

Request for Proposals

MACWA Monitoring in Delaware Estuary and Barnegat Bay

The New Jersey Department of Environmental Protection (NJDEP) Bureau of Climate Resilience Planning and Division of Science and Research seek a qualified entity to conduct monitoring at Site-Specific Intensive Monitoring (SSIM) stations in the Barnegat Bay and on the New Jersey coast of the Delaware Estuary in the Summer of 2021.

Deadline for proposals: 5 PM EST on March 3, 2021

INTRODUCTION

In 2006, the Partnership for the Delaware Estuary (PDE) identified coastal wetlands status and trends as a top priority for understanding the overall environmental health of the watershed. Until then, information about coastal wetland conditions and acreage was limited and inconsistent among New Jersey, Delaware and Pennsylvania.

In 2007, PDE worked with the Delaware Department of Natural Resources and Environmental Control (DNREC) to design and begin to implement a multi-level program to assess the health and extent of coastal wetlands in a consistent manner across the Delaware Estuary. Then, in 2008, PDE along with the Barnegat Bay Partnership (BBP) expanded this program to areas outside the Delaware Estuary, referring to it as the Mid-Atlantic Coastal Wetland Assessment (MACWA). MACWA supports a comprehensive assessment of coastal wetland conditions across the mid-Atlantic region. PDE, BBP, DNREC and partners, such as the Academy of Natural Science of Drexel University and Rutgers University, have since worked to implement MACWA as a regional strategy, continuously updating and strengthening the program.

The MACWA is a 4-tier monitoring and assessment program envisioned to provide rigorous, comparable data across all tidal wetlands of the mid-Atlantic. It has become a platform through which research and monitoring is conducted and data are collected for various purposes. The programmatic structure of MACWA generally follows EPA national guidance (U.S. EPA 2001)

Need for Sit Specific Intensive Monitoring

The main focus of Site-Specific Intensive Monitoring (SSIM; Tier 4) is to track changes in physical, chemical and biological conditions. The goal is to relate any changes to sea level rise and other stressors. Having a network of SSIM stations facilitates spatial analyses in addition to temporal analyses. The SSIM program consists of a suite of data collection which incorporate permanent vegetation plots, elevation surveys, water quality and soil quality metrics.

Surveying the same locations for several years allows researchers to track and compare changes over time. Monitoring stations for SSIM were selected covering a range of marsh types, conditions and health status. Monitoring consists of a variety of biological, chemical and physical parameters and metrics. Principal core metrics include biological integrity and biomass, surface elevations and physical conditions. Monitoring for geomorphology, biota and water quality was designed to describe both structural and functional properties and overall integrity. All SSIM stations are subject to potential shifts in base forcing functions of the estuary such as sea level rise, sediment budgets and temperature.

SCOPE OF WORK

NJDEP Bureau of Climate Resilience Planning and Division of Science and Research seek a qualified entity to conduct SSIM Monitoring following standard MACWA protocols as follows in the summer of 2021.

- 1. Non-destructive vegetation monitoring** in established vegetation plots in nine sites spread out across the New Jersey Coast of the Delaware Bay and Barnegat Bay. There are nine vegetation plots per site. All work must follow the Quality Assurance Project Plan (QAPP) for MACWA¹ and Standard Operating Procedures as listed in the QAPP or on the Partnership for the Delaware Estuary's methods bank².

Most sites require access by boat. Exact locations are not publicly available and will be disclosed to the contractor once funds are awarded.

Sites for Vegetation Monitoring
Dennis Creek – Dennis Creek Wildlife Management Area, Woodbine, NJ (Delaware Bay)
Maurice River – Port Norris, NJ (Delaware Bay)
Divining Creek – Downe, NJ (Delaware Bay)
Crosswicks Creek – Bordentown, NJ (Delaware Bay)
West Creek – Dinner Point, Forsythe NWR in Eagleswood, NJ (Barnegat Bay)
Reedy Creek – Forsythe NWR in Mantoloking, NJ (Barnegat Bay)
Island Beach State Park – Island Beach State Park, NJ (Barnegat Bay)
Horse Point – Forsythe NWR in West Creek, NJ (Barnegat Bay)
Light House Camp – Upper Barnegat Bay Wildlife Management Area in Ocean County, New Jersey (Barnegat Bay)

- 2. Elevation monitoring** around three Surface Elevation Tables (SETs) at each of four sites following established MACWA protocols. This involves 12 grid surveys of approximately 200 points completed with real-time kinematic-global positioning system (RTK-GPS).

