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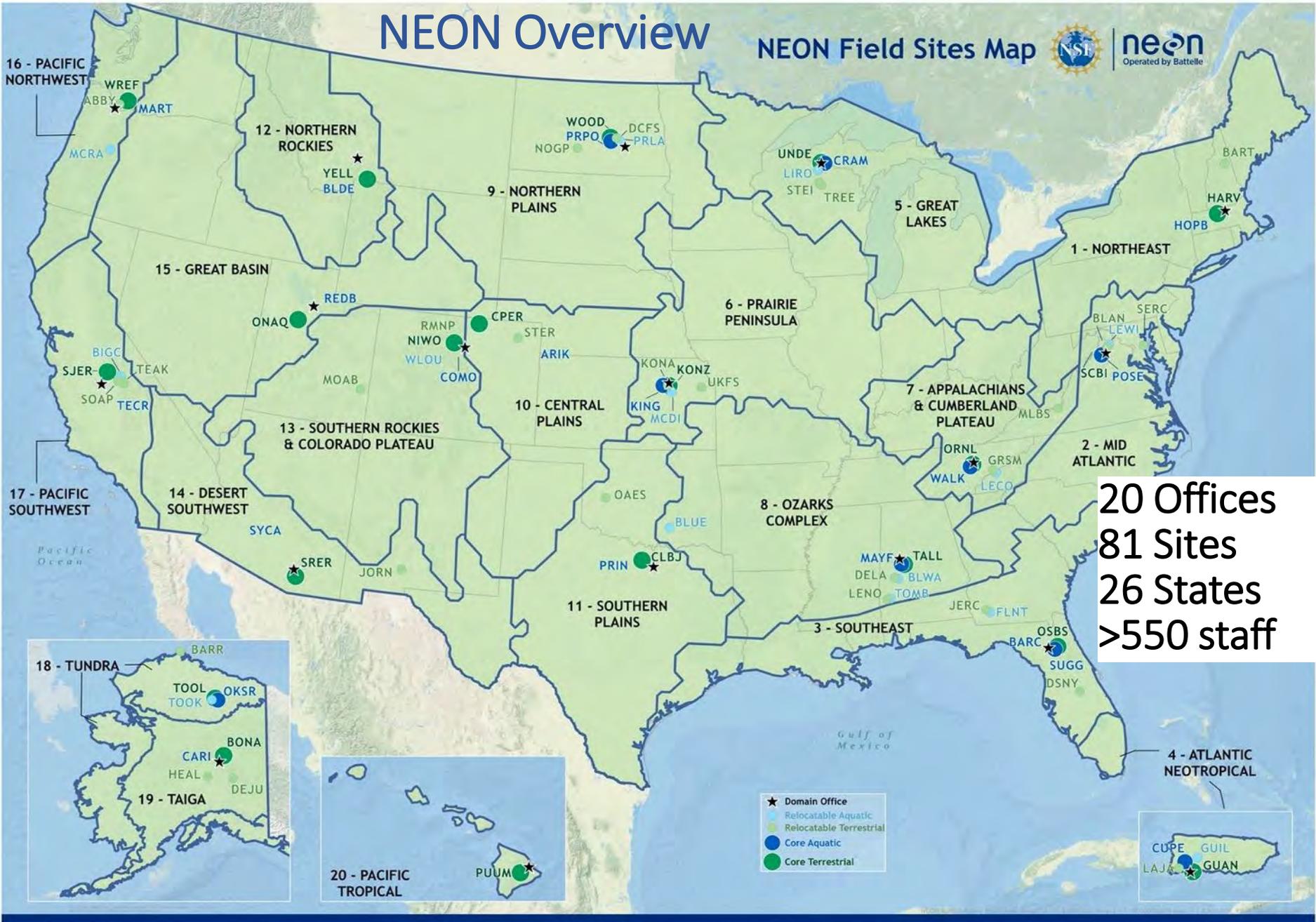
# Monitoring COVID across a continental Observatory

