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FOREST HEALTH AND ECOLOGICAL FOREST MANAGEMENT: CLIMATE ADAPTATION FUND GRANT

October 18, 2018

Outline

- Forest health
- Need for management
- Climate Adaptation grant
- Science based management
- Regional benefit

Forest Health

- What causes changes?
  - Abiotic factors
    - Land use conversion
    - Pollution
    - Light
  - Biotic factors
    - Deer
    - Insects/pathogens
    - Invasive species
  - Climate
  - Management ±

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Stress Factors – Insects and pathogens

2011

2016

- Gypsy Moth 1869 (US)/1987 NEO) ✓

- Chestnut blight 1904/1908 ✓

- Dutch Elm Disease 1930 ✓

- Emerald Ash Borer 2002 ✓

- Beech Leaf Disease 2012/2014 ✓

- Hemlock Woolly Adelgid 1950/2012

- Asian Longhorn Beetle 1996/2011

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Stress Factors – Climate

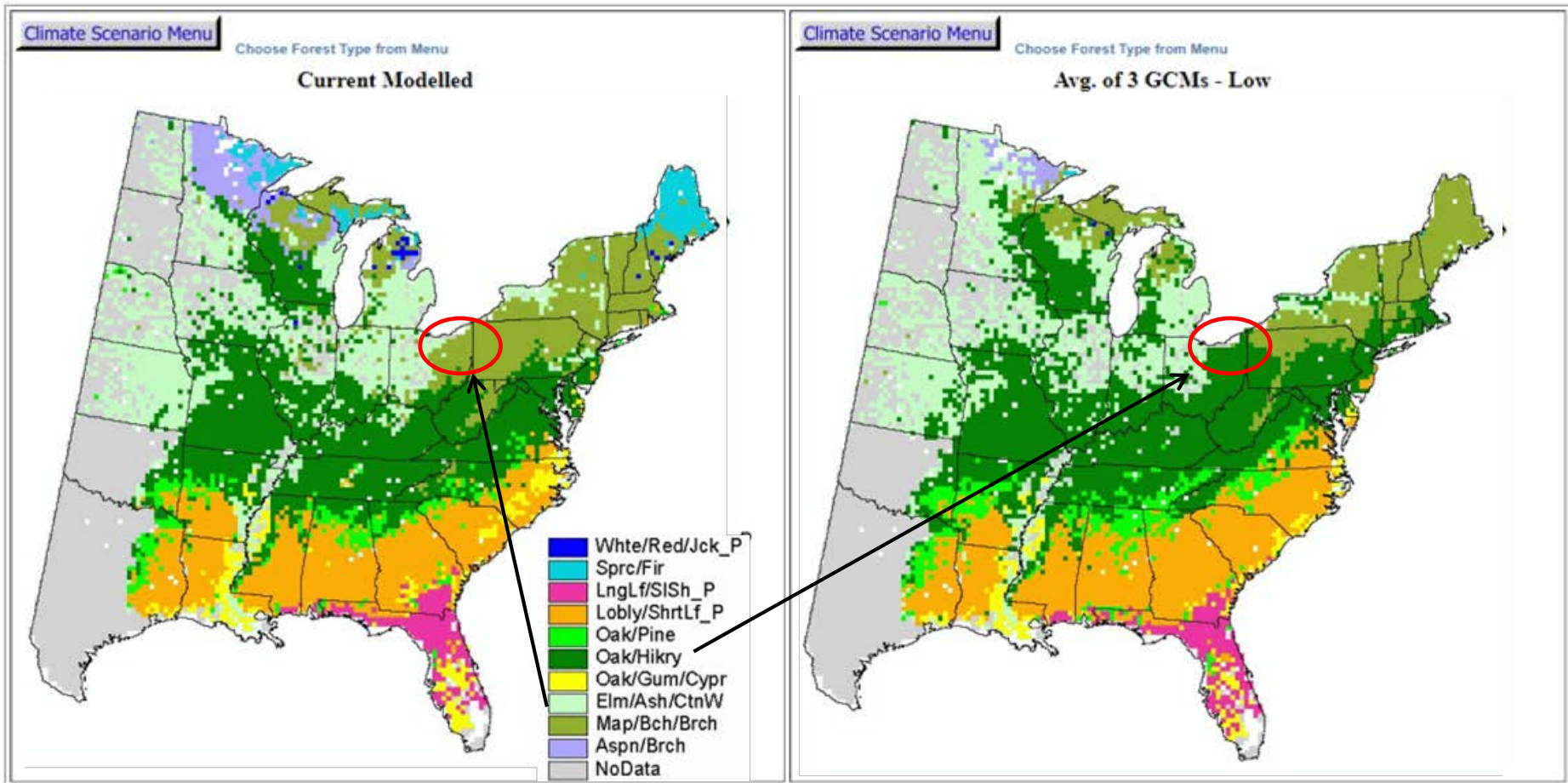**Climate effects on weather**

- Increased average temps - longer growing seasons

- More rain in winter

- More extreme – longer rain, heat, drought events

- Change in species ranges

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Stress Factors – Climate

"**Mesic upland forests** were determined to be the **most vulnerable** to projected changes in climate..." USFS 2014

Ecological Forest Management

Goals:

- Tree regeneration/light

- Diverse age, species, structure

- Young-forest habitat

- Resiliency

Oak regeneration in light gap

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