



2019 Site Environmental Report Chapter 6 – Natural and Cultural Resources

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BROOKHAVEN
NATIONAL LABORATORY



What's being presented

- Chapter 6 of the SER
- Update on Natural Resources
- Update on Cultural Resources

Chapter 6 - Natural and Cultural Resources

■ Natural Resource Management

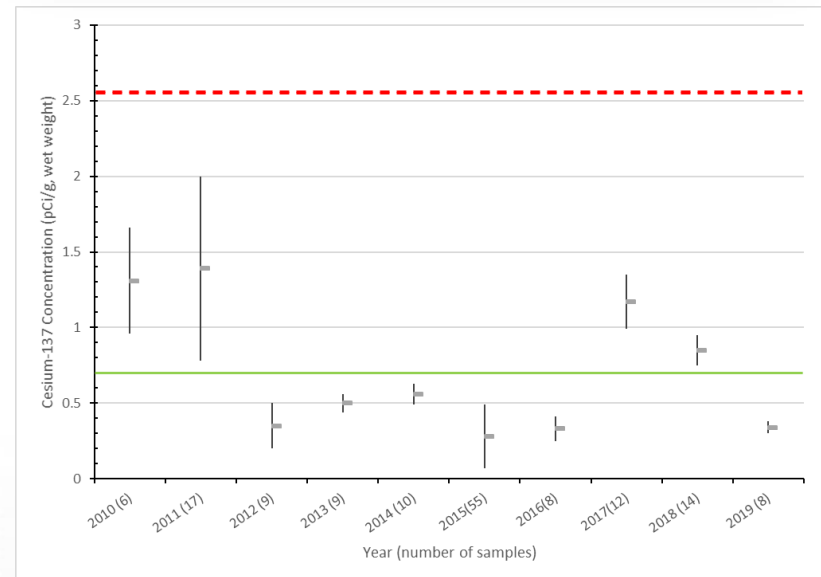
- Deer Management
 - End of year population 300-350
 - Population reduction of 250 deer
 - Contract with USDA – Wildlife Services
- Prescribed fire program on hold pending memorandum of understanding with NYSDEC
- Turkey population at 350-500 birds
- Continued opportunities for interns on variety of ecological topics
 - Key effort: Forest health monitoring last done in 2005-2006

■ Surveillance Monitoring

- Cs-137 in deer had similar results as past years - highest value 0.98 pCi/g, wet weight, off-site on William Floyd Parkway.
- Ten-year trend shows decline; 2019 on-site average in meat was 0.20 pCi/g, wet weight, with ten-year on-site average being 0.71 pCi/g, wet weight
- Batch sampling of deer; no sample above 0.20 pCi/g, wet weight and average being 0.06 pCi/g wet weight



2019 Forest Health Monitoring Team



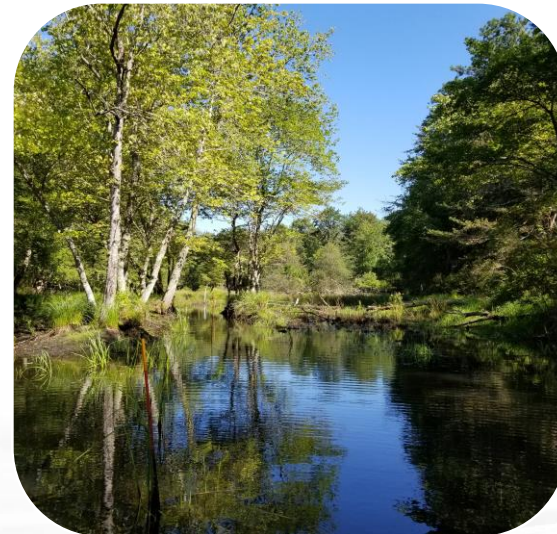
Ten-Year Trend of Cs-137 Concentrations in Deer Meat, dashed line is pre-cleanup avg., solid line is 10-year avg. 0.71 pCi/g wet weight.

Chapter 6 - Flora and Fauna Monitoring (continued)

- **Fish surveillance monitoring**
 - Peconic River dry most of year – no fish monitoring
 - Population survey 17 fish w/largest being 85mm
- **Peconic River Clean-up**
 - Final 2,600 sq. ft. area naturally restoring, mostly open water habitat
 - Request to close permit submitted
- **Terrestrial vegetation and soils**
 - Grassy vegetation and soils similar to past years
- **Precipitation monitoring**
 - Low level mercury – highest value 13.1 ng/L



2017



2019

Chapter 6 - Cultural Resource Management

- **Contract to review early BNL buildings**
 - Berkner Hall (488), Chemistry (555), Physics (510), Computational Sciences (515), Instrumentation (535) all National Register Eligible
 - Building 120 (original barracks portion) also National Register Eligible
 - Brookhaven Center (30) determined not to be eligible due to significant alterations.



