SLF Transport Risk pestHubMap Help
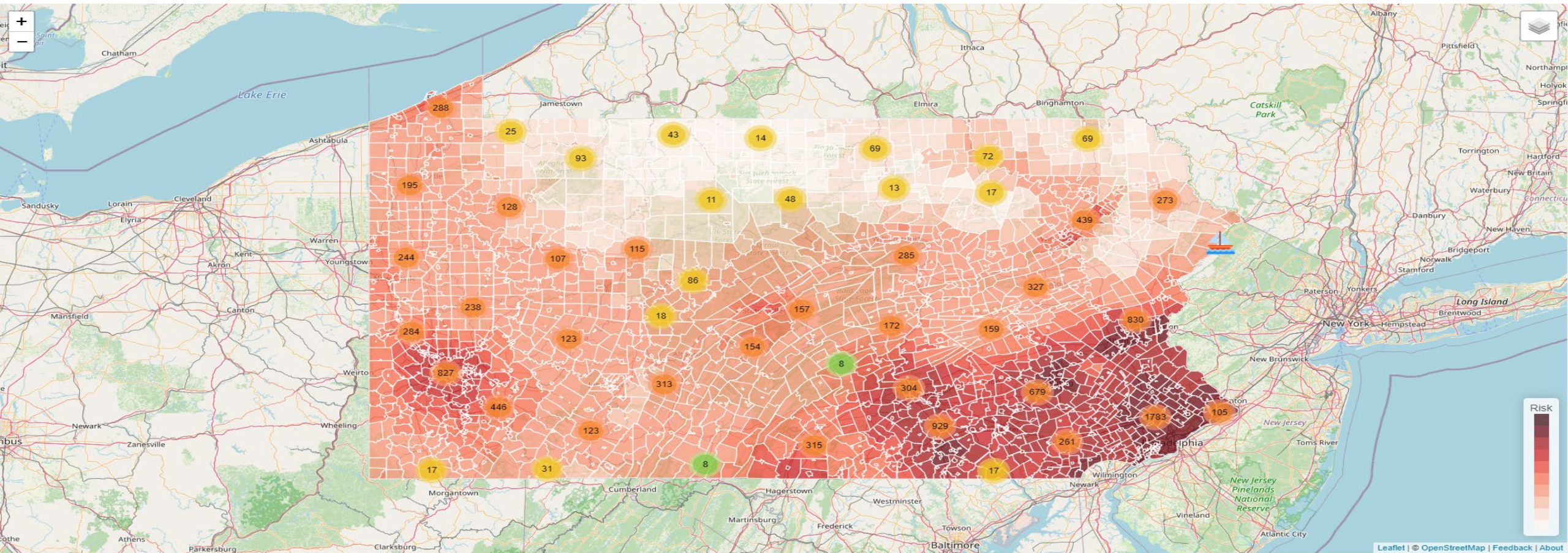
This help document describes the components and how to use

[SLF Transport Risk pestHubMap](SLF%20Transport%20Risk%20pestHubMap)

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Map Components:
High Transport Risk Locations

- When zoomed out, visualize clusters of high risk transportation properties

- Zoom in to see icon for property type

- Click on an icon to view property name, address, and GPS coordinates, which redirects to Google Maps.

- Click on property type buttons at the button to hide that type from the map.

