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Testimony of Sean Mahar
Director of Government Relations, Audubon New York
Before the Joint Legislative Hearings on the New York State Budget
February 4, 2013

Mr. Chairmen, and other distinguished members of the Senate and Assembly, thank you for allowing me the opportunity to address you today. My name is Sean Mahar and I am the Director of Government Relations for Audubon New York, the State program of the National Audubon Society representing 27 local Chapters and 50,000 members across the state. Our mission is to protect birds, other wildlife and the habitats that support them through advocacy and education based on sound science. On behalf of our Executive Director Albert E. Caccese, Board Chairman Alex Zagoreos, our members and Chapters, I offer the following testimony on Governor Andrew Cuomo's 2013-2014 Executive Budget proposal.

Before I speak on the Governor's proposed budget, I would like extend our thanks to the Legislature for your support of successful legislation last year which created a comprehensive program to improve regulation of invasive species. This measure will help shut the door to invasive species and alleviate the environmental, economic and health threats they pose.

In addition, we commend the Governor and Legislature for the quick response to the devastation caused by Hurricane Sandy and your attention to the improvements needed to make our communities more resilient in the face of future storm events and sea level rise. As the state continues to recover from the damages from not only Hurricane Sandy, but Hurricane Irene and Tropical Storm Lee, the decisions we make now in how we rebuild will have lasting impacts on our environment and the long term protection of our communities and infrastructure. Attached to this testimony we have included our recommendations to the NYS2100 Commission, outlining a number of priority steps the state should take to focus recovery efforts on a mix of 'hard' engineering innovations and protection and restoration of natural infrastructure and barriers to create long-term resilience for the region.

Happily, the Governor's budget proposal prioritizes a number of investments that ensure a balanced approach to storm risk reduction and climate change adaptation efforts that rely on a mix of structural and natural solutions. This approach will help to comprehensively protect coastal communities from future storm events and sea level rise, while enhancing our economically important coastal environments. His added focus on spurring the transition to a clean energy economy through new investments in renewable energy and sustainability programs is an essential step to combating the threat of climate change head on, and as we'll testify below, we urge the legislature to strongly support these proposals.

Not only are these investments in our natural defenses and clean energy projects important for reducing our vulnerabilities climate change, they are central to the states continued economic recovery. In particular, we are grateful that the Cuomo Administration has proposed increased funding for projects that put people to work protecting our environment, for the State Agencies that guide these restoration efforts, and continued initiatives to address the infrastructure needs facing our State Parks. As we've testified in the past, these investments in the restoration of the New York's water, air and open space should play an essential role in the revitalization of the state's economy, and support an ever growing eco-tourism and forest products industries.

“Birds Mean Business” - Economic Importance of “Ecotourism”

And when it comes to recreation trends, some may be surprised to hear it, but bird watching is attracting one of the biggest followings. With approximately 46.7 million people nationwide observing birds and spending an estimated \$54.9 billion in 2011, bird and wildlife watching is a fast growing segment of the tourism economy. Total expenditures for wildlife watching activities in New York are \$4.2 billion according to the US Fish and Wildlife Service’s “2011 National Survey of Fishing, Hunting and Wildlife Associated Recreation”.

When combined with the 823,000 hunters and 1.8 million anglers, wildlife associated recreation is estimated to contribute \$9.2 billion to the State’s economy each year. This economic impact of hunting, fishing and wildlife watching is calculated by assessing the trip-related expenditures on food, lodging and transportation, as well as factoring in sales of necessary equipment. It clearly illustrates that bird watching and ecotourism play an important role in the state’s economy.

To show this trend first hand to businesses and municipalities in the state, we launched our “Birds Mean Business” campaign featuring the attached calling cards that have been distributed to bird watchers to leave behind in the local communities they travel to watch birds. The goal of this program is to spur local businesses, chamber of commerce and tourism promotion agencies to stand up for open space protection in their communities and develop new strategies to market themselves as destinations for bird watchers, capitalizing on their growing stream of revenue

While this will help local communities understand the important role that ecotourism plays in supporting their economy, we also hope that it shows that state expenditures in conservation of the resources and habitats that so many enjoy are not matching these individual investments. Thankfully though, the Governor’s budget proposal improves that trend by restoring conservation investments to a number of priority programs, and we look forward to working with the Legislature to support this proposal.

Support New York Works – Investing in State Parks and DEC infrastructure

For starters, we commend the Governor for proposing another significant investment in the New York Works initiative to address the infrastructure needs facing our State Parks and Department of Environmental Conservation (DEC) facilities. By continuing this capital funding and putting New Yorkers to work upgrading these aging facilities now, the state will be saving money in the long run as the longer we wait to undertake projects to restore our environment, the problems only get worse and more costly to fix, decreasing the state’s economic return.