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NEON Operations Manager

Presented at Large Facilities Workshop – 2021 April Webinar  
April 7, 2021

# NEON Overview

## NEON Field Sites Map



20 Offices  
81 Sites  
26 States  
>550 staff

- ★ Domain Office
- Relocatable Aquatic
- Relocatable Terrestrial
- Core Aquatic
- Core Terrestrial

# Develop Plans

## HQ

- Tailored for teams that work out of NEON HQ (Labs, Production repair, Calibration, Engineering, Warehouse, IT)

## Field Science

- Covers operations in domains (labs, observational sampling, instrumentation)

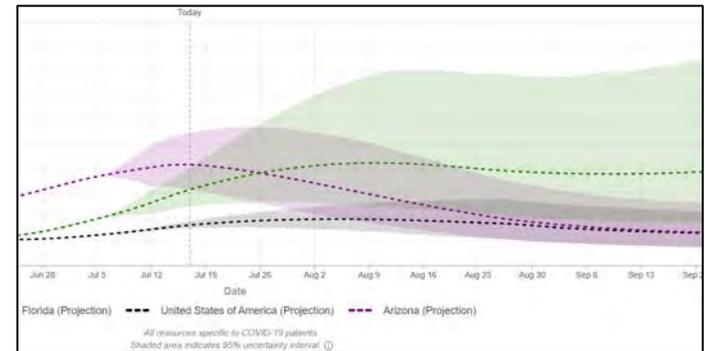
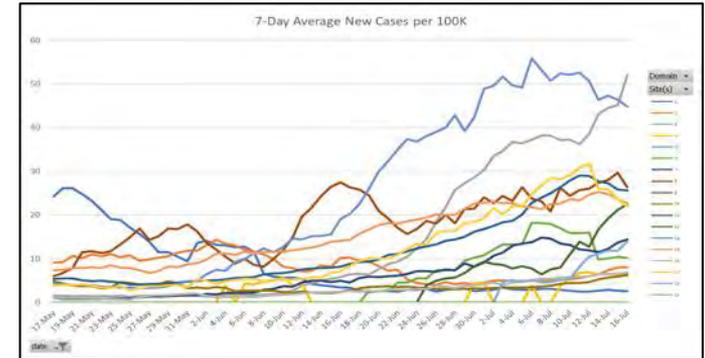
## AOP

- Covers operations in the hanger and during airborne operations for remote sensing

