

GYPSY MOTH ERADICATION IN WASHINGTON STATE 2016



Washington
State Department of
Agriculture



What new cool stuff we learned.

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Invasive Species Working Group
PNWER Annual Summit
July 26th, 2017
Portland, OR



Gypsy Moth Defoliation in Rhode Island 2016

Over 400,000 acres of defoliation.





Gypsy Moth Forest Defoliation
353,000 acres in Mass 2016
700,000 acres in PA 2015



What's at risk?

- 100 state parks.
- 2.1 million acres DNR-managed forest land.
- 4 million acres of private forest lands.
- 2 million Christmas trees.
- Quarantine restrictions on timber, nursery and Christmas tree exports.
- Defoliate large swaths of national park land.
- Ruin recreational areas.
- Spread to other states.



Asian Gypsy Moth a Greater Threat!

EUROPEAN
(EGM)

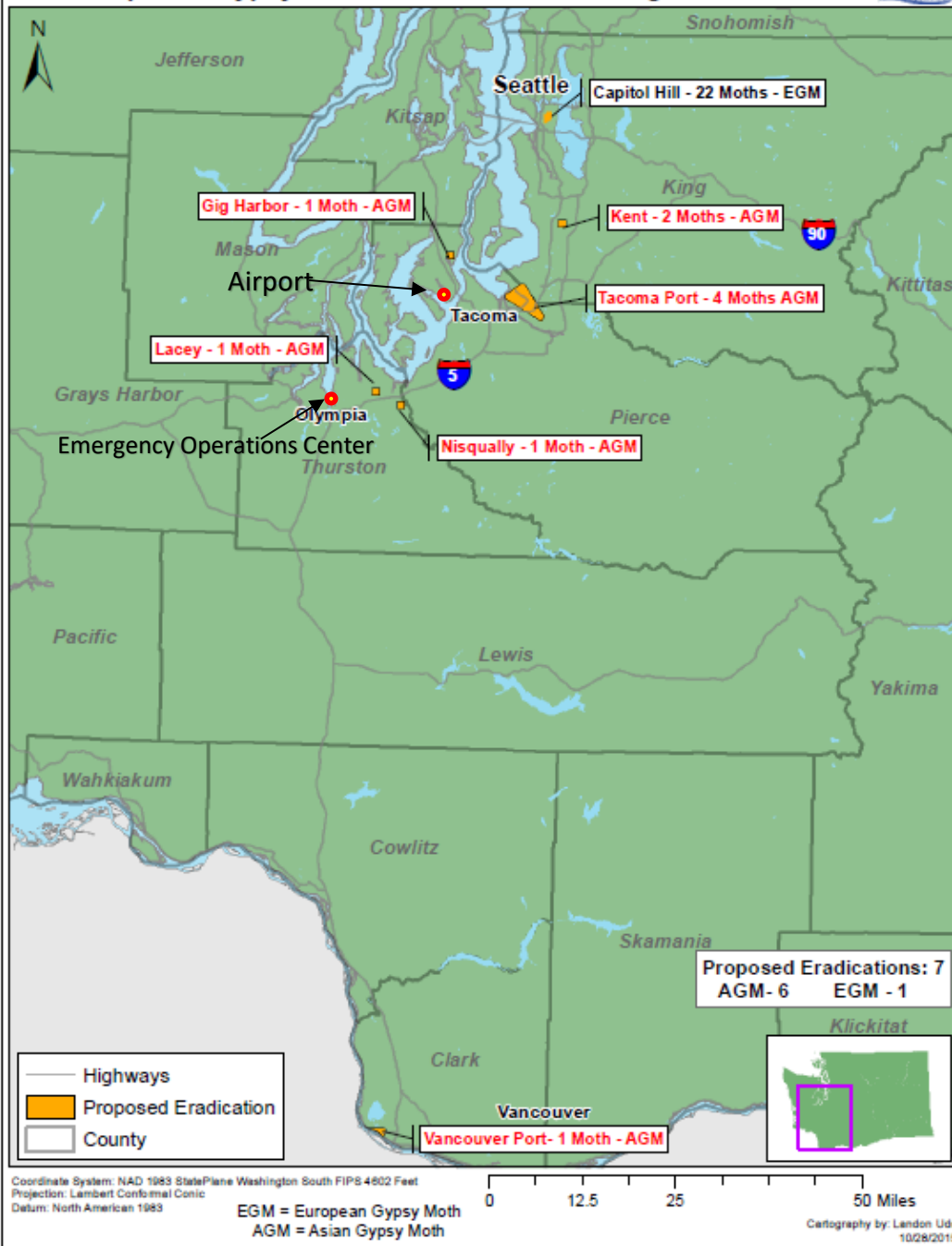


ASIAN
(AGM)



- Females cannot fly,
 - Defoliates mostly deciduous trees,
 - No permanent populations in Washington,
 - 20 states permanently infested in U.S.
- Females fly up to 20 miles,
 - Infestation becomes established more quickly,
 - Defoliates conifers and deciduous trees,
 - No permanent populations in North America.

