

Core applications of ***ForWarn*** data for Forest Service Planning, Monitoring and Management

Steve Norman
William Hargrove
William Christie



Resource Information Management
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1.) What's going on in the Forest?

Detect disturbances in near-real-time

2.) How severe are these disturbances?

Measure seasonal impacts using magnitude and duration

3.) What happens next?

Monitor site recovery and cumulative effects over years

4.) How are we doing overall?

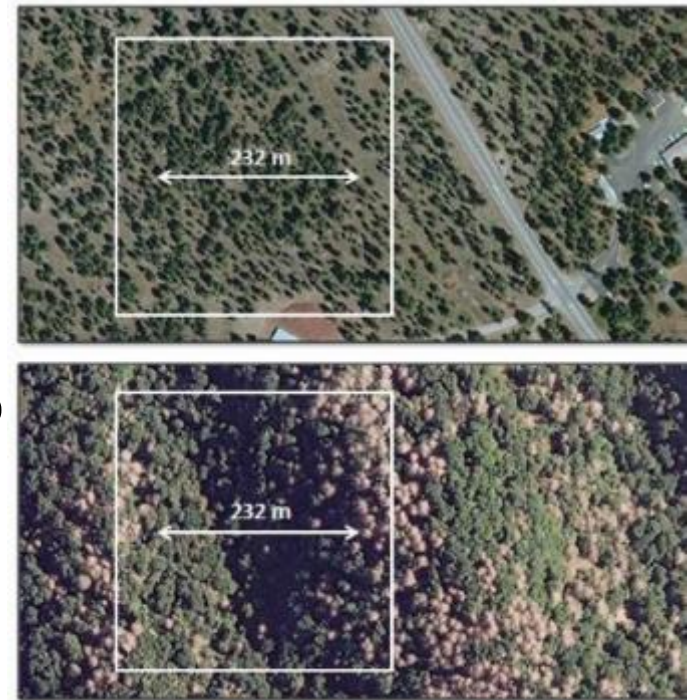
Track status of all lands vs. desired conditions

The *ForWarn* dataset and tools

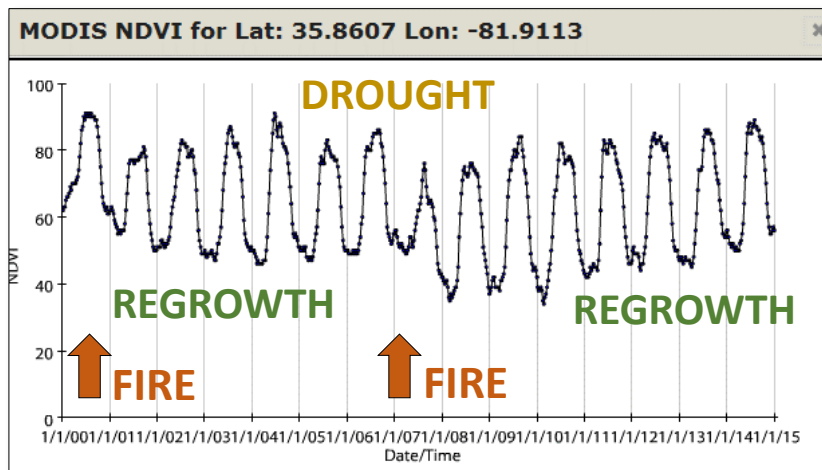


- Daily MODIS satellite NDVI for CONUS
- High temporal, moderate spatial resolution
 - 8-day time steps using a 24-day moving window (46 periods per year since 2000)
 - 232 m grid resolution (5.4 ha/13 ac)
- Online support products show change from various baselines and ancillary datasets:
<http://forwarn.forestthreats.org>

