United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine

USDA APHIS

Beyond Outreach

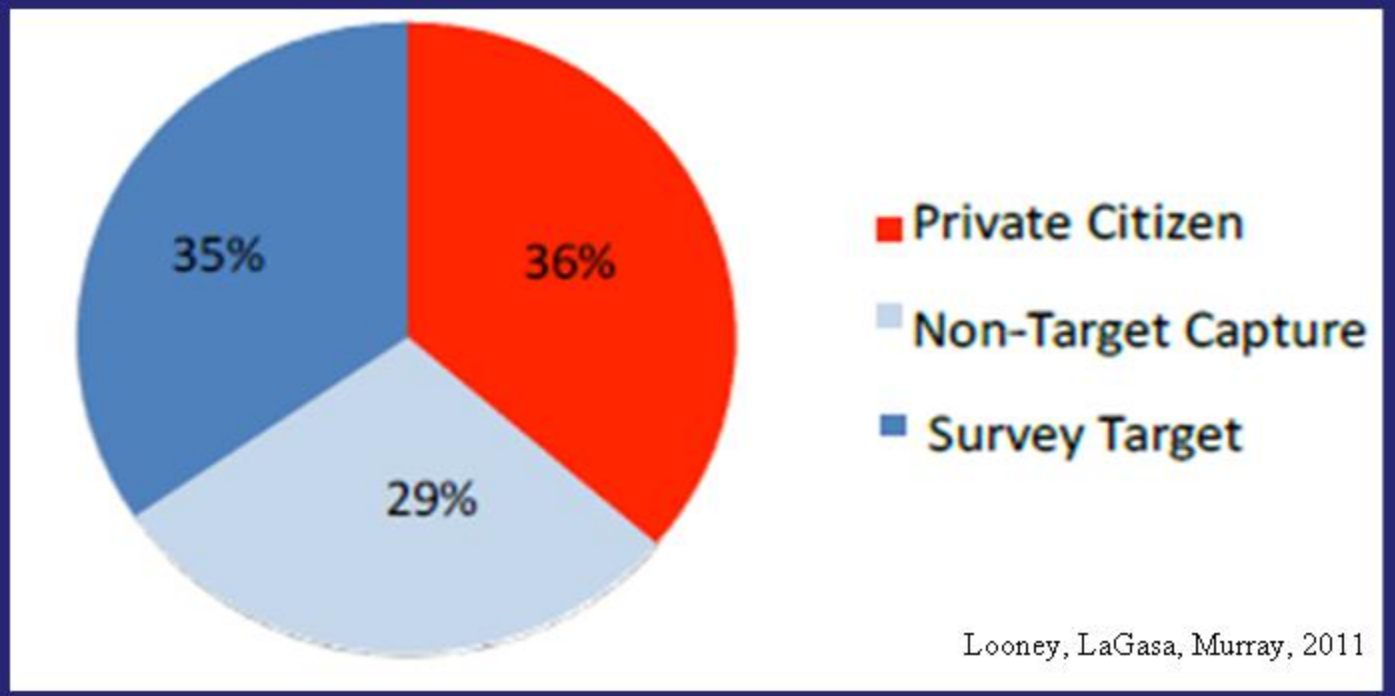
ALB Detection Survey

Mark E. Hitchcox
Pest Survey Specialist
Portland, Oregon

Pest Safeguarding Continuum

- Pre-clearance — active
- Port Inspections — active
- Detection Surveys — active
- Citizen Detectors — active
- Outreach — passive

New Invertebrate Detections in Washington State 1999-2010 (n=57)



Portland Parks & Rec.

Portland P&R

- FY2010-11: 63,000+ volunteer hrs.

- Individuals
- Youth programs
- Community organizations
- Service clubs
- Employee teams
- School classes

Beetle Detectives

- APHIS and select states, 2009 and 2010.
- ALB data postcards
- observations via postcards
- 7000 cards sent out ~ 700 were returned (10%).
- Web-based: 12 states, 29 organizations. 70 surveys

Challenges

- Recruitment
- Retention
- Quality of the data? Negative data?
- Follow-up?

