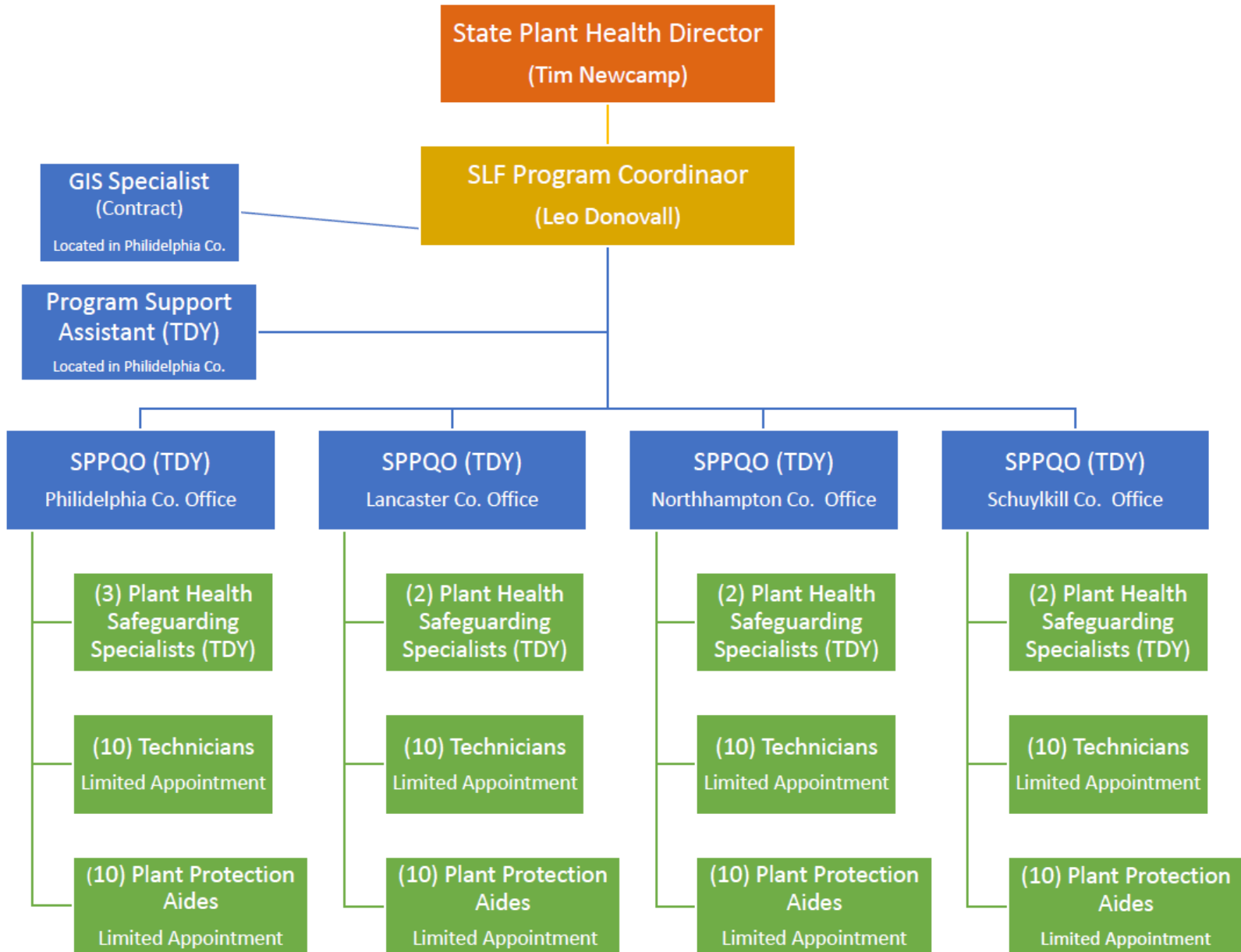




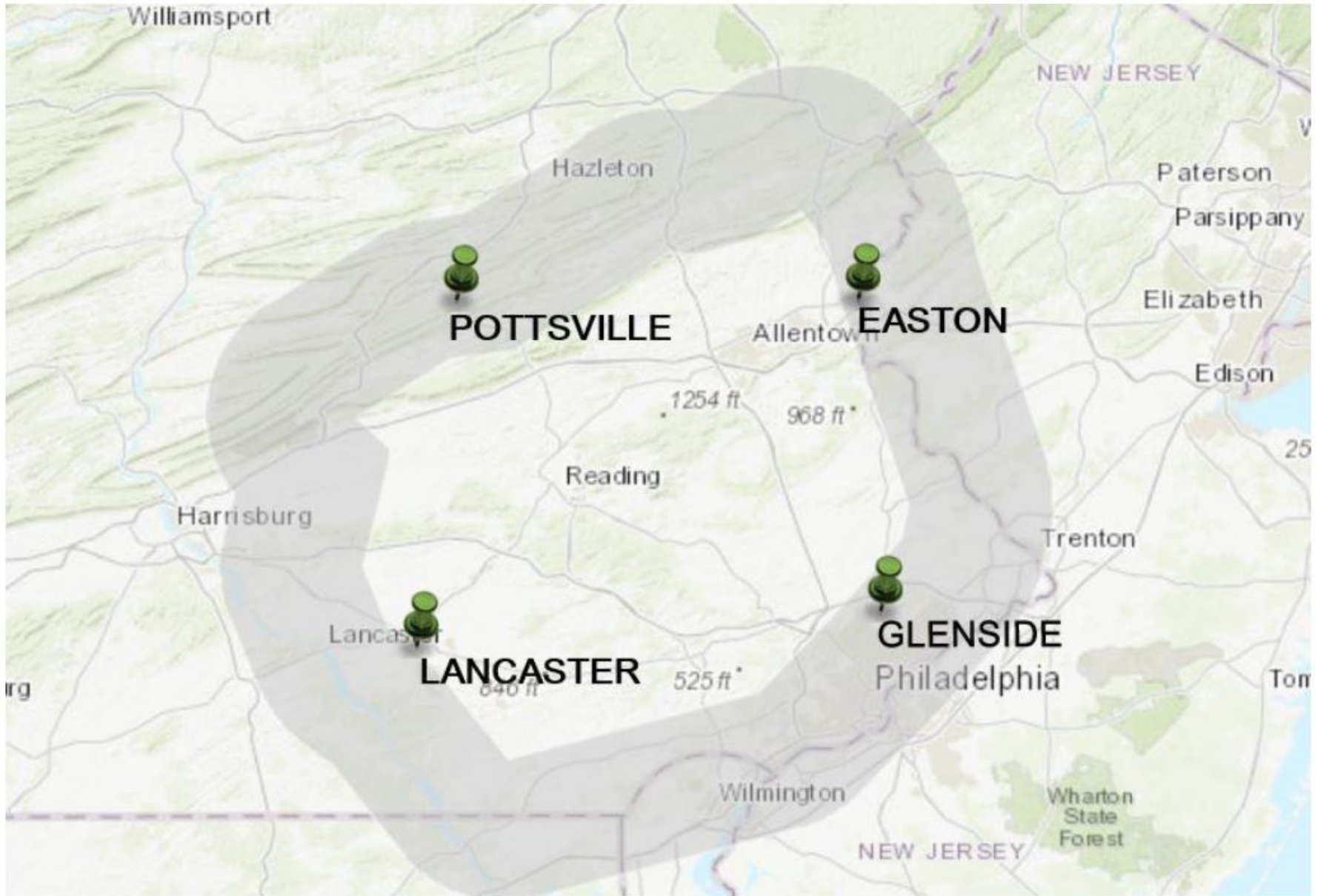
**The USDA-PDA-PSU Cooperative  
Response to Spotted Lanternfly  
(*Lycorma delicatula* (White))  
in Pennsylvania**

# Operational Plan

- PDA will focus on continuing suppression efforts in the core along high risk pathways as well as monitoring outside of the quarantine area
- USDA APHIS PPQ is concentrating efforts on 18-mile (30-km) band at the perimeter of the infested area
  - Staffing 96 program support personnel: 1 Program Director, 1 PSA, 1 GIS Specialist, 4 SPPQO, 9 PHSS, 80 PP Technicians and Aides
  - 2018 goal is treatment at all positive sites within the perimeter band



