NEW JERSEY
League of Conservation Voters
EDUCATION FUND

ENVIRONMENTAL POLICY GUIDE

"WHEN THE WELL'S DRY, WE KNOW THE WORTH OF WATER."

— BENJAMIN FRANKLIN (1706-1790),
Poor Richard's Almanac.

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INTRODUCTION

We are proud to present the *Green in '17* Environmental Policy Guide. This collection of briefing documents is aimed at providing accurate information and recommendations to address the top environmental challenges and opportunities in the Garden State.

Until recently, New Jersey has had bipartisan leadership committed to protecting the environment, and it is our hope this guide will help elected officials, and those seeking to serve in public office, to reestablish New Jersey as a national leader and role model once again. The New Jersey League of Conservation Voters Education Fund (New Jersey LCV Education Fund) has embarked on the *Green in '17* campaign to engage New Jersey citizens, businesses, candidates, and elected officials in discussions of environmental leadership in our state, its impact on our economic vitality, and its effects on the health and safety of those who live and work here.

To inform decision makers on the state, local, and individual levels, New Jersey LCV Education Fund asked experts in environmental policy, advocacy, public administration, and science from more than twenty not for profit organizations to provide assistance in creating policy briefs on critical environmental issues important to the prosperity and health of New Jersey's families and businesses. This booklet – containing briefs on key conservation topics – is the result of their expertise and hard work.

New Jersey LCV Education Fund is a non-partisan 501(c)(3) organization that does not endorse or support any candidate, and educates candidates, elected officials, and the public on the serious environmental challenges New Jersey faces.

Our New Jersey LCV Education Fund team looks forward to discussing environmental issues throughout the election season and beyond in order to raise awareness of, and work toward solutions to, our most pressing environmental problems. If you are interested in learning more or scheduling a briefing with our staff and experts, please call us at 609-331-9922.

ED POTOSNAK
Executive Director
New Jersey LCV Education Fund

SETH LEVIN
Campaign Manager
Green in '17, New Jersey LCV Education Fund

GREEN IN '17

NEW JERSEY LEAGUE OF
CONSERVATION VOTERS EDUCATION FUND

ACHIEVE 100% CLEAN ENERGY

MODERNIZE PUBLIC TRANSIT

DEMAND ENVIRONMENTAL JUSTICE

PRESERVE LANDS AND PARKS

PROTECT DRINKING WATER

ACHIEVE 100% CLEAN ENERGY BY 2050

- Reinvest in a sustainable economy to create the next generation of good middle class green jobs
- Make New Jersey a national leader on clean energy
- Put the health, safety and jobs of New Jersey families first
- Send a message to Washington that New Jersey won't wait for the next superstorm to hit us, we will act on climate change now

MODERNIZE PUBLIC TRANSIT

- Make New Jersey proud of safe and affordable public transit that runs on time
- Save money and time with less traffic and reduce air pollution
- Put people to work on shovel ready projects like the Gateway Access Tunnel

DEMAND ENVIRONMENTAL JUSTICE

- Recognize the cumulative impacts of pollution on urban centers and limit pollution
- Force polluters to pay in full for the damage they do to the environment
- Dedicate money from environmental damages to be spent in the communities harmed by polluters
- Prioritize clean energy investments in low income and communities of color

PRESERVE LANDS AND PARKS

- Defend New Jersey's tourism industry by investing in parks, farms, forests, and historic sites
- Stop the special interests and fossil fuel industry from developing our preserved land
- Keep New Jersey a special place to work, visit, and live by preserving open space, revitalizing our cities, and restoring our cultural landmarks

PROTECT DRINKING WATER FROM THE SOURCE TO THE TAP

- Safeguard our clean drinking water sources in the Highlands and the Pinelands
- Support good jobs repairing leaking pipes and removing lead in schools, homes, and workplaces by investing in water infrastructure upgrades
- Update the State's 20-year-old Water Supply Master Plan
- Ensure plentiful and clean water for New Jersey's business, agriculture, brewing, and other industries

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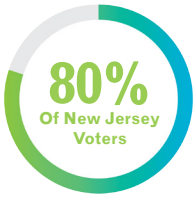
INVEST IN CLEAN ENERGY FOR A STRONGER NEW JERSEY

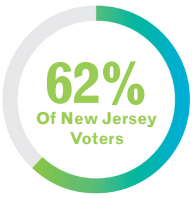
Background

New Jersey's efforts to move to a clean energy future have stalled. The state was a national leader when it adopted the Renewable Portfolio Standard (RPS) in 1999 that require retail electric suppliers to procure a percentage of electricity from renewable sources. The state's current RPS targets plateau in 2021, halting further progress on achieving a clean energy future. Efforts to increase energy efficiency critical to the creation of a clean energy economy, have also stalled.

New Jersey voters from both political parties strongly support the transition to clean energy. A recent poll demonstrates strong bipartisan support for aggressive clean energy goals in every corner of the state:



support raising the state's renewable energy goals to 30% by 2020, and 80% by 2050 – including 89% of Democrats, and 71% of Republicans.



believe New Jersey must move faster to clean energy alternatives.

Fairleigh Dickinson University's PublicMind, on behalf of the New Jersey Conservation Foundation, October 22, 2015

In 2016, nearly 15% of all retail electricity sold in the state was renewable, including 2.75% of locally produced solar. The total RPS will grow to 23.85% by 2021, with 3.47% locally produced solar, to comply with the most current legislation. Apart from locally generated solar, renewable energy is imported from out of state, largely from wind sources in the Midwest.

The RPS standard and a host of other measures were enacted as part of a broader effort to achieve a substantial reduction in greenhouse gas (GHG) emissions by 2050. With support from ratepayers, locally produced solar took off in New Jersey. As of May 2016, 1,800 megawatts of solar had been installed, placing New Jersey No. 4 in total installations by state. Despite this success, the future growth of solar is uncertain because Solar Renewable Energy Credit (SREC) allocations decline substantially after 2017.

Offshore Wind

New Jersey's coast has potential to be one of the largest producers of wind energy in the world, but the state Board of Public Utilities (BPU) has yet to finalize rules that would permit offshore wind construction. The legislature charged the BPU with creating these rules in 2010, but it has yet to comply. Despite the delay, two companies recently won a federal auction for land off the coastline that is set aside for wind development. As soon as the rules are finalized, the process of offshore wind development in New Jersey can begin.

Natural Gas Dominates In-State Generation

New Jersey's current policies favor increased use of natural gas for electric generation. In 2015, more than 2,000 megawatts of new natural gas generation units were under construction. According to US Energy Information Administration data, in 2015, the breakdown of electricity generation in-state was 50% from gas-fired plants, 44% from nuclear plants, 2% renewable and 2% coal-fired plants. The nearly 14% decline in coal-fired generation, down from 15.7% in 2001, resulted in a significant reduction in GHG emissions.

Natural Gas Generation Impacts Local Health

Natural gas is not a clean energy source. When burned, it emits significant amounts of carbon dioxide (CO2), the primary greenhouse gas contributing to climate change. When emitted via leaks through the natural gas pipeline system, it releases methane, another greenhouse gas, which is 84 times more potent than CO2 in the short term.

Energy Efficiency is Lagging

New Jersey was ranked 8th nationally in energy efficiency in 2006, but has fallen steadily, and now ranks 24th according to the American Council for an Energy Efficient Economy.

Primary Concerns:

- New Jersey lags behind its neighbors in energy efficiency
- Utilities are promoting the expansion of natural gas infrastructure, putting ratepayers on the hook for unnecessary and expensive projects because of incentives provided by current regulations
- Emissions from remaining coal-fired generation as well as gas-fired generation are harmful to local communities.
- Offshore wind cannot move forward until there is action from the Board of Public Utilities

POLICY RECOMMENDATIONS:

1. Commit New Jersey to 100% clean energy by 2050

2. Reform public utility regulations to incentivize utilities to achieve high levels of energy efficiency and invest in projects that support the achievement of emissions targets
   - A. Institute aggressive energy efficiency targets
   - B. Increase investments in energy efficiency programs in low-income communities
   - C. Create disincentives for utilities investing in fossil fuel infrastructure projects that do not support Global Warming Response Act interim goals

3. Increase generation of solar and responsibly situated offshore wind
   - A. Immediately enact regulations that enable the development of offshore wind
   - B. Introduce legislation to allow community solar so that low-and moderate-income communities can benefit from distributed generation, reducing their energy costs

4. Retire the few remaining coal-fired generation plants before the end of their economic life

5. Ensure that no gas-fired generation plant increases its emissions

COMBAT CLIMATE CHANGE

Background

Greenhouse gases act like a blanket around the Earth, trapping energy in the atmosphere and causing it to warm. In 2007, New Jersey led the way forward in addressing global warming by passing the Global Warming Response Act (GWRA), which set an ambitious long-term goal of reducing total Greenhouse Gas Emissions (GHG) to 80% below 2006 levels by 2050.[1] EPA emissions data as of 2012 suggests that New Jersey has attained 22% of this goal, with 78% remaining.

AS A COASTAL STATE, NEW JERSEY IS ESPECIALLY AT RISK FOR IMPACTS FROM CLIMATE CHANGE, SUCH AS SEA-LEVEL RISE AND MORE FREQUENT AND INTENSE STORMS. TO ACHIEVE THE 2050 GHG EMISSIONS GOAL WILL REQUIRE A WIDE RANGE OF STRATEGIES AND PROGRAMS ACROSS ALL SECTORS OF NEW JERSEY'S ECONOMY.

In 2011, the Bureau of Energy Resources coordinated with the New Jersey Department of Environmental Protection to develop hypothetical scenarios representing possible outcomes for 2050. The "green" scenario represents the closest approximation of 2050 emissions limits called for in the GWRA and offers guidance about strategies that might be required. Unfortunately, this early planning work has been halted and the current Energy Master Plan does not focus on strategies to reach GWRA targets. New Jersey currently lacks sufficient targets, plans, policies and actions by sector to continue reducing GHG emissions and achieve the ambitious goals set for 2050.

New Jersey withdrew from the Regional Greenhouse Gas Initiative (RGGI), a regional cap and trade program designed to reduce carbon pollution while supporting economic development, creating new jobs and saving consumers money on energy. As a result of this 2011 gubernatorial action, New Jersey no longer receives any revenue from the sale of pollution allowances required in participating states, and the state's power plants are no longer governed by a statewide limit on the amount of carbon pollution they can produce. The foregone proceeds are estimated at $489 million from 2012 through 2020.

Emissions from Cars, Diesel Trucks

Transportation is the largest source of GHG emissions in the state, estimated at 46.3 million metric tons in 2012, or 41.1% of total GHG emissions. Diesel engines are particularly problematic, as they pose a significant threat to public health and have an outsized impact on climate change. Diesel engines release particulate matter, or soot, and contribute to ground level ozone. In addition, diesel-burning sources (trucks and buses) are a major source of black carbon. Reducing emissions of short-lived climate pollutants, like black carbon, can immediately slow the pace of climate change.

[1] On February 13, 2007, Governor Corzine signed Executive Order 54, setting greenhouse gas reduction objectives for the years 2020 and 2050. The New Jersey Legislature passed and the governor signed on July 6, 2007 the Global Warming Response Act, which calls for reducing greenhouse gas emissions to 1990 levels by the year 2020 and further reducing them to 80% below 2006 levels by 2050.

Emissions from Electric Generation

Electric generation from fossil fuels is the second largest source of GHG emissions in the state, estimated at 20.9 million metric tons in 2012, or 18.6% of total GHG emissions. Strategies for achieving the 2050 targets call for electrifying a large portion of the transportation sector and shifting from gas heating in the Residential, Commercial and Industrial Sectors (RCI) to efficient electric heating. As electric generation takes on new demand from these sectors, steps to decrease emissions in electric generation become increasingly important.

Primary Concerns:

- New Jersey has no plan to reach its emission reduction goals consistent with the GWRA
- Pollution from vehicles, especially those powered by diesel engines, is the biggest source of greenhouse gas emissions, a problem that is exacerbated in crowded cities
- Electricity generation remains reliant on fossil fuels

POLICY RECOMMENDATIONS:

1. Rejoin the Regional Greenhouse Gas Initiative (RGGI) with additional protections for low-income communities
   - A. Place an upper limit on total emissions for selected power plants located in high-density communities
   - B. Invest revenue from the sale of allowances in energy efficiency and healthy homes programs in low-income communities that bear a disproportionate burden of local health impacts
2. Place a moratorium on fossil fuel infrastructure projects until a state energy master plan has been developed and the impact on GWRA interim targets can be assessed
3. Reduce emissions in transportation
   - A. Reduce the use of diesel fuel for transportation
   - B. Promote the growth of electric vehicles
4. Develop comprehensive Clean Energy Plan with specific targets and strategies by sector that, in aggregate, meet 2050 GWRA targets
5. Ensure that no gas-fired generation plant increases its emissions
   - A. Prioritize solar, wind, and other renewables
   - B. Increase energy efficiency to reduce total consumption
   - C. Switch from fossil fuel heating to energy efficient electric heating

MODERNIZE PUBLIC TRANSIT

Background

New Jersey Transit (NJT) is the largest statewide public transit system in the United States, serving almost half a million riders per day with rail, bus, and light rail service. From the 1980s until the early 2000s, NJT was held up as an example of a high quality, efficient, and reliable public transit system. Unfortunately, the organization has been severely underfunded and mismanaged, leading to a significant decrease in quality, reliability, and safety over the past decade.

During Governor Christie's tenure, the state subsidy for NJT decreased by more than 90%, forcing budget holes to be filled with fare increases and service reductions. Additionally, planned major infrastructure projects, including a desperately needed new tunnel under the Hudson River, have been sidelined. Even with the increases in fares, NJT has had to shift resources from its capital budget to the general operations budget to cover shortfalls. As a result, sufficient resources have not been available to invest in upgrading existing infrastructure and other capital projects. This lack of investment has resulted in NJT trains having the highest breakdown rate and the most major mechanical failures of the three major commuter rail services to New York. NJT trains break down every 85,000 miles on average, verses more than 200,000 miles between breakdowns for the Long Island Rail Road and Metro-North.

Frequent delays and mechanical failures that stall trains are not the only problems that have developed as a result of the lack of investment. Transit safety also has decreased. Major accidents are rare, but aging trains (the current average is 16 years old), the inability to properly fix and upgrade infrastructure, and lack of funds to equip trains with the latest safety features are increasing risks with each passing year. In 2016, the train derailment in Hoboken that caused one death was the result of a combination of these factors. If they are not addressed, the probability of another major accident will only increase.

Public Transit's Environmental Benefits

Automobiles are the single largest producer of greenhouse gas emissions and air pollution in the state. Additionally, as more cars fill our roadways, congestion increases, leading to long commute times, which results in even more pollution. Safe, affordable, and reliable public transit takes cars off the road as people opt to take a train or bus instead of driving themselves. As more people choose public transit, fewer cars occupy roadways, and decreasing commute times and lowering exhaust emissions. The decrease in emissions will be even more pronounced as drivers switch to vehicles with higher fuel efficiency, hybrids, and electric vehicles.

