

Aerial Census and Mapping of Phragmites

On the Seaside of
Virginia's Eastern Shore



Methods

- # Schweizer 300 CBi helicopter
 - # Trimble Geo 3 Explorer
 - # Flight laptop
 - # Map large patches (> 0.25 acre) as a polygon or line feature
 - # Map small patches (< 0.25 acre) as a point feature
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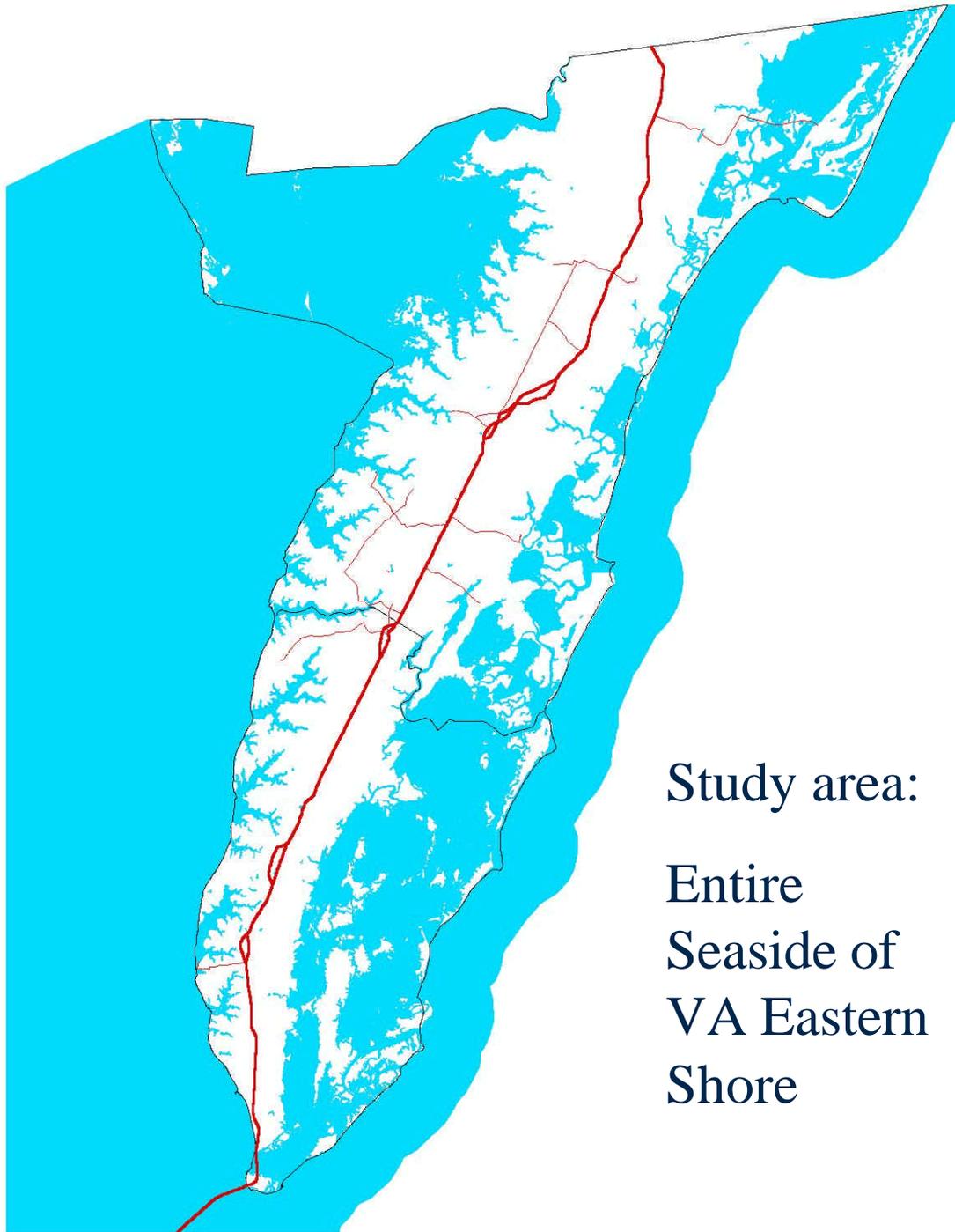
N3275M

300
CBI

GPS



- # Trimble Geo 3 Explorer
- # PDOP mask: 4.0
- # SNR mask: 6.0
- # Elevation mask: 15 degrees
- # Minimum satellites: 4
- # Recording interval: 1 second



Study area:

Entire
Seaside of
VA Eastern
Shore

A Day in the Air







Results

- # 2024 acres of Phragmites in 1404 patches
 - # Average patch size 1.4 acres
 - # Largest patch: 186 acres
 - # 730 acres on the Barrier Islands in 407 patches
 - # Mainland Phragmites acreage: 1294 acres in 934 patches
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Survey Methods

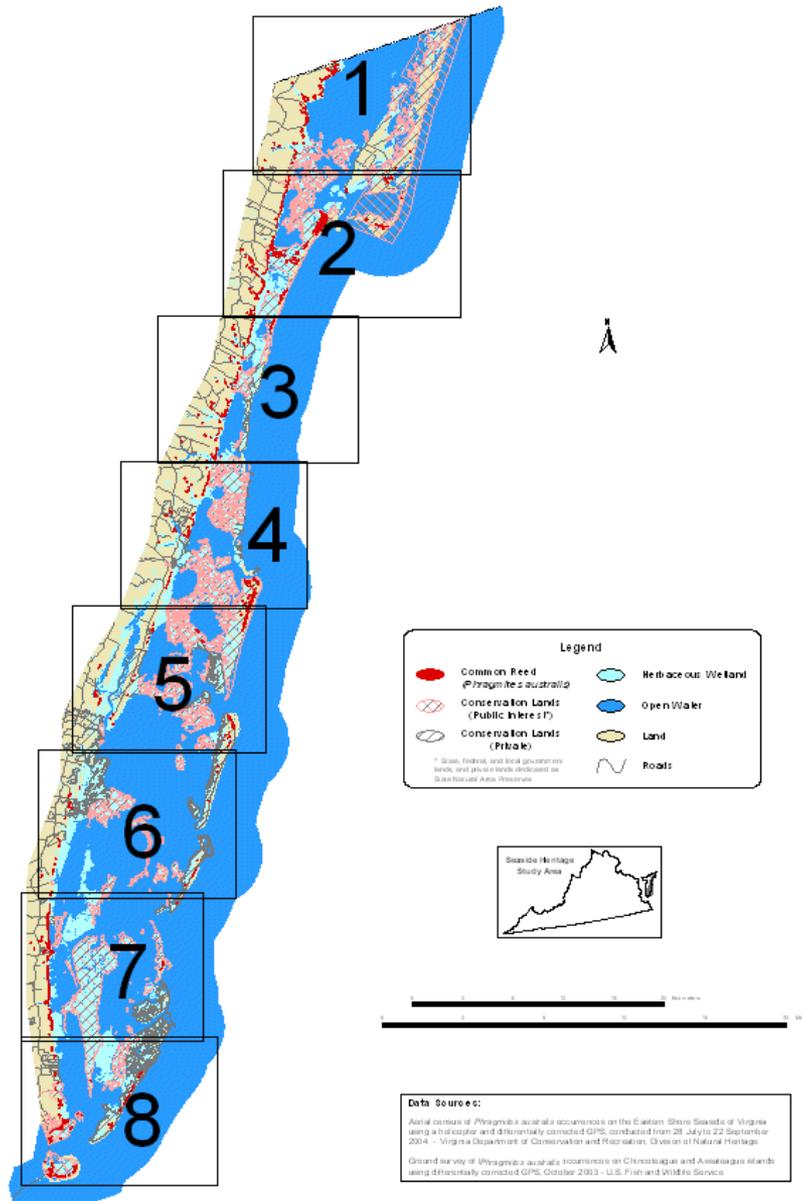
Cost Comparison

- # Ground-based survey on Parramore Island: \$75/acre to map Phragmites using field crews.
 - # Aerial survey: \$20/acre to map Phragmites Shore-wide.
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Distribution and Abundance of *Phragmites australis* on the Eastern Shore Seaside of Virginia