ForWarn grid resolution

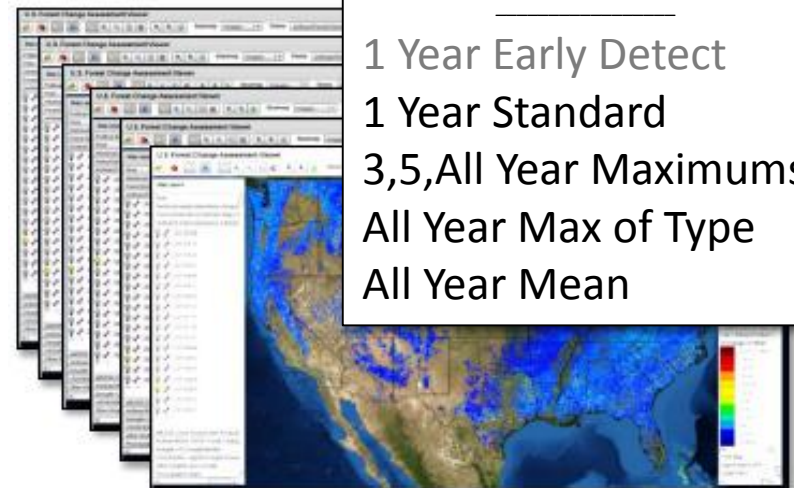


ForWarn time series



Viewer baselines

- 1 Year Early Detect
- 1 Year Standard
- 3,5,All Year Maximums
- All Year Max of Type
- All Year Mean

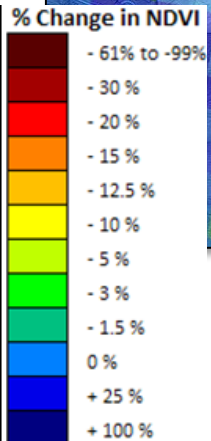
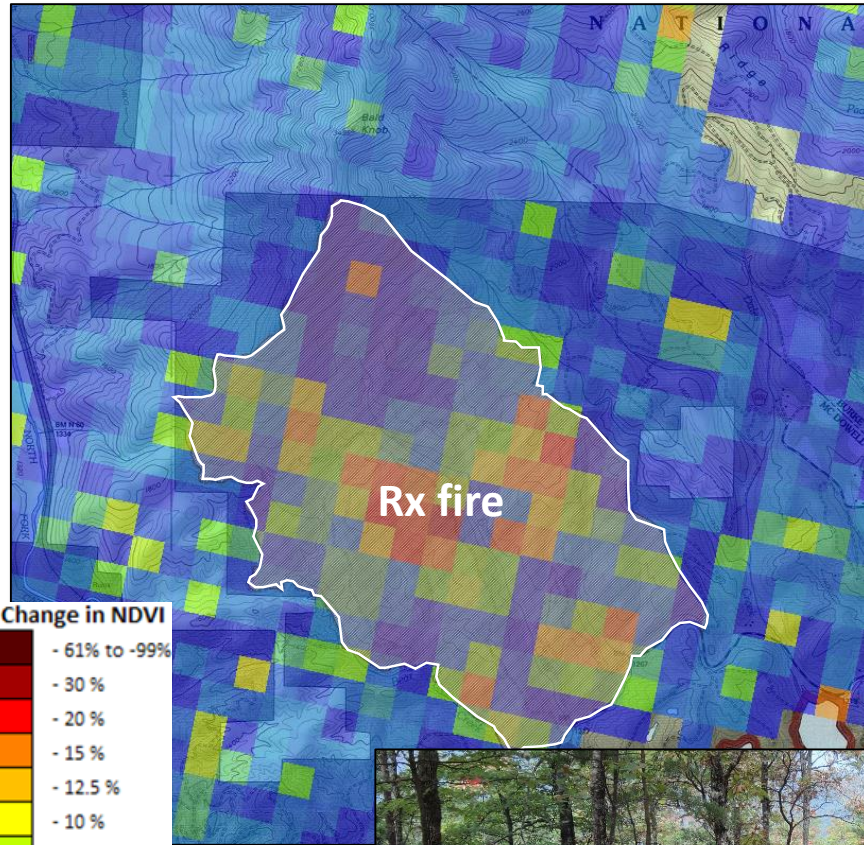


1.) What's going on in the Forest?