Public Transit Benefits Local Housing

According to a 2010 study by the Regional Plan Association, public rail projects significantly increase home values in nearby communities. The average home near lines with improved service increased in value by $23,000. The total projected home value increases that resulted from three major transit infrastructure projects in New Jersey from 1996 to 2003 was $11 billion. These increases in home values represent one of the best ways to quantify the benefit of accessibility to public transit.

Public Transit Creates Economic Opportunities for Urban Areas

Public transportation connects workers with employers and greater economic opportunity. A safe affordable, and reliable public transit system allows workers at many wage levels to get to their jobs with less stress. An efficient transit network enables companies to attract the best talent pool. Additionally, many urban riders depend on public transit, including the rail system, as their primary means of transportation. Public transit allows these riders to fully integrate into the larger economy. Accordingly, significant environmental, public health, and equity benefits accrue to communities that are connected to transportation choices.

Primary Concerns:

- Significant cuts to state funding for public transportation
- Diversion of funds from capital budgets to fill holes in general operations budgets
- Aging infrastructure is making transit less reliable and safe
- Political appointees picked to run NJT
- Increasing fares making public transit less attractive
- Cuts in service making transit less desirable to commuters and employers looking to locate nearby

POLICY RECOMMENDATIONS:

1. Restore state funding to New Jersey Transit
   - A. Create a dedicated revenue source for public transit
   - B. Allocate adequate amount of transportation capital funding to transit projects, including increasing the percentage of Transportation Trust Fund dollars that are dedicated to public transit
2. Support the Gateway Tunnel and other large-scale transportation infrastructure projects
3. Develop a comprehensive plan for improving transit infrastructure, safety, and reliability
4. Appoint qualified experts in public transportation systems to run New Jersey Transit
5. Improve affordability by freezing fares and developing a plan to lower fares over time, especially for lower income riders
6. Increase frequency of trains, especially at high volume times
7. Expand bike and pedestrian access to transit stations

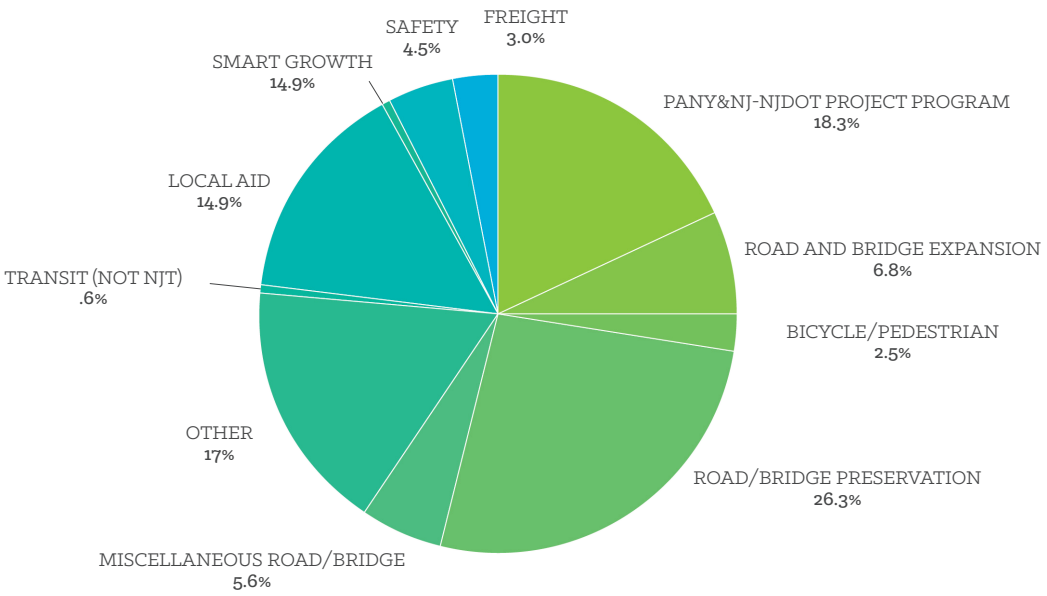
MAKE NEW JERSEY CITIES PEDESTRIAN AND BIKE FRIENDLY

Background

Increasing use of non-motorized transit (walking or biking, for example) will have significant environmental benefits resulting from reduced greenhouse gas emissions and pollution from automobiles, but New Jersey's population density and auto-dependent land use patterns can create significant dangers for those who use non-motorized transportation on the state's roadways. Accordingly, New Jersey must focus on efforts to improve road safety for all users, especially in our cities. The latest fatality statistics from the New Jersey State Police show that in 2015 almost one-third of all traffic fatalities involved cyclists or pedestrians. The Federal Highway Administration has once again labeled New Jersey a "Pedestrian Focus State" because of its high rate of pedestrian-involved crashes, which number nearly twice the national average.

At the same time though, a recent study by CarInsuranceComparison.com ranked New Jersey drivers sixth safest in the nation. Using 2013 National Highway Traffic Safety Administration data, the study ranked states based on overall traffic fatalities, failure of drivers to obey traffic laws, speeding fatalities, DUI fatalities, and pedestrian and bicyclist fatalities. Although New Jersey had the third fewest overall traffic fatalities in the study, it ranked a disappointing 21st in bicycle and pedestrian safety.

SHARE OF DOLLARS IN NJDOT'S 2016 CAPITAL PROGRAM



*Tri-state Transportation Campaign 2016 NJDOT Capital Program Analysis

New Jersey cannot continue to fail its most vulnerable road users. Protecting pedestrians and cyclists becomes more important as the state becomes more urbanized and discourages use of automobiles. Currently, the state invests very little in transit infrastructure for pedestrians and bicyclists -- just 2.5% of New Jersey Department of Transportation's capital budget. Creating safer road for pedestrians and bicyclists will require a shift in both priority and resources at the state level.

Benefits of Increased use of Non-Motorized Transit

- Reduced greenhouse gas emissions and air pollution
- Decreased reliance on fossil fuels that require dangerous extraction and transit
- Decreased congestion on roadways
- Saving on household transportation expenses
- Increased physical activity for adults and children resulting in lower obesity rates
- Reduced rates of heart disease, cancer, and childhood asthma

- Active (non-motorized) transportation-related infrastructure, businesses, and events were estimated to have contributed $497.5 million to New Jersey's economy in 2011, according to a New Jersey Bike and Pedestrian Resource Center study
- The $497.5 million supported:
  - 4,018 jobs with $153.17 million in compensation
  - Added $278 million to state GDP
  - Generated an estimated $49 million in total tax revenue, accounting for nearly three-fourths of the $63 million infrastructure investment

Primary Concerns:

- Pedestrians and bicyclists face a comparatively high level of danger in the state, even though New Jersey drivers are ranked among the safest in the country
- As more people continue moving to urban areas, pedestrian and bike traffic will increase and thus requires more attention from the state
- Current spending on pedestrian and bike infrastructure is inadequate to address the need

POLICY RECOMMENDATIONS:

1. Enact legislation prohibiting motorists from opening an automobile door on a passing cyclist if the motorist is unable to do so safely as New Jersey is one out of only ten states currently without such a law

2. Increase penalties for motorists who injure or kill a pedestrian or cyclist

3. Require motorists to maintain a safe passing distance when overtaking a non-motorized road user as New Jersey is the only state in the north east without such a protection

4. Analyze and forecast future transit patterns and adjust investment and funding accordingly

ADDRESS CUMULATIVE IMPACTS FROM MULTIPLE SOURCES OF POLLUTION

Background

One of the most complex environmental challenges is the effects of "cumulative impacts," defined as the collective situation of individuals and communities exposed to multiple sources of pollution, which too often are viewed independently.

Although New Jersey has yet to finalize and release its cumulative impacts tool to define most heavily affected areas, prior research and intuition point to urban areas, especially those where minority and low-income residents live, as having the highest risk to exposure to multiple pollutants.

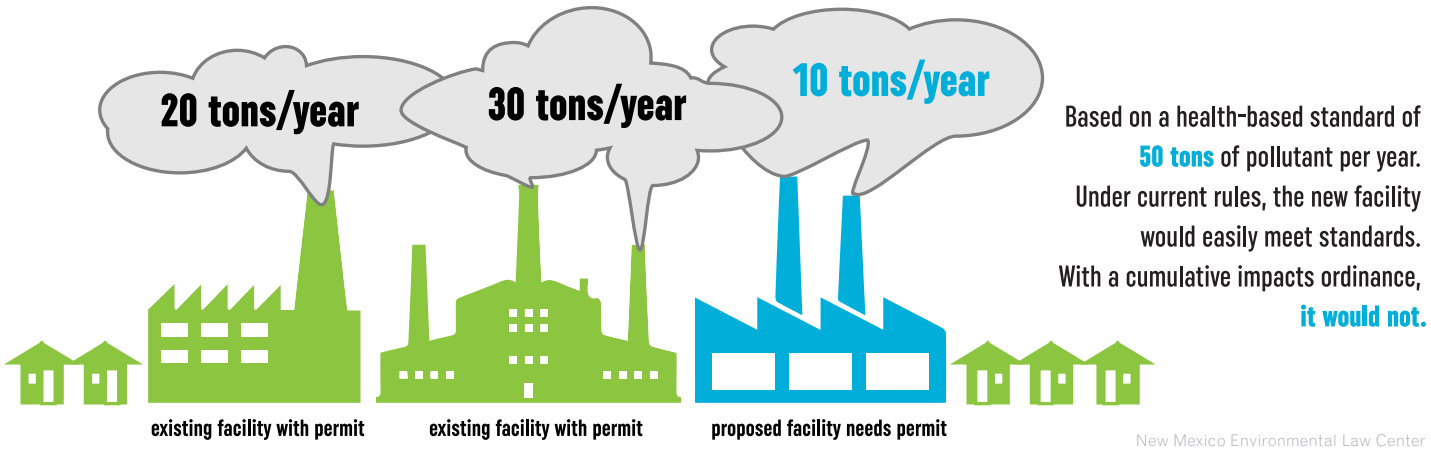
The cumulative impacts of multiple pollutants can lead to exponentially greater public health, economic, and environmental costs, as the dangers associated with one pollutant are exacerbated in the presence of others.

A more comprehensive approach to addressing pollution must be undertaken in order to achieve the highest benefit at the lowest possible cost, especially to protect underprivileged communities too often ignored because of the ineffective methods of addressing pollution's cumulative impacts.

The Current Norm for Addressing Pollution

Most commonly, individual pollutants are addressed in an isolated manner instead of with a holistic approach that accounts for cumulative impacts. For example, take an urban area with a small level of air pollutant X from a recently updated facility and a rural area with an older, isolated facility that emits a substantially more of pollutant X.

A traditional approach to reducing pollution would call for the rural facility to be addressed first, even if that means increasing production at the urban facility, since overall levels of pollutant X would decrease.



New Mexico Environmental Law Center

Although this policy is the most efficient way of reducing the individual pollutant in question, it may actually have significant negative effects, given the increase in cumulative impacts on the urban community. The increased pollution in the densely populated area, combined with smog, ground level ozone, and other pollutants such as chemicals from factories and diesel and gas emissions from vehicles, creates the potential for public health issues, lower property values (thus lower tax revenue), and decreased quality of life.

Primary Concerns:

- The state does not have a way to systematically identify what areas face the greatest threats from the cumulative effects of multiple pollutants
- Pollution control policy addresses individual pollutants in a vacuum
- Levels of pollutants deemed acceptable do not vary by communities though the same amount of a pollutant that causes little to no harm in one area may present significant hazards in another area
- The current methods for predicting outcomes are insufficient and can lead to less than optimal outcomes focused on a single overall metric rather than a comprehensiveview of total impact

POLICY RECOMMENDATIONS:

1. Finalize and release cumulative impacts tool that is in draft form at the New Jersey Department of Environmental Protection to identify communities most affected by cumulative impacts

2. Adopt requirements for special analysis of policy outcomes in areas most likely to suffer from significant cumulative impacts by taking a holistic approach aimed at providing the greatest societal benefit for all New Jersey families

3. Set special standards for new and modified sources of pollution in vulnerable communities that account for the fact that a level of pollution abatement in one area does not necessarily create the same benefits as it does in another area

4. Tighten overall air pollution standards, which will enhance air quality many of our urban areas with air pollution near or exceeding current allowable limits

PROTECT THE PUBLIC'S RIGHT TO KNOW ABOUT ENVIRONMENTAL HAZARDS

Background

In 1983, the New Jersey Legislature found when enacting the Worker and Community Right to Know Act "…that the proliferation of hazardous substances in the environment poses a growing threat to the 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 and 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, label chemical containers, train employees, and make Hazardous Substance fact sheets available.

The grassroots campaign for the law – and the impact of the chemical disaster in Bhopal, India in 1984 – also led to passage of the state Toxic Catastrophe Prevention Act (TCPA) in 1986, which requires high-hazard chemical facilities to develop comprehensive accident prevention plans.

However, challenges remain to ensure the public's right to know and to prevent chemical catastrophes:

- Massive amounts of crude oil are shipped in secrecy by rail, with thousands of potentially deadly rail cars passing through at least 11 New Jersey counties per week to refineries and terminals in Linden, Westville, Perth Amboy, and Philadelphia. Residents, oil and rail workers, firefighters, and other emergency responders are all at risk. Current Right to Know laws applying to facilities in New Jersey do not cover railroad cars carrying oil and chemicals. Other states, such as neighboring New York, allow public access to this information

- The public is denied its right to review Emergency Response Plans. New Jersey has more than 5,000 facilities that use hazardous chemicals. The federal Emergency Planning and Community Right to Know Act (EPCRA) guarantees the legal right of citizens to review Emergency Response Plans that must be developed and updated at least annually by each New Jersey county and municipality. However, the State Emergency Response Commission (SERC) has failed to meet its legal obligation to ensure public access

- Communities, jobs, and our environment remain at risk from an on-site toxic disaster. More than 90 facilities located in 19 of New Jersey's 21 counties use sufficiently large quantities of extraordinarily hazardous chemicals that they are required to submit to the state Department of Environmental Protection (DEP) an Inherently Safer Technology (IST) review. An IST review requires a facility to assess whether it can adopt an IST (such as safer chemicals or processes). The rule does not require facilities implement IST. If facilities assert that alternatives are not feasible, they must include an explanation. DEP rules and policies keep many of these reports from the public

Primary Concerns:

- Potentially hazardous trains are regularly traveling through our communities
- The public does not have access to updated Emergency Response plans even though they are legally required to by the EPCRA
- Facilities that handle extremely hazardous materials are not required to adopt an IST, and the public can be denied access to the company's reasoning

POLICY RECOMMENDATIONS:

RIGHT TO KNOW ABOUT RAIL CAR HAZARDS:

1. The state has records of the crude oil shipments passing through our communities, homes, schools, and workplaces, and should make the following information publicly available:
    - Routes and volume of cargo updated on a monthly basis
    - Worst-case emergency impact scenario, discharge response, cleanup and contingency plan
    - Evidence of financial responsibility for cleaning up and removing discharge or release of a hazardous substance
    - Railroad routing analysis

RIGHT TO KNOW ABOUT EMERGENCY RESPONSE PLANS:

1. Direct SERC to enforce EPCRA by requiring Local Emergency Planning Committees for New Jersey's 21 counties and 565 municipalities to:
    - Make up-to-date Emergency Response plans accessible for public review, including posting plans on its website
    - Ensure annual publication about public access in local newspapers
    - Ensure that Local Emergency Plans are written to inform neighbors about what to do in case of an emergency
    - Railroad routing analysis

2. Direct the DEP to conduct and publish an Emergency Response plan capacity assessment for each county and municipality to determine whether funding levels are sufficient for effective prevention, preparedness and response

RIGHT TO KNOW AND IMPLEMENT SAFER ALTERNATIVES:

1. Direct the DEP to amend TCPA program rules to:
    - Require facilities to adopt safer alternatives whenever feasible
    - Prevent facility management from declaring IST reviews non-public documents
    - Require facility management to better document claims that adopting safer chemicals and technologies is not feasible
    - More clearly define "inherently" safer options

2. Direct DEP to produce an annual report about safer chemicals and processes identified and adopted by facilities, as well as facilities that failed to do so

3. Provide additional staff and resources for DEP's TCPA program to ensure effective enforcement

WATER

PROTECT CLEAN DRINKING WATER

Background

The water New Jersey residents drink typically comes from either public reservoir systems or private wells. Approximately 85% of New Jersey residents rely on a public utility for their drinking water and 15% of New Jersey residents rely on private wells. Importantly, drinking water for urban areas is directly affected by actions in rural areas, such as the Highlands where public utilities serving many cities, maintain their reservoirs. Practically speaking, this often-overlooked connection can result in public health hazards to urban families and business because of poor policy decisions in rural parts of the state.

