

NEON News

Dr. Paula Mabee new Observatory Chief Scientist starting February 3, 2020

Former NSF Division Director for the Environmental Biology

NSF announces NEON re-compete

Letter of intent by Feb. 21st & proposals by June 19th

5yr award beginning Nov 2021

Biorepository at ASU fully operational

Over 103,000 samples & over 700 identified taxa including microbes, invertebrates, vertebrates, aquatic/terrestrial plants

Science recap (phenology/insect team)

Plant phenology observations 5/14 9/17

Over next two years will shift from 3 to 20 focal species (with less replicates)

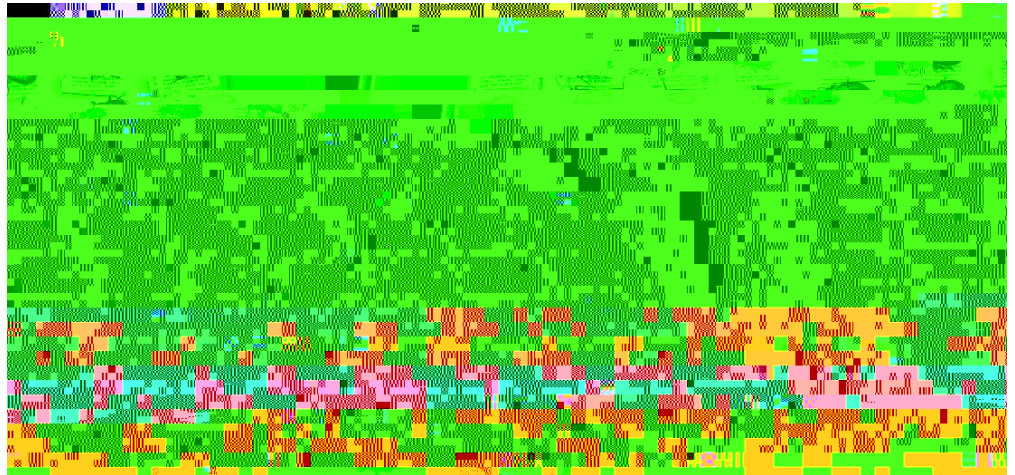
Mosquito phenology collections 5/24 9/25

Toolik holds the record among all NEON sites for mosquito captures!

Beetle (Carabids) traps deployed 6/13 8/22

19 species identified to date

Tick sampling: still zero!



Science recap (flora)

Plant Diversity and above-ground herbaceous biomass 7/8- 7/26/19

Surveyed 13,200 m² of land for all vascular plants present

Encountered 135 vascular plant species

Reduced intensity in 2020 (198m²)

More effort will be dedicated to sorting/weighing bryophytes

Assessed woody species in plots around the NEON tower to see if they met criteria for veg structure survey; will reassess every 5yrs

Science recap



Science recap (Small mammal team)

Three bouts; June, July, August

Changes for the 2020 Season:

Cover traps with tar



Boardwalks

Boardwalk construction 2020

Propose to construct ~60m of boardwalk next to tower

Deliver material by snow machine, construct after snowmelt

Total NEON Boardwalk



Generator shed

2019:

Two new generators installed 7/15,
expected consumption reduced by 50%

Powers NEON tower and NOAA station

Maintenance

Primarily supported by NEON

visual inspections continued by TFS
maintenance ~ 3days

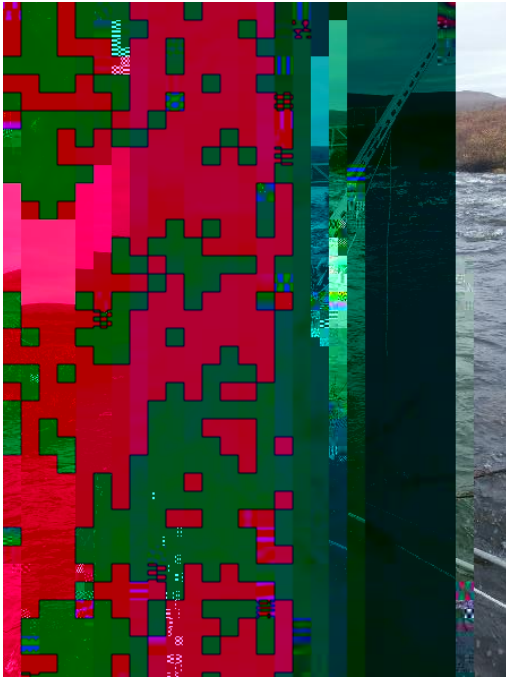
Remote monitoring planned for coming
season



