

**Opportunity Title:** Urban Wet Carbon Accounting and Climate Change

**Opportunity Reference Code:** 0022-NPP-NOV24-GISS-EarthSci

**Organization** National Aeronautics and Space Administration (NASA)

**Reference Code** 0022-NPP-NOV24-GISS-EarthSci

**How to Apply** All applications must be submitted in [Zintellect](#)

Please visit the NASA Postdoctoral Program website for application instructions and requirements: [How to Apply | NASA Postdoctoral Program \(orau.org\)](#).

A complete application to the NASA Postdoctoral Program includes:

1. Research proposal
2. Three letters of recommendation
3. Official doctoral transcript documents

**Application Deadline** 11/1/2024 6:00:59 PM Eastern Time Zone

**Description** About the [NASA Postdoctoral Program](#)

The [NASA Postdoctoral Program \(NPP\)](#) offers unique research opportunities to highly-talented U.S. and non-U.S. scientists to engage in ongoing NASA research projects at a NASA Center, NASA Headquarters, or at a NASA-affiliated research institute. These one- to three-year fellowships are competitive and are designed to advance NASA's missions in space science, Earth science, aeronautics, space operations, exploration systems, and astrobiology.

**Description:**

Wetlands are strongly linked to climate, whether in emissions, fluxes, or storage. We investigate carbon storage in wetlands in the New York area, assessing the value of these wetlands for preserving them in the face of coastal ecosystem degradation and managed restoration, in terms of regional and global biogeochemical cycles as well as in terms of climate change mitigation policies. Using satellite remote sensing and observational data, this study will address this urgent research gap by characterizing carbon (C) stocks and fluxes in the lower Hudson Valley and the Long Island Sound, and developing measurement and analytical approaches for use in support of Monitoring, Reporting and Verification (MRV) frameworks in coastal wetlands. The applicant will couple space-based remote sensing with comprehensive field and laboratory experiments to quantify the areal extent of wetlands and determine the depths and C content of various types of wetland sediments (both riverine and marine-estuarine). In addition, we will together examine the role of these wetlands in lateral exchanges of organic C with adjacent estuarine and coastal waters. This combination of studies will allow us to understand wetland-atmosphere-estuarine C exchanges, assess how much C is stored on the landscape today, and how land use and land cover change, as well as changes in climate will affect this significant C reservoir. This information is critical for C management and MRV activities. A strong background in remote sensing, GIS, or blue carbon is required.



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**Field of Science:** Earth Science

**Advisors:**

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**Questions about this opportunity?** Please email [npp@oraui.org](mailto:npp@oraui.org)

- Eligibility**
- **Citizenship:** U.S. Citizen Only
- Requirements**
- **Degree:** Doctoral Degree.