



United States Department of Agriculture

# Ohio Asian Longhorned Beetle Cooperative Eradication Program



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**USDA APHIS PPQ**  
**Project Manager - Ohio**



# Presentation Outline

- **ALB background**
  - What is it?
  - How did it get here?
  - What is at risk?
  - Where is it?
- **Asian Longhorned Beetle (ALB) Program**
  - Who are we?
  - What authority do we have?
- **What has been done in response to the Ohio ALB infestation?**
  - Eradication strategy
    - Quarantine/regulatory work
    - Survey/detection – from the ground and from the tree
    - Removals – infested trees and high-risk host trees
    - Chemical treatments



# What is ALB (*Anoplophora glabripennis*)?

**Kingdom:**

Animalia

**Phylum:**

Arthropoda

**Class:**

Insecta

**Order:**

Coleoptera

**Family:**

Cerambycidae

**Subfamily:**

Lamiinae

**Tribe:**

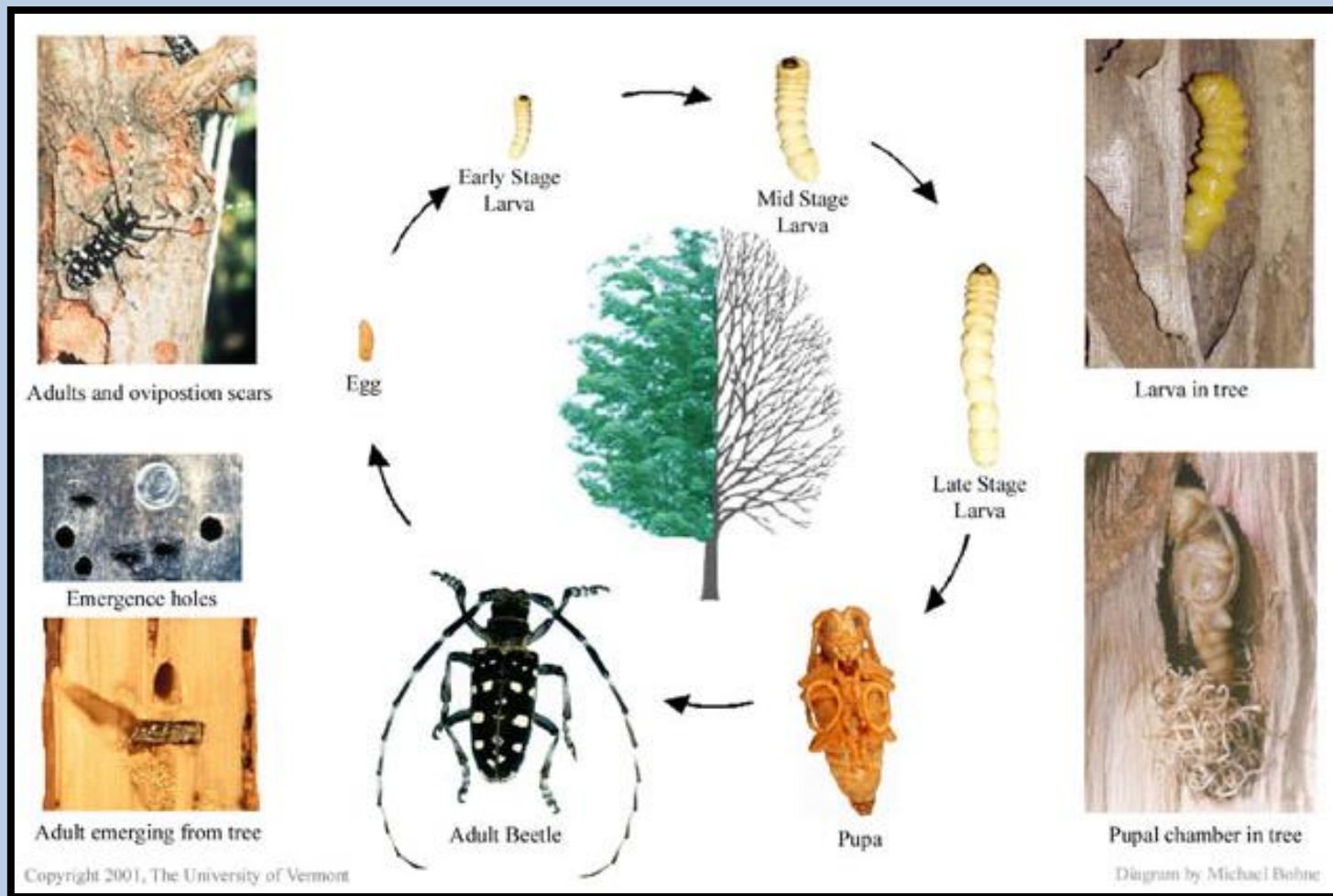
Monochamini

**Genus:**

*Anoplophora*

**Species:**

*A. glabripennis*



# How did ALB get here?



# What is at risk from ALB?

- Tourism
- Sugar maple industry
- Timber industry
- Nursery stock industry
- Water Quality
- Air Quality
- Quality of life





United States Department of Agriculture

## What is at risk from ALB? - William H. Harsha Lake & East Fork Rec. Area





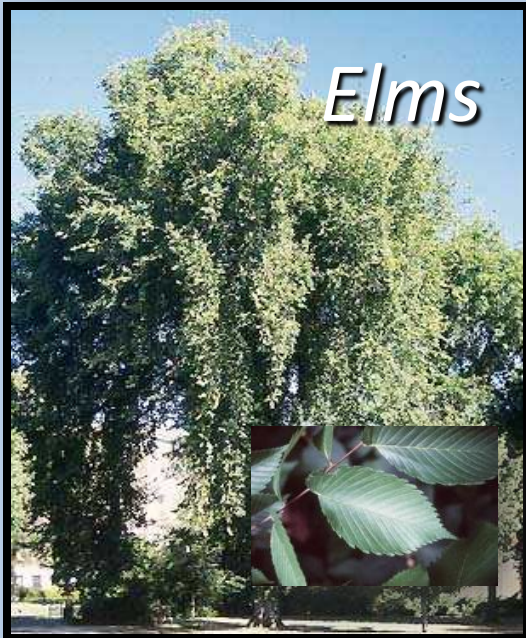
*Maples*



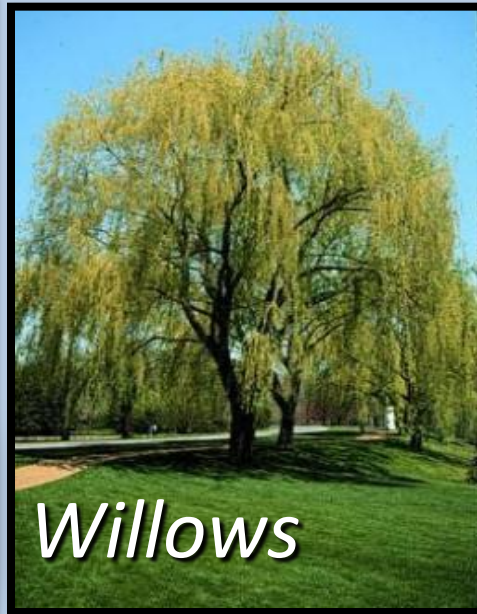
*Birches*



*Buckeye*



*Elms*



*Willows*



*Poplars*



*Sycamores*

**Representative ALB  
Host Trees**

# ALB Host Trees



- All Maples (*Acer* spp.)
  - Red
  - Sugar
  - Boxelder
  - Silver
  - Norway
- Willows (*Salix* spp.)
- Elms (*Ulmus* spp.)
- Buckeyes / Horsechestnuts (*Aesculus* spp.)
- Poplars (*Populus* spp.)
- Birches (*Betula* spp.)
- Sycamore (*Plantanus* spp.)
- Ash (*Fraxinus* spp.)
- Mimosa (*Alizia* spp.)
- Katsura (*Cercidiphyllum* spp.)
- Mountain-ash (*Sorbus* spp.)
- Goldenraintree (*Koelreuteria* spp.)
- ~~Hackberry (*Celtis* spp.)~~

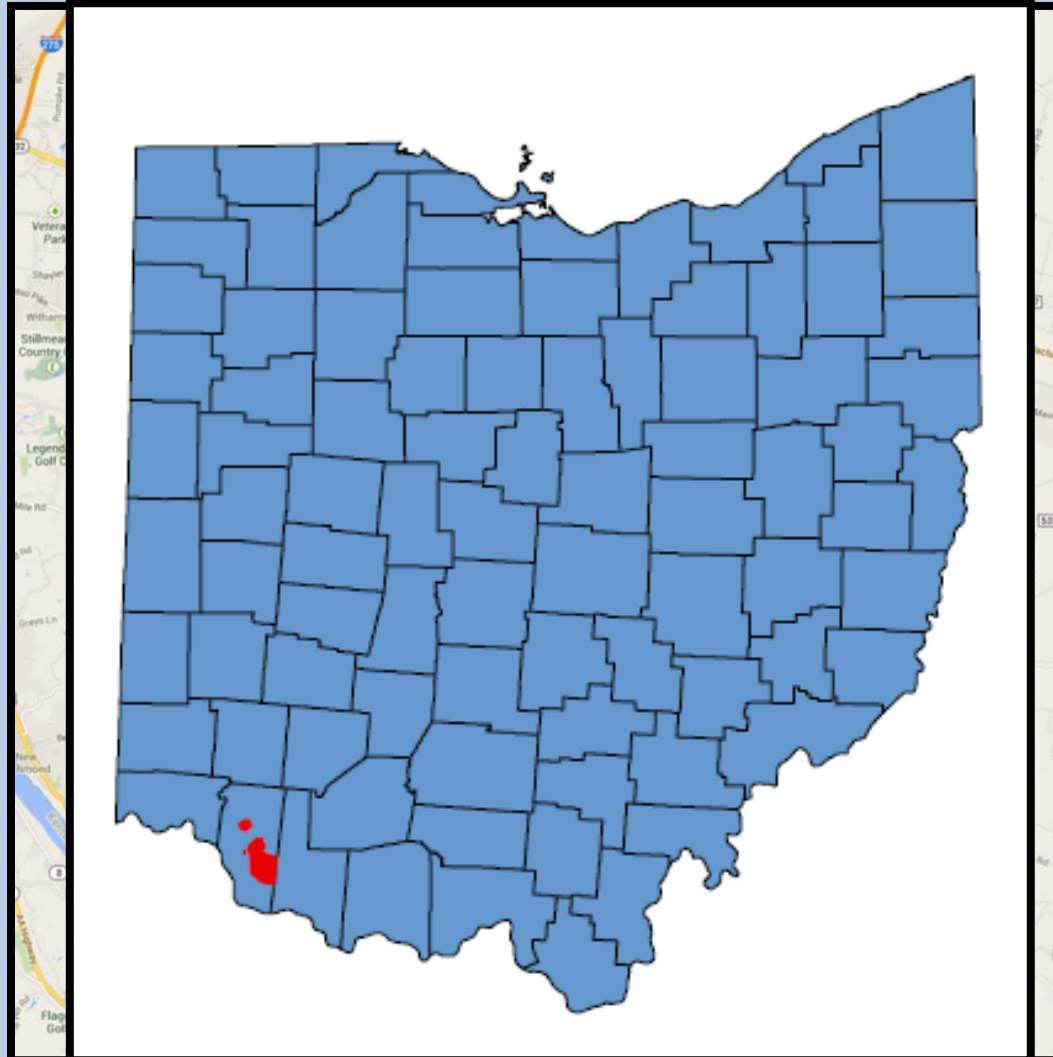




# Where is ALB in North America?



# Eradication strategy - Where is ALB in Ohio? Quarantine/regulatory work



# Eradication strategy - Quarantine/regulatory work

## Regulatory Call Log Category

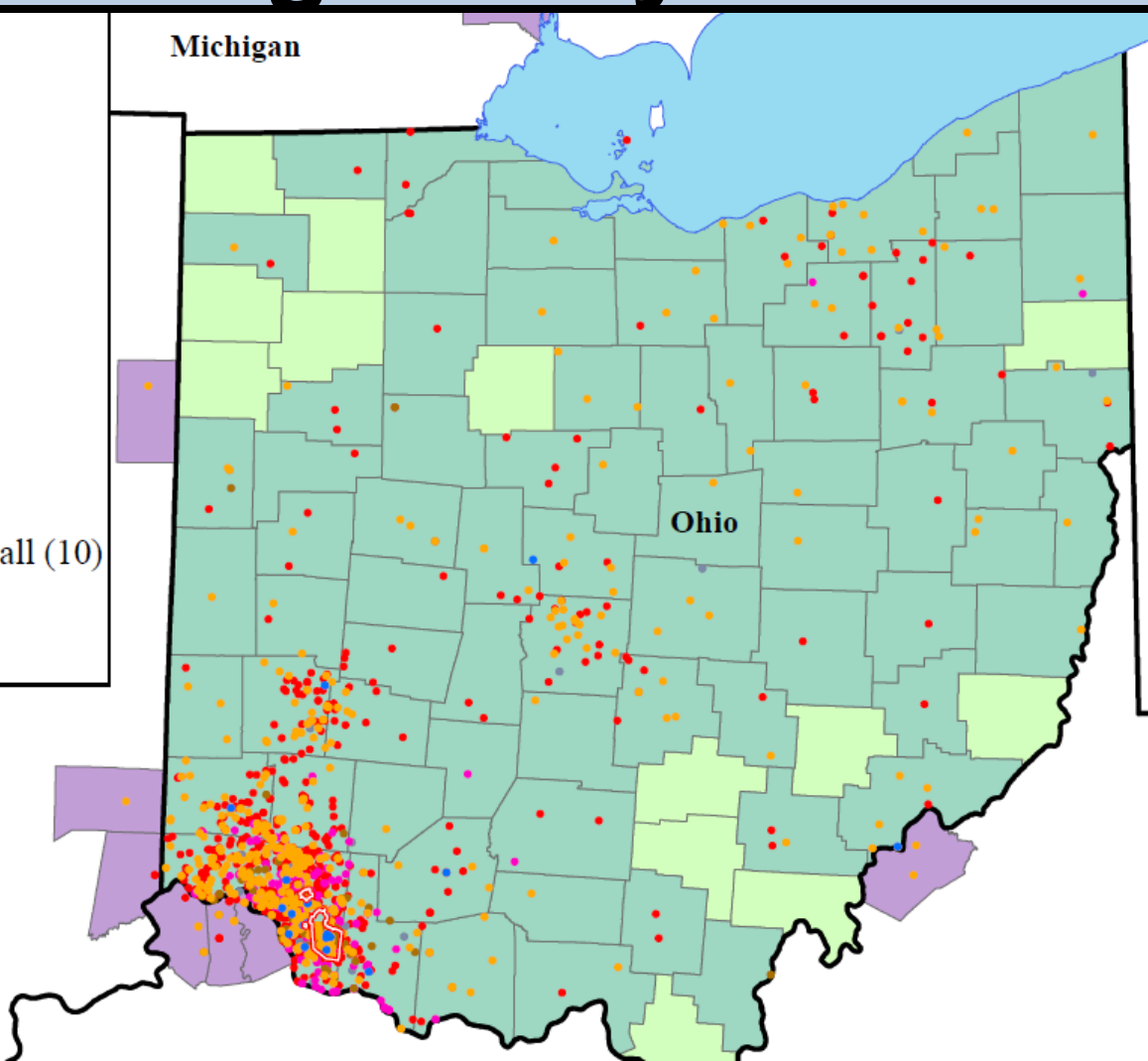
- Possible Infested Tree (1,236)
- Possible ALB (449)
- Regulatory Call (401)
- Firewood (163)
- Information Request (100)
- Other Call (20)

## Ohio Regulatory Calls by U.S. County

- Ohio Counties with Call (75)
- Ohio Counties without Call (13)
- U.S. Counties Outside of Ohio with Call (10)
- OH ALB Quarantine Boundary
- Great Lakes

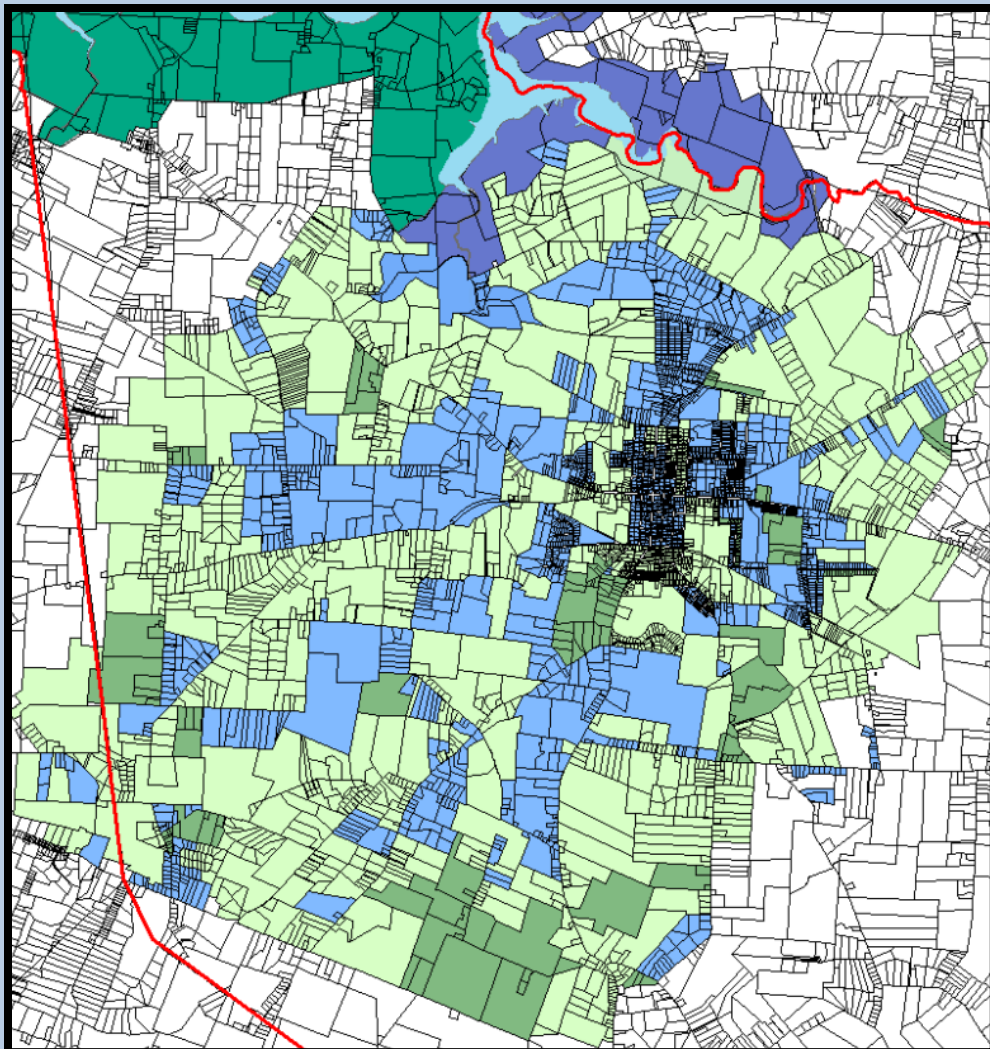
As of 4/3/2015

Indiana



# Eradication strategy – Survey/detection

As of 4/3/2015



# Eradication strategy – Survey/detection



# Eradication strategy – Survey/detection





Dave Benninger



Dave Benninger





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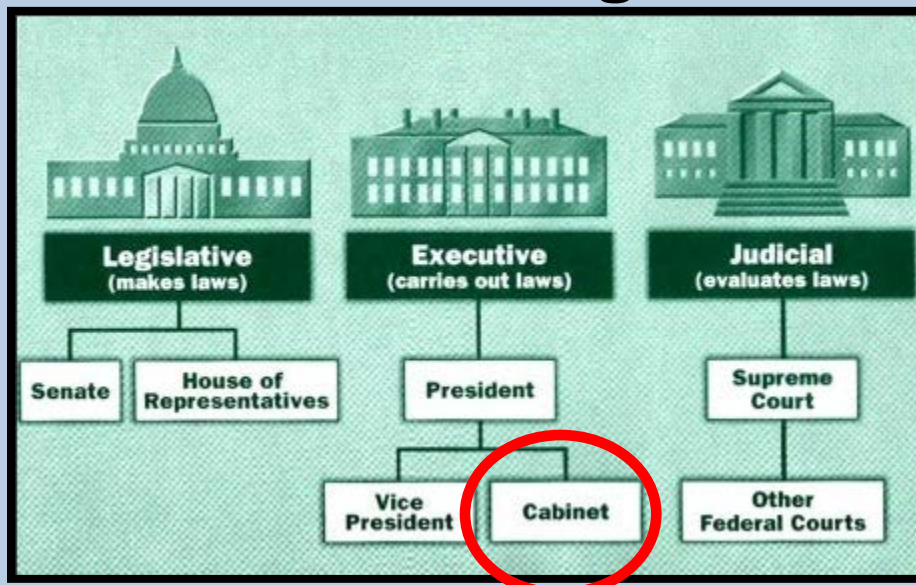
Dave Benninger



Dave Benninger

# Asian Longhorned Beetle Program – Who are we?

Branches of the Federal Government

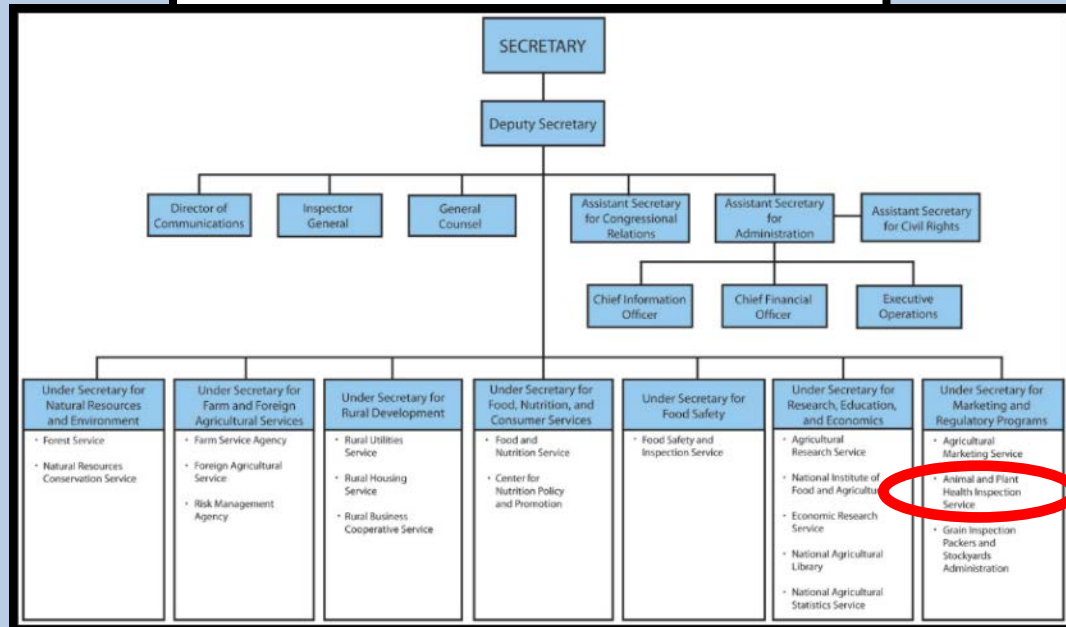


Departments of the Executive Branch



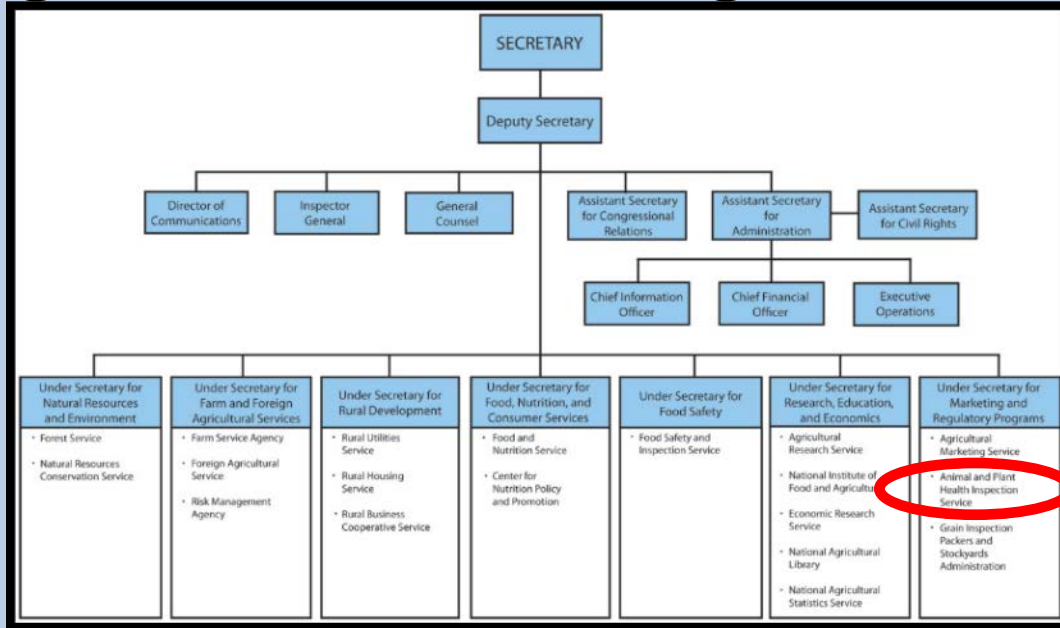
# Asian Longhorned Beetle Program – Who are we?

Departments of the Executive Branch

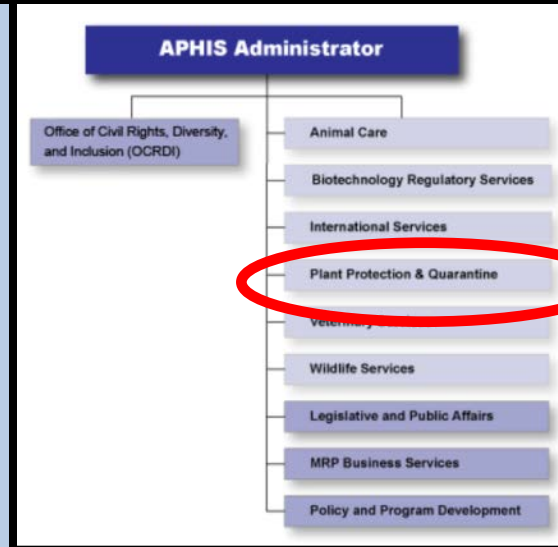


USDA Agencies

# Asian Longhorned Beetle Program – Who are we?



**USDA Agencies**



**APHIS Divisions**

# Asian Longhorned Beetle Program Authority

## Plant Protection Act 2000

(7 US Code 7701 – 7 US Code 7772)

<http://www.aphis.usda.gov/brs/pdf/PlantProtAct2000.pdf>

= Law passed by US Congress



Interpretation of the law

## Code of Federal Regulations (CFR)

Title 7 : Agriculture

Chapter 3 (subparts 300-399) : APHIS

Subpart 301 : Domestic Quarantine Notices

Subparts 51 - 51-9 : Asian Longhorned Beetle

7 CFR 301:51 – 7 CFR 301:51-9

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/asian\\_lhb/downloads/albcfr12.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/asian_lhb/downloads/albcfr12.pdf)

=

e.g. Federal Order, Interim Rule, Final Rule

Published in the Federal Register before incorporation into the CFR

NOTE: Ohio Administrative Code parallel rule 901:5-57 regulates intrastate movement

<http://codes.ohio.gov/oac/901%3A5-57>



Implementation of regulations

Manuals, SOPs, Guidelines

=

e.g. Asian Longhorned Beetle Response Guidelines

[http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/asian\\_lhb/downloads/response-guidelines.pdf](http://www.aphis.usda.gov/plant_health/plant_pest_info/asian_lhb/downloads/response-guidelines.pdf)

# Eradication strategy – Removals

- Infested tree & high-risk host removals
- Property owner notification and work plan development
- Tree cutting
- Stump management
- Debris pickup
- Debris deregulation
- Restoration
- Property owner signoff
- Replant



# Eradication strategy – High-Risk Host Removals

- What makes a tree a high-risk for ALB?
  - Host tree for ALB
  - Within a ½ mile of a known infested tree.
- Why remove high-risk host trees?
  - Lightly infested trees are difficult to detect and some will be “**false negatives.**”
  - The longer an infested tree is allowed to remain as suitable ALB habitat, the longer it can be a source of dispersing ALB.



# Identifying Lightly Infested Trees



**Lightly Infested**

**Heavily Infested**

# Identifying Lightly Infested Trees

- Positive identification of ALB in lightly infested trees is a challenge:
  - **Ground Surveys:** Only 20 – 40% of lightly infested trees are identified
  - **Aerial Surveys/Experienced Climbers:** Only 65 – 75% of lightly infested trees are identified



# Graphic Illustration



Uninfested host tree



Lightly infested host tree

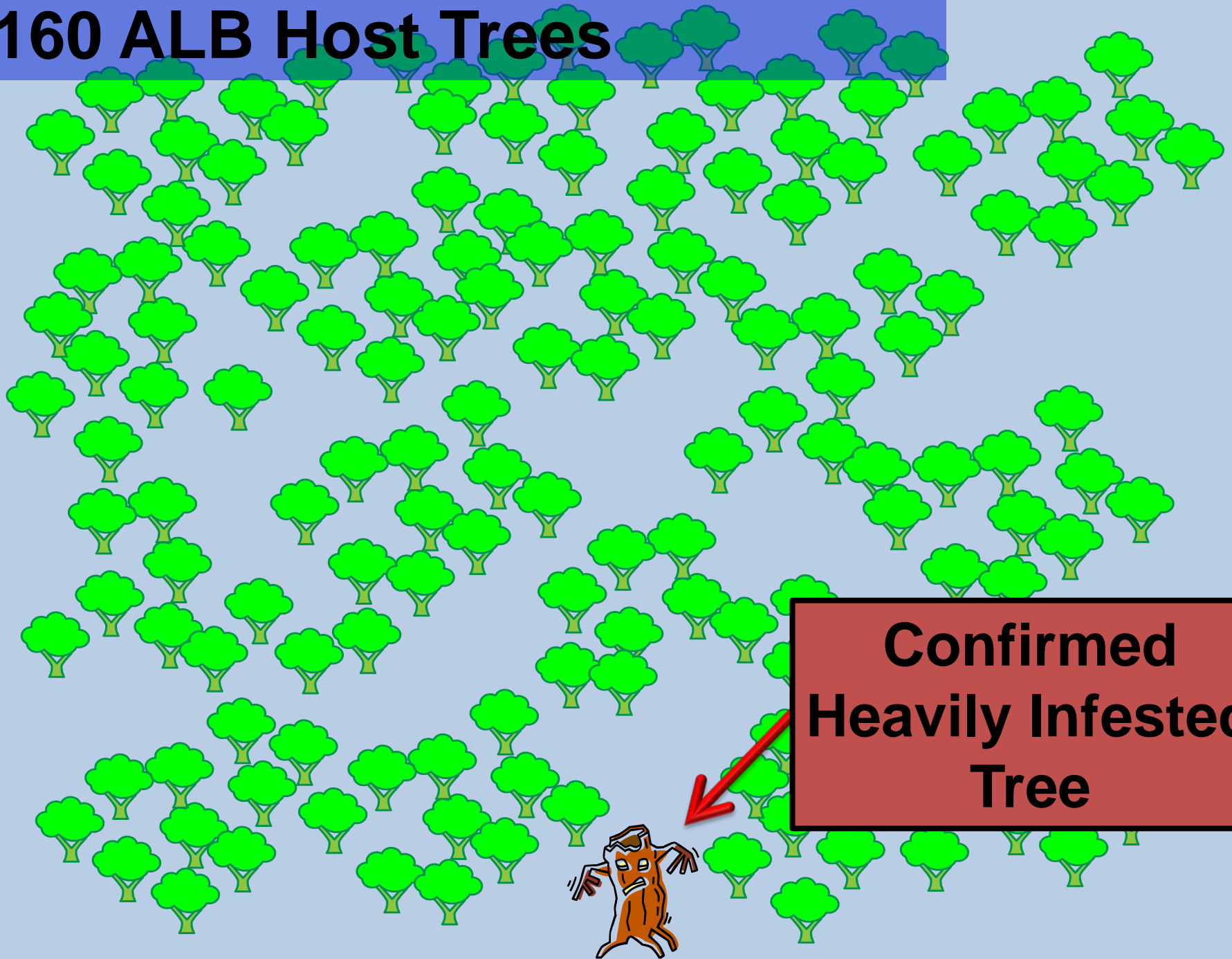


Lightly infested host tree – not detected – **false negative**



Heavily infested host tree – detected

# 160 ALB Host Trees



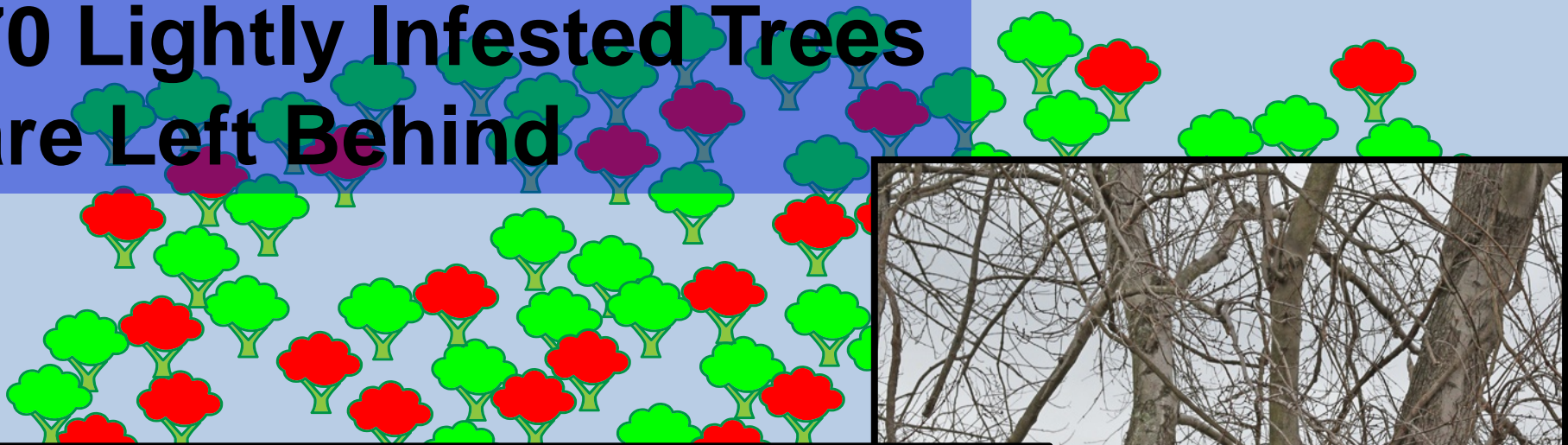
# 100 Are Actually Lightly Infested: But Not Yet Detected

Ground Surveys: Only 20 – 40%  
(30% avrg.) of lightly infested  
trees are identified

Remove 30% (30) Trees



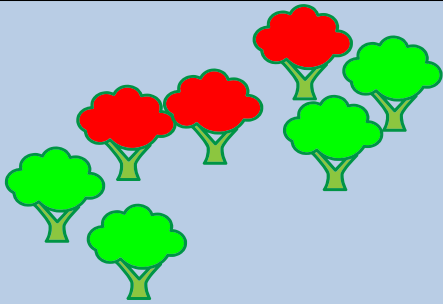
# 70 Lightly Infested Trees are Left Behind



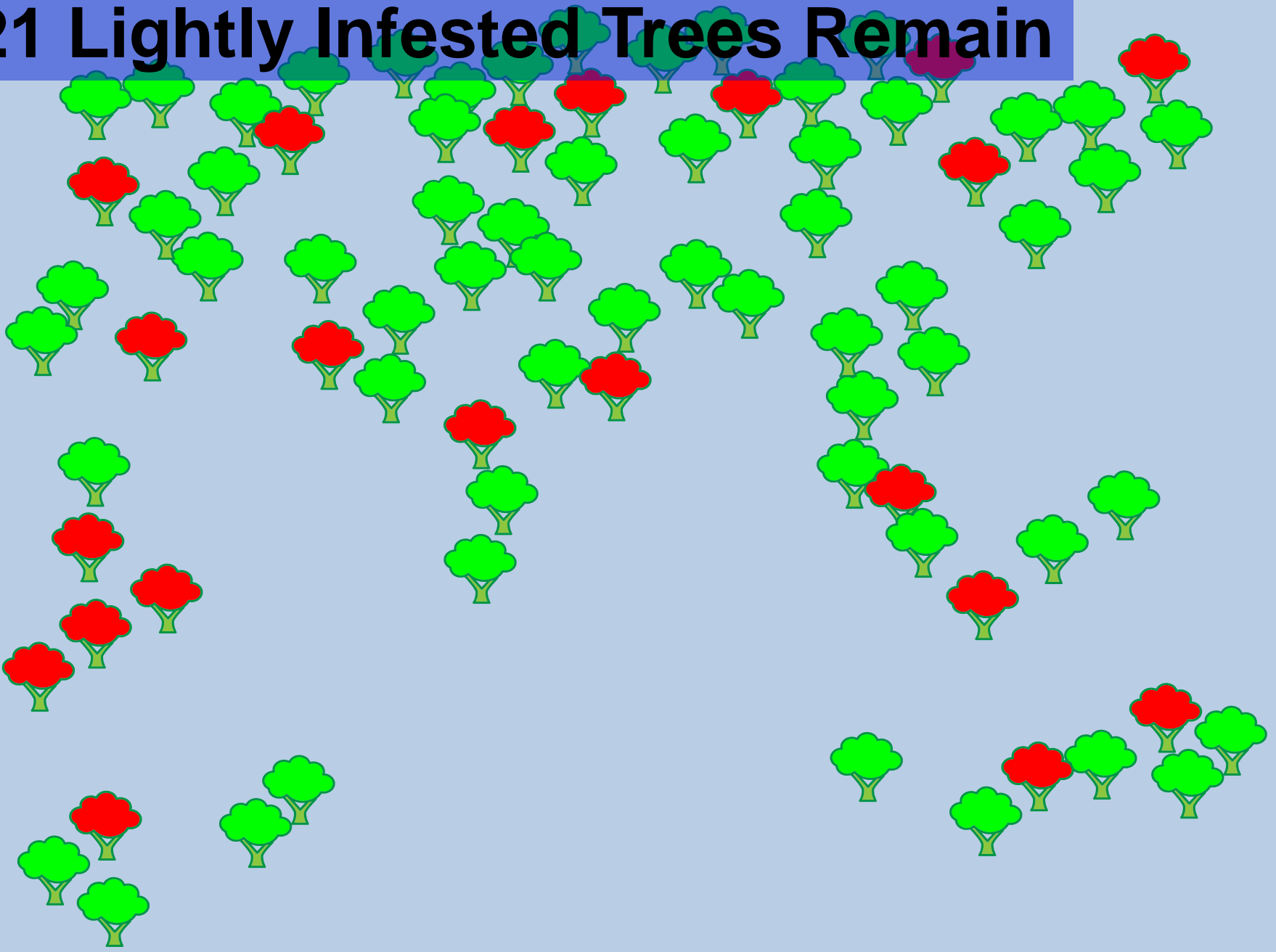
**Experienced Climbers:**

Only 6  
of lightly infested trees  
are identified

**Remove 70% (49) Trees**



# 21 Lightly Infested Trees Remain



# 21 Lightly Infested Trees Remain

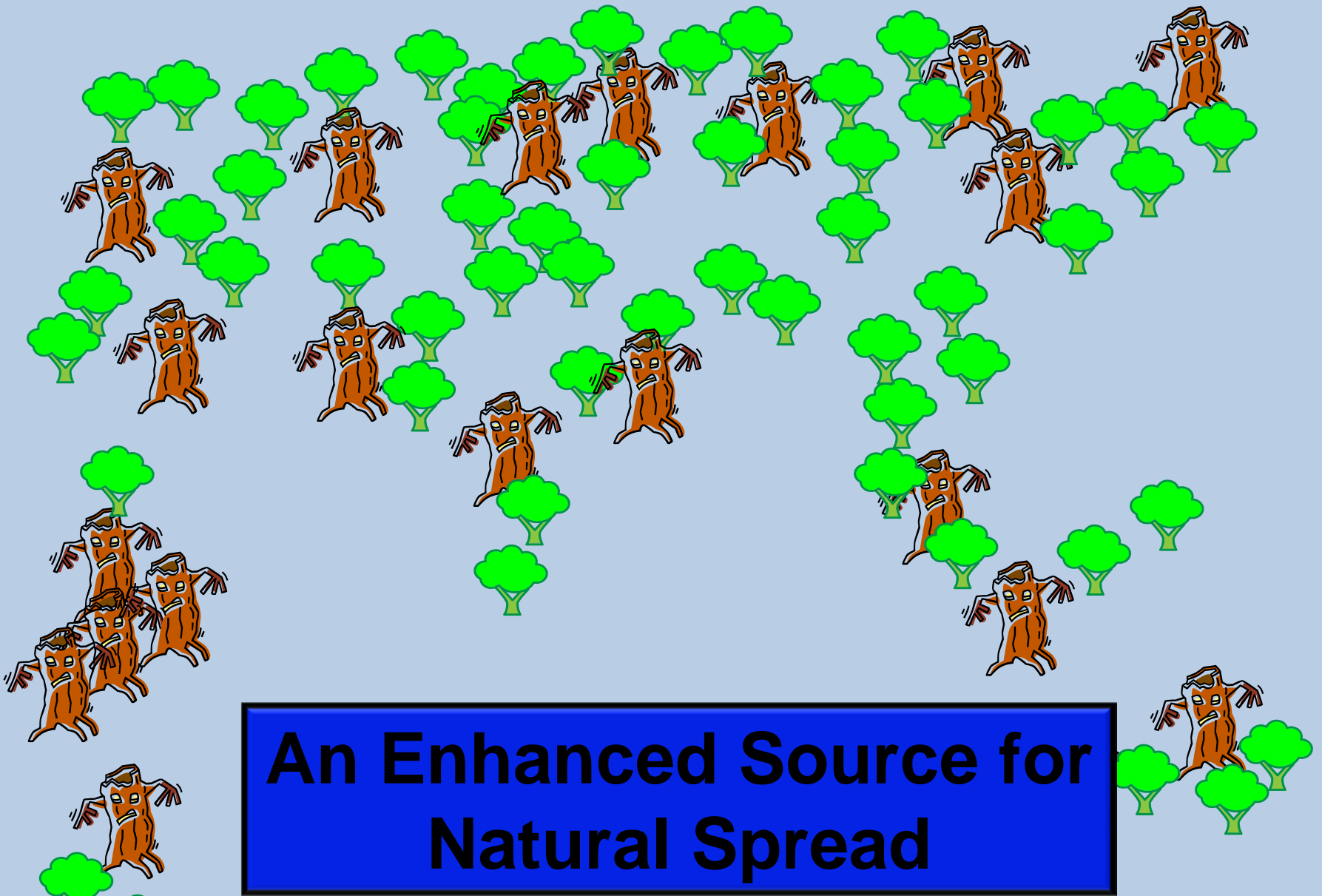
**A Potential but Illegal Source for  
Human Assisted ALB Spread**

