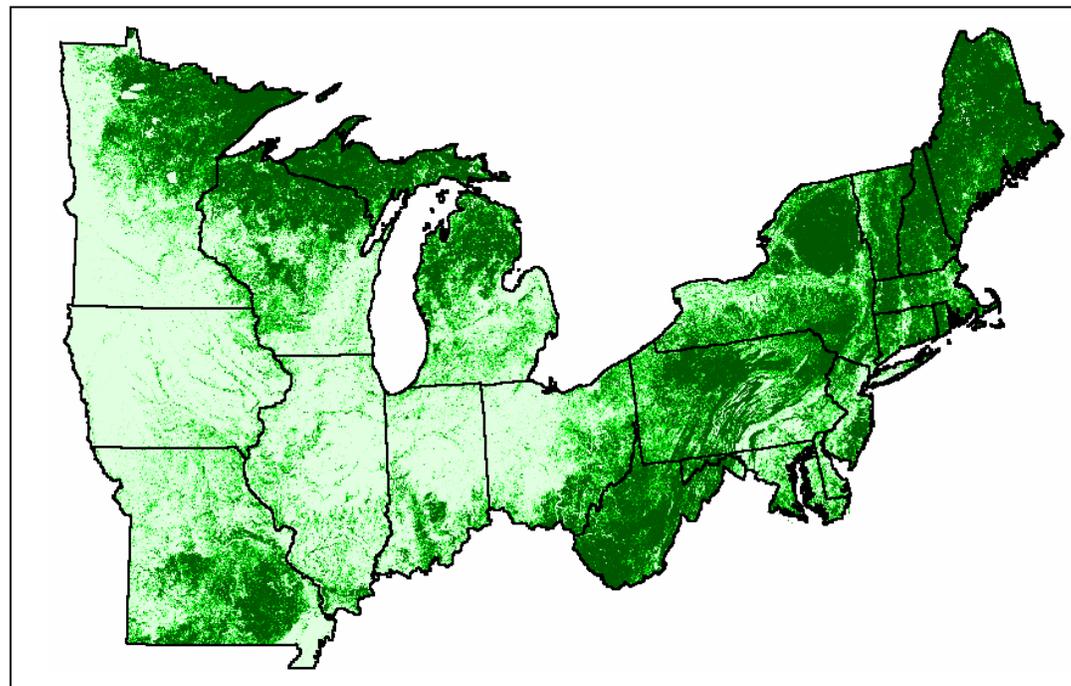


# FHM Activities in the Northeastern Area



**Jim Steinman - FHM Program Coordinator  
Northeastern Area  
USDA Forest Service  
Newtown Square, PA 19073**



# FHM Activities in the Northeastern Area

- Detection Monitoring
- Evaluation Monitoring
- Intensive Site Monitoring
- Research on Monitoring Techniques
- National Risk Map of Insects and Diseases



# Detection Monitoring

## Data Analysis

- Insect Pests and Diseases (FHP)
- Forest Health Indicators (FIA)
- Drought (NOAA)
- Air Pollutants (EPA)

## Reporting

- 2003 Forest Health Highlights
- 2003 Pest Conditions
- Maine 4<sup>th</sup> Annual Inventory Report
- Northeastern Area Report
- Allegheny National Forest



# Detection Monitoring – Major Insects & Diseases

## Insects

Spruce Budworm  
Forest Tent Caterpillar  
Southern Pine Beetle

Gypsy Moth  
Hemlock Woolly Adelgid  
Balsam Woolly Adelgid  
Common Pine Shoot Beetle  
Emerald Ash Borer  
Asian Longhorned Beetle

## Diseases

Oak Wilt  
Decline Complexes

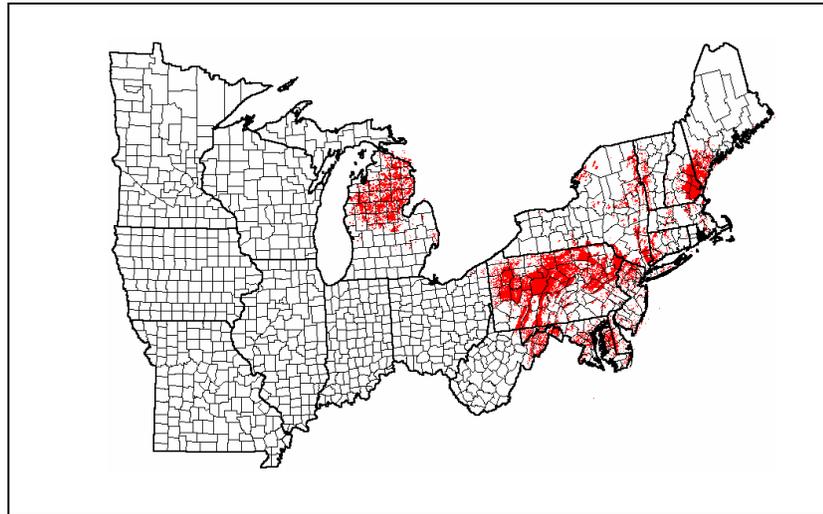
Chestnut Blight  
White Pine Blister Rust  
Beech Bark Disease  
Dogwood Anthracnose  
Butternut Canker



