Utilizing Digital Tools for Local Invasive Plant Management

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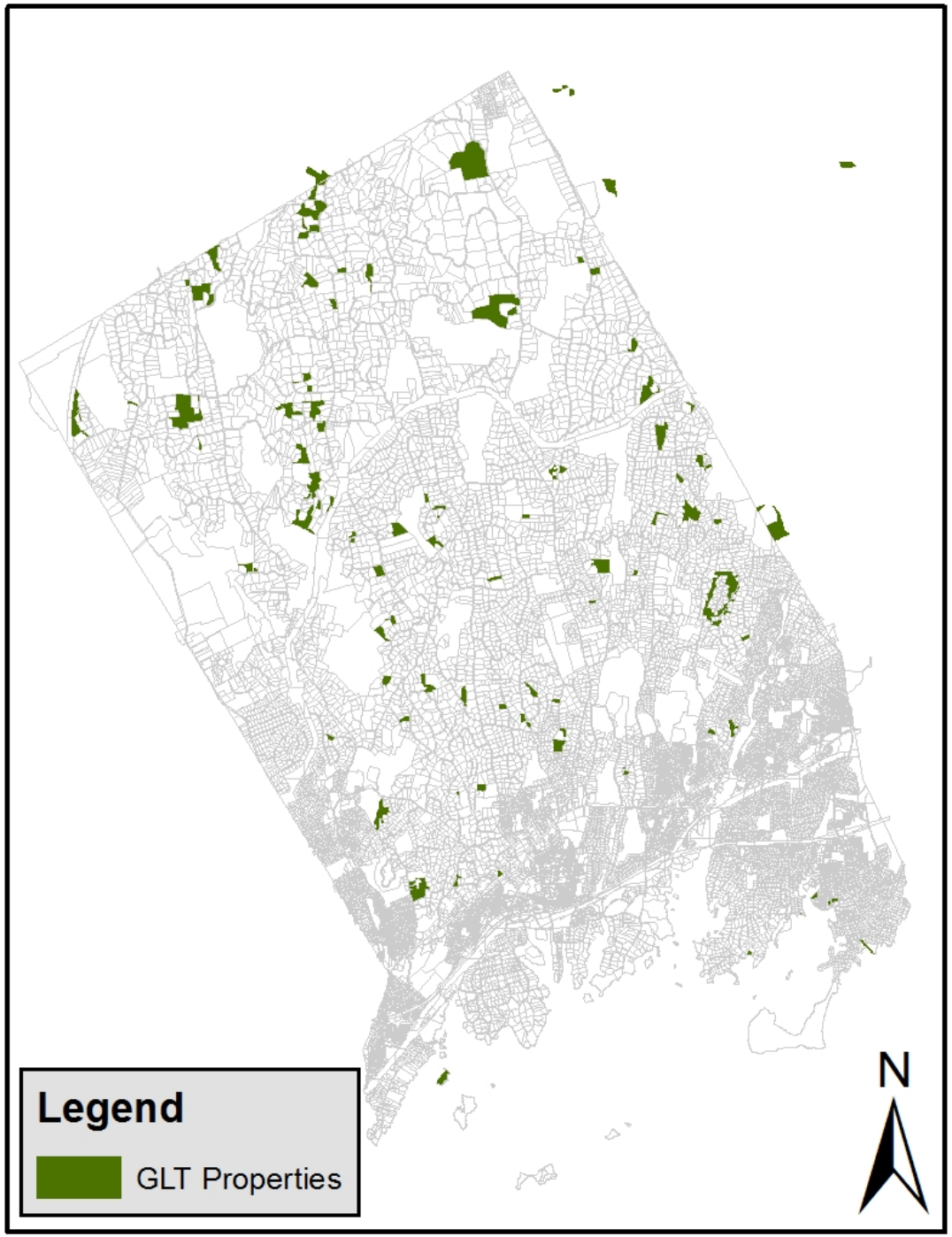


The Greenwich Land Trust has amassed two great resources:

hundreds of acres of open space…

diverse habitats hosting a variety of ecological communities

Invasive plant management to free resources for native flora and fauna

The people that care deeply for the land

Digital tools can empower our volunteers to efficiently monitor and manage preserves.

Allows staff to access enthusiasm and knowledge of field leaders to build a comprehensive strategy for all our properties.

Field leaders inspect properties and provide on the ground information.

