



Cleveland Metroparks

**FIND YOUR PATH**

South Chagrin Forest Management Project  
Near-term results

June 16, 2022

Constance Hausman – Natural Resources







2017-2019

# Wildlife Conservation Society Climate Adaptation Fund - The Doris Duke Foundation

- Targeted Riparian Forest Adaptation to Protect Coldwater Streams
- **Help forests adapt through responsible, science-based forest management**

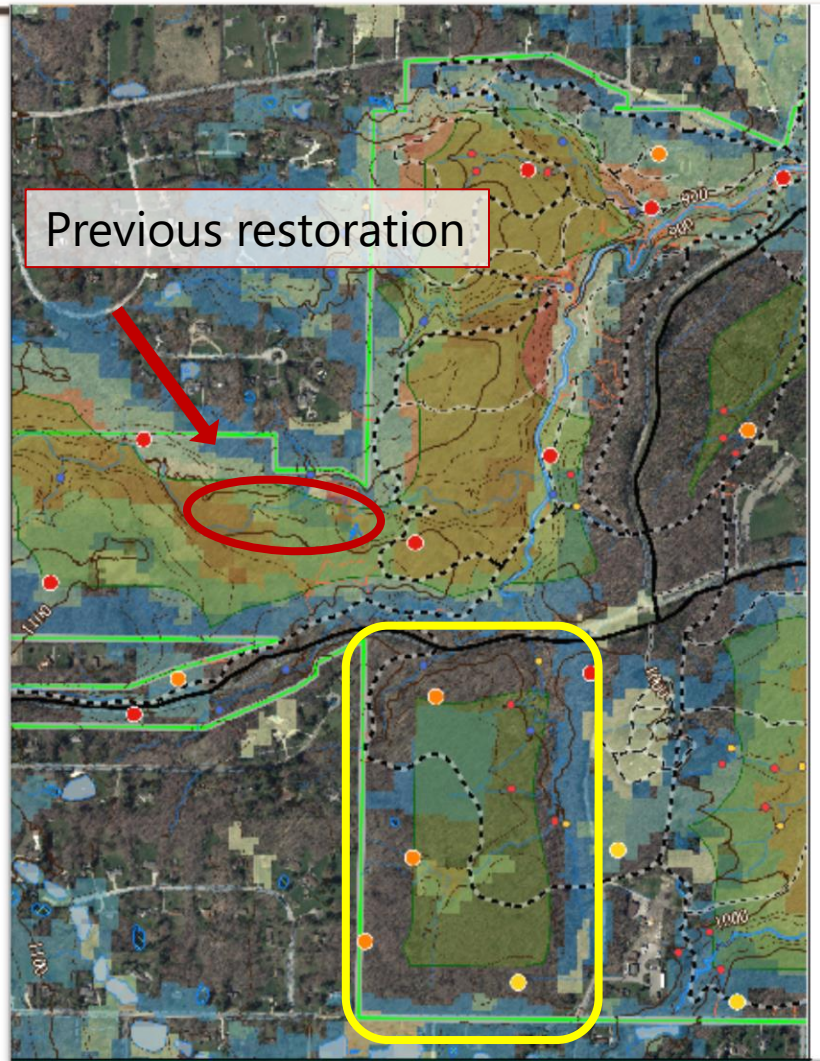
# Advisory Committee: Field Workshops

**Collaborative dialogue to discuss issues and adaptation strategies across project sites**

- ODNR Division of Forestry
- U.S. Forest Service
- The Nature Conservancy
- The Ohio State University
- The Wilderness Center
- Project partners



# South Chagrin: Sulfur Springs



# Goals

## Ensure

- Resilient Forest  
(tree regeneration)

## Enhance

- Species tolerant to climate change
- Species with greater wildlife value
- Age, species and structural diversity

## Reduce

- Poorly-formed trees
- Red Maple (>73%)





# Change the Forest Trajectory

- Document baseline
- Data collection
  - Aerial images (drone)
  - Stream survey
  - Vegetation
  - Wildlife (cameras)
  - Nesting Birds
- Monitor transition & measure response