Aquatic infrastructure

2018

2019

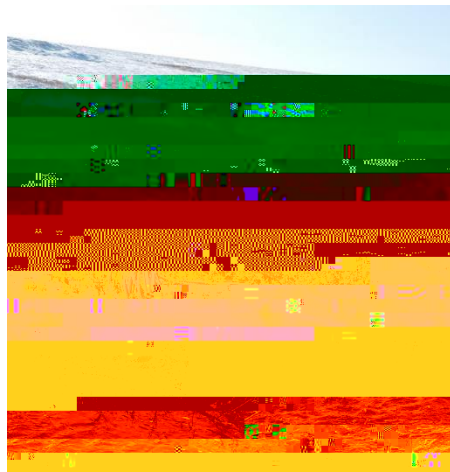
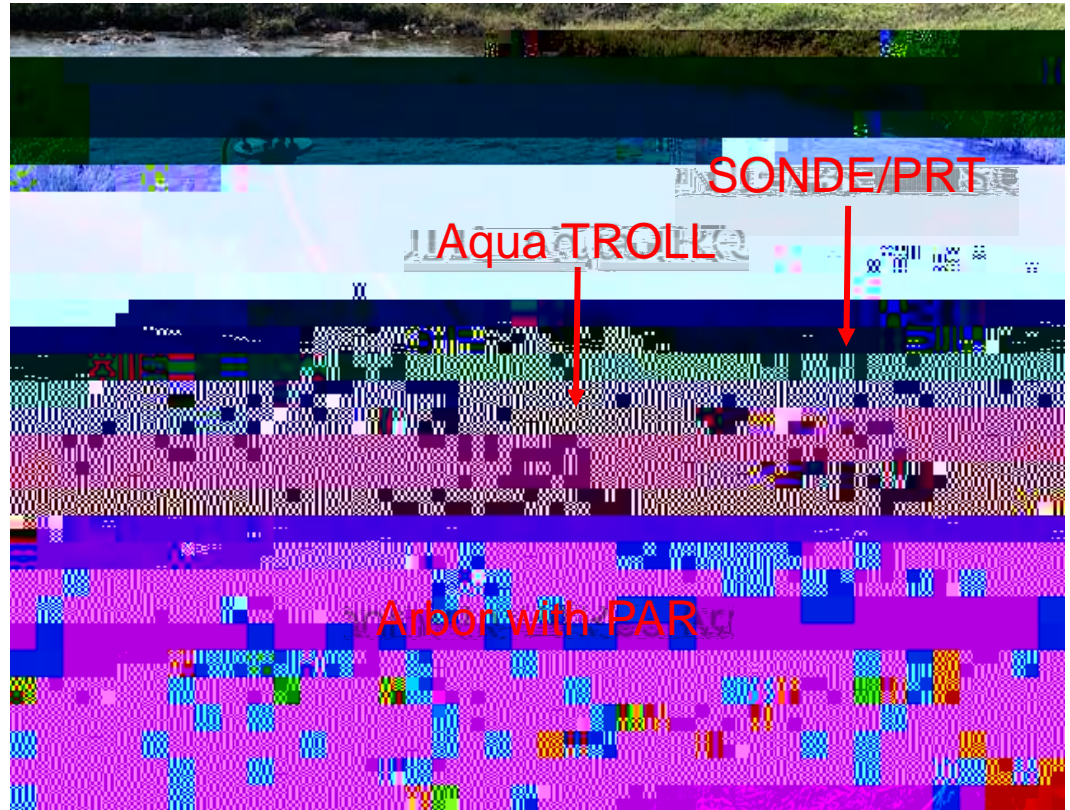
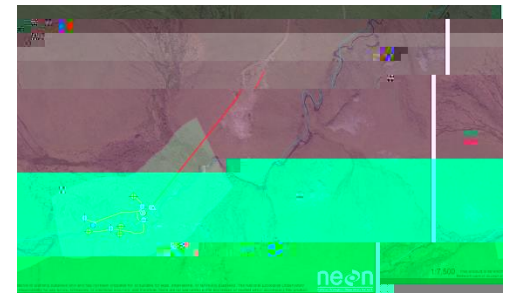


Aquatic infrastructure

2018



2019



2020 Oksrukuyik upgrades

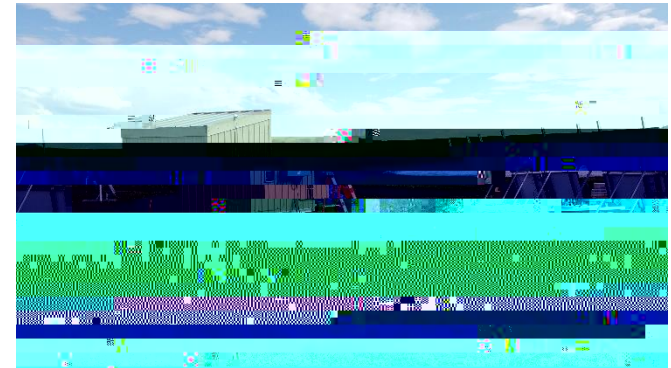
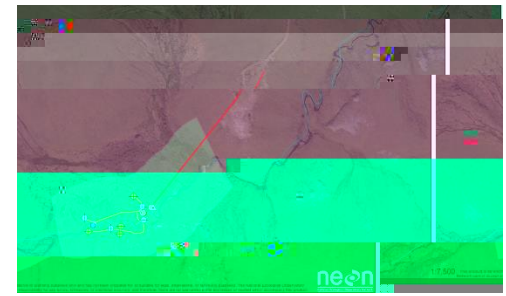
Current solar power system is insufficient to continuously operate the site (March - Oct)

Proposed install: Atrix 1500w fuel cell + four 100lb propane tanks

Addition of satellite communications to meet data availability requirements.

Streaming: up to 256 kbps

IP: up to 352 kbps (up), 700 kbps (down)



Remote Sensing

2019 Flight dates

6/22 7/14

2020 Flight dates

6/26 7/27

Flight box expanded to the west to cover Toolik lake watershed