A New Partnership



Science-based management with cutting edge ecological research and online tools

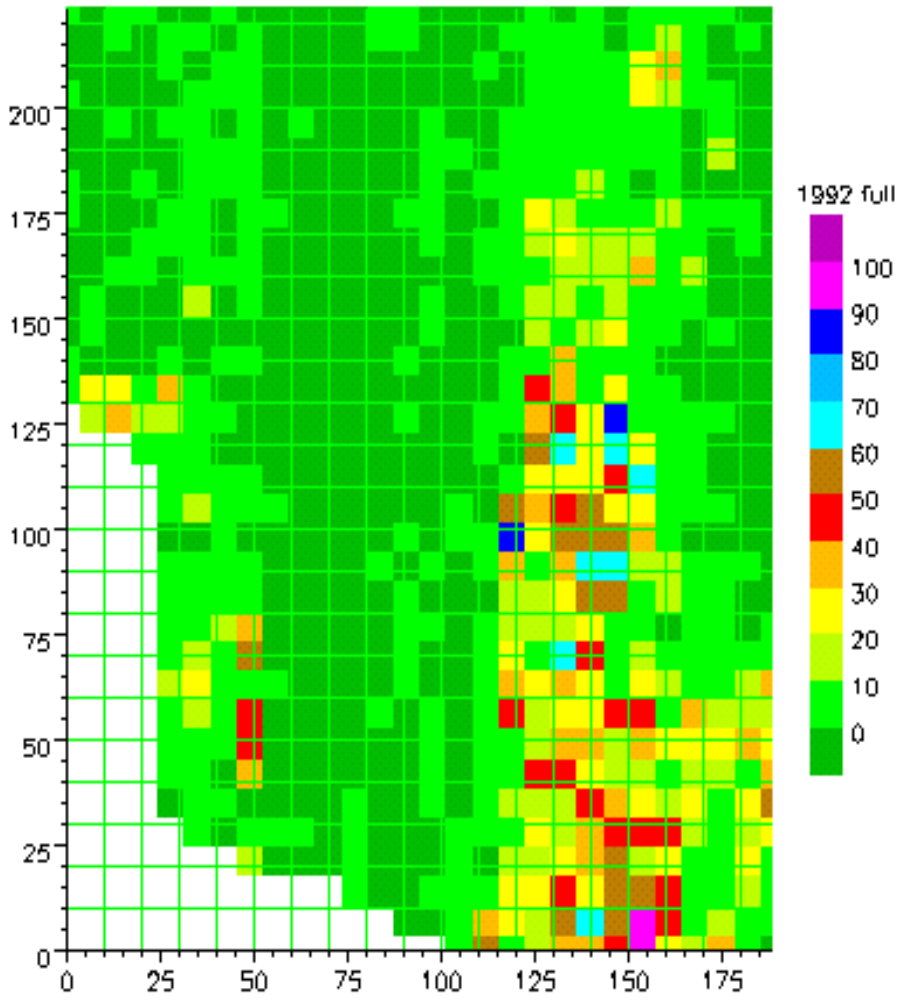
All invasive plants mapped with site-specific management plans

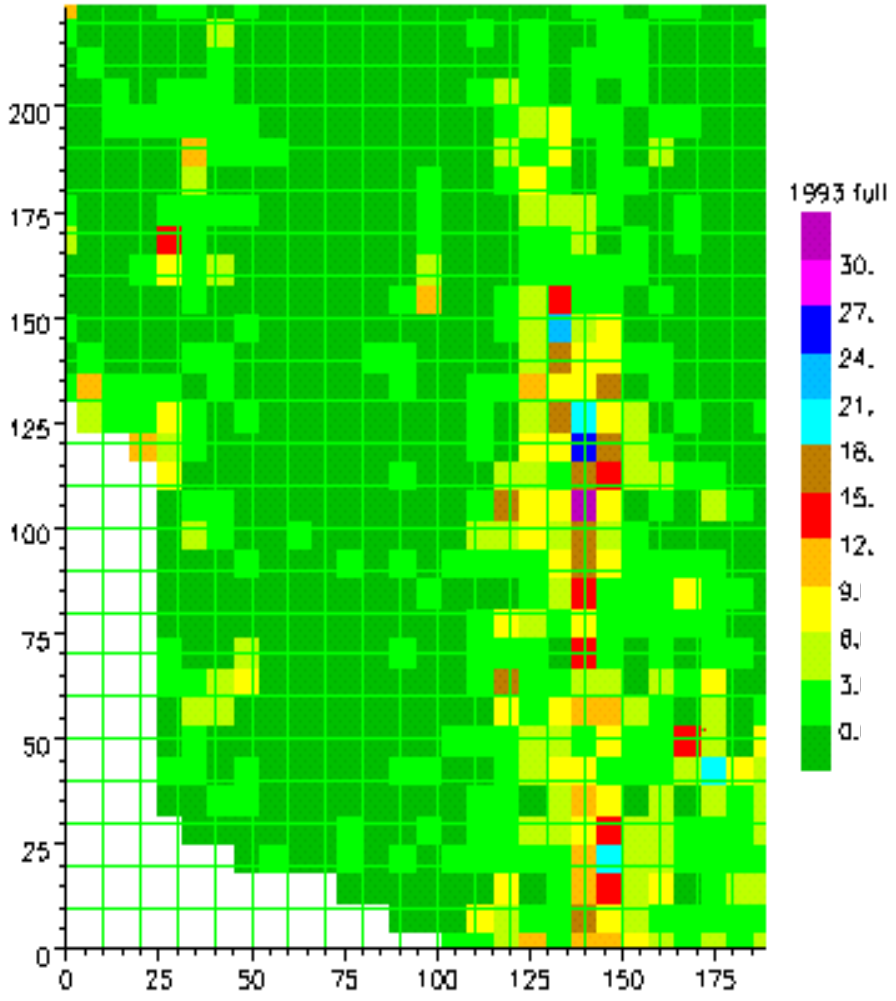
Mapping

Knowledge of this year's weed population informs next year's management decisions