THE MANY THREATS TO SURFACE WATER AND GROUND WATER QUALITY INCLUDE IRRESPONSIBLE DEVELOPMENT, CLIMATE CHANGE, POLLUTION, FLOODING, STRESSED AQUIFERS, AND INADEQUATE PLANNING. ADDITIONALLY, THE DISCOVERY OF NEW AND PREVIOUSLY UNREGULATED DANGEROUS CHEMICALS IS AN EMERGING THREAT TO THE HEALTH OF NEW JERSEY FAMILIES OF UNKNOWN MAGNITUDE.

The Christie administration wanted to roll back critical clean water protections, which, if enacted, would dangerously diminish water quality. The safeguards the Christie administration aimed to weaken include the Flood Hazard Act rules, Water Quality Management planning rules, Combined Sewer Overflow (CSO) rules, Municipal Separate Storm Sewer Systems rules, The Waiver Rule, State Groundwater Standards, Highlands Regional Master Plan, and Rules Governing Nitrate Standards. The proposed amendments weaken pollution standards and encourage development that could have major negative public health and water quality implications.

Existing Surface Water Regulations

Surface water in New Jersey is regulated under the federal Clean Water Act and the Safe Drinking Water Act. State-level protections for drinking water include the Safe Drinking Water Act, the Water Pollution Control Act, Water Supply Management Act, Pollution Prevention Act, Water Quality Management Planning, and Spill Compensation and Control Act, among others.

Existing Ground Water Regulations

There is no federal law protecting ground water in New Jersey, but state law requires public utilities test their wells quarterly. Private wells, which supply water to 15% of the state's population and are typically concentrated in rural areas, are subject to testing under the Private Well Testing Act when a house is sold. Landlords are required to test well water every five years. They must provide tenants with copies of the test results. The Private Well Testing Act is a consumer information law, and therefore, it does not require remediation of any kind if pollutants are found in a well. Private wells on owner-occupied properties are not required to be tested, even though the federal Centers for Disease Control suggest wells be tested annually.

Primary Concerns:

- Policy changes to lower clean water standards and significantly weaken protections for drinking water
- Aquifers that are in deficit or otherwise stressed
- Newly identified, unregulated contaminants and chemicals
- Inadequate strategic state and regional land use planning and support
- Well testing is inconsistent for private wells and remediation is not mandatory
- Climate change is effecting weather patterns and increasing the storm intensity and frequency, resulting in more flooding and droughts
- Irresponsible development
- Continued population growth
- Pollution

POLICY RECOMMENDATIONS:

1. Reverse the regulatory revisions of the Christie administration and strengthen groundwater standards, drinking water standards, Flood Hazard and water quality rules
2. Protect source water areas, such as the Highlands and the Pinelands (See Support the New Jersey Highlands brief, page 60 and Sustain the Pinelands brief, page 62)
3. Improve land use planning; provide strong support for regional planning and existing regional planning authorities (Highlands, Pinelands, Meadowlands)
4. Update New Jersey's decades-overdue Water Supply Master Plan
5. Create a research agenda to examine long-term trends in water quality and quantity, expected impacts of climate change, the interaction between groundwater and surface water, and potential impacts on water quality of continued population growth
6. Review, update, and strengthen Total Maximum Daily Load implementation plans
7. Improve monitoring of groundwater quality in regions of the state where a significant portion of families rely on wells for drinking water
8. Address emerging contaminants through research, outreach, and regulation, including fully implementing the lead and copper rule and establishing standards for contaminants such as perflourinated chemicals (PFOA and PFOS), radionuclides, and boron
9. Create educational resources for families and improve public outreach on water quality issues, including well and septic testing and maintenance, and contaminants of concern (such as lead, arsenic, PFCs, mercury, and radionuclides)

CONSERVE WATER RESOURCES

Background

New Jersey's rivers, streams, lakes, bays and wetlands are of enormous consequence to the state's economy, agriculture, recreation, tourism, and fish and wildlife populations. A 2007 state Department of Environmental Protection (DEP) report found that New Jersey's waters generate $9.8 billion in revenue per year. Protecting and restoring New Jersey's water systems is essential to quality of life and economic vitality.

Existing Water Protection Laws

Surface waters are protected under the Federal Water Pollution Control Act, better known as the Clean Water Act, as well as the New Jersey Water Pollution Control Act, Flood Hazard Control Act, Freshwater Wetlands Protection Act and the state's Water Quality Planning Act. The DEP is tasked with administering and enforcing these laws and promulgating implementation regulations.

Total Maximum Daily Loads (TMDL)

The Clean Water Act requires states to prepare biennial reports on the quality of their waters, including a list of "impaired" water bodies called the 303(d) list. In New Jersey, more than 90% of water bodies for which data is available do not meet all of the water quality standards and are considered impaired for at least one water quality parameter. States are required to develop plans to address water quality impairments using a TMDL, a regulatory term that describes how much pollution a waterway can handle while still meeting water quality standards. In the remediation plan, the amount of pollution required to be reduced is allocated among the entities responsible for contributing to the pollution, including both point (intentional discharge from regulated agencies) and non-point (runoff from lawns, streets, farms, etc.) sources.

Surface Water Quality Standards

A major legal tool for protecting our rivers, streams and other water bodies are the Surface Water Quality Standards. These standards include "designated uses," which establish the goals and expectations for how each water body is used, "stream classifications," "water quality criteria" to protect the designated uses, and "antidegradation designations."

Designated uses include drinking water supply, fish consumption, shellfish resources, propagation of fish and wildlife, recreation, agriculture, and industrial water supply

Stream classifications are made based on designated uses. Freshwaters are classified as FW1, if they are not subject to any manmade wastewater discharges; FW2 for most other fresh waters; and PL, for areas located within the Pinelands protection and preservation areas. Freshwaters are further classified as "trout production, "trout maintenance," and "non-trout"

Water quality criteria are developed for individual pollutants to protect designated uses, aquatic life and human health

Antidegradation designations establish ground rules for protecting water quality that meets or exceeds water quality criteria. Waters are designated in one of three antidegradation levels:

- Outstanding National Resource Waters are set aside for posterity because of their unique ecological significance, exceptional recreational significance, or exceptional water supply significance and cannot be subject to any manmade wastewater discharges. NJDEP cannot approve any activity that might cause a lowering of existing surface water quality

- Category One waters are protected from any measurable change in water quality because of their exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resources
- Category Two waters have the same water quality criteria as Category One, but some lowering of existing water quality may be allowed in Category Two waters based upon a social and/or economic justification

Primary Concerns:

- Polluted runoff from parking lots, roadways, rooftops and other hard surfaces is a major source of water pollution, more so than point sources of pollution in many parts of the state
- Impervious surfaces block the percolation of water into the ground, also known as groundwater recharge, which can affect levels in streams and rivers that rely on ground water flow
- Lack of integration between the DEP program that implements and oversees the Surface Water Quality Standards and land-use regulation at the agency, which issues permits to authorize new development and other activities that disturb undeveloped land
- DEP adopted amendments to the Flood Hazard Control Act that weaken protection for streams and make it easier for developers to build within areas that previously had more stringent protection
- Antidegradation designations of water bodies often undervalue water bodies, allowing more pollution to vital waters
- Climate change is exacerbating the water quality problems by creating highly variable precipitation levels year over year, leading to increased runoff and pollution during wet years and droughts, which concentrate pollution levels in dry years

POLICY RECOMMENDATIONS:

1. Strengthen stormwater management rules to ensure greater mitigation of polluted runoff from development and redevelopment projects
2. Integrate Surface Water Quality Standards and TMDL plans with permitting programs
3. Strengthen requirements for Municipal Separate Stormwater Systems (MS4) programs to require greater pollution controls and groundwater infiltration
4. Restore protections under the previous Flood Hazard Control Act that were eliminated during the Christie administration
5. Revise antidegradation designations of the state's water bodies to better protect important water bodies
6. Aggressively pursue the purchase of land within flood plains that are susceptible to flooding through the state's Blue Acres program to restore the natural flood storage capacity in these areas

REDUCE EXPOSURE TO LEAD IN PUBLIC DRINKING WATER SYSTEMS

Background

Some 34 water systems in New Jersey are known to have exceeded federal Safe Drinking Water Act levels for lead, including, but not limited to, schools in Newark, Paterson, Camden, and Hamilton Township (Mercer County), as well as Morristown Medical Center. The U.S. Environmental Protection Agency (EPA) has established a Maximum Contaminant Level Goal (MCLG) for lead in drinking water at zero at mg/L. Known health effects of lead exposure in children include delays in physical and mental development, behavior and learning problems, and lower IQ, while adults can suffer from decreased kidney function, high blood pressure, and reproductive problems, according to the EPA. Pregnant women are at a higher risk for premature birth and reduced growth of the fetus as a result of exposure. There is no known safe level of lead consumption. This is both an environmental and a public health problem.

THERE ARE TWO SOURCES OF LEAD CONTAMINATION IN DRINKING WATER: FAUCETS AND FIXTURES ATTACHED WITH LEAD SOLDER, PRIMARILY USED PRIOR TO 1986, AND WATER PIPES MADE OF LEAD THAT ARE USED TO DELIVER WATER FROM A TREATMENT FACILITY TO HOMES, SCHOOLS, BUSINESSES, AND HOSPITALS. LEAD WAS PROMOTED AS A DURABLE MATERIAL AND THEREFORE SOUND INVESTMENT FOR MUCH OF THE LAST CENTURY.

Lead leaches from solder or pipes because of corrosive water. Corrosive water includes acidic water and hot or warm water. Chlorine, used to disinfect public drinking water supplies, can amplify corrosiveness. Water treatment facilities take action to reduce lead leaching in drinking water from supply lines containing lead by adding orthophosphate, an effective, safe inhibitor to reduce the amount of lead that water can dissolve and carry as it flows through pipes. However, the effectiveness of orthophosphate is greatly reduced when used on badly deteriorated water lines.

Testing for Lead in New Jersey Schools

New Jersey complied with the Safe Drinking Water Act and implemented no stricter standards until 2016 when the state Board of Education (BOE) began requiring schools to test for lead in drinking water. Before the state BOE requirement, the federal standards exempted schools from

such testing. As of July 13, 2016, the date the state BOE's requirement took effect, schools are required to test their water for lead within one year. The state BOE rules exempt private schools and daycare centers that don't receive state funding. However, the rules do apply to public, charter, and renaissance schools, jointure commissions, educational service commissions, approved private schools for students with disabilities acting under contract on behalf of New Jersey public school districts, and State funded early childcare centers.

The state BOE developed technical guidance and resources to assist schools in complying with the regulation, including a toolkit and templates for developing a sampling plan, Quality Assurance Project Plan (QAPP), letters to school community, etc. Additionally, the BOE is developing a communications strategy for outreach to schools; it worked with Newark Public Schools to finish initial school sampling by the end of August 2016; and is proposing to install equipment to remove lead in kitchen areas of several schools. Surprisingly, there is no state rule requiring schools to fix the source of lead contamination through pipe replacement or filters. The only requirement is to shut down the contaminated source and provide an alternate source of drinking and cooking water. Therefore, schools with lead contaminated water such as Paterson, Newark, and Camden now rely on bottled water, an expensive and environmentally unfriendly source of clean water.

Primary Concerns:

- Preventable developmental problems in children
- Potential long-term public health problems that have social and economic ramifications

POLICY RECOMMENDATIONS:

1. Increase testing of water sources, especially those used regularly by infants and children, including a revision of state BOE requirements to include private schools

2. Identify and secure increased funding for infrastructure replacement, including fixtures, lead soldered pipes, and aging drinking water lines

3. Research alternate effective water treatments to prevent lead from leaching into drinking water

REMEDIATE BROWNFIELDS AND POLLUTED WATERS IN CITIES

Background

Cities throughout New Jersey retain a toxic legacy as a result of industry. Many of our old cities and their surrounding areas and waterways are heavily polluted with various carcinogens, heavy metals, pesticides, and other toxins. This history creates unique challenges such as brownfields, or contaminated former industrial sites, and polluted waterways, which significantly increase the dangers associated with flooding.

New Jersey has thousands of brownfield sites, most of which are located in urban centers. In the Ironbound neighborhood of Newark alone, more than 100 brownfields exist. These sites are often eyesores – abandoned industrial or commercial facilities such as empty factories that are unable to be redeveloped without remediation of contaminants. They also pose dangers for children who play there, and are associated with increased crime and lower property values of nearby properties.

Urban waterways are also frequently unfit for human recreation and, worse, pose substantial public health concerns in the event of flooding. As a recent example, the Passaic River, a Superfund Site that contains PCBs, metals, pesticides, and the largest site of dioxin (a byproduct of Agent Orange) concentration in the world, flooded during Superstorm Sandy. In the Ironbound neighborhood of Newark, the community was inundated by tidal water originating from the Passaic River and the Newark Bay during the storm, when floodwaters rose to depths of 8 feet in places. The floodwaters were contaminated, which led to a toxic mix of water, sewage, and unknown materials entering homes, businesses, recreational spaces, and grounds across the community.

In the direct aftermath of the flooding, little was done to test the affected areas for increased toxins, but more recent testing has uncovered that areas affected by the Sandy flooding still have elevated levels of lead and arsenic in their soil. Additionally, at least one case has been reported of a child developing a rare skin condition attributed to the contaminated water.

Almost every area with an industrial history in New Jersey faces the same threats that have impacted Newark.

FLOODING IS A MAJOR CONCERN THROUGHOUT THE STATE, BUT URBAN AREAS HAVE A UNIQUE CHALLENGE BECAUSE OF THE ADDITIONAL DANGEROUS TOXINS THAT CONTAMINATE FAR TOO MUCH OF THE LAND AND WATER IN THESE IMMEDIATE AREAS.

Too often, the state treats flooding in these areas the same as other areas, though urban flooding challenges are far more complex, potentially far more serious, and require a unique response.