**And a Source for Natural Spread**

**These are Now  
"False Negatives"**







**An Enhanced Source for  
Natural Spread**

**They Will Become Heavily Infested!**

# ALB Eradication



**Chainsaw: the most effective  
ALB eradication tool**



















Vermeer

TG-7000

8886







Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Initial Detection: May 2011



East Fork State Park

Initial Detection

BETHEL



- Infested Trees
- Removed Trees



0 0.5 1 2 3 Miles

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: June 2011

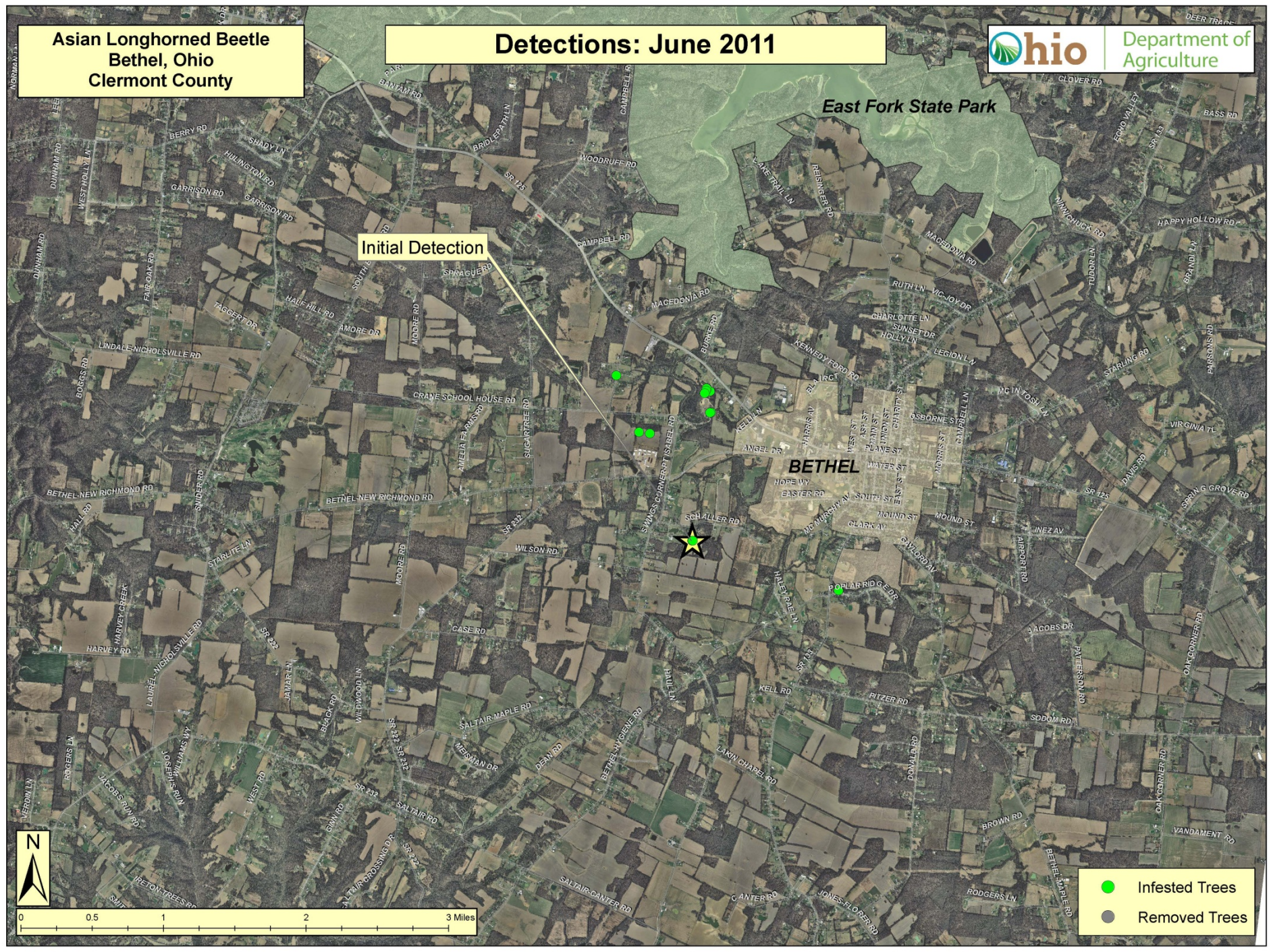
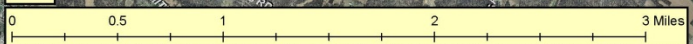


East Fork State Park

Initial Detection

BETHEL

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: July 2011

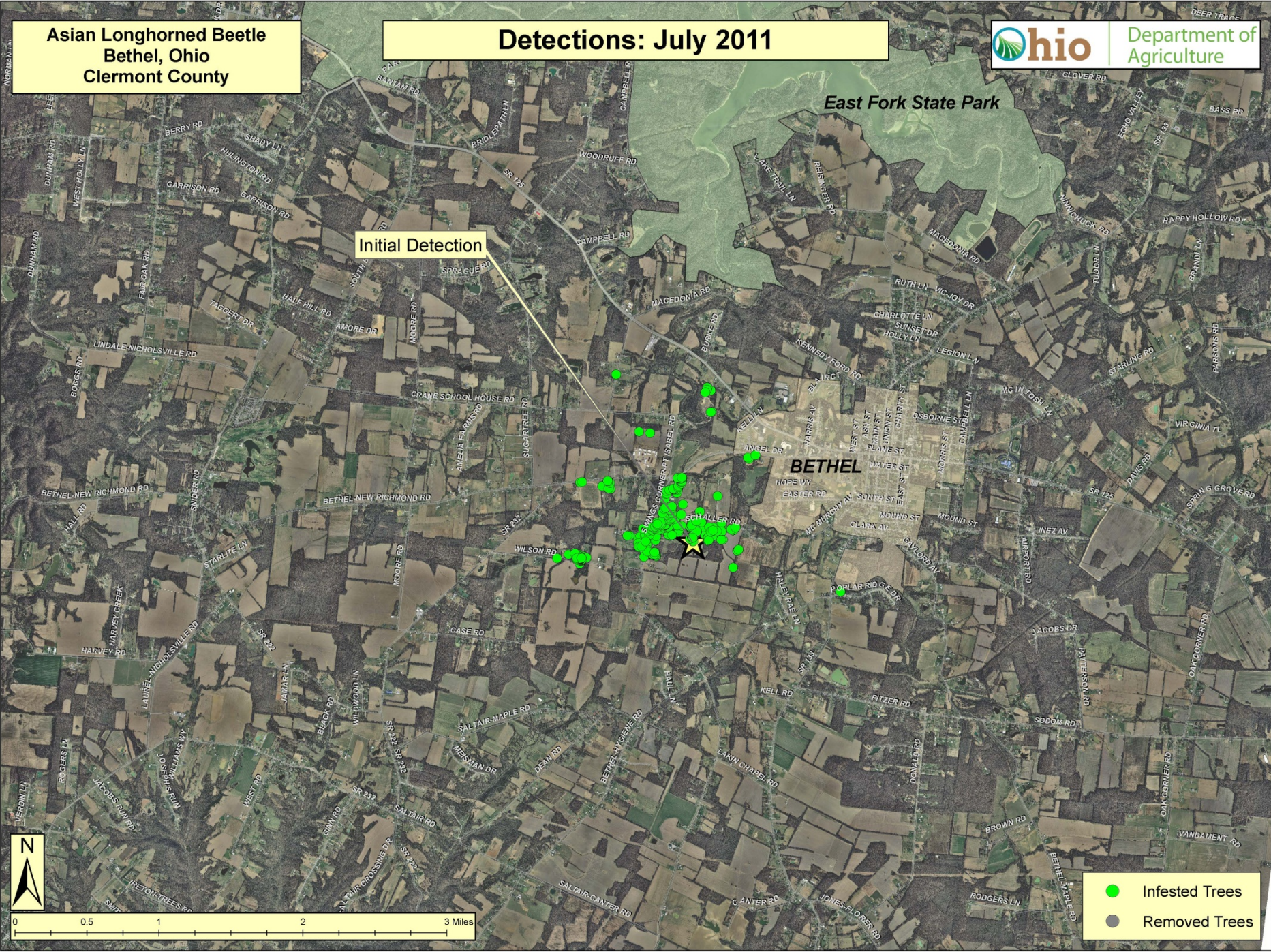
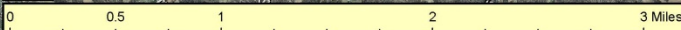


East Fork State Park

Initial Detection

BETHEL

- Infested Trees
- Removed Trees





**Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County**

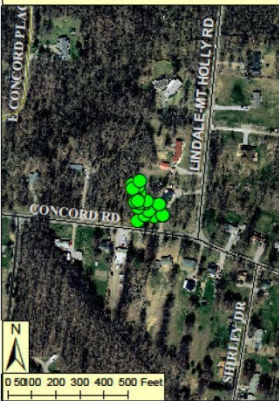
**Detections: August 2011**



**East Fork State Park**

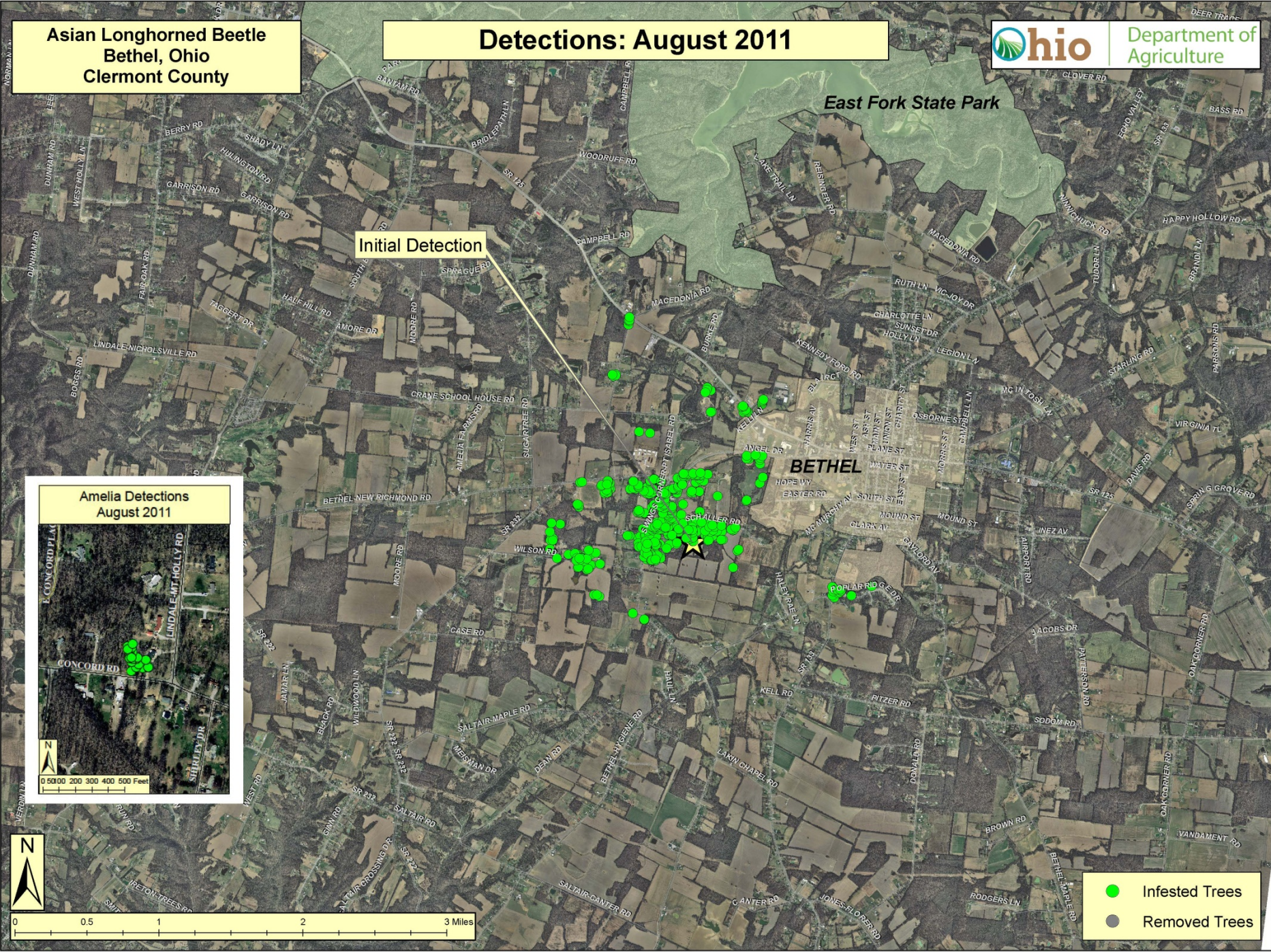
**Initial Detection**

**BETHEL**

**Amelia Detections  
August 2011**



-  Infested Trees
-  Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: September 2011

East Fork State Park

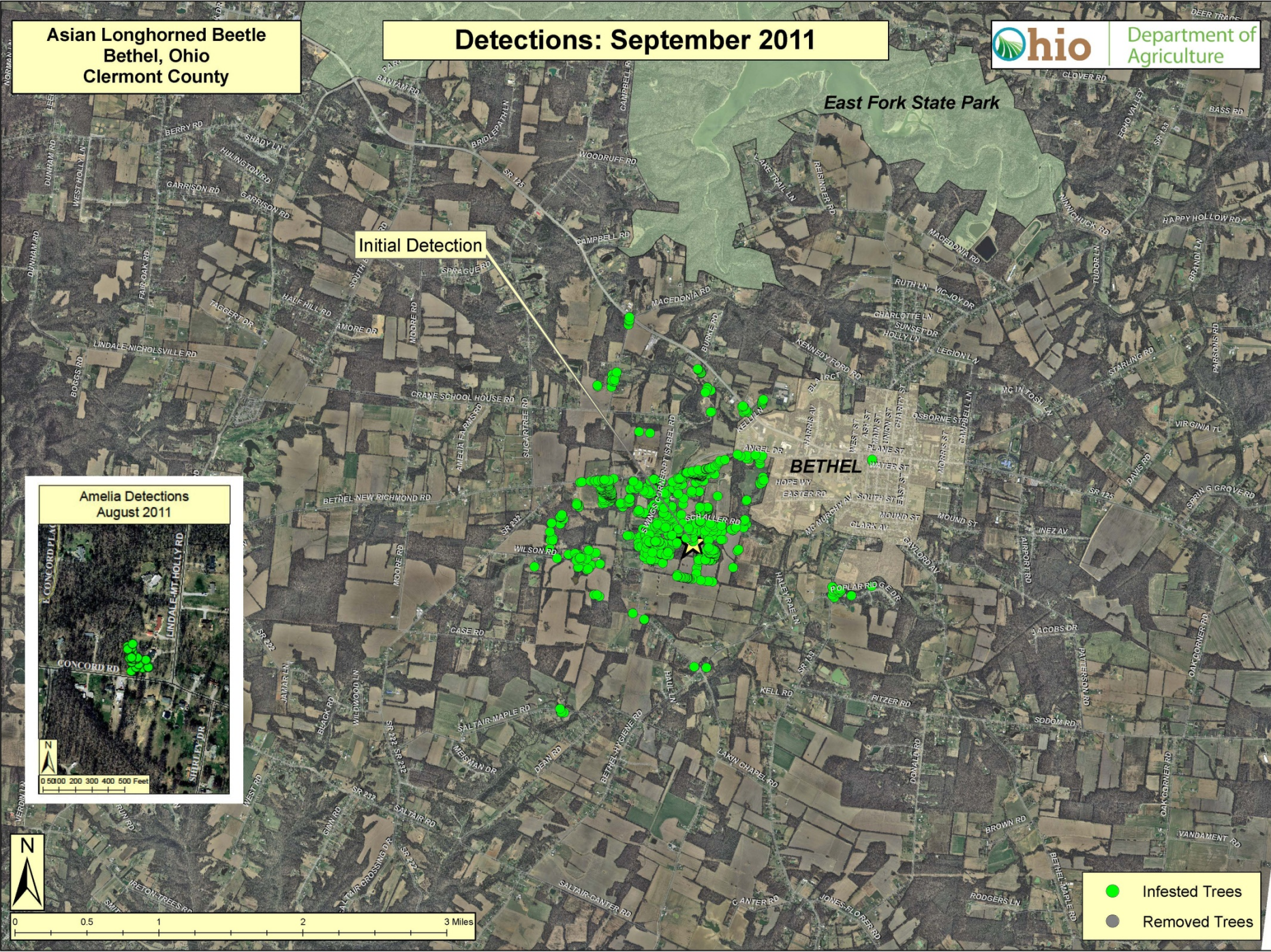
Initial Detection

BETHEL

Amelia Detections  
August 2011



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

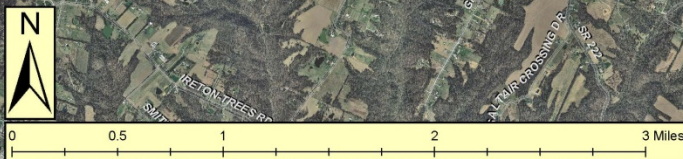
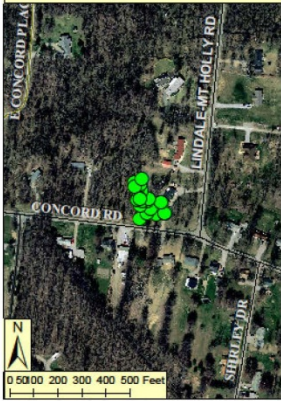
Detections: October 2011

East Fork State Park

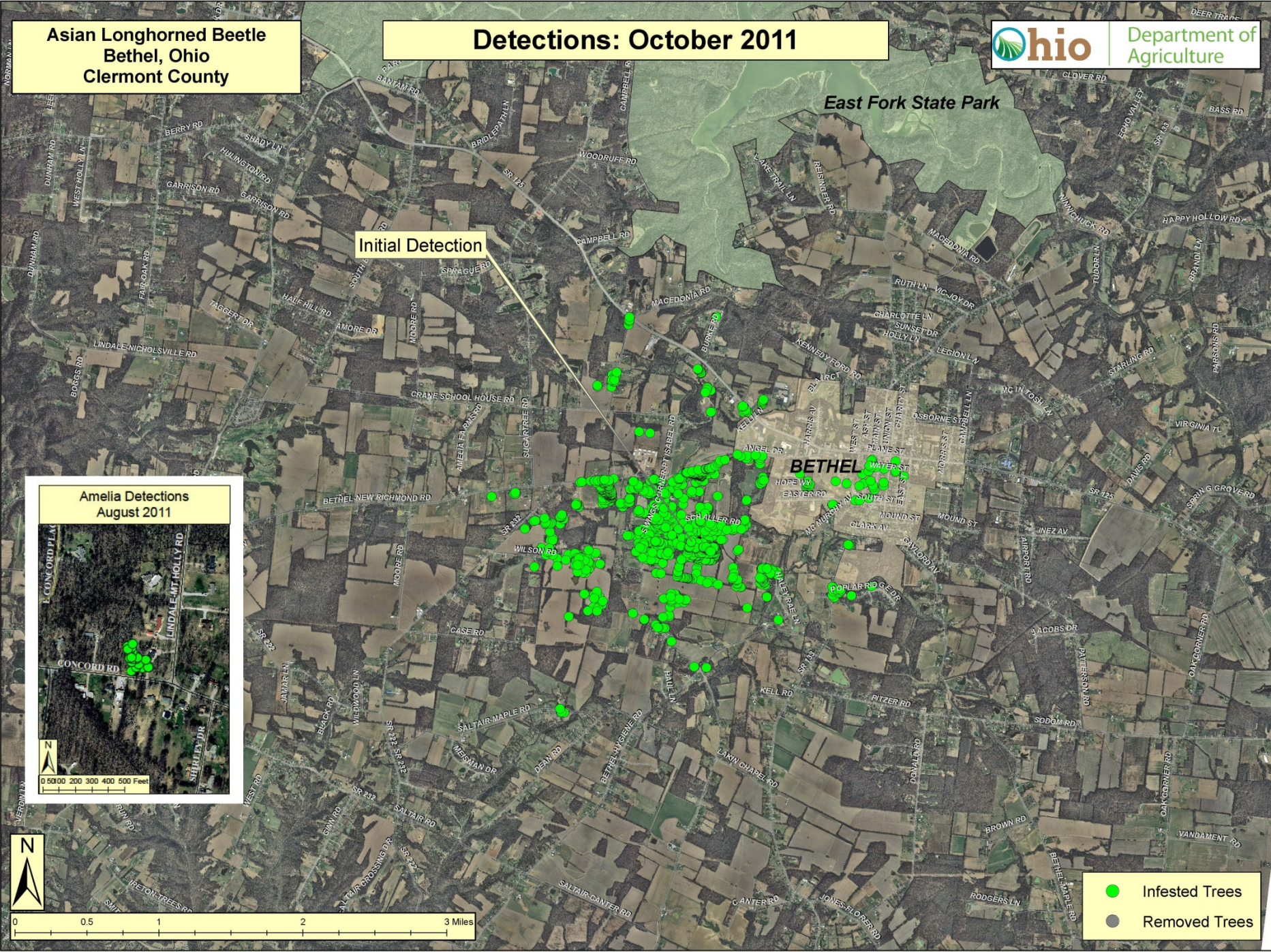
Initial Detection

BETHEL

Amelia Detections  
August 2011



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: November 2011



East Fork State Park

Initial Detection

BETHEL

Amelia Detections  
August 2011



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: November 2011

East Fork State Park



Initial Detection

BETHEL

Amelia Detections  
August 2011



0 0.5 1 2 3 Miles

-  Infested Trees
-  Removed Trees

**Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County**

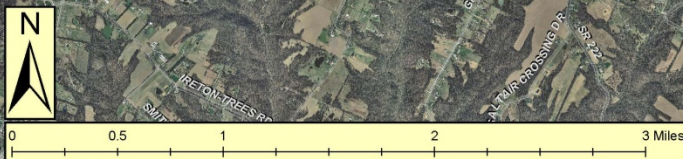
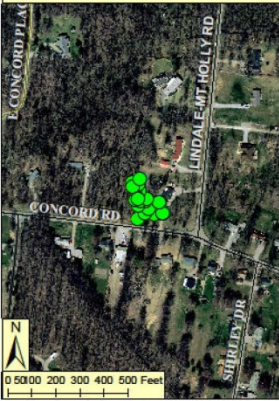
**Detections: December 2011**