### SPOTTED LANTERNFLY OFFICE LOCATIONS



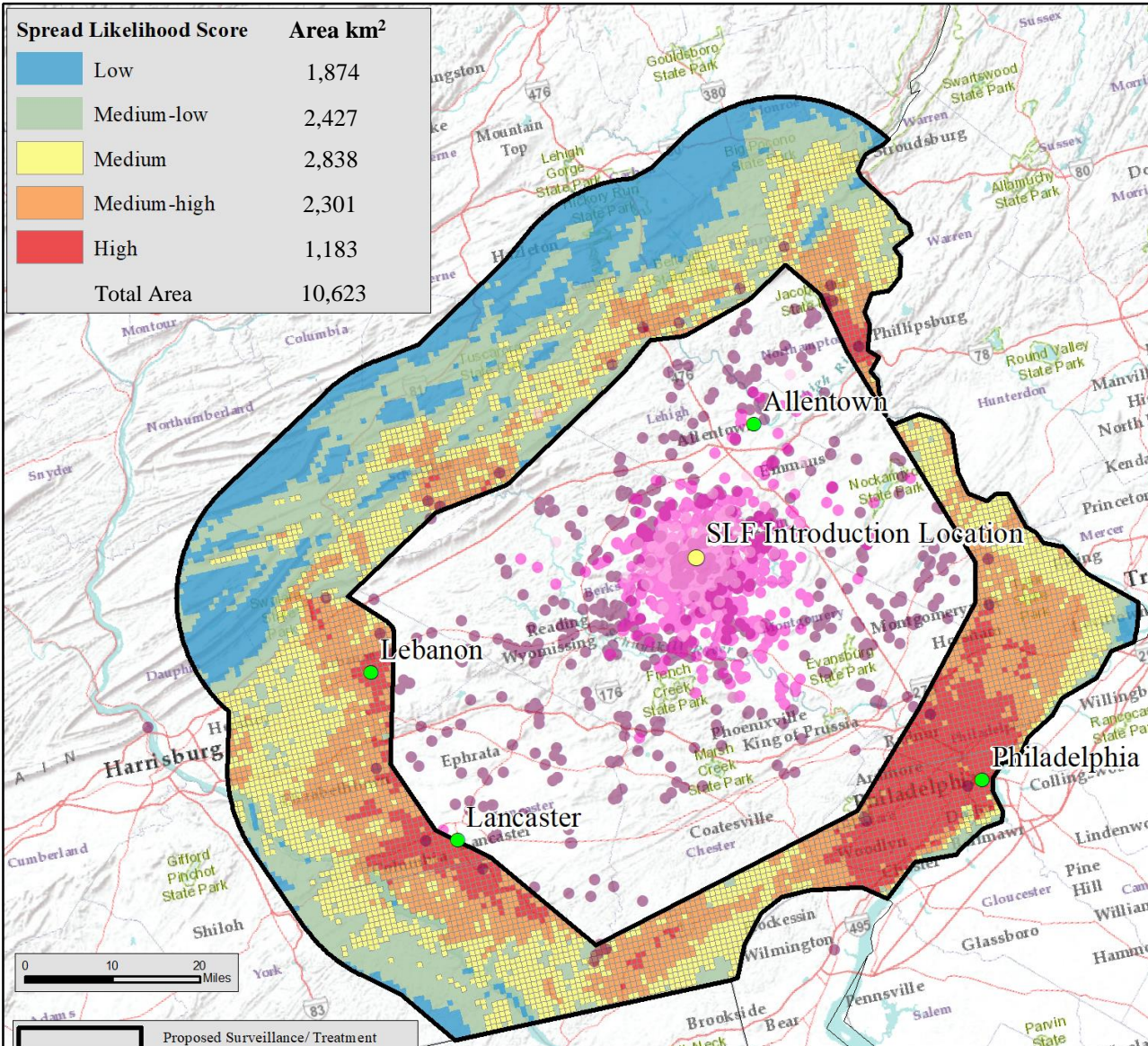


# 2018 Spotted Lanternfly PPQ Tactics Timeline

Date	Action	Carried out by
Year-round	Property assessment, mark trees for herbicide or insecticide treatment	PPQ Staff
April – October (Begin at leaf out, end at leaf fall)	Herbicide application in positive locations. <i>Ailanthus</i> trees may produce root suckers and/or herbicide may not be taken up in spring due to high phloem pressure, requiring additional applications throughout the year.	Applicator (w/ PPQ staff for QA/QC)
May – Aug	Establish trap trees (systemic insecticide application) in positive locations	Applicator (w/ PPQ staff for QA/QC)
May – Nov (replace bands and refresh lure every two weeks)	Population monitoring – tree bands and methyl salicylate lures in treated areas – <u>band trap trees only</u> .	PPQ Staff
June – Nov	Detection Survey – visual inspection for 4th instar and adults (egg masses as a low priority)	PPQ Staff
June – Nov	Delimitation survey – visual inspection for 4th instar and adults (egg masses as a low priority)	PPQ Staff
June – Nov (replace bands and refresh lure every two weeks)	Delimitation survey – Tree bands and methyl salicylate lures. Use in combination with visual inspection unless otherwise directed.	PPQ Staff



Spread Likelihood Score	Area km <sup>2</sup>
Low	1,874
Medium-low	2,427
Medium	2,838
Medium-high	2,301
High	1,183
<b>Total Area</b>	<b>10,623</b>