Berkner Hall – designed by Max O. Urbahn architects



Brookhaven Center 1947 (left) and 2019 (right)



Chemistry – designed by Marcel Breuer

Natural Resource – 2020 Update

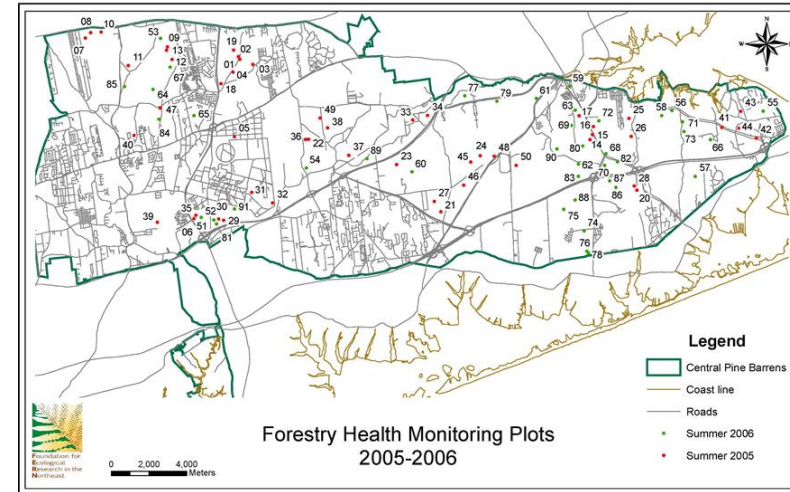
■ Deer Management

- March 2020
- Initial population estimated ~400
- Plan for removal of 150 deer
- 82 deer taken first weekend; 1,521 lbs. of meat donated to Island Harvest
 - Second weekend planned, but cancelled due to COVID
- 8 representative samples taken and tested for Cs-137, nothing above 0.10 pCi/g, wet weight; avg. 0.04 pCi/g, wet weight
- Current estimate (fall 2020) based on 55% reproduction rate before surveys ~ 500



Natural Resource – 2020 Update

- **COVID caused cancellation of most the Natural Resource Program for the year**
- **MOU between Central Pine Barrens Commission (CPBC) and SUNY-ESF**
 - Second Summer of Forest Health Monitoring
 - Remaining plots from 2019 completed of 90+ plots monitored
 - (3) term appointments with CPBC and (1) Grad student
- **Pollinator plantings**
 - 15 acres replanted in fall 2019
 - Dry conditions spring 2020
 - Mid-summer some drought resistant species emerged
- **4-Poster experiment**
 - Cameras deployed for 2020, photos being archived
 - Intern working virtually developed software for sorting photos



Natural Resource – 2020 Update

■ Fire Management

- April 2020 95-acre fire in the northeast corner of BNL
- One of several fires in April – May timeframe
- Within area of 2012 fire that burned ~900 – 1000 acres
- Reiterates need for fuels management



BNL Paumanok Fire - April 16, 2020



SA, HEPL, and the OAS user community. Some SA, HEPL, and the OAS user community. Some SA, HEPL, and the OAS user community. Some SA, HEPL, and the OAS user community.

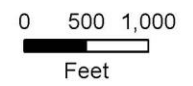
Cultural Resource – 2020 Update

- **1960s era efficiency apartments**
 - Negotiated an MOU with NY State Historic Preservation Officer
 - BNL will develop kiosks to illustrate history of Apartment Area
 - Two apartments demolished
- **Long Island Museum – History of BNL**
 - Identifying artifacts for exhibit
 - Exhibit postponed to 2021
- **Completed contract to evaluate science buildings 50+ years of age**
 - More buildings have been determined eligible for listing on National Register
 - Medical complex
 - AGS complex





- Legend**
- NHPA status**
- Eligible
 - Ineligible
 - Demolished



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National Register Eligible, Ineligible, and Demolished Buildings

Environmental Protection Division

JLH - 11/4/2020
r:/arcmap_projects/natural_resources/bldg_statud.mxd

Questions?

A black marker is shown in the bottom right corner, having just finished drawing a thick, curved underline under the word "Questions?". The marker is black with a silver tip and a small logo that says "CARTER" is visible on the side.