**East Fork State Park**

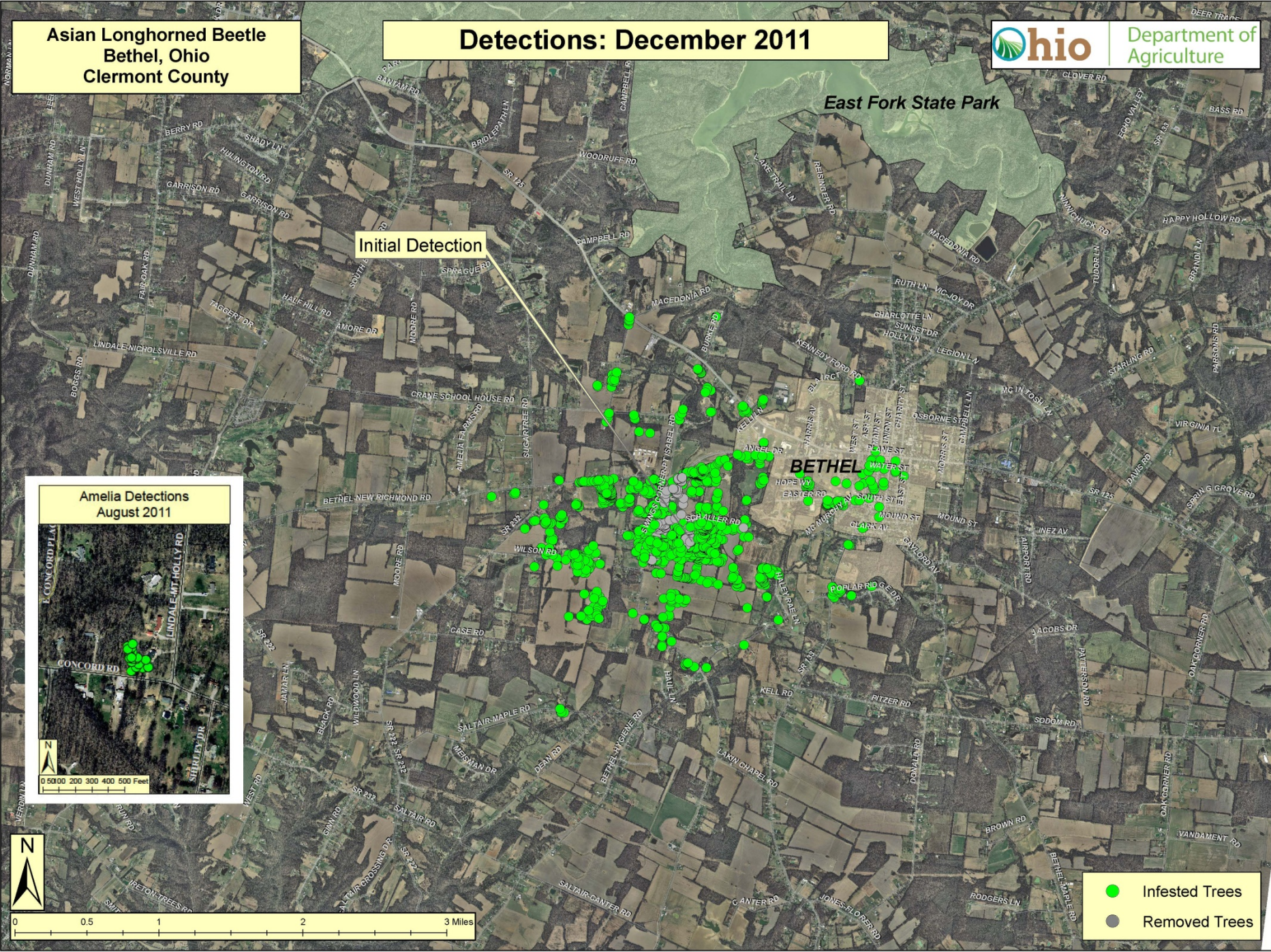
**Initial Detection**

**BETHEL**

**Amelia Detections  
August 2011**



-  **Infested Trees**
-  **Removed Trees**



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: December 2011



East Fork State Park

Initial Detection

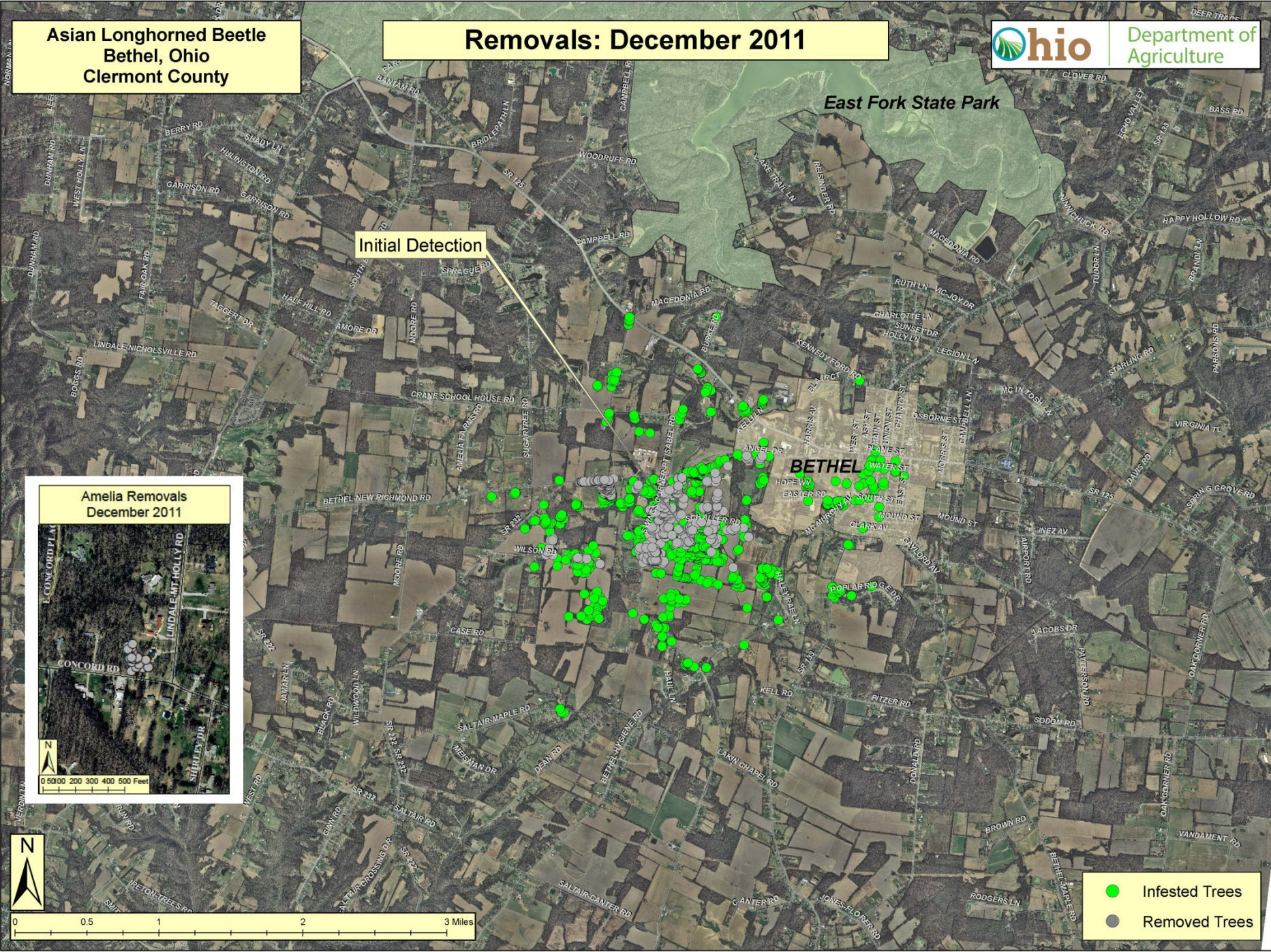
BETHEL

Amelia Removals  
December 2011



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



**Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County**

**Detections: January 2012**

**East Fork State Park**



**Initial Detection**

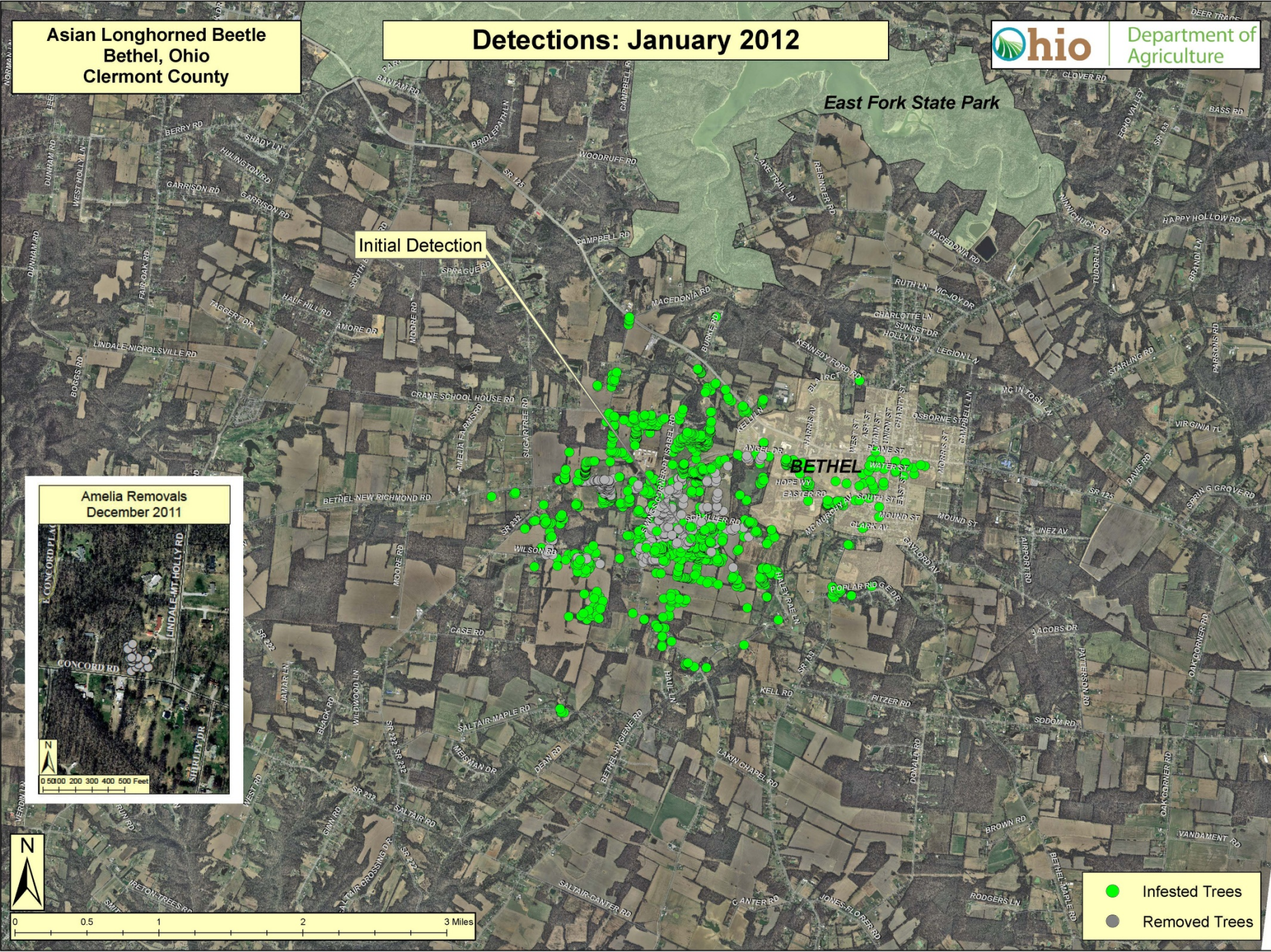
**BETHEL**

**Amelia Removes  
December 2011**



0 0.5 1 2 3 Miles

-  Infested Trees
-  Removed Trees





Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: January 2012



East Fork State Park

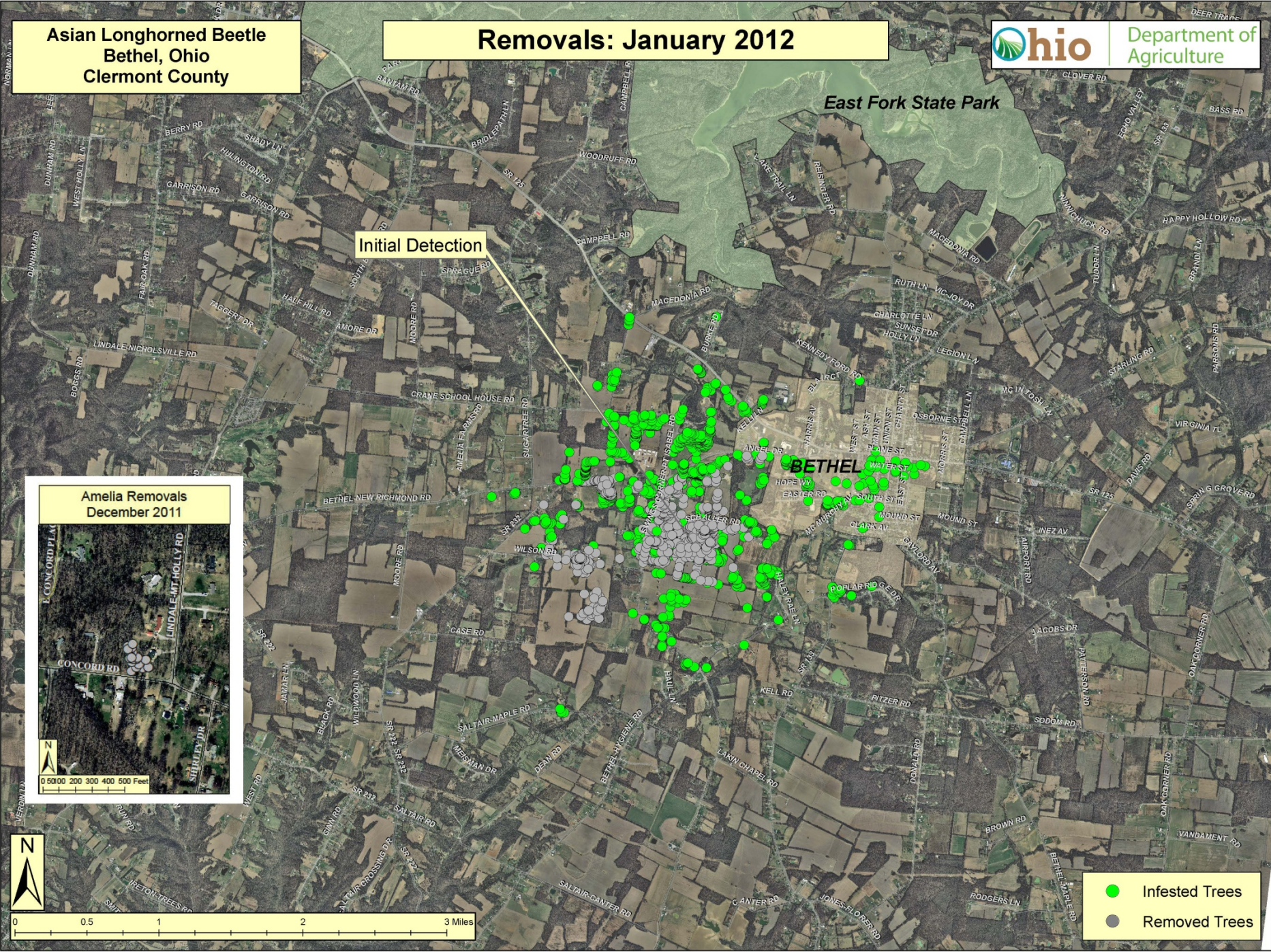
Initial Detection

BETHEL

Amelia Removals  
December 2011



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: February 2012

East Fork State Park

Initial Detection

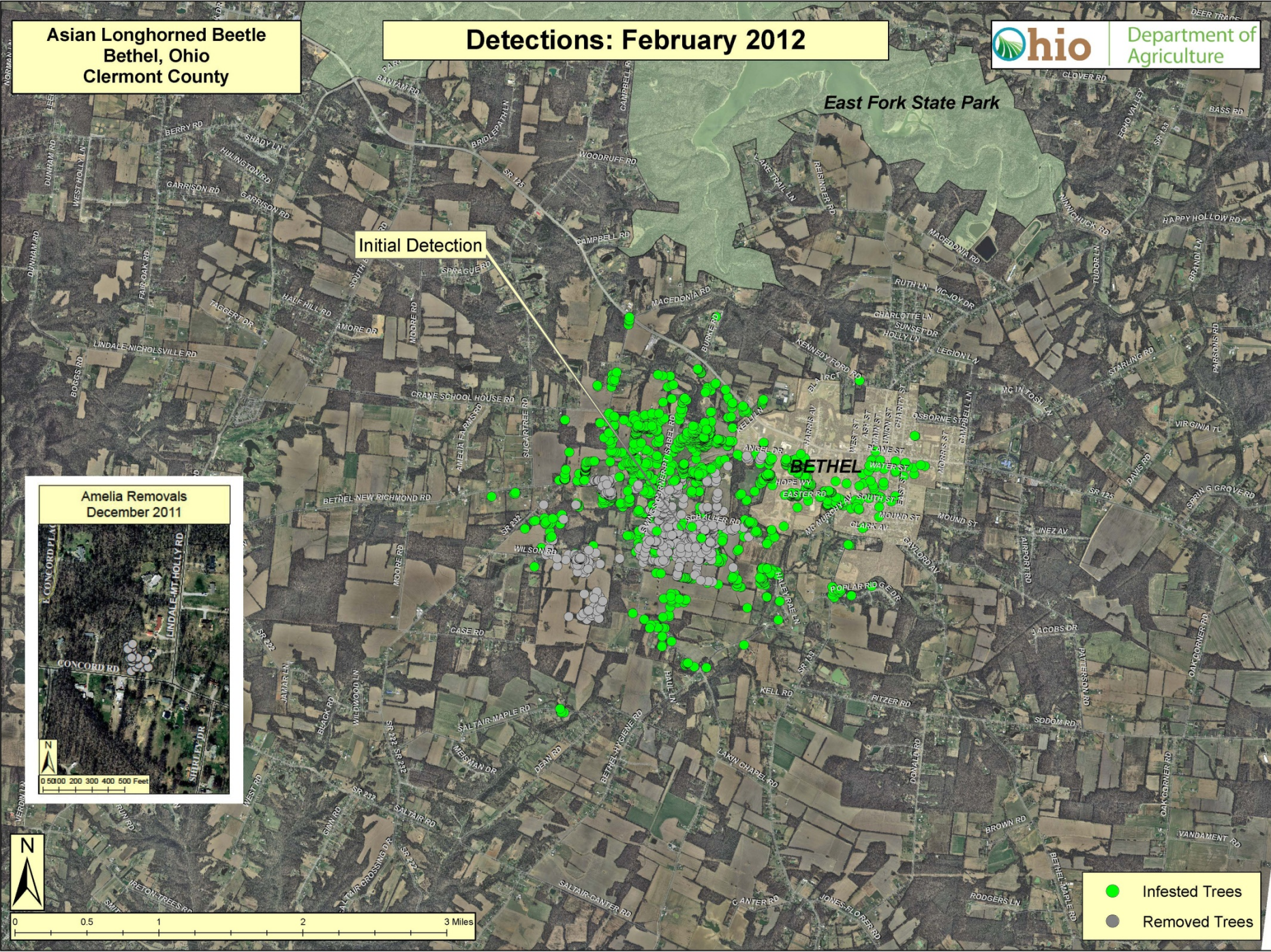
BETHEL

Amelia Removes  
December 2011



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: February 2012



East Fork State Park

Initial Detection

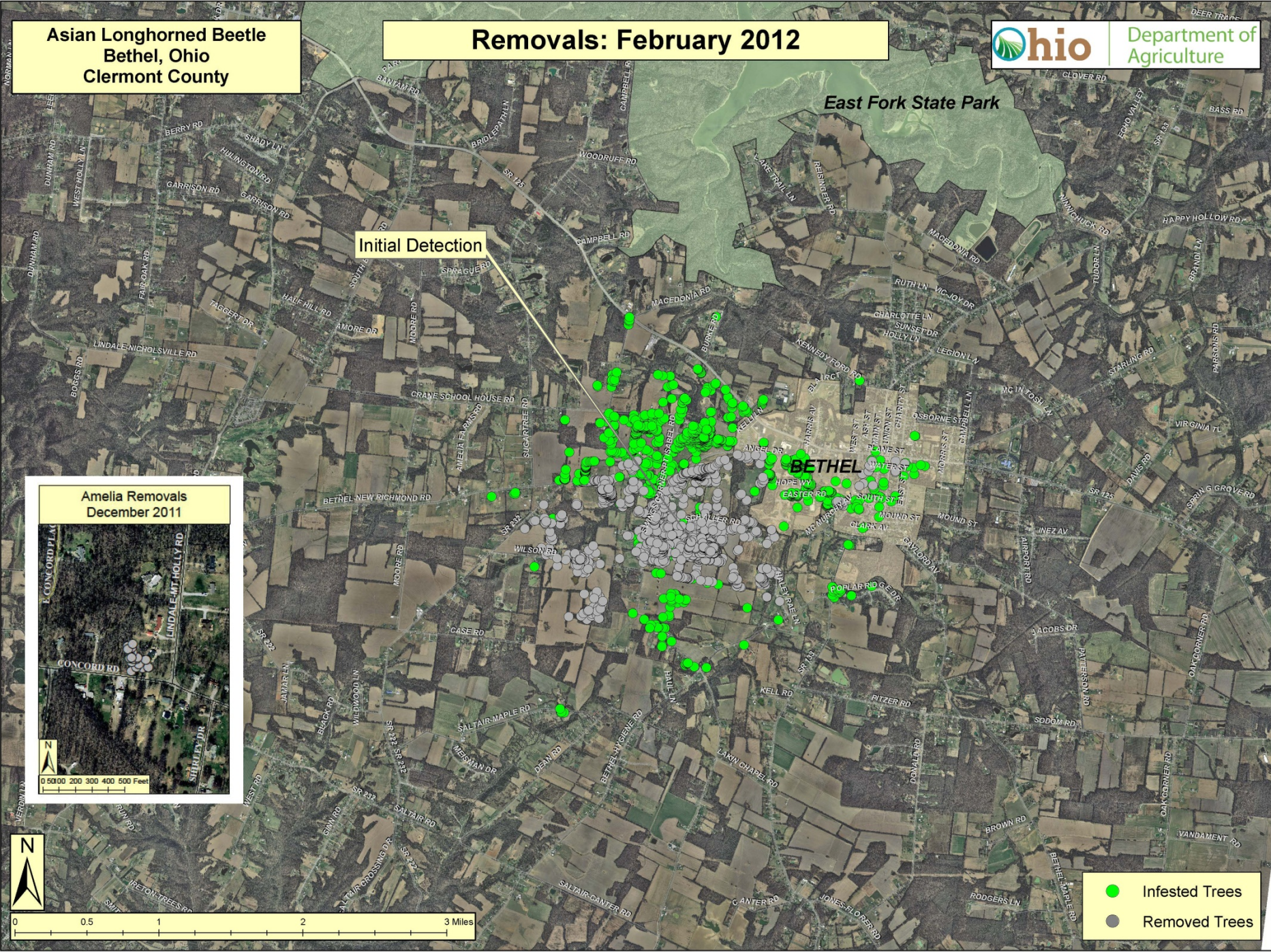
BETHEL

Amelia Removals  
December 2011



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: March 2012

East Fork State Park

Initial Detection

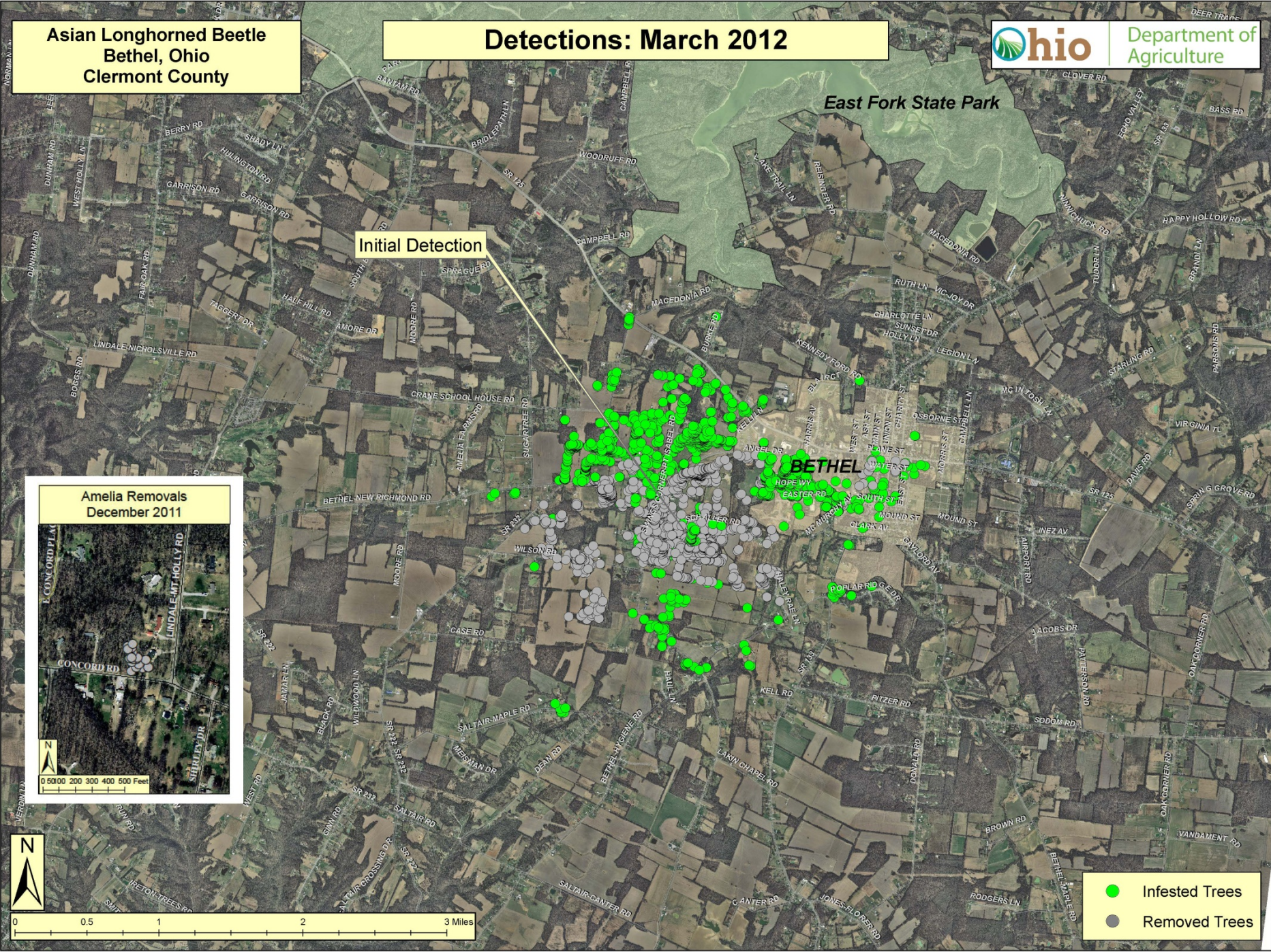
BETHEL

Amelia Removes  
December 2011



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: March 2012

East Fork State Park

Initial Detection

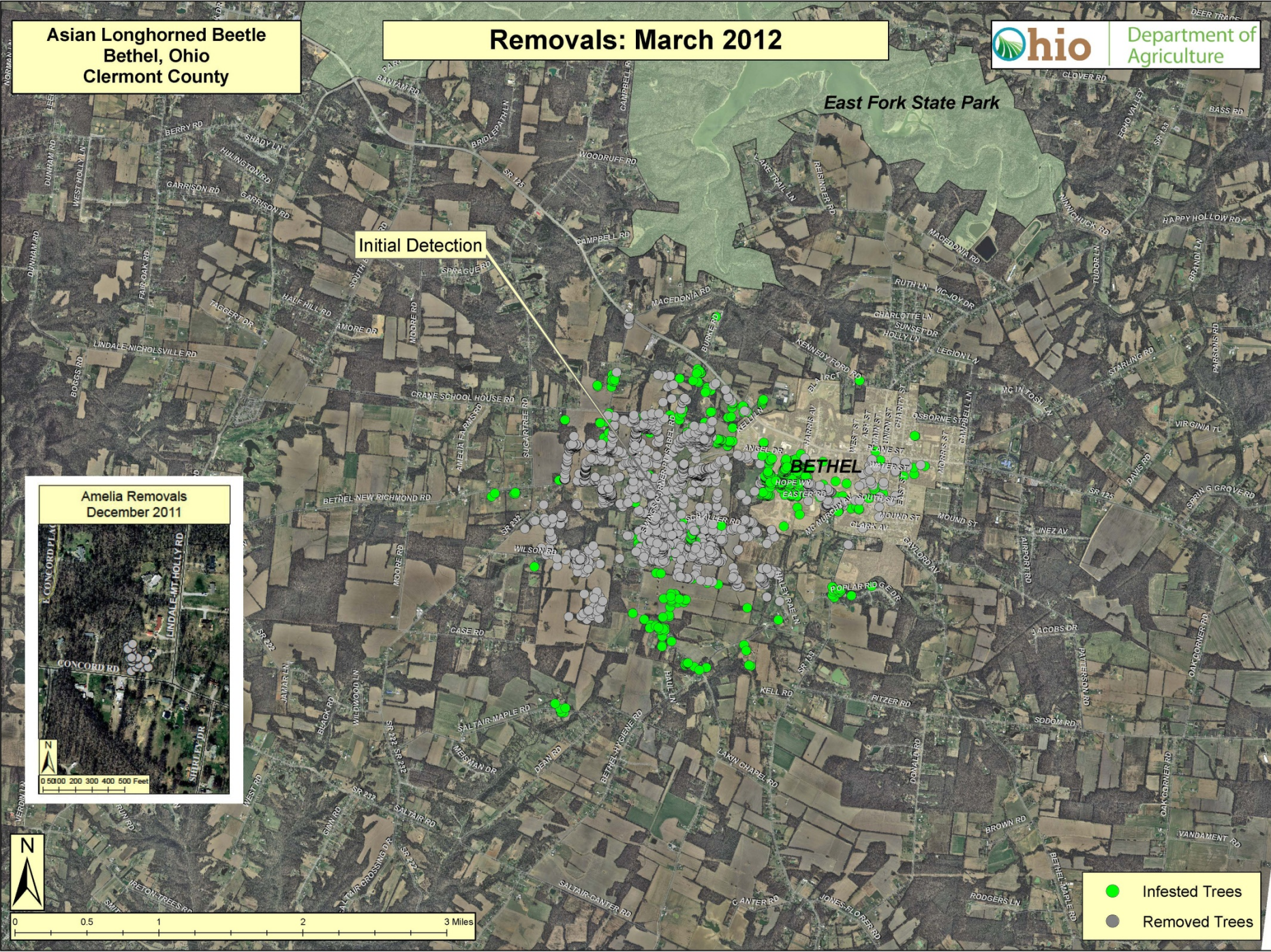
BETHEL

Amelia Removals  
December 2011



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: April 2012

East Fork State Park

Initial Detection

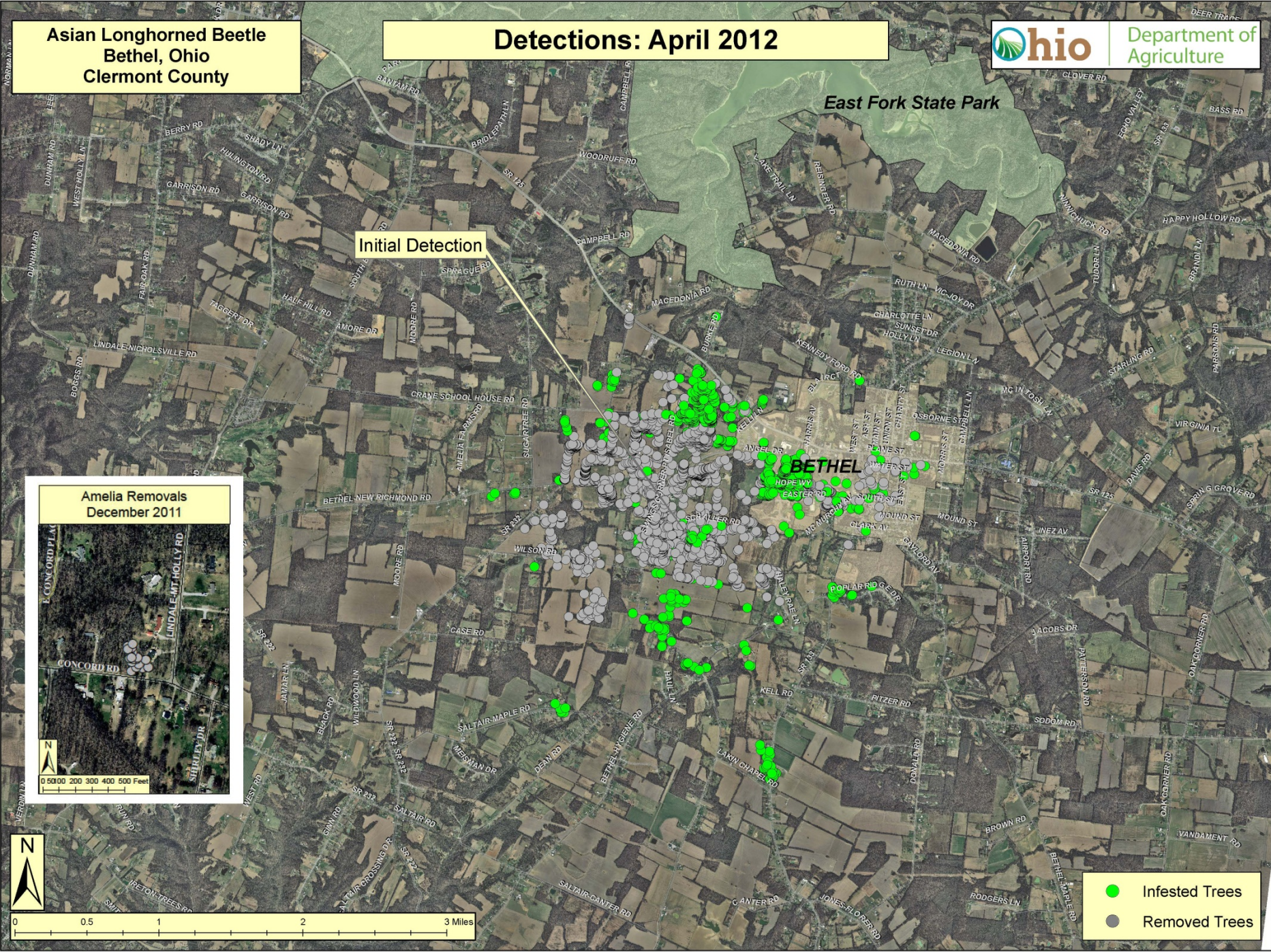
BETHEL

Amelia Removes  
December 2011



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: April 2012

East Fork State Park

Initial Detection

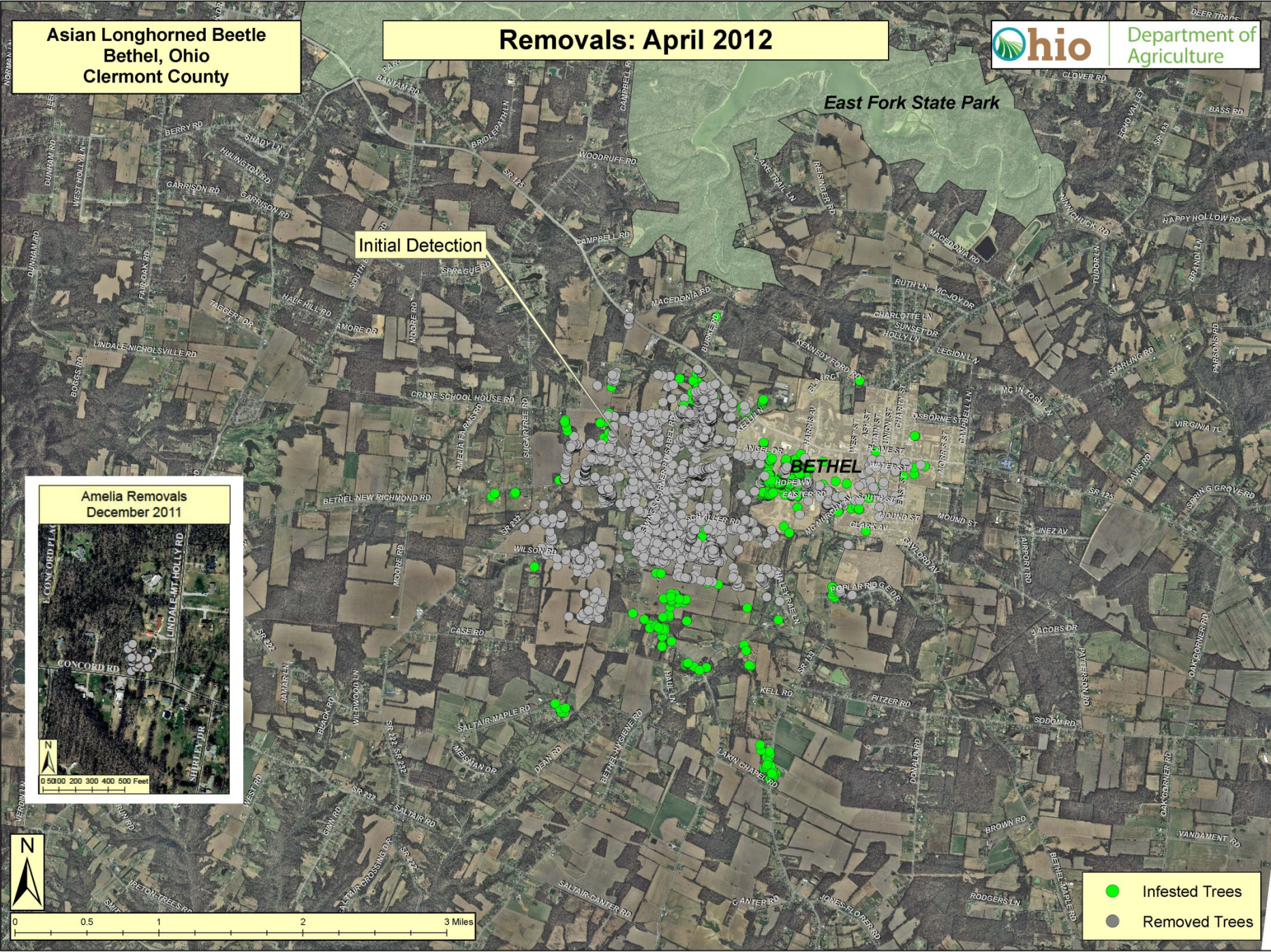
BETHEL

Amelia Removals  
December 2011



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

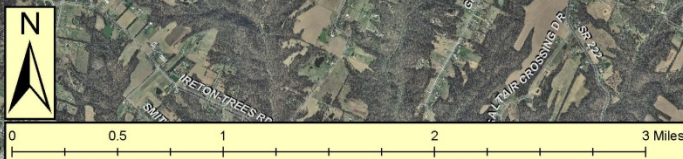
Detections: May 2012

East Fork State Park

Initial Detection

BETHEL

Amelia Detections  
May 2012



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

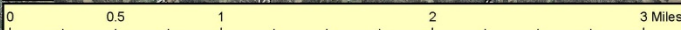
Removals: May 2012

East Fork State Park

Initial Detection

BETHEL

Amelia Removals  
May 2012



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: June 2012



East Fork State Park

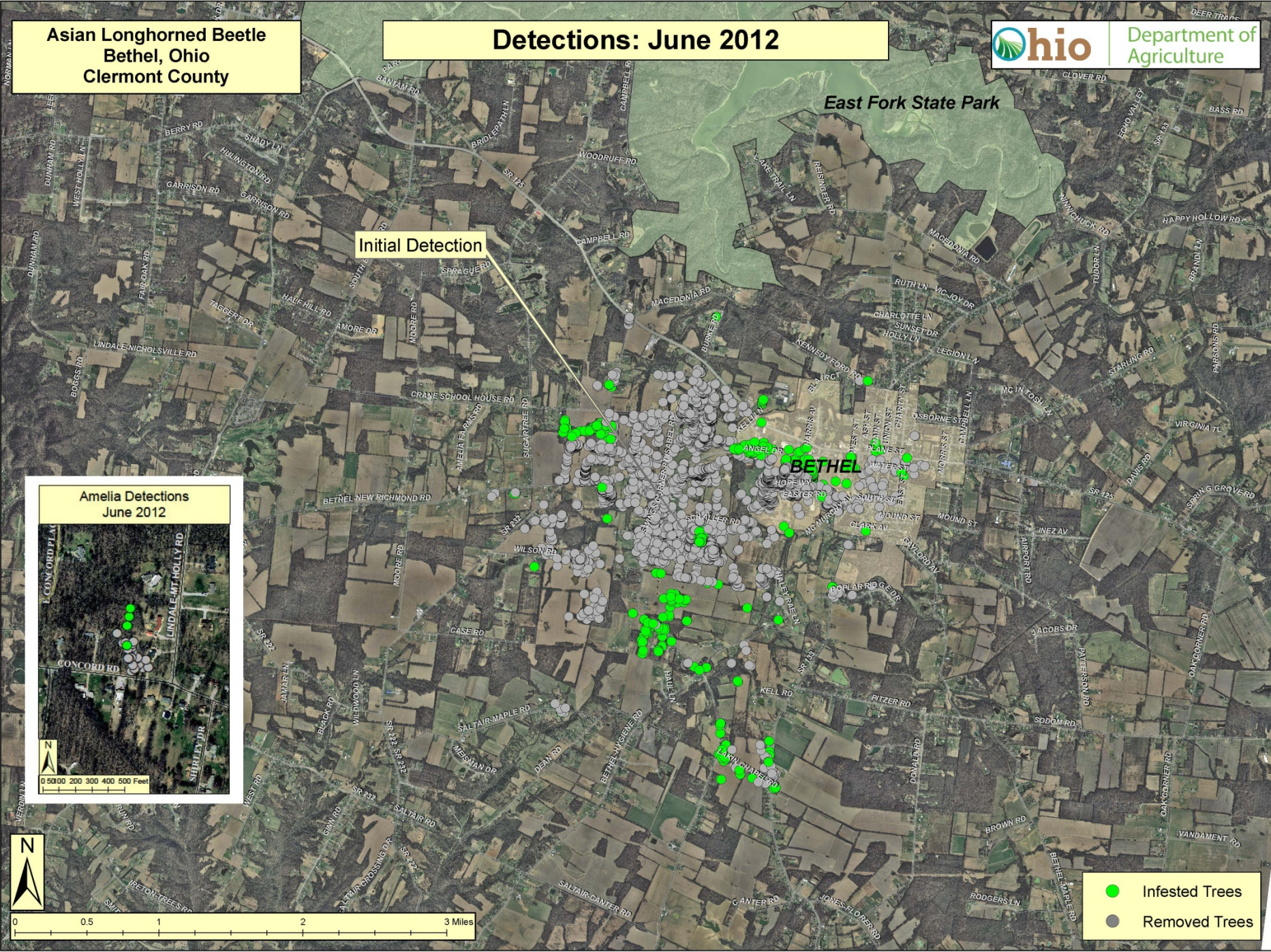
Initial Detection

BETHEL

Amelia Detections  
June 2012



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: June 2012

East Fork State Park

Initial Detection

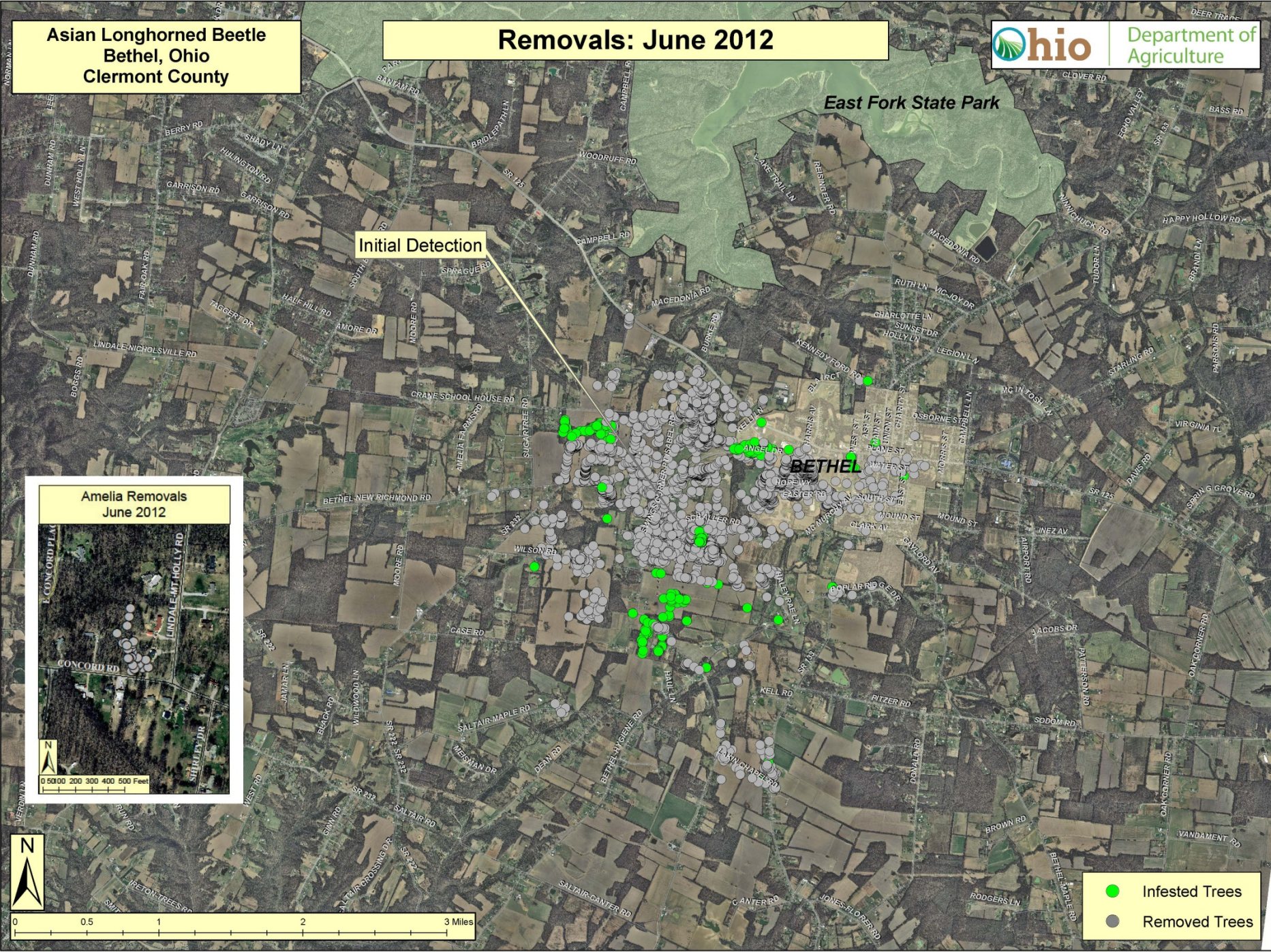
BETHEL

Amelia Removals  
June 2012



0 0.5 1 2 3 Miles

- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: July 2012

East Fork State Park

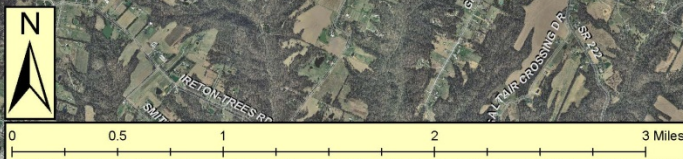
Initial Detection

BETHEL

Stonelick Detections  
July 2012



Amelia Removals  
June 2012



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- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: July 2012

East Fork State Park

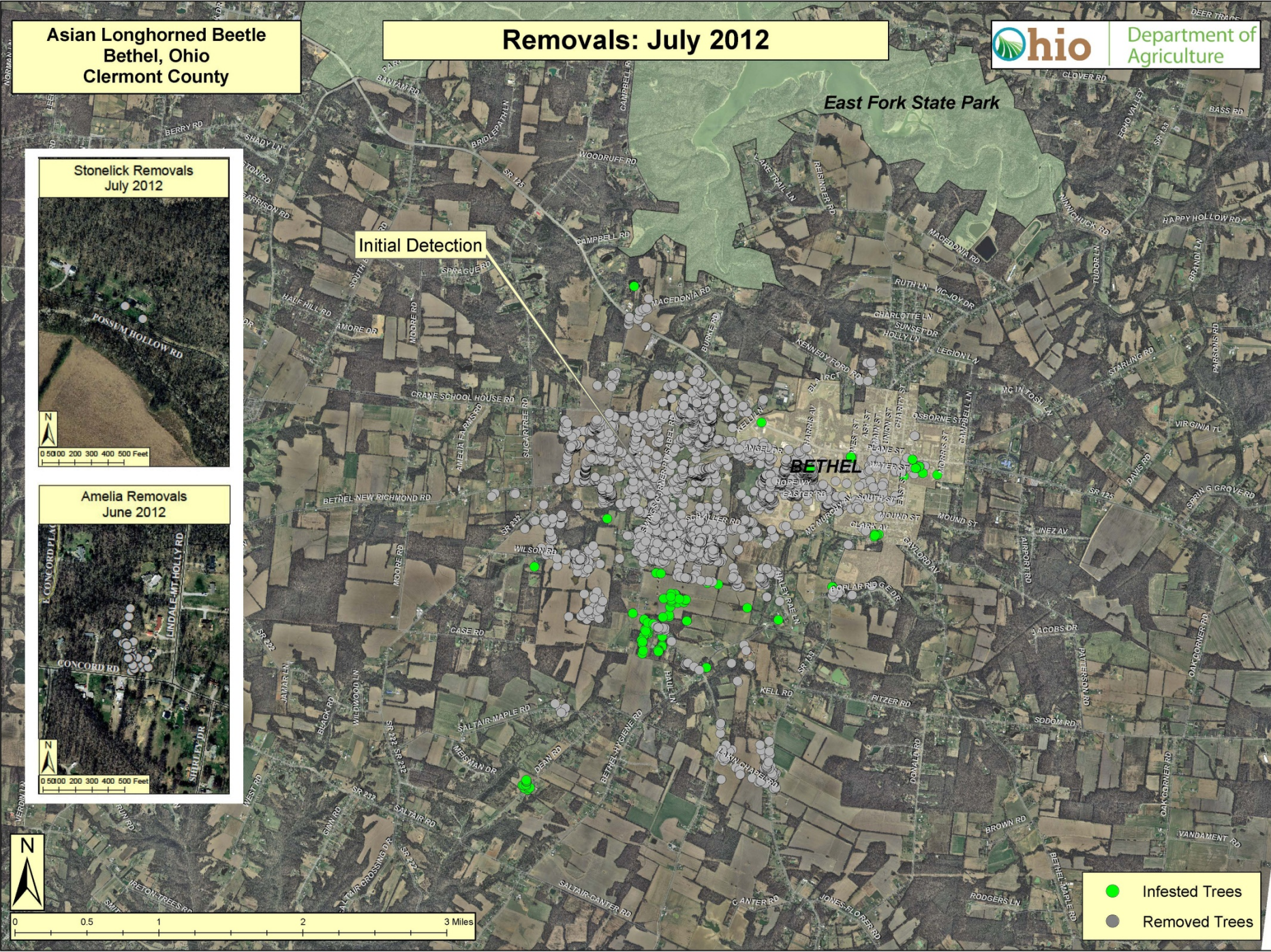
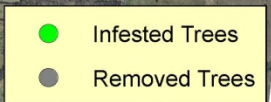
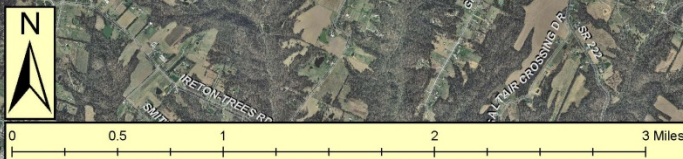
Initial Detection

BETHEL

Stonelick Removals  
July 2012



Amelia Removals  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: August 2012

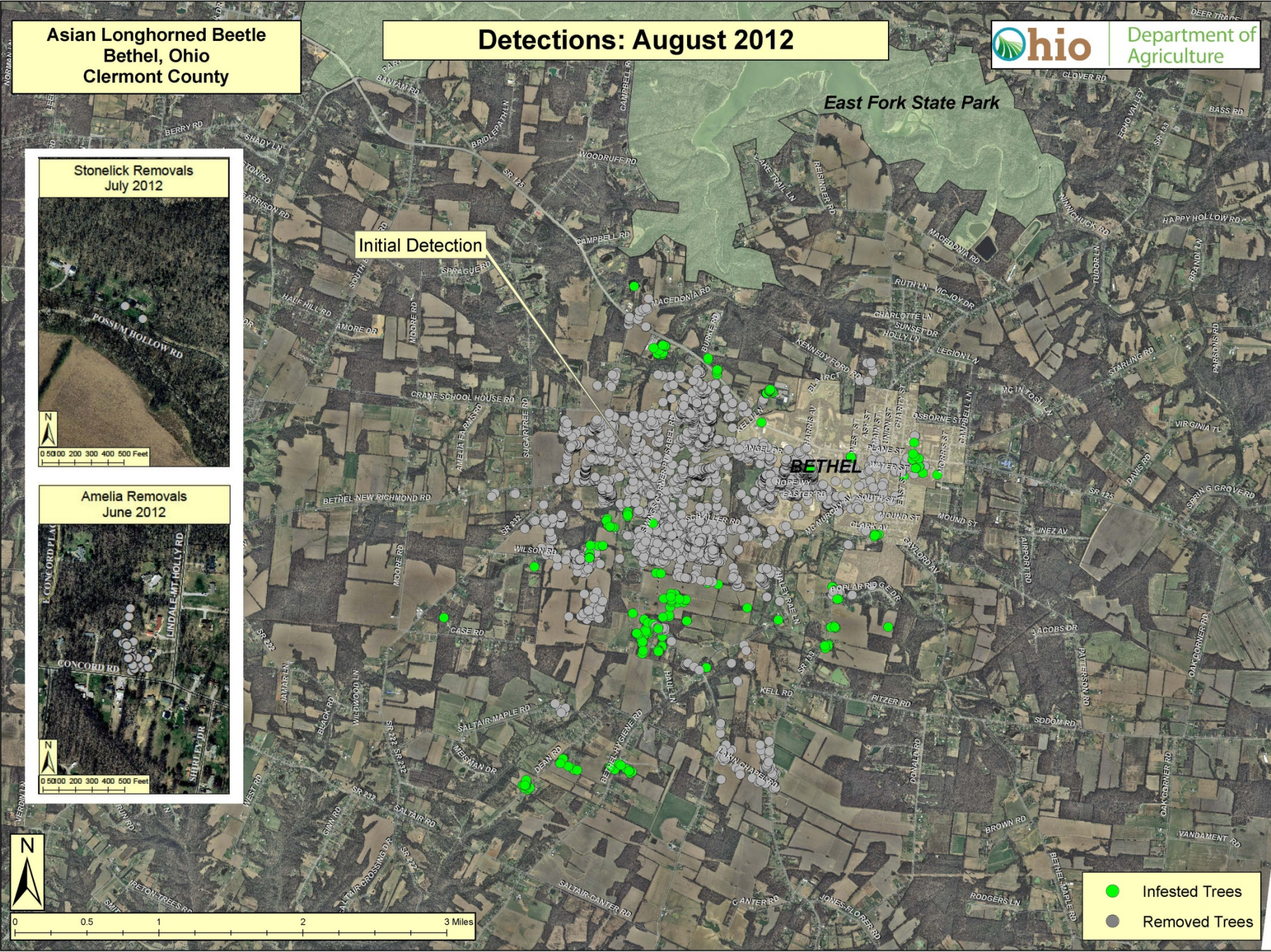
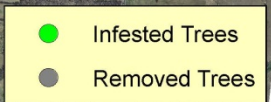
East Fork State Park