Map Components:
Establishment Risk Layer

- Turn on and off using the drop-down menu in the top right
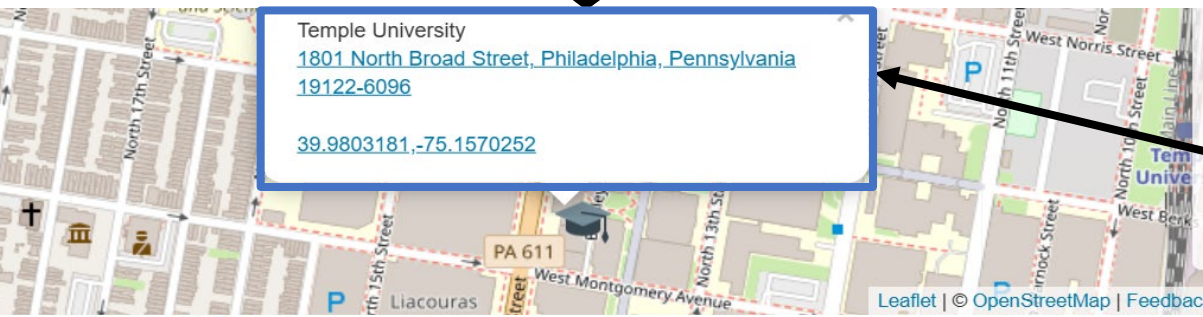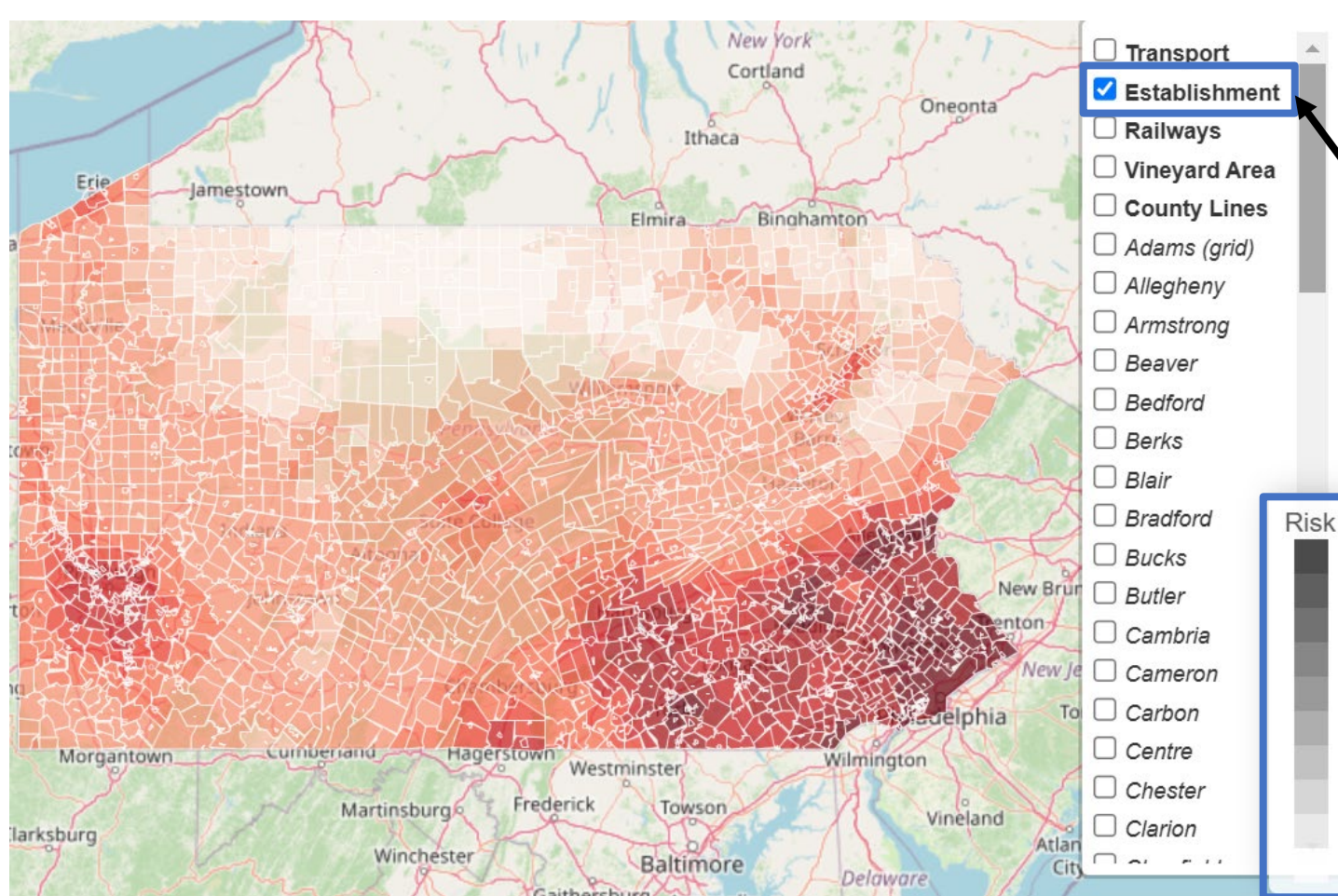
- Darker colors depict areas of high level of establishment potential