# Summer 2019

Temporary trail closure



# Forest Management

## Master Logger

- Track Feller Buncher
- Log/Stump confirmation



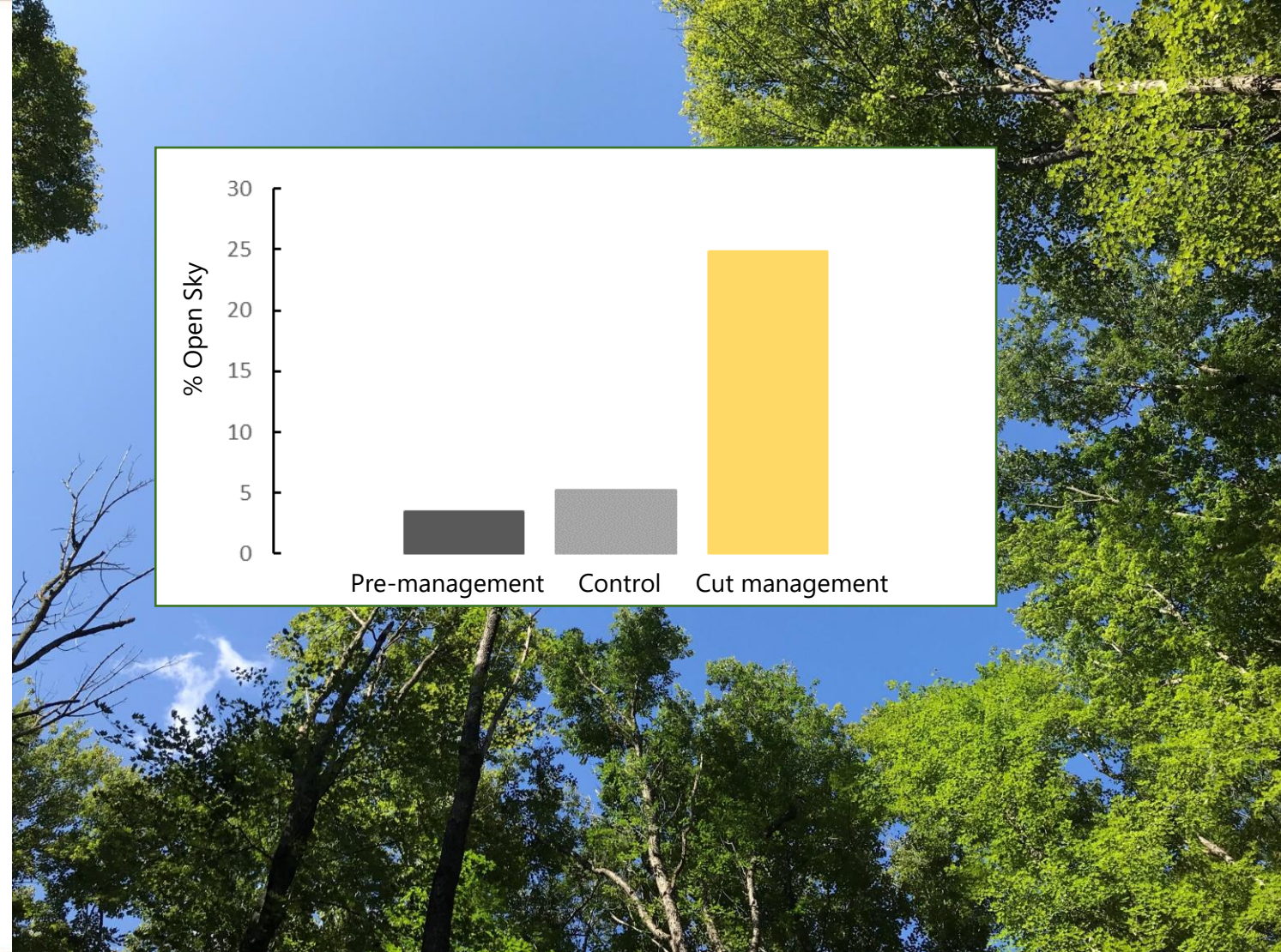
# Zoo Browse Opportunity

Canopy tops – desirable species

- Sugar Maple
- Tulip Poplar



# Light Conditions – Canopy Gaps



Before

&

After



Tree Species  
Removed

76% red maple  
14% black cherry  
5% ash

~1%  
sugar maple  
red oak  
tulip  
Am. elm  
beech

# Exclosures



# Regeneration Survey 2021

## 3 Orange High School Seniors

- May 2021
- tree regeneration survey inside large exclosure

## Eysenbach/Hausman

- Complete regen survey (outside exclosure & control site)

