Division of Biological Infrastructure NEON Competition Webinar

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Overview

1. Project intent and design
2. NEON data themes and data products
3. NEON Subsystems
4. NEON operational requirements
5. NEON competition DCL
6. NSF's oversight of Large Facilities
7. Questions

NEON: Intent

- Enable regional- to continental-scale research

- 30-year lifespan to explore decadal trends

- Enable individual and team science
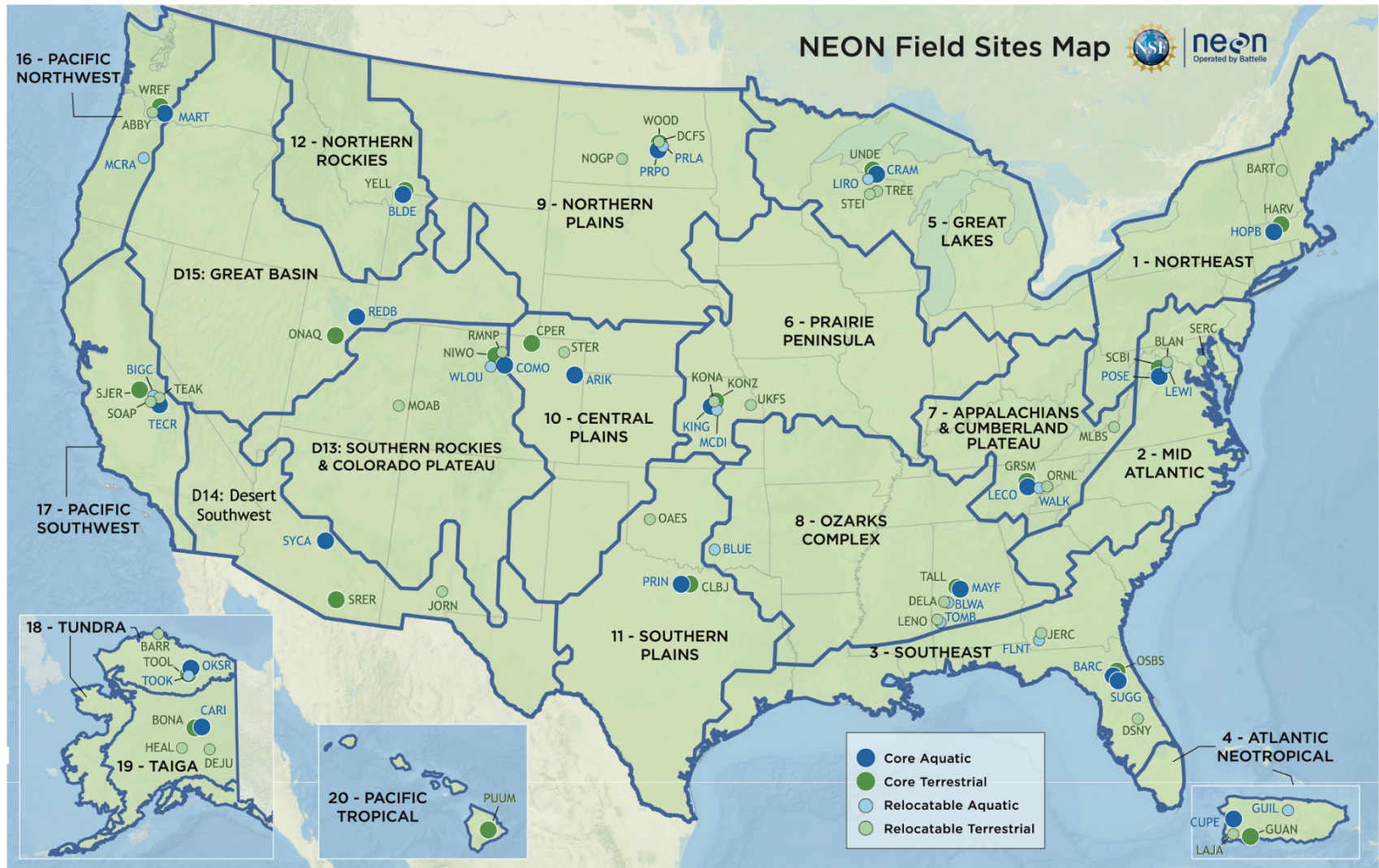
- Democratize and standardize ecological research
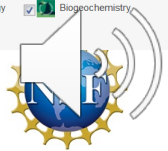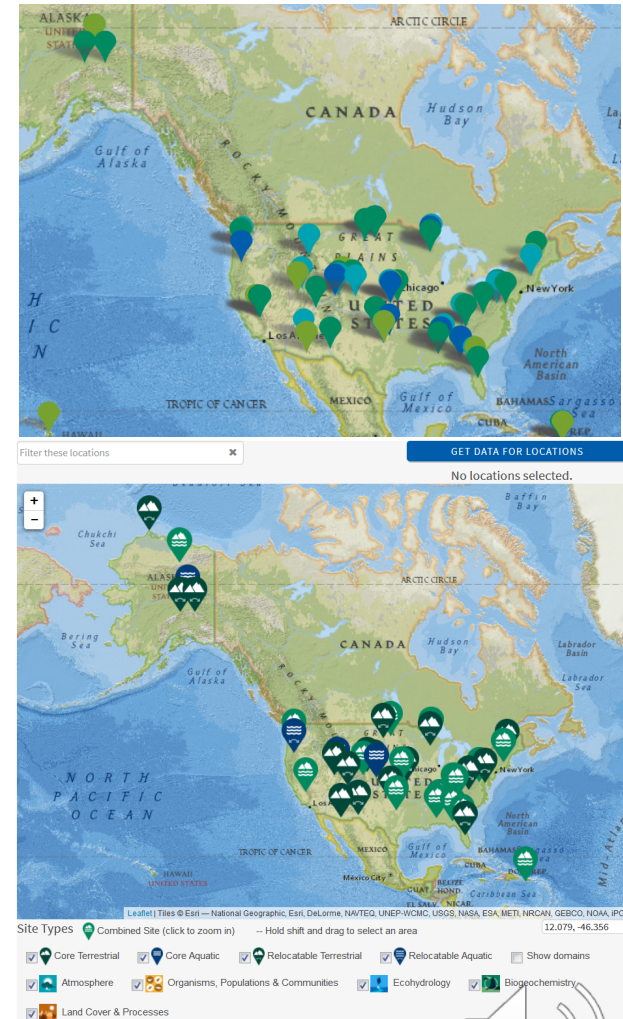
NEON: Design