ABOUT: Establishment potential was calculated to be the maximum predicted suitability for SLF within an area from an ensemble of species distribution models for SLF outlined in Huron et al. (2022, fig 4a). It is not the density of high risk transportation properties.
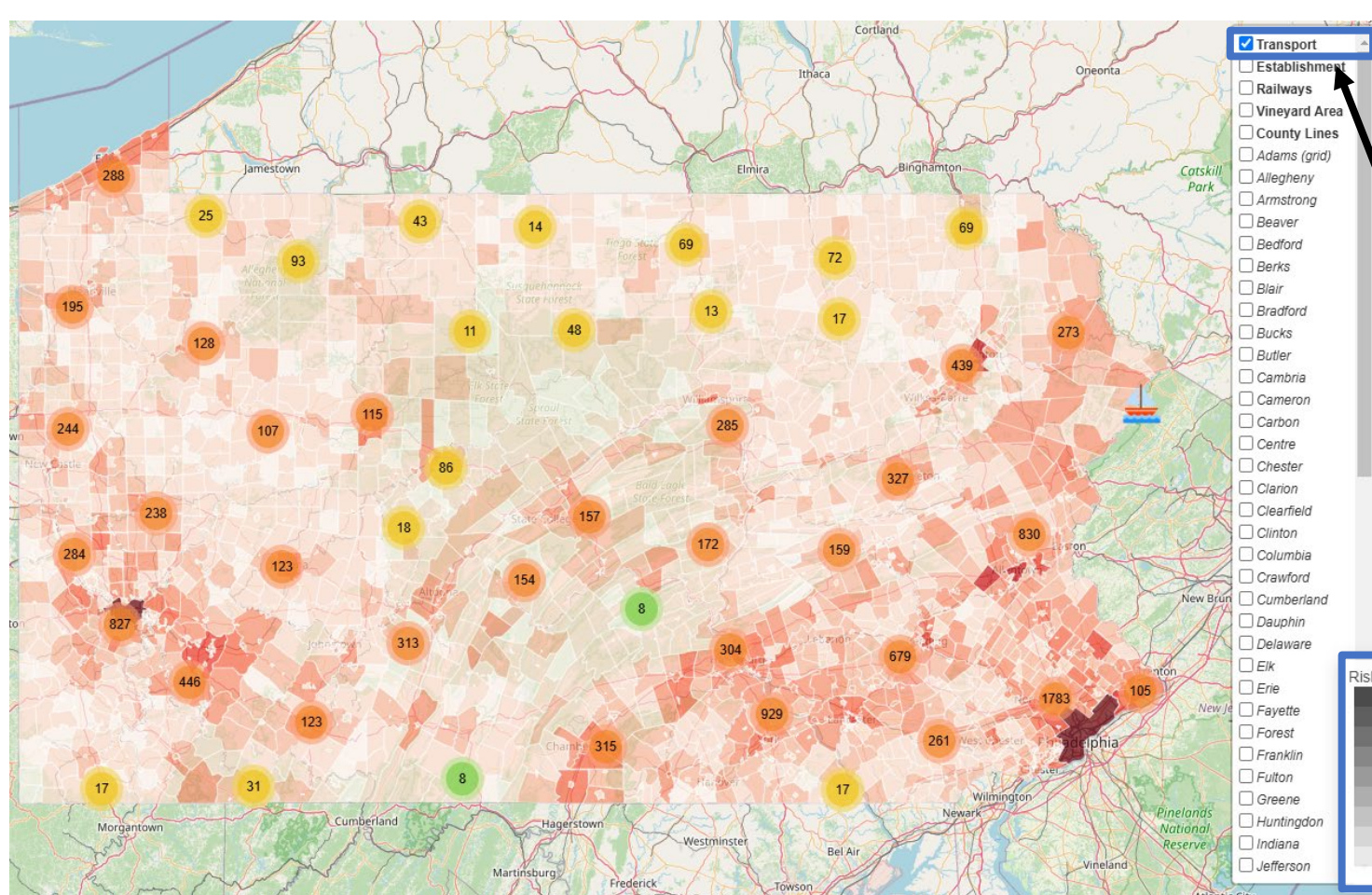
Map Components:
Transport Risk Layer
- Turn on and off using the drop-down menu in the top right

- Darker colors depict areas of high level of risk for transport

ABOUT: The layer is the density of high-risk transportation properties. The higher the number of transportation properties, the higher the risk for SLF spread.