Detect disturbances in near-real-time

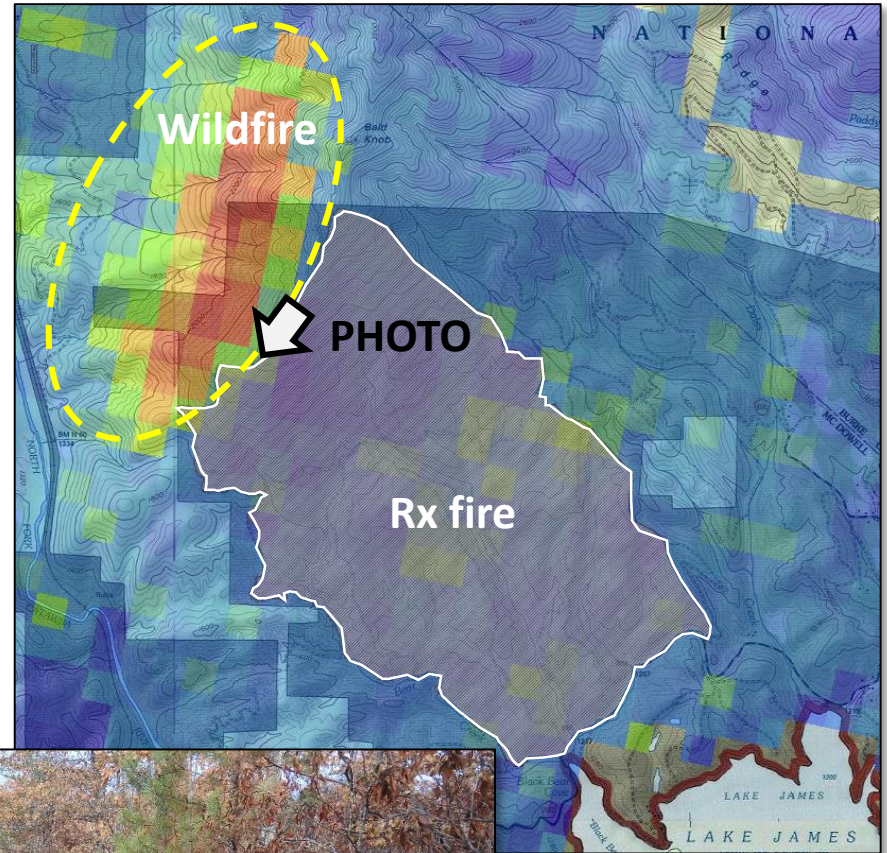
ForWarn 1-year Baseline for 3/29/2015

January Rx Fire, Pisgah NF, NFNC



ForWarn 1-year Baseline for 9/5/2015

Bald Knob Fire, Pisgah NF, NFNC



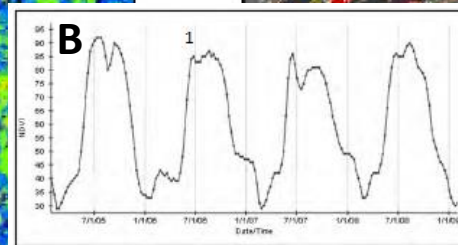
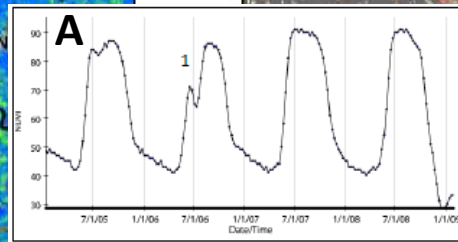
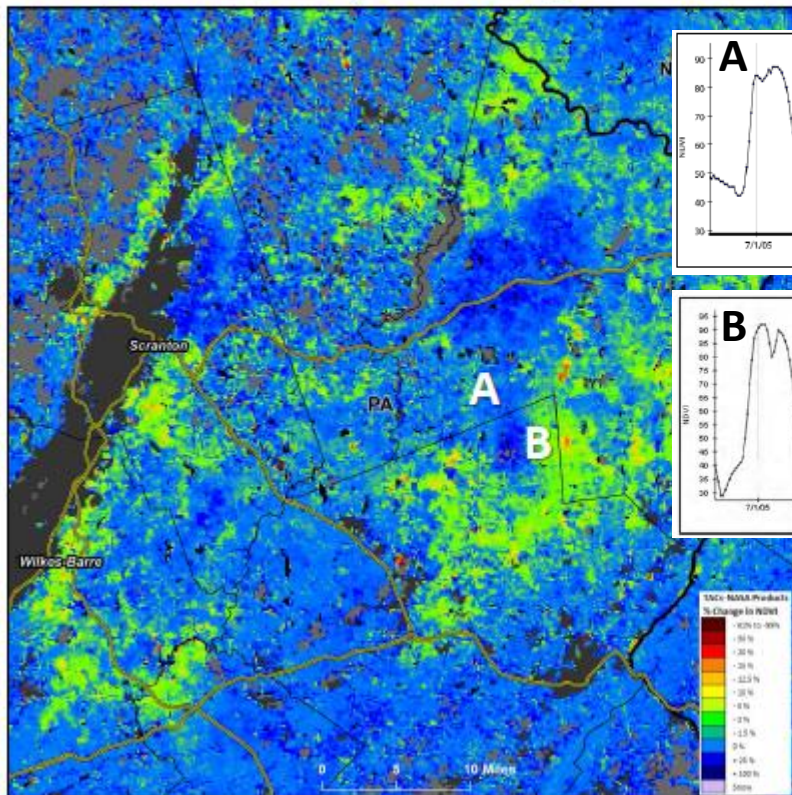
2.) How severe are these disturbances?