While we urge the legislature to support this much needed \$90 million capital investment in the state parks system and \$40 million in DEC infrastructure, we also urge you to work with the Governor to ensure the use of LEED certified, sustainable development practices is prioritized in its implementation. These techniques, such as utilizing energy efficient lighting and appliances, porous pavement, water efficient appliances, and green roofs, have numerous environmental and economic benefits, from reducing costs to the state through energy savings to alleviating storm water runoff into sewer systems. Utilizing these design elements at State Parks would ensure the state is leading by example, providing a great opportunity to educate state residents and inspire similar actions in their own homes.

In addition, last year’s New York Works investment in state parks also launched a number of on-the-ground habitat restoration projects, enhancing the natural infrastructure of these parks. The \$300,000 dedicated toward these habitat improvement projects augmented and leveraged our ‘*Audubon in the Parks*’ initiative, a model public-private partnership to enhance bird habitat and natural resources found at our state parks. We look forward to working with the legislature to ensure that the State Parks department once again prioritizes similar investments in protecting natural resources.

Lastly, we strongly support that a portion of the DEC’s New York Works funding will be dedicated for capital grants for clean water infrastructure projects, and urge the legislature to support this funding. This is a critical step toward addressing the \$36.2 billion wastewater infrastructure crisis facing the state, and will also help in our efforts to maintain federal investments in the Clean Water State Revolving Fund.

Maintain Environmental Agency Budgets and Staff

In addition to New York Works funding, we greatly appreciate that the Governors proposed budget has once again maintained staffing and operating budgets at our environmental state agencies. With management and stewardship responsibilities for the majority of the State's open space and natural resources, the Office of Parks, Recreation and Historic Preservation (OPRHP), the DEC, the New York State Environmental Facilities Corporation (EFC), and the Department of Agriculture and Markets (DAM) are on the front lines of enhancing opportunities for our residents and visitors to enjoy New York's outdoors and biodiversity. The past budget cuts endured by these agencies have left them barely able to meet their mandated activities and safeguard our environment, and we look forward to working with the Governor and Legislature on a long term strategy to reinvest in these agencies, and ensure they have the necessary resources and staff to appropriately conserve our open space and natural resources.

Support Increased funding for the Environmental Protection Fund

Another way the Governor is proposing to capitalize on the economic recovery potential of environmental investments is by increasing the Environmental Protection Fund (EPF), the state's primary source of spending on environmental capital projects. As we celebrate the EPF's 20th anniversary, we strongly urge your support of his proposed \$153 million EPF appropriation, and his efforts to protect the funds integrity by not "sweeping" funds for non-environmental purposes or offloading programs traditionally funded in other portions of the budget. This strong proposal begins to rebuild the EPF, and address the growing backlog of projects across the state.

In addition to supporting the appropriation level, we also urge your support of the Governor's proposal to reinvest in a number of EPF categories that have been hit hard in this economic downturn, including open space protection, farmland protection, invasive species eradication, the Zoos, Botanical Gardens and Aquaria (ZBGA) program, biodiversity research and stewardship, the Ocean and Great Lakes conservation initiative, and the Water Quality Improvements Program (WQIP).

In particular, the \$5 million increase to the WQIP category, which will provide new funding for the protection of natural infrastructure in storm risk reduction, is an important step toward increasing our resilience to future storms and sea level rise and must be maintained. New York's coastal resources provide tremendous economic value and services supporting commercial and recreational fishing, and other forms of recreation and tourism. In addition, New York's beaches and salt marshes provide globally significant habitats for birds and other wildlife, supporting some of the world's highest diversities of migrating and breeding bird congregations. We are encouraged to see the Governor's focus on utilizing a balanced approach to reduce our vulnerabilities from the threats posed by climate change and help our ecosystems and wildlife species adapt to the new climate reality. By enhancing the protection of natural features like wetlands, marshes, dunes, barrier islands and beaches, it provides a cost effective solution that reduces flood risk to homes, businesses and infrastructure, while improving the health of our coastal environment. It is estimated that for every dollar invested in disaster mitigation and natural infrastructure protection, four dollars are saved in recovery costs².

Regarding the ZBGA program, which provides funding to many organizations like our Audubon Nature Centers for the care of their living collections, I'm happy to be joined today by colleagues from the Coalition of Living Museums, as well as several of our live birds of prey from the Theodore Roosevelt Sanctuary and Audubon Center who are direct recipients of this funding. We hope that you have the chance to meet these birds on the third floor of the Legislative Office Building today.