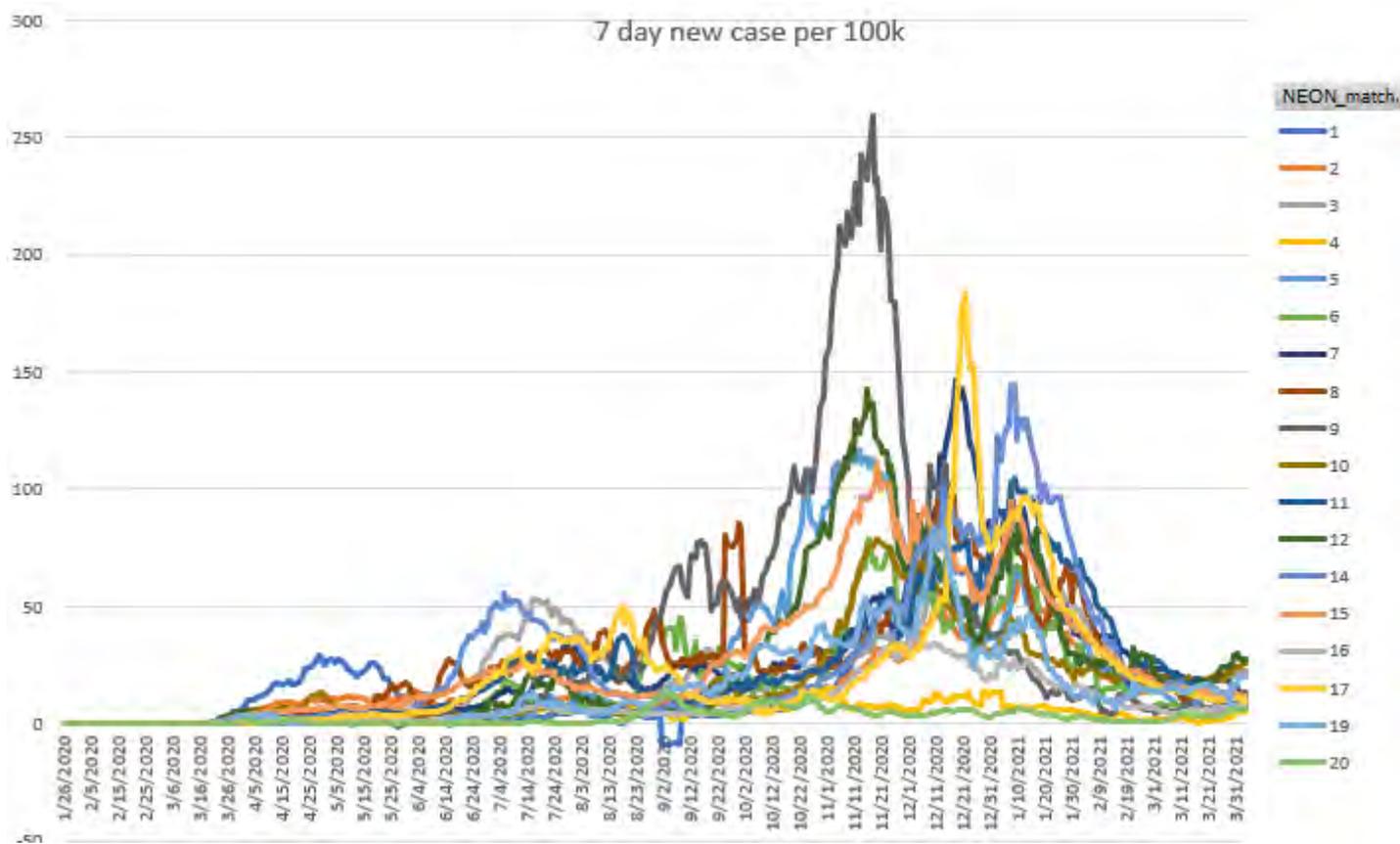


# Evaluation Data Sources

- Infection Trends
  - Data from NYT GitHub repository
  - Counties with NEON office or sites, nearby metro areas and lodging locations
- Hospital Capacity
  - Forecast models
  - National: CDC and healthcare orgs
  - Local Health Depts and Hospitals
- News
  - Local and National news feeds



# COVID-19 infection rates in counties local to NEON



Data from The New York Times, based on reports from state and local health agencies.



# Evaluation by Location

## All Field Science

- Daily (March 19 – April 10)
- 2-3/week (April 10 – June 2)
- Weekly (June 2 – July 14)
- Bi-weekly (rest of 2020 - early 2021)
- Weekly (current)

## Other teams (HQ and AOP)

- Reviewed when the team lead feels conditions are ready to restart some/all operations
- Revisited as conditions change or new requests
- Start of AOP flights in 2021

## Evaluation Criteria for consistent reviews

KEY	Guidance	Infection Trends (7-day new case)	Hospital Capacity (update 6/25/20)	Supplies	Operating/ Travel Plans
	Work from home only, state or local guidelines restrict work or site access restricted by host	Infection rates high (50-150/day and stable or increasing over 150/day)	>60% ICU headroom for used state and/or county	Less than 2-week supply, supplies not ordered, backordered or unavailable	Significant gap identified, no solution identified
	May reopen after meeting additional state, local or site host requirements; partial access	Infection rates moderate (20-50/day and stable or increasing, 50-150/day and decreasing)	51-60% ICU headroom used for state and/or county	Less than 2-week supply, supplies ordered and available	Gap identified, possible solution identified but not fully communicated or implemented
	May reopen, have met all state, local or site host requirements	Infection rates low (under 20/day or 20-50/day and decreasing)	<50% ICU headroom used for state and county(1)	More than 2-week supply on hand	Effective implementation of current plans

