

The Chesapeake Bay Nutria Eradication Project

A Conservation Partnership for Marsh Restoration



Protecting People
Protecting Agriculture
Protecting Wildlife



United States Department of Agriculture
Animal and Plant Health Inspection Service

Nutria, a South American rodent...



- Mature at 6 months
- Breed year round
- 3 litters/year
- Breed within 2 days
- Litter size average 4-5
- 80% females pregnant

Nutria consume all parts of the marsh vegetation including the roots...



...reducing once vibrant marshes to mudflats.



Thousands of acres of wetlands have been destroyed. Primarily on the Blackwater National Wildlife Refuge.

1938



2010



We do not work alone. Cooperation has been the key since the beginning.



To eradicate nutria from the Delmarva Peninsula and prevent their reestablishment.

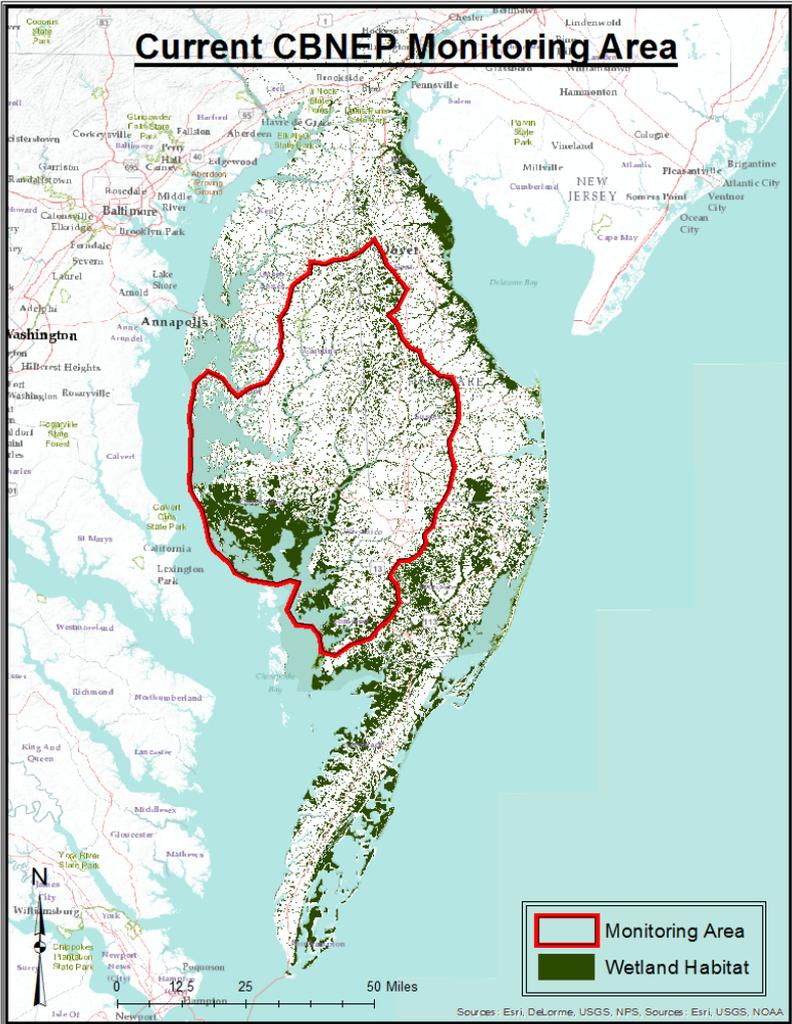
Detection

- Observed-based surveys
- Device-based surveys

Removal

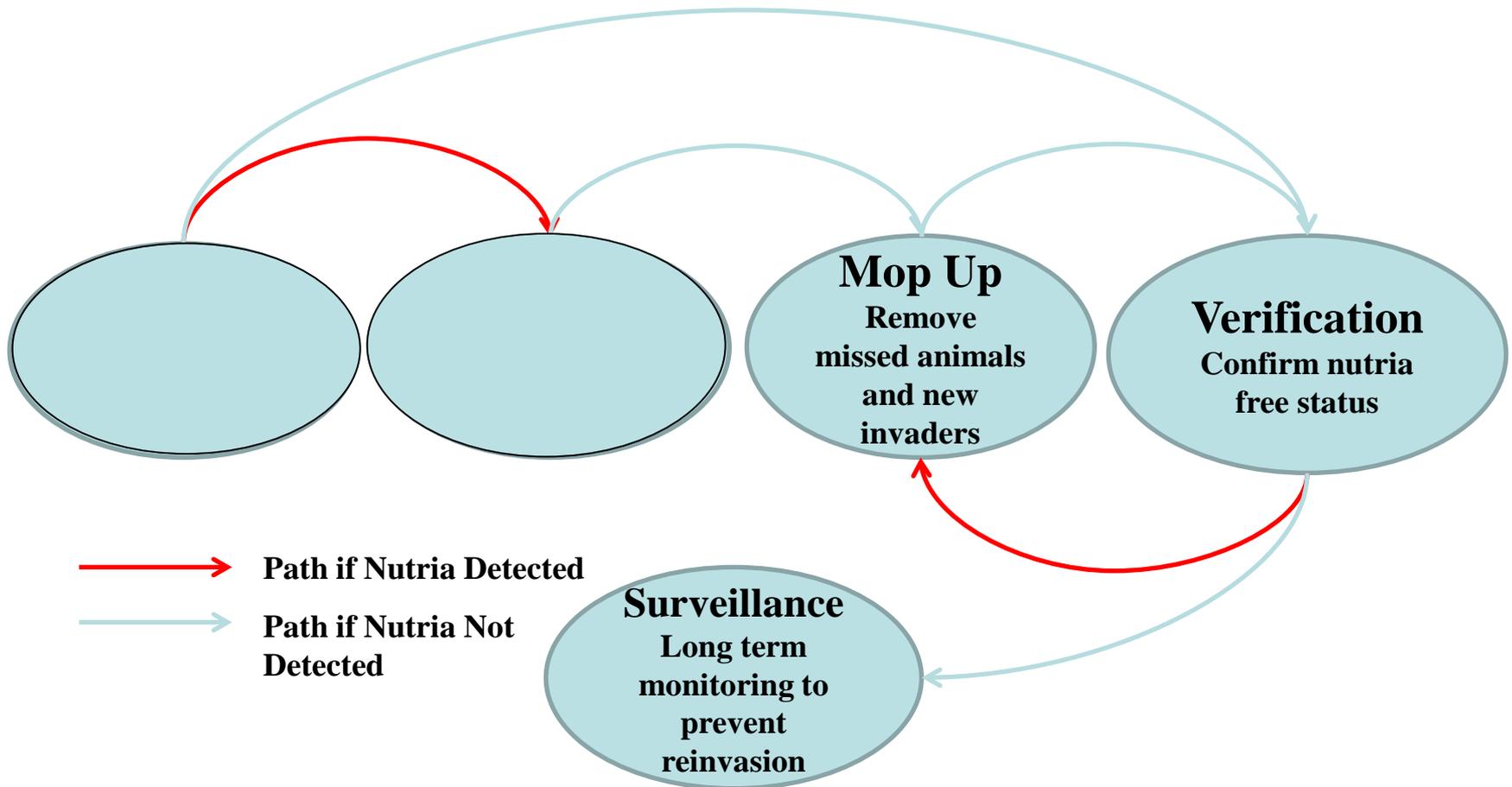
- Trapping

Project Area: the Delmarva Peninsula