While we urge the legislature to support this proposed appropriation in the Governor's budget, we also urge you to work with the Governor to enact provisions that would continue to grow the EPF as its primary funding source continues to grow. When enacted in 1993, the EPF was designed to provide a secure source of environmental funding in good economic times and bad, through revenue from the Real Estate Transfer Tax (RETT). The RETT revenues have also been used to pay down the debt service on the 1996 Clean Water/Clean Air Bond Act. As the RETT continues to recover from the housing slump and debt payments on the 1996 Bond Act decline, we respectfully request that the RETT revenues which are no longer used to pay Bond Act debt be phased into the EPF to further augment the fund and maintain a conservation connection to this revenue source.

Supporting the clean energy economy

In addition to these direct investments in the EPF and State Agencies, the Governor's focus on spurring the transition to a clean energy economy, though investments and expansion of the 'New York Sun Solar Program', the Cleaner Greener Communities program, and development of a \$1 billion green bank program are essential to the future recovery of the state and will help consumers and municipalities bring new renewable energy onto the grid and curb our reliance on fossil fuels. These programs will also help position the state as a national leader in moving toward energy independence and we strongly urge the legislature to support these important proposals.

Maintain New York's Eligibility to Receive Federal Funds - PPGG S.2605 / A.3005 Part M §15

Due to provisions enacted in previous budgets authorizing sweeps and transfers of special revenue accounts, some of which provide matching funds to federal programs, New York was at risk of being declared ineligible to receive over \$20 million dollars in federal aid through the Pittman-Robertson Wildlife Restoration and Dingell-Johnson Sport Fish Restoration funds by the United States Fish and Wildlife Service. These federal funding programs provide critical support to protect and restore wildlife and natural resources that are important for New York's environmental quality and economy. With recent cuts to the DEC's non-personal service budget, the DEC relies more heavily on this federal aid to advance conservation of wildlife and fish species which are important for tourism and recreation in New York State. Thankfully the Governor has included language in above referenced bill to address this issue, and we urge the Legislature to ensure this language is maintained in the final budget.

Other Potential Initiatives

Expand and Promote Voluntary Conservation Funding Programs

Currently, the state has enacted a number of voluntary conservation funding mechanisms, such as the Habitat Access Stamp, Bluebird open space conservation license plates, and the Return a Gift to Wildlife Program. However, there are currently no concerted efforts by the state to promote any of these opportunities, and many state residents don't even know they exist. We strongly urge the Legislature to work with Governor Cuomo to develop an initiative to promote these programs and expand the places residents can purchase the Habitat Access Stamp to bring in additional voluntary revenues to the state.

Federal Ecosystem Restoration Funding - Great Lakes and Long Island Sound

While New York continues to prioritize these investments in environmental improvements, the Federal government must continue to be an active player. Recently, thanks to the help of the Legislature, we have secured significant federal support through the Long Island Sound Restoration and Stewardship Acts, the Clean Water State Revolving Fund and the Great Lakes Restoration Initiative, including the addition of New Staff in the DEC's Great Lakes program thanks to a federal grant. In the coming months, as the President and Congress begin debate on the Federal budget for FY13 and 14, we look forward to working with members of the legislature to communicate the importance of this funding to the New York State Congressional Delegation.

Conclusion

Meeting the demand for environmental improvements and protecting bird species from further decline will take creativity and a commitment from all levels of government. Audubon New York once again urges the legislature to support Governor Cuomo's proposal to increase funding for the Environmental Protection Fund, continue funding to enhance our state parks, maintain our state agencies and ensure that needed environmental investments are made to help stimulate the economy and keep New Yorkers working. Thank you again for allowing me to testify today, and should you need any additional information, please contact me at 518-869-9731 or smahar@audubon.org.



Audubon NEW YORK

Recommendations to the NYS 2100, NYS Respond, and NYS Ready Commissions

Audubon New York, the state program of the National Audubon Society, appreciates the opportunity to provide the following recommendations to the NYS 2100, NYS Respond and NYS Ready Commissions. We look forward to working with the Commissions to rebuild in a smarter way and strengthen our state's ability to adapt to the challenges of a changing climate. While these comments are offered in the context of Hurricane Sandy, they are designed to apply statewide in nature. Please contact Sean Mahar, Director of Government Relations at 518-869-9731 or smahar@audubon.org with any questions on the following recommendations.

