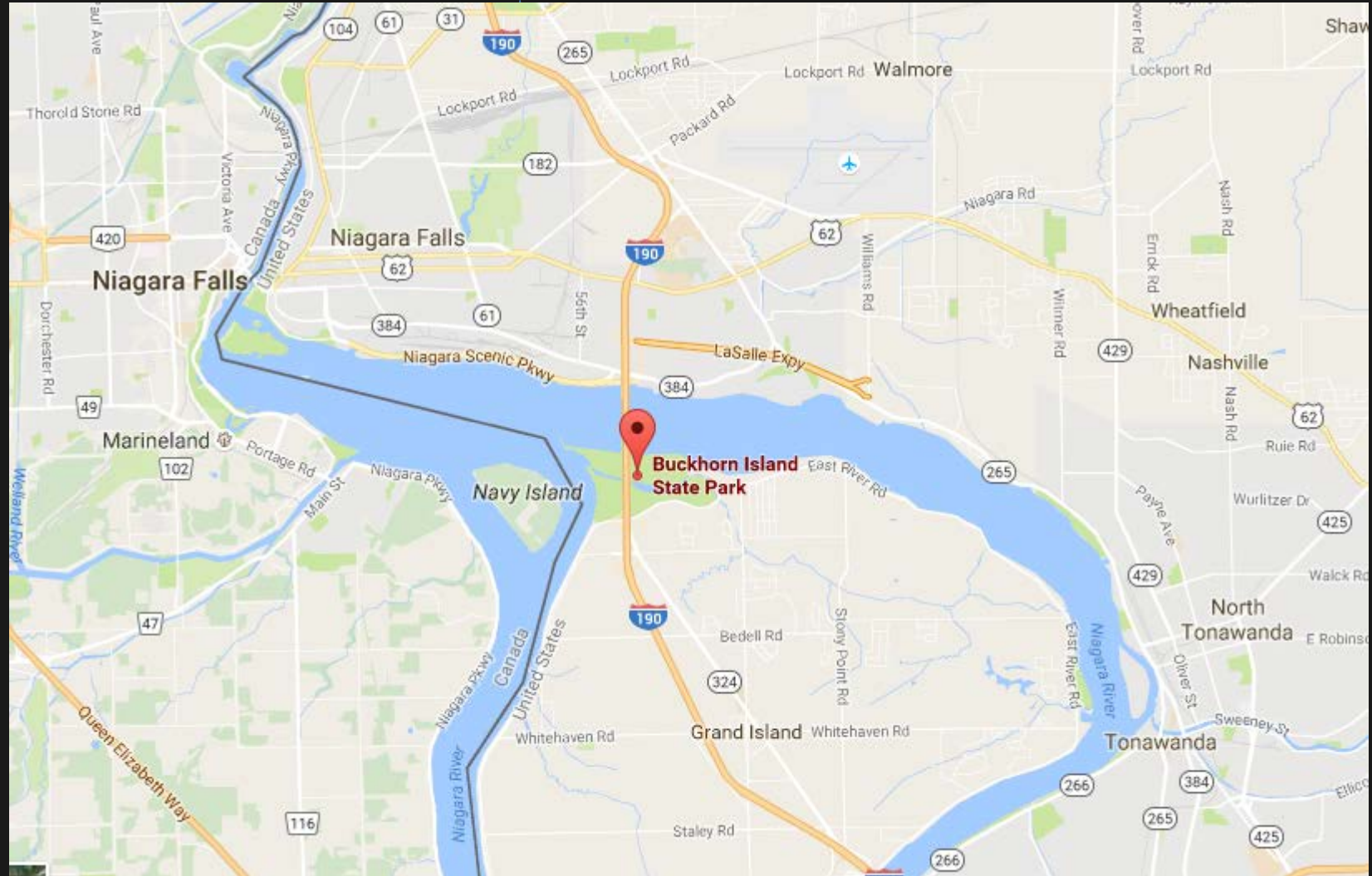
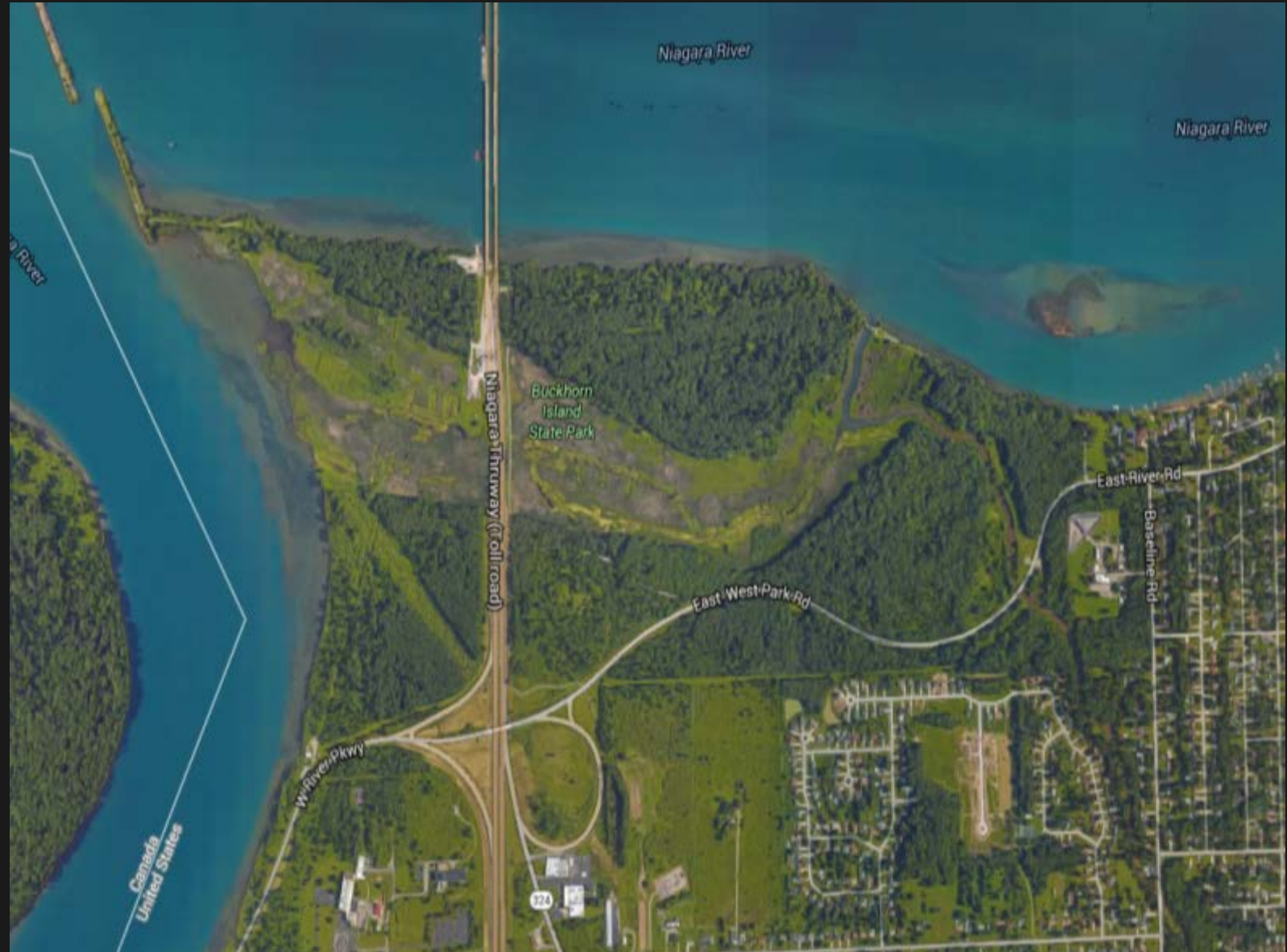