Primary Concerns:

- Urban industrialized areas continue to have high levels of dangerous toxins both on land and in nearby waterways
- Brownfields are a drain on communities both socially and economically
- In the event of flooding, toxins are spread to new areas
  - Residents are directly exposed to toxins
  - Levels of residual toxins in soil are unknown, with no required testing
- Dense populations in the floodplain of highly contaminated waterways
- Threat of toxins is ignored in typical flood response

POLICY RECOMMENDATIONS:

1. Restore and increase funding for brownfield assessment and remediation

2. Create funding for community-based brownfield site planning modeled after the EPA's Area-wide Planning Program or New York State's Brownfield Opportunity Area Program

3. Encourage use of the Blue Acres floodplain buy-out program in urban communities through education and outreach

4. Take storm water contamination into account in future disaster planning by requiring soil and water to be tested in open space as well as public and private properties for impacted communities immediately after the event

5. Make post-disaster testing for families exposed to potential stormwater contamination available as part of emergency response protocol

6. Allocate funding to assist those with health impacts related to these flood events

7. Implement long-term planning before and after events including

   A. Remediation
   B. Buyout/relocation
   C. Hazard mitigation

PROMOTE A HEALTHY OCEAN

Background

A clean and healthy ocean is the backbone of a $34 billion industry that sustains thousands of jobs and local coastal economies in New Jersey through tourism, and recreation and commercial fishing. Furthermore, the NY/NJ Bight (the area of the ocean from Montauk, NY, to Cape May, NJ) hosts an amazing diversity of marine life including 300+ species of fish, 350 species of birds, 5 species of sea turtles, and 31 species of marine mammals.

After decades of abuse – and a reputation as "the ocean dumping capitol of the world" – ocean and coastal water quality in New Jersey has improved due to the end of ocean dumping, modernization of pollution controls, and waste management improvements. Unfortunately, the Atlantic Ocean off the New Jersey coast continues to be stressed by industrialization, toxic runoff and rising temperatures.

Ocean Industrialization

Liquefied natural gas ports, offshore oil and gas exploration, large-scale mineral and resource extraction and mining, open water aquaculture, and many other industrial activities continue to threaten the health of the Atlantic Ocean and coastal areas. These abuses are incompatible with the clean ocean economy upon which New Jersey depends, may pose a national security risk, negatively impact marine mammal and fisheries, and exacerbate climate change-related damages. These activities also pose a risk of chemical spills, leaks, and other accidents, which would have devastating consequences.

Toxic Stormwater Runoff

Every time it rains, millions of gallons of stormwater flows from roads, parking lots, houses, and other hard surfaces, transporting chemicals, fertilizers, fecal bacteria, and debris directly into coastal and marine waters. Stormwater runoff is the No. 1 cause of coastal water pollution and impacts everything from beach and water conditions to shellfish harvesting, and fisheries health. Additionally, debris carried by stormwater not only makes beaches unsightly, but harms marine life through ingestion and entanglement.

Climate Change

CLIMATE CHANGE, WHICH IS CAUSED BY EMISSIONS OF CARBON DIOXIDE AND OTHER GREENHOUSE GASES BY HUMAN ACTIVITY, IS ALREADY HAVING SIGNIFICANT EFFECTS ON THE HEALTH OF OUR OCEANS THROUGH SEA LEVEL RISE AND ACIDIFICATION.

According to NASA, since 1870, the sea level has risen roughly 280 millimeters (11.02 inches), and the rate of rise has accelerated. In addition to increased risk of flooding and property damage along New Jersey's coast, sea level rise is drowning salt marshes, especially along the southwestern portion of New Jersey known as the Delaware Bayshore. The salt marshes are the primary source of protection from flooding for local communities and are home to a large shellfish industry.

Ocean acidification is an equally dangerous effect of climate change and high levels of carbon dioxide emission. A large percentage of carbon dioxide is absorbed by sea water and triggers chemical reactions, which reduce the pH and mineral concentrations of the sea water.

The increased acidity is affecting commercial oyster farm operations and coral reefs. A warmer, more acidic ocean holds less dissolved oxygen and threatens to expand the more than 500 dead zones already documented around the world. Estimates of future carbon dioxide levels, based on business-as-usual emission scenarios, indicate that by the end of this century the surface waters of the ocean could be nearly 150 percent more acidic, with a pH that the oceans haven't experienced for more than 20 million years.

Primary Concerns:

- Ocean Industrialization
  - Construction, maintenance, and operations impact clean ocean economy and marine ecosystem
  - Development's negative effect on marine life
- Toxic Stormwater Runoff with pollutants, pathogens, and debris entering coastal waters
- Climate Change
  - Sea Level Rise
  - Ocean Acidification

POLICY RECOMMENDATIONS:

1. Amend New Jersey's Coastal Zone Management Plan or take legislative action to prevent harmful industrial activities

2. Strengthen stormwater permits and regulations, linking these standards to pollution reductions and surface water quality standards

3. Enforce litter laws, and pursue legislation to reduce use of single-use plastic by requiring all plastics to be recyclable; incentivize market for recycled plastic content; and pursue bans and fees on specific plastic items

4. Increase monitoring to identify and manage acidification hotspots, and impacts of ocean acidification on New Jersey's valuable shellfish industry

5. Support the Mid-Atlantic Regional Ocean Council's mapping and data portal work

STOP PLASTICS FROM ENTERING WATERWAYS

Background

A prominent threat to New Jersey's waterways is plastic pollution. At least 80% of plastic pollution is land-based from littering and stormwater runoff, and this contamination in our waterways is occurring at an alarming rate. In just eight years, the world's oceans are expected to contain 1 metric ton of plastic for every 3 metric tons of fish; by 2050, there is expected to be more plastic than fish.

TO REVERSE THESE STARTLING PREDICTIONS, NONPROFITS AND OTHER CONCERNED ORGANIZATIONS HAVE ENCOURAGED THE PUBLIC TO AVOID SINGLE-USE, THROWAWAY PLASTICS AND SWITCH TO SUSTAINABLE AND RENEWABLE ALTERNATIVES.

Despite these efforts, less than 10% of plastic gets recycled each year. Fifty percent of used plastic is sent to landfills and incinerators, leaving the remaining 40% unaccounted for, likely ending up in our waterways.

Consumers are reliant on throwaway plastic products such as plastic bags, bottles, straws, utensils, and Styrofoam to-go boxes. These 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 (plastic about the size of a grain of rice or smaller). Many wastewater treatment plants are unable to capture tiny floating plastics and discharge them into waterways.

Contaminants such as DDT and flame retardants already present in the water are absorbed by the plastic. Thus, when plankton, fish, or birds mistake microplastic for food, they also ingest contaminants adhered to the plastic. Microplastics have been found in fish and shellfish tissue, indicating that microplastics can enter aquatic, and likely human, food chains.

Sampling by NY/NJ Baykeeper has found that at least 165 million plastic pieces are floating within NY-NJ harbor waters at any given time. The Passaic River along the City of Newark was the most plastic-abundant New Jersey waterway sample with at least 391,634 plastic particles per square kilometer. The most abundant type of plastic found within samples was foam.

Primary Concerns:

- Plastic recycling rates are still extremely low, despite public education efforts
- Once in waterways, plastics never degrade; they break down into microplastics
- Marine life eats microplastics, which can contain dangerous chemicals, assuming the particles are food

POLICY RECOMMENDATIONS:

1. Institute a stricter statewide recycling mandate

2. Work with large producers of waste, such as schools and hospitals, to ensure adequate recycling programs

3. Incentivize or require recycling or decreased usage of single-use plastic products through policies such as:

   A. Institute fees on single-use bags
   B. Prohibit public schools and colleges from selling or using polystyrene food containers
   C. Require deposits on plastic bottles

ELIMINATE COMBINED SEWER OVERFLOWS

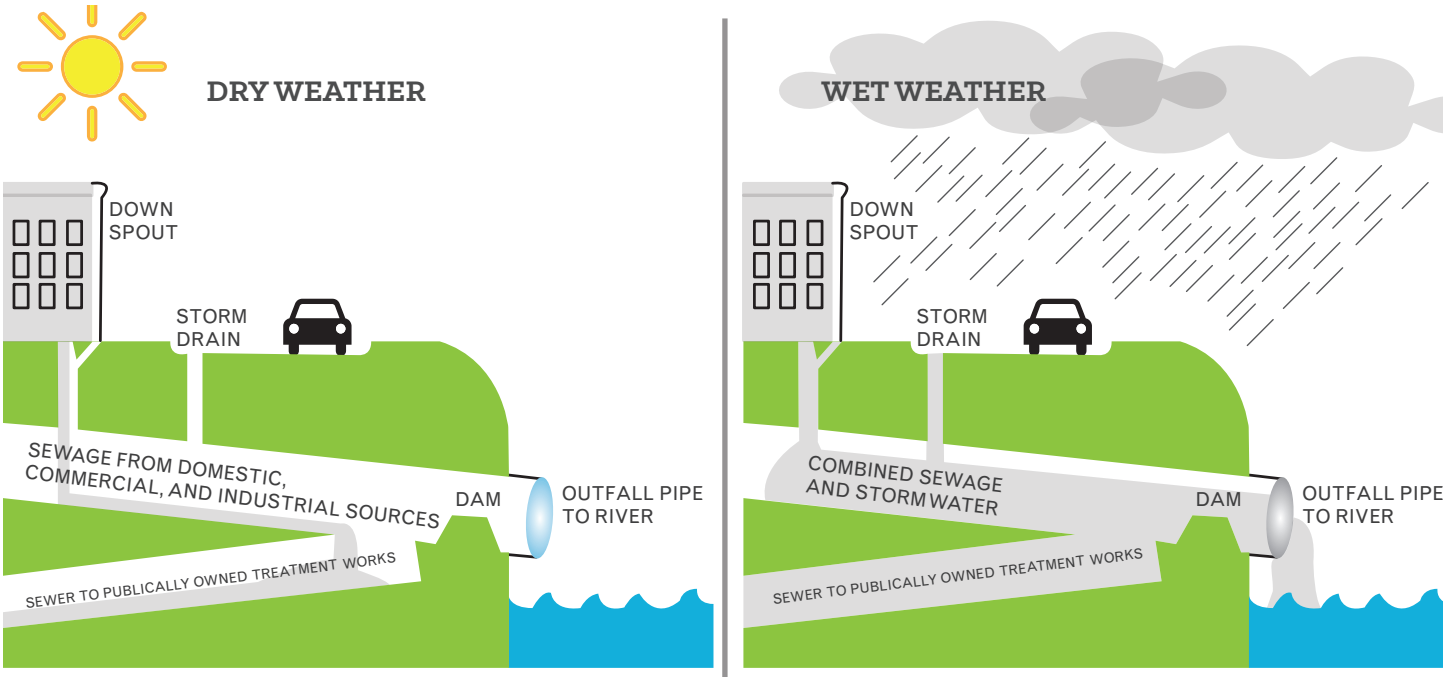
Background

Combined sewer systems are shared underground pipe networks that carry 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, but sometimes they don't have sufficient capacity. When the pipes get too full, the sewage-contaminated, untreated water and debris overflows into waterways. Combined sewer systems are remnants of the country's early infrastructure and are still found located in older urban areas, including 21 New Jersey cities.

The impacts of Combined Sewer Overflows (CSOs) include:

- Health: People can get sick if exposed to raw sewage that has spilled in waterways from CSOs or backed up into homes or streets
- Recreation: Sewage overflows can make recreation, including swimming, kayaking, and fishing, on rivers and streams unsafe for at least 24 to 48 hours
- Environment: Sewage overflows can cause beach closures, harm aquatic habitats, contaminate shellfish beds, and dump significant amounts of trash into waterways

THIS IS HOW A COMBINED SEWER SYSTEM WORKS WHEN IT'S DRY AND WHEN IT'S RAINING OR SNOWING.



Graphic courtesy of U.S. Environmental Protection Agency.

Toxic Stormwater Runoff

In response to a lawsuit by Hackensack Riverkeeper and NY/NJ Baykeeper, the Department of Environmental Protection (DEP) issued new individual permits for combined sewer overflows. The permits, effective July 2015, mark a significant improvement over the old general permits and set the state on a path toward compliance with the federal Clean Water Act and the National CSO Policy by reducing or eliminating the remaining 212 CSOs in 21 New Jersey cities. Obligations under the new permit include placing warning signs at CSO outfall sites, notifying the public of CSO discharges, characterizing the system's infrastructure, and developing a Long-Term Control Plan (LTCP).

Long-Term Control Plan

The LTCP is a systemwide evaluation of the sewage infrastructure, and the hydraulic relationship between the sewers, precipitation, treatment capacity, and overflows. As part of the LTCP, the permittee must evaluate alternatives that will reduce or eliminate discharges, and develop a plan and implementation schedule to do so. LTCPs are created to identify the most cost-effective manner to regulate CSOs to meet water quality standards. The permittee must establish a public participation process that actively involves the affected public throughout. The deadline for selection of a LTCP is due June 1, 2020. The LTCPs will take several years and millions of dollars to implement.

Primary Concerns:

- The permit does not mandate the inclusion of green infrastructure in the LTCP
- Cost barriers to implementation
- Continued compliance with permit milestones and robust public participation in the LTCP

POLICY RECOMMENDATIONS:

1. The New Jersey Environmental Infrastructure Trust (NJEIT) should continue its policy of providing interest-free financing for permittees and cities with combined sewer systems to address CSOs, including the principal forgiveness program developed for green infrastructure projects. Additional money should be allocated for these projects

2. Improved communications of sewage discharges. Currently, permittees provide notice of sewage discharges on a website. Ideally, notification to communities also would include email or text alerts

3. DEP should encourage the inclusion of green infrastructure projects as part of the solution to capturing stormwater before it enters the combined system

4. Integration of CSO permit implementation with DEP's other water quality programs, including stormwater management permits (e.g., Municipal Separate Storm Sewer permits)

IMPROVE WASTEWATER INFRASTRUCTURE AND MANAGEMENT

Background

In June 2016, the American Society of Civil Engineers released the Report Card for New Jersey's Infrastructure,[1] which gave New Jersey's wastewater infrastructure a D grade. Wastewater infrastructure is comprised of the system of pipes that collects and conveys wastewater and wastewater treatment facilities. The D grade means New Jersey is doing a substandard job managing the state's wastewater infrastructure overall, based on the evaluation of capacity, condition, funding, future need, operation and maintenance, public safety, resilience and innovation.

Stormwater Runoff and Combined Sewer Issues

Nonpoint pollution includes runoff from lawns, streets, parking lots, and other large paved or impervious surfaces (see also Protect Water Resources brief). In some areas of the state, stormwater runs directly into the sewer system and can overload the wastewater infrastructure and treatment plants during heavy rain or snow, causing untreated wastewater discharge into waterways, and flood streets, businesses and homes (see also Eliminate Combined Sewer Overflows brief, page 36).

Green Infrastructure

One way to manage stormwater to prevent it from entering a combined sewer system or pollute local waterways is to install green infrastructure. Green infrastructure uses vegetation, soils, and natural processes to manage water and create healthier environments by reducing polluted runoff, flooding, and adding green features to neighborhoods. Green infrastructure works by soaking up and storing water, and then slowly releasing it into the ground so it does not overwhelm the sewer system, and is filtered of pollutants.