- **Establish a centralized state authority to coordinate and oversee coastal protection and restoration efforts.**

New York is not alone in dealing with the impacts of multiple storms and can learn many lessons from other state recovery efforts. In the wake of Hurricanes Katrina and Rita in 2005, Louisiana created the Coastal Protection and Restoration Authority (CPRA)¹, which was directed to develop, implement and enforce a comprehensive coastal protection and restoration Master Plan² for the state. This single state authority integrated coastal restoration and protection efforts by bringing together state agencies operating in the coastal zone under a single authority to speak with one clear voice for the future of Louisiana's coast. This approach was critical in advancing a Multiple Lines of Defense (MLOD)³ strategy and ensured that restoration and protection of coastal wetlands, barrier islands and other critical ecosystem features that act as natural storm buffers were implemented on an equal footing with structural projects such as levees and other flood protection measures.

Currently, New York has the framework for creating a similar authority in the New York Ocean and Great Lakes Ecosystem Conservation Council (ECL article 14). However, this Council's legislative charge should be amended and strengthened to provide better coordination between the multiple state agencies in New York and repurposed to implement a coastal resiliency and restoration plan, similar to the requirements in the implementing language of the CPRA⁴. Specific actions in this recommendation are as follows:

Develop a 'Multiple Lines of Defense' (MLOD) strategy for New York

Central to the mission of this new authority should be the development of a MLOD strategy in New York focused on protecting and restoring natural infrastructure, such as barrier beaches, dunes and coastal wetlands. This is a key way to 'rebuild smarter' and will provide numerous environmental and economic benefits to our coastal regions. It is estimated that for every dollar invested in disaster mitigation and natural infrastructure protection, four dollars are saved in recovery costs⁵. Incentivizing these solutions will be important as many communities will need to invest in upgrades to existing protective structures damaged during the storm.

¹<http://coastal.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&nid=79&pnid=73&pid=75&catid=0&elid=0>

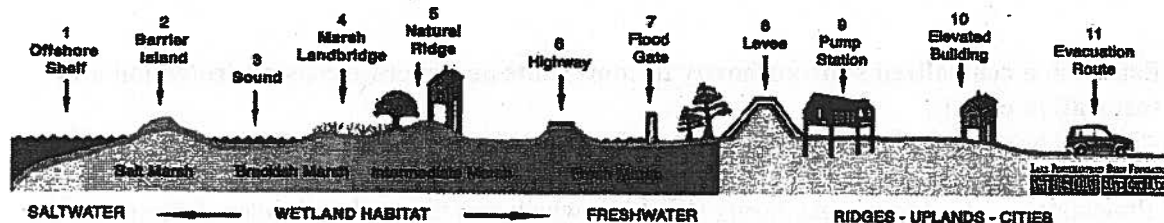
²<http://www.coastalmasterplan.louisiana.gov/2012-master-plan/final-master-plan/>

³http://www.mlods.org/images/ALL_MLODSVI_PUs_ONLY.pdf

⁴<http://coastal.louisiana.gov/index.cfm?bmd=pagebuilder&tmp=home&nid=121&pnid=79&pid=80&catid=0&elid=0>

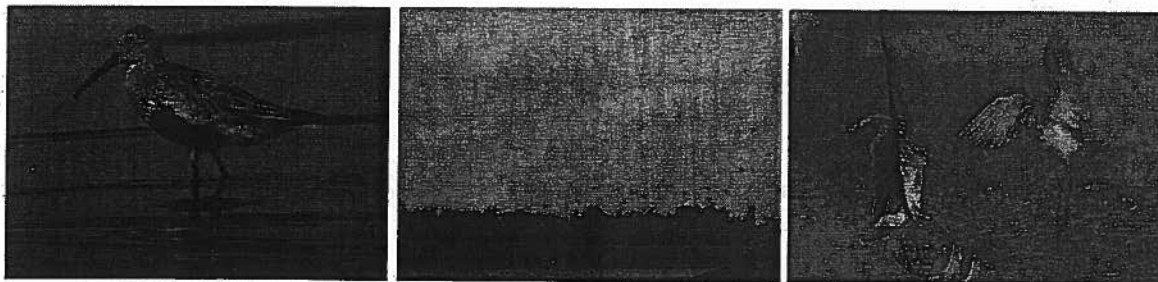
⁵<http://www.mississippiriverdelta.org/blog/2012/07/02/the-next-50-years-nonstructural-storm-protection/>

If only utilized on their own, protection measures like levees, bulkheads, seawalls and other such manmade structures, are expensive, hard to maintain, interrupt natural sediment processes, result in biological impacts and changes to, and acceleration of, erosion patterns. Promoting a mix of structural and natural solutions is essential to comprehensively protect coastal communities and ecosystem services from more intense storm events. This type of multipronged strategy will allow beaches and salt marshes to naturally migrate and adapt, and provide a buffer to vulnerable human communities and infrastructure from rising sea level and storm impacts. In particular, wetland restoration in places like Jamaica Bay can preserve ecosystems while minimizing property damage by adding natural buffers to storm surge.