European Black Alder Removal

Buckhorn Island
State Park



- Important Bird Area
- DEC Bird Conservation Area
- DOS Significant Coastal Habitat
- Niagara River AOC Priority Habitat
- NHP: Significant Ecological Communities, Rare Plants, Rare Animals
- One of a few sedge meadow habitats on river



NY Power Authority Habitat Improvement Project

- Invasive species management plan for marsh
- Phragmites
- Japanese knotweed



Figure 1.1
Buckhorn Site Location Map

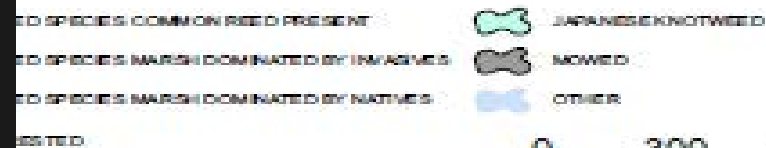


Cover Type Mapping

- Cattail vs Phragmites dominated areas
- Forested
- Scrub-Shrub
- Mixed species



BUCKHORN COVER TYPE MAPPING (EAST PART)



European Black Alder Work

- Buffalo Audubon Society
- Niagara River Greenway



Plant Fact Sheet

EUROPEAN BLACK ALDER

Alnus glutinosa L.