Examples of green infrastructure include preserved natural areas (open space), rain barrels, bioswales, rain gardens, green roofs, permeable pavement, and tree plantings.

Primary Concerns:

- Lack of comprehensive assessment of condition of the wastewater system and treatment facilities and asset management
- Capacity of wastewater systems, including the need for analysis of future capacity needs at wastewater treatment plants
- Routine discharges of untreated sewage and polluted runoff from combined sewer systems
- Inadequate funding for capital improvements, maintenance and resiliency (cost estimates are in the billions)

[1] http://www.infrastructurereportcard.org/wp-content/uploads/2013/02/ASCE-Report-Card-for-NJ-Infrastructure-6.16.16.compressed.pdf

POLICY RECOMMENDATIONS:

1. Mandate the inclusion of green infrastructure in future water quality regulatory or permitting mechanisms, such as stormwater permits or Long Term Control Plans

2. Continue prioritization of Environmental Infrastructure Trust funds for green infrastructure, including the principle forgiveness for such loans

3. Require asset management of owner/operators of wastewater systems, including proactive management and maintenance of assets

4. Require improved future capacity analysis at wastewater treatment facilities, triggered when capacity reaches 80%

5. Develop more robust water conservation measures for existing and new development, to alleviate the pressure on aging wastewater infrastructure system

INCREASE RESILIENCY TO FLOODING

Background

The Jersey Shore has been a tourism magnet for more than 100 years. People vacation, live or retire to the many small coastal and bayside communities because of their waterfront location and easy access to recreation and other amenities. Some families have most of their wealth invested in Shore real estate and have built a culture and tradition around spending summers down the shore, while others come for shorter periods or their annual family vacation. Shore tourism generates more than $30 billion in annual revenue.

Superstorm Sandy in 2012 caused extensive damage from wind and flood waters and exposed extreme vulnerabilities in some communities at the Shore and elsewhere: Houses were washed away or so severely flooded they became structurally unsound; thousands of people were displaced, some permanently, and critical infrastructure such as power substations, rail stations and wastewater treatment plants were seriously damaged and knocked out of commission.

ALTHOUGH THIS WAS THE MOST SEVERE STORM TO HIT NEW JERSEY IN MANY DECADES, SIMILAR STORMS ARE MORE LIKELY BECAUSE OF CLIMATE CHANGE. REBUILDING IN PLACE WITHOUT ADDITIONAL RESILIENCY MEASURES MERELY SETS UP THE STATE FOR MORE DAMAGE THE NEXT TIME A SANDY-LEVEL STORM HITS.

Hurricanes and superstorms are not the only threat. The effects of climate change – rising seas and increasingly severe weather, including intense snowstorms and rainstorms that can cause significant and repetitive inland river flooding – mean that more properties (and by extension, the municipal tax base) and an ever-increasing number of residents are at risk, up and down the state. The cost of repeated recovery and rebuilding is not sustainable.

Building up our most vulnerable areas so 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:

- Insufficient funds are allocated to preparing for the next major weather event
- Rebuilding in high-risk locations is unsustainable
- Most current master plans at all levels of government do not include forward-looking climate data such as projected sea level rise
- Too many structures are located in flood prone areas
- Many small coastal communities do not have sufficient resources to adequately plan and implement resiliency measures

POLICY RECOMMENDATIONS:

1. Ensure sufficient funds and a mandate for severe weather event planning, at all levels of government

2. Require, and sufficiently fund, the inclusion of forward-looking climate data and a robust analysis of risk and vulnerability in all plans, at all levels, from municipal master plans to the State Plan, with guidance on projections for sea-level rise over time, and on time horizons for various types of planning (100 years for major infrastructure, for example)

3. Strengthen the state hazard-mitigation plan, which is due to be updated in 2019, by requiring greater integration and coordination with county plans that will help direct funding appropriately and reduce improper land use

4. Continue funding and educating the public about the benefits of the Blue Acres program that removes properties from flood-prone areas and returns the property to its natural state to better absorb floodwaters

5. Incentivize and streamline mechanisms for municipal consolidation, in particular for small coastal communities, to increase potential revenue for struggling areas

6. Establish a regional taxing and planning entity for the state's vulnerable coastal area, similar to the highly successful Meadowlands Commission, so that plans and investments specific to the region can be developed and coordinated in order to protect people and property and capitalize on the Shore as a remarkable cultural and tourism asset

MANAGE WATER CRISES

Background

New Jersey is experiencing twin water crises of flooding and drought. The state has too much water -- except when there isn't enough. Intense flash floods and increasingly frequent tropical storms, such as Sandy, Irene, and Floyd, are flooding the Garden State, while state declarations of drought watch are increasingly common, with two declared within 10 months of one another in 2015 and 2016. Groundwater sources that supply drinking water and feed streams are decreasing in both the Highlands and Pinelands, the two largest water reserves in the state. Moreover, New Jersey is failing to plan for drinking water, agricultural, and environmental needs amidst decreasing water availability. The Water Supply Master Plan is a long-range planning document designed to meet our water needs when there is fluctuation in rain and snowfall, but it has not been updated since 1996, in violation of the state Water Supply Management Act, which requires updates every five years.

Flooding

- **Land use:** New Jersey is the most densely populated state in the nation with a long history of development along our many waterways. Flooding is getting worse for two reasons: (1) expanding floodplains, and (2) climate change. New Jersey's floodplains are growing larger because of increased amount of impervious cover – such as roads, rooftops, and compacted lawns – that accompany traditional development. Impervious cover prevents rain from soaking into soil and quickly shuttles rainwater toward the nearest stream. The volume of storm water runoff is frequently so large that our streams are unable to accommodate the additional water, causing flooding in the roads, businesses, and basements that are closest to those streams
- **Inland**: New Jersey's land-use development practices have located people, businesses and industry close to rivers and streams. The growing width of floodplains because of the increases in impervious cover and stormwater runoff are placing more people and businesses at greater risk
- **Coastal**: The primary cause of increased coastal flooding in New Jersey is climate change. Climate change brings both sea level rise and more frequent and intense storms to the state's coast. Sea level rise is also drowning our salt marshes, especially along the southwestern portion of New Jersey known as the Delaware Bayshore. The salt marshes are the primary source of protection from flooding for local communities. These salt marshes are home to much of New Jersey's shellfish industry, and therefore intimately tied to our economy. Additionally, New Jersey's eastern shoreline along the Atlantic is significantly developed, adding significantly to the cost of recovering from severe weather events

Drought

- **Water Supply Master Plan:** The New Jersey Water Supply Management Act (WSMA) was adopted by the Legislature and signed into law in 1981. Among other requirements, it directs the Department of Environmental Protection (DEP) to develop a Water Supply Master Plan (WSMP) to ensure that the Garden State has enough clean water to meet all of its needs and update the plan at least every five years. The WSMP was last updated in 1996. The DEP continues to issue permits for water use, known as water allocation permits, based on the outdated WSMP. Independent analysis of New Jersey's major groundwater supplies show the amount of water is decreasing in the both the Highlands and the Pinelands, and both areas are showing

ecological stress due to decreasing amounts of water

Primary Concerns:

Flooding:

- Effects on public safety
- Property damage
- Infrastructure damage (washed out roads and bridges, damage to wastewater and drinking water treatment plants)
- Toxins left behind by polluted flood water
- Agricultural crop destruction
- Loss of wildlife habitat
- Amendments to the Flood Hazard Area Rules allowing more development in riparian areas (land alongside waterways) and floodplains

Drought:

- Ecological impacts of drying streams and wetlands (when healthy, these buffer against floods by absorbing water)
- Adverse effects on tourism and recreation (low stream flows lead to increased bacteria levels in swimming and boating areas)
- Agricultural crop destruction
- Negative effects on major businesses and industries such as pharmaceutical research, breweries and manufacturing

POLICY RECOMMENDATIONS:

FLOODING:

1. Revise DEP regulations regarding development
   - A. Require installation of green infrastructure in all redevelopment and new development
   - B. Reduce removal of beneficial stream bank vegetation that helps to stabilize soil
   - C. Prohibit any new development in floodplains – coastal and inland

2. Develop and implement a plan to better protect the New Jersey Shore from storms
   - A. Use a combination of hardscaping and green infrastructure including an integrated dune system
   - B. Prohibit new develop in coastal floodplains

3. Invest in research to support the growth of marshes in the Delaware Bayshore to prevent them from drowning and exasperating flooding and devastating the shellfish industry

4. Require improved future capacity analysis at wastewater treatment facilities, triggered when capacity reaches 80%

DROUGHT:

1. Update and revise the Water Supply Master Plan

2. Establish a public education program and implement it when a drought watch is declared

3. Evaluate water allocation and other regulations for opportunities to require efficiency
   - A. Fix leaking water distribution lines
   - B. Implement drip irrigation for agriculture

LAND

ACCELERATE LAND PRESERVATION

Background

New Jersey is a national leader in the preservation of open space, farmland, and historic sites. Roughly 1.2 million acres have been permanently preserved through federal, state, county, and local preservation programs. But, even with these successes, New Jersey is slated to be the first state to reach full build-out in 30 years, meaning there will be no more buildable vacant land.

Accordingly, the state has immediate preservation needs.

- The Highlands and Pinelands regions, which provide clean drinking water to more than 75% of the state, need to be permanently protected
- Access to parks in major urban centers remains a challenge, and several of our biggest cities have the fewest number people within walking distance of a park in the nation
- 350,000 acres of farmland preservation is needed to ensure a sustainable agricultural industry
- State inventories show more than $700 million in additional needs to preserve our cultural heritage
- Significant storm and seasonal flooding throughout the state and along the coast are evidence of the need to purchase flood-prone properties and return the lands to their natural state

New Jerseyans have consistently supported state funding for open space preservation at the ballot. In 2014, voters constitutionally dedicated a percentage of the Corporate Business Tax (CBT) to be used for land preservation, but it took nearly two more years for needed implementation legislation to be passed to guide the disbursement of the funds. The implementation bill will sunset in 2019. Regular, predictable, and reliable funding is key to ensuring successful preservation. State funding is a necessary starting point to leverage millions in additional funding from federal, county, municipal, nonprofit, and corporate entities. This funding mix is critical to sustainable preservation.

State Preservation Programs

- Green Acres: Established in 1961, Green Acres has helped preserve more than 650,000 acres of land, and provide more than 1,100 park development projects in all 21 counties
- Farmland Preservation: Established in 1983, it has preserved more than 200,000 acres
- New Jersey Historic Trust: Since 1990, more than $137 million has been invested in 734 historic sites
- Blue Acres: Established in 1995, Blue Acres has facilitated purchase of hundreds of flood-prone properties that helped families move to safer locations and decrease repeated home flooding

Benefits of Open Space

Preserving open space provides tremendous benefits, which increase quality-of-life and make New Jersey a better place to live, work, and raise a family. Natural areas, parks, farmland, and historic sites protect our state's finite natural resources. Open spaces are also responsible for improving public health, raising property values, preventing flooding, providing access to

locally grown fresh foods, and protecting water resources, wildlife habitats, and food supplies. Studies show that for every $1 invested in open space preservation, there is $10 return in the form of ecosystem services (such as water purification, waste treatment, and flood mitigation), natural goods (such as fish and farm products), and outdoor recreation. Restoration of historic sites creates more jobs than by new construction, often revitalizing urban neighborhoods and allowing us to preserve and in some cases, repurpose, our valuable history. Residences adjacent to parks and preserved open spaces have real estate values 15 to 20% higher than those a block or more away.

Primary Concerns:

- Lack of funding: Even with the 2014 ballot measure, state funds for preservation are less than half of what they were at their peak
- Periodic breaks in funding: Implementation language for the constitutional dedication took more than a year and a half to become law, stalling many projects while the money accrued in the treasury

POLICY RECOMMENDATIONS:

MAINTAIN OR INCREASE PRESERVATION FUNDING

1. Ensure no significant reductions in CBT funding to preservation

2. Increase or create a new dedication of an existing tax such as CBT or the sales tax

3. Encourage county and local government open space bonding programs

4. Encourage the state to continue efforts to secure federal dollars through the Land and Water Conservation Fund and the federal farm and ranchland protection program

5. Stop raids environmental programs through the general fund, and make up for past funding cuts

ENSURE CONSISTENT FUNDING

1. Begin evaluations of Open Space, Farmland, and Historic Preservation programs early to avoid breaks in funding when implementation sunsets

2. Create a long-term plan for funding and program evaluation

PRESERVE HABITAT, WILDLIFE, AND NATURAL AREAS

Background

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 our 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 is apparent in all reaches of the state, even urban areas, and our 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 Atlantic coast barrier island dunes and bays.

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. Most of these landscapes would benefit from restoration that addresses past and ongoing human impacts. New Jersey is home to about 2,100 known native plant species, 415 species of breeding land and freshwater birds, mammals, fish, amphibians, and reptiles, 500 species of migratory birds, marine mammals, and marine fish, and tens of thousands of invertebrate species. One and a half million shorebirds and as many as 80,000 raptors make migratory stopovers in New Jersey each year. Of the terrestrial and freshwater vertebrate species, approximately 30% of New Jersey's plants and animals are considered rare (species of conservation concern) because of declines in their populations, and 16% are listed as state threatened or endangered.

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 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 29,000 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 Department of Environmental Protection, there are designated "natural areas." Today, the natural areas system consists of 43 designated natural areas encompassing almost 40,000 acres, and 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.

The natural areas system and the Natural Lands Trust have seen declining staffing resources as well as a largely dormant governance, resulting in less preserved natural area 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 to protect habitat and natural landscapes. Through the use of the science-based Landscape Map, land can be evaluated based upon the likelihood of presence of species with a goal toward connecting landscapes to create corridors for wildlife. This also creates transparency and predictability in planning and development in the protection vital wildlife. Finally, the management of wildlife is critically underfunded. Relying heavily on federal funds from the State and Tribal Wildlife Grant program, the Endangered and Non-Game Species program manages New Jersey's many wildlife and bird species with limited staffing and support.

Primary Concerns:

- Continued loss of natural lands that sustain a rich diversity of flora and fauna and the water supply, and which are essential to residents' quality of life and the tourism industry
- Lack of funding for wildlife management including research, monitoring, and restoration
- Declining populations of rare plant and animal species from a variety of human stressors including development, lack of comprehensive management of public lands, an overabundant deer population, advancement of invasive species, rising sea level, storm surges, and shoreline erosion
- Damage from illegal off-road vehicle traffic on public lands, which is increasing, to the detriment of important habitats

POLICY RECOMMENDATIONS:

1. Increase preservation and stewardship of natural lands through the state Green Acres program, focusing on restoring and enhancing connectivity between the large preserves
2. Increase resources for the DEP Natural Heritage program to support identification, research and protection of rare plants and animals
3. Increase funding for the Endangered and Non-Game Species program
4. Revitalize and expand of state's natural areas system and council
5. Institute landscape-scale planning for state lands that consider and protect the range of natural resource values, and continue to expand coordination among state agencies
6. Increase enforcement against illegal off-road vehicles on public lands

PROVIDE ACCESS TO PARKS AND PUBLIC LANDS

Background

Easy access to parks and public lands, especially parks and shores, ideally within walking distance, is the number one factor to increasing levels of physical activity in children and adults. Providing safe, well-maintained and aesthetically appealing parks is critical to the physical and mental benefits that will have a lasting impact on public health.