2016 Proposed Gypsy Moth Eradications, Washington State



7 Gypsy Moth Treatment Sites in 2016

2015 Trap Catches
 42 gypsy moths total

10 Asian gypsy moths

4 Port of Tacoma

2 Kent

1 Nisqually

1 Lacey

1 Gig Harbor

1 Port of Vancouver

32 European Gypsy Moths

22 Capitol Hill, Seattle

Egg masses also detected



2016 Asian Gypsy Moth Eradication, Kent



Kent
King Co.

2 Asian gypsy moths

640 Acres
Treatment Area

Coordinate System: NAD 1983 HARN StatePlane Washington South FIPS 4602 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983 HARN

0 0.125 0.25 0.5 Miles

This data is provided on an "AS IS," "AS AVAILABLE" and "WITH ALL FAULTS" basis. The content of this map and data are from many sources and are NOT warranted to be complete, accurate or current. All critical information should be independently verified. WSDA and its officials and employees assume no responsibility or legal liability for the accuracy, completeness, reliability, timeliness, or usefulness of any of the information.

Legend

- Gypsy Moth Detection, 2 Moths
- Proposed Eradication, 640 Acres

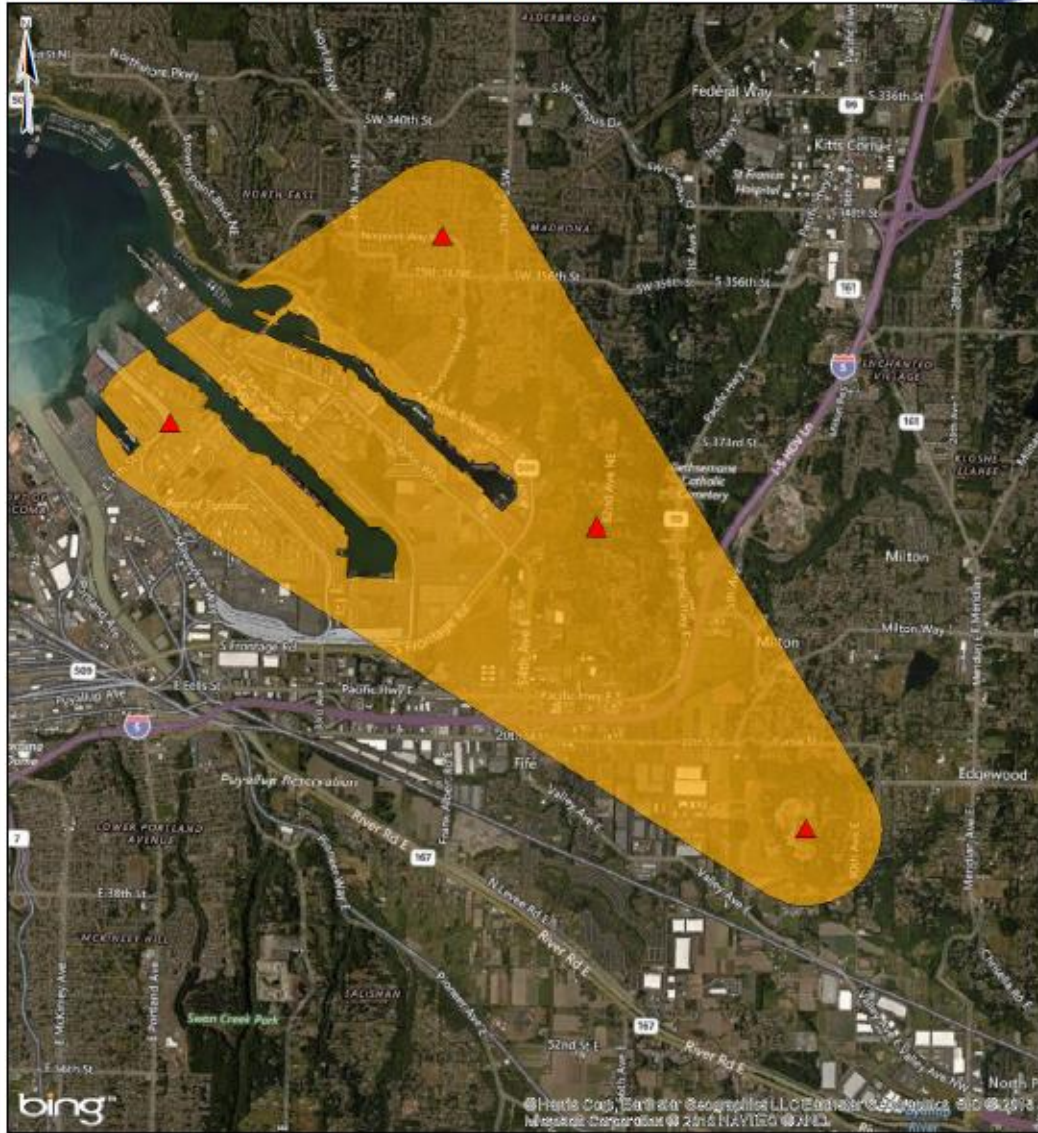
Cartography by: Landon Udo | 9-29-2016



Port of Tacoma Pierce Co.



Treatment Area
7,000 Acres

4 Asian Gypsy Moths



Coordinate System: NAD 1983 HARN StatePlane Washington South FIPS 4602 Feet
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- Legend**
-  Gypsy Moth Detection, 4 Moths
 -  Eradication Zone, 6979 Acres

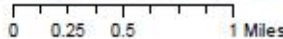
Port of Vancouver Clark Co.

Single AGM
Treatment Area
807 Acres

Part of a larger
9,000 acre treatment
including Portland OR.



Coordinate System: NAD 1983 HARN StatePlane Washington South FIPS 4602 Feet
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Legend