Year 2 - Seaside Heritage Program - November 2004

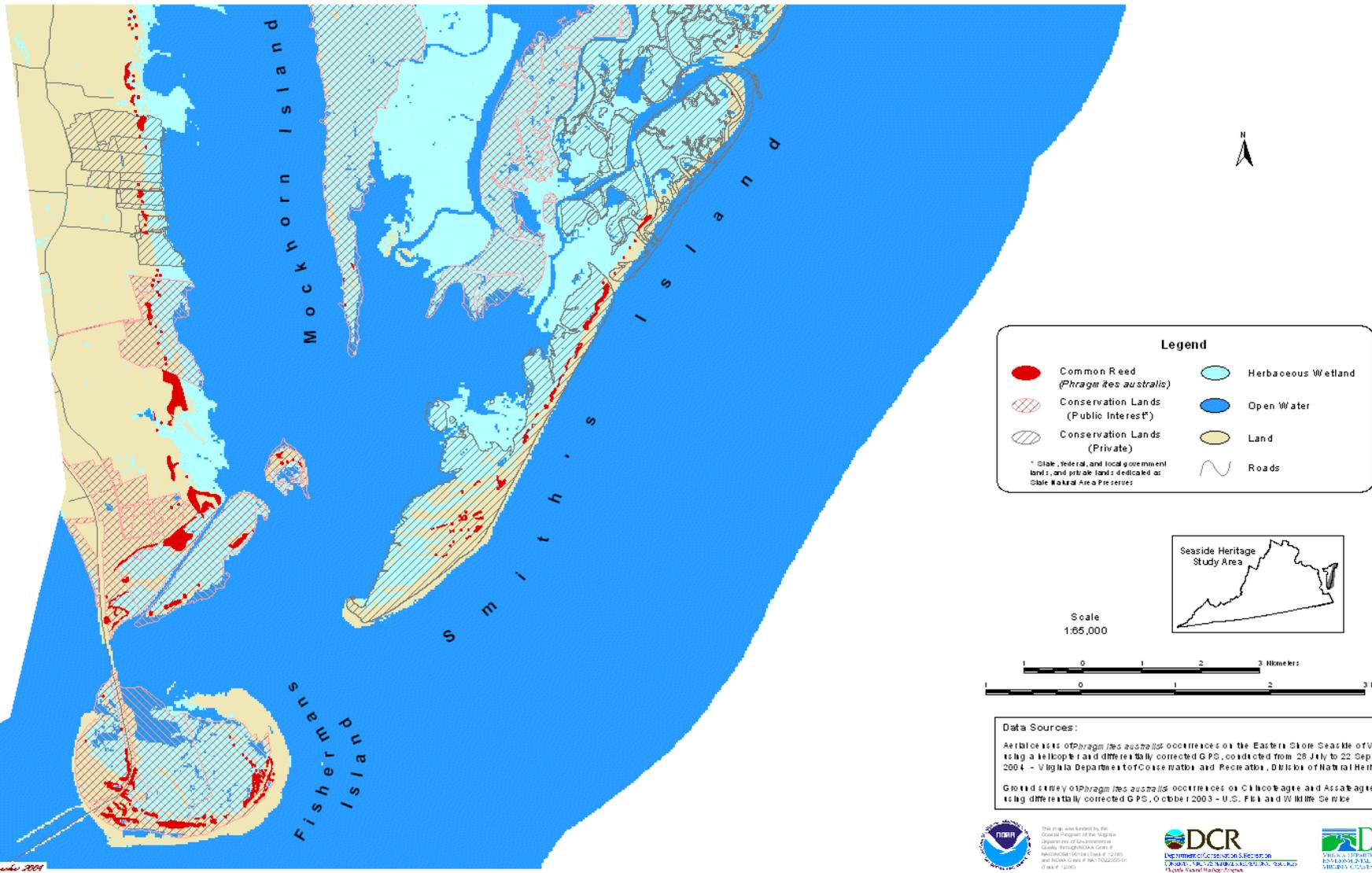
Map Key



Distribution and Abundance of *Phragmites* on the Eastern Shore Seaside of Virginia

