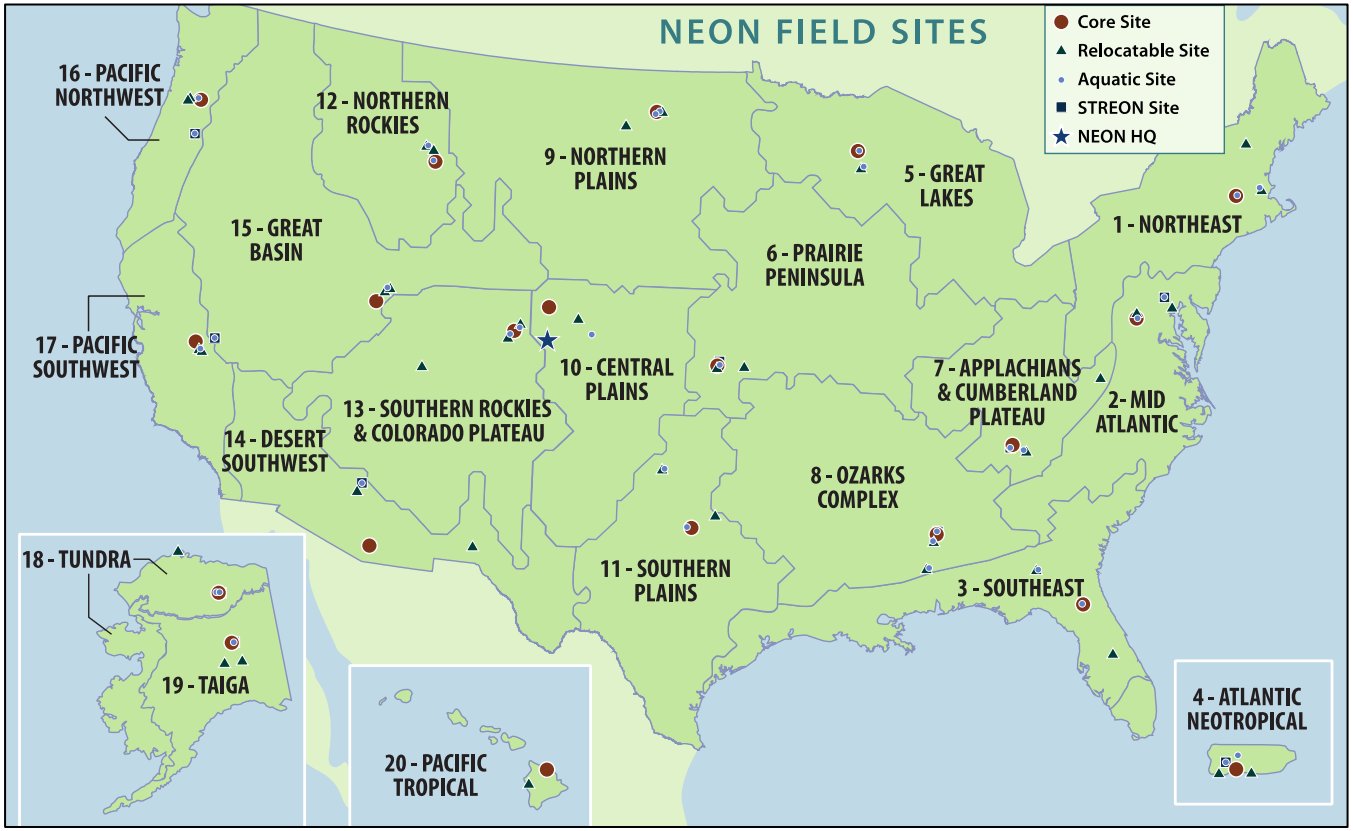
NATIONAL ECOLOGICAL OBSERVATORY NETWORK

Katrine Gorham
Alaska Field Operations Manager, NEON

Toolik Steering Committee Meeting
San Francisco, CA | December 13, 2014

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

A Continental-Scale Design



1. **Core sites:** Located in unmanaged wildland conditions

2. **Relocatable sites:** Representative of human land management effects on ecosystems

3. **Aquatic sites:** Measure changes in aquatic systems over time

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

Domain 18, Tundra

TERRESTRIAL	Toolik Lake (Core)
Site Construction	Jan-15 to Oct-15
Sensor Infrastructure Installation	Apr-16 to May-16
TIS Initial Operational Capability	Jun-16
TOS Initial Operational Capability	Aug-16

AQUATIC/STREON	Oksrukuyik Creek (Core & STREON)	Toolik Lake (Relocatable)
Site Construction – AQUATIC Facilities	Sep-15 to Dec-15	Aug-15 to Nov-15
Sensor Infrastructure Installation	Jul-16 to Jul-16	Jun-16 to Jun-16
AIS Initial Operational Capability	Aug-16	Aug-16 to Aug-16
AOS Initial Operational Capability	Oct-16	Oct-16 to Oct-16
Site Construction - STREON Facilities	Aug-15 to Dec-15	-
STREON Initial Operational Capability	Aug-16	-