Ensure comprehensive study of storm surge barrier proposals

While storm surge barriers may seem like a relatively easy and effective solution, their feasibility to protect New York needs to be studied in much greater detail by such an authority. National groups such as the National Research Council's National Academies of Science and Engineering, the American Society of Civil Engineers, and the NGO community, among others, are resources that can be targeted to aid a new state authority in this endeavor. Although they have the potential to shield New York harbor and lower Manhattan, these barriers would increase the storm impact to people living in Brooklyn, Queens, or Staten Island and may worsen flood elevations for communities in Jamaica Bay. Jamaica Bay's tidal wetlands, a global Important Bird Area, represent the largest remaining wetland ecosystem in New York City, supporting a large number of animal and plant species, including thousands of shorebirds and a large colony of nesting herons, egrets, and ibis, all of which are enjoyed by many visitors from the city and beyond. Every barrier plan that has been presented would reduce exchanges of New York City's estuarine waters with the ocean, degrading water quality and changing temperature and salinity. This would have a negative effect on our rebounding ecosystems and coastal fisheries, a source of pride and livelihood for many New Yorkers. These low lying areas have lost wetlands, oyster reefs and other natural systems that could be reestablished to enhance our natural lines of defense by slowing and reducing storm surge and improving flood resilience.



Protect Barrier Island Habitat

The authority should also prioritize creation of a strategy to protect barrier islands. As a barrier island, Fire Island not only supports an irreplaceable ecological habitat, but also provides protection to human communities and supports New York's lucrative commercial, sport fishing, and ecotourism industries. Fire Island is the only federally designated wilderness area in New York and a globally Important Bird Area, providing some of the most important bird habitat in the state and one of the best birding areas in the state; it is home to a wide variety of both migratory and resident bird species, including endangered species such as the Piping Plover. Because the natural mechanisms that create barrier islands depend on the island's ability to change in response to storms and sea level rise, dredging, beach replenishment, hard structures, and other coastal engineering projects will have a negative impact on the Island's ability to offer both storm protection and habitat. New York should implement a comprehensive strategy to protect, maintain and restore barrier islands, which would ensure that the State is eligible for FEMA reimbursement programs for implementing such projects.



Utilize State Parks as educational resources to showcase natural solutions

While this new authority should be focused on bringing together the traditional state agencies with management authority over coastal infrastructure and coastal zone management, the Office of Parks, Recreation and Historic Preservation should also play a strong role in developing the MLOD strategy. With more than 30 parks in coastal areas across the state, including iconic and highly visited Jones Beach and Robert Moses State Parks, these facilities should be on the front lines of implementing the MLOD strategy. Further, in the future, these facilities will play a crucial role in showcasing natural infrastructure solutions to community leaders and the public, while also educating visitors on the topics of adapting to and mitigating the effects of sea level rise and climate change.

As recovery efforts from the damages caused by Hurricane Sandy at our coastal Parks begin, and plans for future response efforts are developed, the state should make sure it is using this opportunity to lead by example at these Parks. Emphasis should be placed not on rebuilding infrastructure in the same places, but on relocating infrastructure away from flood prone areas, and using new building design choices to minimize risk to and vulnerability of infrastructure. Additionally, the State should focus on three rules: allow beach habitat to naturally change rather than attempting to rebuild beaches in the same areas; protect new beach habitat created from the storm; and restore other important natural features, like salt marshes, that will help absorb the force of future storm events and other threats from sea level rise. These natural features provide important protection for coastal communities.



Establish uniform coastal zoning and building codes

In addition to prioritizing creation and implementation of a MLOD strategy as part of a broad coastal restoration and resiliency plan, this new authority should also seek to provide uniform coastal zoning rules, update building codes and advance sustainable development strategies. The goal would be to reduce the patchwork of different local zoning policies, practices and building codes that have led to poor planning choices in many areas, and increased vulnerability of public and private infrastructure.

More stringent building codes and zoning ordinances can prevent new development from being built in vulnerable areas and will ensure that new structures, and major modifications to existing infrastructure, are more resilient. Relocating and retrofitting existing building and critical infrastructure systems- including transportation, electrical, communications and wastewater- will increase resilience to extreme weather and enhance disaster response and recovery. Groups such as the American Planning Association and regional and local planning associations and governmental agencies in conjunction with the Federal Emergency Management Agency and other such entities can jumpstart the process of evaluating existing policies and making initial recommendations for improved practices.