Map Components:
County Layers

- Turn on county outlines for state/region using drop-down menu

- Turn on 1 km survey grids for each county using drop-down menu
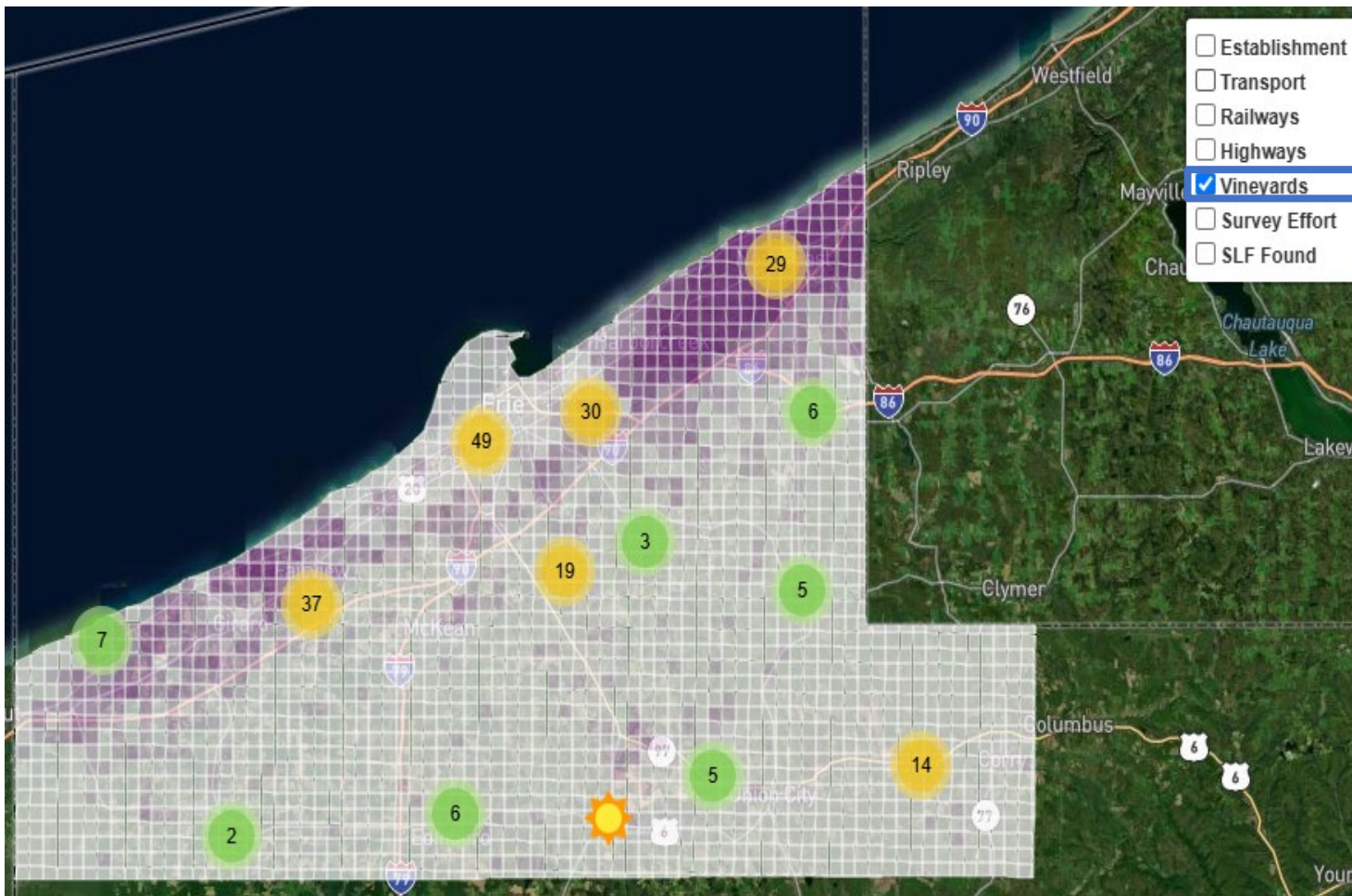
Map Components:
Vineyard Layer