Urban Areas

Many of urban areas are shamefully short of parkland. For example, the Ironbound section of Newark is home to 50,000 residents, more than 10,000 of whom are children, but it has just 44 acres of parkland and even less – just 24.81 acres – that are usable to local families. The National Recreation and Park Association recommends 6.5 to 10 acres of parkland per 1,000 residents; the Ironbound has a half-acre per 1,000 residents.

TAKEN TOGETHER, THE CITY OF NEWARK HAS 3.69 ACRES OF PARKS PER 1,000 RESIDENTS, WELL BELOW THE NATIONAL AVERAGE.

New York City, by comparison, has 7.17 acres of parkland per 1,000 residents, which is about average among larger U.S. cities.

Tidal Waterways and Shorelines

Access to tidal waterways and their shores is required as part of the Public Trust Doctrine.

Rules adopted by the state Department of Environmental Protection (DEP) have rolled back public access requirements and ceded oversight of public access to municipalities. The state Legislature continues to work on the issue; a recently introduced bill would codify the Public Trust Doctrine into law and provide clear guidance to DEP on implementation.

Primary Concerns:

- Disparity in access to parkland between urban and non-urban areas
- Limited access to waterways, especially the Atlantic Ocean, due to the lack of enforcement and misinterpretation of the Public Trust Doctrine

POLICY RECOMMENDATIONS:

1. Ensure continued funding for Green Acres, Farmland Preservation, and Blue Acres programs

2. Prioritize funding for parks development projects in under-served areas that lack adequate green spaces

3. Work with the Legislature and stakeholders to craft and pass comprehensive public access legislation that provides for equity to our state's shores no matter the location

4. Require Shore towns to provide parking, bathrooms, perpendicular access and affordable beach fees

5. Require off-site mitigation when on-site access to beaches is not feasible

CREATE MORE URBAN PARKS

Background

City parks and other urban green spaces improve physical and psychological health, strengthen communities and make cities and neighborhoods more attractive places to live and work. New Jersey is the most densely populated state, with current density estimated at more than 1,200 people per square mile. Many urban areas support more than 10,000 people per square mile. This population density increases our need for parkland in cities.

American adults and children rarely engage in the recommended levels of physical activity needed for a healthy lifestyle. A sedentary lifestyle contributes to obesity and related diseases such as high blood pressure, diabetes, congestive heart failure and stroke. The epidemic of inactivity is partially due to car-based development patterns as well as inadequate access to parks and open space. 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.

Urban 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 with their community, 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. Nature provides a natural calming – a respite from stress filled lives. Additionally, living adjacent to natural areas tends to boost property values.

Polluted and Abandoned Sites

Abandoned or contaminated properties are often a detriment to our urban communities. These sites, typically located in older urban areas and along waterways, are prime opportunities for new parks, which can connect people to the environment and increase the livability and economic vitality of a neighborhood.

Green Infrastructure

Older cities in New Jersey were built with significant impervious cover, which contributes to local flooding and polluted runoff into waterways (See Protect Clean Drinking Water brief, page 24). When old combined sewer systems (CSOs) are in use, stormwater outflows can lead to significant health hazards and environmental impacts. Incorporating green infrastructure into new or existing parks can reduce these incidents and make these neighborhoods better places to live. Sea level rise must be considered along waterways and low-lying areas (see Improve Wastewater Infrastructure Management brief, page 38).

Primary Concerns:

- Many people lack access to parks and recreation facilities within walking distance of their homes
- Insufficient parks and greenways exist, limiting walkable transportation corridors that encourage healthier lifestyles, which is especially pressing in urban and low-income areas where transportation options are limited
- Brownfields and blighted urban properties are a drain on communities
- Impervious surfaces and lack of green infrastructure increase polluted stormwater runoff and potential for flooding

POLICY RECOMMENDATIONS:

1. Prioritize funding for remediation and park development in urban areas that are disproportionately affected by contamination

2. Use funds from Natural Resource Damage settlements to expand park and urban green space development in polluted areas

3. Establish properties with statewide significance in urban areas as state parks in order to provide more equitable access to state parks for all residents

4. Restore and increase funding for brownfield assessment and remediation

5. Increase grant funding for the development of green infrastructure in cities with CSOs

CONTROL ENERGY INFRASTRUCTURE SPRAWL

Background

For decades, New Jersey has been on the forefront of land use issues. In 1985, in response to suburban sprawl resulting from widespread automobile use – which was destroying thousands of acres of prime farmland and forest habitat – the New Jersey Legislature enacted the State Planning Act and adopted a State Plan to manage land use and infrastructure. These actions, coupled with changing demographics, helped abate some of the intense pressure on farms and forests from suburban sprawl. A new form of sprawl has taken root, however: fossil fuel pipelines, natural gas compressor stations, high-tension transmission lines, retrofitted generating plants for natural gas, and solar facilities on prime farmland and forests rather than rooftops, warehouses, brownfields, and parking lots.

New Jersey has no planning mechanism in place to deal with energy infrastructure sprawl. These projects are being proposed and reviewed in a vacuum, without the benefit of a long-term plan to assess their need or address the many issues they present.

While New Jersey's energy master plan acknowledges a mandate to reduce greenhouse gas (GHG) emissions by 2050, it provides no plan to reduce the use of fossil fuels necessary to achieve that goal. In 2015, New Jersey's electricity was generated from a combination of coal-fired plants (2%), natural gas-fired plants (50%), renewable energy (2%), and nuclear plants (46%). As a result, greenhouse gas emissions rose 17%, largely due to increased emissions from gas-fired power plants. This increase continues the state down a path inconsistent with our adopted emissions targets, and cannot be maintained if we hope to achieve those goals.

Approval Process for Energy Infrastructure

Multiple agencies are responsible for partial reviews; coordination between the agencies is lacking. The Board of Public Utilities (BPU) reviews pipeline projects that fall within the state's borders. The Federal Energy Regulatory Commission (FERC) reviews natural gas pipeline projects that cross state lines. Most of the state's local land use regulations can be overridden by FERC. Oil pipelines are not subject to FERC review, but rather to state and local regulation. The Department of Environmental Protection (DEP) has permitting review over the environmental impacts of these often poorly planned and duplicative energy infrastructure projects.

Environmental Impacts of Energy Infrastructure Sprawl

Many of the proposed pipeline routes would traverse preserved lands, including farms and forests. Examples include the proposed PennEast pipeline, which would cross 4,300 acres of preserved farms and forests, and two pipelines proposed in the Pinelands, which threaten the integrity of the Pinelands Comprehensive Management Plan. These projects can cause irreparable damage by crossing pristine waterways and disturbing habitats and ecosystems.

Primary Concerns:

- Energy infrastructure sprawl directly contradicts renewable energy goals
- Highly flawed regulatory and approval processes
- Irreversible environmental damage from expansion of fossil fuel infrastructure
- Irresponsible development of renewable energy that unnecessarily sacrifices open space

POLICY RECOMMENDATIONS:

1. Place a moratorium on new fossil fuel energy infrastructure until a comprehensive energy plan is developed

2. Implement a clean energy planning process that establishes enforceable greenhouse gas emissions targets by sector with intermittent benchmarks and a final requirement of at least 80% renewable energy by 2050, consistent with the energy master plan and Global Warming Response Act

3. Require DEP to limit and control irresponsible energy infrastructure expansion through its existing authority to issue permits for such projects, including those authorized by the FERC by denying permits for projects that do not provide public benefit or for which alternatives would result in less environmental impacts

4. Protect preserved lands from private industrial projects

5. Enforce policies for renewable energy projects and facilities to avoid damage in critical environmental areas and ensure that they are in appropriate locations

PRIORITIZE STEWARDSHIP

Background

New Jersey is a national leader in land preservation with 1.2 million acres of permanently preserved land. While emphasizing protecting land in the most densely populated state is critical for New Jersey's future, stewardship of already-preserved lands is an equally important, though often overlooked and underfunded, component of the long-term preservation process.

Stewardship is defined in legislation as: "an activity, which is beyond routine operations and maintenance, undertaken by a government unit, or a qualifying tax exempt nonprofit organization to repair, or restore lands acquired or developed for recreation and conservation purposes for the purpose of enhancing or protecting those lands for recreation and conservation purposes."

Stewardship can be an ongoing effort or distinct project intended to enhance, restore, or maintain natural, recreational, or historic resources on previously preserved lands. Stewardship funding is not intended to be used for salaries or administration, but rather for materials and project-related labor.

Examples of stewardship projects include, but are not limited to:

- Climate adaptation
- Park upgrades to enhance visitor experiences and/or protect natural resources
- Plant, animal, wetland, or habitat protection, recovery, and restoration
- Forest management
- Improve access to recreational areas
- Repair damage through soil and water conservation projects
- Monitoring and planning

Stewardship is essential to ensuring the full benefits of land preservation are realized in the long run. Acquisition of land is a critical first step in protecting New Jersey's natural resources for future generations, but lands that are preserved and not properly stewarded have the potential to deteriorate. Although, the property may be safe from development, acquisition does not ensure that the property will continue to provide the benefits for which it was acquired. Threats to preserved lands include a changing climate, invasive species, pollution, an overabundance of deer, and damage from the illegal use of vehicles. Any one or combination of these threats can result in a significant decrease in the societal benefits of preserved land, especially in the long term; the best way to ensure maximum return on the investment in acquisition is through stewardship.

State Stewardship

The Department of Environmental Protection (DEP) is the state's largest manager of preserved lands, forests, and parks. The DEP is responsible for managing hundreds of thousands of acres of land, well-visited parks, and ecologically valuable forests, as well as managing, preserving, and protecting more than 500 species of wildlife and fish. Over the past 10 years, the DEP budget has undergone significant reductions, gravely impacting its ability to properly steward many state lands and resources. The DEP is dangerously understaffed and has seen personnel decreases from a height of 4,000

employees 10 years ago to the current 2,800 employees. Because permitting and enforcement are given priority, a disproportionate number of the reductions have affected staff that perform stewardship activities.

County, Local, and Nonprofit Stewardship

State budgetary concerns are mirrored at the county and local government levels as increased stewardship burdens, rapidly increasing costs, limited resources, and staff shortages impact the ability of these agencies to properly steward preserved lands and parks. Given these constraints, nonprofits can be a critical partner in stewardship projects by bringing professional staff, volunteers, and an ability to leverage private funding. Additionally, nonprofits have the ability to undertake projects without the constraints of bureaucratic red tape.

Primary Concerns:

- Limited funding allocated to stewardship projects
- Decreases in DEP budgets and personnel responsible for stewardship
- Lack of comprehensive stewardship planning

POLICY RECOMMENDATIONS:

1. Increase budgetary support for DEP and allocate more money to staffing at DEP, particularly in the divisions of Parks and Forestry and Fish and Wildlife

2. Increase funding for stewardship-related expenditures such as planning, monitoring, research, and restoration

3. Institute long-term landscape planning for stewardship on all publicly owned parks, wildlife management areas, natural areas, and forests

4. Establish and fully fund implementation of the State Forest Action Plan and State Wildlife Action Plan, and meet federal matching requirements for State Wildlife Grants to steward wildlife

5. Address critical backlog of capital park improvements at the state, county, and local levels through planning and increased funding

6. Adopt a comprehensive, scientifically based plan for controlling motor vehicle use on state lands to protect natural areas and the rights of non-motorized recreational users

7. Inventory, map, record, monitor and enforce conservation easements to ensure natural resources are permanently protected

PROTECT THE DELAWARE RIVER WATERSHED

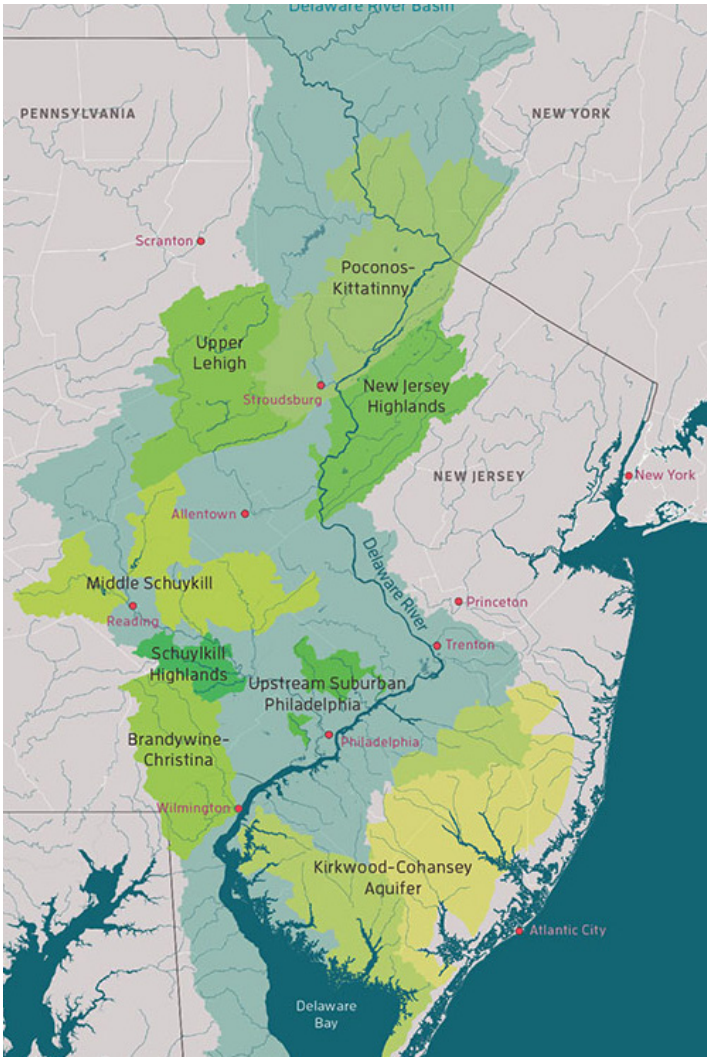
Background

The Delaware River Watershed provides drinking water to 16 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. Notably, 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.

As the longest undammed river east of the Mississippi, the Delaware River provides habitat for more 200 resident and migratory fish species, hosts significant recreational fishers, and 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. Recently, the U.S. Geological Survey's Water Census identified the Delaware River Watershed as one of three areas of national focus.



