Aerial Census and Mapping of Phragmites

On the Seaside of Virginia’s Eastern Shore
Methods

- Schweitzer 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
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
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.
Distribution and Abundance of Phragmites on the Eastern Shore Seaside of Virginia
Year 2 - Seaside Heritage Program - November 2004
Map 8
Largest patch of Phragmites – Wallops Island NWR – 186 acres
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