Measure seasonal impacts using magnitude and duration

Gypsy Moth
Defoliation
2006
PA-NY-NJ

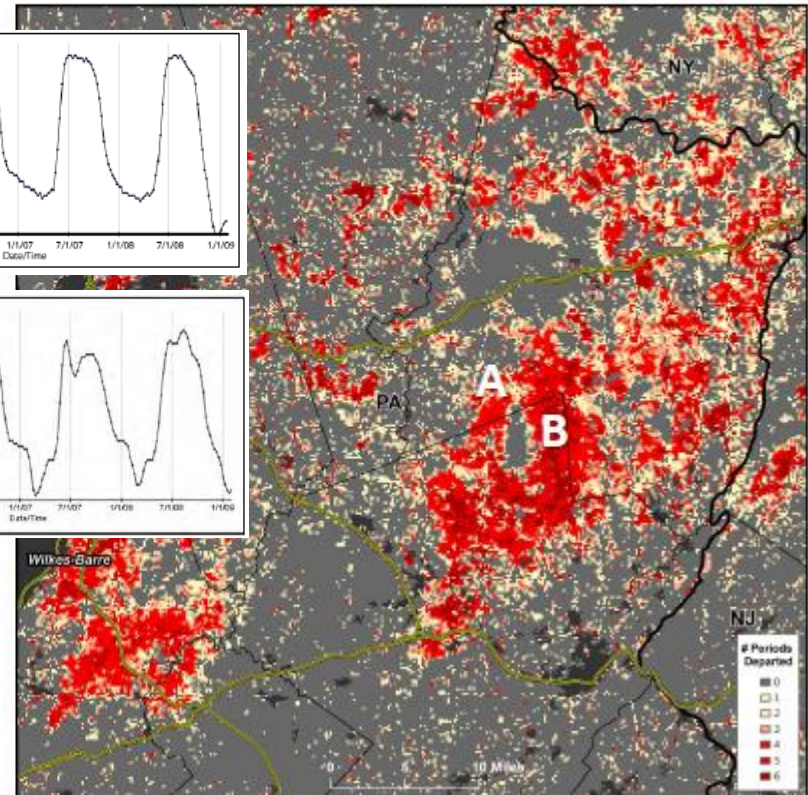
Disturbance Magnitude

Single-period NDVI departure