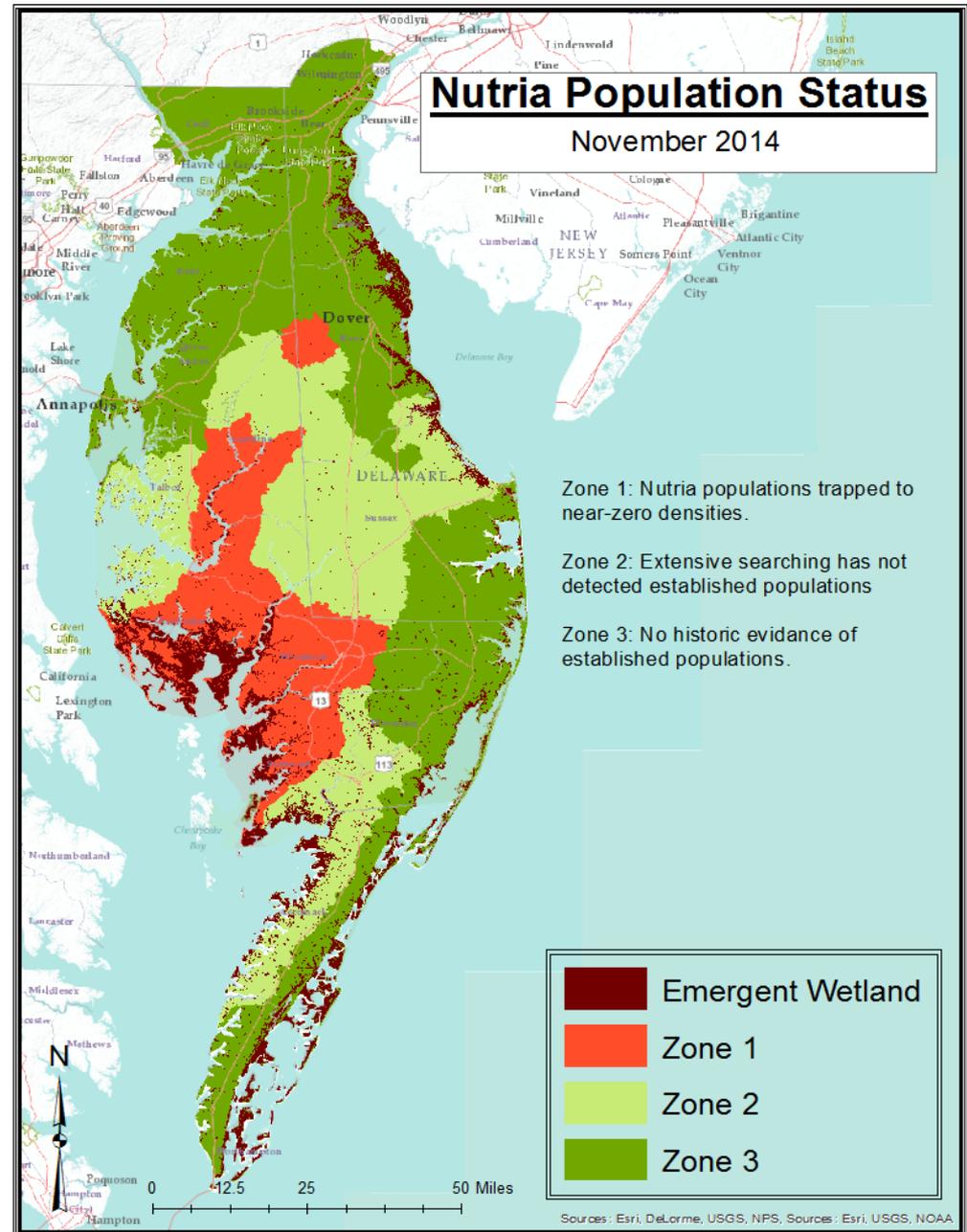


The End of an Era

Phases of Eradication



- The Population Status map has now been reduced from 4 to 3 zones.
- The number of wetland acres covered has increased since 2012 from $\approx 160,000$ to $\approx 250,000$ acres.



Adaptive Management

Detection strategies and tools informed by operational research

Observer based detection survey

Shoreline surveys

- Pros
 - Intelligent
 - Mobile
 - Covers large area
- Cons
 - Observer Variability
 - Fatigue
 - Snapshot in time



