GYPSY MOTH ERADICATION IN WASHINGTON STATE 2016

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)**
- Females cannot fly,
- Defoliates mostly deciduous trees,
- No permanent populations in Washington,
- 20 states permanently infested in U.S.

**ASIAN (AGM)**
- Females fly up to 20 miles,
- Infestation becomes established more quickly,
- Defoliates conifers and deciduous trees,
- No permanent populations in North America.
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
Kent
King Co.

2 Asian gypsy moths

640 Acres
Treatment Area
Port of Tacoma
Pierce Co.

Treatment Area
7,000 Acres

4 Asian Gypsy Moths
Port of Vancouver
Clark Co.

Single AGM Treatment Area
807 Acres

Part of a larger 9,000 acre treatment including Portland OR.
## 2016 Treatments

<table>
<thead>
<tr>
<th>Location</th>
<th>Acres Treated</th>
<th>Gypsy moth type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacoma</td>
<td>7,000</td>
<td>Asian</td>
</tr>
<tr>
<td>Vancouver*</td>
<td>800</td>
<td>Asian</td>
</tr>
<tr>
<td>Kent</td>
<td>640</td>
<td>Asian</td>
</tr>
<tr>
<td>Nisqually</td>
<td>640</td>
<td>Asian</td>
</tr>
<tr>
<td>Lacey</td>
<td>640</td>
<td>Asian</td>
</tr>
<tr>
<td>Gig Harbor</td>
<td>600</td>
<td>Asian</td>
</tr>
<tr>
<td>Seattle</td>
<td>130</td>
<td>European</td>
</tr>
</tbody>
</table>

**TOTAL:** 10,500

* Administered by Oregon Dept of Ag.
WSDA Treatment History

Tacoma, 9 Asian Gypsy Moth

ACRES TREATED

acres treated per year

116,476
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 MOTHP

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.
2016 GYPSY MOTH OUTREACH OVERVIEW

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

**GYPSY MOTHS DETECTED**
- 10 ASIAN
- 32 EUROPEAN

**Outreach philosophy:** Engage, Inform, Respond
- 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

**OPEN HOUSES**
- 6 in person
- 1 virtual

**SPECIAL OUTREACH CONDUCTED TO:**
- TRIBES
- SCHOOLS
- DAYCARES
- VETERANS
- HOMELESS
- MEDICAL FACILITIES

**New Outreach Method:**
Track and respond to posts on public social media pages
- 2,000 people signed up for treatment notification texts or robocalls
- 92% opted for text messages
- 62,000 Twitter impressions during gypsy moth treatment window
- 150 WSDA tweets during the treatment window
- 8 Blog posts
- 5,000 stakeholders received regular email updates
- 600 people joined the gypsy moth email listserv
- 21,281 views of 1 new gypsy moth video
- 125,000 people reached through Facebook promotions

Presented at numerous community meetings

**Biggest public misconception:**
GMO bacteria used in treatments

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

**The Result**
- Completed all treatments at each site
- Minimal public opposition
- Greater than anticipated public support
- 34,000 traps to be placed this summer

**143,000 postcards sent out**

**16,735 visits to gypsy moth homepage in April 2016**
Increase of 5,800% over December 2015
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
TRACMAP
Precision guidance system
What we would do differently.

Port of Tacoma
7000 acre treatment area
Field crews from multiple observation points is critical.
6 mile radius
25 to 36 traps mile$^2$

10,477 Traps high density trapping
2016 trap catch total - 25
Previous 15 year average - 35
High - 75      Low – 1
Zero catches in delimiting grids.
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