STEAC MEETING REPORT (09/16/2020)

The STEAC met on September 16, 2020 with a quorum of eleven members attending (Anne Giblin, Jackie Matthes, Jeff Dukes, Kim Novick, Mike Dietze, Peter Groffman, Rob Guralnick, Sarah Bevins, Sparkle Malone, Frank Davis, Emily Bernhardt). Seven NEON-Battelle staff attended (Gene Kelly, Kate Thibault, Darcy Gora, Paula Mabee, Mike Kuhlman, Mike SanClements, Kim Nitschke).

The meeting was virtual, and the following topics were discussed: I. The Fall Meeting II. The STEAC Report; III. The NSF Annual Review of Operations; IV. Data Licensing; and V. Soil temperature sensors.

I. Fall Meeting: The fall meeting is scheduled for November 2 and 4th, 2020 from 11am to 4pm ET. A few agenda items for this meeting were identified: Tracking NEON data use; Interactions between the STEAC and TWGs; Review NSF panel comments.

II. Discussion of the Battelle response to the [STEAC Spring report 2020:](#)
The STEAC is interested in knowing how NEON is working with other networks through formal agreements. In the report, the STEAC also requests more information about how STEAC recommendations are being used. In the past, written responses were provided. To increase the diversity of the STEAC, it may be useful to create small ad hoc working groups to work on specific tasks. The STEAC recognized that transparency in 2019 required improvement. The STEAC is now more visible and all meeting minutes are being posted on the NEON website. The STEAC also recognized that there should be better communication between the technical working groups (TWGs). Although reports on proposed changes often include TWGs, working group leads should attend STEAC meetings when appropriate to lead discussions. STEAC members can also be a point of contact for the TWGs.

III. NSF Annual Review Update: The NEON annual operations review was positive and a reflection of all of the great work of the NEON staff. The panel comments will be sent to NEON in the next month. The following items were applauded: outreach, the diversity, equity, and inclusion plan, the advancement of the postdoc and scientist in residence programs, the COVID-19 plan, the improvements to the user interface, IS monitoring tools, and the software plan. The panel also identified a few challenges: the increasing burden of the NEON staff, metadata visibility, and IO and OS data. The panel also suggested that NEON compile a list of the most influential publications.

STEAC: The STEAC applauds NEON for the successful panel review. The STEAC suggests that NEON sets up a google scholar organizational page to keep track of all papers published. This third party software will also indicate the impact of individual articles. When reporting to NSF, consider highlighting the most recent articles.

IV. Data Licensing Recommendation: The TWG recommends CC0- the most open license.
STEAC: The STEAC supports the CC0 status but recognizes that the terms of the CC0 may differ from other networks. The STEAC recommends working with data networks that host NEON data to align the licensing for all NEON data.

V. The transition to a combined soil temperature & moisture sensor: Soil settling around the sensors (temperature and moisture) is causing issues and the current sensors have been discontinued. This presents an opportunity to change the design. Engineering will redesign and select a new soil sensor. A combined temperature and moisture sensor is being considered and will lead to savings. This will limit uncertainties and spatial heterogeneity between the sensors. The TWG recommends these combined sensors, which are being used by other networks

successfully. A request for bids from suppliers has been sent out. NEON requests feedback on how to phase in new sensors along with current sensors.

STEAC: The STEAC recognizes that it is both necessary to change the design and make measurements in parallel with the new and old sensors. Consider using additional sensors to increase the number of measurements at a site. Since changes are being made, consider adding the soil moisture and increasing measurements at the same time. NEON should try to keep the sensors running in parallel until criteria are met. The criteria should be based on capturing a full range of conditions. If it doesn't cost more, consider keeping all sensors running in parallel as long as possible.