# Detection Monitoring - Gypsy Moth Impact

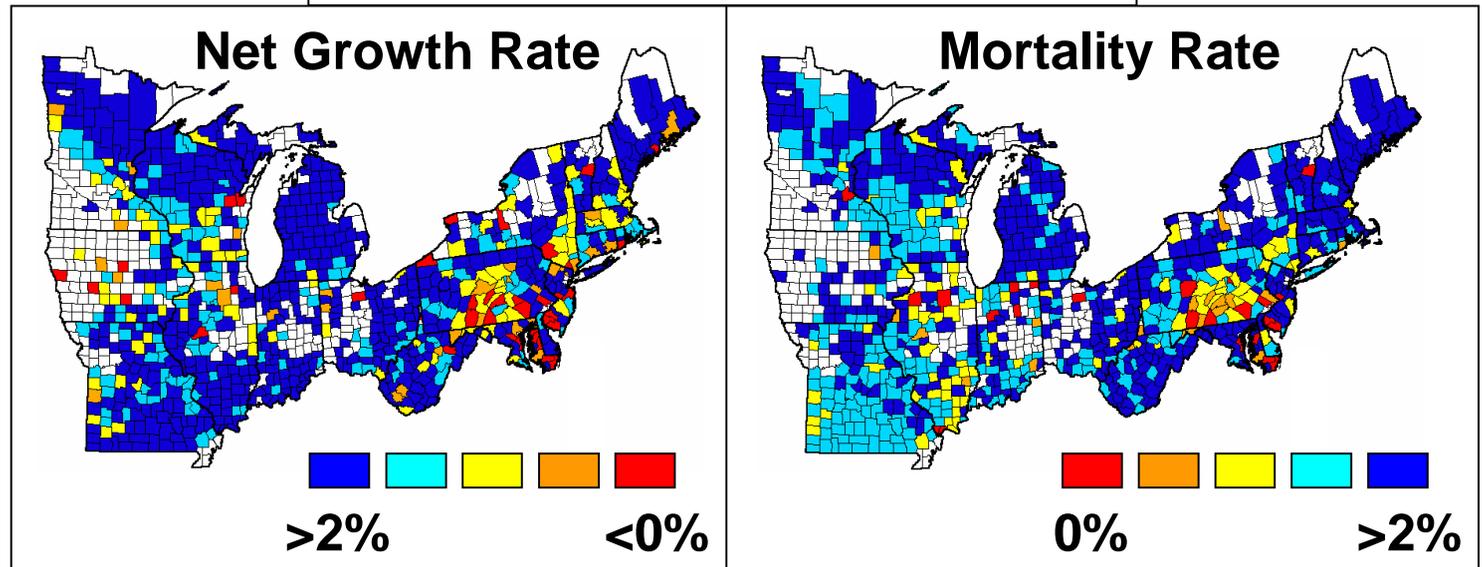
**Defoliation  
(FHP)**

**1988-92**



**Growth Loss  
and  
Mortality  
(FIA)**

**1985-95**

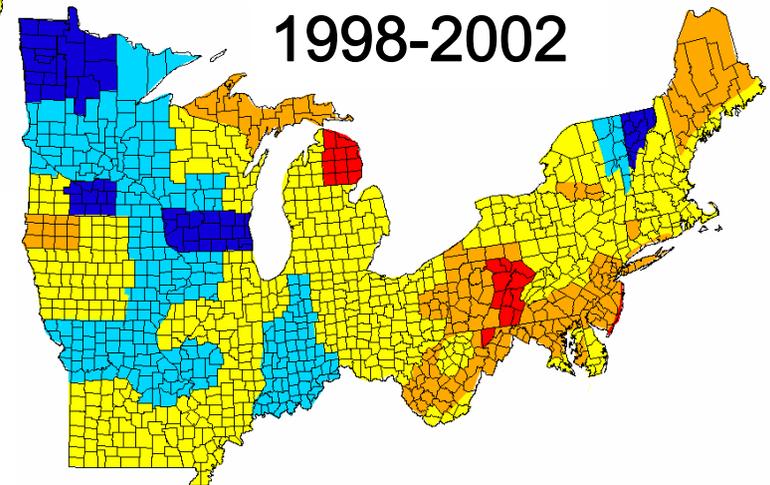
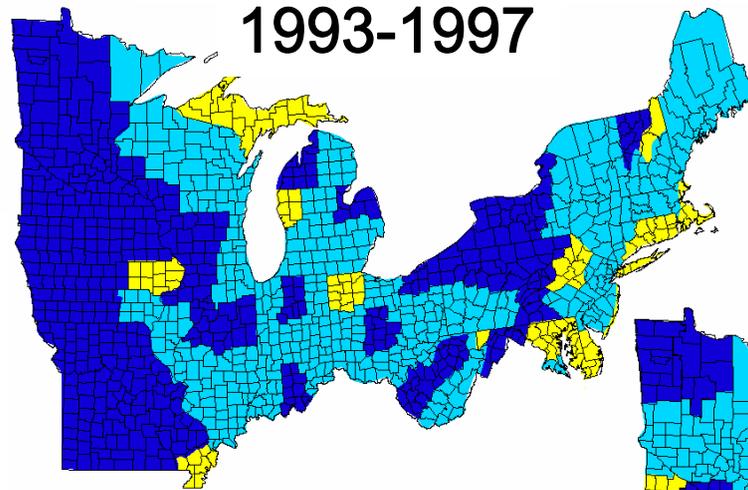
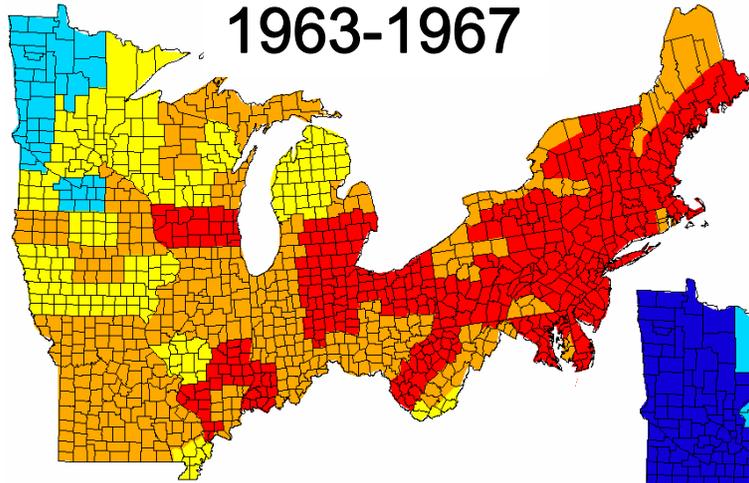