- Turn on and off using the drop-down menu in the top right

- Darker colors depict the presence of vineyard acreage

ABOUT: This layer visualizes the presence and absence of viticultural area. Viticultural regions have suitable environments for SLF establishment shown in Huron et al. (2022, fig. 5a).
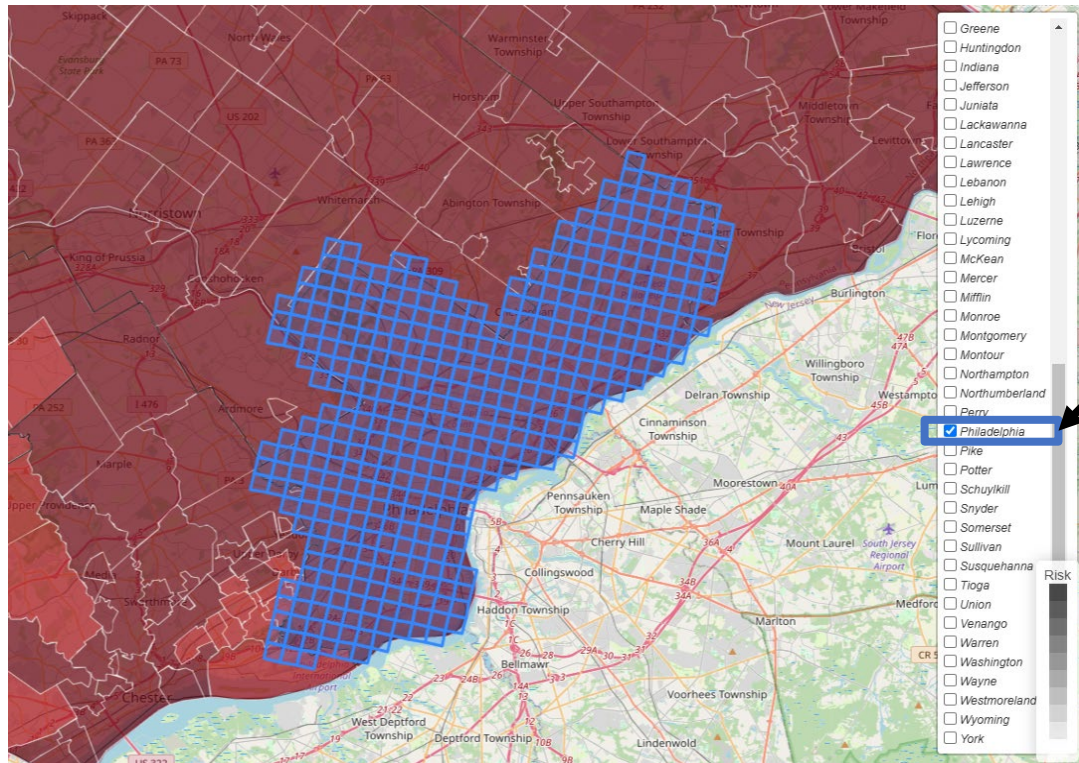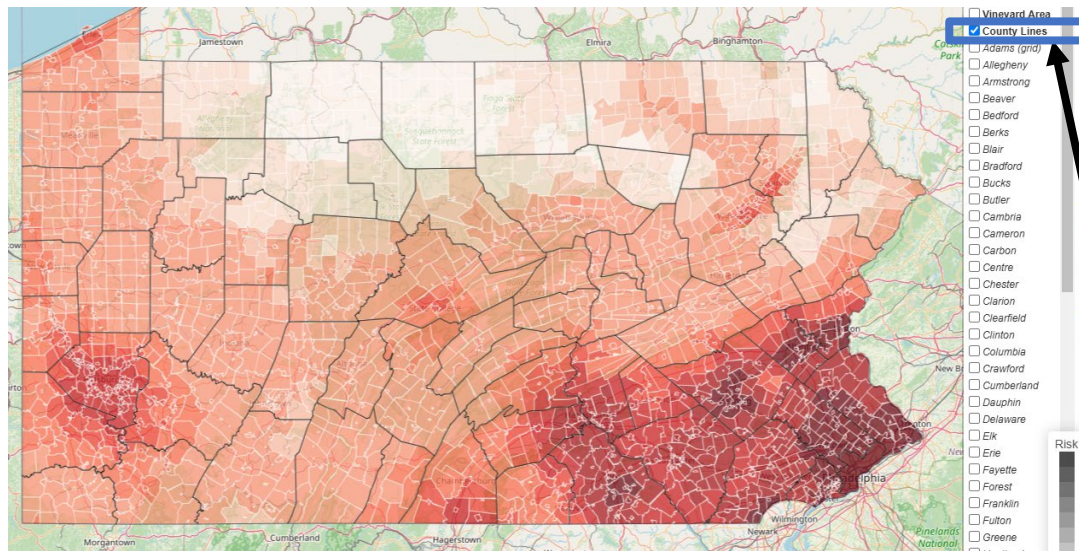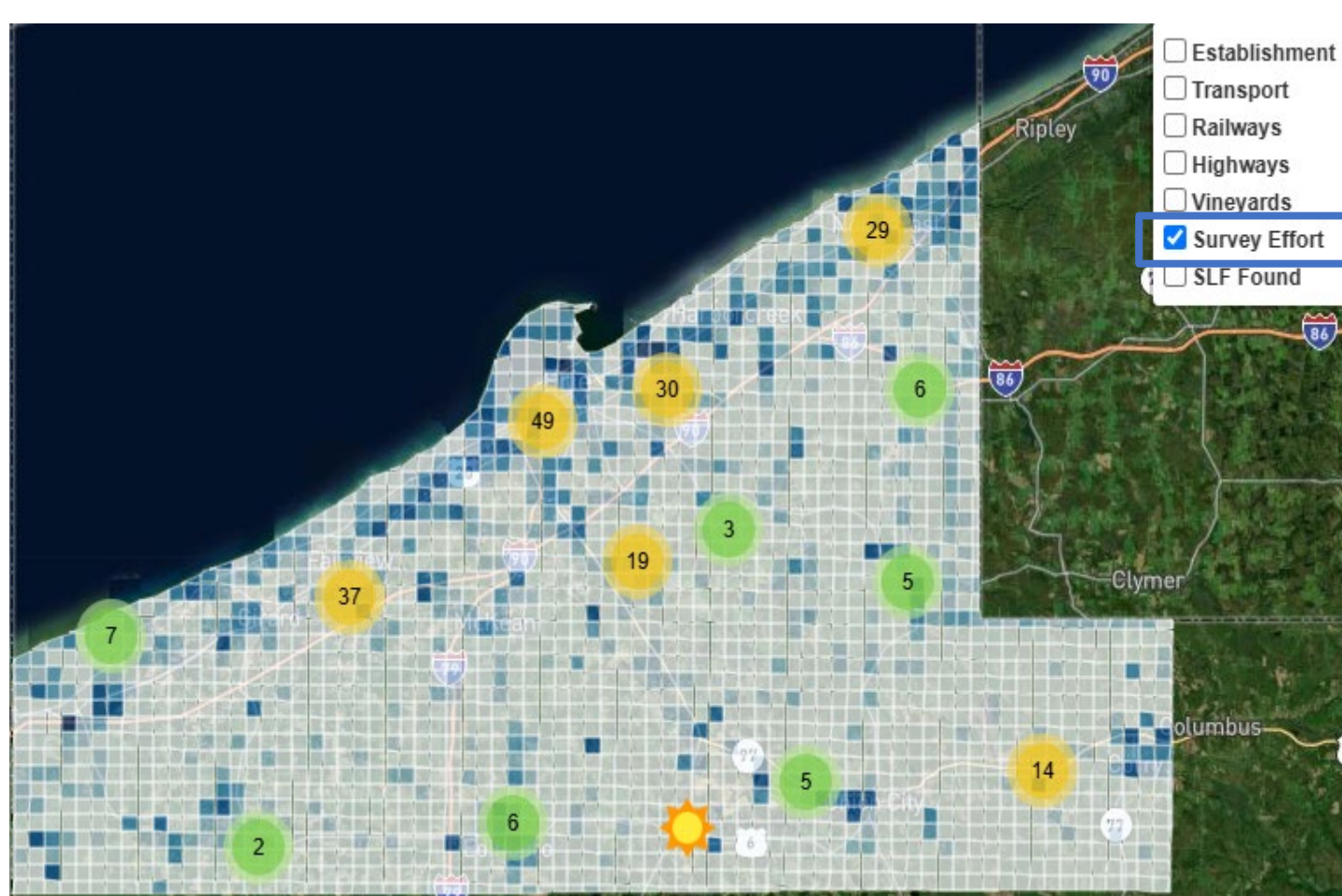
Map Components:
Survey Effort Layer