Primary Concerns:

- Water quality and quantity issues resulting from increased development
  - Increased pollution runoff
  - Higher demand for water from residents and industry leading to greater withdraws
- Flooding issues that are becoming more prevalent and economically costly with increased development in and around the floodplain
- Rollbacks of state regulations such as the Flood Hazard Area Rules that encourage even greater levels of development leading to both flooding and water quality and quantity issues

POLICY RECOMMENDATIONS:

1. Fund and incentivize land preservation projects within the watershed

2. Reverse the rollbacks of regulations by the current administration in Trenton, especially the Flood Hazard Areas Rules

3. Support policies that encourage the protection of the Highlands and Pinelands regions, and uphold the integrity of the Highlands Council and Pinelands Commission

4. Fully fund state share of the Delaware River Basin Commission (DRBC), which regulates the four-state river

SUPPORT THE NEW JERSEY HIGHLANDS

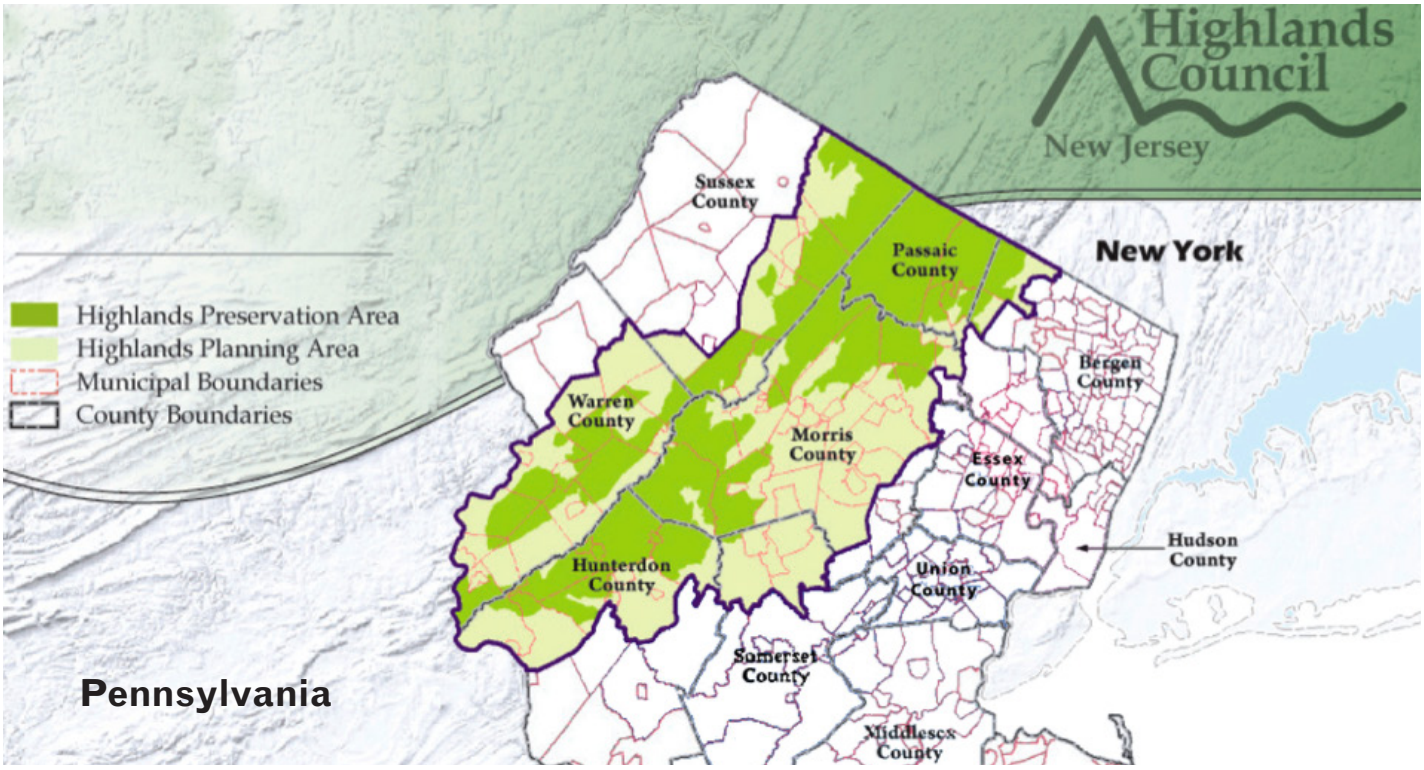
Background

The Highlands is a physiographic province that stretches from western Connecticut to east central Pennsylvania. The New Jersey portion of the Highlands encompasses 88 municipalities in seven counties. In 2004, the Highlands Water Protection and Planning Act was passed to protect the Highlands from the piecemeal development patterns that were consuming 5 square miles of Highlands forests and wetlands each year.

The Highlands is as important to the water supply of New Jersey as the Catskills region is to New York City. The Highlands is the source of drinking water for more than 6.2 million people, which is more than 70% of the state's population. Additionally, the Highlands provides water to a large portion of New Jersey's pharmaceutical, manufacturing, and food and beverage industries. For example, the Anheuser Busch InBev bottling plant next to Newark Liberty International Airport uses as much Highlands water per day as the City of Bayonne. Even with New Jersey's large population and demand for water, the cost of water in New Jersey is the fourth lowest in the country, largely due to the purification function that the Highlands forests provide naturally and for free.

Highlands Preservation and Planning Areas

By statute, the Highlands region is divided into two distinct areas: The Preservation Area, which came under the strict land-use regulations of the New Jersey Department of Environmental Protection with passage of the Highlands Act; and the Planning Area, which balances growth and development with capacity-based water-resource protection 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; 47 are split between Preservation and Planning Areas.

Highlands Regional Master Plan

The Highlands Regional Master Plan (RMP) was adopted by the Highlands Council in 2008. The goal of the RMP is to protect and enhance the value of the resources in the entire Highlands region. Although towns in the Preservation Area are required to adhere to the RMP, municipalities in the planning region have no such requirement. The voluntary conformance to the plan is critical, though, for its success, and many municipalities have conformed.

Primary Concerns:

- Diminished independence of the Highlands Council
  - Recent appointees, including the chairman, have been motivated to advance a development agenda that is at odds with the RMP and have no specialized knowledge of the Highlands
  - The Council lacks any initiative to promote municipal conformance to the RMP
- Rollbacks of state regulations that affect the Highlands including
  - Septic Density Regulations for the Highlands
  - Flood Hazard Area Rules
- Outside pressure discouraging towns in the planning area from voluntarily adhering to the RMP

POLICY RECOMMENDATIONS:

REGULATIONS:

1. Reverse the rollback of regulations by the last administration, especially the Septic Density Regulations for the Highlands and Flood Hazard Rules, which severely threatens water quality

2. Work with stakeholders on any new rule amendments

HIGHLANDS COUNCIL:

1. Appoint commissioners and staff to the Highlands Council who believe in the mission of the Highlands Act and the RMP. All current members' tenures have expired so the next governor will have the ability to influence the effectiveness and quality of the council for years to come

2. Restore the independence of the Highlands Council by allowing members to vote without fear of retribution

3. Support the RMP to encourage municipalities in the planning area to voluntarily conform

SUSTAIN THE PINELANDS

Background

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 protecting 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 U.S. Department of Agriculture identified the Pinelands watershed as one of the northeastern United States' 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 (CMP) 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 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 U.S. Secretary of the Interior.

Primary Concerns:

- Diminished independence of the Pinelands Commission. Recent appointees have been predisposed to advance a development agenda and have no special knowledge of the Pinelands
- Circumvention of agency review and approval for compliance with the CMP on recent energy infrastructure projects
- Contamination of the aquifer from increased development leading to increased levels of nitrogen from lawn and farm stormwater runoff
- Increased demand for clean water is resulting in saltwater intrusion into the aquifers, periodic water supply crises, and drying out of wetlands, streams and ponds
- Destruction of public lands and habitats by illegal, but nearly unregulated, off-road vehicle and truck traffic in regulated areas

POLICY RECOMMENDATIONS:

PINELANDS COMMISSION:

1. Appoint commissioners and staff to the Pinelands Commission who believe in the mission of the agency and consistent implementation of the CMP

2. Restore the independence of the Pinelands Commission by allowing members to vote without fear of retribution

3. Support changes to the CMP to ensure that infrastructure projects are properly reviewed by the Pinelands Commission before they can move forward

WATER QUANTITY AND QUALITY:

1. Implement new storm water control regulations that require methods to mitigate pollution by removing nitrogen before it enters ground and surface waters

2. Expand stream buffer requirements for new construction and public facilities

3. Revise CMP to better protect high-quality habitats from future development

4. Employ comprehensive planning for the location and volume of wells serving current and future needs

5. Reform regulations to bar new or increased withdrawals in locations that harm wetland and stream ecosystems, and require water conservation actions that offset new or increased withdrawals

6. Promote infrastructure planning and repairs to eliminate water lost from public supply systems

7. Establish new rules requiring water protection measures in site preparation and design of new construction

STEWARDSHIP OF PUBLIC LANDS:

1. Adopt a comprehensive, scientifically based plan for controlling motor vehicle use on state lands to protect natural areas and the rights of non-motorized recreational users

2. Authorize state parks and forests superintendents to block motorized vehicle access to wetlands and streams

3. Launch a sustained public communications and enforcement initiative to change the expectations of those doing the damage and engage the broader public in enjoying state lands through low-impact recreation

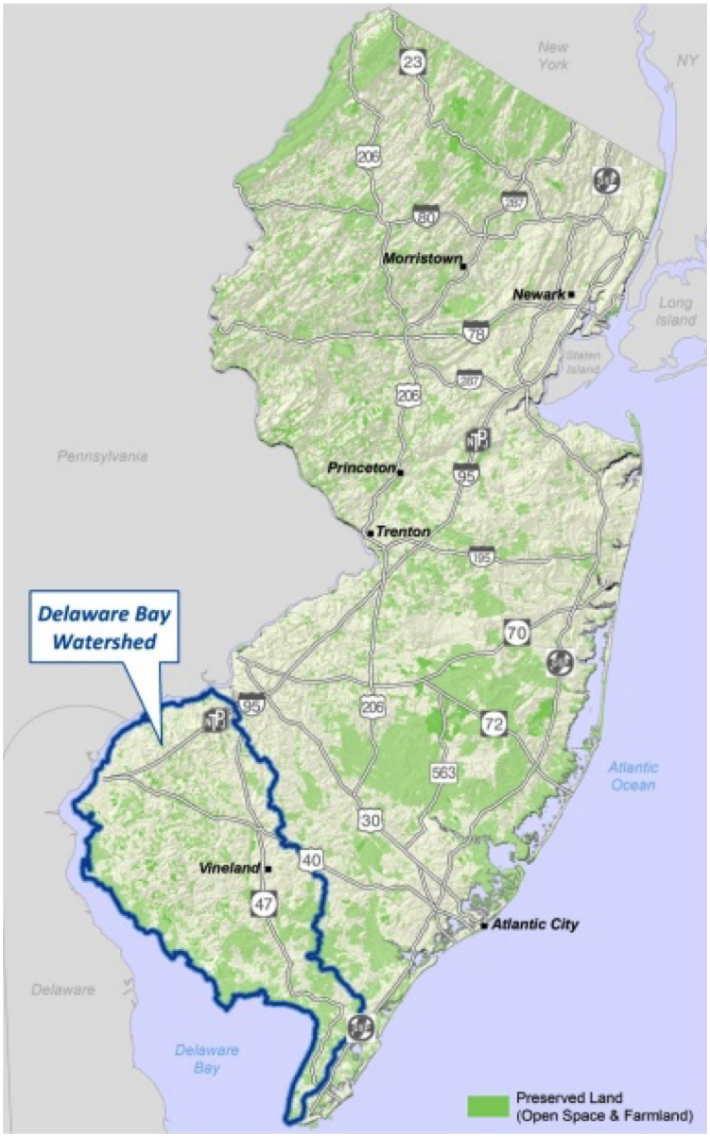
SAFEGUARD THE DELAWARE BAY WATERSHED

Background

At about 1,200 square miles, the greater Delaware Bay Watershed sits on the southwestern coast of New Jersey covering an area roughly from Woodbury in Gloucester County to Cape May Point. The Delaware Bay Watershed is equally recognized for its highly productive farmland, rich biological diversity, and maritime heritage.

The region is a complex patchwork of tidal rivers, salt marshes, forests, farms, towns and small cities. The character of the region changes dramatically from north to south. The northernmost reach is dominated by densely populated suburbs of Philadelphia and Wilmington, DE. Moving south, the landscape gives way to New Jersey's largest and most productive farm belt, covering nearly 500 square miles in southern Gloucester County, most of Salem County and the western part of Cumberland County. Further along, the cities of Bridgeton, Vineland, and Millville are among the region's fastest growing. The nearby Cumberland County coastline supports commercial crabbing, oystering and other fishing. The southernmost part of the watershed overlaps with 150 miles of the Pinelands National Reserve. The Delaware Bayshore is recognized for its importance to migratory waterfowl, songbirds, and shorebirds. The watershed is also home to four National Wild and Scenic Rivers.

Protection of the diverse culture and the environmental characteristics of the Delaware Bay region depend heavily on proper planning and land preservation initiatives that work to protect water quality and habitats, an especially difficult task in this economically disadvantaged region.



Although much of the region is rural, the need to maintain municipal revenue has led to resistance to permanently protecting land. As a result, many lands are not protected, which increases the chances that irresponsible development will occur, harming the region's ecological features. Even more troubling, publicly preserved lands, such as those in Millville City, face the threat of private development by municipal governments seeking ratables. Additionally, some have improperly located solar arrays – by deforesting areas to clear the way for installation. Even though increasing renewable energy production is a positive goal, not if it comes at the expense of clean water and habitat protection, especially in a region so heavily dependent on the river and bay for its economy and identity.

Primary Concerns:

- Water quality
- Limited open space and farmland preservation exacerbated by resistance from municipalities
- Health of wildlife such as shorebirds, horseshoe crabs, and fish that help to drive much of the economy in the region
- Diversion of public preserved lands for development
- Improper use of preserved land for development of renewable energy infrastructure

POLICY RECOMMENDATIONS:

1. Encourage preservation efforts, which will help to protect water quality, by restoring the Payment In Lieu of Taxes (PILOT) program to help struggling municipalities deal with the loss of ratables

2. Protect the most critically important habitats for shorebirds such as the endangered red knot while encouraging sustainable oyster aquaculture

3. Prevent any diversions of public lands for private development

4. Uphold restrictions on use of preserved lands to uphold their integrity

RESTORE RARITAN BAY

Background

The Raritan Bay is an untapped New Jersey resource; its economic and recreational potential limited by poor water quality. Since the 1970s – thanks to the Clean Water Act and the work of dedicated advocates – 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.
In the late 1800's, 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.

People think of the Jersey Shore as ending at Sandy Hook, but, in fact, it extends to Perth Amboy. Thus, Raritan Bay is the backyard for millions of people, providing recreational activities such as fishing, boating, kayaking, crabbing, swimming, and bird watching.

Primary Concerns:

- Overall water quality in the bay
- Insufficient restrictions on new pollution
- Combined Sewer Overflows (CSOs) discharge raw sewage into the water during times of heavy precipitation
- Lack of regular quality testing
- Unsafe conditions for recreational use

POLICY RECOMMENDATIONS:

1. Replace CSOs that discharge raw sewage directly into the water
2. Request that the Environmental Protection Agency designate the Raritan Bay as a No Discharge Zone (NDZ) to prevent vessels from discharging sewage
3. Preserve land along the shoreline of and the tributaries to the Raritan Bay; and restore existing natural areas to reduce flooding and filter water before it enters the bay and its tributaries
4. Improve stormwater management with a goal of zero run-off into Raritan Bay
5. Revive oyster-related research and restoration to act as a natural water filter
6. Designate beaches along the Raritan Bayshore as bathing beaches and perform regular, protective water quality testing and timely notification of water quality that creates health risks
7. 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

ENCOURAGE FARMLAND PRESERVATION

Background

The state Farmland Preservation Program has protected more than 200,000 acres of important agricultural lands – an impressive accomplishment for such a small and densely populated state. Large concentrations of preserved farmland are needed to support the growing demand for local food and to support New Jersey's significant agricultural industry. Preserved farms also play a significant role in protecting the state's water supply and wildlife habitat, combatting climate change by sequestering carbon, and as part of the state's interconnected system of preserved lands that provide a host of public benefits, such as higher real estate values and greater quality of life.