- **Increase funding for the Environmental Protection Fund**

Funding implementation of an MLOD strategy will take a variety of sources. Already, New York's Environmental Protection Fund (EPF) provides essential support to protecting and restoring natural infrastructure that is critical to reducing vulnerabilities in our communities, and building resilience in the face of more frequent extreme weather events. We stand with the Friends of New York's Environment Coalition in urging support for \$164 million in EPF funding for FY 2013-2014, and subsequent increases in future years especially to categories like open space protection, urban forestry, water quality improvements, municipal park lands and other categories that provide important support to bolstering our natural line of defenses against weather events and sea level rise.

- **Upgrade Wastewater Infrastructure**

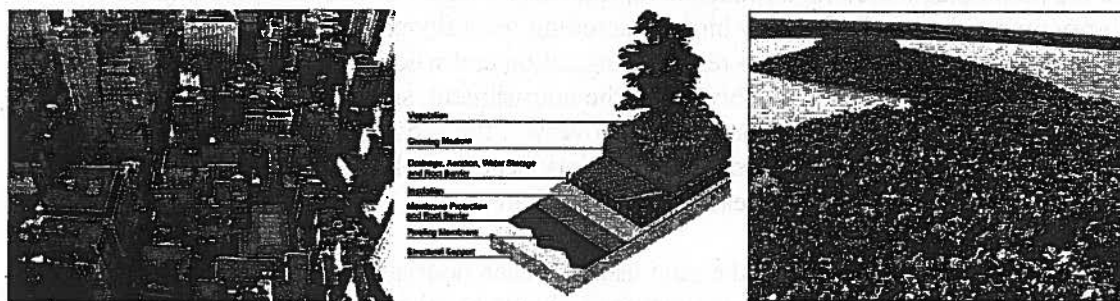
Much of New York's wastewater infrastructure has exceeded its designated life and these outdated facilities are discharging billions of gallons of raw, untreated sewage into local waterways in heavy rain events. This not only threatens public health, it causes beach closures, harms commercial and recreational fishing opportunities, and most importantly threatens the economic vitality of the State. As we have observed from Hurricane Sandy, wastewater treatment plants in coastal zones are at risk from flooding and associated corrosion caused by saltwater infiltration, sewer pipes can be damaged by erosion and rising water tables, and septic systems are also at risk from saltwater corrosion and rising groundwater conditions.

Cost of necessary repairs, replacements and updates to New York's wastewater infrastructure over the next 20 years have been estimated at \$36.2 billion, and new federal and state funding is desperately needed. The New York Works program provides a framework for targeting funds to communities to

upgrade repair these aging and damaged facilities, and we urge for the state to explore this option as a short term strategy for helping communities. Longer term, in addition to other potential sources of state funding, such as a new State Bond Act, the Federal Government must increase appropriations to the Clean Water State Revolving Fund and we look forward to working with the state to advocate for this important program.

Expand Green Infrastructure Grants Program

Also, the state must provide increased funding for the newly created Green Infrastructure Grants Program. This program is essential to providing support for innovative storm water control and abatement projects, such as protecting natural infrastructure like clam and oyster beds that have numerous benefits from storm protection to water quality improvements. Other types of “green infrastructure” solutions, like wetland protection and creation, creating green roofs, utilizing porous pavement, must be incorporated into recovery plans. Incentivizing these solutions is important, as many communities will need to invest in upgrading their wastewater infrastructure that was damaged in the storm, and will enhance an MLOD strategy.



- **Implement Priority Recommendations in the New York State Sea Level Rise Task Force Report**

New York has a strong available blueprint for action in the New York State Sea Level Task Force Report, created in 2007. The Task Force has outlined the hazards and challenges of sea level rise and identified numerous consensus-based strategies that must be implemented to address the threats posed by climate change. The Task Force Report, combined with numerous scientific studies, has given us the knowledge needed to take immediate action and a clear opportunity for state agencies, local communities and conservation organizations to work together and address these critical threats now and increase our resilience in the face of future climate events.

In addition to the state formally adopting sea level rise projections, we strongly urge swift implementation of Task Force recommendations 5, 7, 10, and 11. Recommendation 5 provides advice for reducing vulnerability in coastal areas at risk from sea level rise and storms and supports increased reliance on non-structural measures and natural protective features to reduce impacts from coastal hazards. New development and re-development in coastal risk management zones should be consistent with policies that rely on natural protective features and non-structural shoreline protection measures. Recommendation 7 outlines NYS laws that can be amended to address sea level rise and prevent further loss of natural systems that reduce risk of coastal flooding in hazard zones.

