

Policy & Science Advisor UPDATE

**NYSERDA**

Welcome!

Morgan Brunbauer joined the Environmental Research group as the New York State Offshore Wind Fisheries Manager in January. Morgan holds master's degrees, in Marine Biology with a focus on Fisheries Management, and in Environmental Management with a focus on Common Pool Resources Management. Morgan comes to NYSERDA from the New York State Department of Environmental Conservation, where he was a Marine Biologist, and supported the State's offshore wind energy development efforts. At NYSERDA, Morgan will serve as a liaison to the fishing industry and engage stakeholders on views, fishing practices, equipment, and other factors that need to be taken into consideration in siting, planning, and developing offshore wind farms.



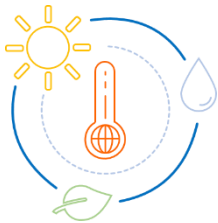
Air Quality & Public Health

This quarter, the New York State Energy Research and Development Authority (NYSERDA) released PON 4230, Energy-Related Air Quality and Health Effects Research. Targeted Research Categories include:

1. Methane and CO-Pollutant Emissions from Landfills and Oil/Gas Systems
2. Pollutant Trend Analyses and Related Accountability Studies
3. Low-cost Techniques for Measuring Spatial Variation and Local Air Quality

A total of \$2,000,000 is available for projects. Proposals are due on May 20, 2020.

For additional information please visit the [Current Opportunities](#) sections of NYSERDA's website.



Climate Change

- A collaborative research project with the NYS Department of State, the Science and Resilience Institute of Jamaica Bay, and other stakeholders, was completed this quarter. The project developed a coherent framework for monitoring and evaluating the performance of nature-based shoreline features compared to hard structural and natural approaches throughout New York State’s diverse coastal environments. The framework and monitoring protocols have been completed and will be made available soon but can be provided via email upon request.
- The next-generation statewide climate impacts assessment has been initiated with the formation of an approach and framework. While ostensibly an update to the 2011 ClimAID project, this assessment will aim to be more usable for decisionmakers and will develop a variety of products to reach a wide range of audiences.



Ecosystem Response

- A publication titled, “The response of stream ecosystem in the Adirondack region of New York to historical and future changes in atmospheric deposition of sulfur and nitrogen” has recently been published open access in Science of the Total Environment and is available [here](#). Building on this project, NYSERDA, along with the New York State Attorney General’s Office, are funding a project with E&S Environmental Chemistry, Syracuse University, and the U.S. Geological Survey to expand the target load analyses developed for Adirondack streams to include evaluation of criteria and target values to protect soils and terrestrial ecosystems (i.e., sugar maple) in Adirondacks effects of acid deposition.
- With NYSERDA support the U.S. Geological Survey is planning a 1.5-day workshop to be held this fall in Albany, NY hosting scientists and policy makers from universities, government agencies, non-governmental organizations, who are involved in issues relating to soil carbon, and who are interested in advancing a soil monitoring network in the Northeast. From this workshop the U.S. Geological Survey will also be developing a white paper providing recommendations for how to proceed in forming a monitoring network. The white paper will make use of soil monitoring data that has been collected in the Adirondack region over the past few decades to design a sampling regime, and methods for monitoring soil carbon. The goal of this work is to quantify how the Adirondack soils can contribute to New York’s carbon emission goals through sequestration and storage.