Initial Detection

Stonelick Removes  
July 2012



Amelia Removes  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: August 2012

East Fork State Park

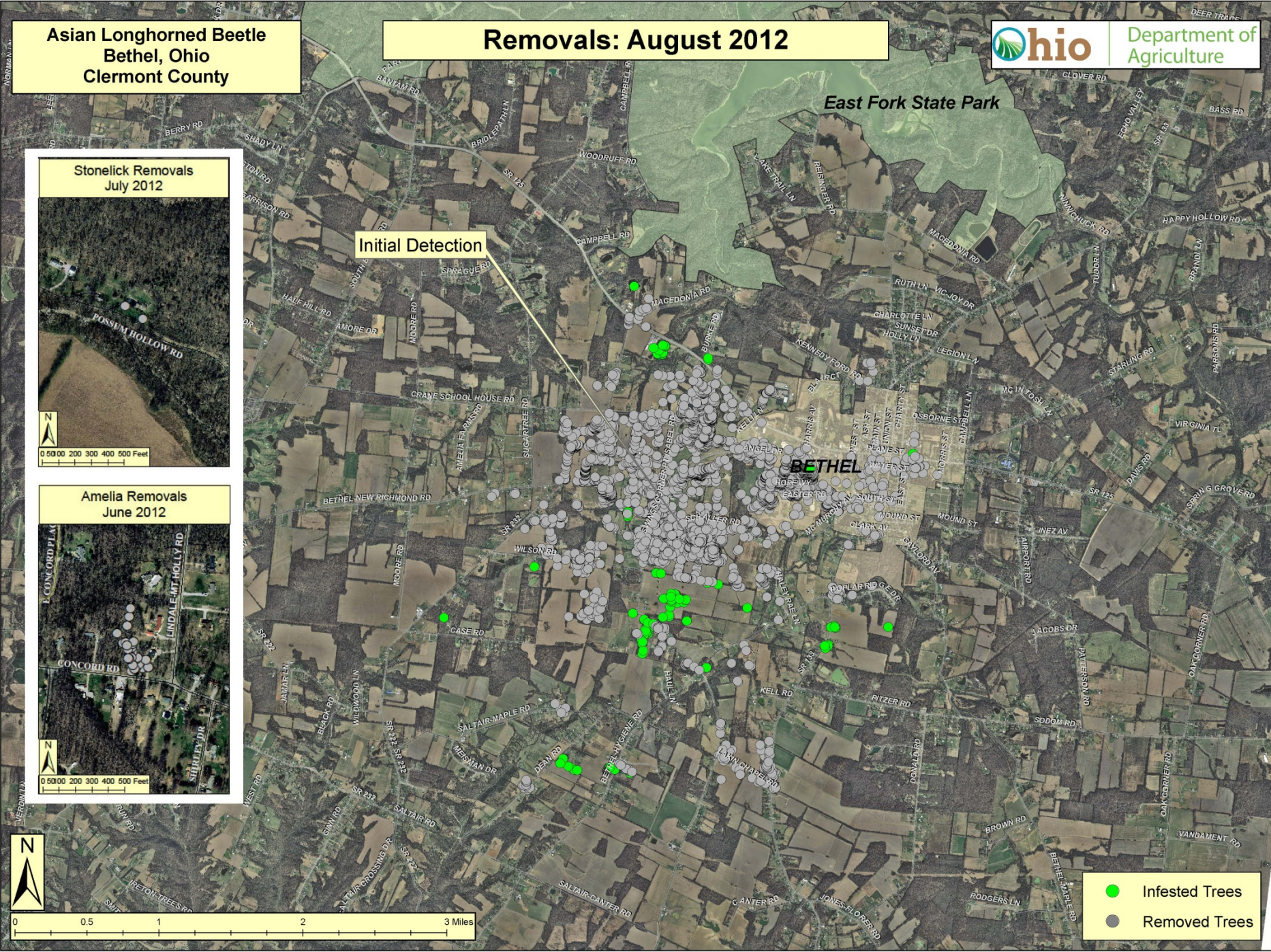
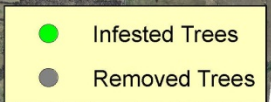
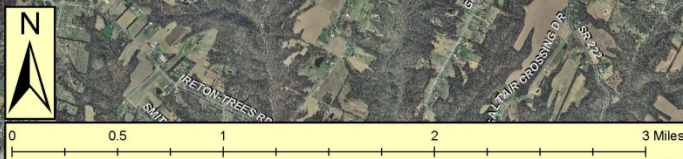
Initial Detection

BETHEL

Stonelick Removals  
July 2012



Amelia Removals  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: September 2012

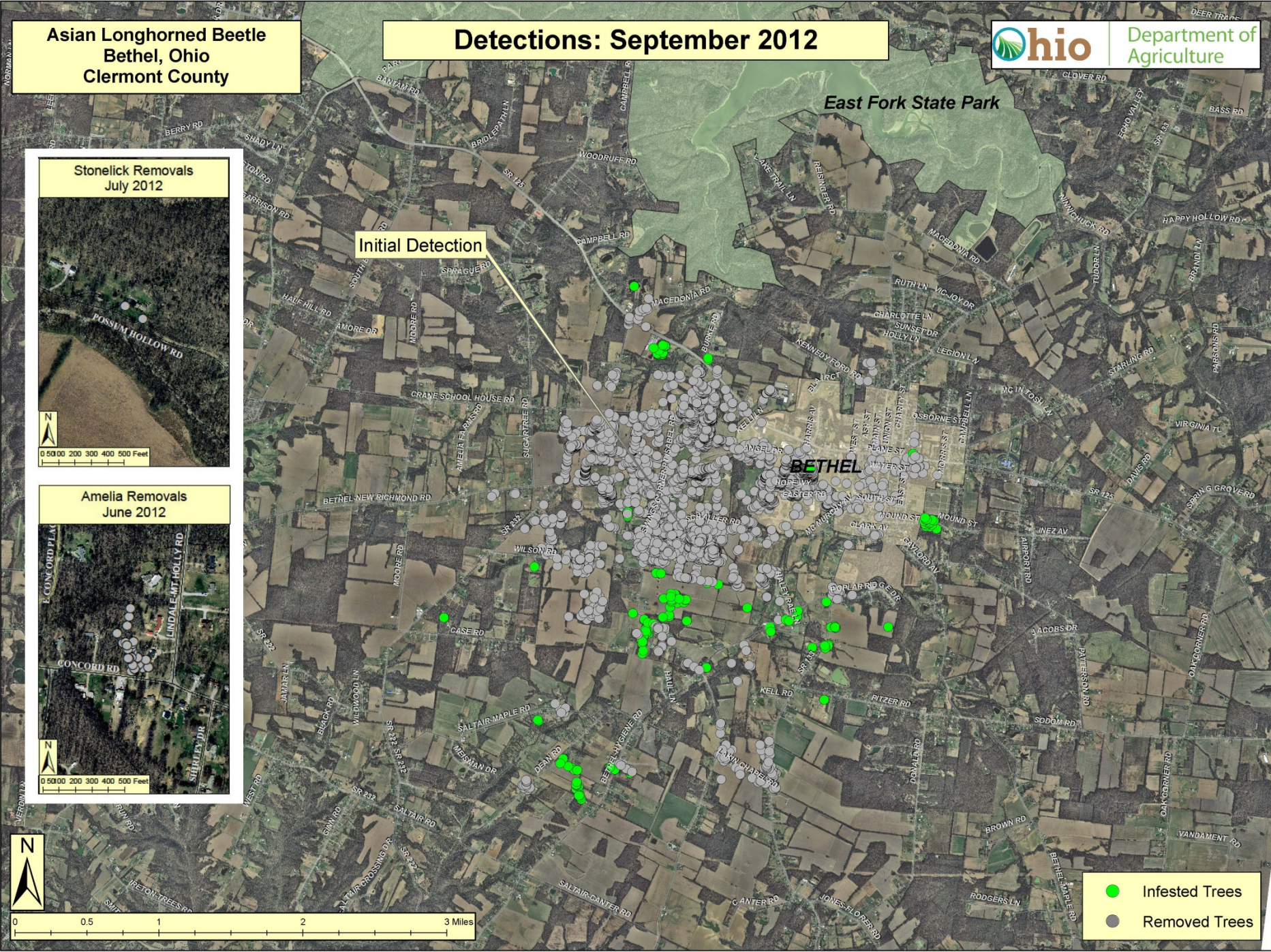
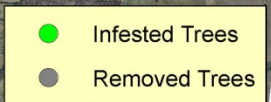
East Fork State Park

Initial Detection

Stonelick Removes  
July 2012



Amelia Removes  
June 2012





Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: September 2012

East Fork State Park

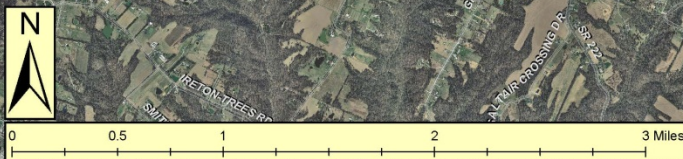
Initial Detection

BETHEL

Stonelick Removals  
July 2012



Amelia Removals  
June 2012



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: October 2012

East Fork State Park

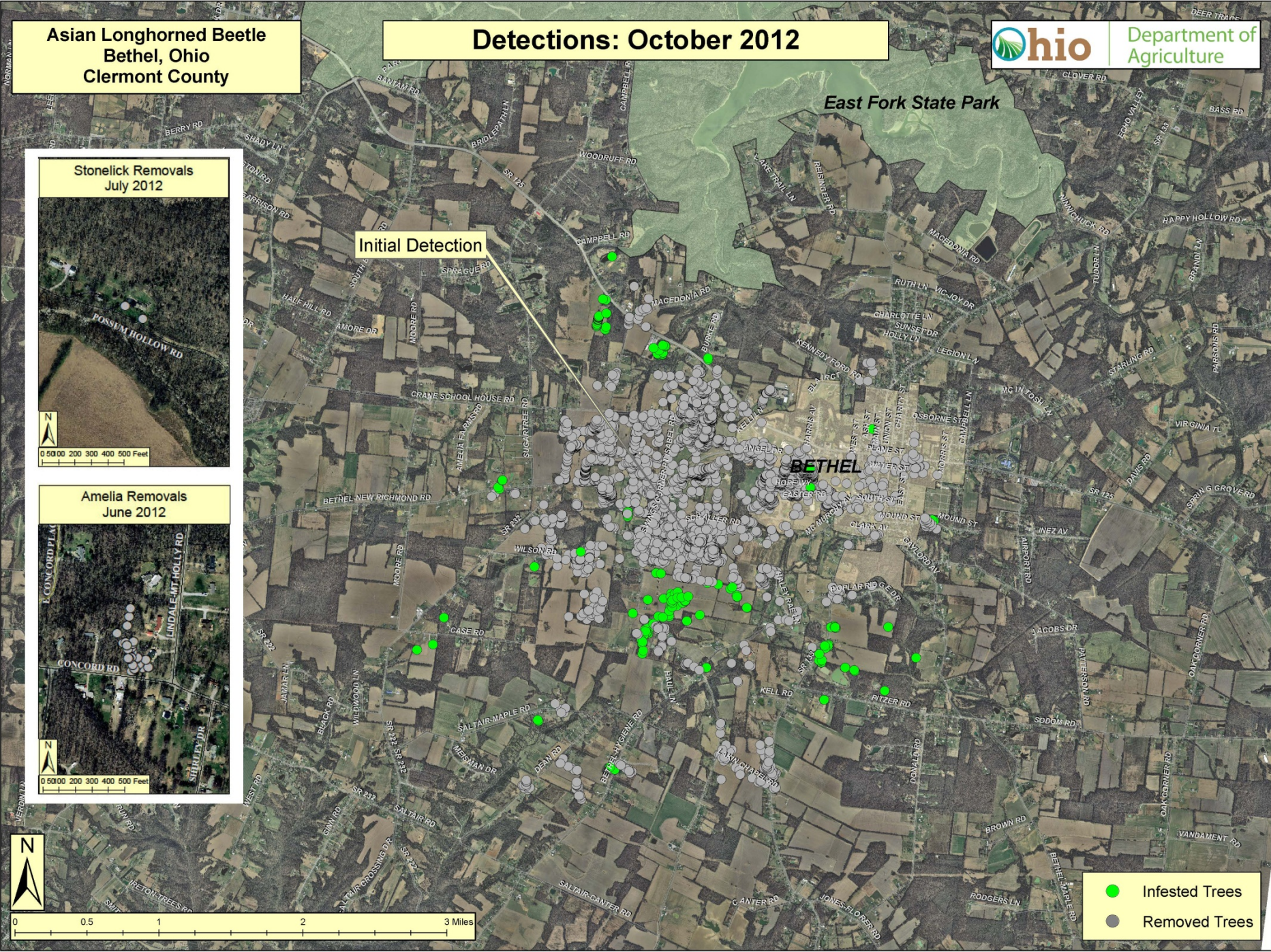
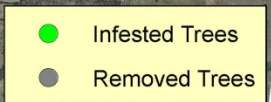
Initial Detection

BETHEL

Stonelick Removes  
July 2012



Amelia Removes  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: October 2012

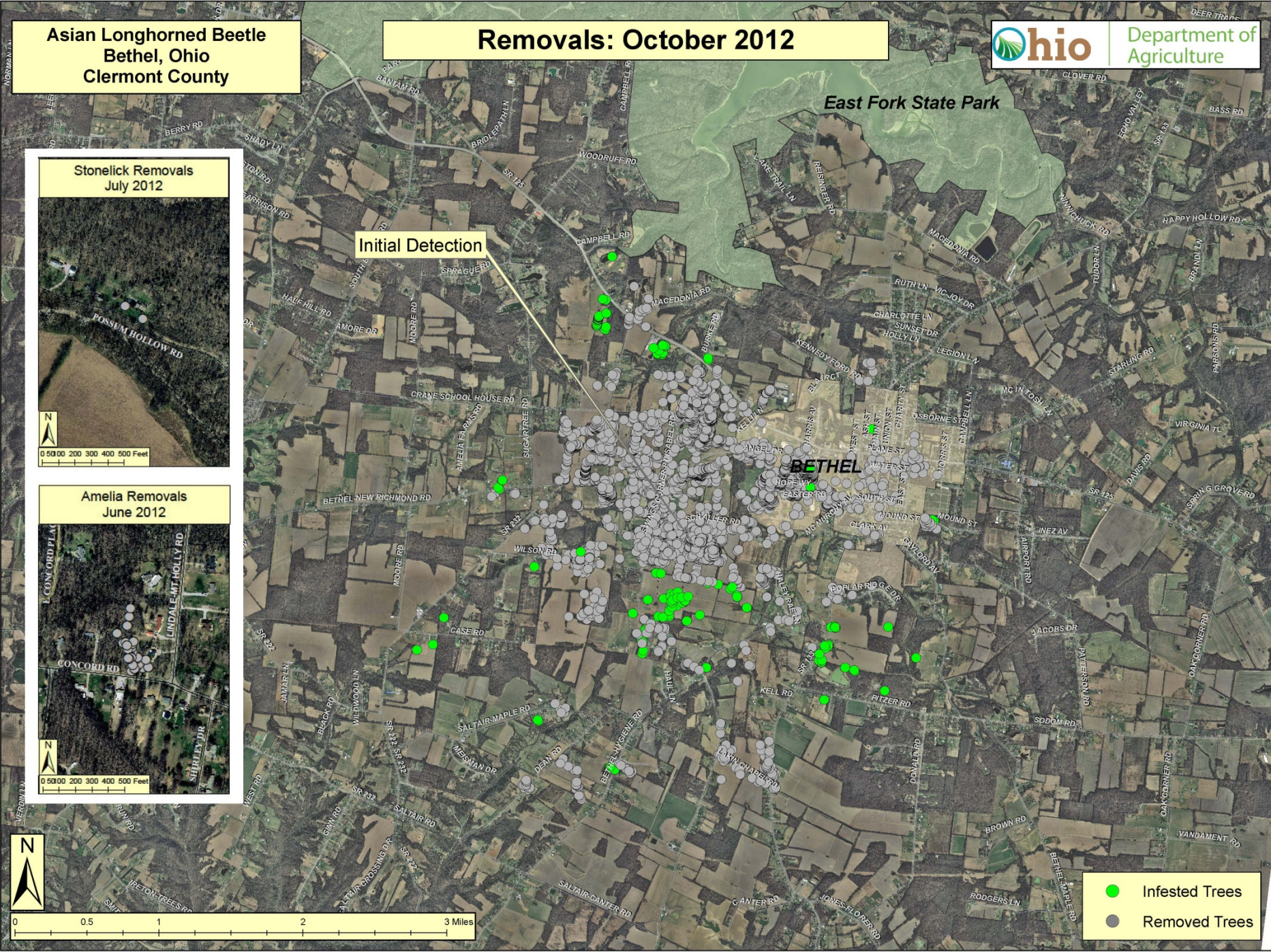
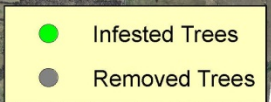
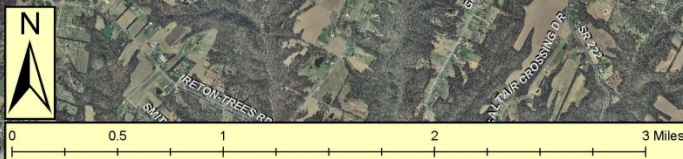
East Fork State Park

Initial Detection

Stonelick Removals  
July 2012



Amelia Removals  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: November 2012

East Fork State Park

Initial Detection

Stonelick Removes  
July 2012



Amelia Removes  
June 2012



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: November 2012

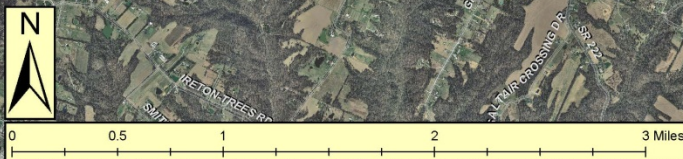
East Fork State Park

Initial Detection

Stonelick Removals  
July 2012



Amelia Removals  
June 2012



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: December 2012

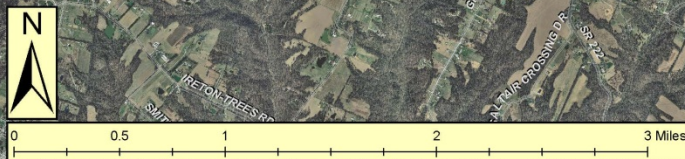
East Fork State Park

Initial Detection

Stonelick Detections  
December 2012



Amelia Removals  
June 2012



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: December 2012

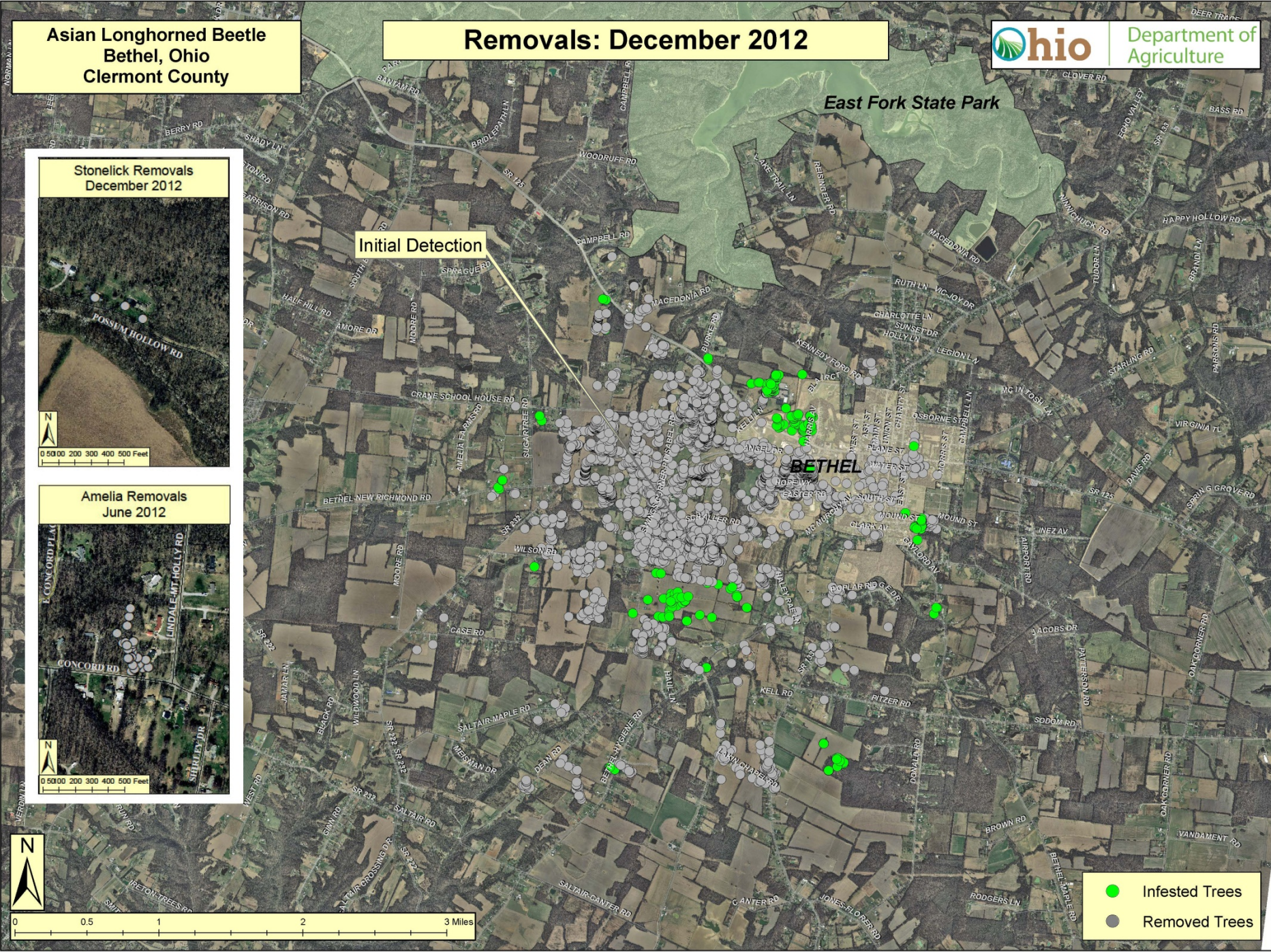
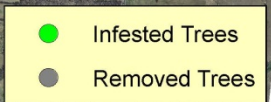
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
June 2012



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: January 2013

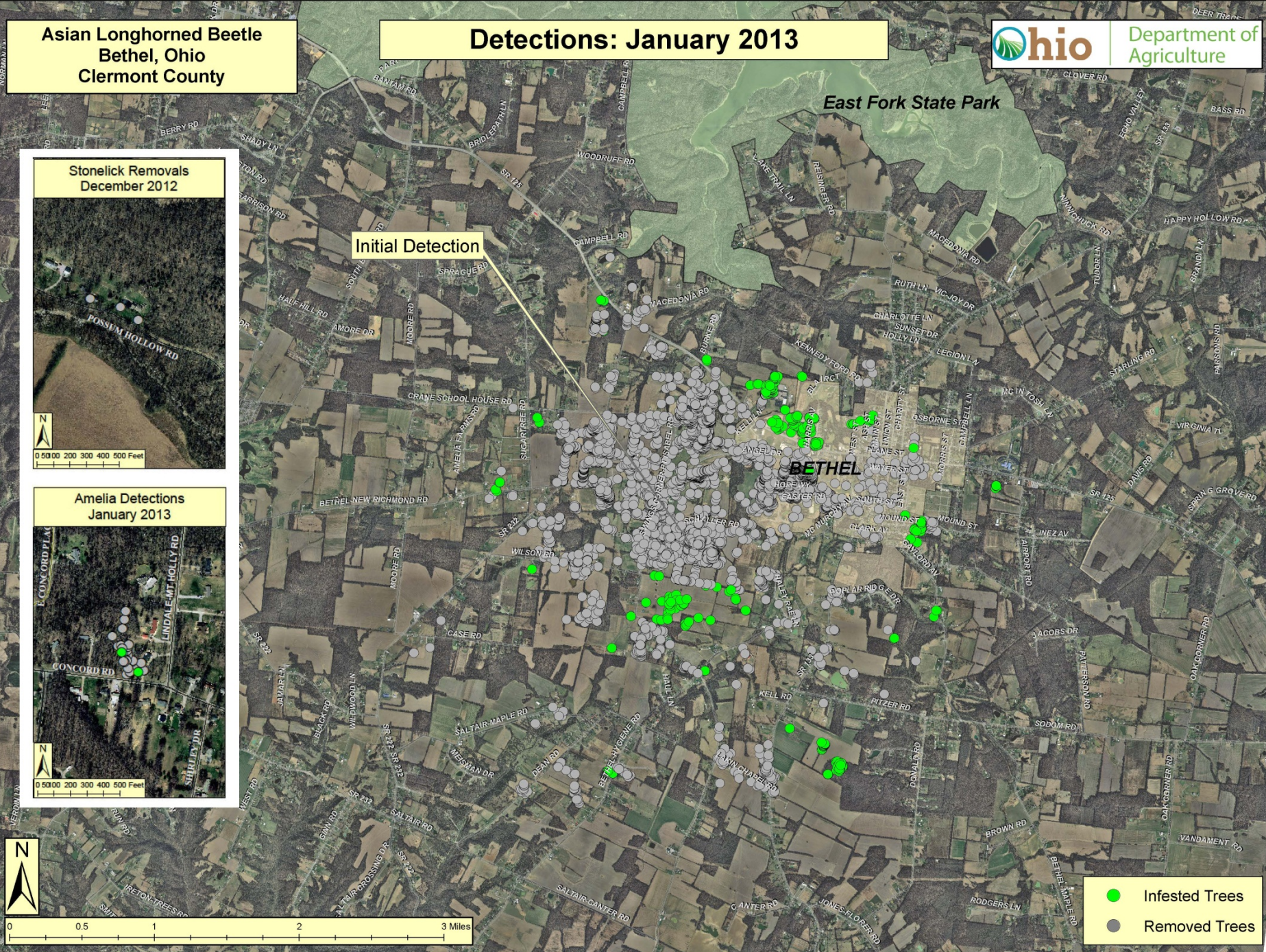
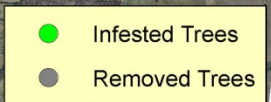
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Detections  
January 2013





Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: January 2013

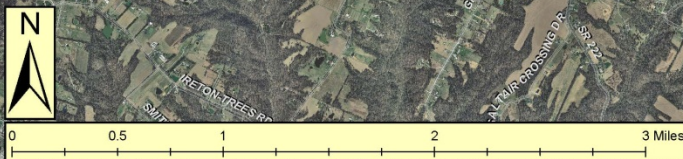
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Detections  
January 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: February 2013

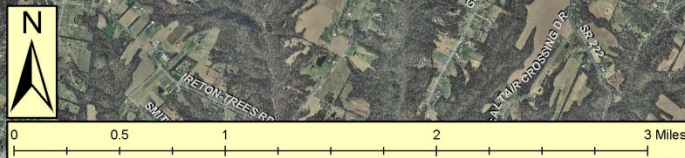
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Detections  
February 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: February 2013

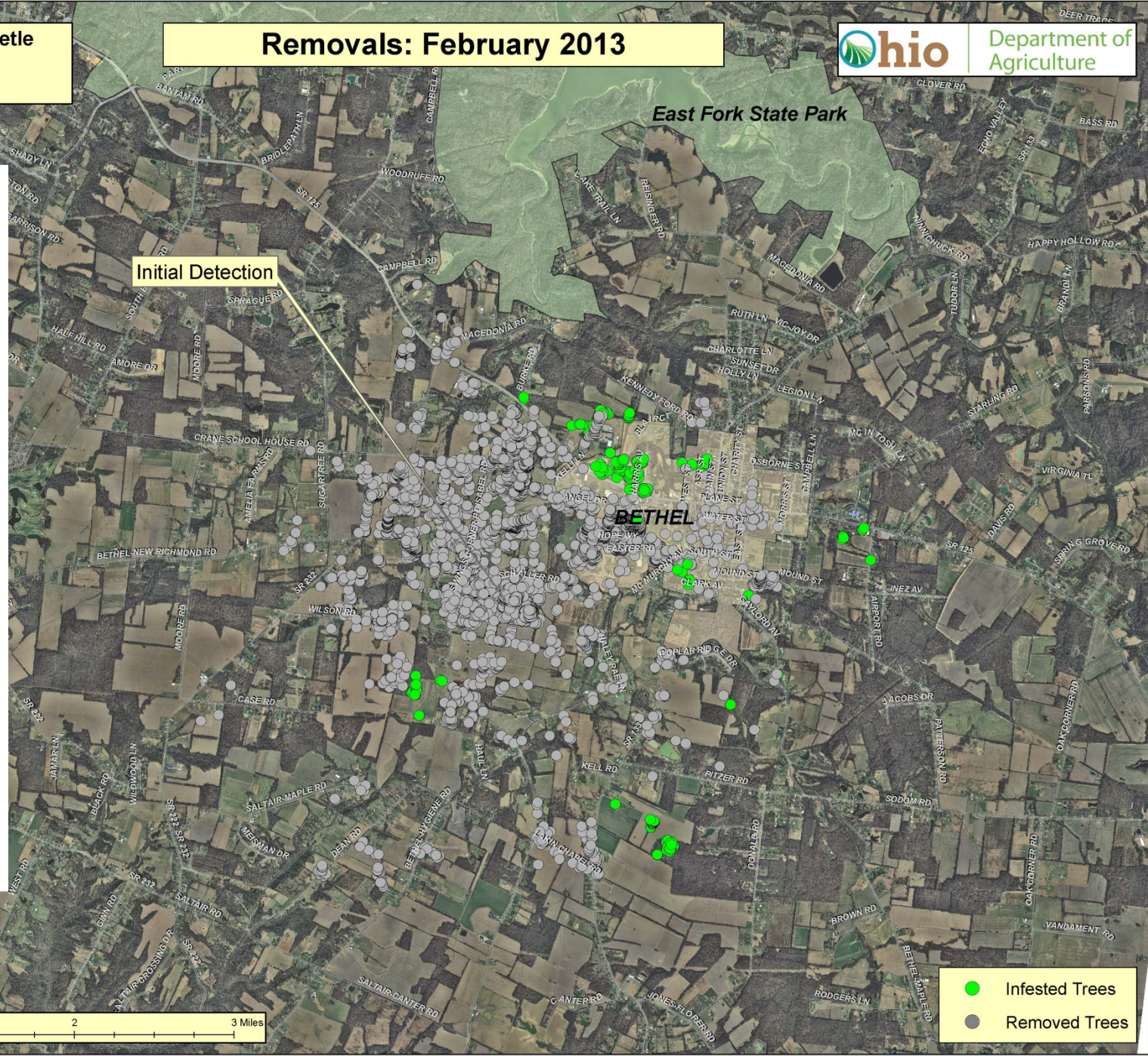
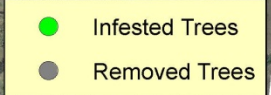
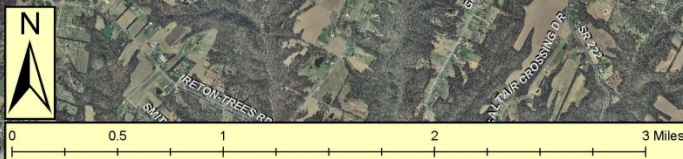
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Detections  
February 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: March 2013

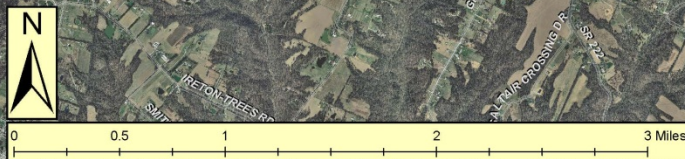
East Fork State Park

Initial Detection

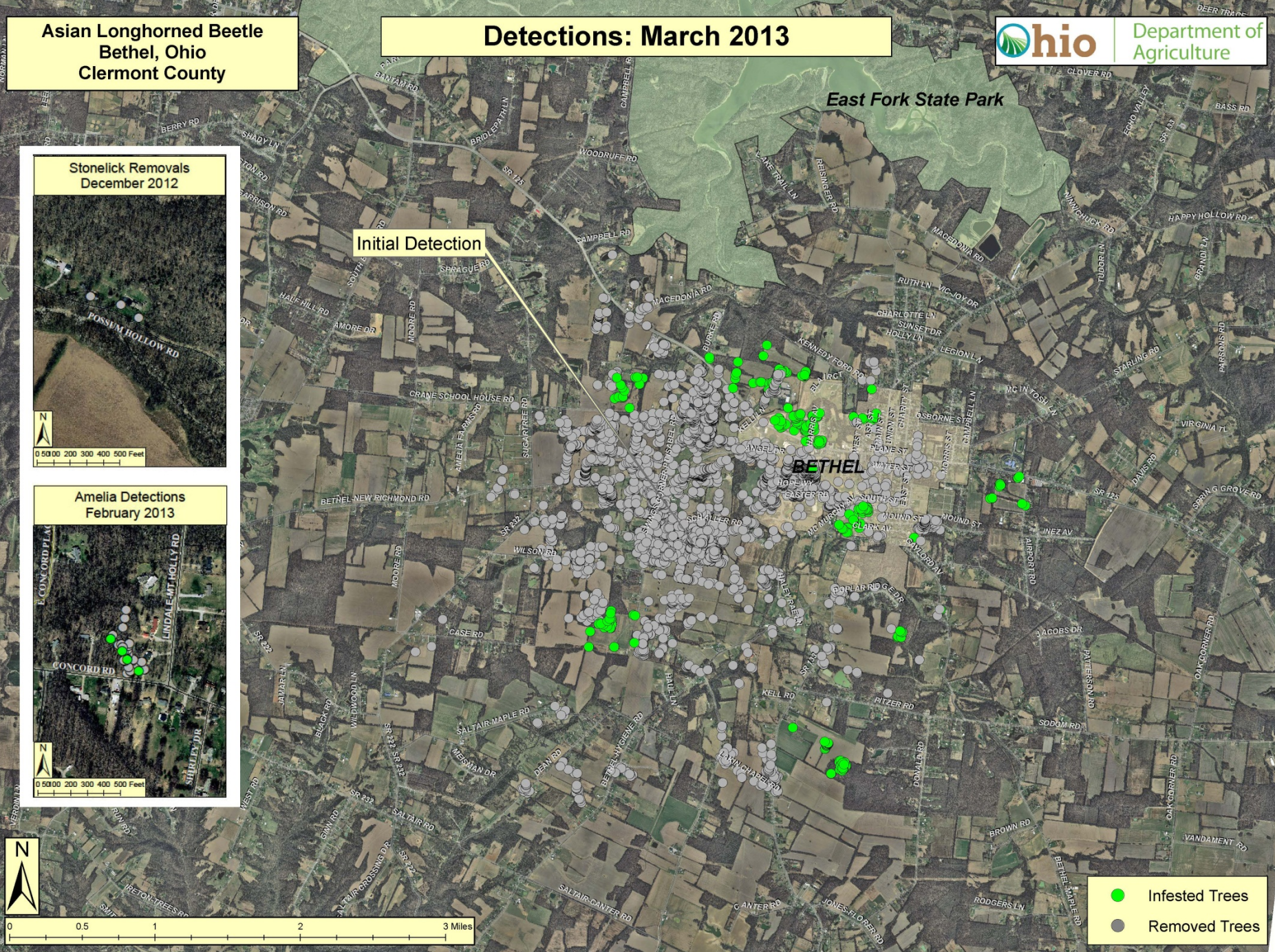
Stonelick Removes  
December 2012



Amelia Detections  
February 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: March 2013

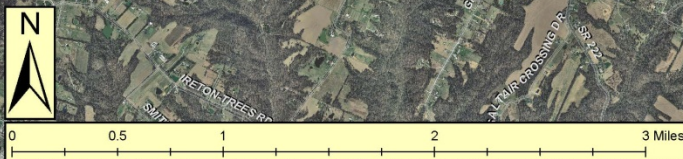
East Fork State Park

Initial Detection

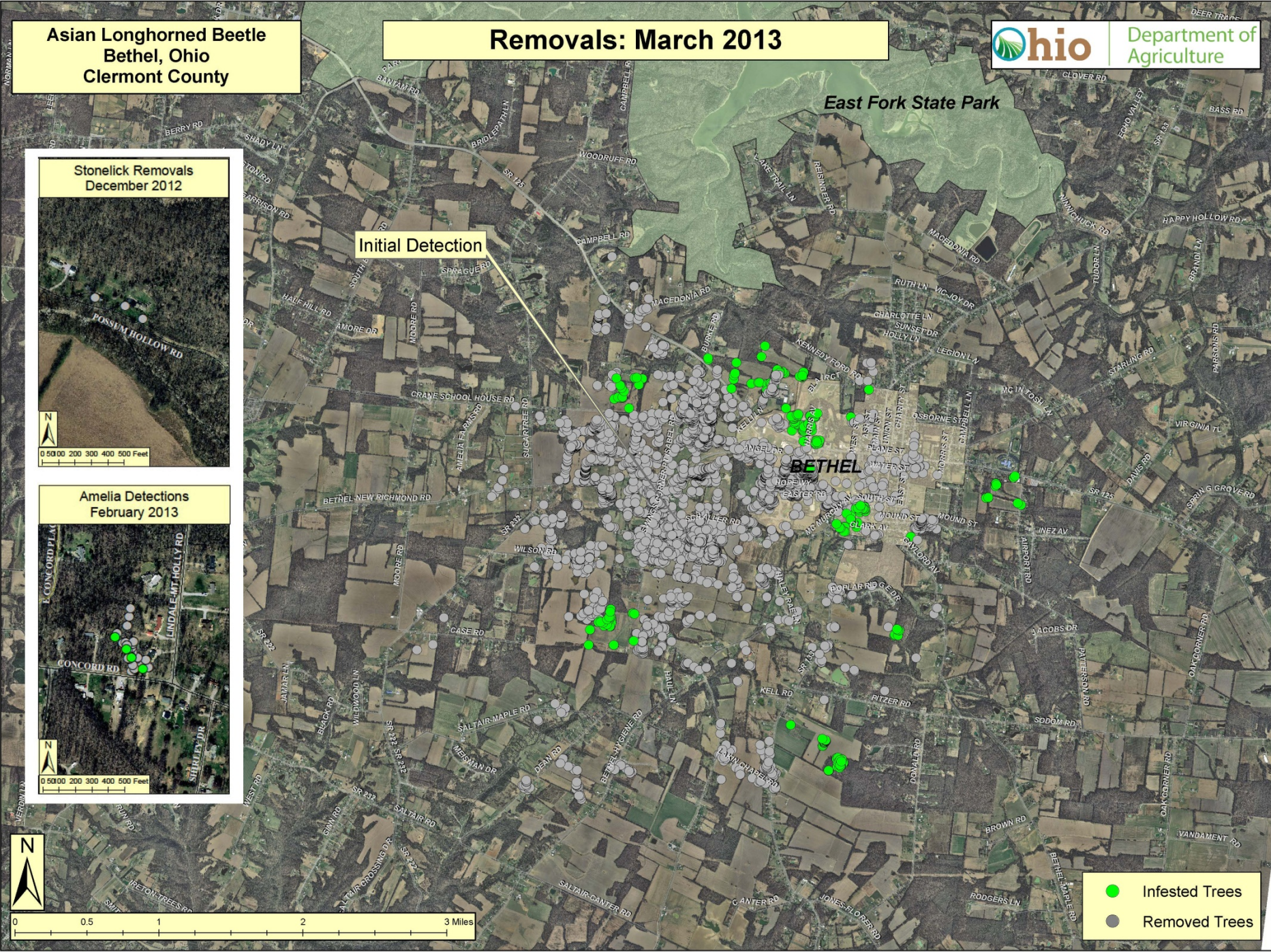
Stonelick Removals  
December 2012



Amelia Detections  
February 2013



- Infested Trees
- Removed Trees



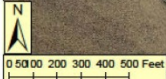
Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: April 2013