Challenges with Volunteer-geared projects

- Recruitment
- Consistency
- Data Quality
- Time Investment
- Sampling challenges
  - Property Access
  - Quality Control
- Short-term benefits
- Long-term benefits

Can Science prevail?

Portland ALB Detection Survey

- Risk-based — Defined high-risk Survey Sites
- Science — biology, botany, ecology, + metrics: defined "population" statistical model
- Standardized Methods
  - Tiered experience
  - "Spikes"
  - Mapping/gadgets
- Clear goals

"ALB" Detection Survey

Goal 1: Increase public awareness and response

Goal 2:, the presence/absence of "ALB" in defined high-risk areas in the metro area.

Anoplophora spp.
Tremex woodwasp
Hesperophanes campestris

Science, and The Metrics

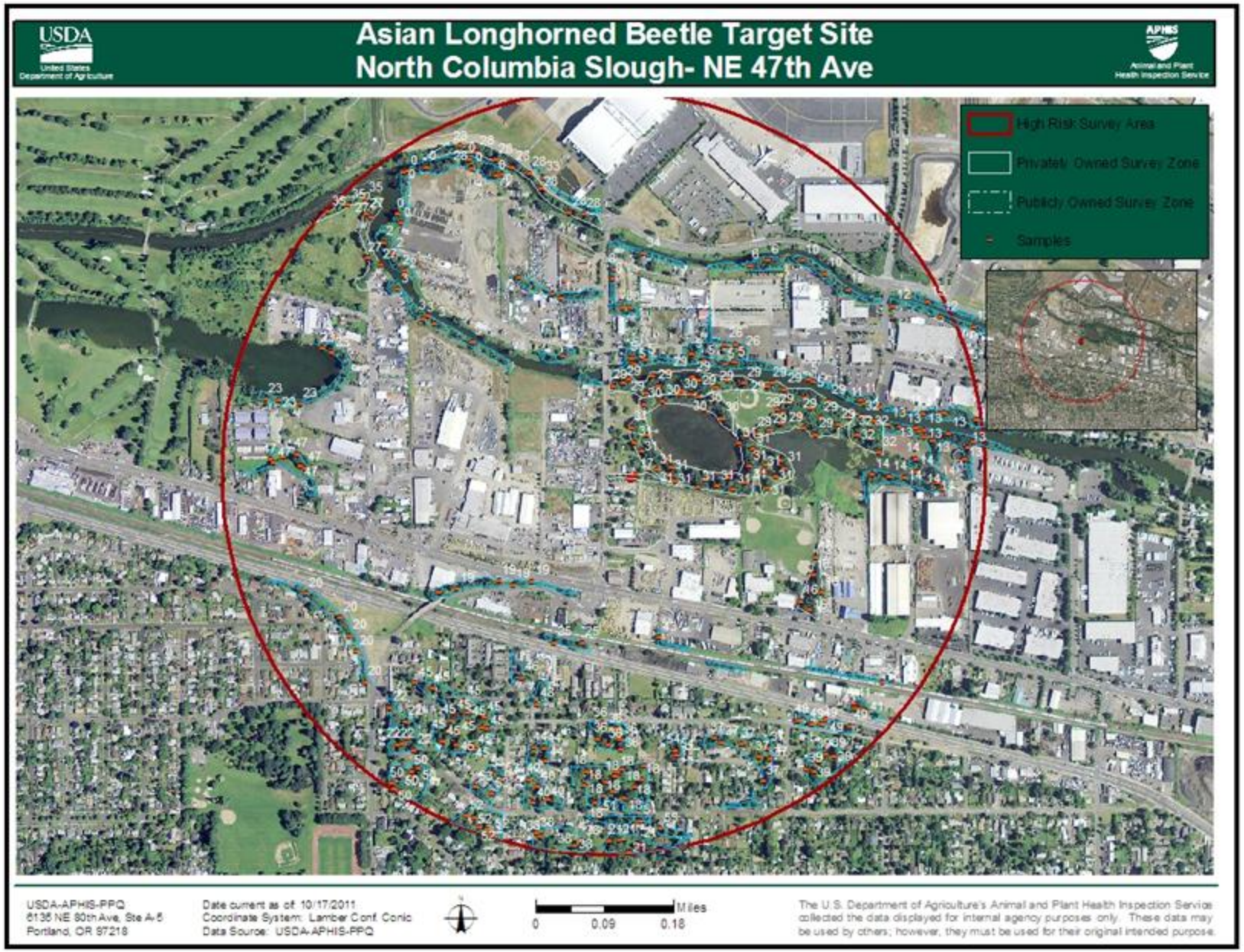
Alternate Hypothesis: ALB is present at the Survey Site

Null Hypothesis: "95% confident that less than 1% of the surveyed population is infested with the beetle."

i.e.: a 99% pest-free population.