Offshore Wind

- The offshore wind Environment Technical Working Group (E-TWG) met on February 10th to share and discuss updates on E-TWG activities. The group discussed the development of best management practices, environmental research projects funded by NYSERDA, and other relevant updates. A meeting summary is available [here](#).
- Two best management practices (BMPs) specialist committees convened by the E-TWG continued to meet throughout the first quarter of 2020 to develop recommendations for minimizing and mitigating impacts to birds, bats and marine mammals from offshore wind development. These recommendations aim to inform New York's Phase 2 offshore wind procurement process, as well as other State and federal processes.
- NYSERDA convened a [workshop](#) from March 4-6, 2020 to inform the development of scientific research framework to guide the long-term study of potential impacts to birds and bats from offshore wind energy development in the eastern U.S. There were 46 participants including scientists, environmental non-governmental organizations, regulators, and offshore wind developers from the U.S. and Europe. Discussions focused on identifying hypotheses and methods to better understand offshore wind-related impacts and represents the first step in a larger effort to develop a scientific framework document to guide future research.
- Given COVID-19 related health and safety concerns, NYSERDA and workshop organizers have rescheduled the second [State of the Science Workshop on Wildlife and Offshore Wind](#). The workshop, originally scheduled for May 2020, will now be held on November 16-17, 2020 in Rye Brook, New York. The workshop will focus on assessing the state of knowledge regarding offshore wind development's cumulative effects on wildlife population and ecosystem.
- Following up on a commercial fishing transit workshop NYSERDA co-sponsored with the Responsible Offshore Development Alliance (RODA) in 2019, a survey was created to gather additional feedback on potential transit routes in the NY Bight. The goal of the effort is to understand how commercial fishermen utilize the NY Bight and where there are common routes fishermen use to reach fishing locations and ports. Clearer definition of these routes is expected to reduce risk and uncertainty for offshore wind development and fishermen. The comment period closed in January 2020 and a final report is in review. The report will also incorporate recent work from the U.S. Coast Guard regarding transit in southern New England lease areas. A final report is expected to be complete in the second quarter of 2020.
- The Responsible Offshore Development Alliance (RODA) Fisheries Knowledge Trust, a NYSERDA sponsored project, held its kickoff meeting this quarter. The project is developing a standardized, industry-owned data platform that allows fishermen to own, use and market their data while retaining granular control over who has access to it. It also will have the capacity to crowdsource data. The overall goal is to support data rich consensus products for ecosystem assessment science and management.

Land-Based Renewables



- Program Opportunity Notice (PON) 4270, [Environmental Research-PV site Design, Information Gaps, and Mitigation Opportunities](#) closed in February. The PON received a strong response from universities, government agencies, non-governmental organizations, and private consulting firms. The proposals seek to address a wide range of environmental and societal concerns associated with the development of non-residential PV systems throughout New York State. It is anticipated that awardees will be announced during the second quarter of 2020.
- Over the next 3-4 months, Eastern Research Group will be conducting a literature synthesis and analysis of how renewable energy systems can be developed in a manner that is cost-effective, while also being sensitive to environmental concerns. Specifically, the effort will focus on addressing how the components of these renewable energy systems are handled once decommissioned. This project will collect, synthesize, and describe the current state of knowledge around the types of materials that are used in offshore wind, terrestrial wind, solar, and battery storage systems and how at the end-of-life the component parts of these systems can be disposed of, and/or handled to minimize their environmental foot print. Finally, it will assess whether there are options that NYSERDA could consider at the off-take stage to minimize renewable energy related waste.

Program Reports and Papers posted recently include:

- [20-04 Predictive Relations Between Acid-Base Chemistry and Fish Assemblages](#) [PDF]
- [20-01s Summary Report Monitoring Spatial Gradients and Temporal Trends of Mercury in Songbirds of New York State, 2013–2017](#) [PDF]
- [20-01 Monitoring Spatial Gradients and Temporal Trends of Mercury in Songbirds of New York State, 2013–2017](#) [PDF]
- [Declining Aluminum Toxicity and the Role of Exposure Duration on Brook Trout Mortality in Acidified Streams of the Adirondack Mountains, New York, USA](#) 
- [Beta diversity response to stress severity and heterogeneity in sensitive versus tolerant stream diatoms](#) 
- [Recovery of Soils from Acidic Deposition May Exacerbate Nitrogen Export from Forested Watersheds](#) 
- [A Newly Identified Role of the Deciduous Forest Floor in the Timing of Green-Up](#)  [PDF]