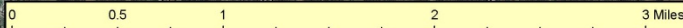
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Detections  
February 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: April 2013

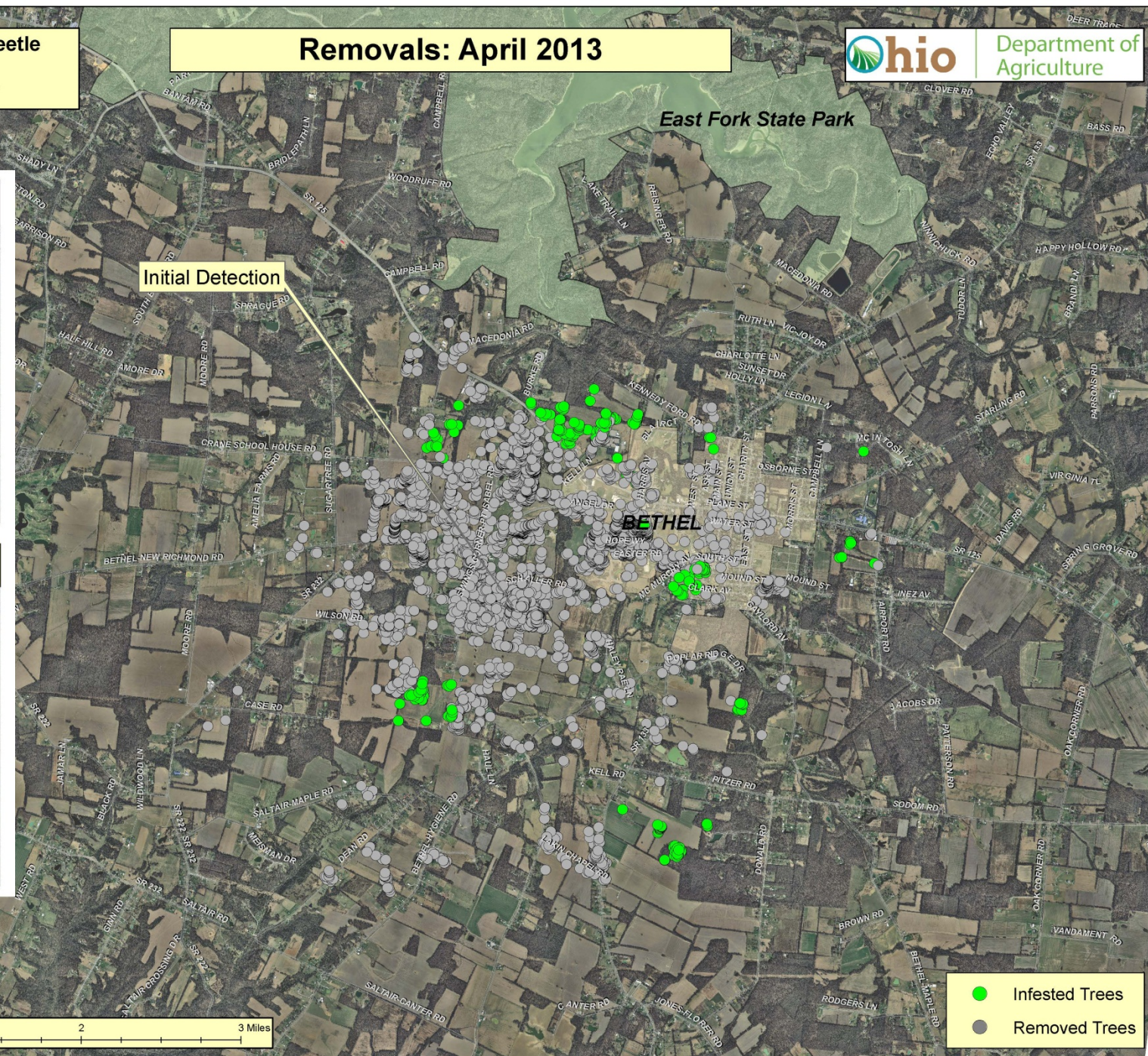
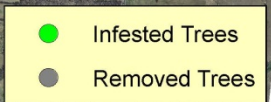
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
April 2013



**Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County**

**Detections: May 2013**

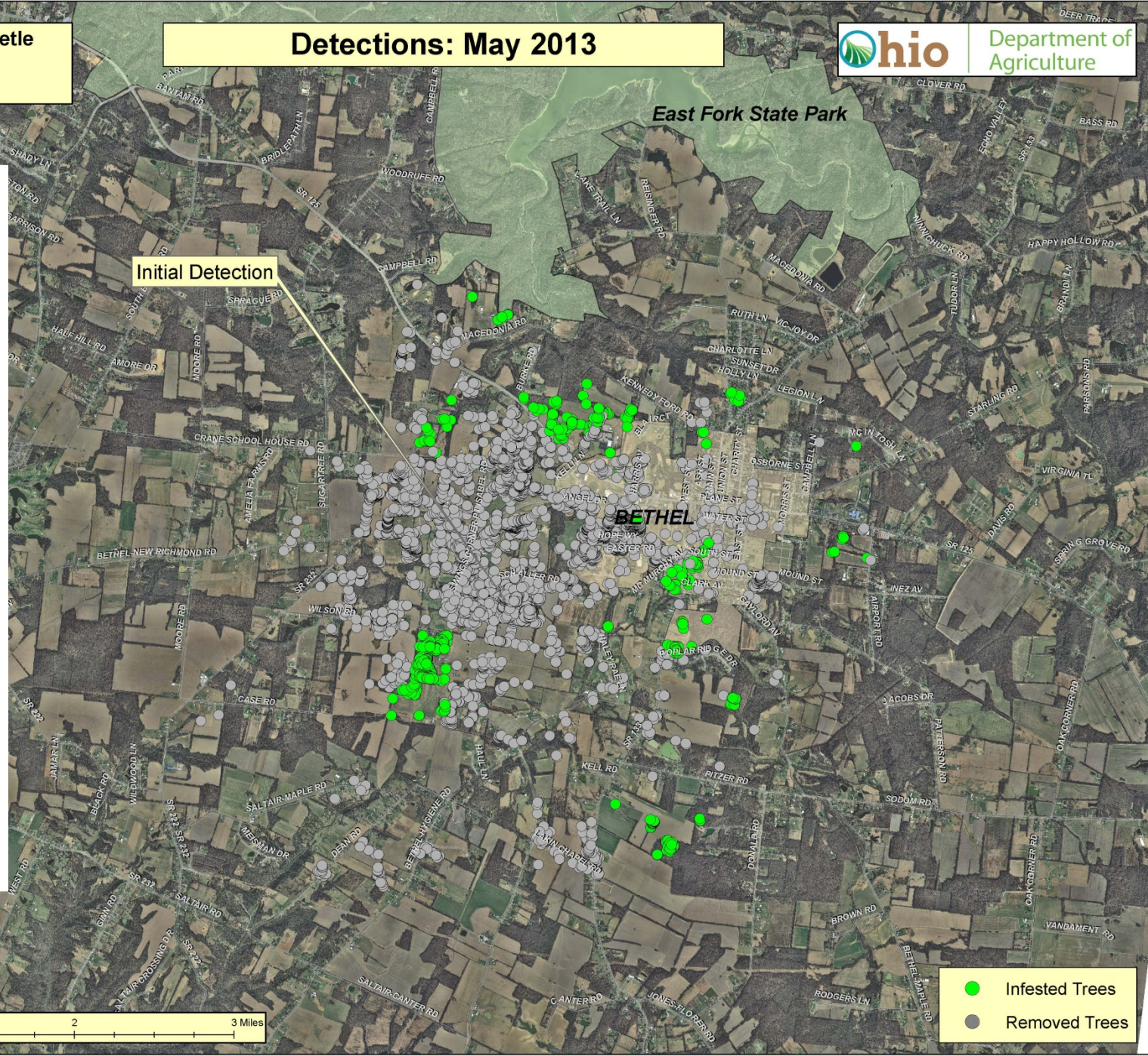
East Fork State Park

Initial Detection

**Stonelick Removes  
December 2012**



**Amelia Removes  
April 2013**



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: May 2013

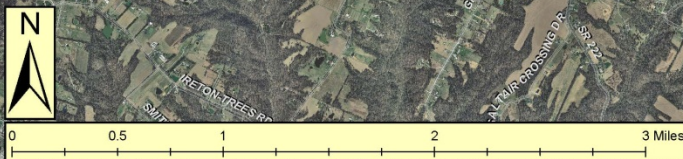
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
April 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: June 2013

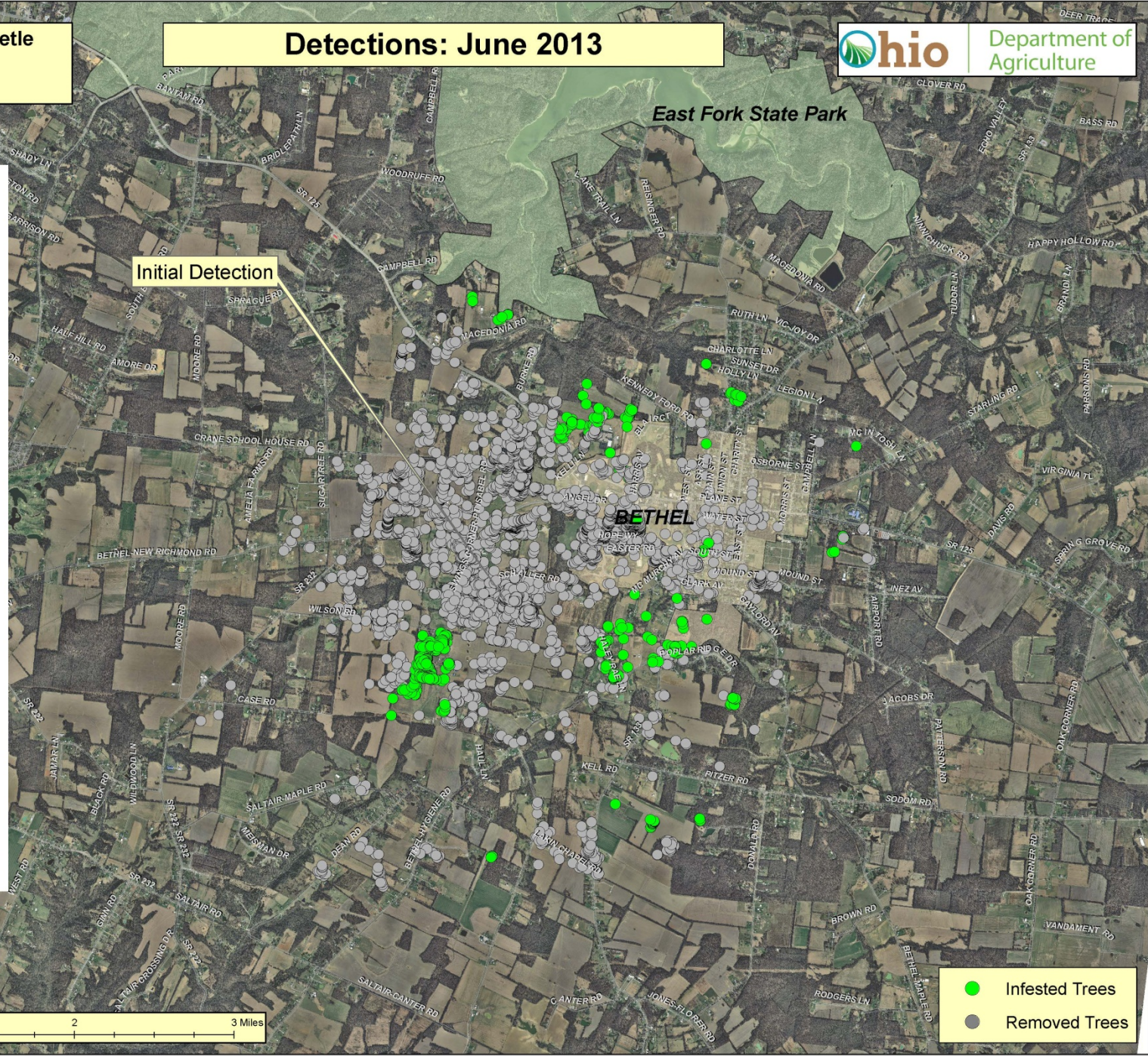
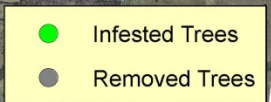
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
April 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: June 2013

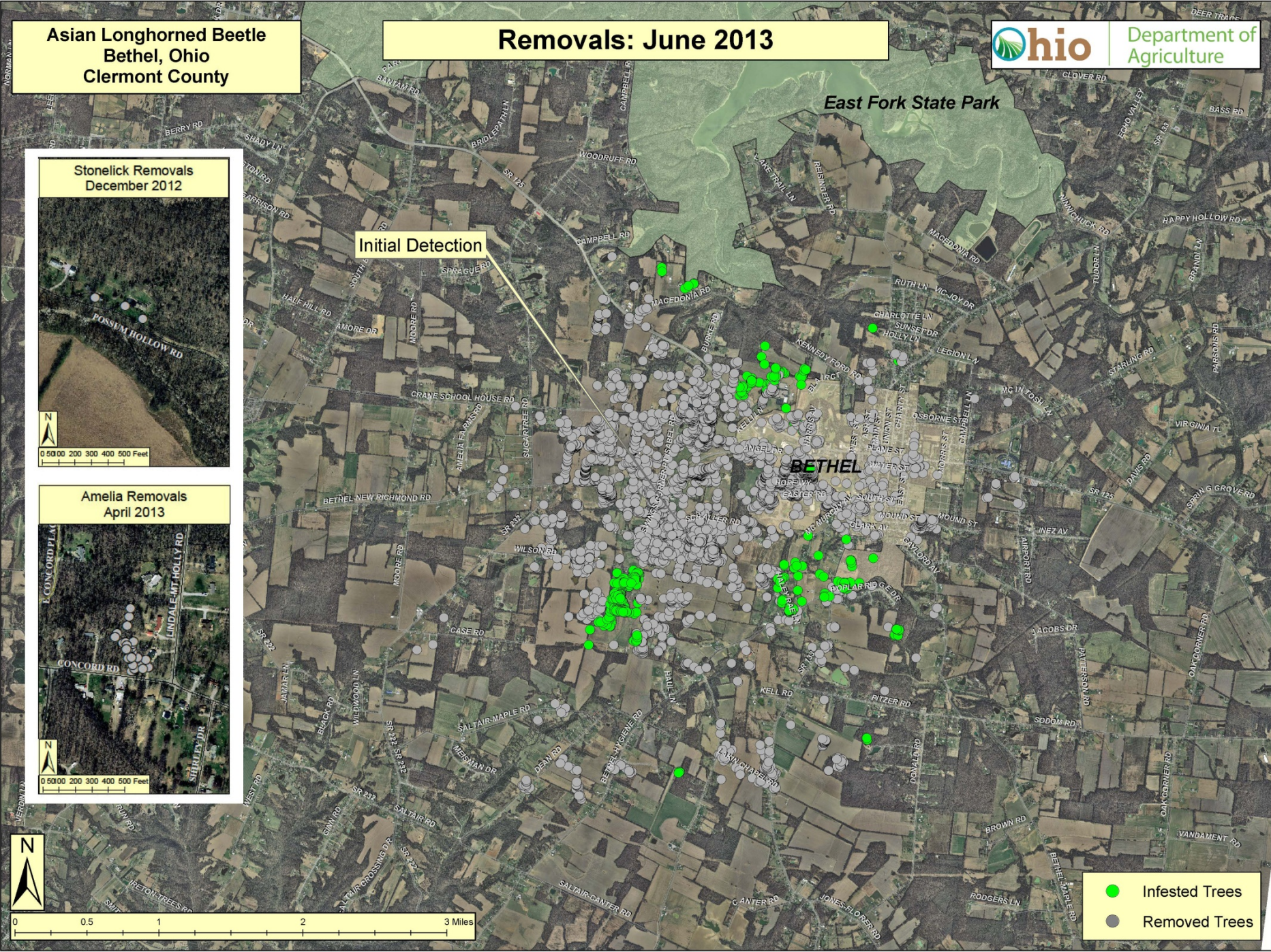
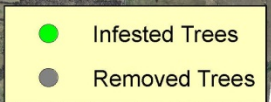
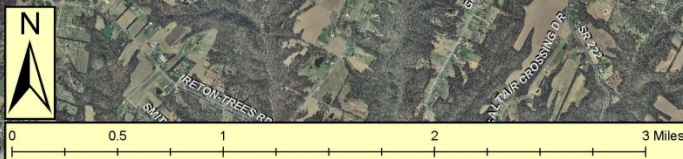
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
April 2013



**Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County**

**Detections: July 2013**

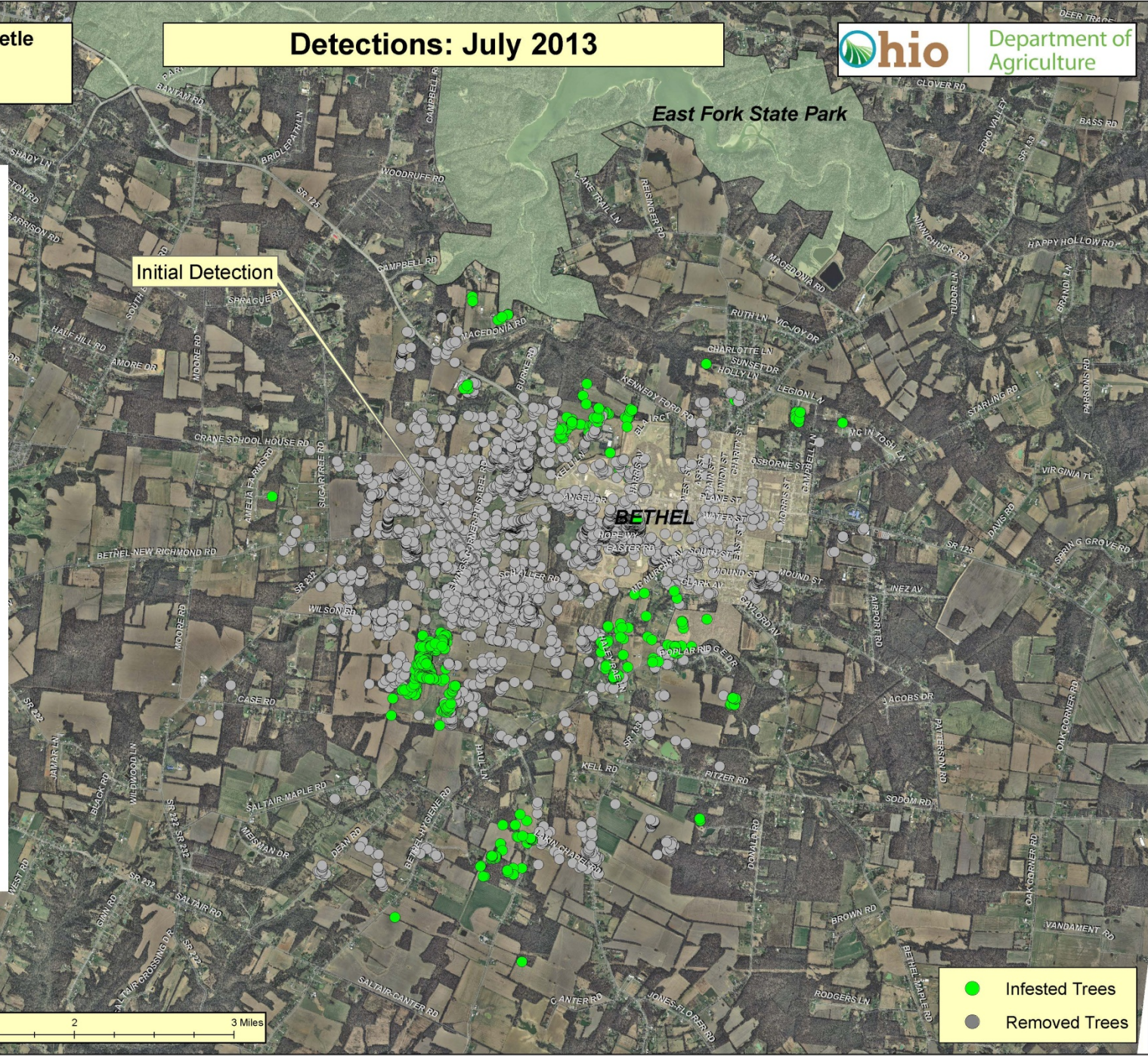
**East Fork State Park**



**Initial Detection**

**Stonelick Removes  
December 2012**



**Amelia Detections  
July 2013**



-  Infested Trees
-  Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: July 2013

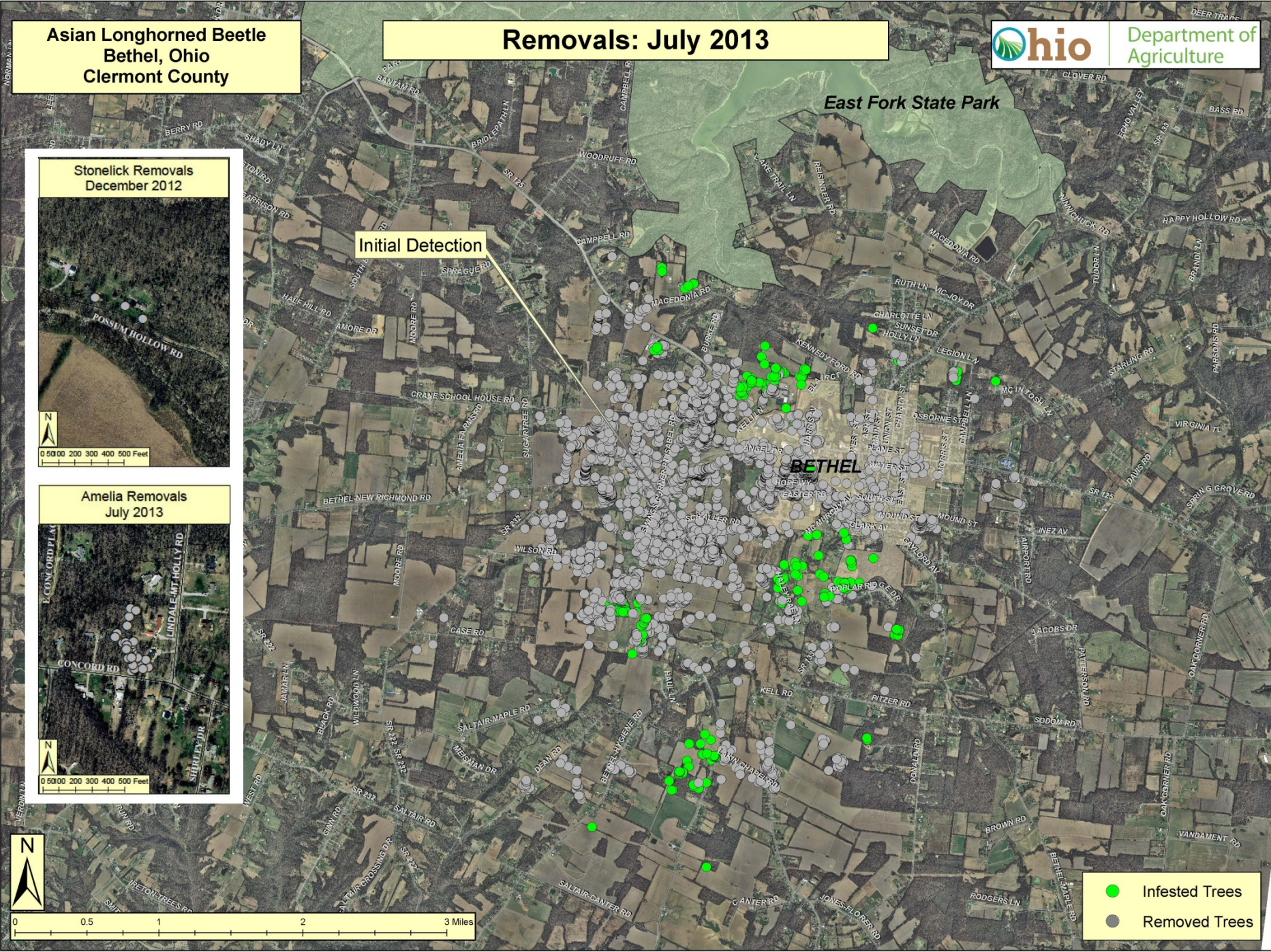
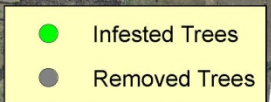
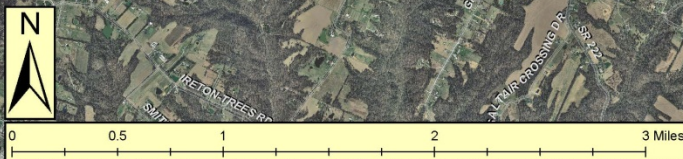
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: August 2013

East Fork State Park

Initial Detection

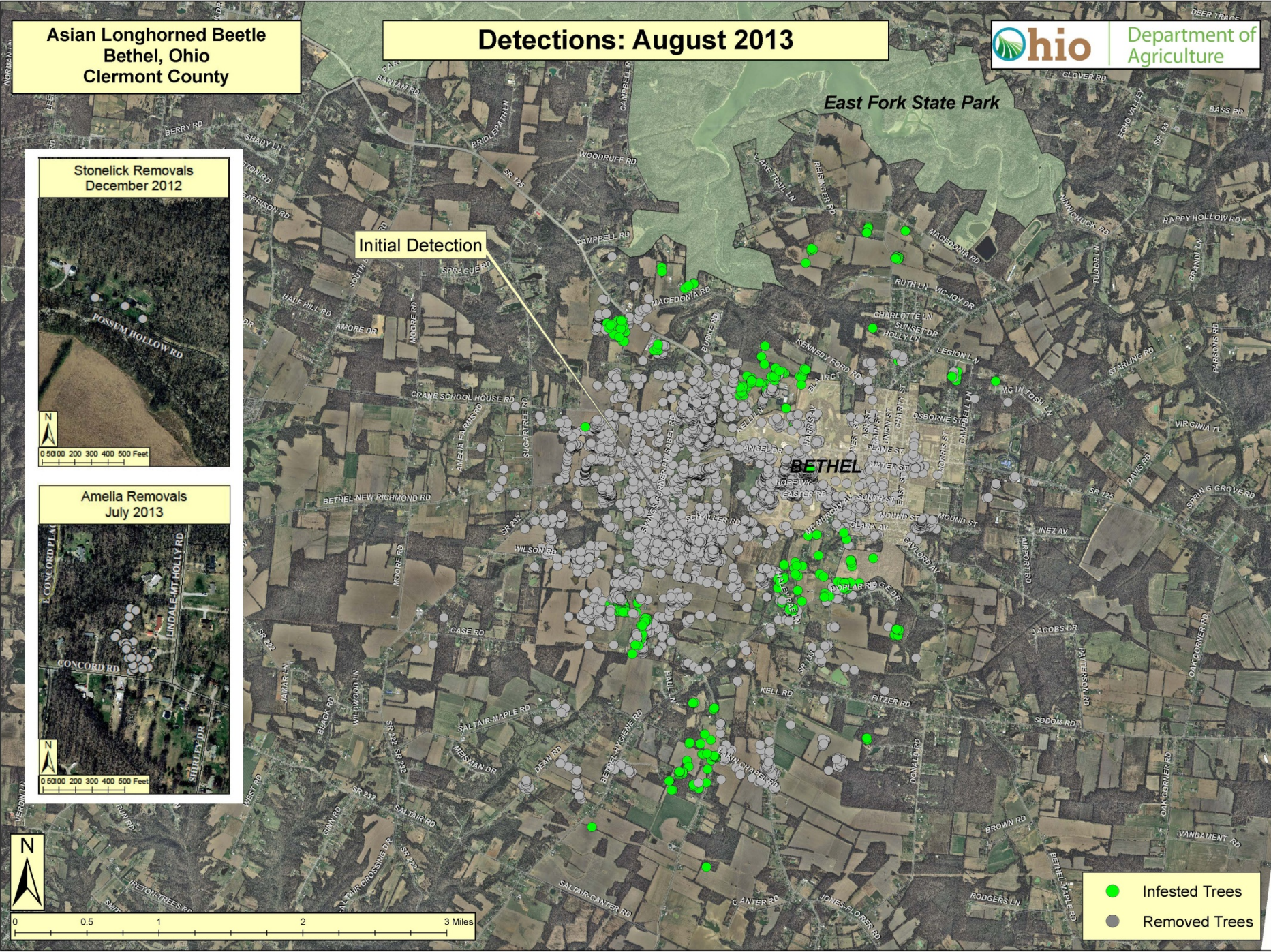
Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: August 2013

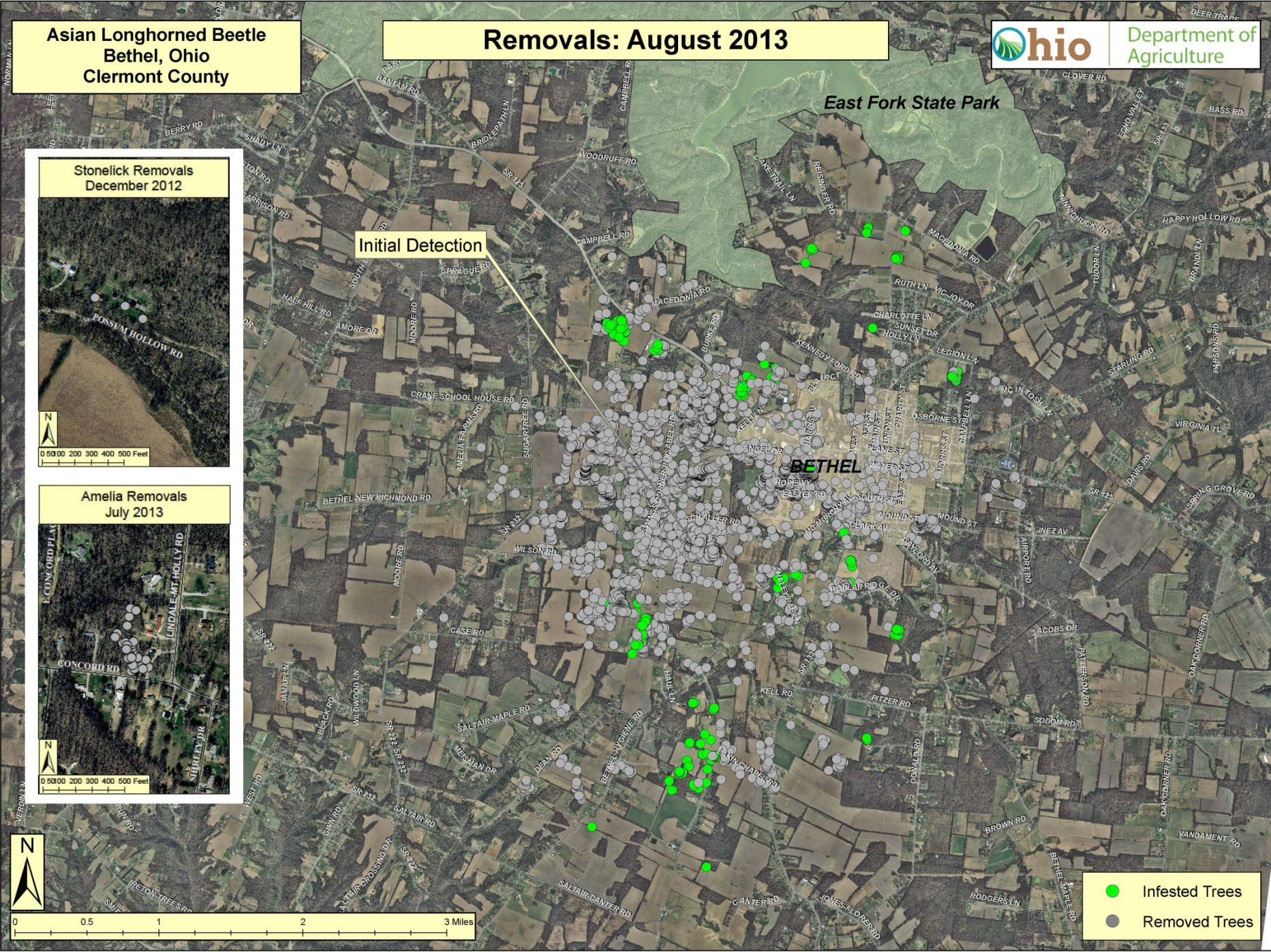
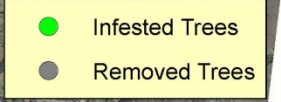
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: September 2013

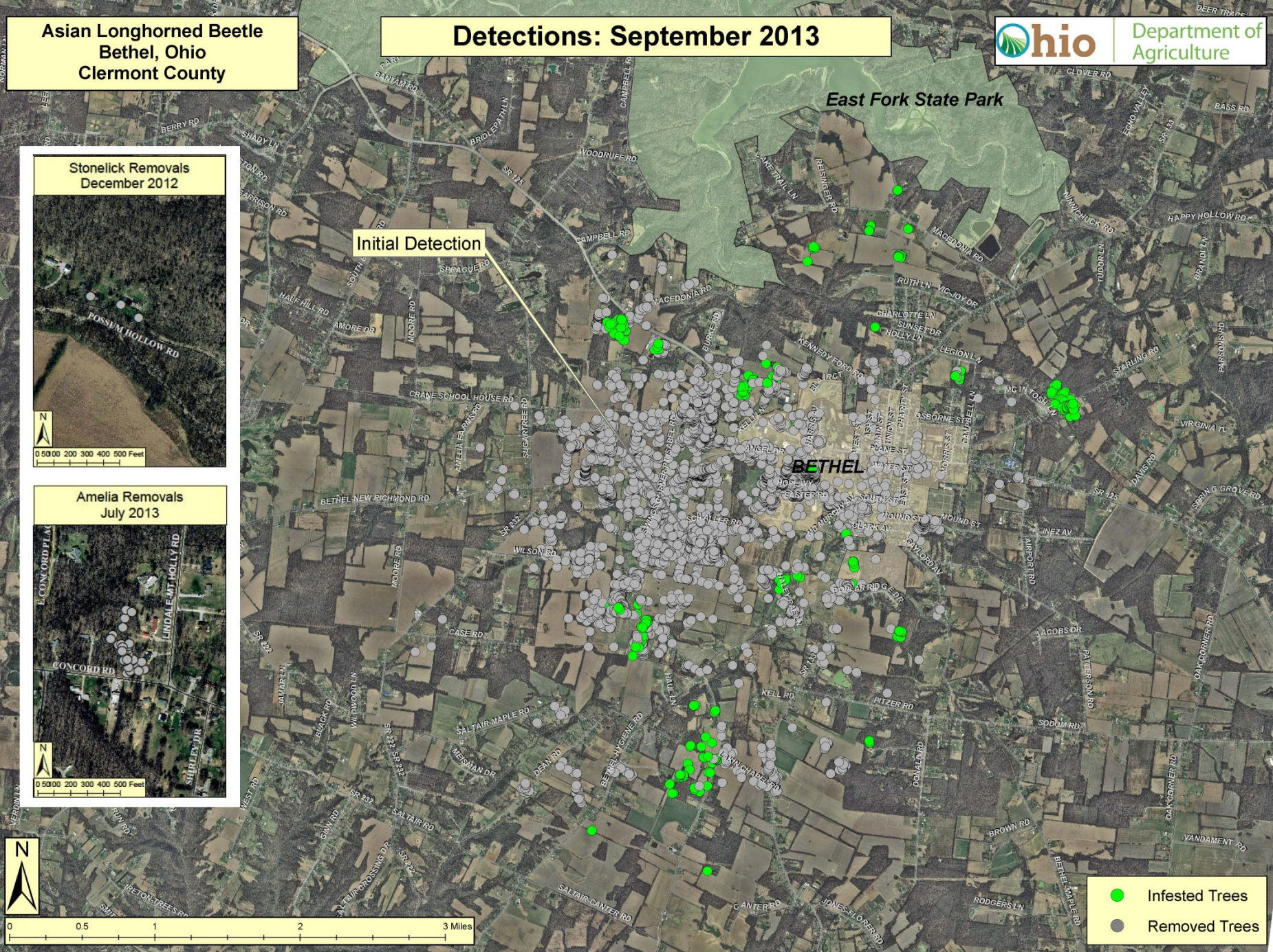
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: September 2013