- Gypsy Moth Detection, 1 Moth
- Eradication Zone, 807 Acres

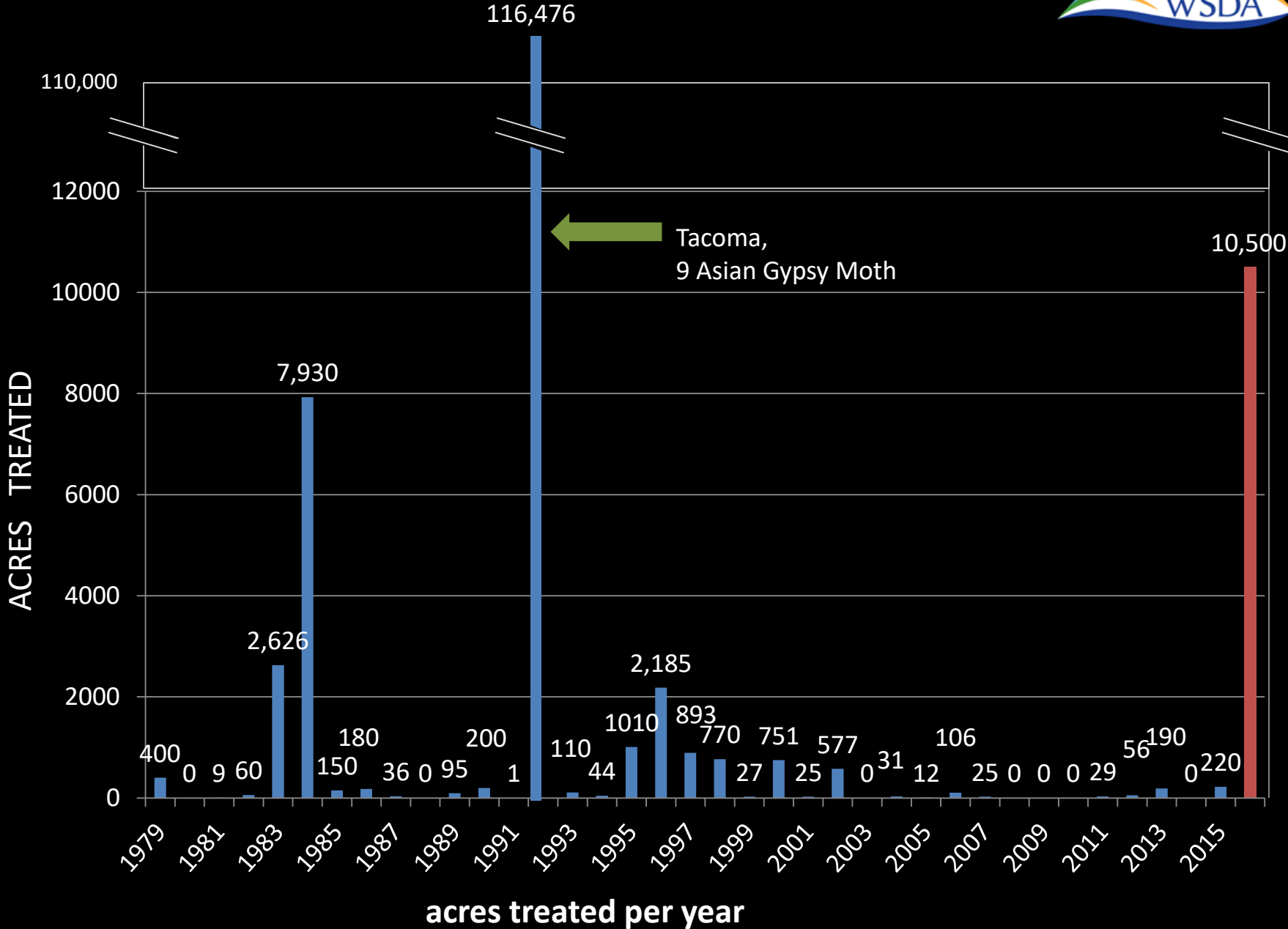
2016 Treatments



<i>Location</i>	<i>Acres Treated</i>	<i>Gypsy moth type</i>
Tacoma	7,000	Asian
Vancouver*	800	Asian
Kent	640	Asian
<i>Nisqually</i>	<i>640</i>	<i>Asian</i>
<i>Lacey</i>	<i>640</i>	<i>Asian</i>
Gig Harbor	600	Asian
Seattle	130	European
TOTAL:	10,500	

* Administered by Oregon Dept of Ag.

WSDA Treatment History



2016 GYPSY MOTH OUTREACH OVERVIEW

- 143,000 direct mailings.
- 2,000 robo calls and text messaging.
- 5,000 emails to stakeholder list.
- 600 email listserve.
- 6 Open houses.
- 1 live webinar.
- 6 press releases.
- Interactive web treatment boundary map.
- 21,281 views of new gypsy moth video.

13

REASONS TO UNFRIEND THE GYPSY MOTH



13

You Aren't Made of Money

Infestations cost billions: expensive control programs, reduced tourism, replacing trees in forests and at home, and restrictions on exports.

12

Not a Walk in the Park

Gypsy moths destroy large swaths of national and state parklands.

11

Creepy Crawlies

Millions of caterpillars can cover trees and your car, house, lawn, playground equipment, and can even fall on you.



10

Stowaways

They hitch rides on ships, motor homes, and even patio furniture to relocate to a new home.

10 ASIAN
32 EUROPEAN
GYPSY MOTHS DETECTED

Gypsy moths are established in almost half of US states



10,500 Acres to treat in WA
38,475 Homes & businesses in treatment areas