# Detection Monitoring - Drought

[www.noaa.gov](http://www.noaa.gov)

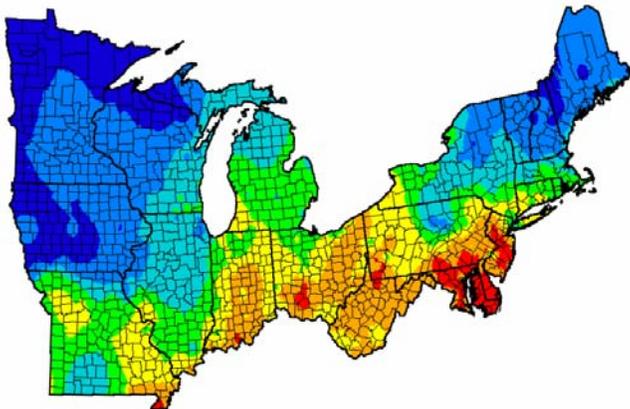
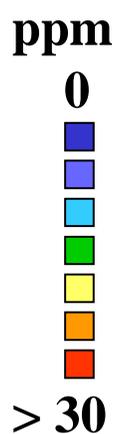
Palmer Drought Severity Index

Moist  Droughty

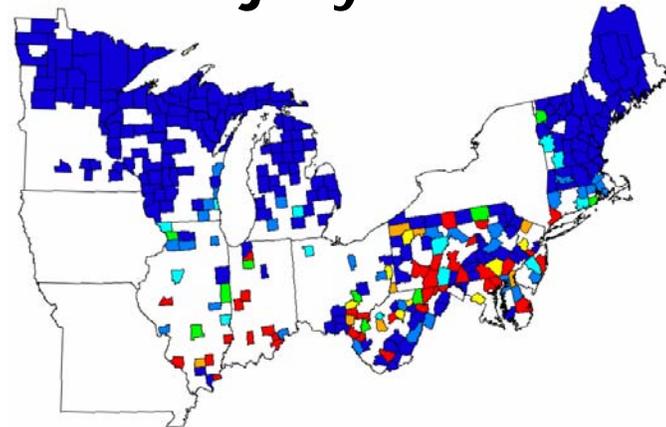
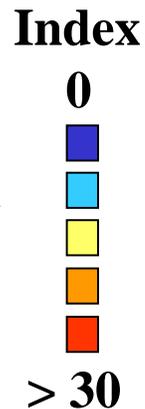