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

Site Locations

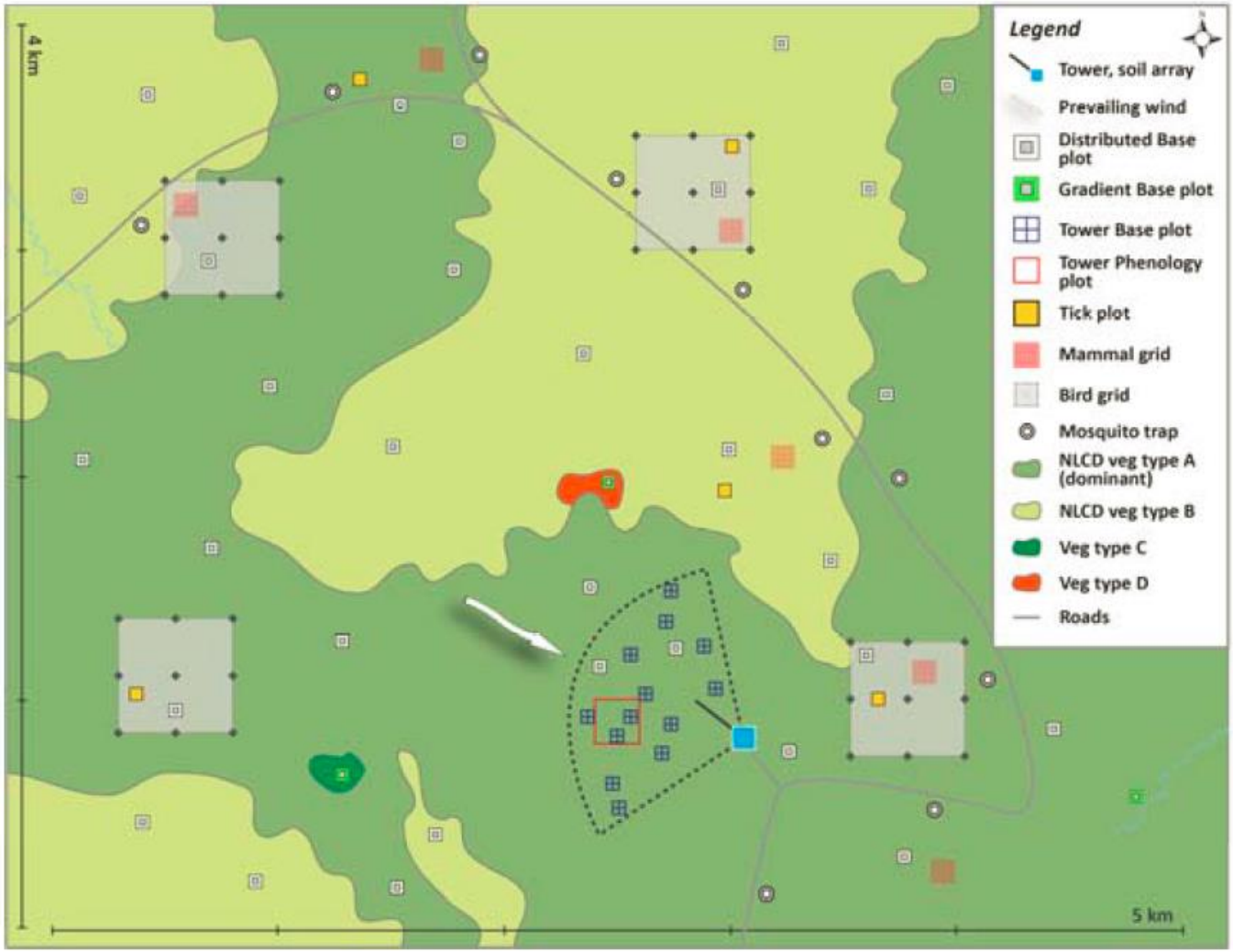
Core site tower and instrumentation will be located off the Dalton Hwy at MP 289.2, roughly five miles north of Toolik Field Station (MP 284.5). Site will include 26 ft tower, instrument hut, soil array, soil pit, precipitation gauge, generator / power run, parking area, and boardwalks.

Core aquatic / STREON site will be northeast of core tower location at Oks creek. Site will include sensors, groundwater wells, met station, streambed experiment baskets, and boardwalks.

Relocatable aquatics site at Toolik Lake. Site will include buoy and sensors, groundwater wells, met station, and boardwalks.

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

Plot Establishment Activities, 2015



© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

TOS Plot Establishment Activities, 2015

- NEON field team of six will be on-site at Toolik for approximately three weeks, July 13-31.

- From a large pool of randomly selected potential plots, selection will be narrowed to 30 base plots, 30 distributed tower plots, 6-8 mammal grids, 10-15 bird plots, 6 tick plots, and 10 mosquito points

	Plants	Soil Microbes	Small Mammals	Mosquitoes	Birds	Beetles	Ticks	Soil
Diversity	✓	✓	✓	✓	✓	✓		
Abundance	✓	✓	✓	✓	✓	✓		
Pathogens			✓	✓			✓	
Phenology	✓	✓		✓				
Pools/fluxes: Biogeochemistry	✓							✓
Function		✓						
Productivity & Biomass	✓							

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.

Questions?

© 2013 National Ecological Observatory Network, Inc. ALL RIGHTS RESERVED.