

NEON Assignable Assets – Infrastructure for the Research Community

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November 22, 2022

Abstract

The National Ecological Observatory Network (NEON) is a long-term ecological observatory focused on collecting and providing open, continental-scale data that characterize and quantify complex and rapidly changing ecological patterns and processes. As part of the broader Observatory design, the NEON Assignable Assets Program provides access to NEON infrastructure enabling Principal Investigator (PI)-driven research. Requests can be from five main areas: Sensor Infrastructure (SI), Observational Sampling Infrastructure (OSI), the Airborne Observation Platform (AOP), the Mobile Deployment Platform (MDP), and Field Site Access and Coordination (FSAC). NEON's field sampling teams are also available at NEON sites to support specimen collection and observations for specific research needs. The PI or their sponsor is responsible for costs incurred by the NEON program to complete the requested access or collection. In addition, NEON can provide Letters of Support/Collaboration for collaborating with NEON scientists or using NEON data. Sensor Infrastructure (SI): NEON offers access to existing sensor infrastructure (i.e., towers, power, and communications) for installation of physical instrument systems or the addition of new arrays for collecting data from automated sensor suites. Observational Sampling Infrastructure (OSI): PIs can request that NEON Field Ecologists collect data or biological samples at NEON sites. Airborne Observation Platform (AOP): Provides a suite of remote sensing instruments mounted in an aircraft for collecting airborne-based data (discrete and waveform LiDAR, hyperspectral imagery, and RGB camera). Mobile Deployment Platform (MDP): NEON offers a suite of self-contained, mobile arrays of sensors, power systems, and data logging capabilities for capturing atmospheric, soil, and aquatic-based measurements. These are deployable in areas of interest to capture data analogous to ongoing NEON data collection. Field Site Access Coordination (FSAC): Researchers may want to work within or adjacent to NEON sites while not utilizing NEON infrastructure or personnel. Review of these projects ensures no impact to NEON data collection, and provides minimal logistical support for working adjacent to NEON sites. More at <https://www.neonscience.org/assignable-assets>

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2019 AGU Fall Meeting | A43P-2939

NEON Overview



- ❖ Collect 30 years of observations
- ❖ 47 terrestrial and 34 aquatic observing sites across the U.S.
- ❖ Open source data are readily available to scientists, educators, students, decision makers and the general public on the NEON Data Portal at data.neonscience.org/home
- ❖ The NEON design contains PI & agency requestable assets to facilitate ecological research via the NEON Assignable Assets Program. This program makes available certain components of NEON's infrastructure to members of the community to support their own research or other activities.
- ❖ Use of NEON Assignable Assets are on a cost-recoverable basis.
- ❖ Contact | AssignableAssetRequests@BattelleEcology.org

NEON Infrastructure Available for Use



Mobile Deployment Platform (MDP)
These self-contained mobile sensor arrays can be set up to collect meteorological, soil and surface water data for short- to medium-term monitoring projects. MDPs are designed for rapid deployment to be able to capture stochastic ecological events (e.g. fires, flood events, pest outbreaks) across the landscape



Observational Sampling Infrastructure (OSI)
Investigators may request access to NEON sampling locations, additional data/sample collection by NEON's professional field ecologists to support for PI-led projects at NEON sites, or access to excess biological samples collected but not archived as part of the NEON Biorepository.



Airborne Observation Platform (AOP)
AOPs are light aircrafts outfitted with a high-fidelity hyperspectral imaging spectrometer, discrete and waveform LiDAR, and a high-resolution digital camera to collect remote sensing data. Researchers can request to fly non-NEON sites or to fly NEON sites at times of year when NEON does not collect AOP data.



Field Site Access Coordination (FSAC)
Researchers may want to work within or adjacent to NEON sites while not utilizing NEON infrastructure or personnel. NEON can facilitate access and coordination. Review of these projects ensures no impact to NEON data collection and provides limited logistical support for work adjacent to NEON sites.



Sensor Infrastructure (SI)
Investigators may request to add sensors to existing NEON field site infrastructure to collect their own data. Terrestrial field site infrastructure includes meteorological/flux towers and soil arrays. Aquatic sites include in-situ aquatic sensor stations, groundwater wells, and meteorological stations in the riparian area of the site.



Letters of Support/Collaboration
Investigators wanting to collaborate with NEON scientists, use resources or data not regularly available through the portal, or collaborate with NEON in some other manner may request a Letter of Support/Collaboration from NEON.
www.neonscience.org/letters-support

More Information

www.neonscience.org/assignable-assets