History of opposition to pesticide use for gypsy moth control

Outreach philosophy: Engage, Inform, Respond

OPEN HOUSES
6 in person
1 virtual

SPECIAL OUTREACH CONDUCTED TO:



- **Multiple** interviews on 4 major television networks and 2 cable news programs
- **6** Press Releases
- **Numerous** newspaper and blog articles
- **Daily** Media updates during operation

143,000 postcards sent out

New Outreach Method:
Track and respond to posts on public social media pages

13 reasons to unfriend the gypsy moth

agr.wa.gov/gypsymoth

16,735 visits to gypsy moth homepage in April 2016

Increase of **5,800%** over December 2015

2,000 people signed up for treatment notification texts or robocalls

8 Blog posts

5,000 stakeholders received regular email updates

92% opted for text messages

600 people joined the gypsy moth email listserv

62,000 Twitter impressions during gypsy moth treatment window

21,281 views of 1 new gypsy moth video

125,000 people reached through Facebook promotions

150 WSDA tweets during the treatment window

Presented at **numerous** community meetings

Completed all treatments at each site

Minimal public opposition

Greater than anticipated public support

34,000 traps to be placed this summer

Biggest public misconception: GMO bacteria used in treatments

ZERO

- **LAWSUITS**
- **PROTESTS**
- **PUBLIC RECORD REQUESTS**

The Result



Air Tractor 822

Three Btk applications per site - 3 to 10 days apart.
Treatments began on April 16th and ended May 3rd.