Year 1

Year 2



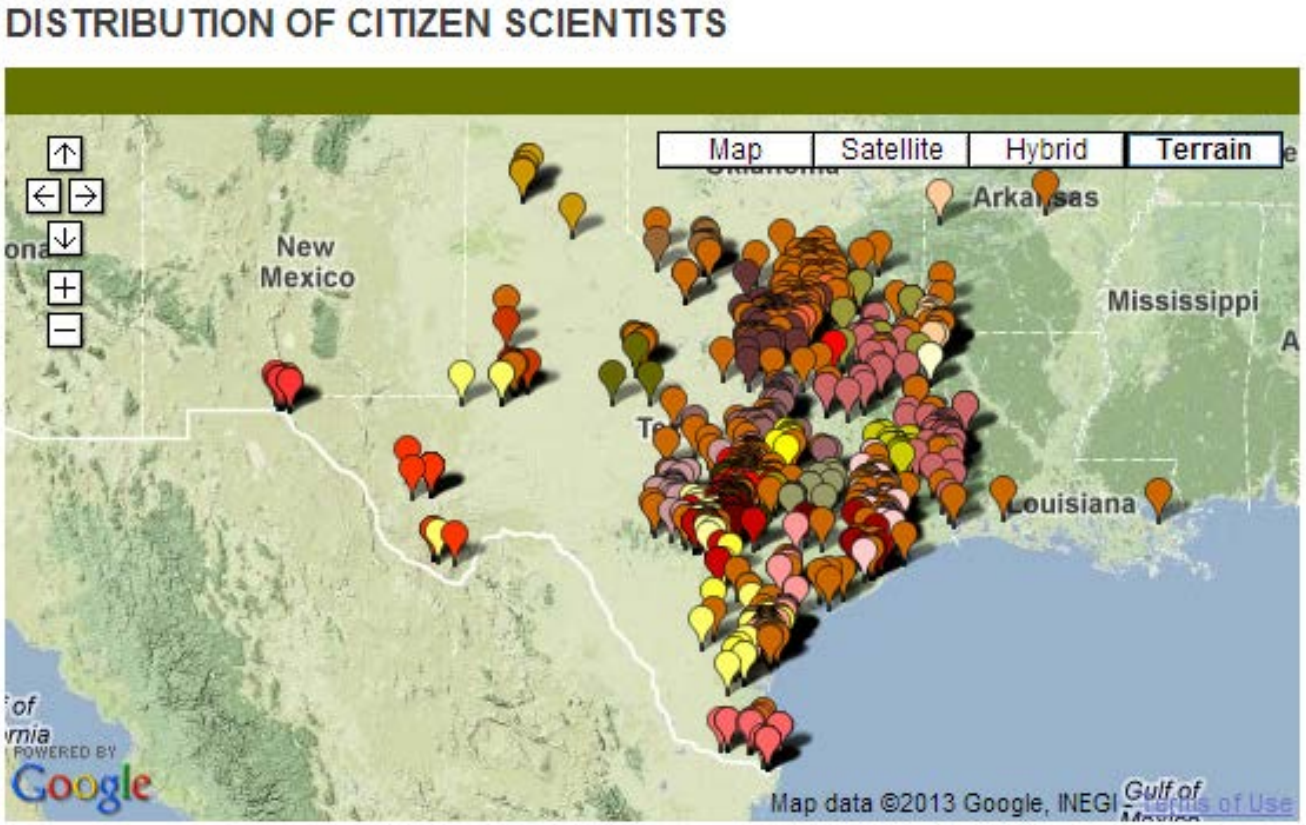


Gerhards, Mortensen, Wyse,1997

Monitoring

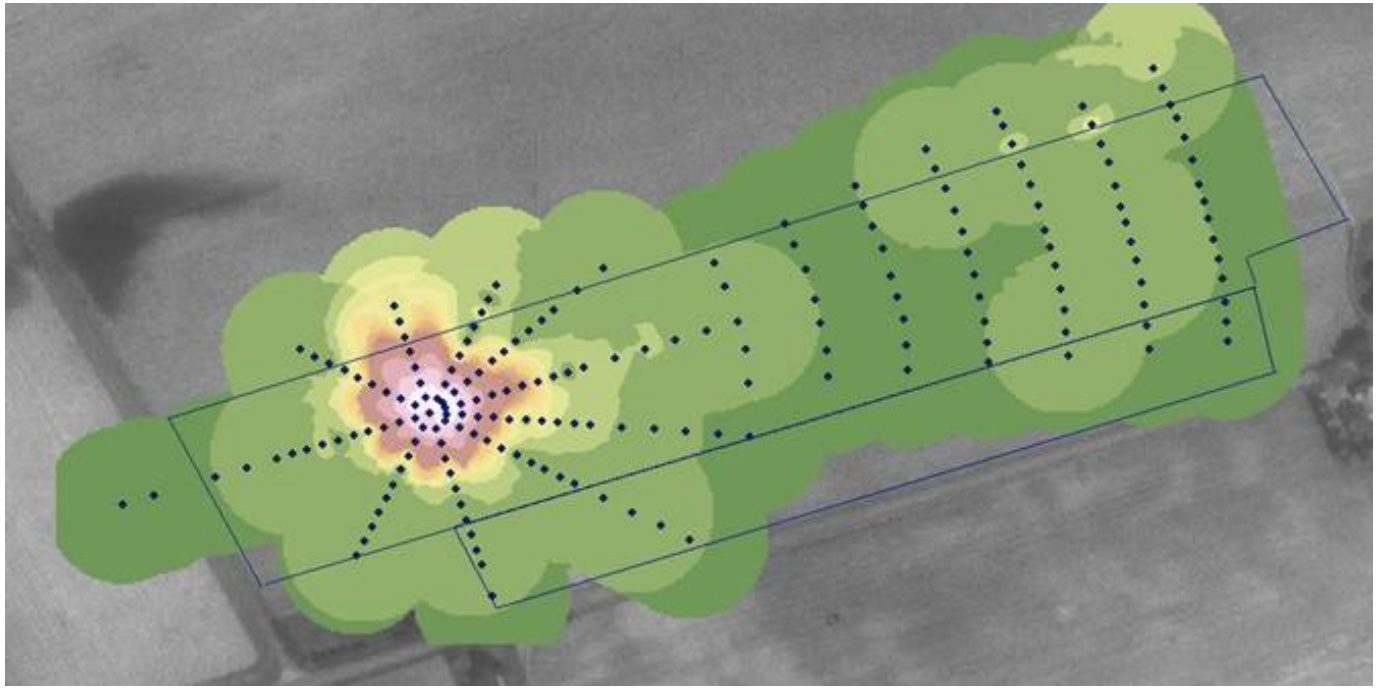
"Texas Invaders" network relies on local volunteers to watch for the spread of invasive plants.