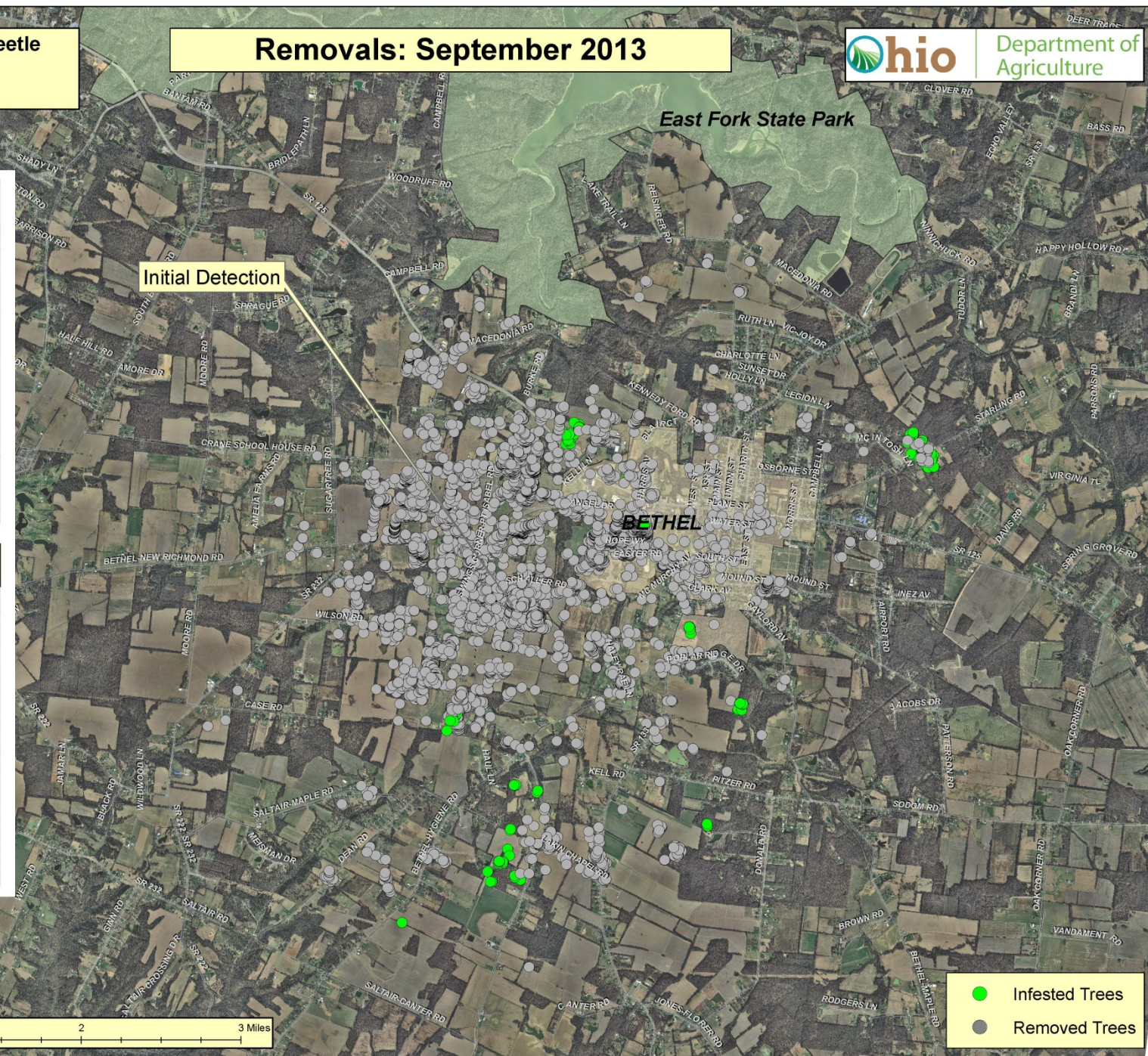
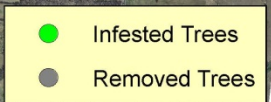
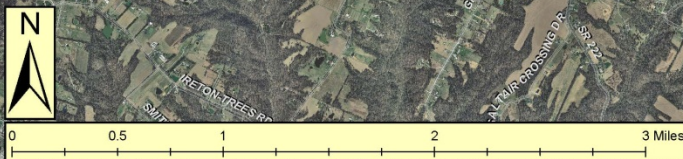
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: October 2013

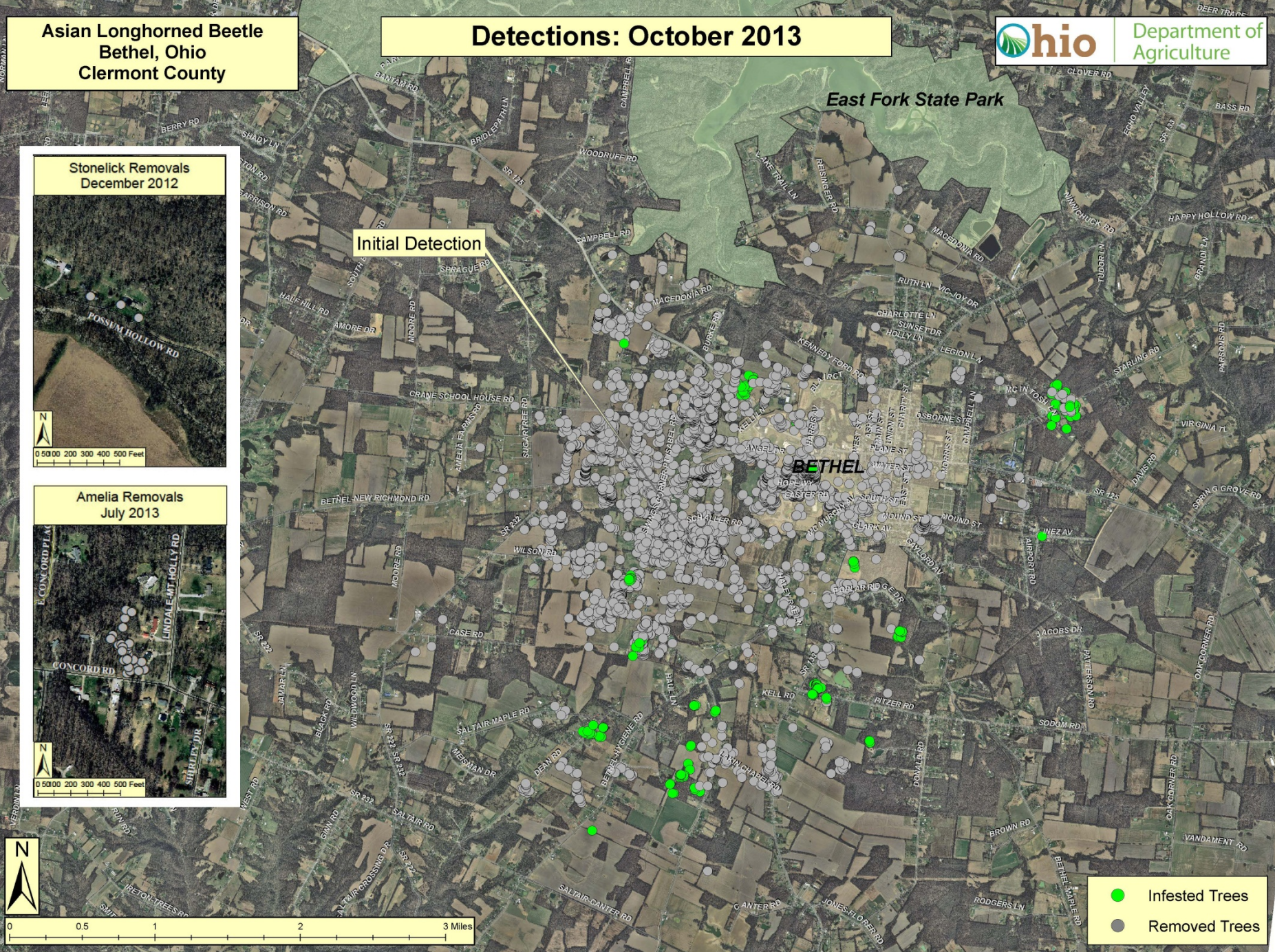
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: October 2013

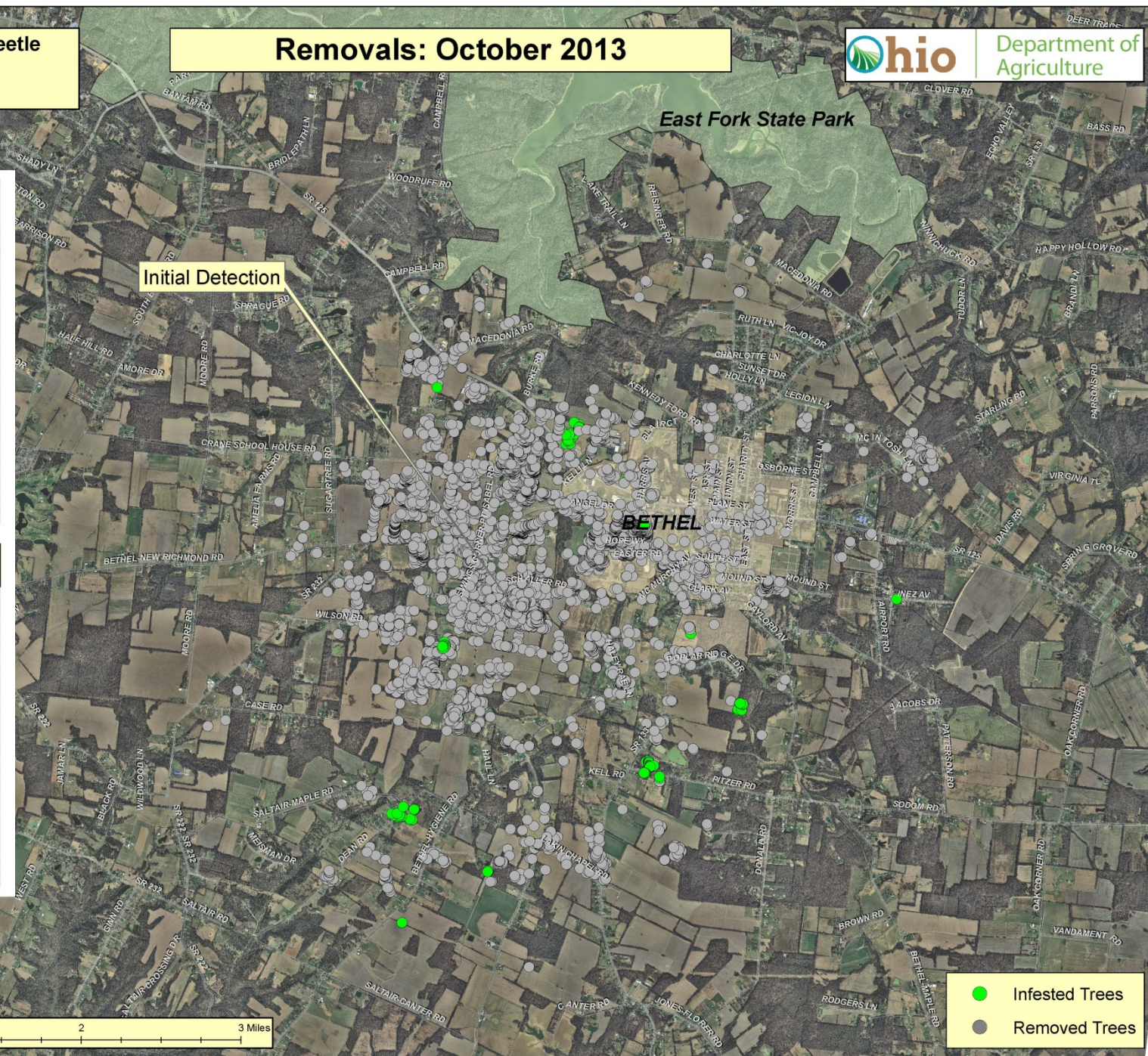
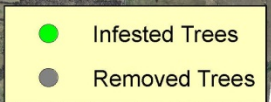
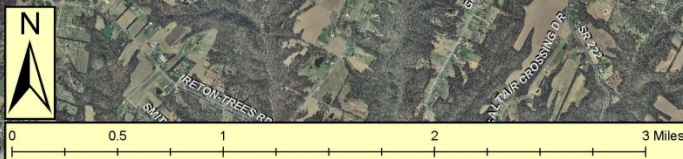
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: November 2013

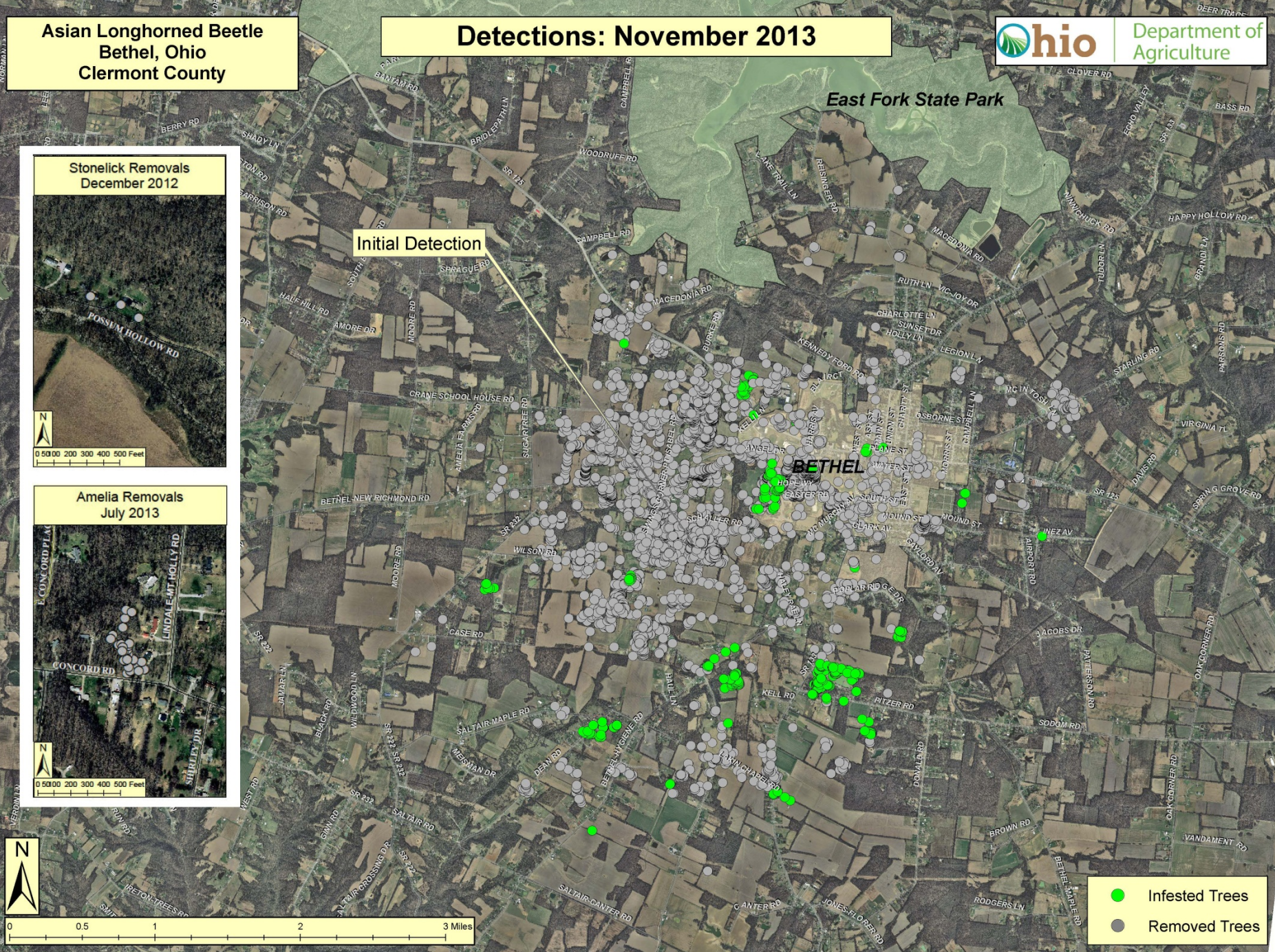
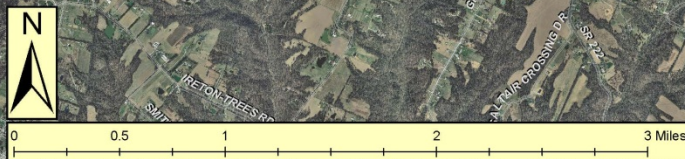
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: November 2013

East Fork State Park

Initial Detection

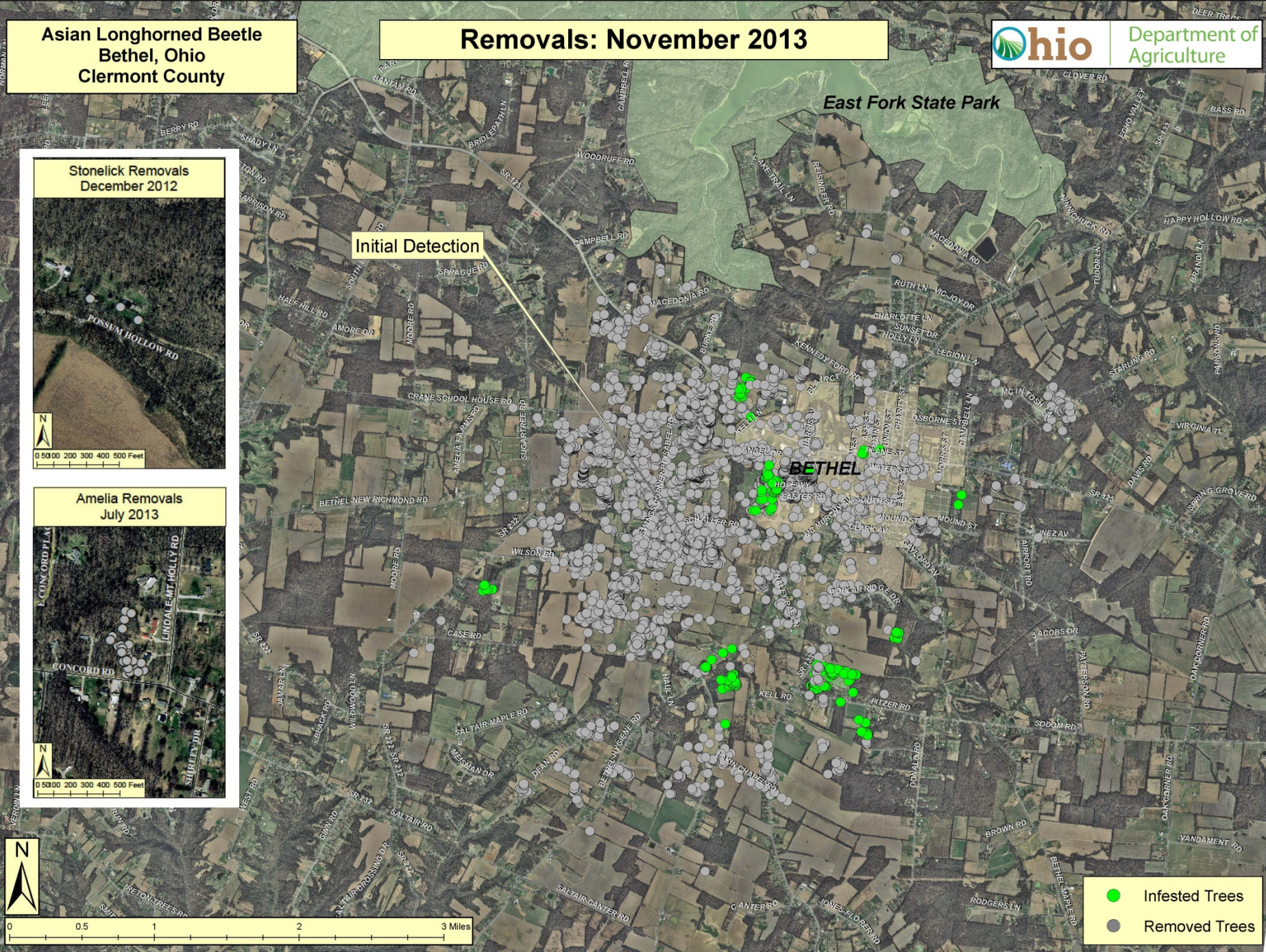
Stonelick Removals  
December 2012



Amelia Removals  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: December 2013

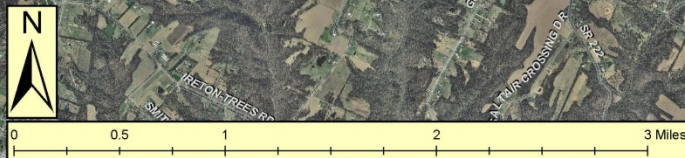
East Fork State Park

Initial Detection

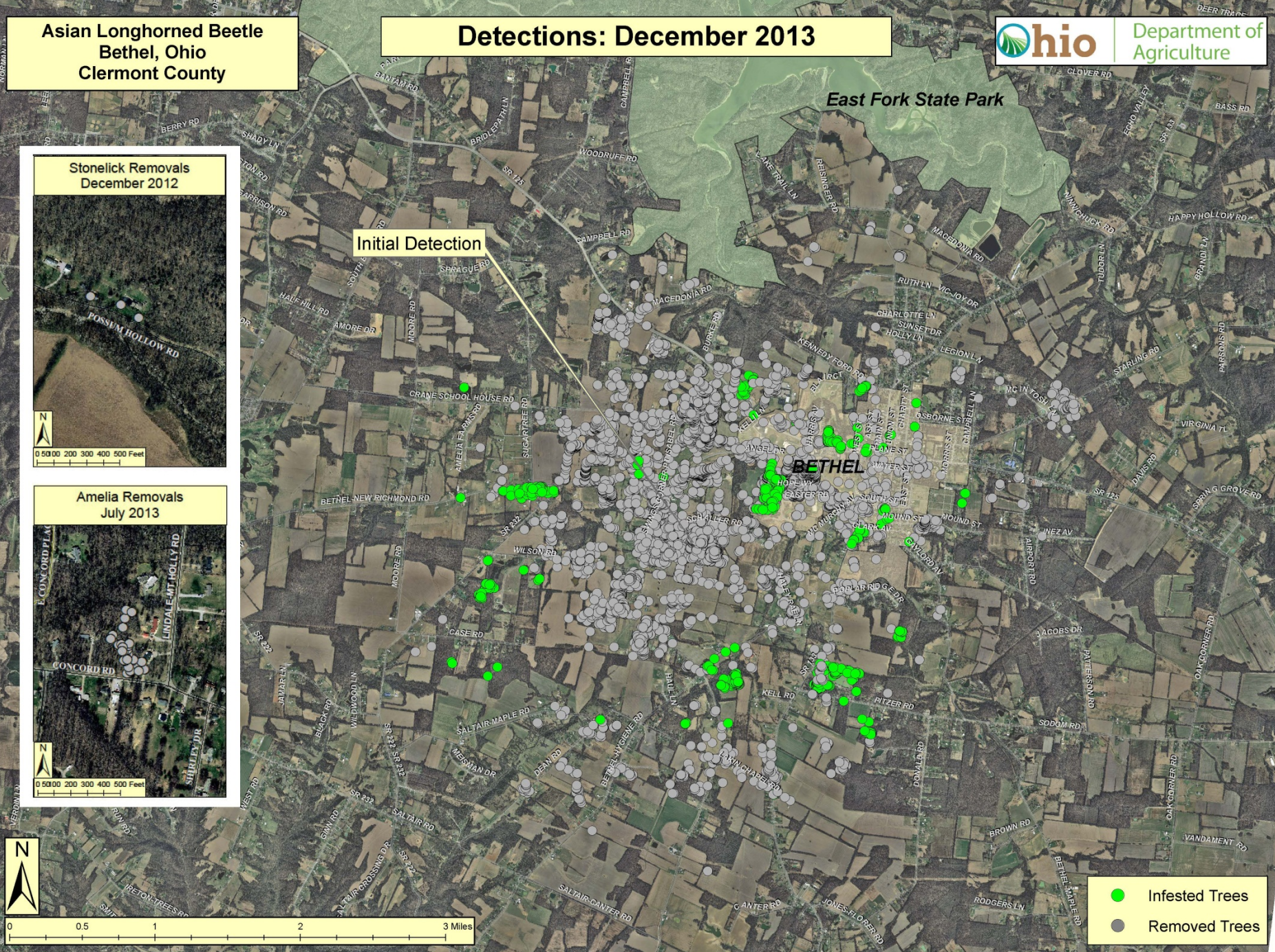
Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: December 2013

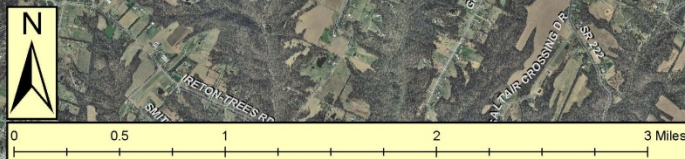
East Fork State Park

Initial Detection

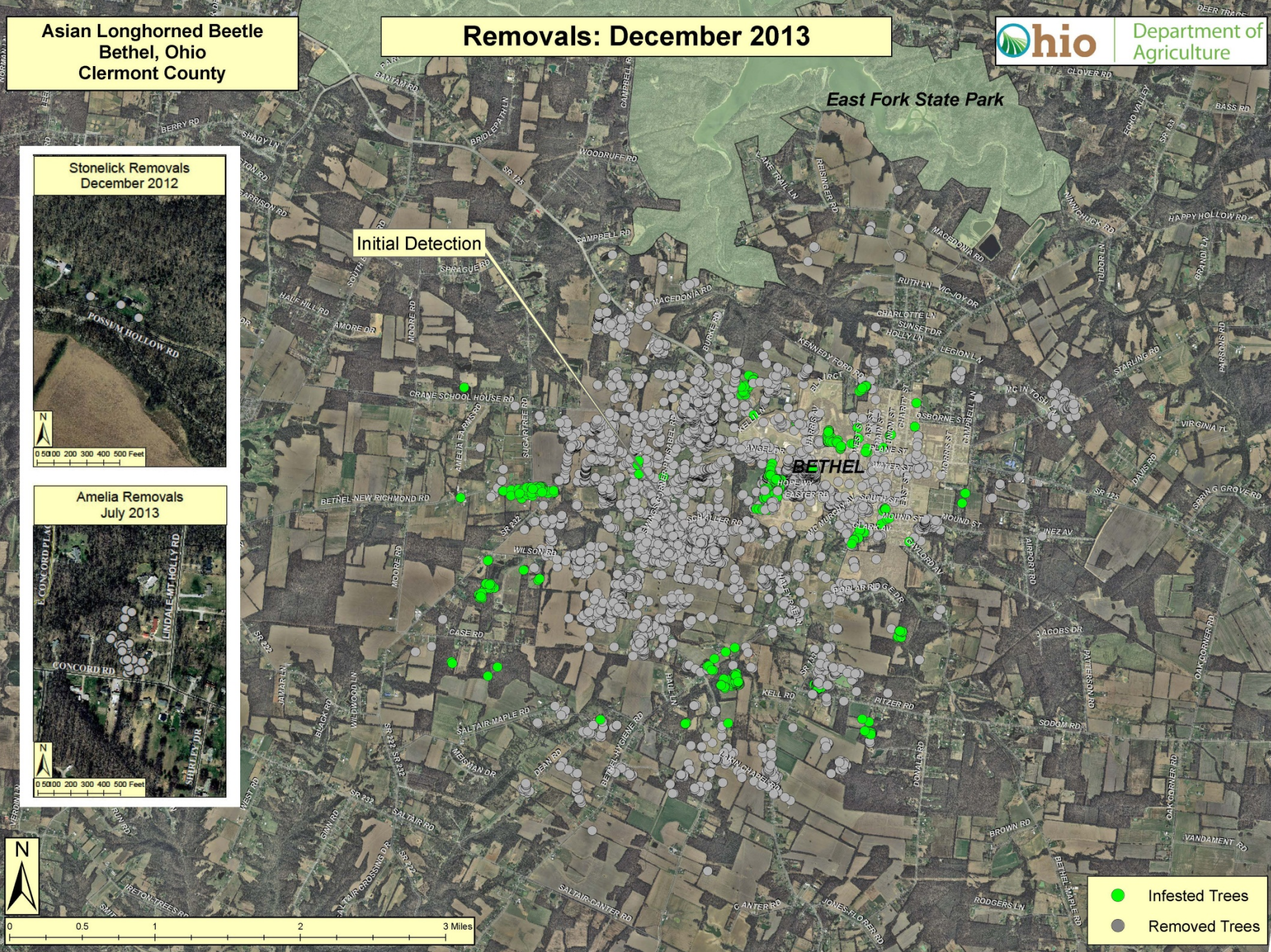
Stonelick Removals  
December 2012



Amelia Removals  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: January 2014

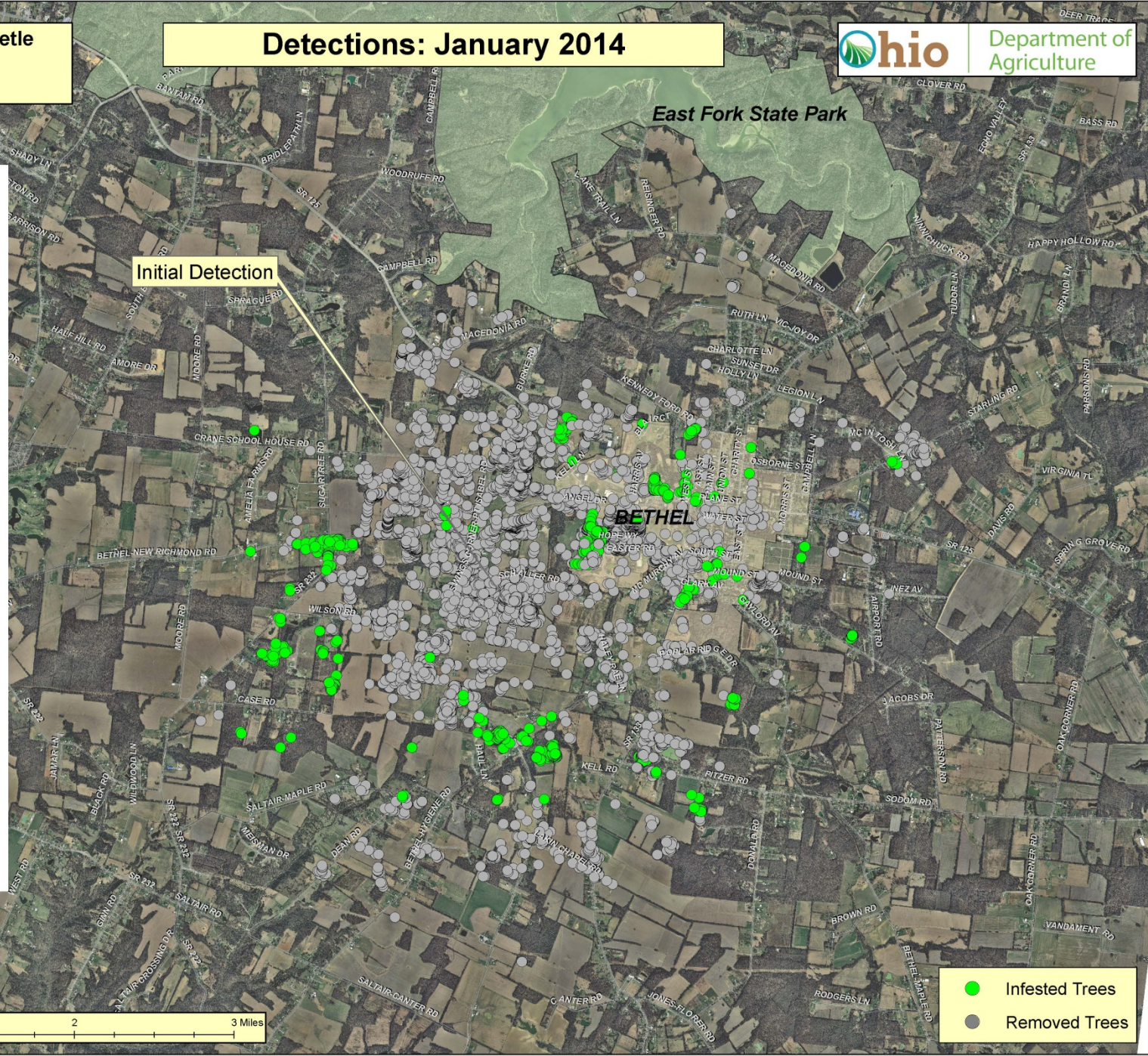
East Fork State Park

Initial Detection

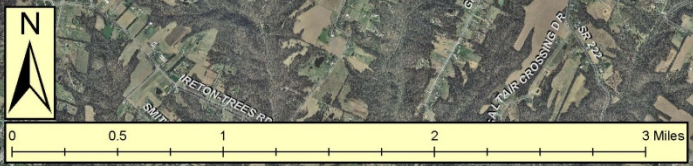
Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees





Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: January 2014

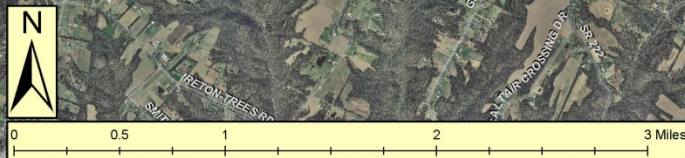
East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: February 2014

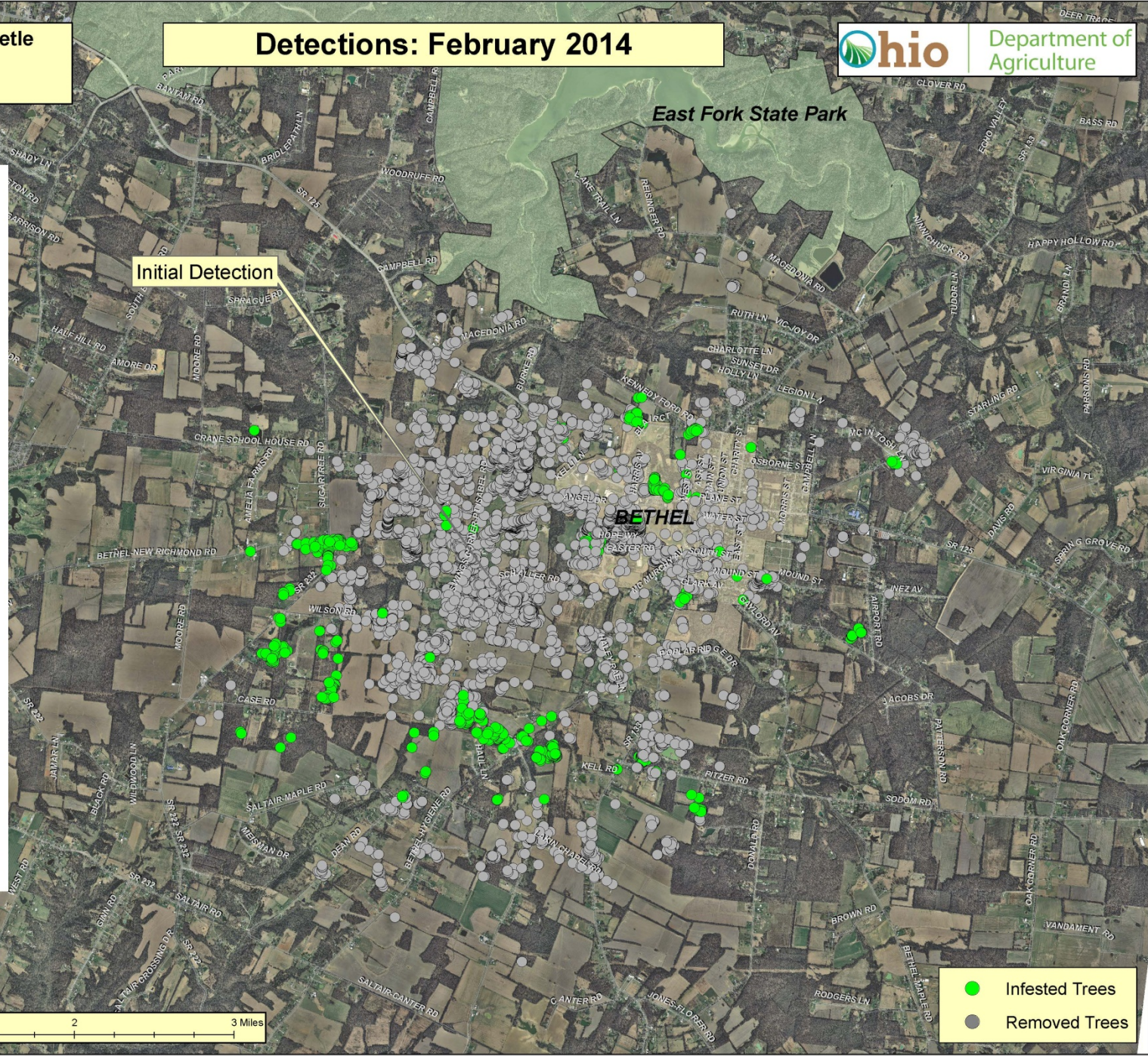
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: February 2014

East Fork State Park

Initial Detection

Stonelick Removals  
December 2012



Amelia Removals  
July 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: March 2014

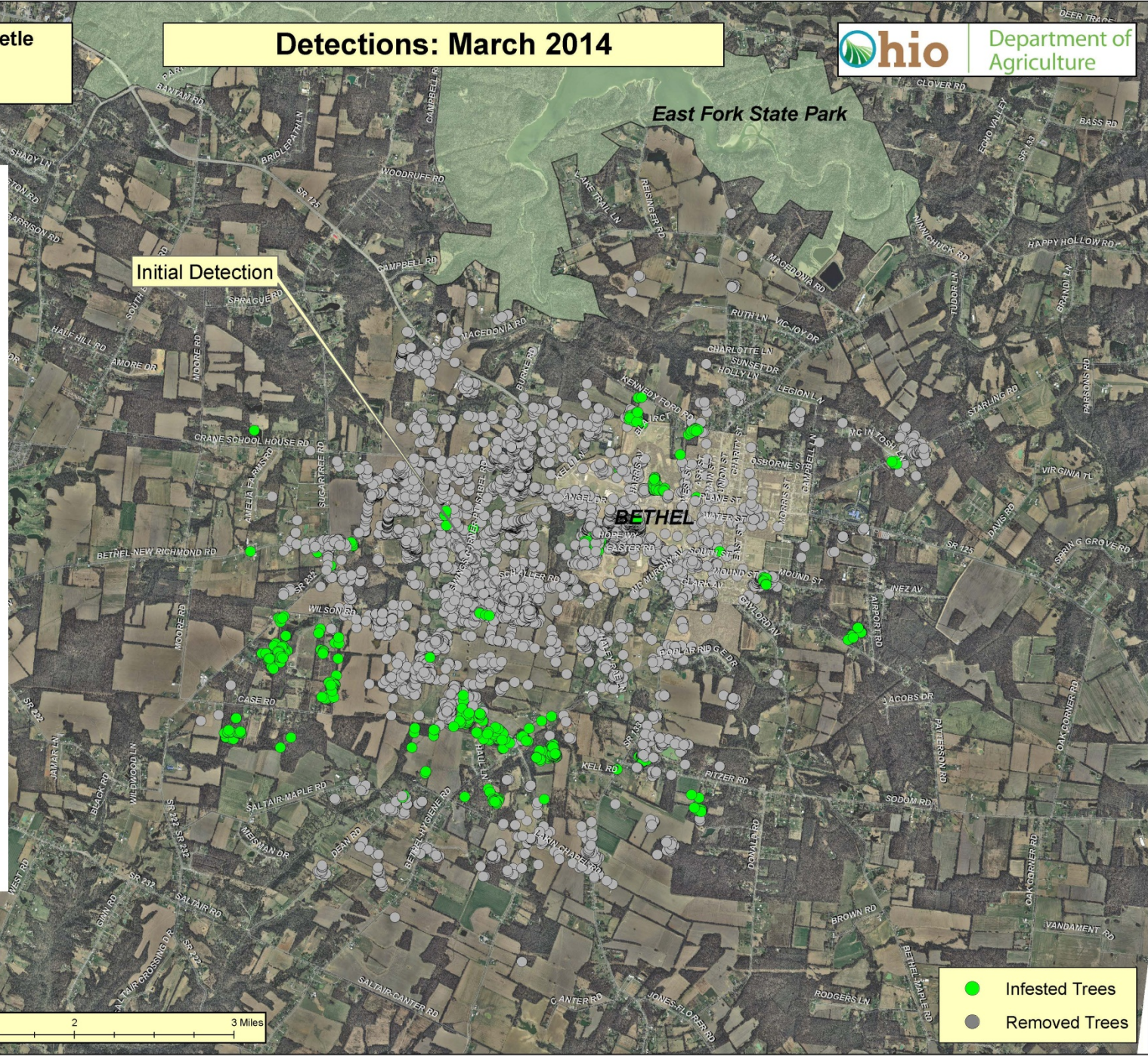
East Fork State Park

Initial Detection

Stonelick Removes  
December 2012



Amelia Removes  
July 2013



- Infested Trees
- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: March 2014