10 atomizers
150 micron droplets
200 foot swaths



Automated Flight Following (AFF) Internet Aircraft tracking system

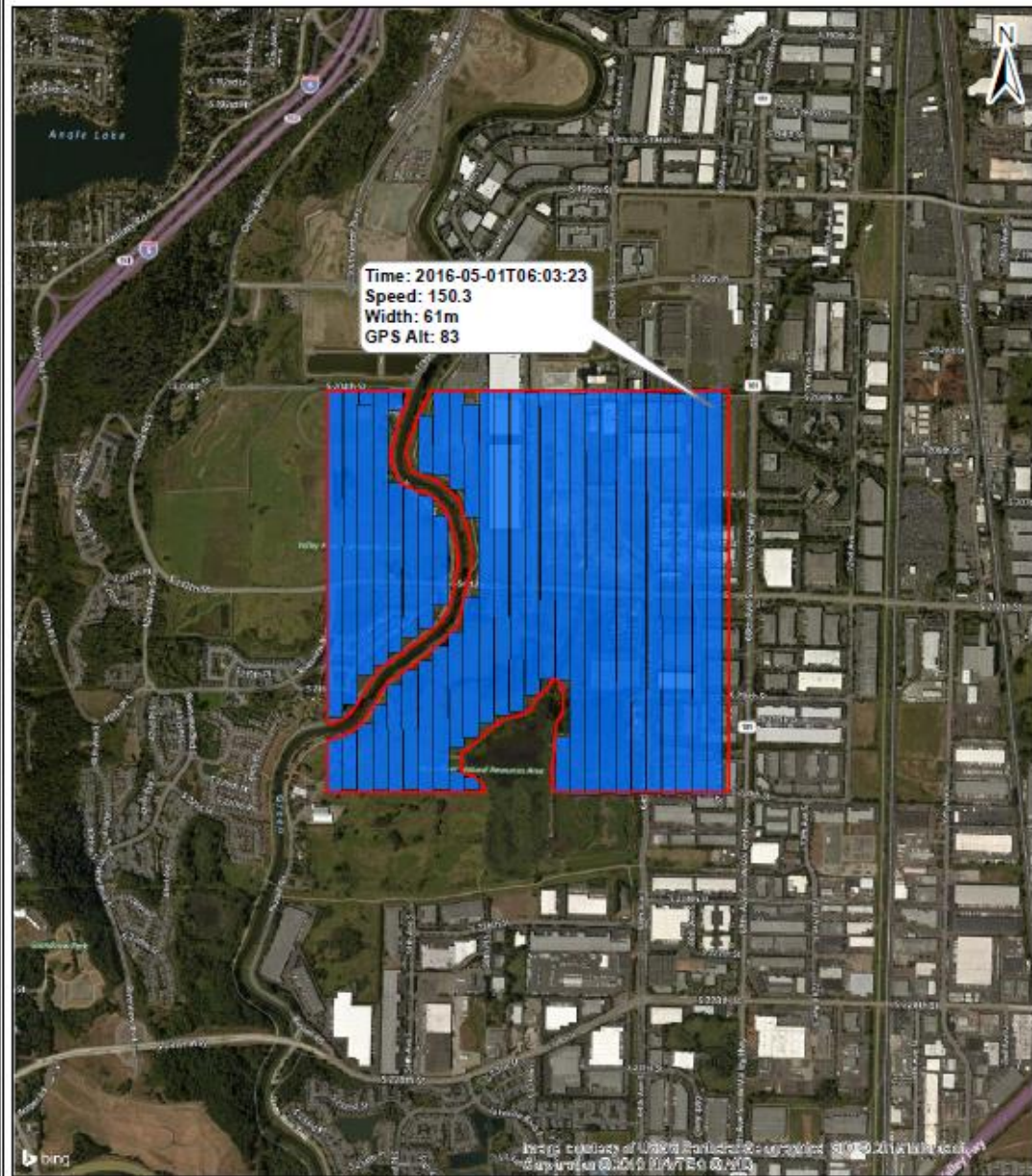


ICS, Emergency Ops Center
Natural Resource Bldg.
Olympia, WA



TRACMAP
Precision guidance system

Kent Gypsy Moth Eradication, Treatment Swaths 5-1-2016



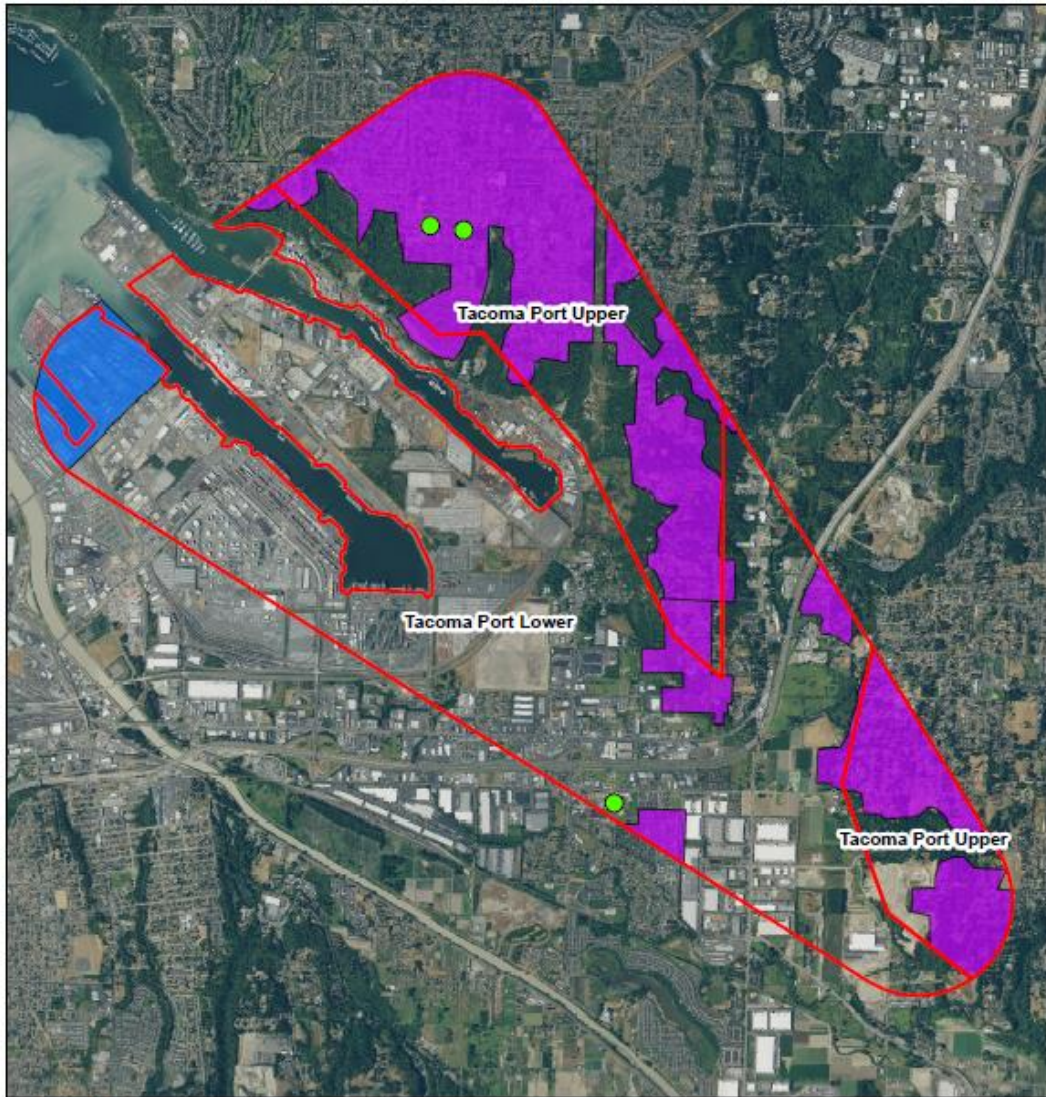
Legend

- Eradication Zone
- Treatment Swaths


200 ft swath width

Date: 5/3/2016







Legend

 Proposed Eradication Zones, Lower & Upper

Time Exclusion Areas

 Residential, 7:50am Stop Time

 Tacoma Dock Workers, 7:00am Stop Time

 Schools

0 0.5 1 2 Miles

Coordinate System: NAD 1983 StatePlane Washington South FIPS 4802 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Cartography by : Landon Udo
4-18-16



What we would do differently.