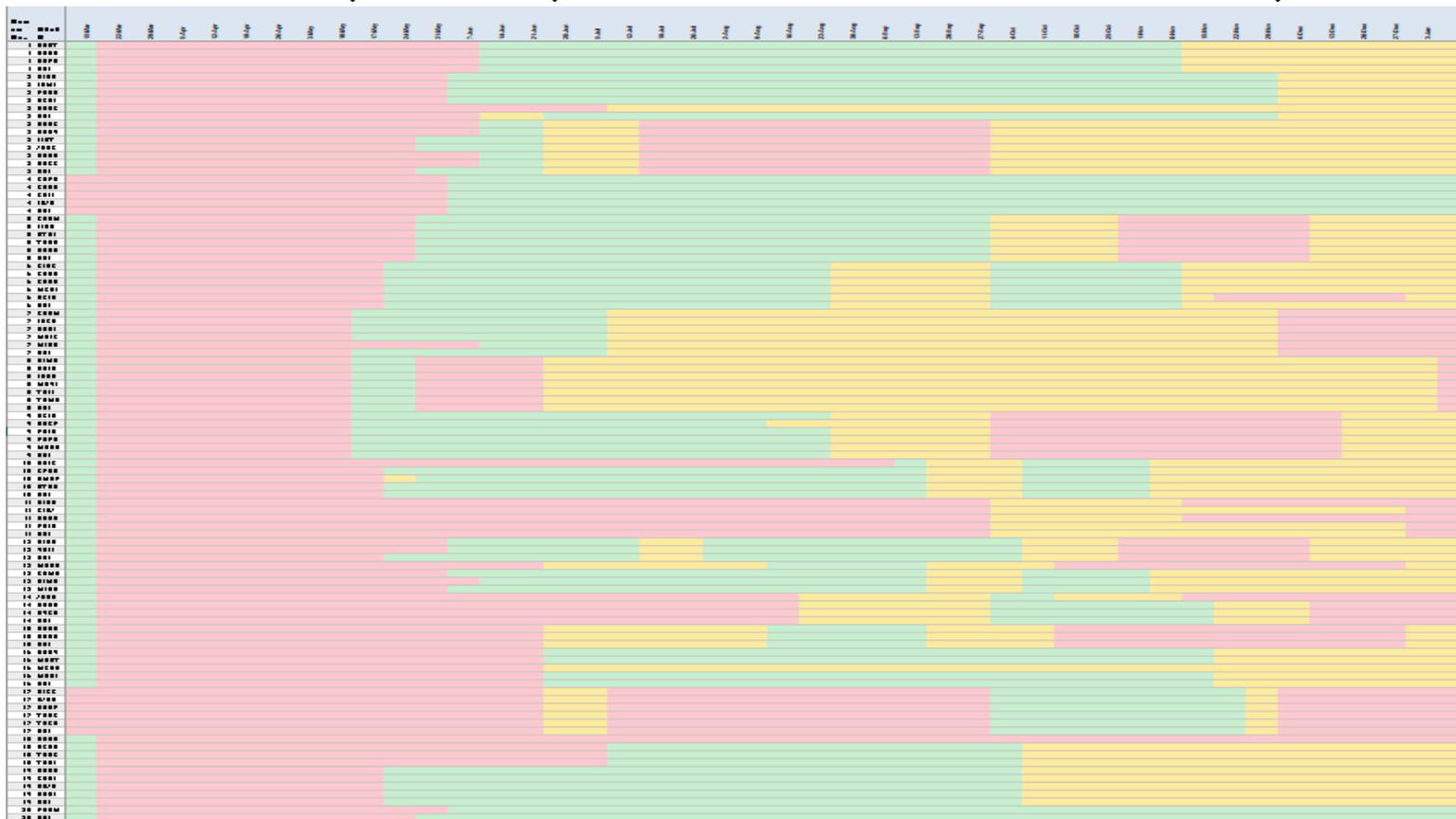
# COVID-19 effects on Field Science

NEON Closure  
**March 23**

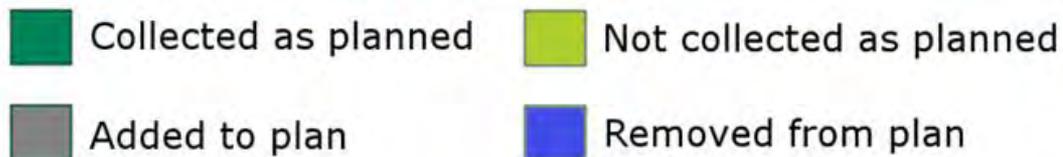
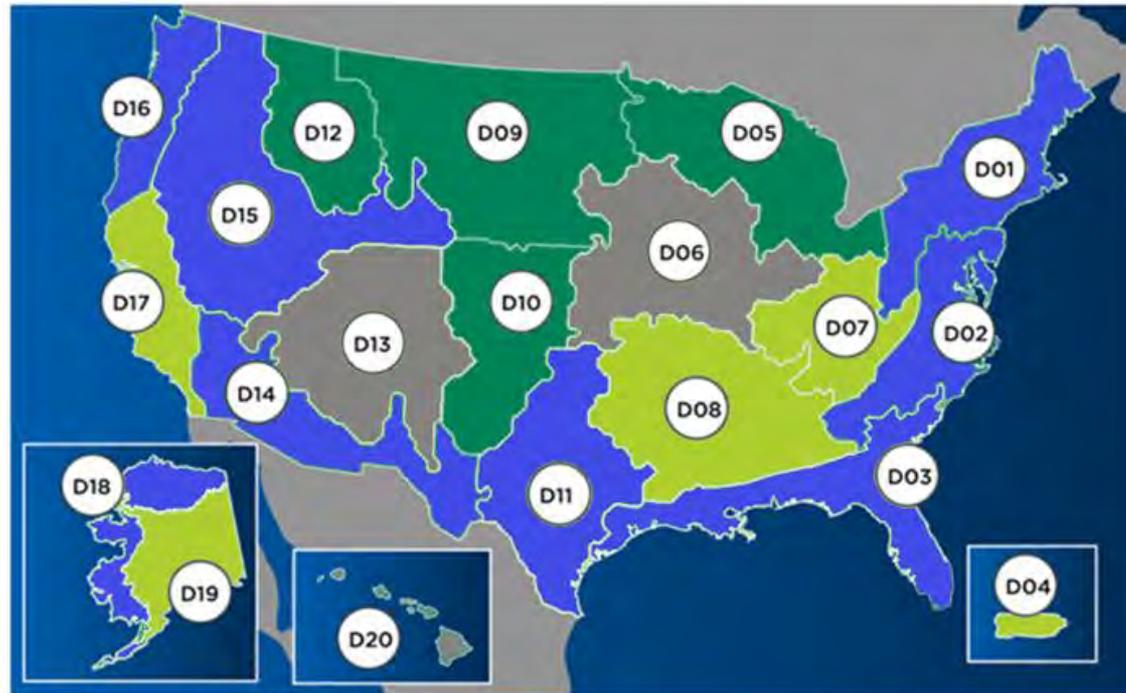
NEON Reopens 15  
sites **May 18**

All NEON sites allowed to open based on  
guidelines; 68 of 81 NEON sites open or  
conducting limited activities **July 1**

All Continental US site  
operations limited or  
closed **Dec 7**



# Airborne Observation Platform: Used Flexibility to Maximize Collections



# COVID-19 Monitoring Lessons Learned

- Data Sources
  - Cast a wide net
  - Look for consistency
  - Be creative if you can't get the exact data you need
- Evaluation Consistency
  - Apply guidance to all locations equally
  - Recognize risk adverse and risk accepting behaviors
  - Consult the team as a group
- Communication
  - Listen to the team and employee concerns
  - Make info available to all
- Validation
  - See what others are doing and how it compares – learn from them



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