"The more trained eyes watching for invasive species, the better our chances of lessening or avoiding damage to our native landscape."



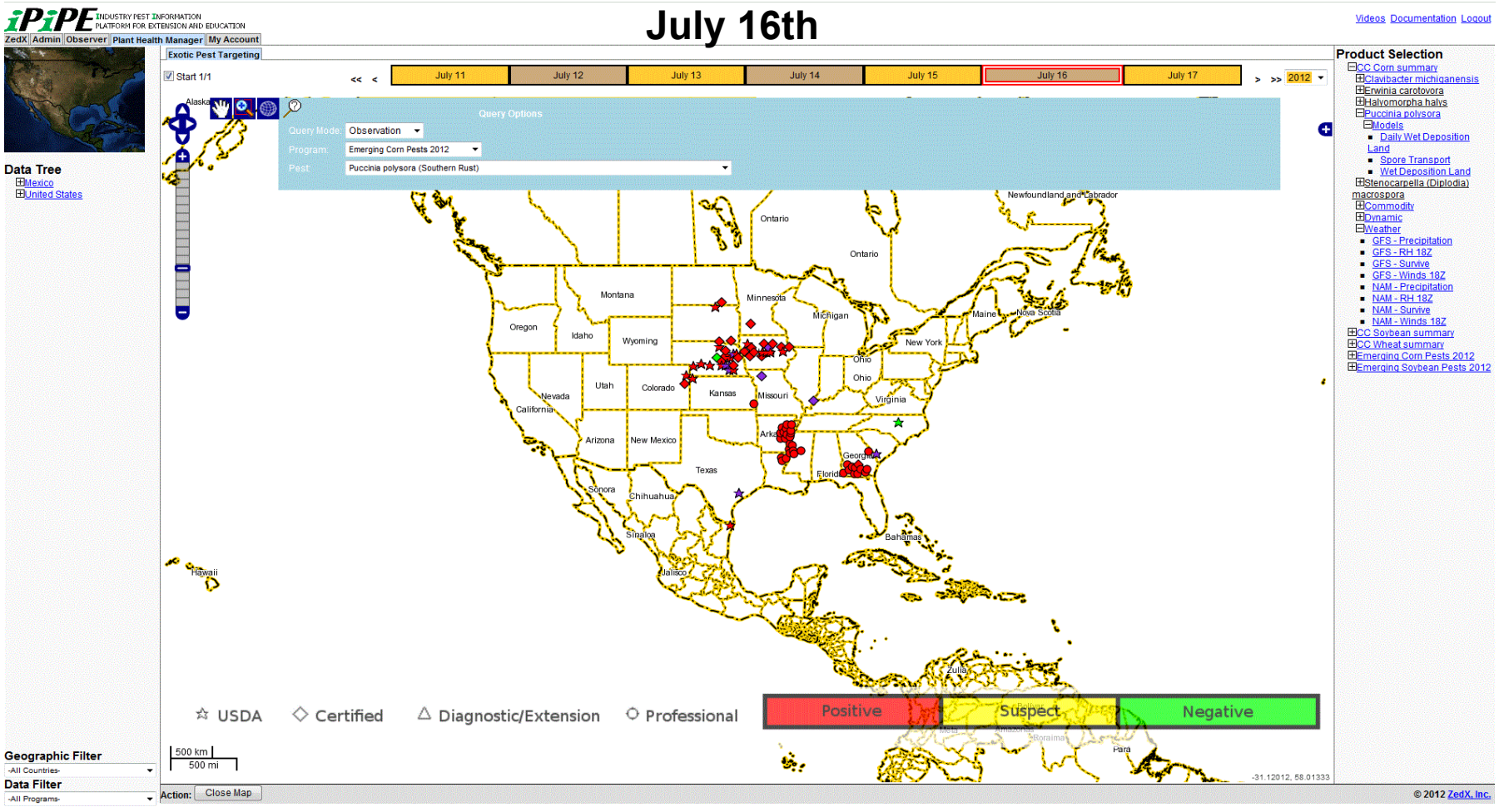
Prediction

with many invasive plants, spread from known populations can be estimated based on dispersal of the species and local conditions