Recommendation 10 calls for raising public awareness of the adverse impacts of sea level rise and climate change as well as the potential strategies to adapt. Many people may not understand or appreciate the implications of sea level rise and climate change, and funding for a vigorous public

education and outreach program is essential and must be a priority. Though our network of chapters and Audubon Centers, we are available and ready to assist the State in this outreach and education effort. Recommendation 11 advocates for developing mechanisms to fund adaptation to sea level rise and climate change. The Task Force has outlined potential funding sources to support the development and implementation of coastal resilience plans, coastal area mapping, restoration of natural protective features and critical habitats, green infrastructure, and acquisition of lands in vulnerable areas.

- **Limit Beach Nourishment – allow natural changes in shoreline**

Beach nourishment may not be effective for short stretches of beach front, as is the case in New York, or for those beaches with high erosion rates. Success rates are highly variable; beach nourishment tends to encourage further development along unstable shorelines unless measures are taken to prevent development in highly sensitive areas, not to mention the high costs of implementing replenishment actions with beach nourishment projects. Ocean and beach systems are naturally highly dynamic and constantly changing. Creating a steeper beach profile on barrier beaches through nourishment can actually lead to greater wave energy and greater beachside erosion. Biological impacts of beach nourishment are numerous, including diminished reproductive success of wildlife, reduction in biomass of prey for resident and migratory birds – including federally protected Piping Plovers, and degraded habitat. A large proportion of the resident vegetation and wildlife are destroyed by the initial addition of sand. Changes in the beach habitat after the nourishment, such as an altered beach profile and sediment disposition, will influence the rate of recovery of the ecosystem's natural equilibrium. Research of the direct and cumulative effects on New York beaches is lacking on this subject and should be carried out as decisions to use beach nourishment are made.

In addition, careful study of the source of the sand used in beach nourishment activities must be undertaken. Preferably, sand for these types of activities should be taken from an offshore sediment source and not from inlet shoals or intertidal areas. By utilizing offshore sources, impacts to birds and other wildlife that depend on these intertidal areas would be reduced. The use of dredge spoils in beach rebuilding should be studied for their toxicity, and sand from potentially toxic sources should not be used. Also, in emergency cases, coastal permitting and consistency review should not be waived for these activities.

- **Improve protection of tidal and freshwater wetlands**

After the devastating floods following hurricanes Sandy and Irene and Tropical Storm Lee, it is clear that the state must do a better job of protecting the natural features that are key to helping alleviate flooding – wetlands. Regardless of size, tidal and freshwater wetlands provide countless environmental benefits from flood protection to storm water runoff control. Wetlands filter pollutants, pesticides and sediments from the water, thus improving water quality, all of which benefit the State's economy by increasing recreation and ecotourism opportunities. They also contain a diverse range of plant and animal species, including some species that are exceptionally rare. These important communities provide essential habitats for many species of migratory waterfowl and shorebirds, for numerous threatened, endangered, or species of special concern, such as the Bald Eagle and Osprey, and for countless other amphibian, avian, fish, and wildlife species to nest, breed, and feed.

Currently, New York's freshwater and tidal wetland protections are out dated and inadequate at protecting these vital resources. The New York State Department of Environmental Conservation (DEC) has the authority to regulate freshwater wetlands 12.4 acres or greater that are recorded on an official adopted map, while the federal government (EPA and Army Corps.) has authority over the rest. However, a 2001 Supreme Court ruling in Solid Waste Agency of Northern Cook County v. United

States Army Corps of Engineers limited the federal government's authority to regulate certain "isolated" wetlands under the Clean Water Act. "Isolated wetlands" are wetlands that are not connected by navigable surface water to waters of the U.S. Since that time, the federal government has backed away even further from protecting these extremely important areas, leaving them unprotected and vulnerable loss in New York, thusly exacerbating problems with flooding.

In order to improve protection of freshwater wetlands, New York State must remove the size threshold and mapping requirements for regulation. While the mapping requirement should be removed from regulation, the State should still inventory and map all existing wetlands in the New York and make these maps available to the public and regulatory community. In addition, for both freshwater and tidal wetlands, the State must put in place stronger buffer protections around regulated wetlands. The Massachusetts Wetlands and River protection Act⁶ provides a model program that New York should follow in protecting all the State's wetlands regardless of size, and provides for strong buffer protection around both tidal and freshwater wetlands. Additionally, New York must establish riparian buffers along streams and rivers, similar to the Massachusetts program. Currently no such protection mechanism exists in the State, which has led to inappropriate development in flood prone areas.