- Turn on and off using the drop-down menu in the top right

- Darker colors depict areas of higher number of surveys.

Map layer checkboxes:
- Establishment
- Transport
- Railways
- Highways
- Vineyards
- ☑ Survey Effort
- SLF Found

ABOUT: Identifies the number of survey efforts within a 1km grid cell. These surveys could be visual or traps deployed to record the presence of SLF in an area.
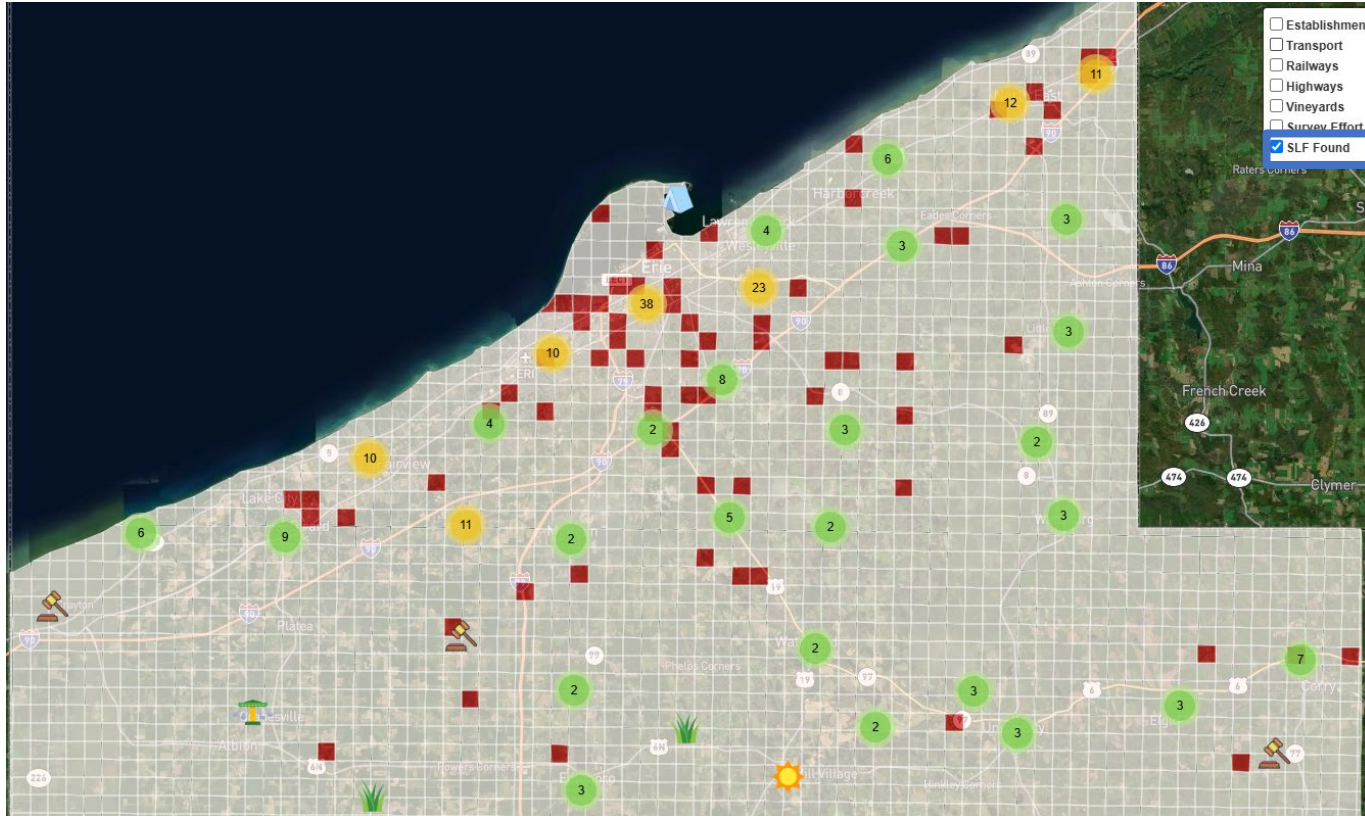
Map Components:
SLF Found Layer

