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National Audubon Society  
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Dear Legislator,

On behalf of the National Audubon Society's one million plus members, we are writing to you to consider including investments in renewable energy, energy efficiency, and natural infrastructure in any upcoming bills on infrastructure or surface transportation.

Smart infrastructure investments help address twenty-first century challenges by providing foundational, societal, environmental, and economic benefits. By ensuring that the construction and retrofitting of new and existing infrastructure projects plan accordingly for sea-level rise, storm surge, flooding, drought, heat waves, and extreme weather events, the number of people who experience disruptions in essential services provided by water, sewage, energy, and transit systems can be minimized.

For built structures like roads, bridges, railways, ports, electric grids, and sewer systems that form our nation's critical infrastructure network, more and more communities are turning to natural ecosystems - or infrastructure projects built to mimic them - to help protect against extreme weather and provide important services. These cost-effective, nature-based solutions are becoming more common as a means to manage stormwater, protect coastal communities from more frequent and severe storm events and rising tides, and retain water in arid environments. Natural infrastructure, or nature-based solutions, can be used alone or in combination with structurally-engineered approaches. These approaches often cost less to build and maintain, and can provide other benefits like habitat for birds and other wildlife, recreational opportunities with associated economic benefits and societal values, and clean drinking water.

In addition to protecting communities and habitat, renewable energy, energy efficiency, and natural infrastructure have positive impacts to the economy:

- The renewable energy and energy efficiency industries are driving economic growth and creating jobs. In 2016, the wind and solar industries added 25,000 and 73,000 jobs, respectively, while 133,000 jobs were created in energy efficiency. The solar industry alone is responsible for about one in every 50 jobs created nationwide.<sup>1</sup>
- Coastal wetlands prevented \$625 million in direct property damages during Hurricane Sandy.<sup>2</sup>
- Restoration of Muskegon Lake in Michigan stabilized the shoreline at 10 locations, which is estimated to have a 6-to-1 return on investment.<sup>3</sup>

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<sup>1</sup> U.S. *Energy and Employment Report*. United States Department of Energy. 2017. <https://www.energy.gov/downloads/2017-us-energy-and-employment-report>

<sup>2</sup> Weeks, Jennifer. *Nature's Coast Guards*. 2017. Science News for Students. [www.sciencenewsforstudents.org/article/natures-coast-guards](http://www.sciencenewsforstudents.org/article/natures-coast-guards).

<sup>3</sup> Samonte, Giselle, Peter Edwards, Julie Royster, Victoria Ramenzoni, and Summer Morlock. 2017. *Socioeconomic Impacts of Habitat Restoration*. National Oceanic and Atmospheric Administration. U.S. Department of Commerce. Technical Memorandum NMFS-OHC-1.

- Setback levees that facilitate the natural functioning of the flood plain in Hamilton County, California were estimated to be more cost effective than upgrading to existing levees.<sup>4,5</sup>
- In Virginia, forests contribute \$17 billion annually to the economy, provide \$3 billion in recreational opportunities, protect watersheds from erosion and sedimentation, and promote clean air.<sup>6</sup>
- Everglades restoration in Florida results in a 4-to-1 return on investment, protecting the drinking water of more than 8 million people and increasing wetland resiliency. This wetland system was critical to buffer Hurricane Irma in 2017.<sup>7</sup>

As Congress considers investments to maintain and improve U.S. infrastructure, it should provide direction, authority, and funding for renewable energy, energy efficiency, and natural infrastructure. Audubon's recommendations include:

#### Renewable Energy and Energy Efficiency:

- Invest in the buildout of renewable energy generation and battery storage to improve the sustainability of the grid. Site large-scale projects in a manner that avoids, minimizes, or mitigates impacts on birds and the places they need.
- Build out transmission to allow for the integration of renewable and clean energy sources in to the grid. Encourage coordinated regional planning efforts to ensure the continued reliability of the grid, while minimizing impact to important wildlife habitat.
- Retrofit buildings and cities to be more energy efficient. Encourage weatherization and installation of energy efficient in commercial, private, and government-owned buildings. Reduce tailpipe emissions by expanding public transit and charging stations for electric vehicles.

#### Natural Infrastructure:

- Include a definition of natural infrastructure: Natural infrastructure is the strategic use, restoration, or management of natural lands and waters to conserve and restore ecosystem functions and/or reduce flood or storm damages. Natural infrastructure alternatives seek to use, enhance, facilitate, protect or restore naturally occurring hydrologic, geomorphic, biological, chemical and ecological functions and processes of streams, rivers, floodplains, wetlands, or shorelines. Actions that qualify for use in a natural infrastructure alternative include, but are not limited to: (i) acquisition of land or easements, including flooding easements; (ii) removal of structures such as dams, levees, and culverts to restore natural hydrology, form, function, or ecological processes; (iii) modification of structures such as dams and levees, including through sediment diversions or levee setbacks, to restore natural hydrology, form, function, or ecological processes; (iv) reoperation of dams and reservoirs to restore or better mimic natural hydrology and flow patterns (v) restoration efforts designed to reestablish natural hydrology, form, function, or processes of rivers, streams, floodplains, wetlands, or

<sup>4</sup> Downing, Jim, Louis Blumberg, Eric Hallstein. "Reducing climate risk with natural infrastructures." The Nature Conservancy. <https://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/california/ca-green-vs-gray-report-2.pdf?redirect=https-301>

<sup>5</sup> Depietri, Yaella, Timon McPhearson. 2017. "Integrating the Grey, Green, and Blue in Cities: Nature-Based Solutions for Climate Change Adaptation and Risk Reduction." Theory and Practice of Urban Sustainability Transitions. Ed. 91-109. Print.

<sup>6</sup> "Economic Benefits of the Forest Industry in Virginia." Virginia Department of Forestry. <http://www.dof.virginia.gov/forestry/benefits/index.htm>

<sup>7</sup> McCormick, Clement, Fischer, Lindsay, Watson. 2010. *Measuring the Economic Benefits of America's Everglades Restoration*. Mather Economics. Roswell, GA.

shorelines; (vi) creation or restoration of living shorelines; (vii) removal of nonnative vegetation or reintroduction of native vegetation; and/or (viii) other actions that would reduce flood or storm hazard intensifying conditions by restoring the environment.

- Incorporate natural infrastructure into planning, technical assistance, grant criteria, and funding decisions to increase resilience of traditional infrastructure, reduce long-term costs, and protect and restore fish and wildlife habitat. For example: Incorporate habitat connectivity into long-term planning and design options; Include coordination with wildlife and hazard mitigation agencies and consideration of state plans, including through State Wildlife Action Plans and State Hazard Mitigation Plans; Increase and sustain pre-disaster mitigation funding and set aside a portion for natural infrastructure; and incentivize use of materials and techniques, such as bioswales, pervious pavement, and culverts that ensure adequate flow in rivers and estuarine systems.
- Ensure a return on investment for natural infrastructure projects, by setting aside a portion of funding for the purpose of data collection, monitoring and evaluation of project effectiveness.
- Create a consultation process with DOI and the relevant federal agency to transfer excess property into the Coastal Barrier Resources System, which restricts federal expenditures in hazard prone areas.
- Include funding for infrastructure that prevents water pollution across the U.S. and secures water supply for people, birds and other wildlife.

We ask for your consideration of these priorities as you work to create solutions for our country's infrastructure that will protect birds and the places they need, while also laying the foundation for economic growth. Please see us as a trusted resource moving forward on this and other issues where healthy communities, economies, and wildlife can overlap.

Sincerely,

Sarah Greenberger  
Senior Vice President, Conservation Policy  
National Audubon Society