Factors affecting Probability of Detection



Device based detection surveys

Monitoring Platforms

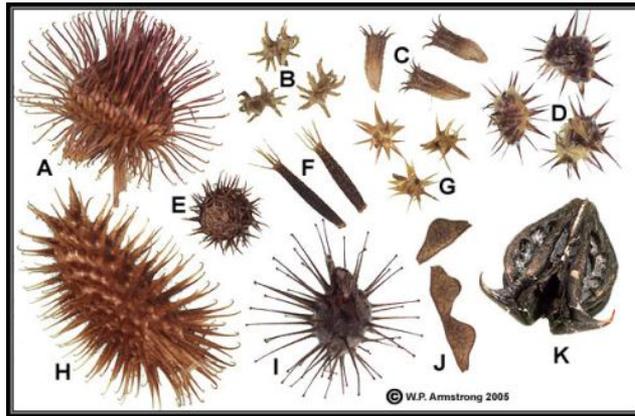
- Pros
 - Data accumulated over time
 - Less device variability
 - Lower cost
 - Scalable sample size
- Cons
 - Require maintenance
 - Require validation
 - Covers small area



Monitoring Platforms



Monitoring Platforms: A New Twist on an Old Device



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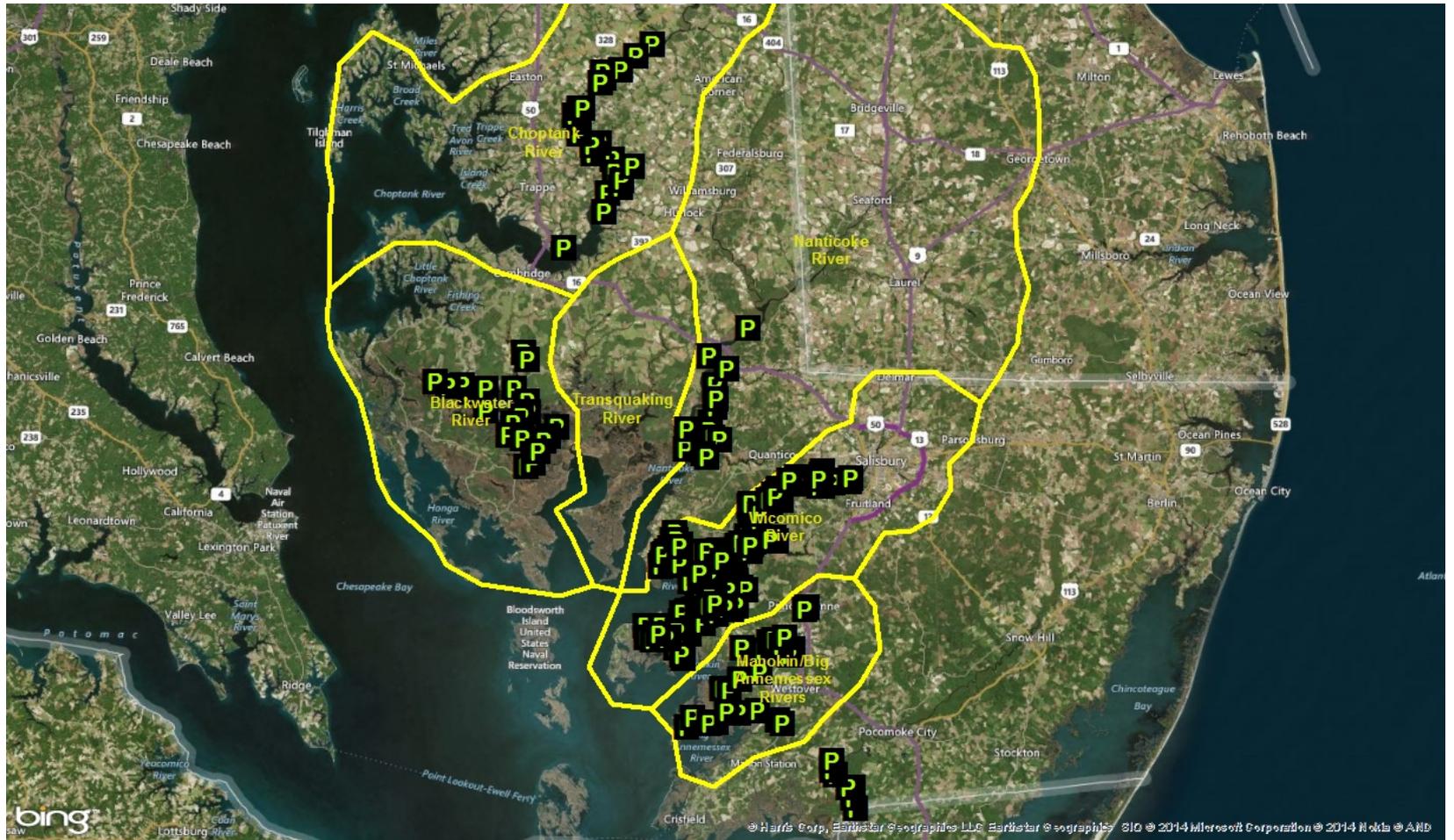


Kerr and Dawson. 2013. The Wildlife Professional.