from prior year for August 4



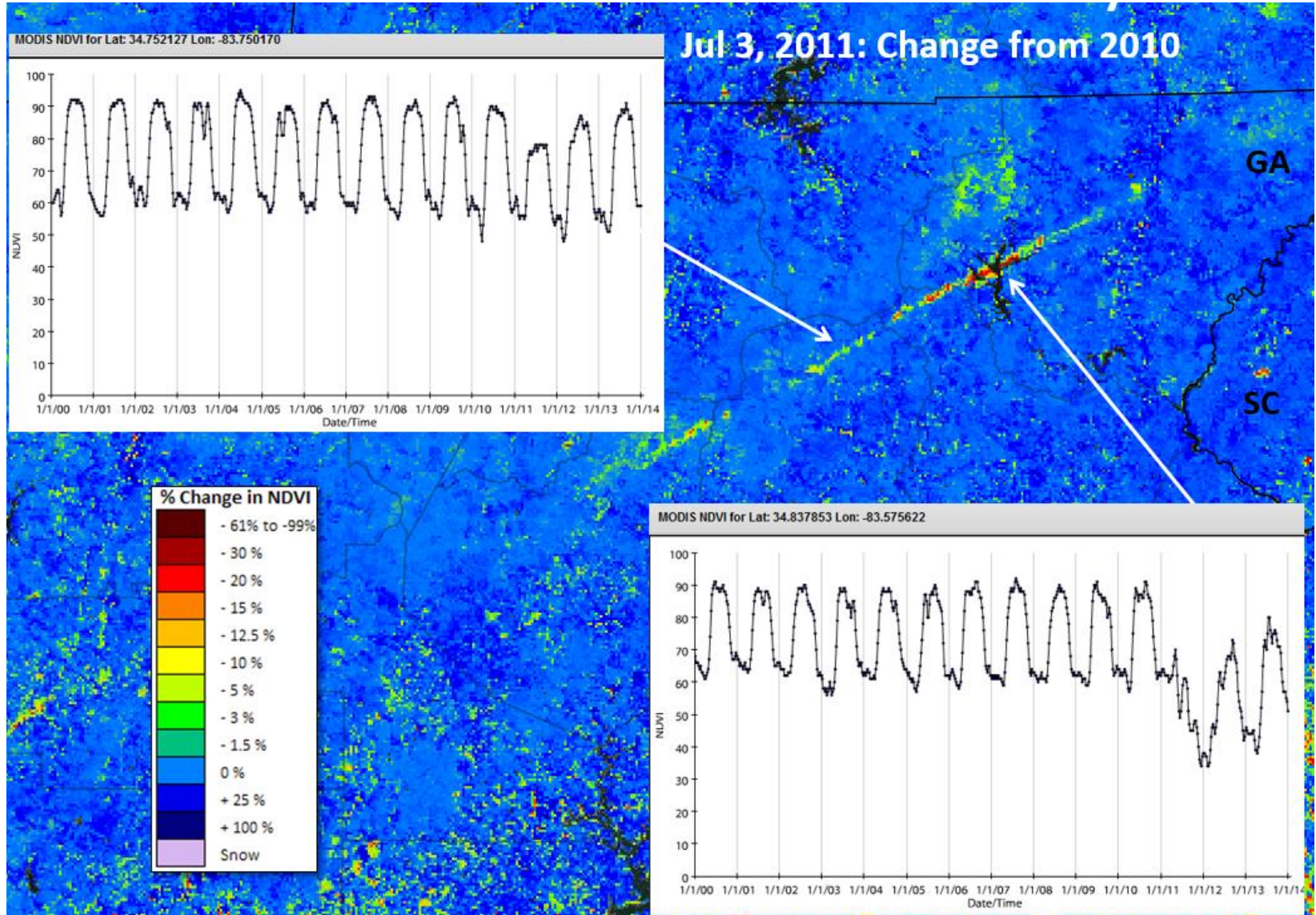
Disturbance Duration

Count of 6 periods from Jun. 25–Aug. 4
with $\geq 5\%$ NDVI departure from prior year



3.) What happens next?