Plant Symbol = ALGL2

*Contributed by: USDA NRCS Plant Materials
Program*



Robert H. Molhenbrock
USDA NRCS 1995
Northeast Wetland Flora
@USDA NRCS PLANTS

**Caution: This plant could become
invasive.**

current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site at plants.usda.gov.

Description

This species was introduced from Europe and should not be confused with native alders. The leaf, flower, and fruit are similar to the native shrub alders found along the streams of the Northeast. Black alder is a tree that can grow 60-70 feet tall. The leaf is smooth, 3-5 inches long, with a serrated margin. Small, winged seed is produced in little woody cone-like fruits. The bark is dark brown, with prominent warty strips.

Adaptation and Distribution

Black alder will grow on a wide variety of soils, from well drained to somewhat poorly drained with light to moderate textures. It does not do well on droughty or wet sites. The species is hardy to the south shore of Lake Ontario, and to northeast Kansas but may not be reliable in USDA zone 4 or colder.



2002

Source: 2011 NYS GIS Clearinghouse

Areas of European Black Alder Colonization



2008



2011

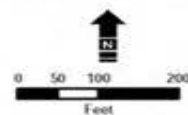
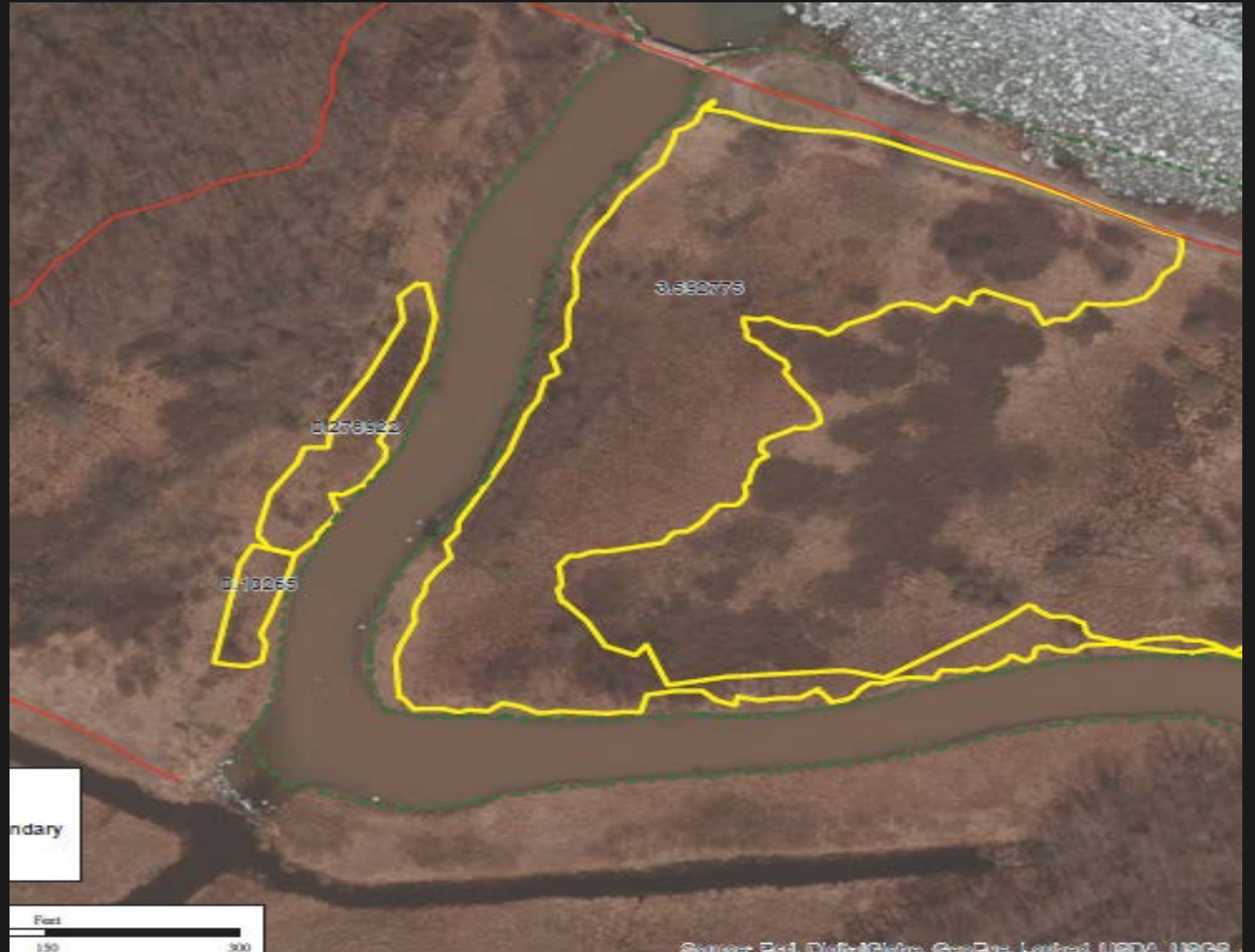