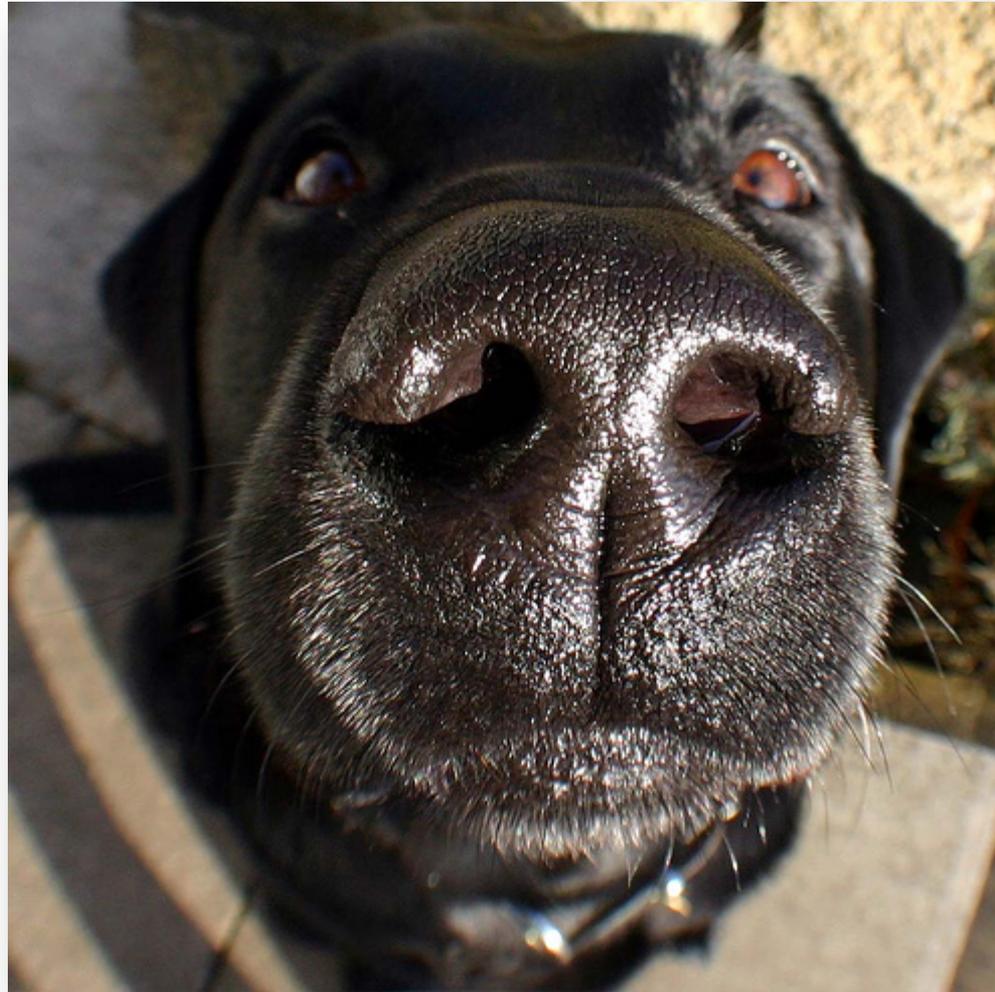
Monitoring Platforms: A New Twist on an Old Device



Sentinel Platforms



A new weapon in our arsenal of detection tools begins tomorrow!



WS Wildlife Services

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Detection Dogs



There is hope! Talbot County marsh before and after nutria eradication.



Somerset County marsh before and after nutria eradication.