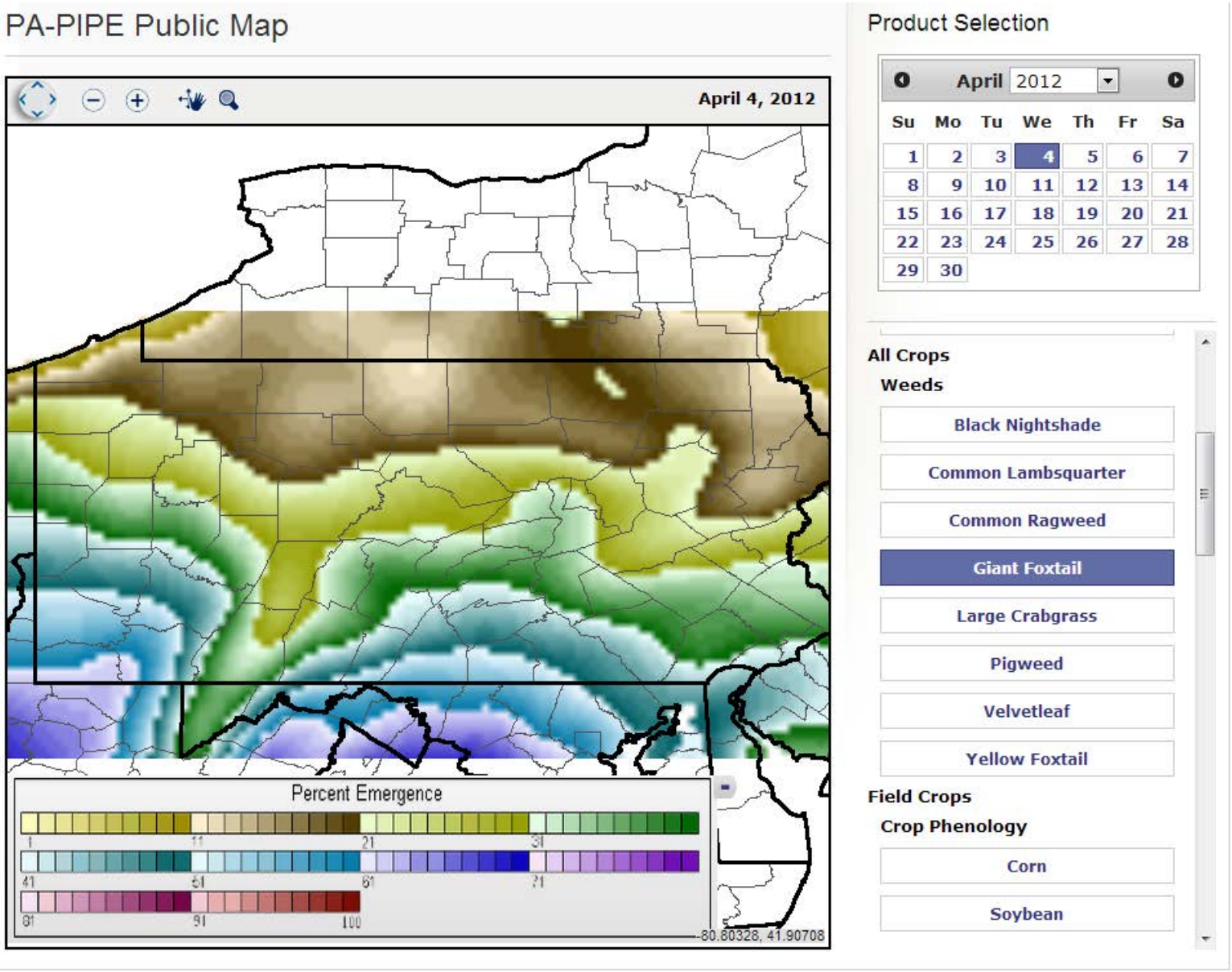
Horseweed seed dispersal from a point source, showing a stratified distribution.