Figure 3. European Black Alder Invasion of the Emergent Marsh
Buckhorn Island State Park
Erie County, New York
Imagery from 2011

NYS Parks Invasive Species Strike team

- Seasonal crew traveling between parks to survey, map and remove invasives
- Mapped EBA prior to RFP
- 4 acres at Buckhorn



Beaver Island State Park

- East River Marsh

- Location of 2003 habitat improvement project
- ~1.3 acres of European Black Alder (initial mapping)
- Additional .6 acres identified during 2015 field season





0.03 Acres

0.1 Acres

0.03 Acres

0.01 Acres

0.01 Acres

1.3 Acres

0.3 Acres

0.02 Acres

0.04 Acres

0.5 Acres

480 ft

© 2015 Google

Google earth

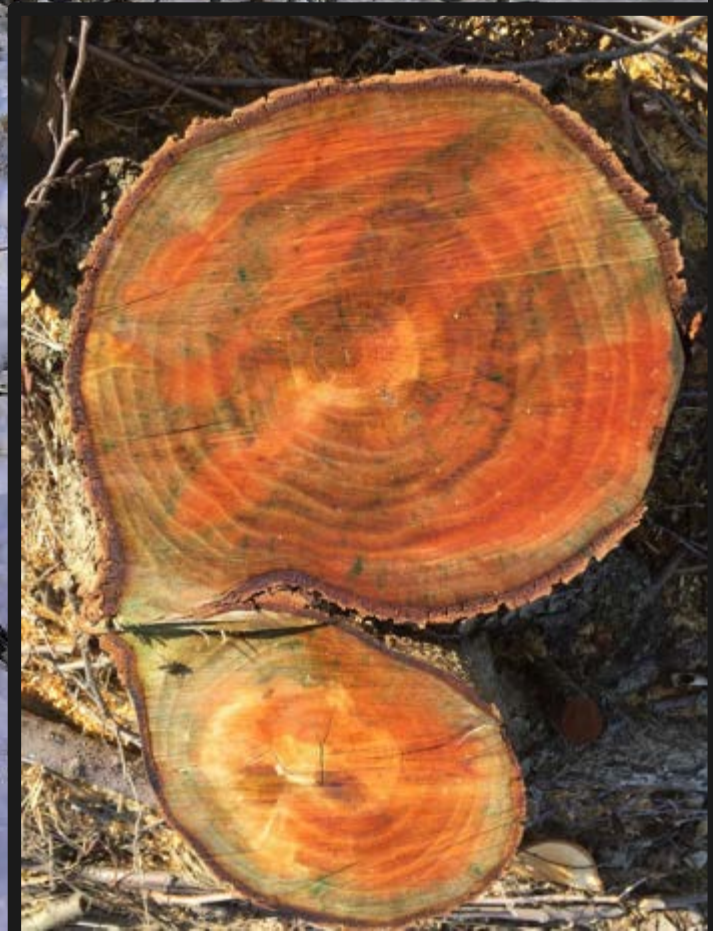
Habitat Management and Restoration

- Winter work to minimize disturbance to sensitive marsh soils
- Cut trees, minimize seed dispersal (240,000 seeds/tree)
- Apply herbicide to cut stump
- Stockpile cut material for later chipping
- Follow-up herbicide applications to stumps, seedlings and sprouts
- Native wetland seed mix in EBA areas













Tricky Points to working in a marsh

- Changing weather conditions
- Material transport
- Permitting









•July 2016 -post herbicide treatment

Next steps

- Monitor for future EBA seedlings
- Additional Purple loosestrife control
- Restoration plantings?





Future invasive species work at Buckhorn

- Upland work
- Woody invasives
- NFWF
Sustain our Great Lakes
- \$235K