- Turn on and off using the drop-down menu in the top right

- Dark color depicts areas where SLF has been found.

ABOUT: Identifies areas where SLF has been found within a 1km grid cell based on visual, traps, or other survey efforts collected and recorded.

Map Components:
Railways

- Turn on and off using the drop-down menu in the top right

ABOUT: Railway lines within a state. This layer visualizes the inward/outward direction to anticipate SLF spread.
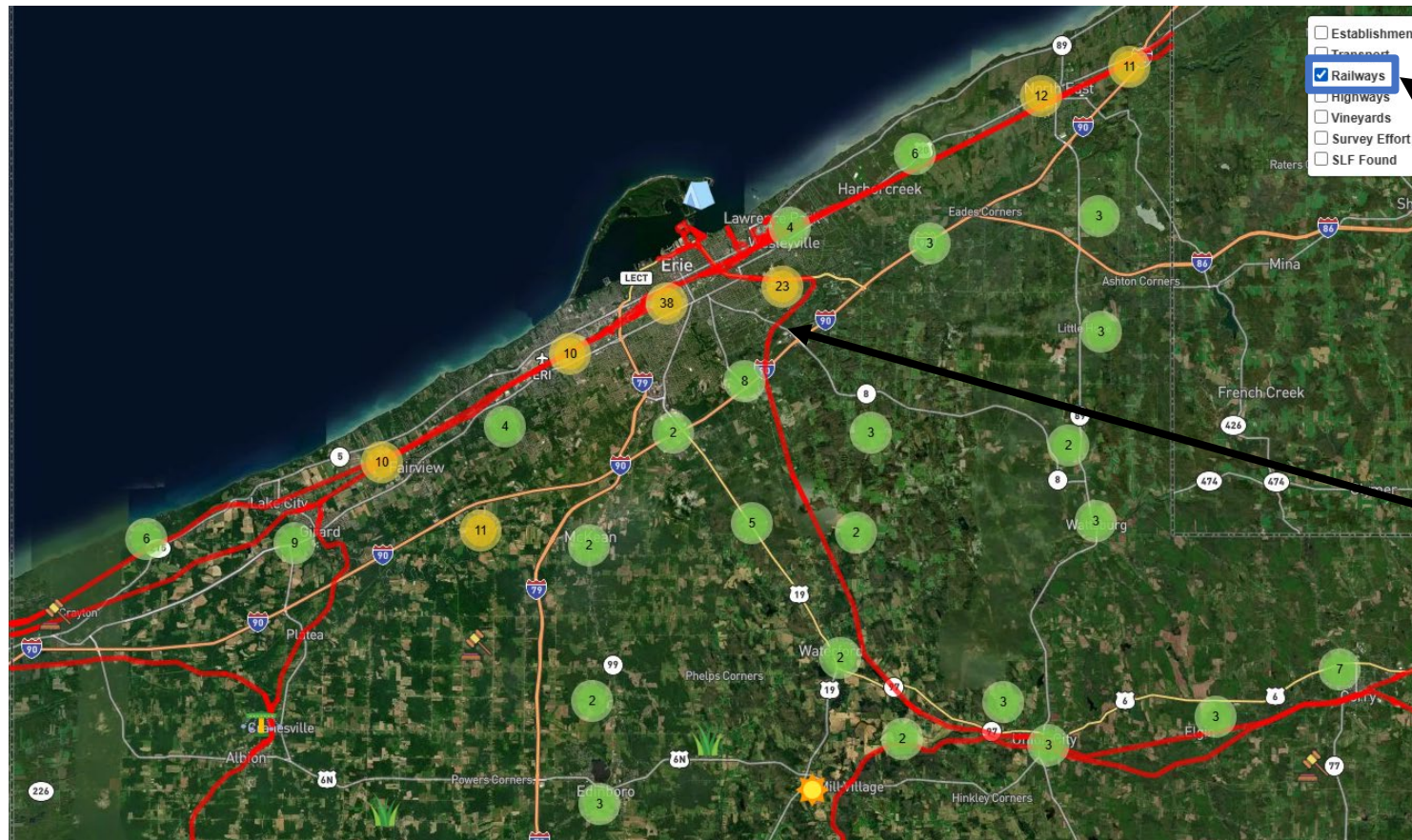
Map Components:
Highways

- Turn on and off using the drop-down menu in the top right

ABOUT: Similarly, this layer visualizes the different types of roads and highways to anticipate SLF spread.