Prediction
iPiPE: Disease Spread Example

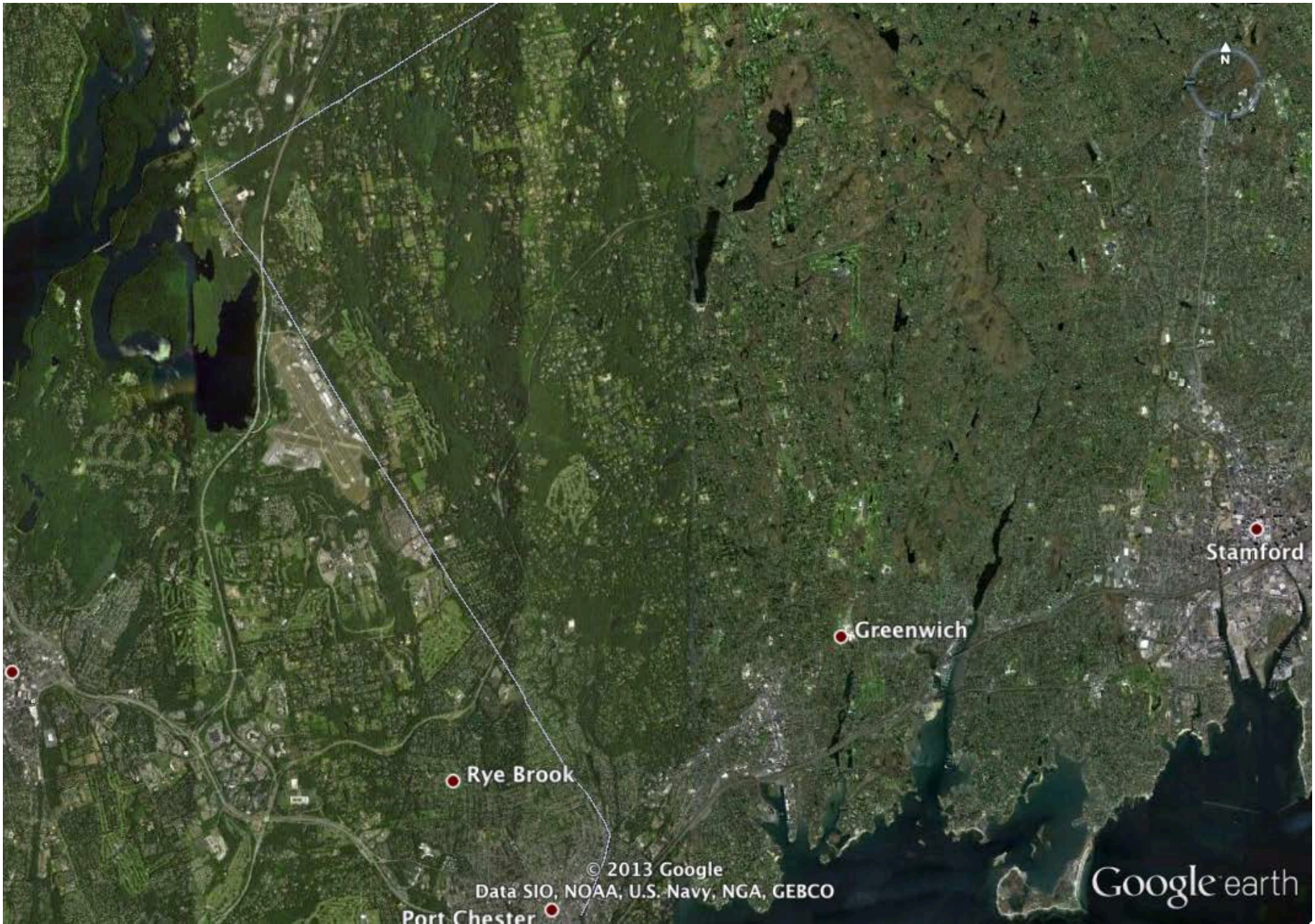


Planning

When and where to use our stewardship resources?