- **Update flood plain maps**

A '100-year flood event' and a '100-year flood plain' do not mean that the event and flooding take place once every 100 years. It means there is a 1 in a 100 chance that the event will happen this year. As was noted by one official in the Adirondacks, "A 100 year flood now seems to come every two years." Experience in the Schoharie Creek watershed also showed that areas that were considered safe from flooding – the higher parts of the 100-year flood plain – were not in fact safe. The flood waters covered areas that up until then were above the mapped flood levels. The State, with the federal government, must undertake a reconsideration of their flood plain maps in all the watersheds of New York and at the same time undertake a comprehensive education and outreach program for local government officials and the public about limiting development in flood prone areas and other non-structural solutions to protect vulnerable communities.

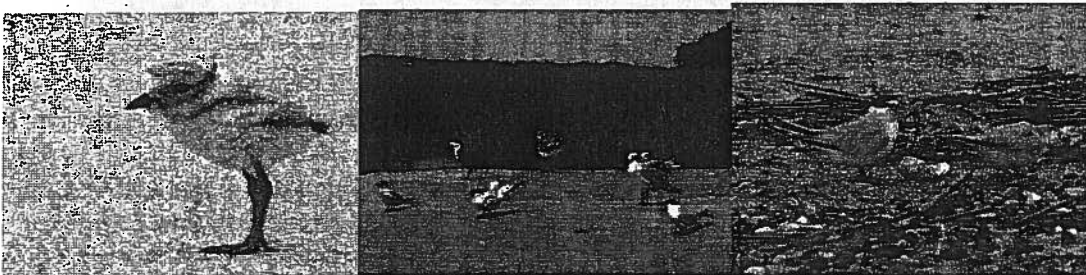
⁶ <http://www.mass.gov/czm/permitguide/regs/maprotectionact.htm>

- **Environmental review and permitting should not be waived for emergency response purposes.**

Important lessons have been learned from Hurricanes Irene and Lee in the Adirondack Park as well as others such as the Schoharie River Valley and Catskills watersheds, lessons which can apply to all areas of the state. Reconstructing meandering stream courses into straight channels only leads to more problems downstream in the form of more concentrated erosion from faster flowing water carrying bigger rocks and debris. In the Keene Valley, for example, the State waived environmental permit reviews and left the contractors to devise their own make-shift solutions, disregarding the geomorphology of the stream and the watershed. We recognize that it is important to act quickly to respond to immediate problems, yet the decisions made in emergency situation can and do exacerbate problems over the longer term. Emergency federal supplement appropriations have a different structure for environmental compliance and they can be issued without slowing down emergency actions. The State should consider adopting a similar process.

- **Avoid work in the beach nesting bird breeding season and shorebird migration season at known breeding and migratory hot spots.**

Long Island and New York City beaches provide critical habitat for numerous beach-nesting bird species including federally threatened and state endangered Piping Plovers and state threatened Common and Least Terns as well as several at-risk migratory bird species. In response to Hurricane Sandy it is important that the process for issuing permits for projects in or near beach-nesting bird breeding habitat is upheld and not relaxed. It is also important that the Endangered Species Act and the Migratory Bird Treaty Act are upheld, and that take of endangered species and/or degradation of critical habitat are prevented. The peak nesting season generally runs from April 1st through August 31st; work during the nesting season should be avoided and any work performed otherwise should avoid altering or lessening the quality of beach-nesting bird habitat. Since nesting habitat has changed, it is best if all non-essential work, such as dune planting and other beach restoration activities, is postponed until after this upcoming nesting season so that the new locations of breeding birds can be documented and properly accommodated. Consideration should also be given to areas that support large numbers of migratory shorebirds during spring and fall migration periods.



- **Provide Coastal Stewardship funding**

Without robust stewardship activities the effects of Sandy could be catastrophic for birds. Old nesting areas have been impacted by erosion and many may become unusable due to lower base elevation. New nesting areas will likely be established, but they must be inventoried early in the season to determine where stewardship and other efforts must be directed. New nesting areas could be in closer proximity to areas of high human traffic and/or in areas/communities unfamiliar with sharing the shores with beach nesting birds. If proper stewardship is initiated, the storm could offer an opportunity to increase productivity and populations of target species, however inaction or inadequate resources could lead to productivity and population declines.

- **Federal Request - Support the Long Island Sound Restoration and Stewardship Act.**

In addition to the many available sources of federal funding through FEMA and other federal agencies, the state should also prioritize support for the Long Island Sound Restoration and Stewardship Acts. These programs provide New York with funding for proactive projects that restore the water quality of the Sound and identify, protect, and enhance important ecological and recreational sites around the Sound critical to protecting natural infrastructure. This program is up for reauthorization, and we look forward to working with the state to ensure its passage and increased funding.