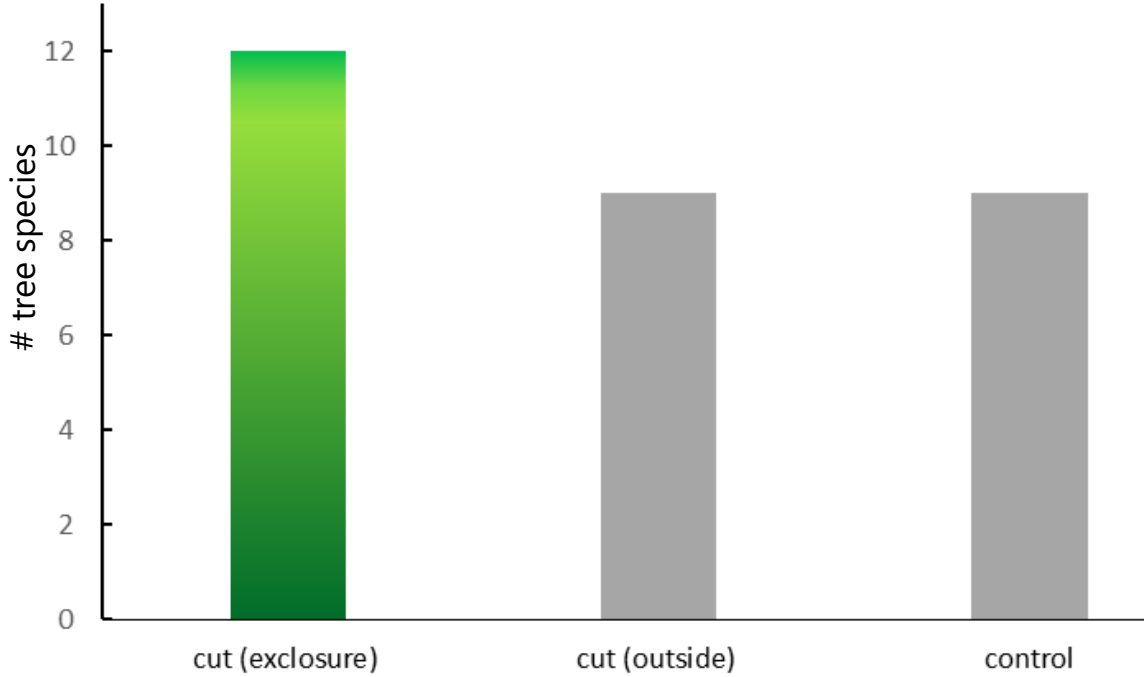


Acorns germinating April 2020





# Regeneration Survey 2021



### Cut Management sites

- 25% more species
- 25% more tree species
- 30% taller vegetation

# Tree Seedlings

Tulip Poplar



Wild Black Cherry



Red Oak



Cucumber Magnolia



Before (2018)

&

After (cut management) (2021)