Definitions

- <u>Amusement Parks</u>: Large outdoor area with at least several large ride structures that attract tourists that are typically open year round
- <u>Auctions</u>: Where goods or livestock are sold to bidders
- <u>Boat Launches</u>: Provide river access to boats, kayaks, and canoes. May or may not be maintained.
- <u>Campgrounds</u>: Designated areas for camping that generally can be reserved. Also includes RV parks
- <u>Casinos</u>: Large facilities for gambling, often accompanied by a hotel and/or resort.
- <u>Colleges</u>: Commuter and residential colleges and universities
- <u>Fairgrounds</u>: Outdoor areas where large periodic fairs and festivals occur
- <u>Farmer's Markets</u>: Locations where farmers and merchants travel to periodically to sell food and goods
- <u>Flea Markets</u>: Where merchants travel periodically to sell goods
- <u>Landscapers</u>: Properties where landscaping and tree services are stationed
- <u>Marinas</u>: Areas where boaters rent space for to place or move boats

Definitions

- <u>Military Bases</u>: Facility or armory that houses military equipment
- <u>Racetracks</u>: Racecourses for motor vehicles including cars, four wheelers, and dirt bikes
- <u>Railroads</u>: Railroad areas that experience train traffic
- <u>Distribution Centers</u>: Includes warehouses, manufacturers, shipyards, and intermodal hubs which exist for the purpose of shipping and mailing of goods
- <u>Stadiums</u>: Fields recreational sports take place and spectators can watch
- <u>Summer Camps</u>: Includes summer day camps and overnight camps and retreats
- <u>Timber Producers</u>: Sawmills, lumber yards, stores that produce and sell wood
- <u>Truck Rentals</u>: Businesses that rent large transport trucks
- <u>Truck Stops</u>: Locations where travelers and truck drivers convene during long trips
- <u>Wineries</u>: Locations where grape vines are grown or storefronts that accompany local vineyards

Iconography

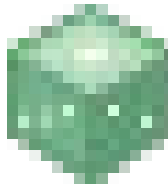- Amusement Parks

- Auctions

- Boat Launches

- Campgrounds

- Casinos

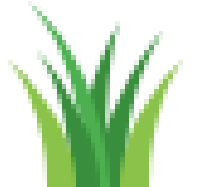- Colleges

- Distribution Centers

- Fairgrounds

- Farmer's Markets

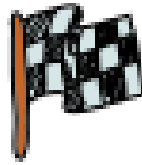- Flea Markets

- Landscapers

Iconography

- Marinas

- Military Bases

- Racetracks

- Railroads
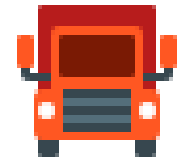
- Stadiums

- Summer Camps

- Timber Producers

- Truck Rentals

- Truck Stops

- Wineries

Interpretation

Areas on the map that have a large cluster of high transportation risk properties and a high risk level are more likely to import, export, and support growth of SLF populations. These areas should be targeted by surveyors to find and control SLF spread

Accuracy

Our high transport risk properties have been checked for accuracy, but it cannot be guaranteed all points are accurate.

Assumptions

The property types listed on our maps were determined to be likely vectors of SLF transport through collaboration and conversation with stakeholders

Creation & Funding

These maps were created by the iEcoLab with funding from the Pennsylvania Department of Agriculture (PDA), US Department of Agriculture (USDA), and California Department of Food & Agriculture (CDFA).

Feedback

Please use our Feedback Form to provide feedback on this dashboard or any of the apps marked with the Temple 'T' logo. You can also contact us directly at iecolab@temple.edu with further questions, comments, or to send us your app to be included on the dashboard.

Citations

Huron, N. A., Behm, J. E. & Helmus, M. R. (2022) Paninvasion severity assessment of a US grape pest to disrupt the global wine market. *Comm. Bio.* 2021.07.19.452723 doi:10.1038/s42003-022-03580-w.

Ramirez, V.A., Zangakis, E., Abernethy, R., Hanley, M., Stuart, J., & Helmus, M.R. pestHubMap: A framework to design interactive applications to map properties that spread invasive species. *In prep.*