Survey points:

- randomly-generated (VSP, ArcMap) within population area.
- unknown distribution
- No overlap
- Standardized sampling


USDA
United States Department of Agriculture
Asian Longhorned Beetle Target Site
North Columbia Slough- NE 47th Ave
APHIS
Animal and Plant Health Inspection Service
High Risk Survey Area
Privately Owned Survey Zone
Publicly Owned Survey Zone
Samples
USDA-APHIS-PPQ
6135 NE 80th Ave, Ste A-5
Portland, OR 97218
Date current as of: 10/17/2011
Coordinate System: Lamber Conf. Conic
Data Source: USDA-APHIS-PPQ
Miles
0
0.09
0.18
The U.S. Department of Agriculture's Animal and Plant Health Inspection Service collected the data displayed for internal agency purposes only. These data may be used by others; however, they must be used for their original intended purpose.

Standardized Sampling

Lab Training

- Review Goals: Project goals and Personal Goals
- Background of the bug(s)
- Survey methods
- Data forms
- Safety
- Test

Field Training

- Tree ID
- Sampling
- Data recording
- Data submission

- Simulation Site Test

Evidence

Exotic Beetle Visual Survey Form

_____ Survey Date/Time_____ _____ PLOT NU
_____ Surveyor Phone_____
.....Sketch map of Survey Site on reverse side of this form.....

inspected:
_____ # inspected _____ damage observed?
tree species: _____ # inspected _____ damage observed?
tree species: _____ # inspected _____ damage observed?

If damage observed, describe in detail below and on Sketch map on reverse side of this form.

Detailed Tree Damage Description
Damaged Tree Location (describe landmarks, tree size, tree species, and if flagging wa

Tree Damage Type: (indicate how many trees had the damage)
Insect Holes:
- ☐ Round holes # _____
- ☐ D-shaped holes # _____
- ☐ Holes in healthy wood
- ☐ Holes in dead wood
- ☐ Dieback in canopy # _____
- ☐ Oviposition scars # _____
- ☐ Sawdust # _____
- ☐ Adult beetles seen (describe) #____, _____
- ☐ Adult beetles collected #_____, Send to USDA with label or call
- ☐ S
- ☐ T
- ☐ Trunk suckering # _____

Please return to USDA-APHIS-PPQ, 6135 NE 80th Ave., Ste. A-5, Portland, OR 97218, 503-326-2019 x228

Sampling methods

- Training,
  - *or* accompany a trained colleague
- Get assignment/instructions
- locate assigned plots
- Find a Host tree near point
  - look for evidence
  - collect data (neg. too)
- Survey a tree only 1x
- Observe min. 2 min./tree

* (depends on size of tree).

Future

- Methods ~ follow-up, triage
- ALB simulation forest
- Field-Test VSP model
- ALB Detection Survey of high-risk sites in Portland area.
  - Portland Parks and Rec.
  - APHIS, ODA, FS, Extention
- One day events
  - Forest Park BioBlitz (May 19th)
  - International Soc. of Arboriculture

National Urban Tree Health Initiative
USFS, Continental Forest Dialogue

Questions (continued)…

Strengthen the relevance
Data entry in NAPIS?

Continue building partnerships

Funding needs?

Farmbill 1021, Goal Area #5

- Prevent the introduction, particularly in high-risk areas
- Develop people to strengthen the safeguarding system
- Increase the number of people actively looking

Mark E. Hitchcox, Pest Survey Specialist
APHIS-PPQ, Oregon
Mark.E.Hitchcox@aphis.usda.gov
office: (503) 326-2919
cell: (971) 219-6069