**Proposed Surveillance/Treatment**

- 2015 SLF Detection
- 2016 SLF Detection
- 2017 SLF Detection
- Hub Offices

USDA-APHIS-PPQ-S&T PERAL Raleigh, NC  
Date Printed: 3/20/2018  
Coordinate System: Albers Equal Area USGS

Data Source:  
Spread likelihood data were created by PERAL  
SLF detections were provided by Pennsylvania Department of Agriculture

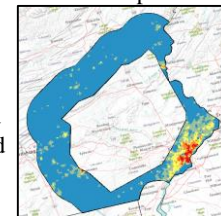
These data, and all the information contained therein, have been collected by the U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS), or by its cooperators on APHIS' behalf, for restricted government purposes only and is the sole property of APHIS. Data may be disseminated on a need-to-know basis only and must be used for their intended government purpose(s).

## Data Elements used to Estimate Spread Likelihood

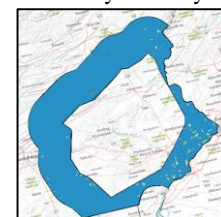
We used seven data elements to quantify the likelihood of SLF spread, which were divided into two broad categories, establishment and entry. Establishment included the distribution of *Ailanthus altissima* and the average number of days in January the minimum daily temperature was below -12.72 °C. Entry included features likely to correspond with the entry of SLF to a new area: vehicle traffic volume, human population density, SLF dispersal, mean distance to the nearest rail line, and revenue from industry pathways. These data elements were combined into a single spread likelihood map assuming equal weight for entry and establishment.