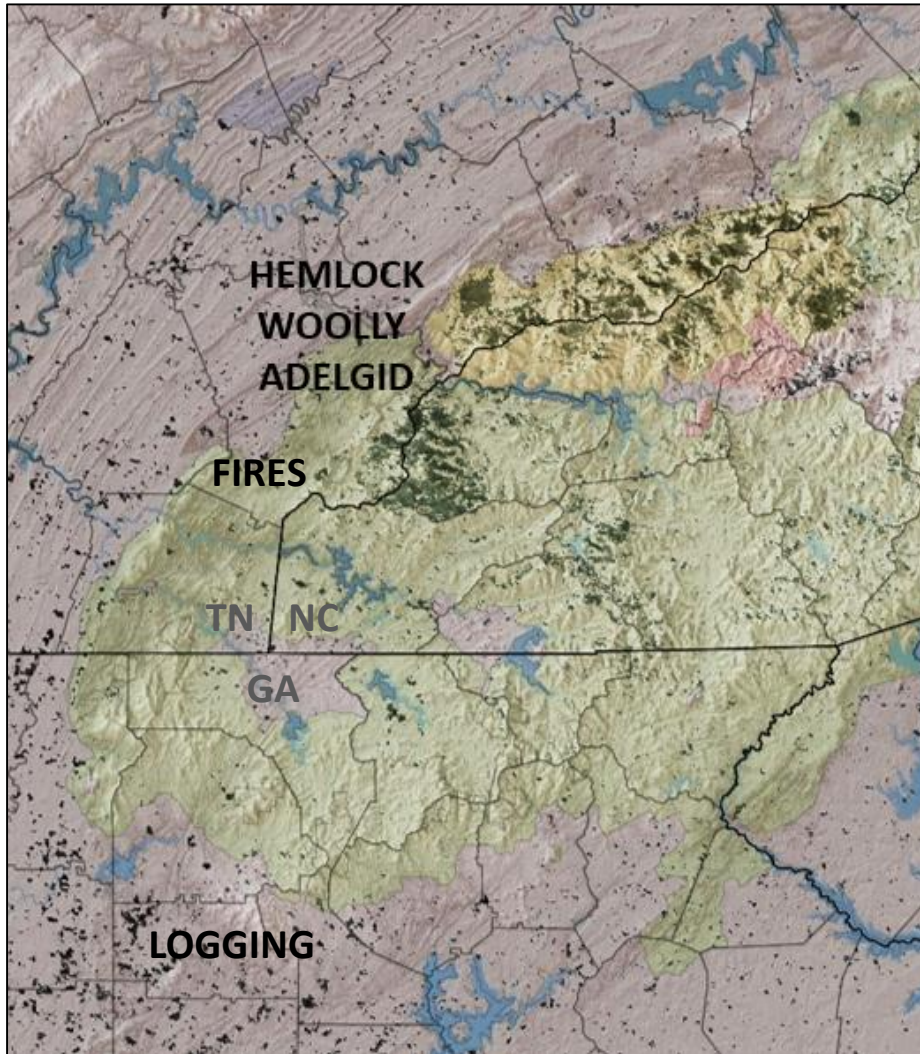
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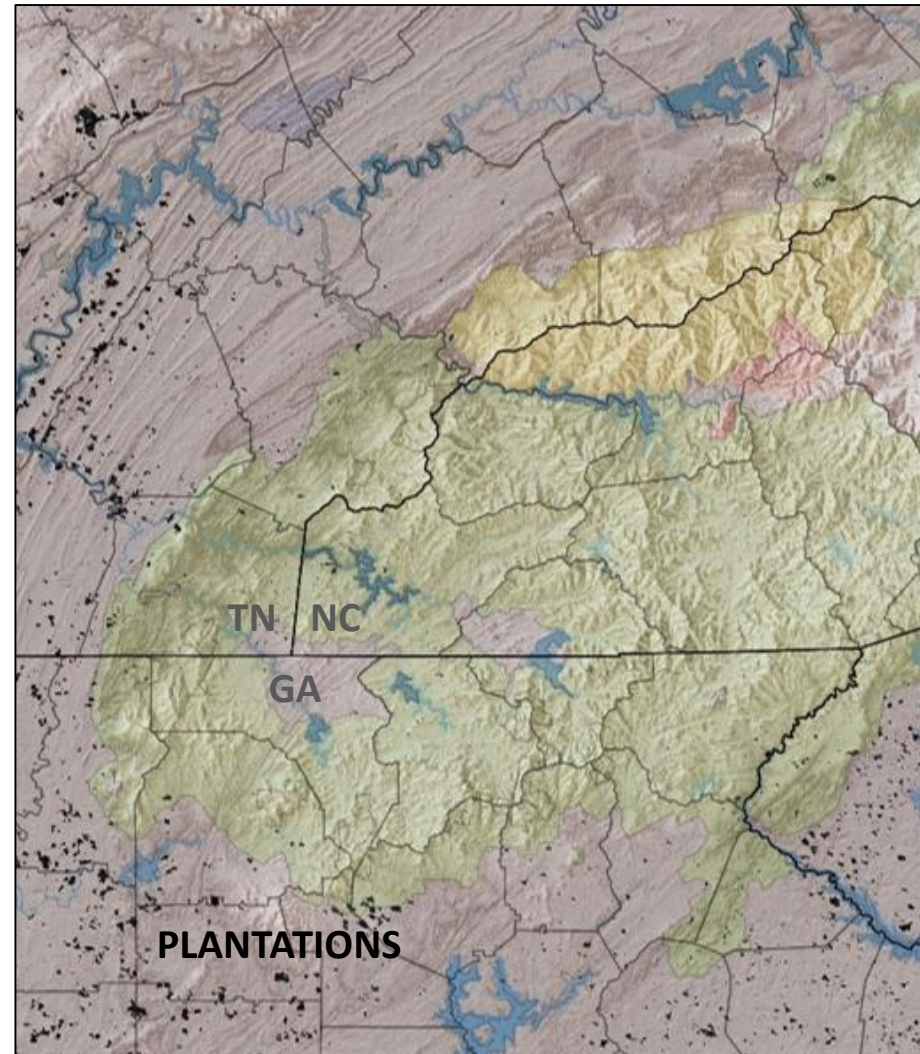
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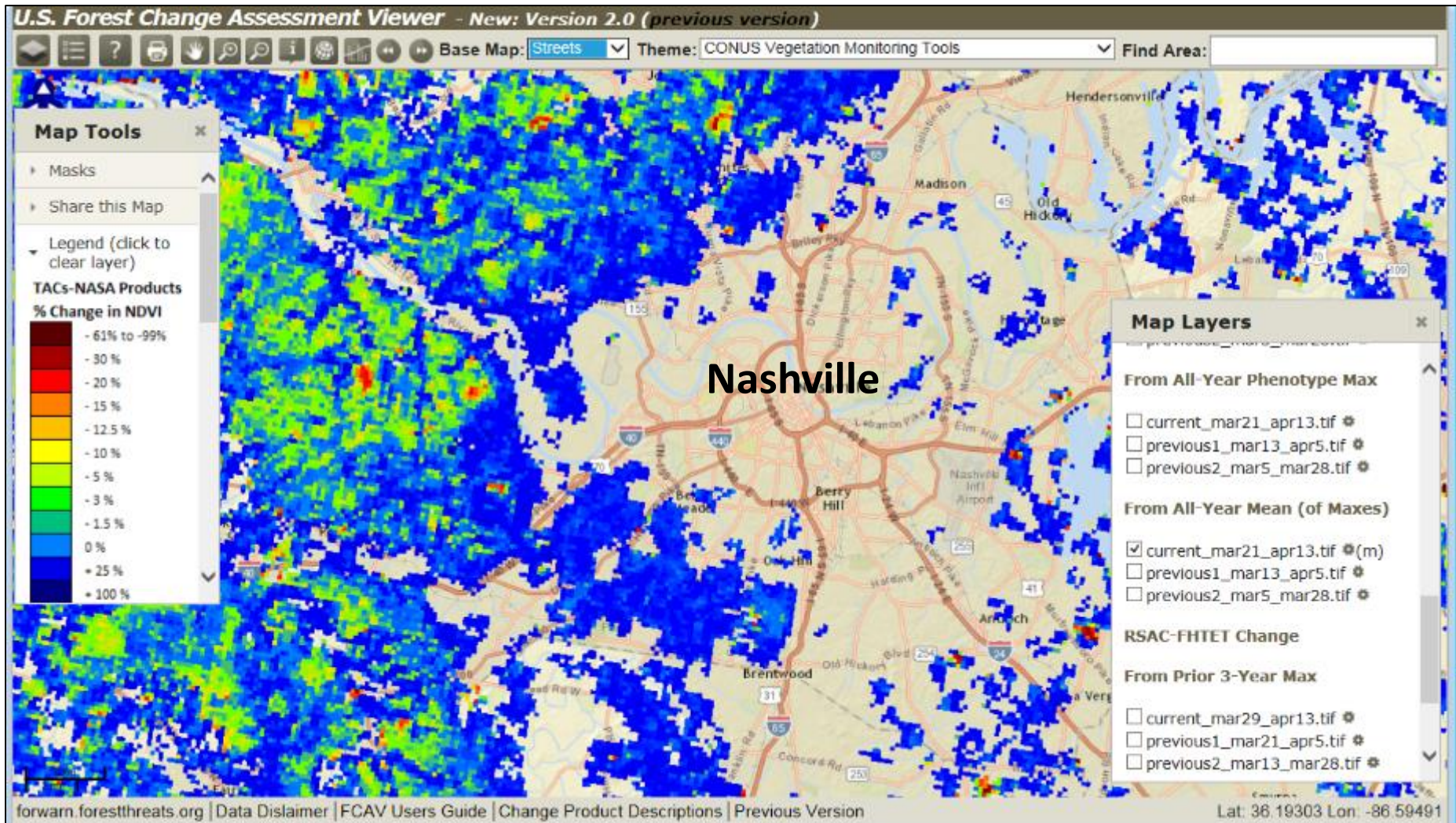
Evergreen Decline 2000-2010



Evergreen Increase 2000-2010



<http://forwarn.foresthreats.org>



whargrove@fs.fed.us

Bill Hargrove (PI)
Research Ecologist

stevenorman@fs.fed.us

Steve Norman
Research Ecologist

wchristie@fs.fed.us

Bill Christie
Biological Scientist