# Detection Monitoring - Air Pollutants

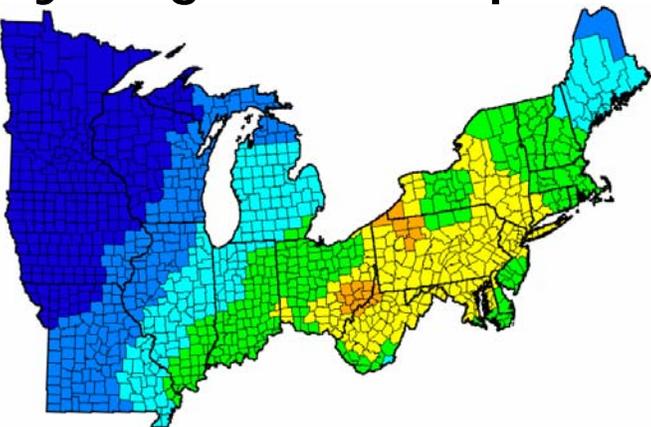
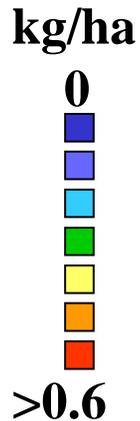
## Ground-level Ozone



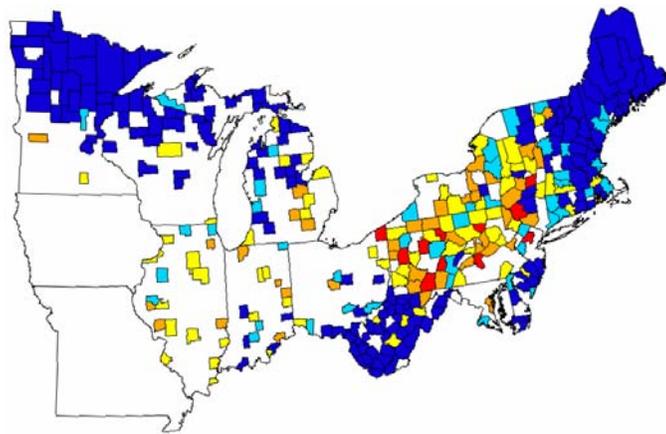
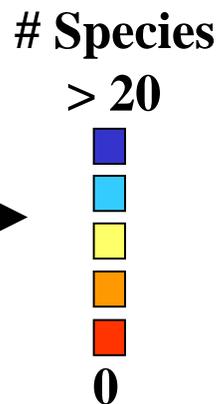
## Ozone Injury to Plants



## Hydrogen Ion Inputs



## Richness in Lichens



# Evaluation Monitoring



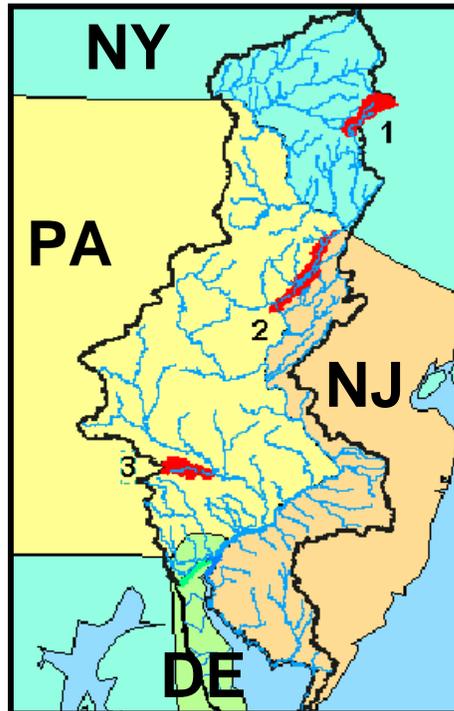
Projects	2003	2004
Native I & Ds	3	3
Invasive I & Ds	4	4
Drought	1	0
Air Pollutants	1	2
Soil Conditions	1	1
Fire	3	4
Unknown Causes	4	3
<b>TOTAL</b>	<b>17</b>	<b>17</b>

# Intensive Site Monitoring

## Delaware River Basin Project

Richard Birdsey

NE Research - Newtown Square, PA



- Collaborative Use of Data
- Process-oriented Models
- Estimates of Carbon Budgets
- Time-trend Analyses
- Conservation Education

# Research on Monitoring Techniques

## Urban Monitoring

Dan Twardus

FHP - Morgantown, WV



- Pilot Effort
- IN, MA, MD, NJ, WI
- FIA 'style' plots
- Street tree surveys

# Research on Monitoring Techniques

## Tree Damage Indicator

Manfred Mielke

FHP - St. Paul, MN



- 10-Year FHM/FIA History
- Optionally Implemented
- QA Analysis
- Revision of field protocols
- National Indicator by 2005

# National Risk Map of Insects and Diseases

