NEON Assignable Assets Program - Putting NEON Assets to Use for the Research Community

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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, specific components of the Observatory are available to funded researchers for Principal Investigator-driven studies as part of NEON's Assignable Asset Program. The available Assignable Assets include the Mobile Deployment Platform (MDP), the Sensor Infrastructure (SI), sampling locations or biological samples as part of the Observational Sampling Infrastructure (OSI), and the remote sensing capabilities of the Airborne Observation Platform (AOP). In addition to the infrastructure assets, NEON has deployable field sampling teams near NEON sites to support specimen collection and observations for specific research needs. Researchers can also gain access to the growing collection of plant and animal specimens and soil and water samples that NEON staff have gathered and stored in the NEON Bioarchive for study and analyses. Mobile Deployment Platform (MDP): NEON offers a suite of these self-contained, mobile arrays of sensors, power systems, and data logging capabilities for capturing atmospheric, soil, and aquatic-based measurements. Sensor Infrastructure (SI): Includes infrastructure (i.e., towers, power, and communications) for physical instrument systems or arrays for collecting environmental data from automated sensor suites. Observational Sampling Infrastructure (OSI): Allows researchers access to NEON sampling locations or to biological samples at NEON sites before samples are archived. Airborne Observation Platform (AOP): Provides a suite of remote sensing instruments mounted into a Twin Otter aircraft for collecting airborne-based data at nearly any site of interest in the U.S.

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A Brief NEON Overview

- 30 years of observations
- 47 terrestrial and 34 aquatic observing sites across the U.S. (including Alaska, Hawaii & Puerto Rico)
- Open source data will be readily available to scientists, educators, students, decision makers and the general public
- **The NEON design contains PI & agency requestable assets to facilitate ecological research via the NEON Assignable Assets Program.**

Access to NEON Infrastructure Includes

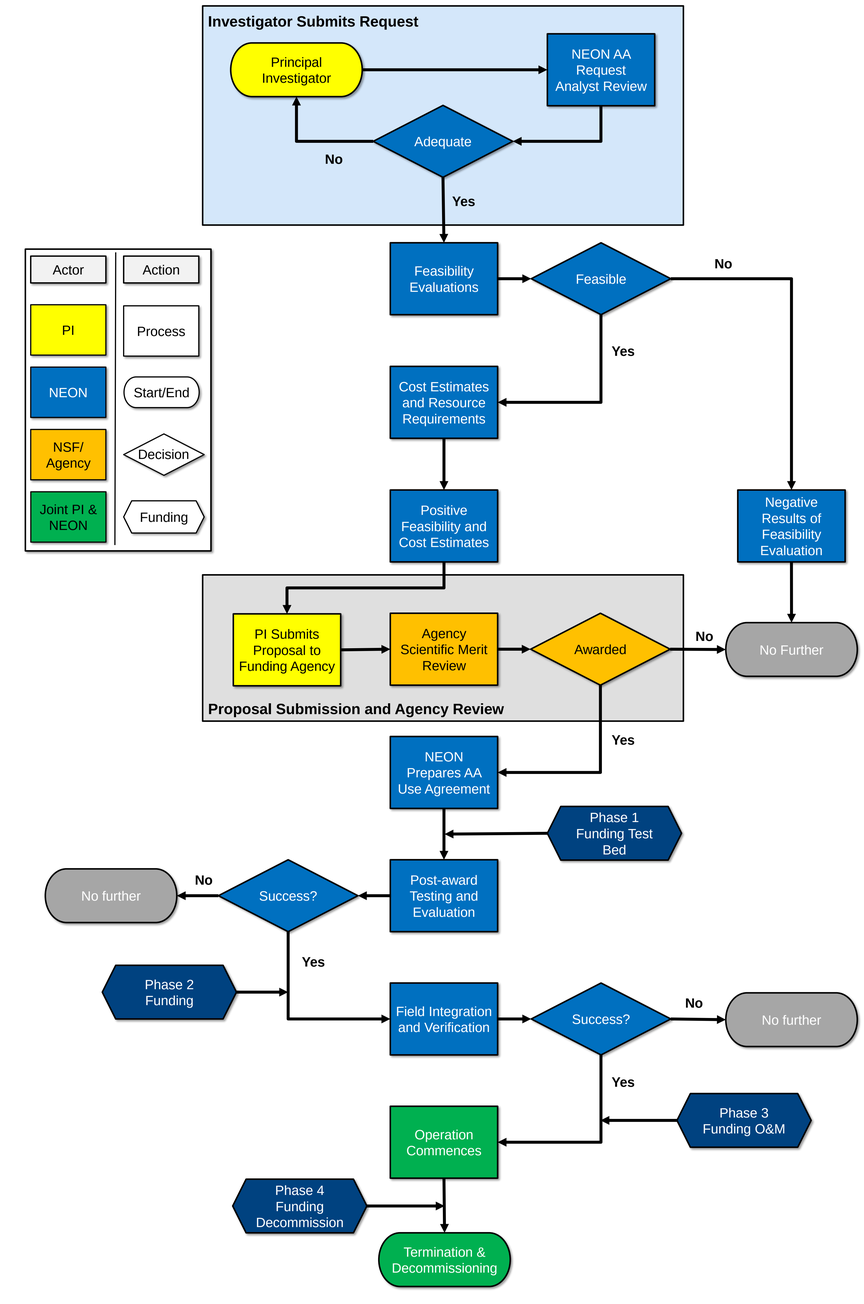
Mobile Deployment Platforms (MDPs): These self-contained mobile sensor arrays can be set up to collect meteorological, soil and surface water data for short- to medium-term monitoring projects. MDPs are designed for rapid deployment to be able to capture stochastic ecological events (e.g. fires, flood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

Airborne Observation Platform (AOP) Surveys: 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.

Access to Sensor Infrastructure (SI) at Field Sites: 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 site infrastructure includes in-situ aquatic sensor stations, groundwater wells, and meteorological stations in the riparian area of the site

Access to Observational Sampling Infrastructure (OSI) at Field sites: Researchers may request access to sampling locations or field technician support for PI-led projects at NEON sites, and access to biological samples collected at field sites before they are archived in the NEON Biorepository.

Request and Evaluation Process



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