### Entry

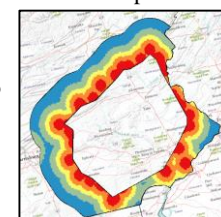
#### Human Population



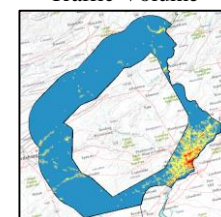
#### Industry Pathway



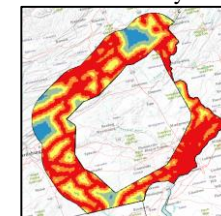
#### SLF Dispersal



#### Traffic Volume

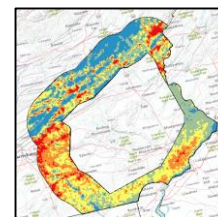


#### Rail Density

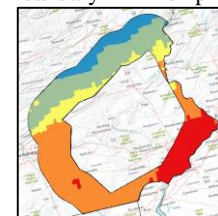


### Establishment

#### A. Altissima



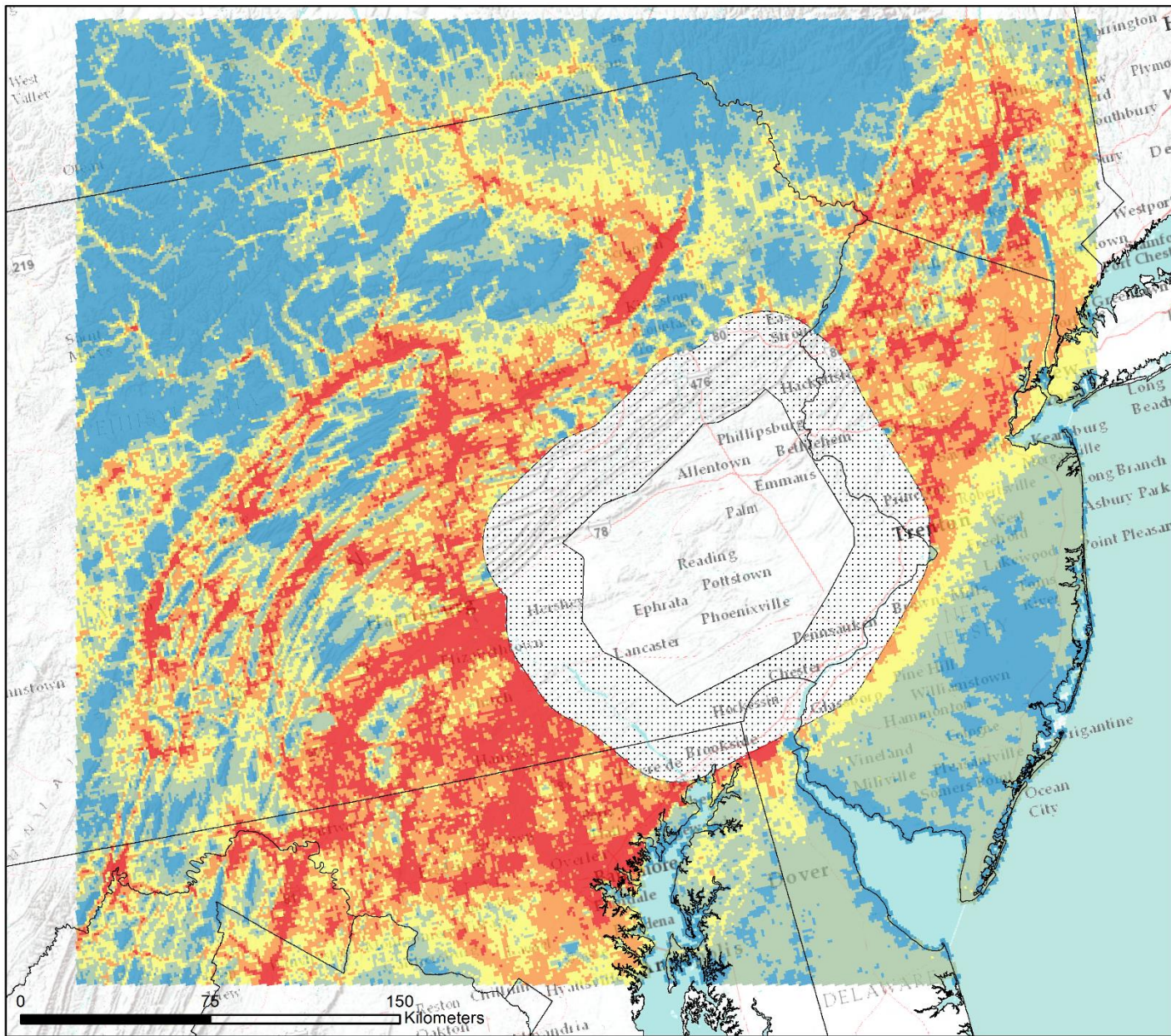
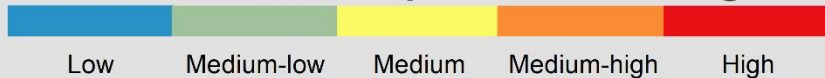
#### January Min Temp