Port of Tacoma
7000 acre
treatment area

Field Personnel Locations : Vancouver Proposed Eradication 2016



Location Reference Map

0 0.325 0.65 1.3 Miles

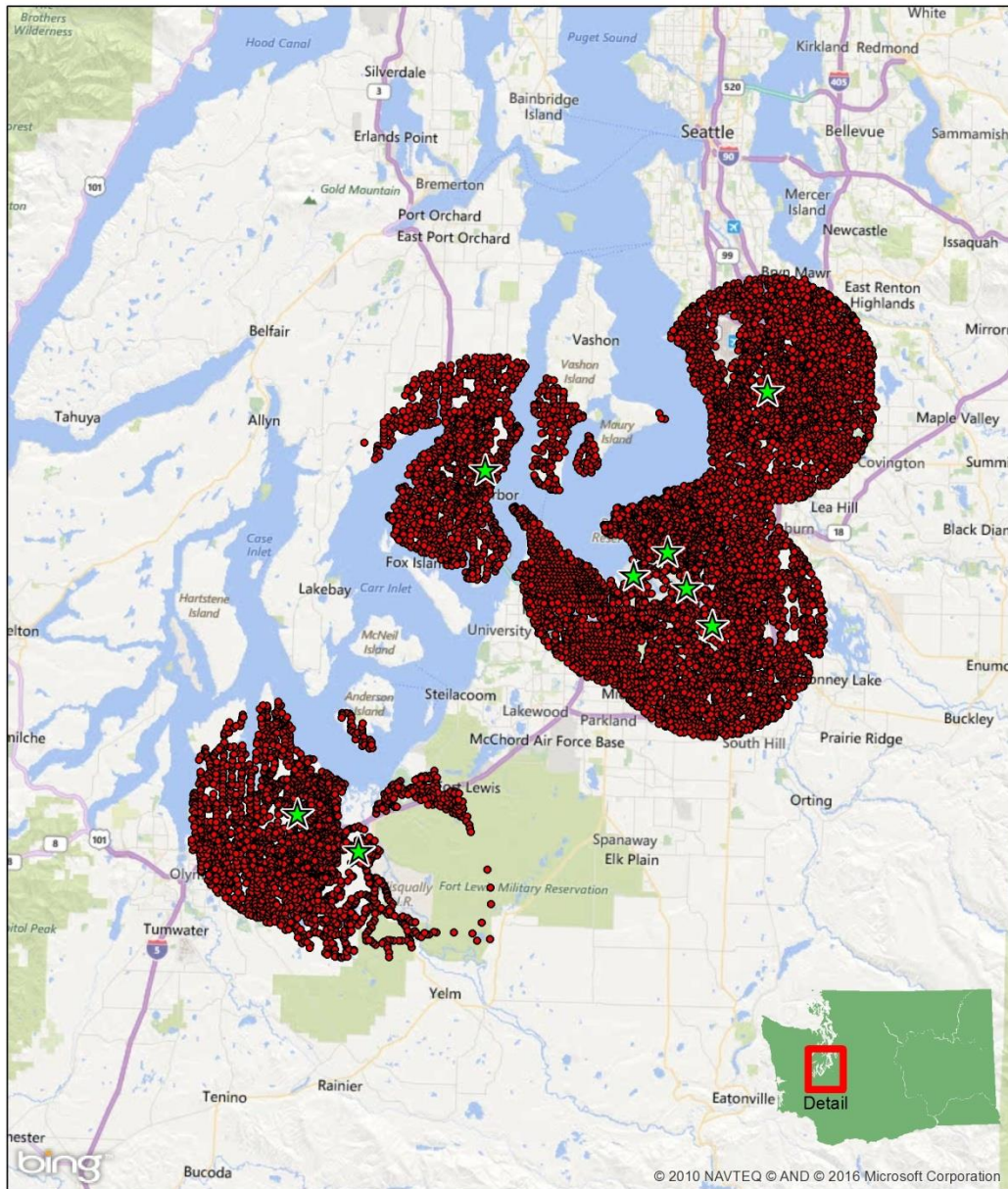


Time: 2:39:32 PM

Date: 4/14/2016

Field crews from multiple observation points is critical.