Sites for Elevation Monitoring
Dennis Creek – Dennis Creek Wildlife Management Area in Woodbine, NJ (Delaware Bay)
Reedy Creek – Forsythe NWR in Mantoloking, NJ (Barnegat Bay)
Island Beach State Park – Island Beach State Park, NJ (Barnegat Bay)
Light House Camp – Upper Barnegat Bay Wildlife Management Area in Ocean County, New Jersey (Barnegat Bay)

- 3. Establishment of new vegetation and marker horizon plots** at the Light House Camp in the Upper Barnegat Bay Wildlife Management Area in Ocean County, NJ. SETs have been installed

¹ The Partnership for the Delaware Estuary and Barnegat Bay Partnership. 2010. Intensive Monitoring and Assessment Program for Tidal Wetlands of Delaware, New Jersey & Pennsylvania, Version 1.0

² <https://www.delawareestuary.org/science-and-research/standard-methods-homepage-2/>

and are monitored at the Light House Camp, but the rest of the MACWA proposals need to be implemented. Task: Establish nine new vegetation plots and nine new marker horizon plots, and measure six plant biomass cores and five *in situ* water chemistry points (total suspended solids, temperature, salinity, dissolved oxygen) as described in the MACWA QAPP and protocols.

All work must follow the Quality Assurance Project Plan (QAPP) for MACWA³ and Standard Operating Procedures as listed in the QAPP or on the Partnership for the Delaware Estuary's methods bank⁴.

Data collection and processing will follow the quality assurance/quality control (QA/QC) procedures outline in the MACWA QAPP. QA/QCed data will be submitted to NJDEP in the standard MACWA and New Jersey Tidal Wetlands Monitoring Network (NJTWMN) formats along with progress reports at the time of invoicing summarizing work completed during the reporting period and any issues that arose while doing the work. Invoices should include purchases and staff hours.

In addition, if applicable, data and information will be uploaded into the database being developed for the NJ Tidal Wetlands Monitoring Network in the approved format.

NJDEP reserves the right to come perform a performance audit in the field and/or lab to check that the QAPP and SOPs are being followed.

DELIVERABLES

- 1. Progress reports on work completed at time if invoicing.** Progress reports should be sent along with invoices detailed work completed and any issues encountered. Invoices need to show how the funding was spent. The number of hours each person worked and receipts for expenses.
- 2. QA/QCed data and photographs in the standard MACWA and NJTWMN digital formats**
- 3. Uploaded QA/QCed data to the NJTWMN database**

PROJECT TIMEFRAME

The NJDEP Bureau of Climate Resilience Planning and Division of Science and Research seek to complete the tasks/deliverables identified above **by September 1, 2021. No extensions will be granted.**

PROPOSAL REQUIREMENTS

All proposals in response to this Request for Proposals must be submitted via email to Metthea Yepsen at Metthea.Yepsen@dep.nj.gov by **5:00 PM on March 3, 2021.**

Proposal specifications:

All proposals should include:

- A basic statement of qualifications, including experience, background, skills and degree of expertise in the specific areas outlined in this RFP.
- Applicants must have access to site specific Surface Elevation Table arms and pins that are routinely used to measure elevation at the sites and have a minimum of two years of experience conducting SSIM monitoring and data analysis.

³ The Partnership for the Delaware Estuary and Barnegat Bay Partnership. 2010. Intensive Monitoring and Assessment Program for Tidal Wetlands of Delaware, New Jersey & Pennsylvania, Version 1.0

⁴ <https://www.delawareestuary.org/science-and-research/standard-methods-homepage-2/>

- Financial proposal for the project, in the range of **\$17,500 to under \$40,000**, including total work hours and hourly rate schedule to perform this work must be submitted using the [PB-120 Form](#).
- Any other relevant contractual language. The successful applicant's final proposal will become part of any signed agreement.

This request for proposals does not commit the State of New Jersey to engaging the services of any firm for any of the items either within or outside the outlined scope of work.

Schedule for Selection of Consultant

1. Deadline for receipt of proposals: March 3, 2021.
2. Applicant notified of selection: By March 10, 2021.
3. Work will commence upon execution of a purchase order.

Please note: applicants must be registered in [NJSTART](#) and the winner bidder must complete the [DPA paperwork](#) before the execution of the purchase order. If you are a new grantee (not in the State's Treasury system) or an existing grantee with a new payment address or wish to receive direct deposit, you must register/update information at www.njstart.gov in order to process a purchase order.