# SLF Likelihood of Spread - Long-distance

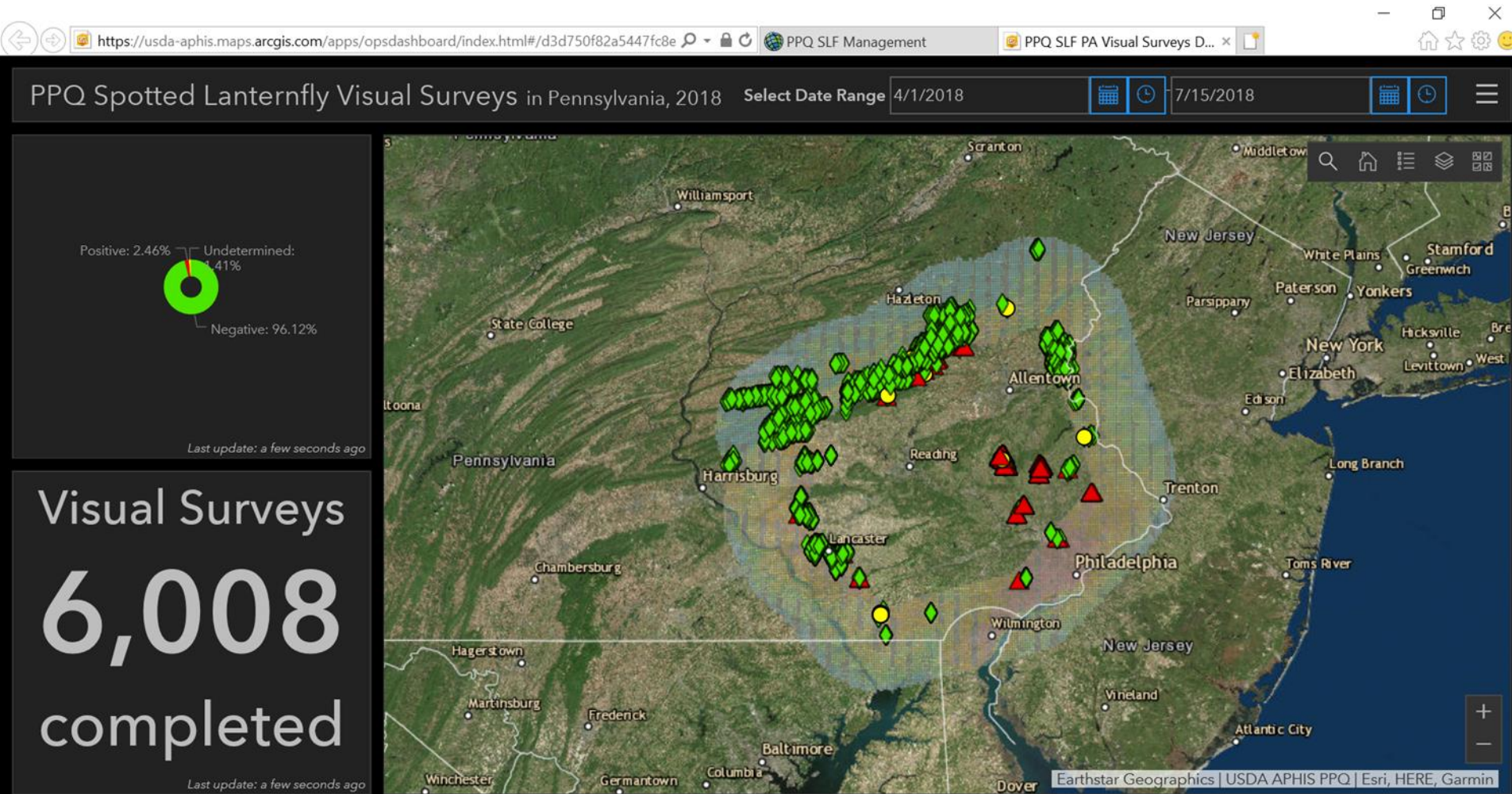
Spread Likelihood Score







# Efforts to Date



# Funding

- CCC Funds:
  - \$17.5 million in existing funds to stop the spread of SLF in Pennsylvania
  - Allows for a three-pronged approach
    - APHIS will manage the outer perimeter of the infestation
    - PDA will focus on the core infested area and detection outside of the quarantine zone
    - PSU will coordinate research and outreach
- Omnibus Spending Bill:
  - \$5 million supporting research, outreach and response efforts throughout the affected region
- Farm Bill
  - \$1 million in Rapid Response funding for VA, NJ, NY, DE, MD and WV to conduct surveillance and respond to detections
- PA State Budget:
  - \$3 million to support PDA's efforts in the core and outside of the Quarantine Zone

## Research Needs

### New Trap and Lure Designs:

- Improved for use in detection
- Reduce non-target bycatch (e.g., vertebrates and pollinators)





# Research Needs

## Treatment Options:

- Non-neonicotinoid alternative for treatments
- Treatment options for organic farmers
- Homeowner recommendations

## Impact Studies:

- Economic impact of SLF
- Impact on alternative hosts





# Research Needs

Can SLF complete its lifecycle without *Ailanthus*?

# THANK YOU



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