Lessons from agriculture:
What a difference a few days make…
May 1st tillage and seeding
May 18th tillage and seeding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Stamford
Greenwich
Rye Brook
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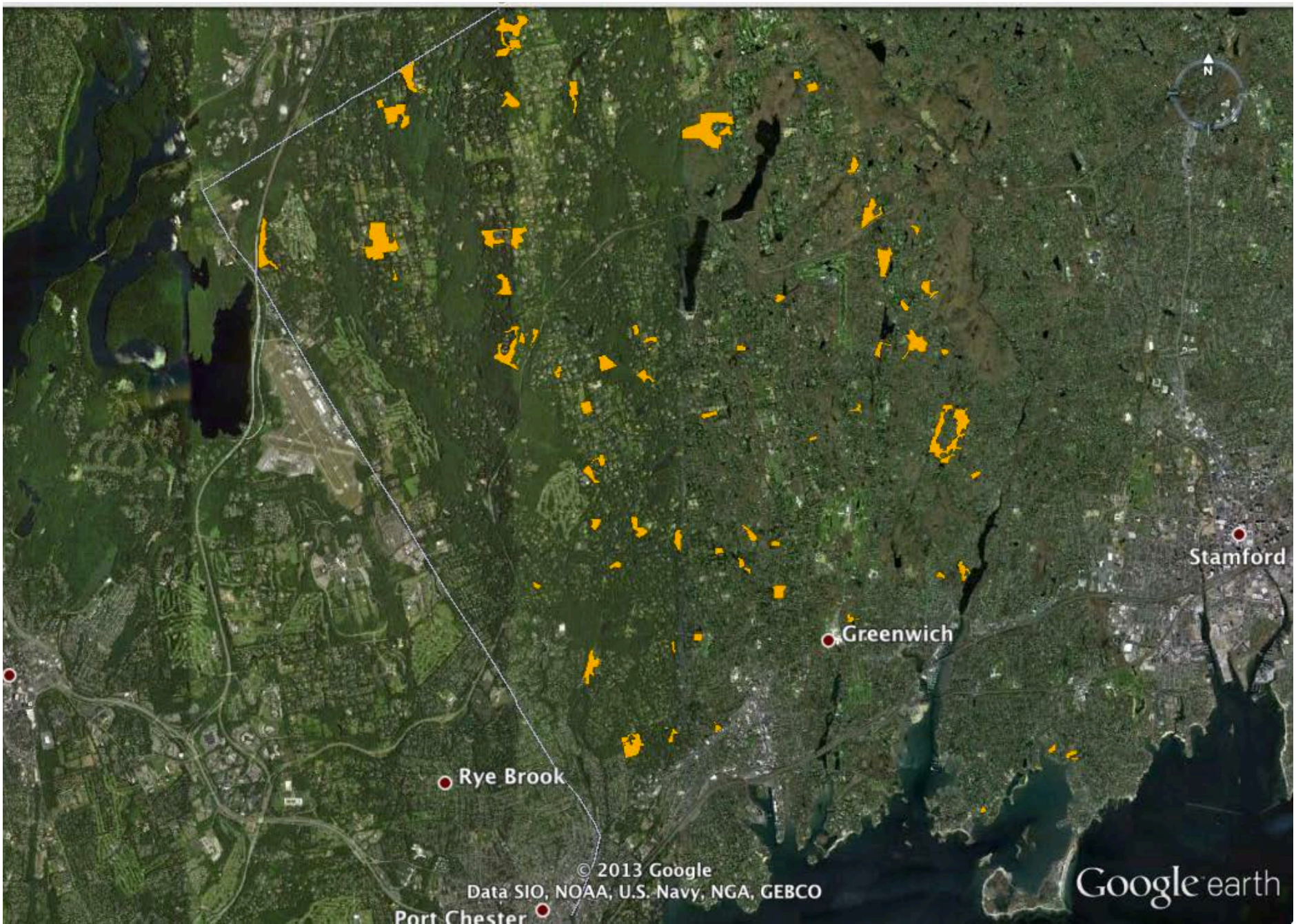
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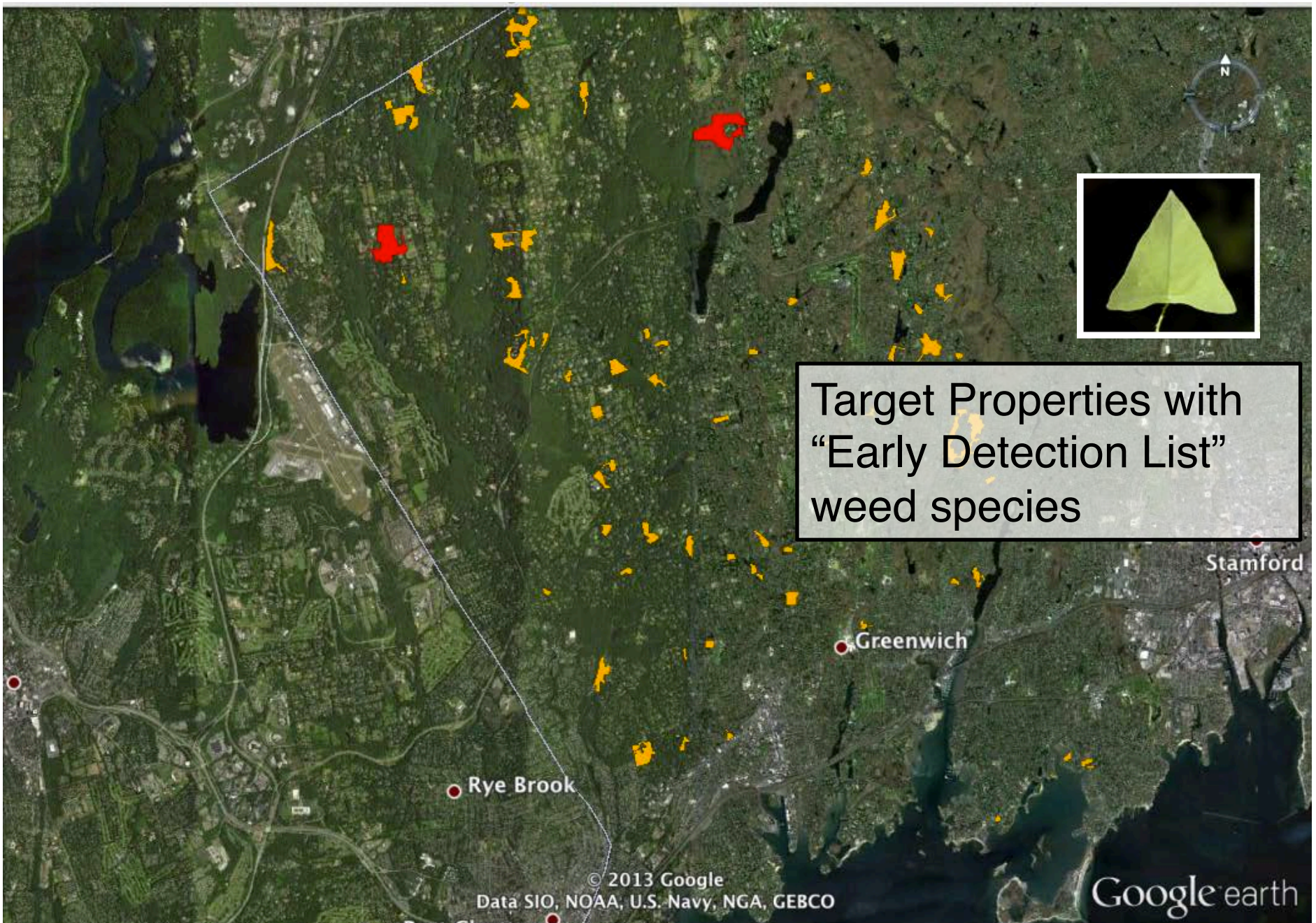
Target Properties with "Early Detection List" weed species
Stamford
Greenwich
Rye Brook
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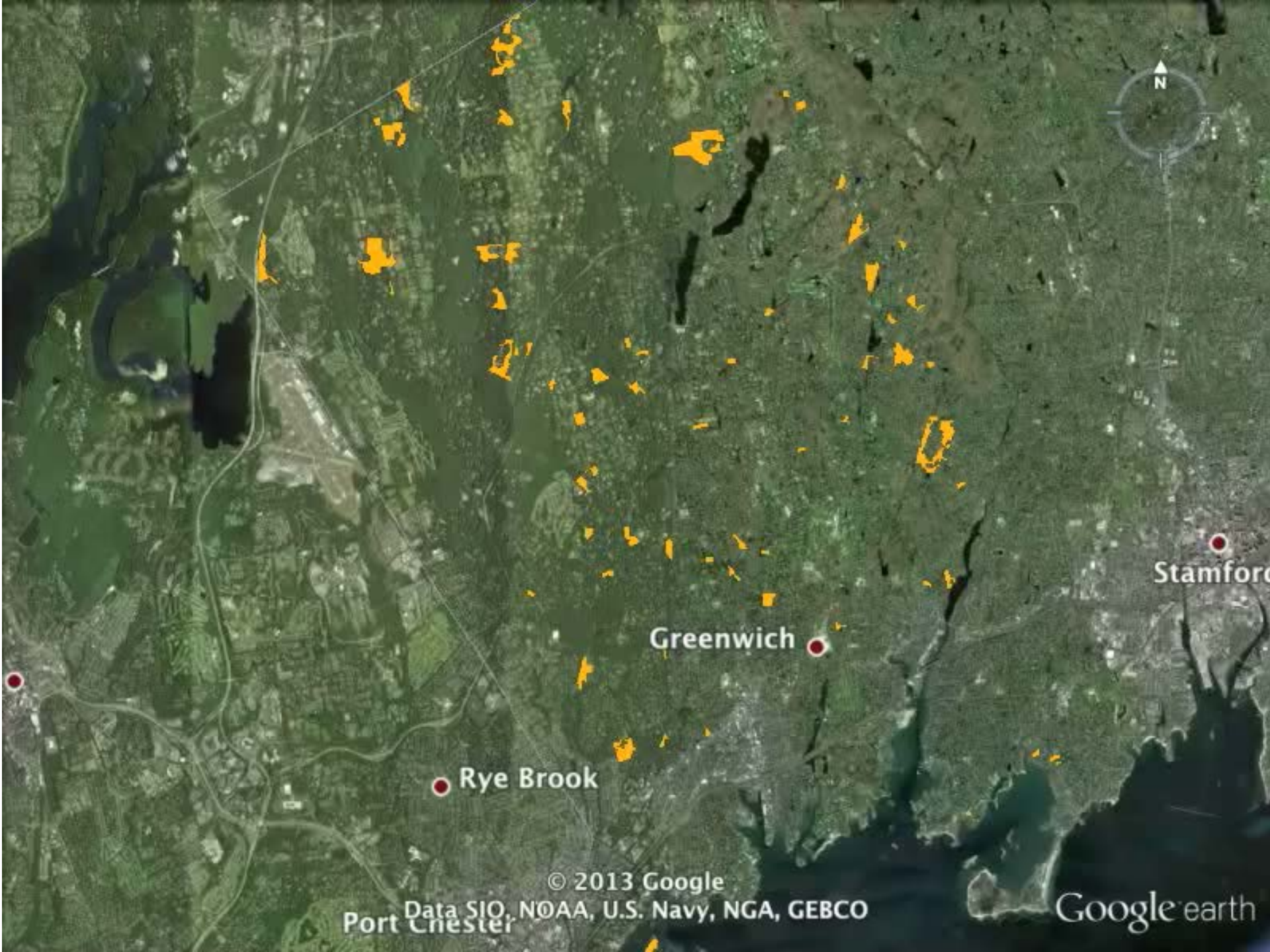
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Woody Invasive plants were removed with volunteers and interns


Multiflora rose
Japanese stiltgrass
Garlic mustard
Multiflora rose
Japanese stiltgrass
Japanese honeysuckle
Tree-of-heaven
European privet
Winter creeper
Garlic mustard
Wine raspberry
Wine raspberry
Winter creeper
Garlic mustard
English ivy
Japanese barberry
Wine raspberry
Garlic mustard
Norway maple
Garlic mustard
Porcelainberry
Japanese stiltgrass
Porcelainberry
Garlic mustard
Wine raspberry
Porcelainberry
Wine raspberry
Amur peppervine
Winter creeper
Multiflora rose
Garlic mustard
Norway maple
Winter creeper
Amur peppervine
Wine raspberry
English ivy
Wine raspberry
Wine raspberry
Garlic mustard
Garlic mustard
Winged burning bush
Winter creeper
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Mapping, monitoring and predictive tools can go beyond weed management to larger conservation goals.

Tracking biodiversity; rare plants and animals

Pest monitoring in orchards and gardens

Bird and Bat house surveys

Trails maintenance