Year 2 - Seaside Heritage Program - November 2004

Map 8



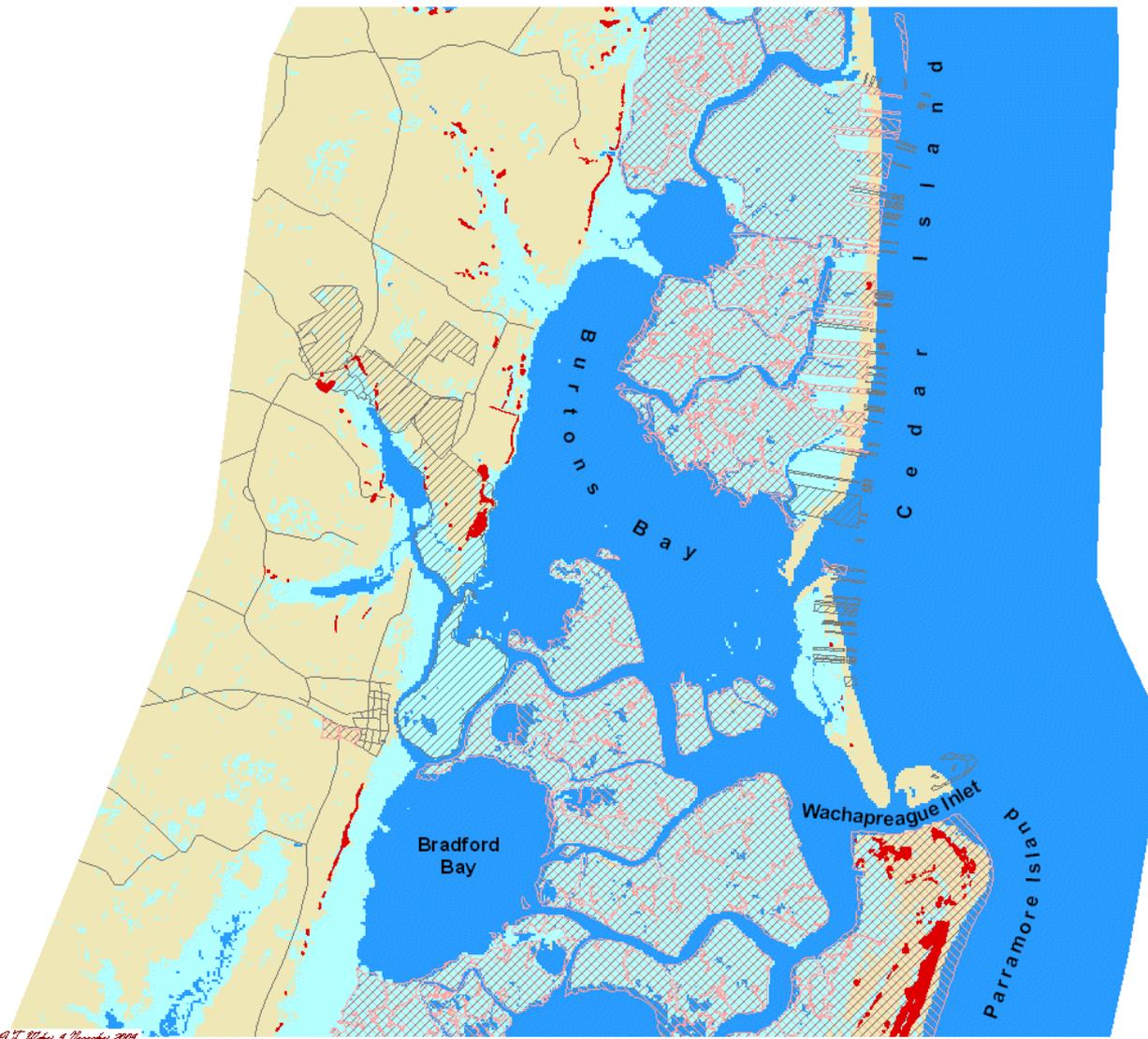
This map was funded by the Coastal Program of the Virginia Department of Environmental Quality through NOAA Grant # NA17OZ0001 and NOAA Grant # NA17OZ0001 (1/04/03)



Distribution and Abundance of *Phragmites* on the Eastern Shore Seaside of Virginia

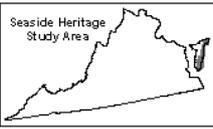
Year 2 - Seaside Heritage Program - November 2004

Map 4



Legend

	Common Reed (<i>Phragmites australis</i>)		Herbaceous Wetland
	Conservation Lands (Public Interest*)		Open Water
	Conservation Lands (Private)		Land
* State, federal, and local government lands, and private lands dedicated as State Natural Area Preserves			Roads



Scale
1:65,000



Data Sources:
 Aerial photos of *Phragmites australis* occurrences on the Eastern Shore Seaside of Virginia to lag a helicopter and differentially collected G.P.S. coordinates from 28 July to 22 September 2004 - Virginia Department of Conservation and Recreation, Division of Natural Heritage
 Ground survey of *Phragmites australis* occurrences on Chincoteague and Assateague Islands using differentially collected G.P.S. October 2003 - U.S. Fish and Wildlife Service

G. J. White, 4 November 2004



This map was funded by the Coastal Program of the Virginia Department of Environmental Quality through NOAA Grant # NA16OAR0004 (State # 1228) and NOAA Grant # NA17OAR0004 (State # 1228).



Largest patch of Phragmites – Wallops Island NWR – 186 acres



An aerial photograph of a coastal area near Oyster, Virginia. The image shows a large body of water, likely a bay or estuary, with a small town or village situated on the shore. The town consists of several white buildings and a few larger structures. To the left of the town, there are large, flat, golden-brown fields, possibly agricultural. In the foreground, a prominent green patch of old dredge spoil is visible, surrounded by water. The background shows a dense line of trees and more distant land. The text "Tidiest patch: old dredge spoil near Oyster, VA" is overlaid on the left side of the image.

Tidiest patch:
old dredge spoil
near Oyster, VA

Goal: To control Phragmites in order to retain at least some parts of the Eastern Shore Seaside in diverse native marsh communities