- Geographically distributed field and lab infrastructure

- Fully networked research platforms

- Internet accessible, data, computational, analytical, and modeling capabilities
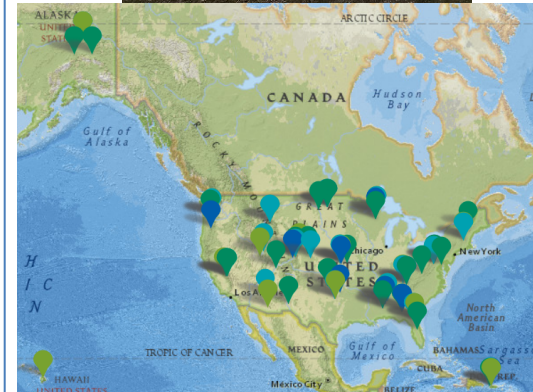
NEON: Locations and Domains

NEON: Data themes and Data products

Five Data Themes

- Atmosphere
- Biogeochemistry
- Ecohydrology
- Land Cover and Processes
- Organisms, Populations and Communities

179 Data Products

NEON: Subsystems

▪Terrestrial and Aquatic Instrument Systems (TIS & AIS)
- Meteorology
- Phenocams
- Soil Sensors
- Surface Water
- Groundwater
- Surface Air Exchange

▪Terrestrial & Aquatic Observation Systems (TOS & AOS)
- Aquatic Organisms
- Terrestrial Organisms
- Soils and Sediments
- DNA Sequences
- Biogeochemical
- Geomorphology
- Pathogens

▪Airborne Observation Platform (AOP)
- Lidar data
- Hyperspectral data
- High resolution camera

▪Biorepository

▪Assignable Assets
- Airborne Observation Platform (AOP)
- Mobile Deployment Platforms (MDP)
- Access to sensor infrastructure
- Access to observational sampling infrastructure

NEON: Operations

- **Resource requirements**
  - Data acquisition
  - Data QA/QC
  - Data dissemination
  - Cyberinfrastructure
  - Human resource management
    - At peak, over 500 employees
    - Permanent
    - Seasonal

- **Engagement and Outreach**
  - Advisory bodies; strategic, science and technical
  - Engage with scientific community
  - Education and training

NEON Competition*

- Rationale for competition
  - Normal NSF process for large facilities
- Competition timeline: key target dates
  - Submission of comments and questions, **September 30, 2019**
  - Solicitation, coming fall 2019
  - Letter of intent, anticipated
  - Full proposals due, June 2020
  - Potential award start date, anticipated late 2021

* Information provided in the Dear Colleague Letter (NSF 19-080)

NSF's Oversight of Large Facilities

- Award oversight mechanism: Cooperative Agreement (CA)
- Unique attribute of CAs
  - Substantial involvement and interaction between NSF and the grantee in carrying out the activity contemplated award.
  - CAs are living documents that are agreed upon and amended by NSF and Awardee.

Summary

- Enabling predictive, regional- to continental- scale research
- Complex distributed infrastructure; complex subsystems, large number of employees and numerous requirements
- Competition key dates
- NSF's Oversight of NEON

QUESTIONS?

- This Webinar will be posted as presented for on-demand viewing:
  - Recorded Webinar –
    - Event webpage
    - NSF NEON Program Page

- Email questions to the cognizant NEON Program Director: Roland P. Roberts
  - neon-bot@nsf.gov