THE FARMLAND PRESERVATION PROGRAM RETAINS AGRICULTURE AS AN INDUSTRY, SAVES LAND FROM RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DEVELOPMENT, AND PROTECTS NATURAL RESOURCES TO MAINTAIN THE RURAL, HISTORIC, AND SCENIC CHARACTER OF THE LANDSCAPE.

Additionally, promoting sustainable agriculture that works in harmony with natural systems benefits New Jersey residents by offering healthy food choices and a cleaner environment.

Protecting Farmland Integrity

The state should uphold the integrity of farmland preservation restrictions regarding non-agricultural development. In recent years, there have been multiple proposals to allow more non-agricultural uses on preserved farms. Proposals have included commercial-scale energy generation facilities, cell towers, and other businesses with parking areas and other infrastructure that would erode the land that has been preserved for agriculture.

Additionally, with the growing demand for locally grown food, protecting high-quality soil ensures that preserved farmland in New Jersey continues to produce crops. Limiting the amount of building and other impervious coverage that can damage soil is an important step to meeting that objective.

Federal Conservation Resources

The Natural Resources Conservation Service (NRCS) in the U.S. Department of Agriculture offers a variety of conservation programs that protect land and promote more sustainable farming and land stewardship. One of those programs in particular, the Agriculture Conservation Easement Program, provides critical preservation resources complimentary to the state Farmland Preservation Program. Federal funds from that program have been

used to preserve thousands of acres of farmland in New Jersey, often in partnership with nonprofit organizations. Other important NRCS conservation programs help New Jersey landowners adopt and implement conservation practices on agricultural properties, including protecting grasslands, transitioning land to organic production, and installing buffers to wetlands.

Access to Farmland

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 farmers, particularly young and beginning farmers. The state Agriculture Development Committee works to address this challenge through its LandLink program, which connects farmers with landowners interested in leasing or selling farmland. There is renewed momentum for this program, which needs additional resources to meet demand.

Primary Concerns:

- Improper use of preserved farmland that threatens soil quality and does not conform to the definition of agricultural work
- Ensuring farmland preservation is adequately funded through federal, state, and local programs
- Land costs can be prohibitive to aspiring farmers

POLICY RECOMMENDATIONS:

1. Ensure that New Jersey maximizes federal funding opportunities from the NRCS
2. Uphold policies that limit non-agricultural commercial development on preserved farms
3. Institute further incentives for natural resources protections
4. Place and enforce limitations on buildings and other impervious surfaces on preserved farms
5. Grow and promote New Jersey's LandLink program that connects young and beginning farmers with landowners interested in selling or leasing land for agriculture

INVEST IN STATE PARKS

Background

Millions of people visit New Jersey's vast and varied state parks every year to hike, bike, fish, and swim. Others, however, overlook this amazing resource in the nation's most densely populated, highly developed state. While New Jersey has a rich history of protecting, growing and stewarding its network of public natural lands, in recent years, state support has dwindled.

Economic Benefit of Parks

Annually, 52% of New Jersey residents participate in outdoor recreation, spending almost $18 billion, which directly supports a $6 billion payroll for 158,000 New Jersey jobs.[1] Accordingly, parks are an important part of New Jersey's economy and account for roughly 3% of the state's GDP.[2] Parks increase tourism, as well as the quality-of-life attributes critical to attracting and retaining high-quality jobs. Unfortunately, the qualities that attract people to parks, and ultimately New Jersey,

[1] https://outdoorindustry.org/images/ore_reports/NJ-newjersey-outdoorrecreationeconomy-oia.pdf
[2] https://www.bea.gov/regional/bearfacts/pdf.cfm?fips=34000&areatype=STATE&geotype=3

are deteriorating due to lack of resources to manage and maintain existing open spaces.

Decrease in Parks Budget

Over the past decade, financial support for environmental programs, including state parks, has declined significantly. Without financial support, state parks have been forced to lay off staff and reduce services such as educational and interpretative programs, park police, and natural resource management. The effect of these reductions is evident across the state. State park agencies have become more reluctant to acquire new land – and are passing on that responsibility to other state agencies and private entities.

In the most densely populated state, state parks are especially important. It's a problem for park budgets to be decreasing while the amount of parkland increases. Previously, each park had multiple staff members; now one staff member could be managing multiple parks. This level of staffing is inadequate, and cannot be sustained.

State parks are a haven for the public, and for the countless threatened and endangered species that also rely on them. Unfortunately, in recent years, these precious natural and cultural areas have succumbed to neglect, becoming overrun with litter, graffiti, and invasive species.

Primary Concerns:

- Parks are being neglected at the state level and inadequate resources are made available to state workers to steward our public resources
- Funding for capital improvements has declined, making maintenance of older structures more challenging

POLICY RECOMMENDATIONS:

1. Restore state park budgets to a level that allows personnel to steward public lands
2. Evaluate and adjust entrance fee structure
3. Address "excess receipts" policy, which requires state parks to "pay back" funds they are allocated from the state general fund
4. Pass additional bonding to specifically support park budgets
5. Secure federal funding through the Land and Water Conservation Fund
6. Ensure no additional reductions for state parks in the general budget

CONTINUE NEW JERSEY REGIONAL PLANNING PROTECTIONS

Background

The regional planning authority that would become the Meadowlands Commission was established in 1969 to reverse the damage of more than a century of uncontrolled industrial development, fill operations, and solid waste dumping that obliterated a once vibrant natural landscape of cedar swamp and salt marsh, leaving it a toxic wasteland. Nine years later, the Pinelands Commission was established to protect the largest fresh water aquifer on the east coast. In 2004, the Highlands Act was passed to protect the drinking water resources that 70% of the state's population depend on today.

THE THREE REGIONAL PLANNING ENTITIES ENTRUSTED TO REGULATE AND PROTECT LAND USE WITHIN THEIR RESPECTIVE REGIONS HAVE MADE GREAT STRIDES.

State government, however, has been detrimental to the regional planning mission. Failing to adopt the State Development and Redevelopment Plan and release the long-overdue Water Supply Plan, while trying to weaken Water Quality Management Plan rules, all undermine the authority of regional planning efforts.

The Meadowlands Commission

In 2014, the Meadowlands Commission was dissolved; its assets and operations were folded into the New Jersey Sports and Exposition Authority (NJSEA). The NJSEA, with no expertise in regional planning or water resource policy and science, is implementing the regional planning regulations under NJAC 19-4-7. The Meadowlands Regional Master Plan is about to expire and NJSEA will be required to draft a new master plan.

The Pinelands Commission

Under the current administration, the integrity and independence of the Pinelands Commission has been under attack. In 2014, South Jersey Gas did not get the required eight affirmative votes from the Pinelands Commission to build a new pipeline; the commission found that the project violated the Comprehensive Management Plan. Soon after the vote, Gov. Christie replaced a respected member of the commission who voted against the pipeline, and reassigned the chairman, who also voted against the project. In February, 2017 the Commission approved the same pipeline with nine votes.

The Highlands Council

Political appointments have interfered with the effectiveness of the council throughout the Christie administration, starting with three

highly controversial appointments in 2011. Because of this political turmoil, conformance to the Highlands Regional Master Plan—the mechanism to achieve the Highlands Act's planning goals – has effectively been halted. In 2016, the state Department of Environmental Protection proposed significantly weakening septic density provisions, allowing more development, which is inconsistent with the intent of the 2004 Highlands Act aimed at protecting regional water resources.

Primary Concerns:

- Political interference in regional planning issues
- Politicization of commission and council appointments
- Lack of funding to county and local planning boards
- Lack of substantive expertise by commissioners and staff
- Consolidation of planning organizations

POLICY RECOMMENDATIONS:

MEADOWLANDS COMMISSION/NJSEA:

1. Include new members on the NJSEA with experience in regional planning, water resource science and policy, or ecological science

2. Re-establish an independent authority or sub-commission to oversee the continued implementation of the regulations under NJAC 19-3-7 and the master plan

HIGHLANDS COUNCIL AND PINELANDS COMMISSION :

1. Restore independence of the Pinelands Commission and Highlands Council by allowing members to vote without fear of retribution or replacement

2. Appoint qualified commissioners and staff who believe in the mission of protecting the Highlands and Pinelands

PROMOTE SMART GROWTH

Background

Until the 1950s, growth in New Jersey was concentrated in urban areas and older suburbs, characterized by good transit infrastructure and traditional Main Street design. Then the triple phenomena of a new highway network, access to inexpensive land and new housing, and single-use local zoning led to a boom in large-scale suburban residential development, followed closely by growth in suburban employment.

This shift in growth patterns resulted in older cities and suburbs, where infrastructure was already in place, being abandoned as residents left. Jobs and housing grew farther apart, which created road congestion in all directions as commuting volume and distance grew.

Recently though, demand has increased for urban living, with smaller, denser housing and walkable communities that provide multiple amenities and employment in close proximity, particularly among the two largest population cohorts: millennials and baby boomers. Current government planning, investment, and tax policies are not designed to support this shift and, in some cases, create impediments.

Government can play an important role in taking advantage of the recent population shift back to cities by encouraging smart or center-based growth.

Benefits of Smart Growth

The federal Environmental Protection Agency defines smart growth as "a range of development and conservation strategies that help protect our health and natural environment and make our communities more attractive, economically stronger, and more socially diverse." By taking advantage of existing infrastructure, such as transit stations, smart growth aims to create mixed-use (residential and commercial) development that encourages sustainable local economies, higher population densities, and a lifestyle that is good for the environment.

The two major environmental benefits from smart growth are reduced air pollution as more people commute by walking, riding bikes, or public transit, and decreased development pressure on open spaces. Decreased pressure on open spaces provides the additional benefits of water protection, carbon sequestration, and providing habitats.

Challenges of Transitioning to Smart Growth

As the state embraces smart growth, it must also address the consequences of this type of expansion. Suburban municipalities that have relied on steady growth in their tax ratables will need to rethink their futures, which might include sharing services with neighbors, consolidating government functions, redeveloping parts of their communities into walkable, transit-accessible neighborhoods, and re-imagining large-lot single-family developments.

Infrastructure throughout the state needs major investments and repair. This is true both in urban areas -- where increased growth will put further strain on outdated water, sewer, and transit infrastructure -- as well as suburban areas, where infrastructure is 40 to 50 years old and in

need of vital repairs. In these areas, the challenge is having sufficient population density to support major investments.

Communities that succeed in fostering smart growth will need to manage their success. Increased demand will increase real estate values, which will put pressure on lower-income residents and small businesses. These towns will need to ensure that the vibrant, walkable places that are being created will produce opportunities for residents with a mix of incomes, including the elderly.

Primary Concerns:

- Current policies support outdated growth and development patterns, which threaten open space and do not conform to more urban-centered lifestyles of millennials and baby boomers
- Some current policies discourage growth in densely populated communities
- Changing growth patterns require suburban areas to rethink their revenue stream
- Aging infrastructure

POLICY RECOMMENDATIONS:

1. Invest in transit in already-developed areas to meet current demand and expand capacity to meet future demand

2. Minimize investment in new road miles, especially in low-density areas, and direct those scarce resources to places where the most people would benefit

3. Provide affordable financing, including grant funding, to upgrade municipal infrastructure and invest in new energy and broadband assets

4. Incentivize economic development, private investment, and job growth near transit hubs

5. Maintain, strengthen, and create new programs that provide priority access to resources for municipalities to strengthen neighborhoods around their transit assets (i.e.: transit villages) or other downtown areas

6. Encourage inclusionary municipal housing ordinances that create diverse housing choices to meet the needs of people of all ages and incomes

UPDATE THE STATE PLAN

Background

Where and how we grow is fundamental to New Jersey's economic prosperity, environmental health and social equity. New Jersey needs a plan for how it will grow -- where and how it will direct spending on infrastructure, parks, and economic incentives.

Recognizing the critical role the state must play in directing growth and aligning resources accordingly, New Jersey in 1986 adopted the State Planning Act, a groundbreaking effort to coordinate land-use planning among state agencies and levels of government. The act mandated the creation of the State Development and Redevelopment Plan (the "State Plan"), as well as the formation of the State Planning Commission, now housed in the Office of Planning Advocacy in the Department of State. The act also mandated that the State Plan be updated at least every 10 years.

The first State Plan was adopted in 1992, and its only update was in 2001. It has produced mixed results. Its vision for strong communities and preserved open lands is widely shared and has helped shape development patterns, but the plan has not been fully implemented by state agencies or municipalities. In 2011 the Christie administration released proposed a State Plan update called the State Strategic Plan.

The new plan included a list of principles and criteria to be used to determine what state investments would be made where. After a year of public meetings, the State Planning Commission was poised to adopt the State Strategic Plan when Superstorm Sandy struck. The draft plan was pulled back to incorporate needed resiliency criteria. More than four years later, the revised draft plan has not been released. As a result, land-use decision-making and state growth and preservation investments are still being determined based on the outdated 2001 plan.

Obviously, the growth and development landscape in New Jersey is very different than it was in 2001. State agencies need updated guidance on how to prioritize and coordinate programs and investments, and the state and its citizens need an updated vision of what the future of New Jersey's land looks like. Having an updated plan will help ensure efficient coordination and alignment of state programs and investments, maximize the return on investments, encourage private investment, reduce uncertainty for municipalities and the private-sector, and guide strategic, long-term decision-making.

Primary Concerns:

- The State Plan is more than 15 years out of date and critical development decisions are being made based on outdated information
- State agencies' programs and spending are not consistent with the State Plan
- Counties and municipalities have largely followed the state's lead and also not updated their plans
- State Planning Commission is lacking members and not meeting regularly

POLICY RECOMMENDATIONS:

1. Adopt an updated State Plan that accounts for current conditions including renewed demand for development in urban areas; increased pressure on funds for open space preservation; coordinated state investments in water, energy, transportation, and economic growth that foster prosperity without sacrificing natural resources

2. Acknowledge the effects of climate change and the need for strong resiliency measures throughout the state, but especially along the vulnerable coast

3. Require state agencies to align programs and spending with the criteria laid out in an updated State Plan

4. Incentivize counties and municipalities to update their plans to align local zoning, redevelopment plans, infrastructure spending, and other growth and preservation investments with the criteria in the updated State Plan

5. Fill open seats on the State Planning Commission, which currently has three vacant public-member seats and two vacant local-government seats

6. Hold regular meetings of the State Planning Commission

POLICY GUIDE ACKNOWLEDGEMENTS

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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 New Jersey League of Conservation Voters Education Fund.

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NOTES

NEW JERSEY
League of Conservation Voters
EDUCATION FUND
PO BOX 1237
TRENTON, NJ 08607-1237

MR. FIRST LAST NAME
123 GREEN LANE
TRENTON, NJ 11111

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