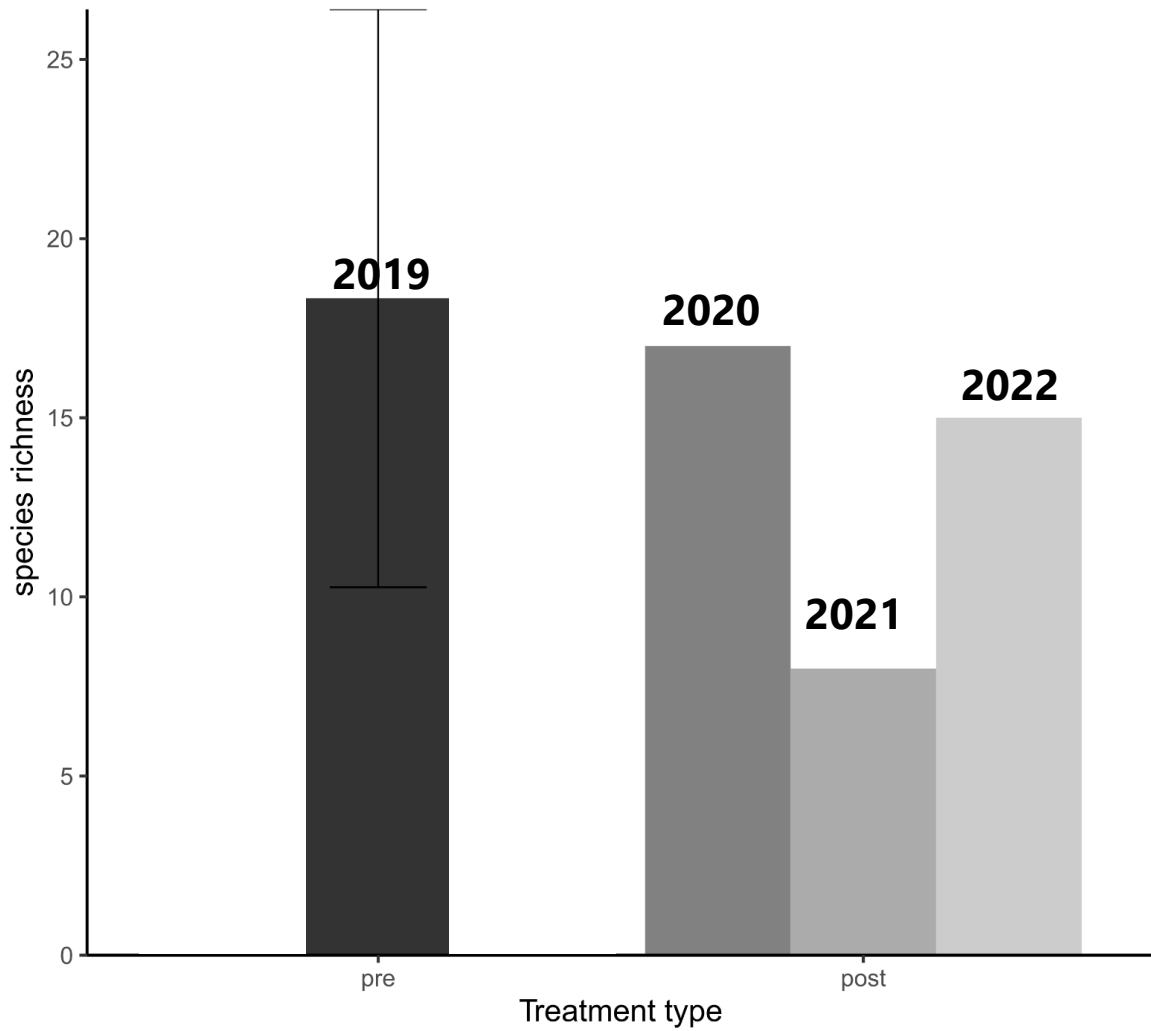
Before (2018)

&

After (control)(2021)