2016 Asian Gypsy Moth Northern Delimiting Grids, WSDA



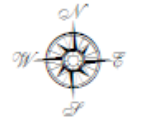
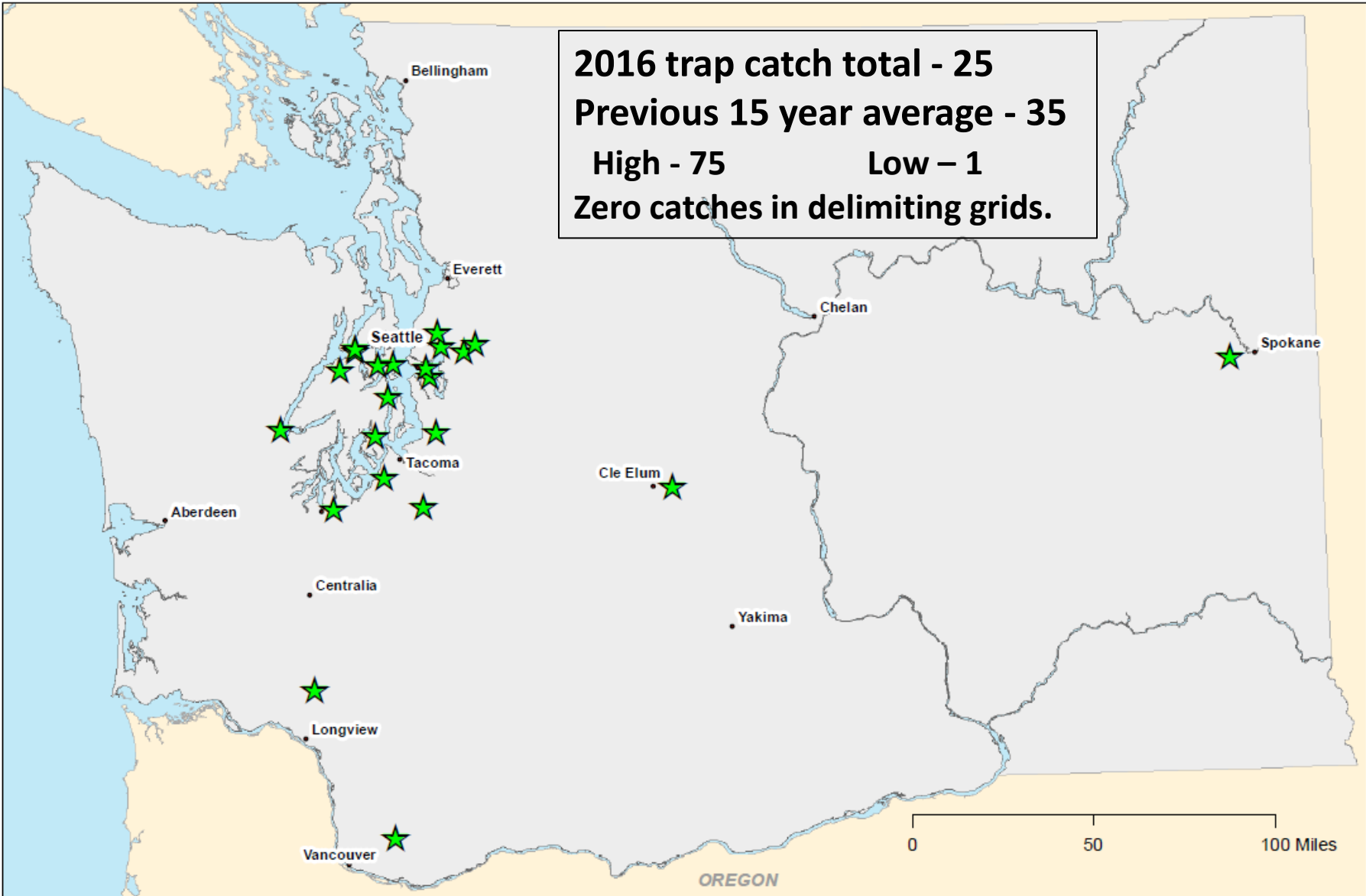
Asian Gypsy Moth 2016 Delimiting Grids

6 mile radius
25 to 36 traps mile²

10,477 Traps high
density trapping

2016 Gypsy Moth Detections, Washington State

2016 trap catch total - 25
Previous 15 year average - 35
High - 75 **Low - 1**
Zero catches in delimiting grids.



- Cities
- ★ Gypsy Moth Detection

25 Detections
All European gypsy moths

Date: 9/23/2016





Key Lessons

- Investment in outreach has huge payoffs in public acceptance.
- Simplify treatment scheduling and planning.
- Use of the fixed wing over rotary wing.
- Real time GIS Technologies.
- On the ground monitoring from multiple vantage points.

The End