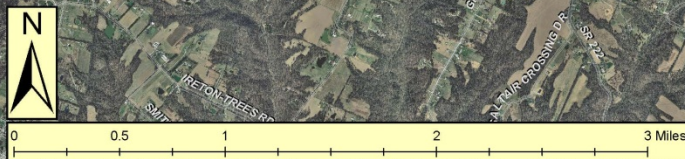
East Fork State Park

Initial Detection

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December 2012



Amelia Removals  
July 2013



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- Removed Trees

Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: April 2014

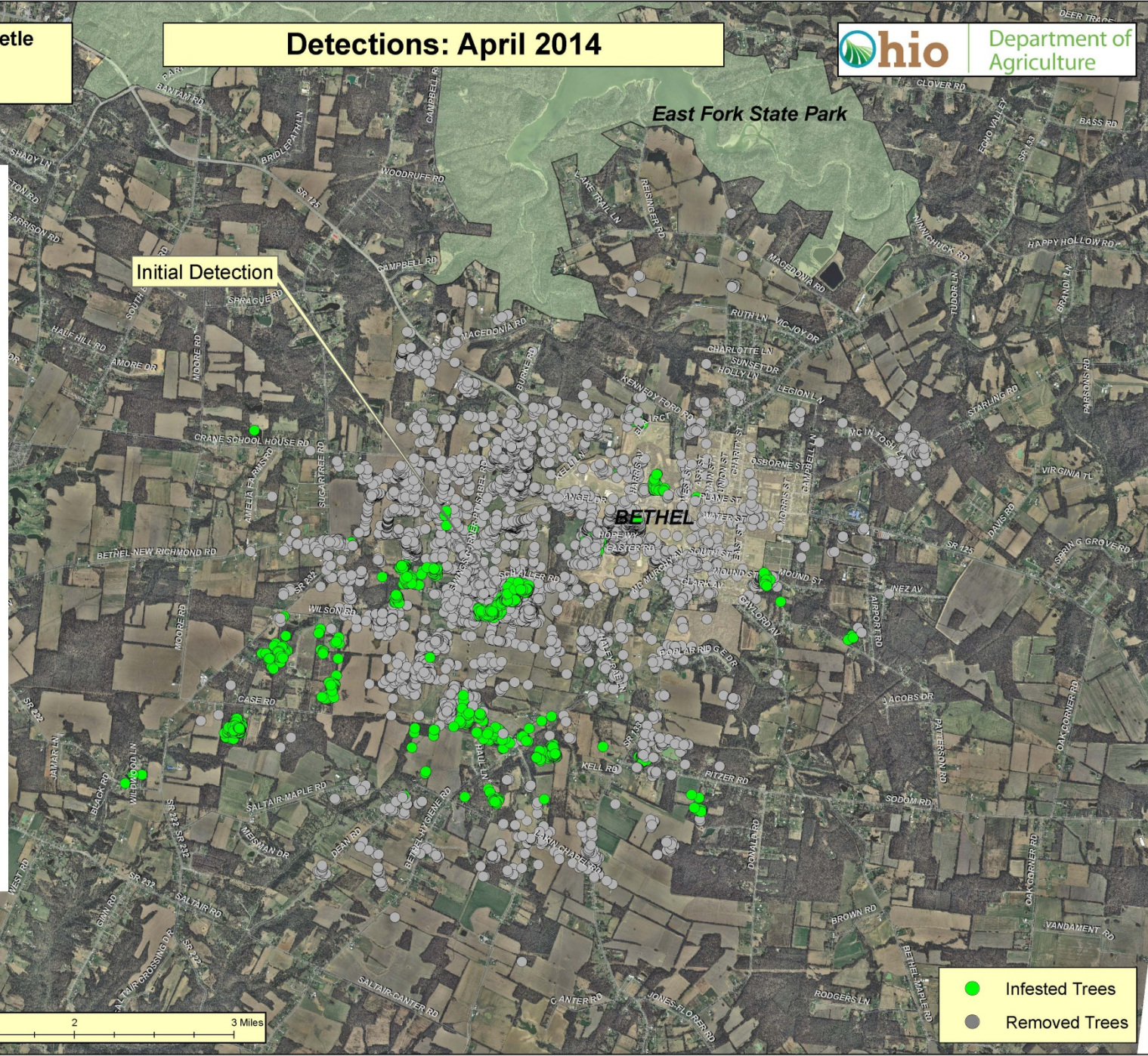
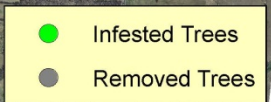
East Fork State Park

Initial Detection

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December 2012



Amelia Removes  
July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: April 2014

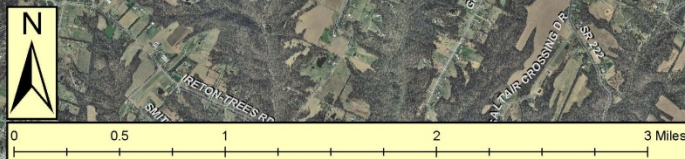
East Fork State Park

Initial Detection

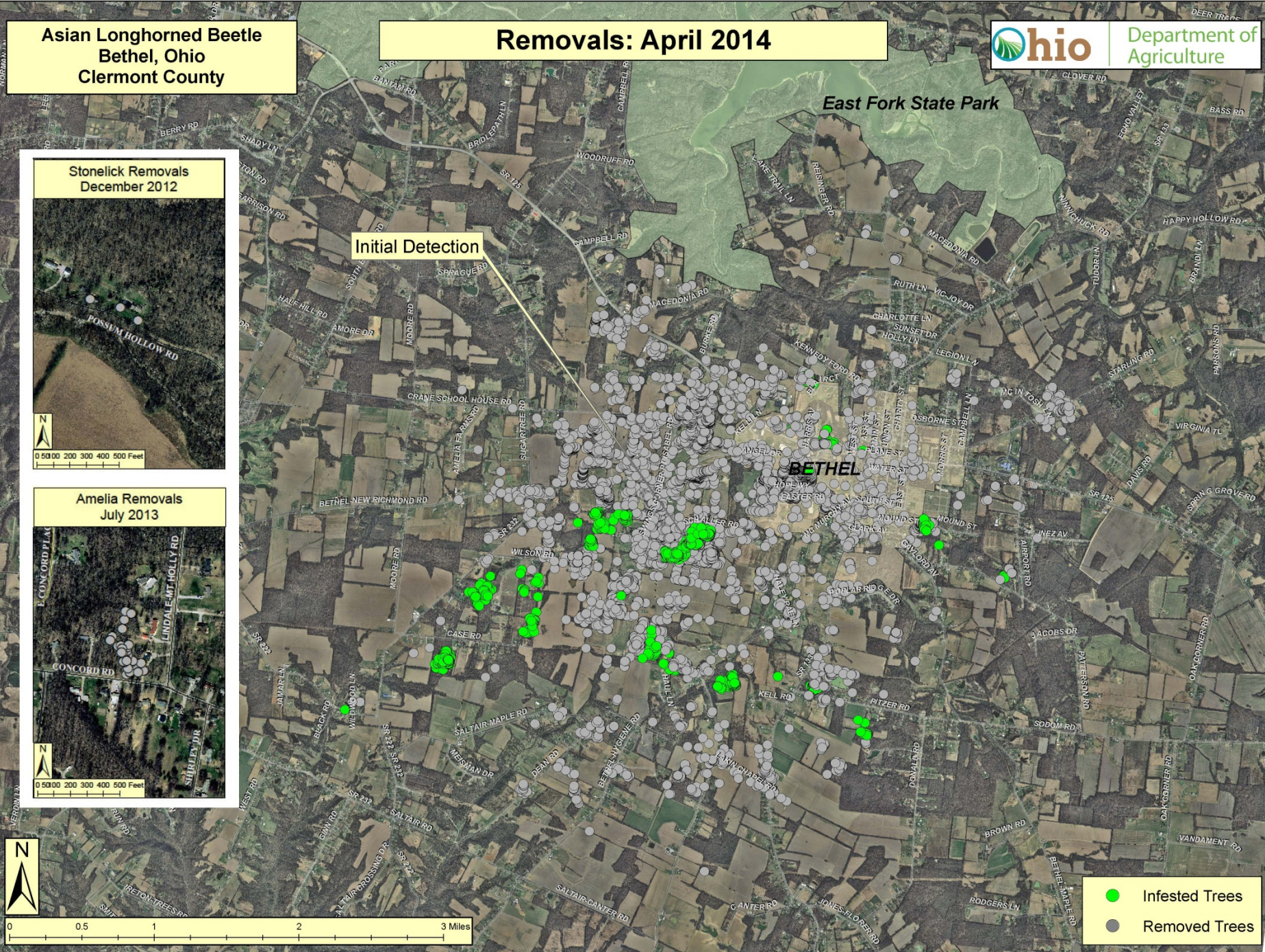
Stonelick Removals  
December 2012



Amelia Removals  
July 2013



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: May 2014

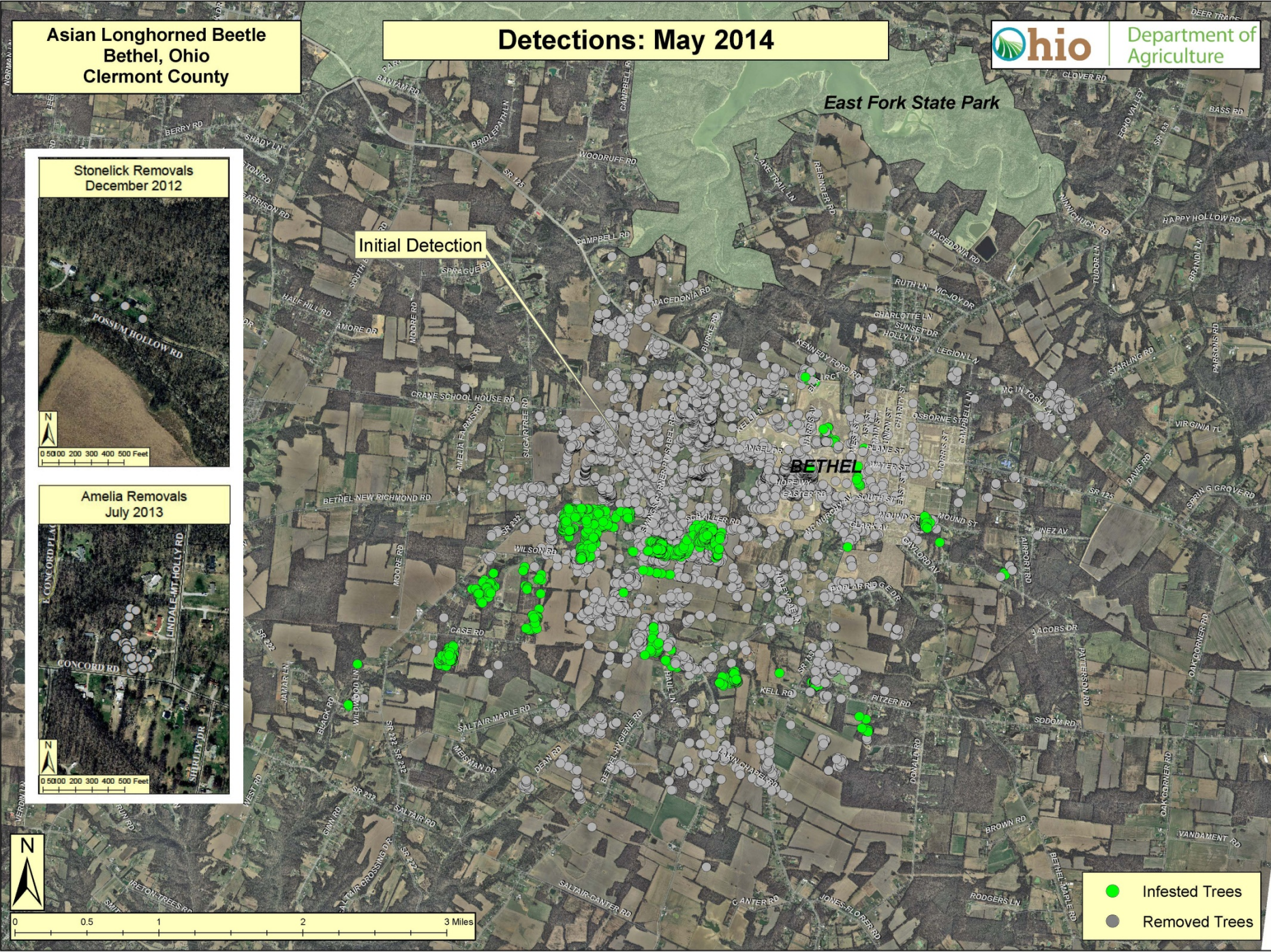
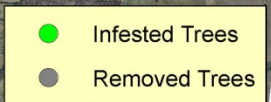
East Fork State Park

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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: May 2014

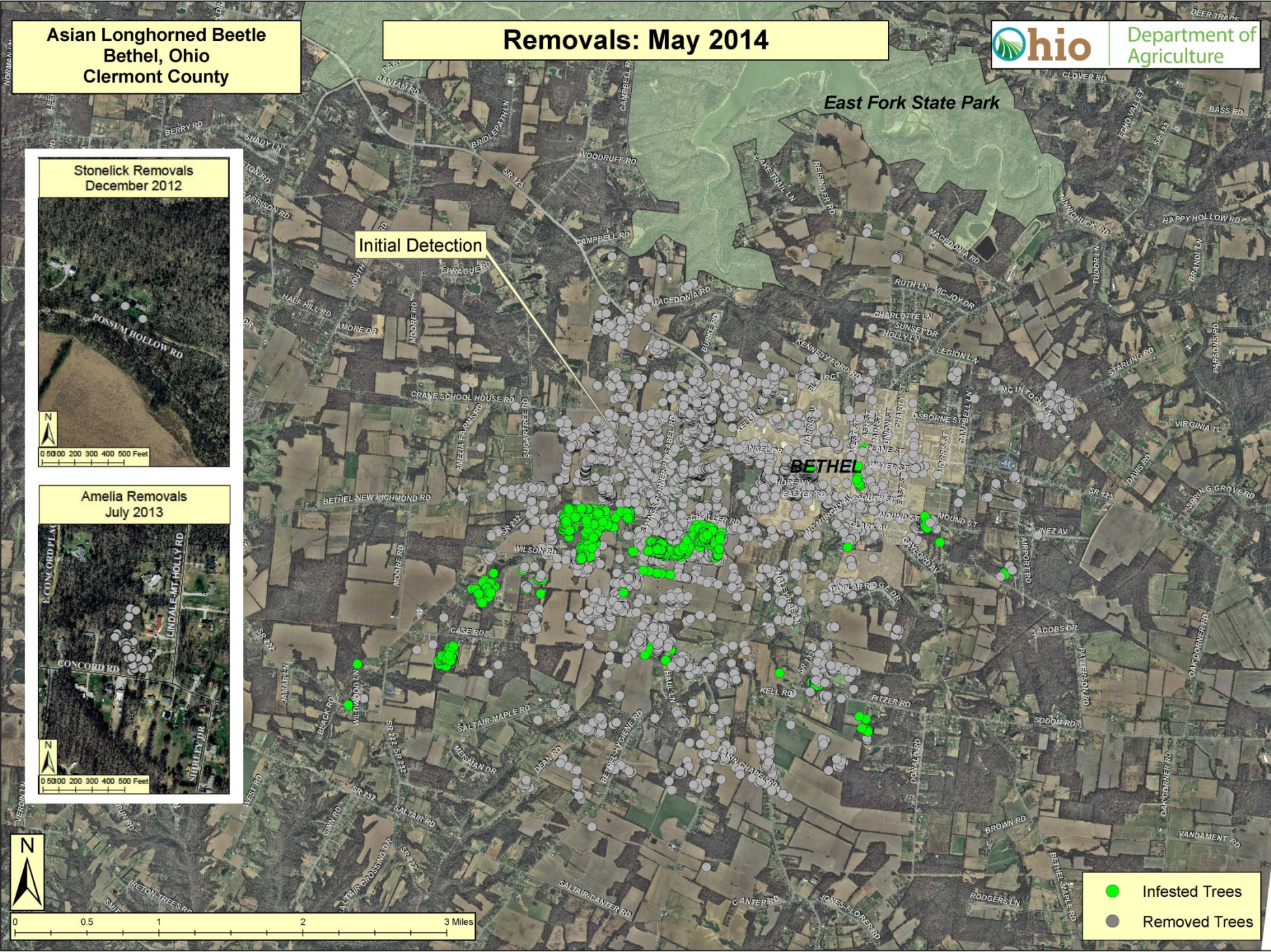
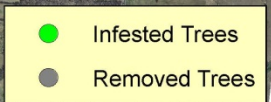
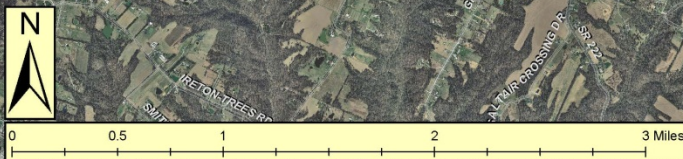
East Fork State Park

Initial Detection

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July 2013



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: June 2014

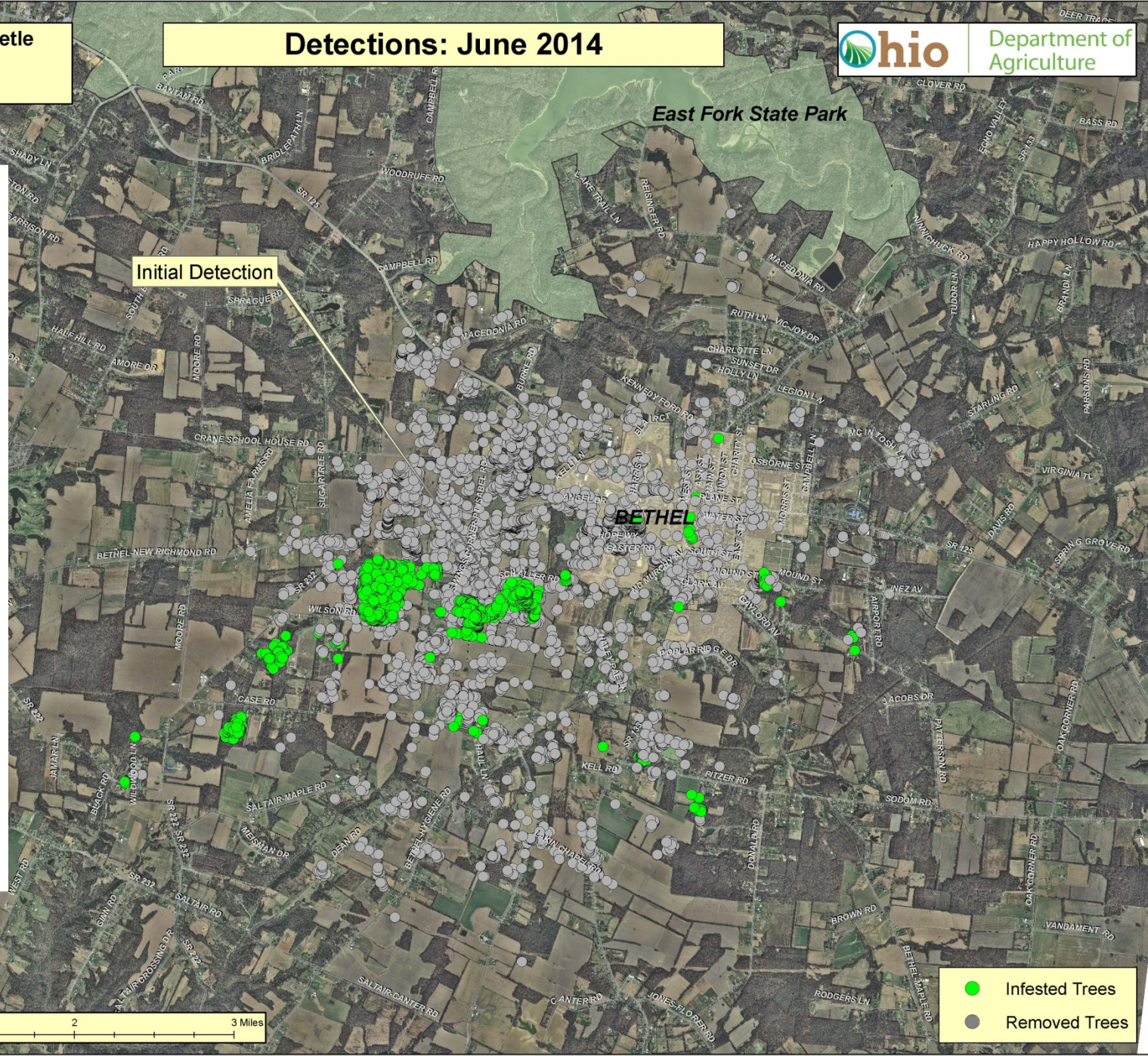
East Fork State Park

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Bethel, Ohio  
Clermont County

Removals: June 2014

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July 2013



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Bethel, Ohio  
Clermont County

Detections: July 2014

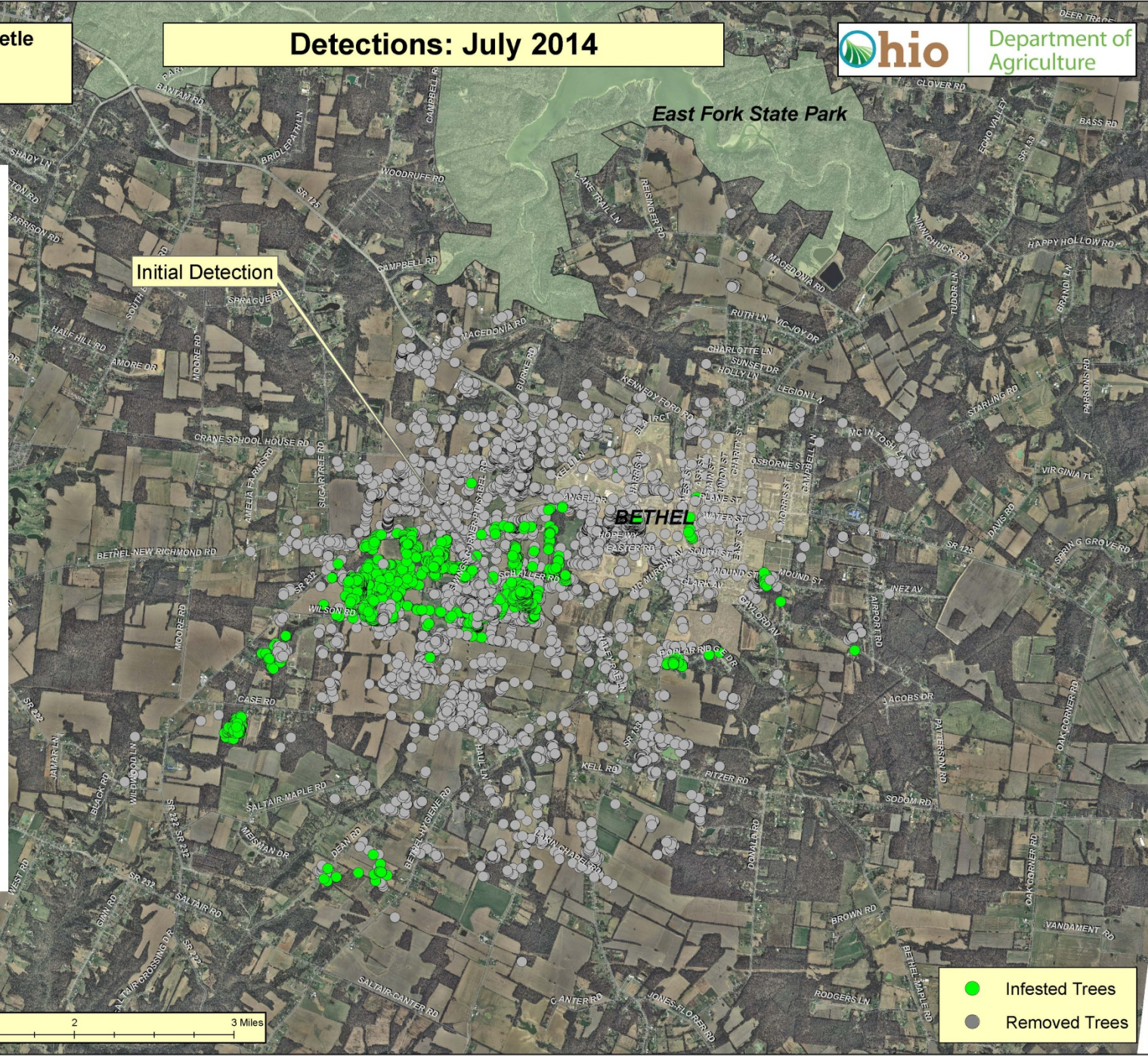
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Bethel, Ohio  
Clermont County

Removals: July 2014

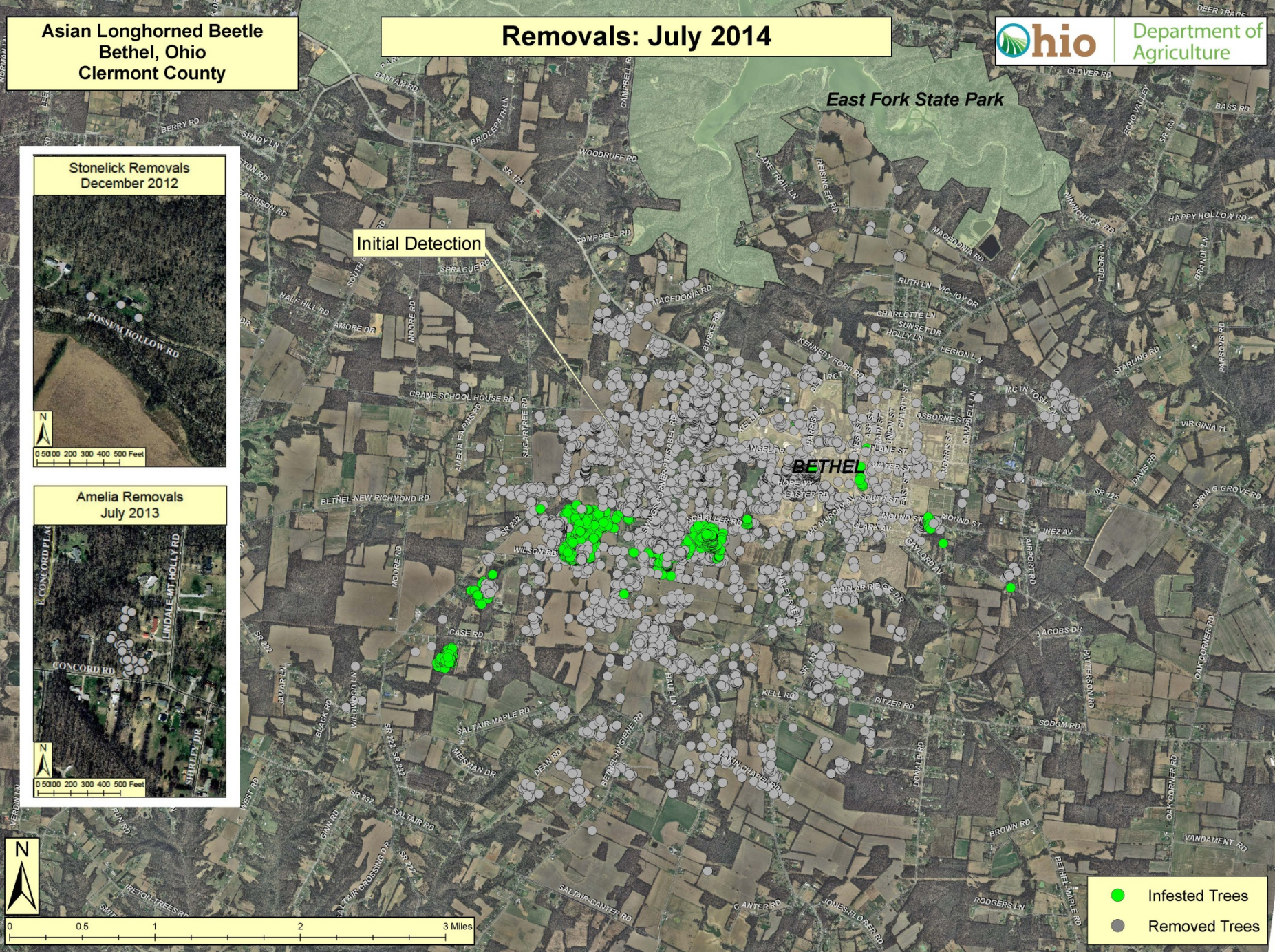
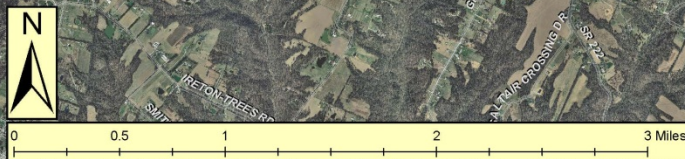
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Clermont County

Detections: August 2014

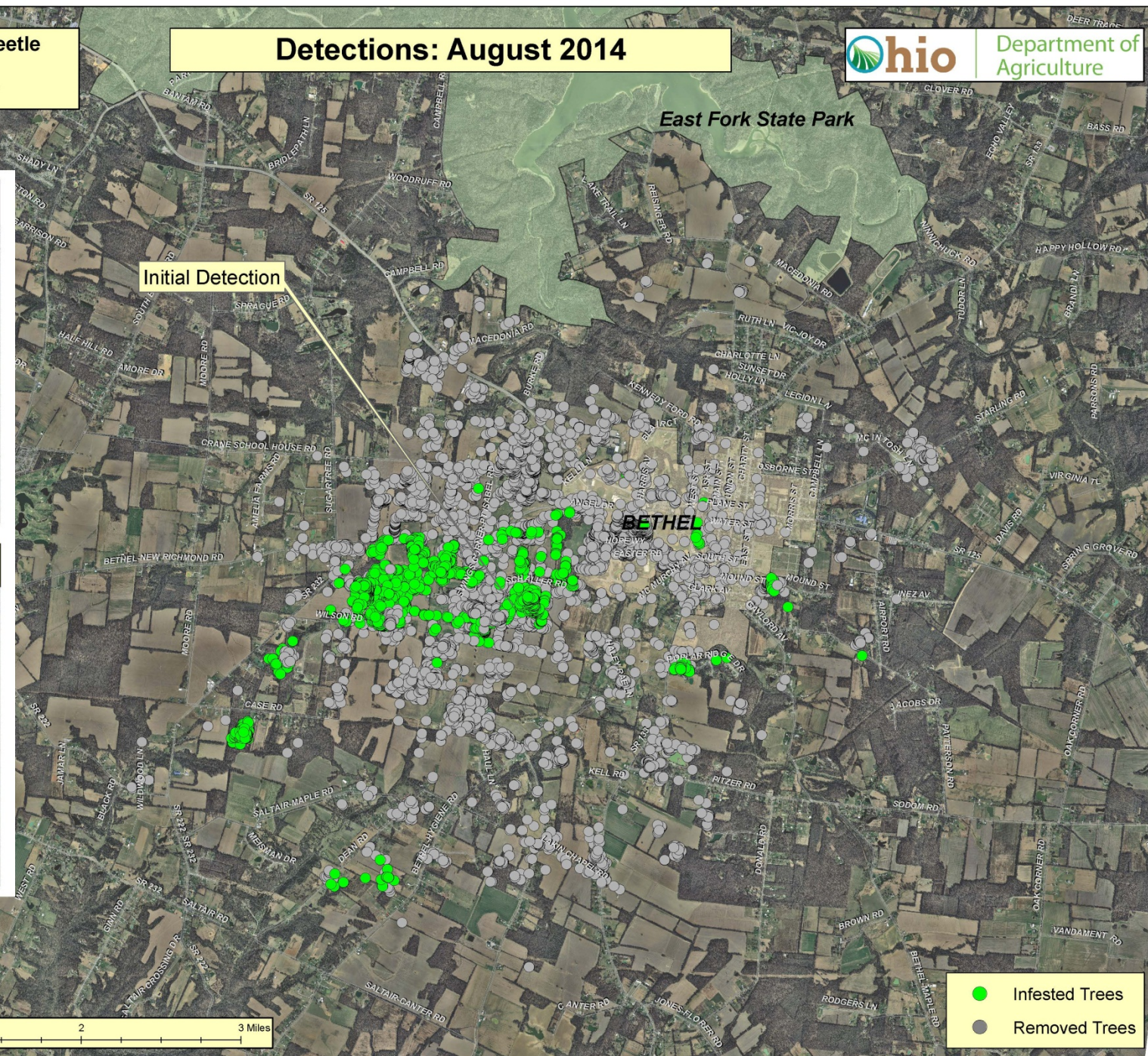
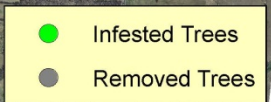
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Clermont County

Detections: September 2014

East Fork State Park

Initial Detection

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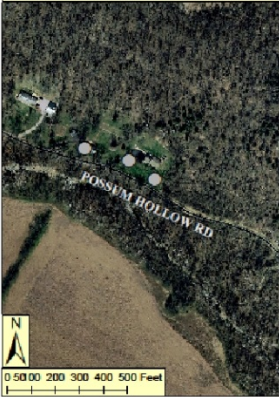
Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: September 2014

East Fork State Park



Initial Detection

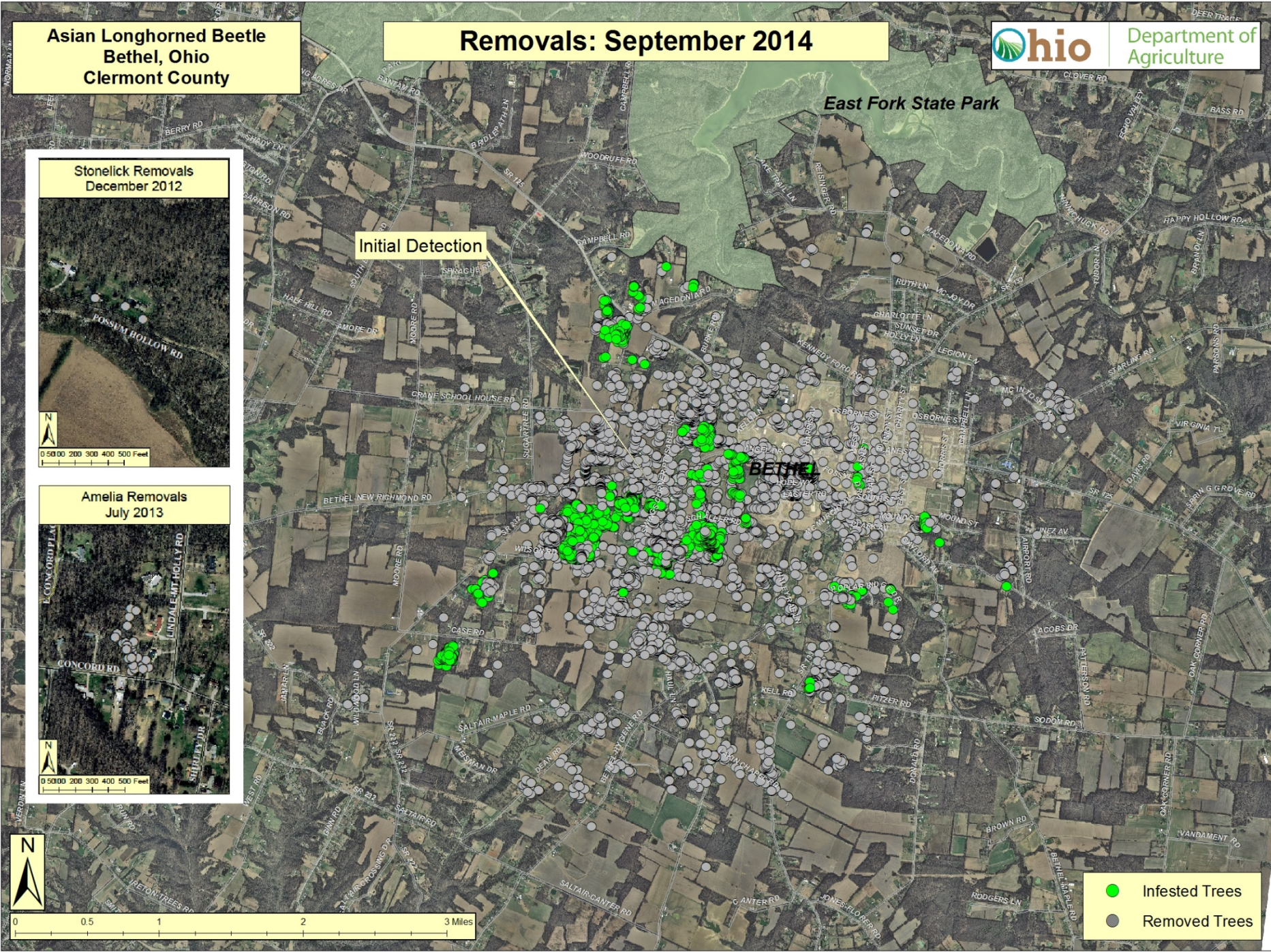
Stonelick Removals  
December 2012



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: October 2014

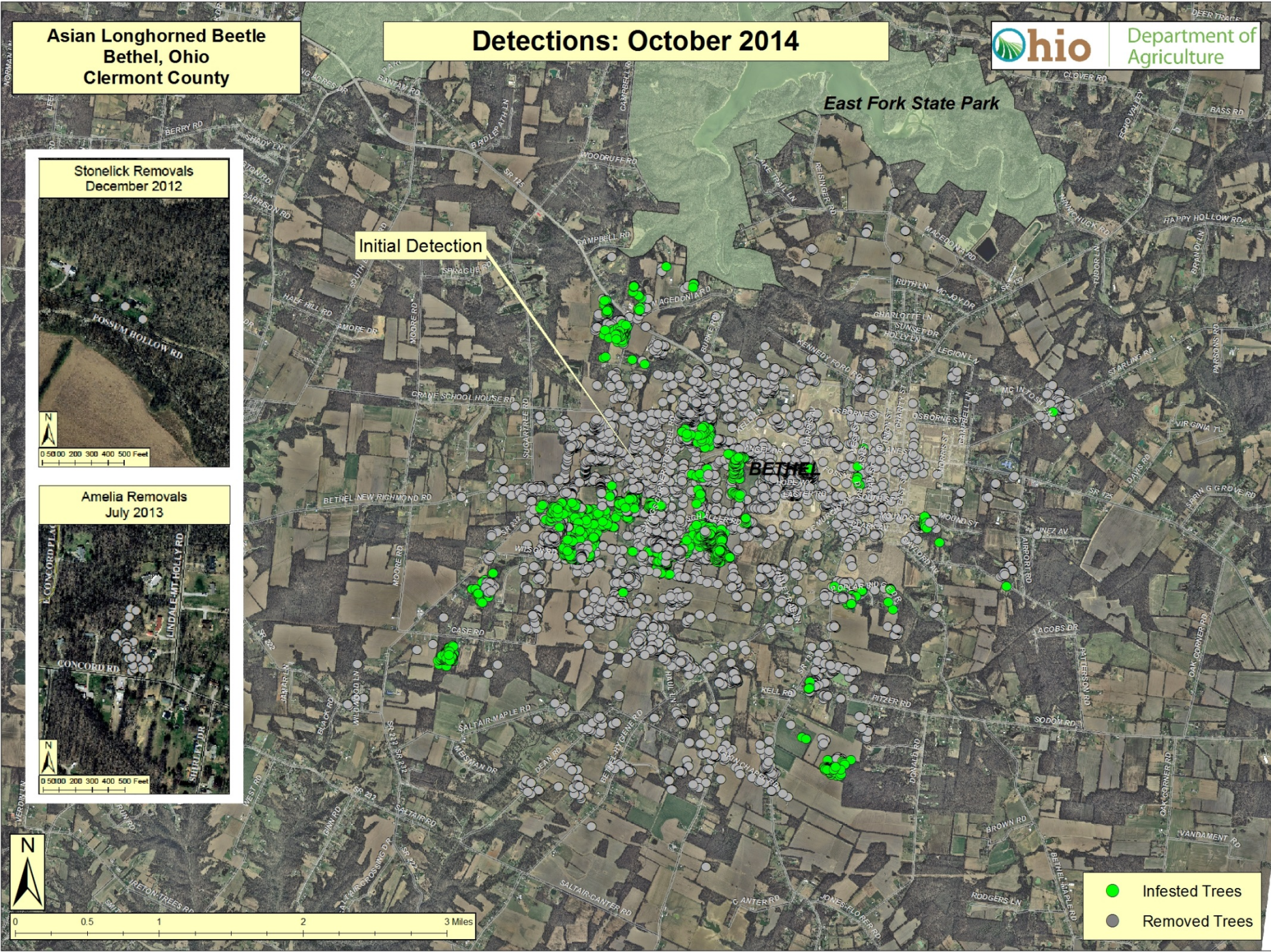
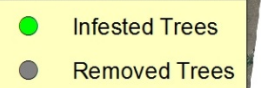
East Fork State Park