# Bird Surveys



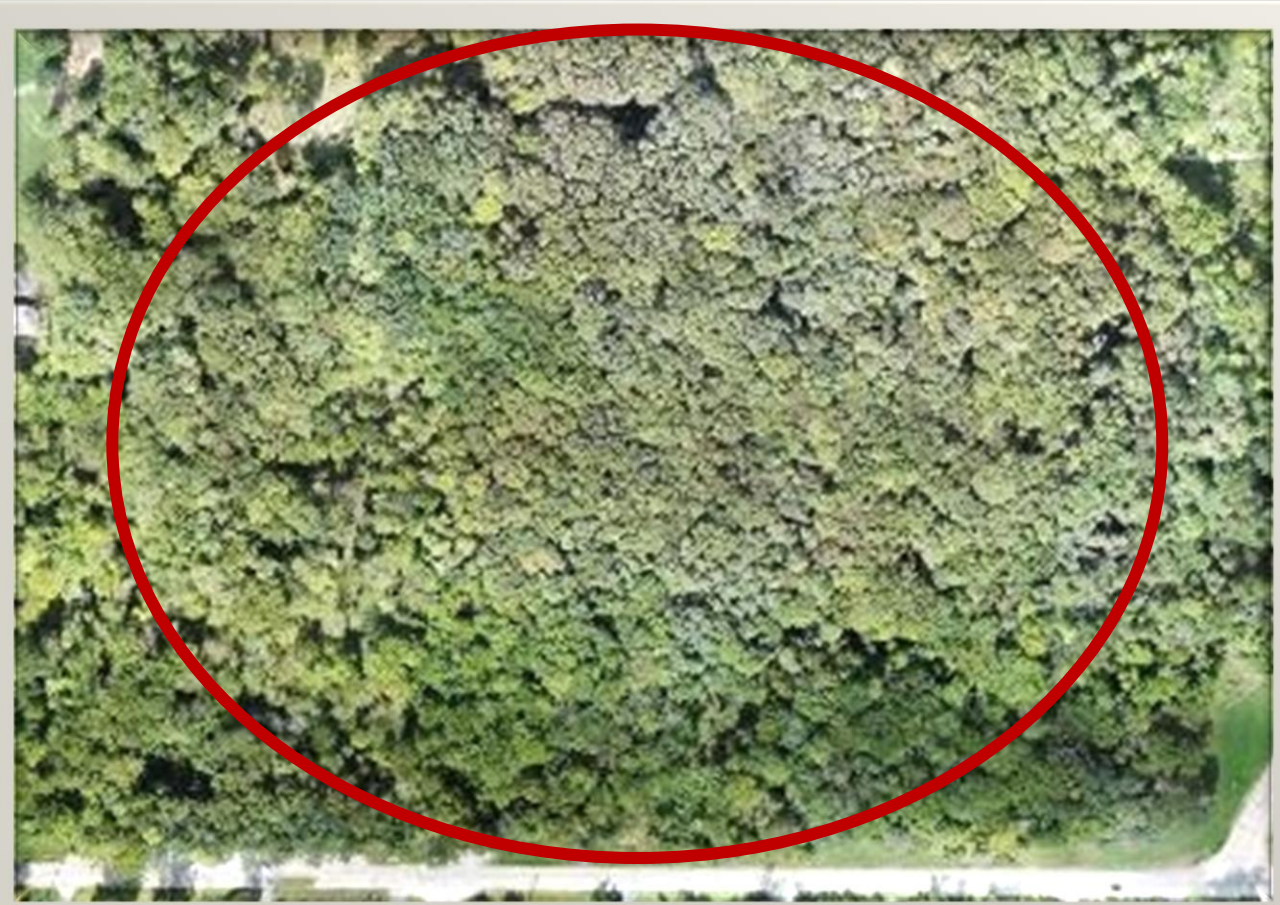
**Pre-management Post-management**



**Before**

**&**

**After**



# ~1 meter patch of forest floor

## 6 Tree Species!

- American Elm
- Tulip Poplar
- Wild Black Cherry
- Green Ash
- Red Maple
- Pyrus (pear) sp.

### Ensure:

- Resilient Future Forest  
(tree regeneration)

### Enhance:

- Species tolerant to climate change
- Species with greater wildlife value
- Age, species and structural diversity





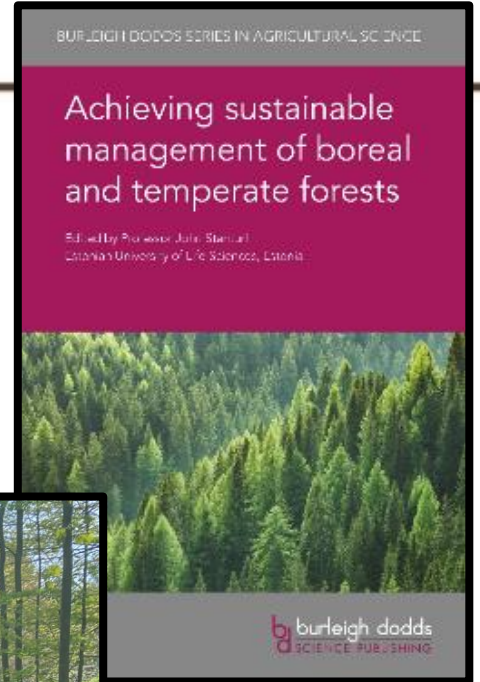


# Outreach: Forest Management & Climate Change

- The impact of climate change on forest systems in the northern United States: projections and implications for forest management – book chapter published 2020
- Fulbright Visiting Scholar Enrichment Seminar – May 2022

## Forest Management tours

- ODNR- Division of Forestry



THANK YOU

## Active Forest Management



Forest management improves forest habitat by enhancing species diversity and stimulating young tree growth. Forests with a variety of form and structure support greater wildlife diversity. These resilient forests will provide benefits now and into the future.