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Bethel, Ohio  
Clermont County

Removals: October 2014

East Fork State Park

Initial Detection

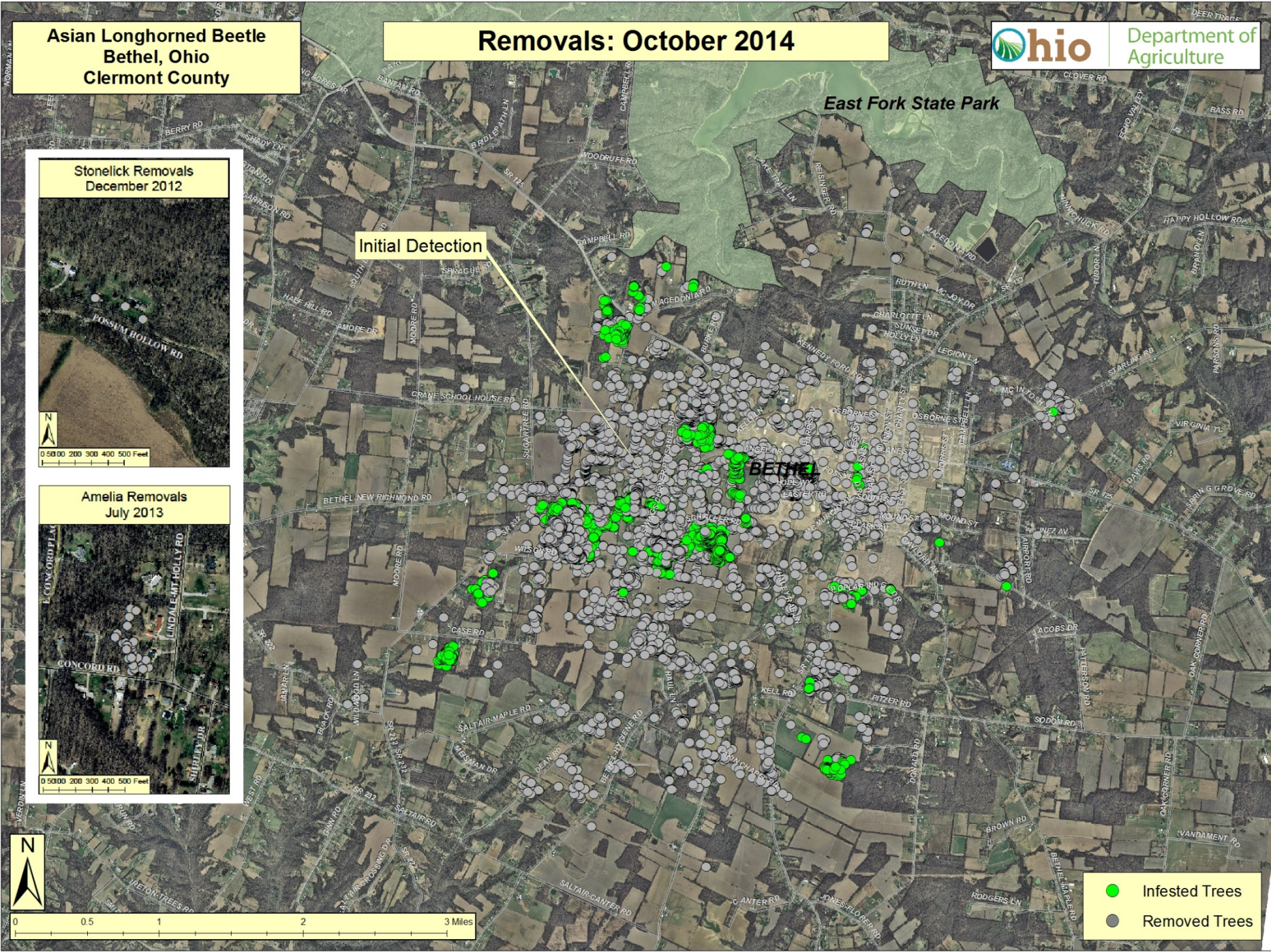
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Bethel, Ohio  
Clermont County

Detections: November 2014

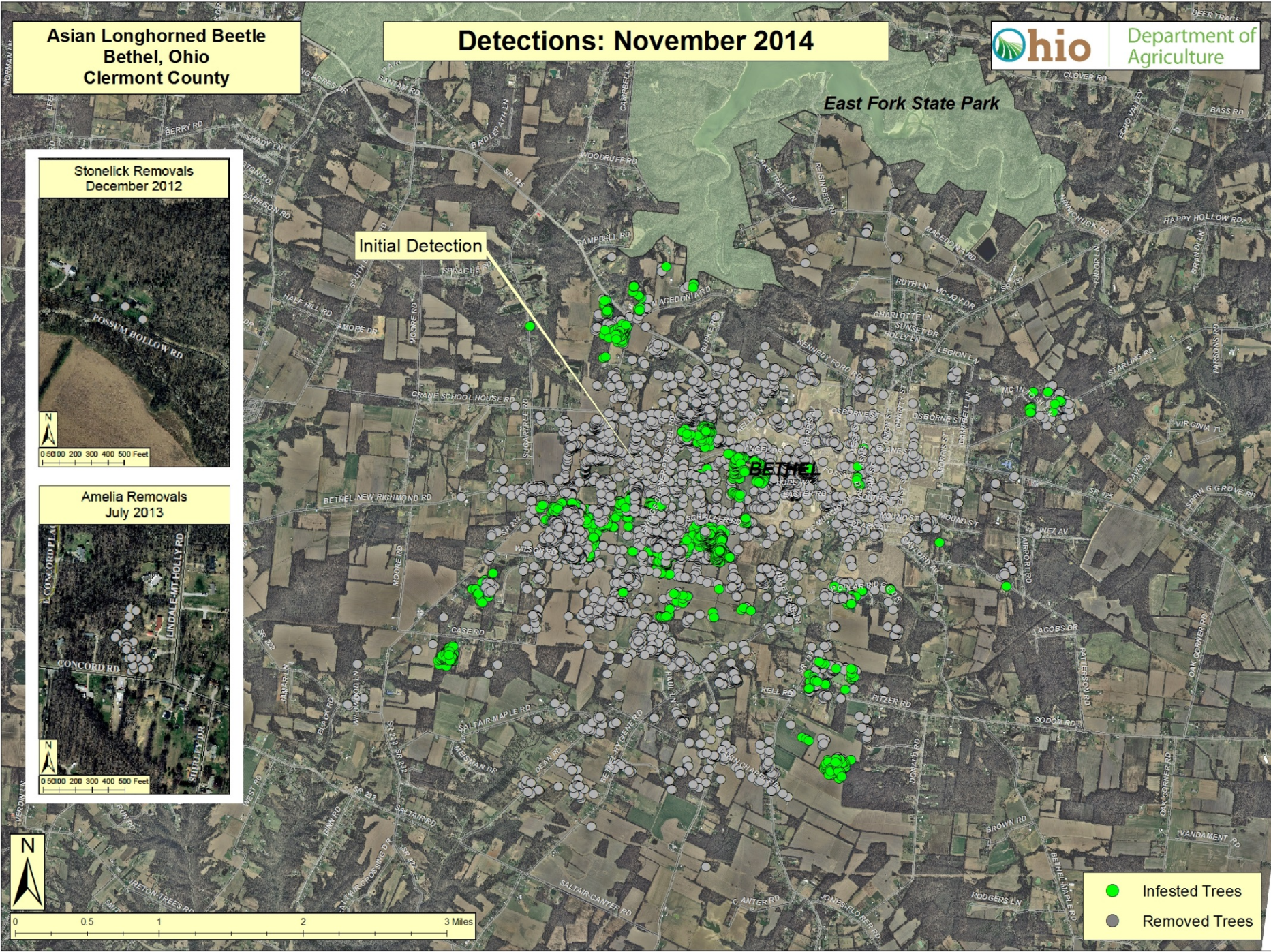
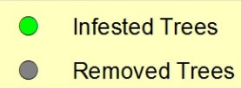
East Fork State Park

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Bethel, Ohio  
Clermont County

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East Fork State Park



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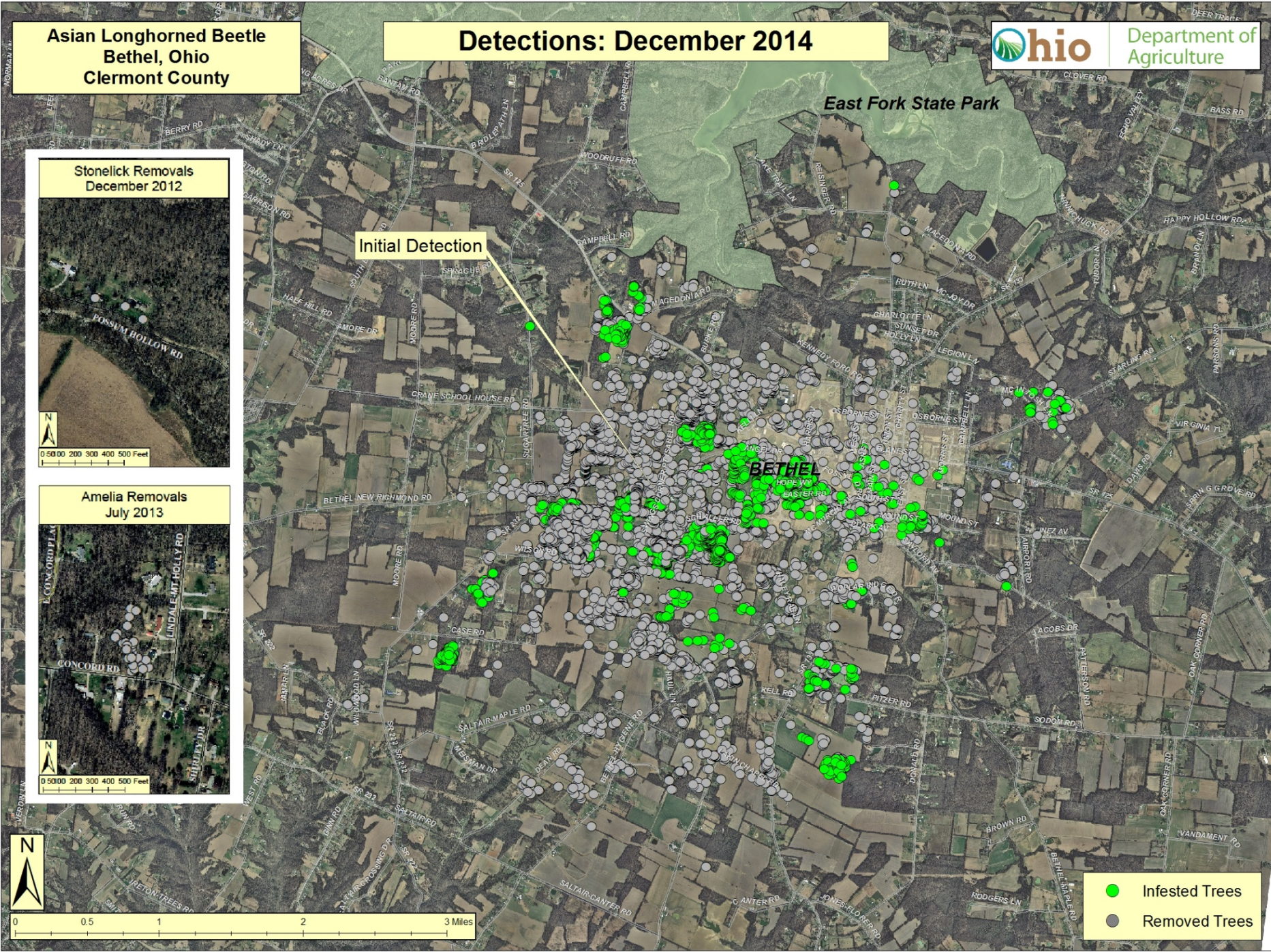
Stonelick Removes  
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July 2013



 Infested Trees  
 Removed Trees



Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

# Removals: December 2014

East Fork State Park



Initial Detection

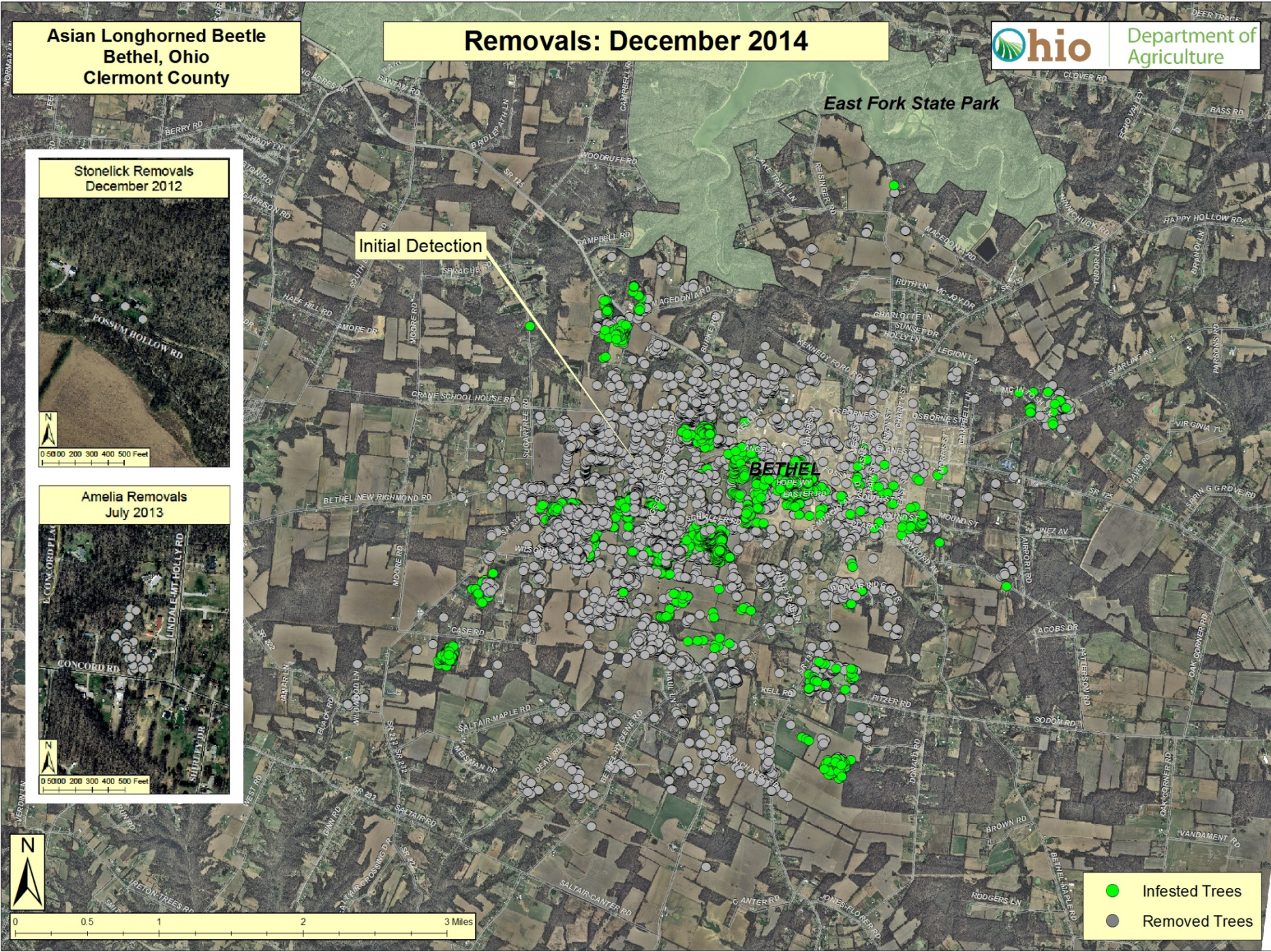
Stonelick Removals  
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July 2013



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Bethel, Ohio  
Clermont County

Detections: January 2015

East Fork State Park



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Initial Detection

Amelia Removes  
July 2013



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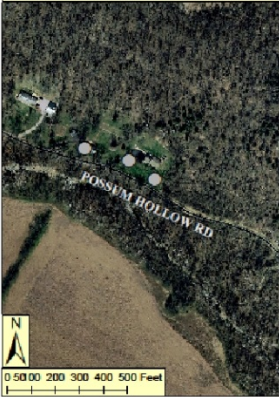
Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Removals: January 2015

East Fork State Park

Initial Detection

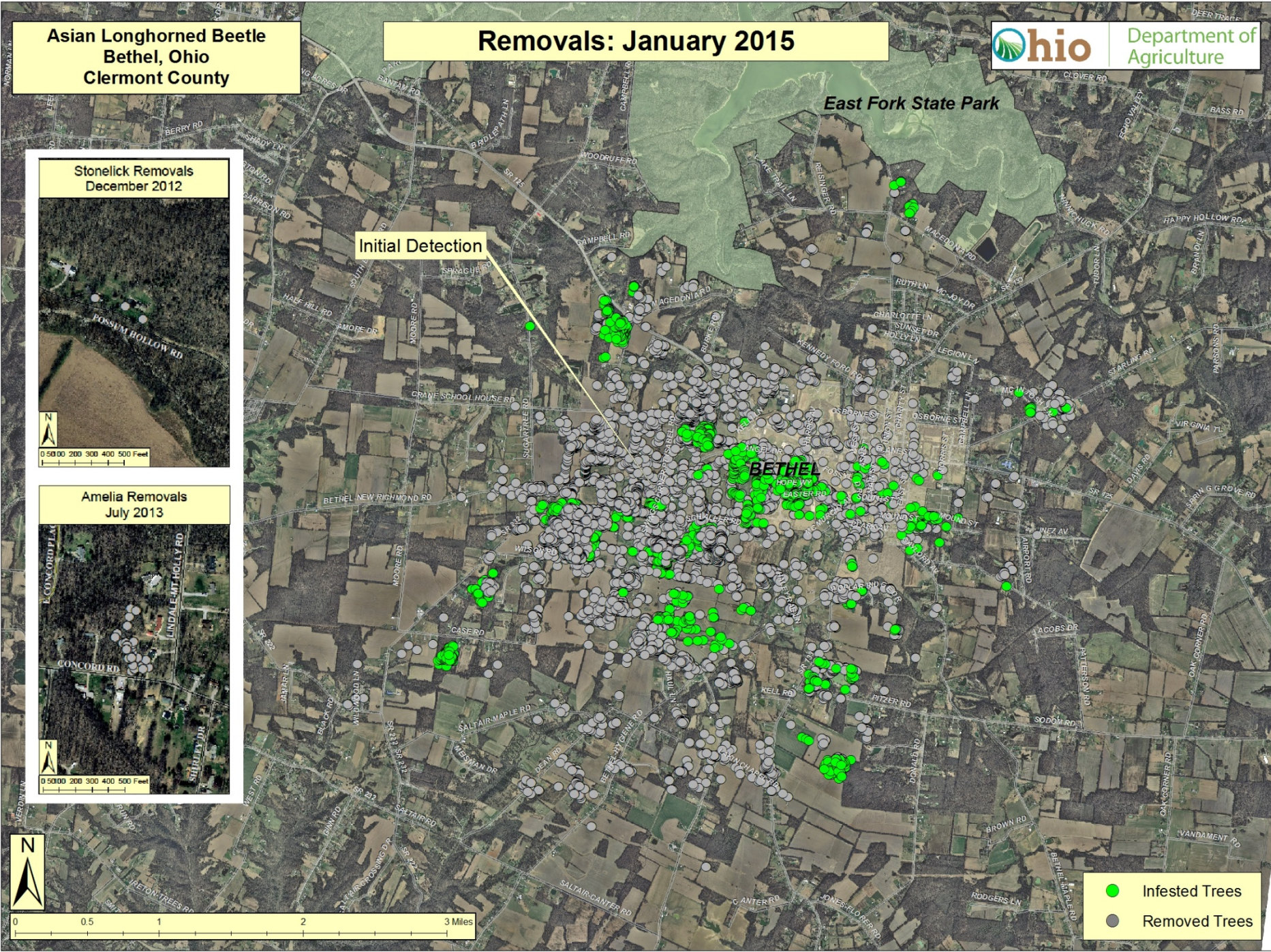
Stonelick Removals  
December 2012



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July 2013



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: February 2015

East Fork State Park

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December 2012





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July 2013



Initial Detection



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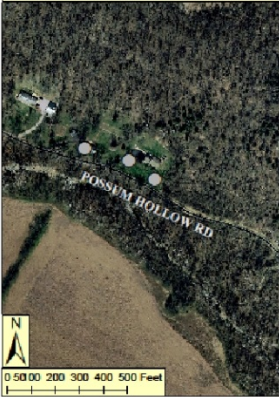
Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

# Removals: February 2015

East Fork State Park



Initial Detection

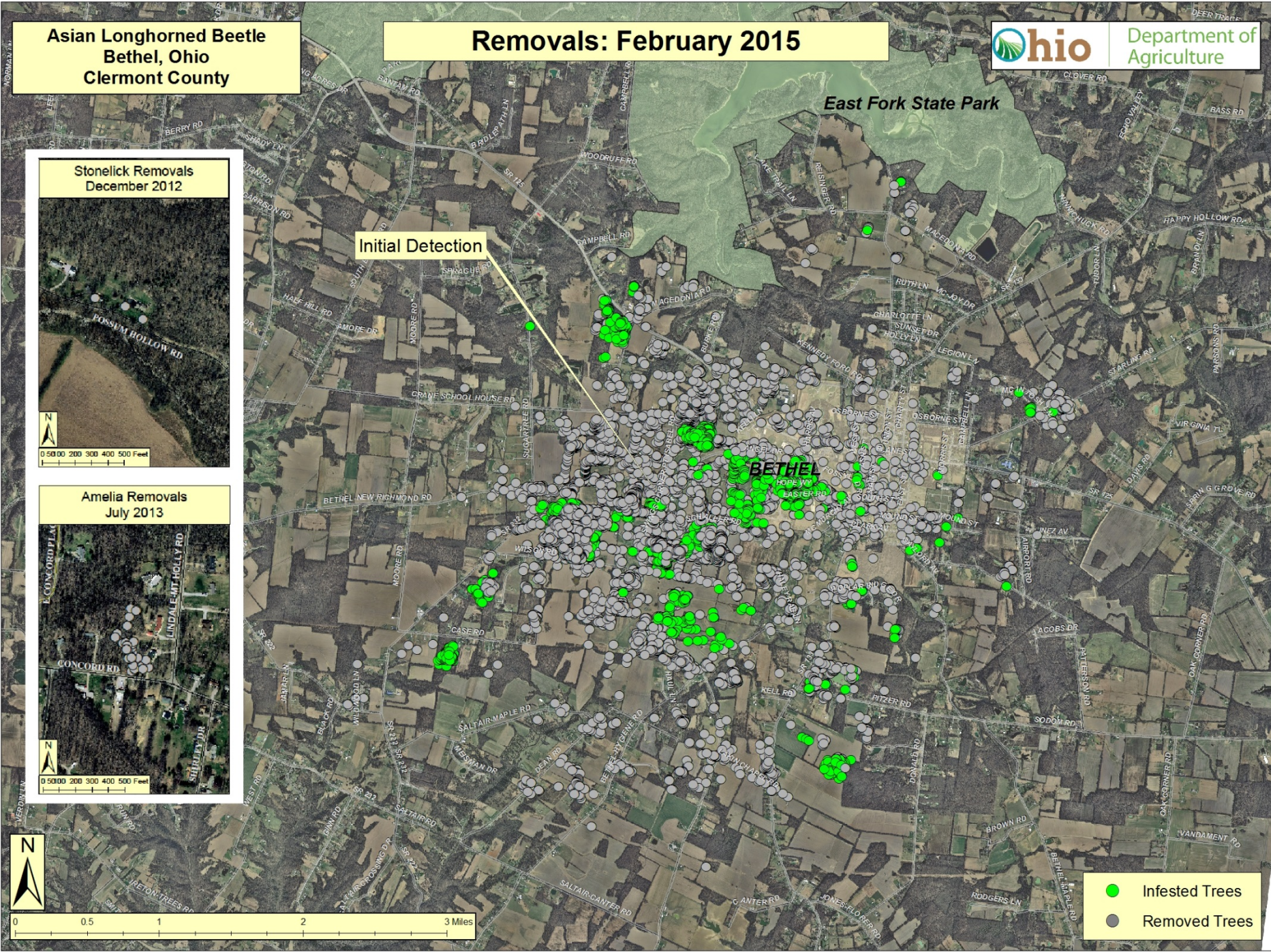
Stonelick Removals  
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July 2013



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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

Detections: March 2015

East Fork State Park

Stonelick Removes  
December 2012





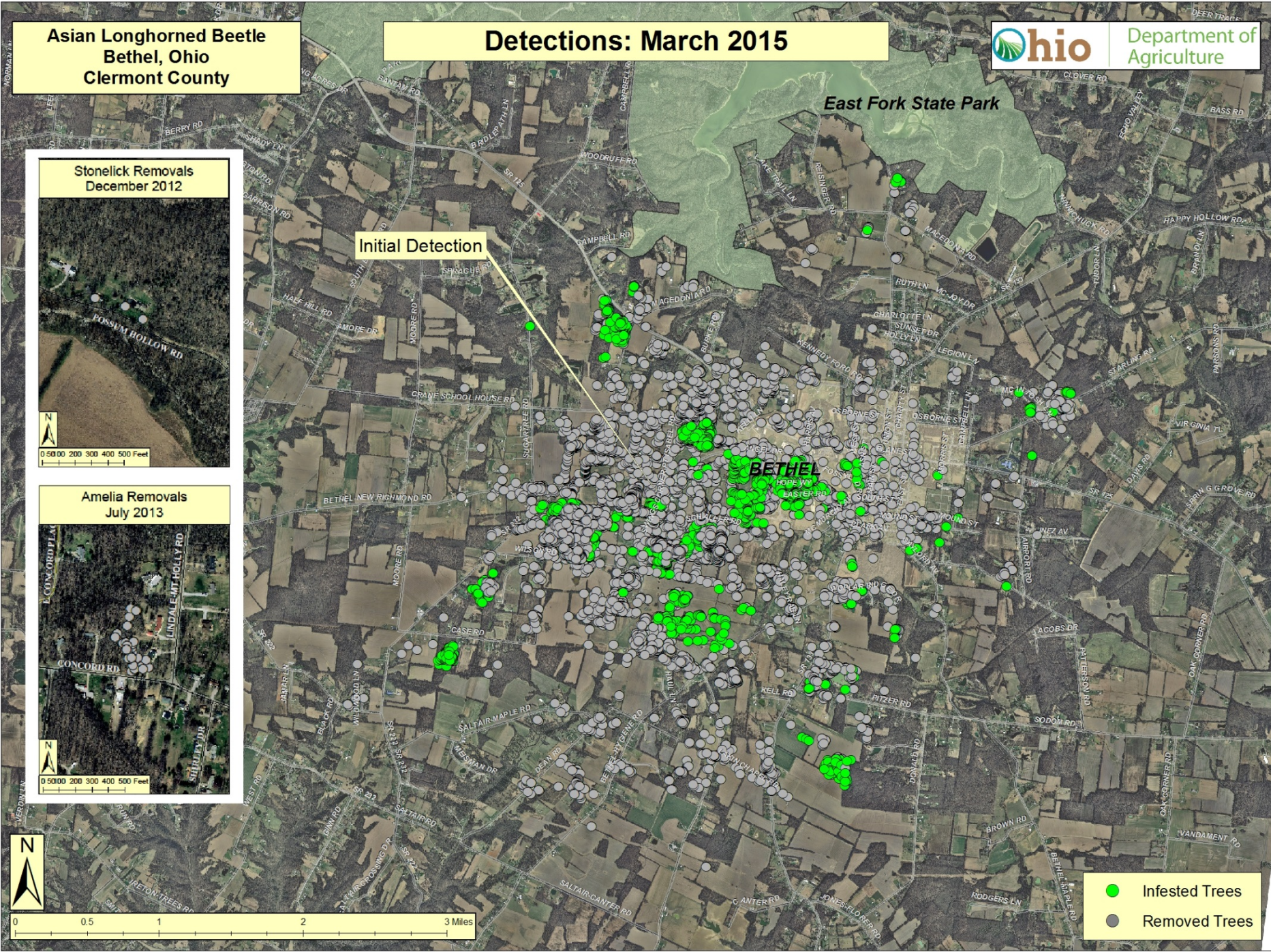
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July 2013



Initial Detection



-  Infested Trees
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Asian Longhorned Beetle  
Bethel, Ohio  
Clermont County

# Removals: March 2015

East Fork State Park



Initial Detection

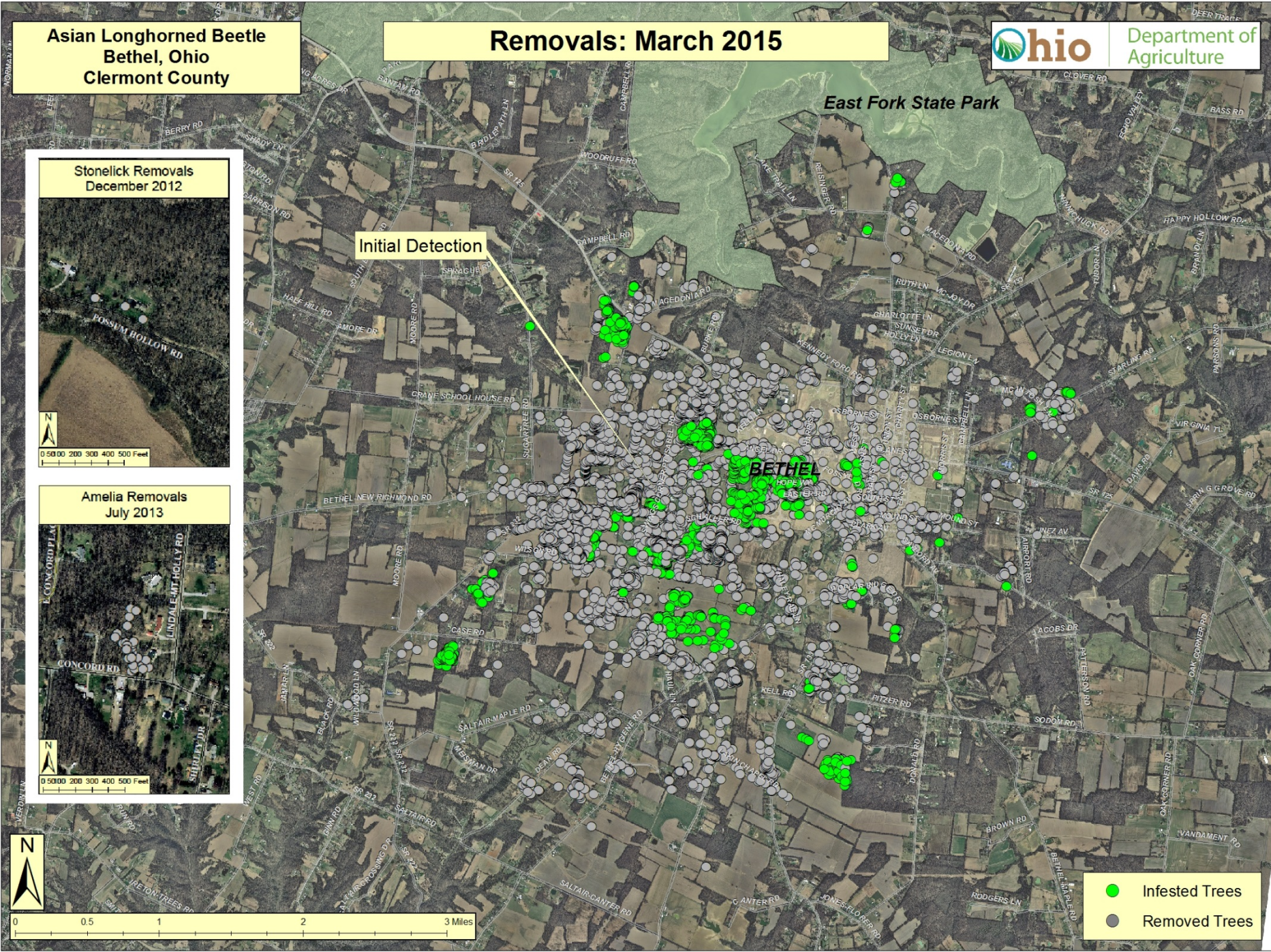
Stonelick Removals  
December 2012



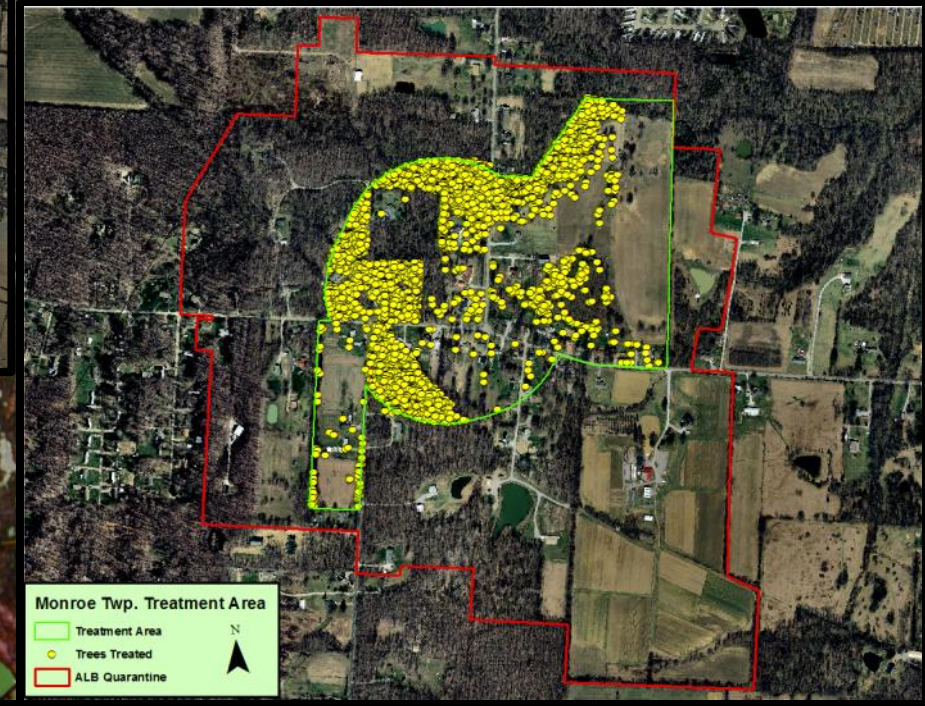
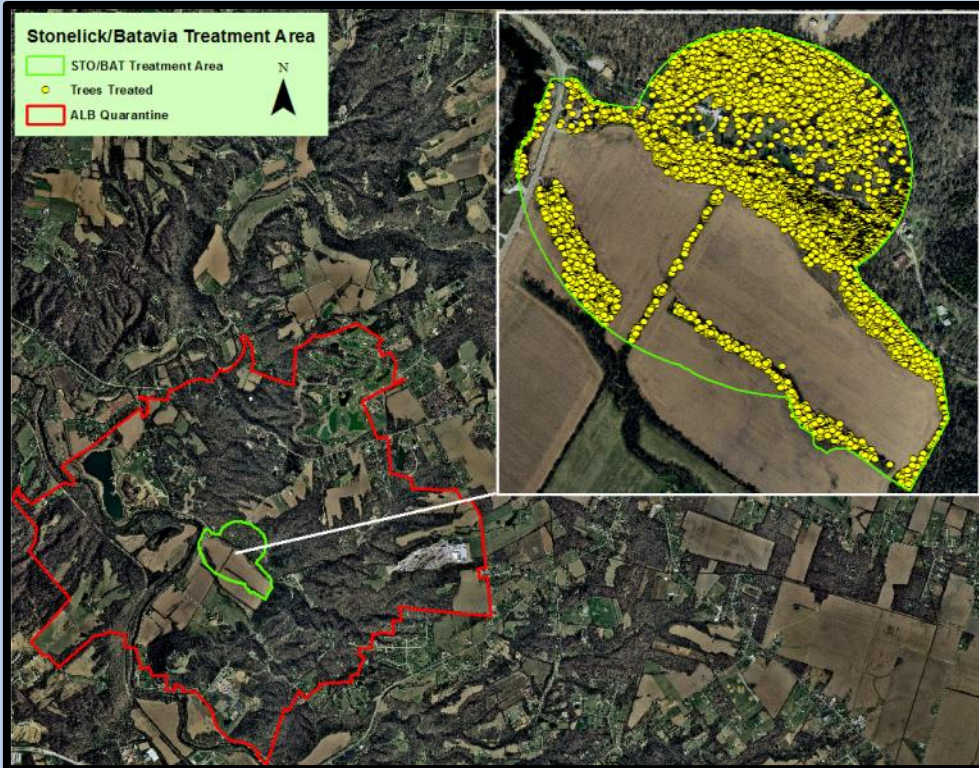
Amelia Removals  
July 2013



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# Eradication strategy – Chemical treatments

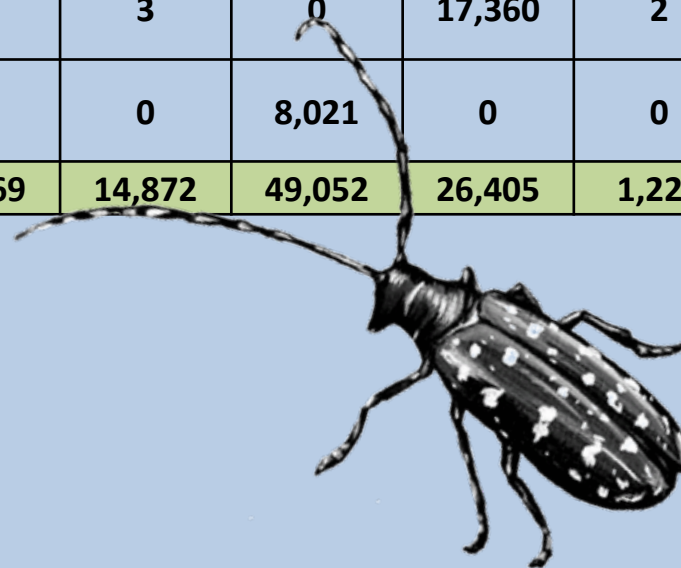


# OH ALB Program Numbers

As of 03/28/2015

			Infested Trees		High-Risk Host Trees			
Area	First Detection	Surveys Conducted	Detected	Removed	Removed	Chemically Treated	Trees Replanted	
Clermont Co. Ohio	Tate Twp	6/2/2011	1,260,708	15,919	14,822	39,893	0	1,199
	Monroe Twp	8/24/2011	55,028	47	47	1,138	9,045	28
	Batavia/Stonelick Twp	7/20/2012	81,713	3	3	0	17,360	2
	Other Areas*	N/A	91,196	0	0	8,021	0	0
<b>TOTAL</b>			<b>1,488,645</b>	<b>15,969</b>	<b>14,872</b>	<b>49,052</b>	<b>26,405</b>	<b>1,229</b>

\* Includes East Fork Recreational Area



# Credits

## Individuals:

**John Burch, USDA APHIS PPQ SPHD Ohio**

**Josie Ryan, USDA APHIS PPQ ALB National Operations Manager**

**Robyn Rose, USDA APHIS PPQ ALB National Program Manager**

**Rhonda Santos, USDA APHIS PPQ LPA**

**Joe Boggs, OSU Extension Hamilton Co.**

**Brian Burke, ODA GIMS Specialist**

**Dan Kenny, ODA SPRO**

**Ken Reed, ODA ALB Supervisor**

**Brett Gates, ODA PIO**

**Jim O'Boyle, USACE**

## Organizations:

**USDA APHIS PPQ**

**USDA APHIS CPHST**

**USDA Forest Service**

**Ohio Department of Agriculture**

**Ohio State University Extension**

**Ohio State University Department of Entomology**

**ODNR, Division of Forestry**

**Clermont County**

**USACE**

