



Department of
Environmental
Conservation



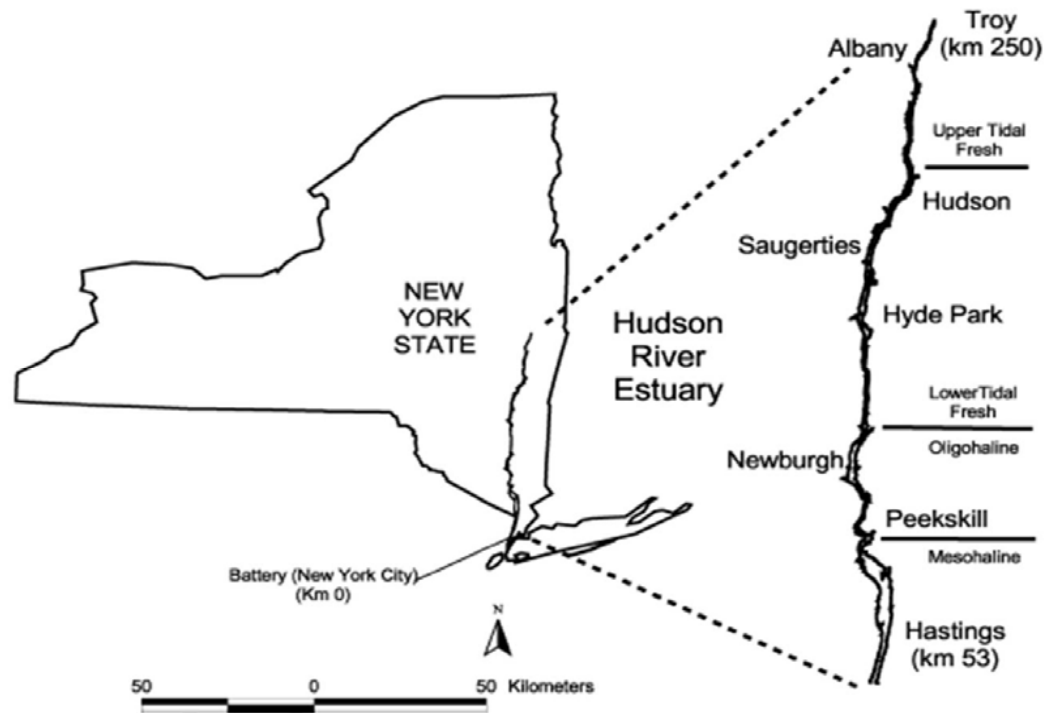
The Latest SAV Mapping and Interpretation and Trends

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Research Coordinator, NYSDEC HRNERR

December 2, 2016

Hudson River Estuary Submerged Aquatic Vegetation Maps



- Funded by NYSDEC Hudson River Estuary Program
- Mapped by Cornell Institute for Resource Information Sciences



SAV:
Water celery (*Vallisneria
americana*)

12/2/2016



Floating Vegetation:
Water chestnut (*Trapa
natans*)



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SAV Mapping Products

Hastings-on-Hudson to the Troy Dam

- 1) Submerged Aquatic Vegetation 1997
- 2) Submerged Aquatic Vegetation 2002
- 3) Submerged Aquatic Vegetation 2007
- 4) Documented SAV (1997 2002 2007)



12/2/2016

SAV Mapping Products

Hastings-on-Hudson to the Troy Dam

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- 4) Documented SAV (1997 2002 2007)

- 5) Submerged Aquatic Vegetation 2014
- 6) Documented SAV (1997 2002 2007 2014)



12/2/2016

Documented SAV Layer

Merged all inventories (1997, 2002, 2007, 2014) into one Documented SAV layer.

Identifies all areas where SAV was mapped and thereby identifies the locations as suitable habitat for SAV growth.

The Documented SAV Layer is being used to provide context for regulatory reviews.

12/2/2016

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NO SIGNIFICANT CHANGE IN 2014

12/2/2016

How much SAV was lost?

<u>Type</u>	<u>2007</u>		<u>2014</u>		<u>Change (Ha)</u>	<u>Percent Change</u>
	<u>Hectares</u>	<u>Acres</u>	<u>Hectares</u>	<u>Acres</u>		
TN	788.6	1948	881.1	2177	92.5	11.7
SAV	1342.6	3317	482.7	1192	-859.9	-64

12/2/2016

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- SAV (*Vallisneria*) ~ **6%** River bottom area in 2007

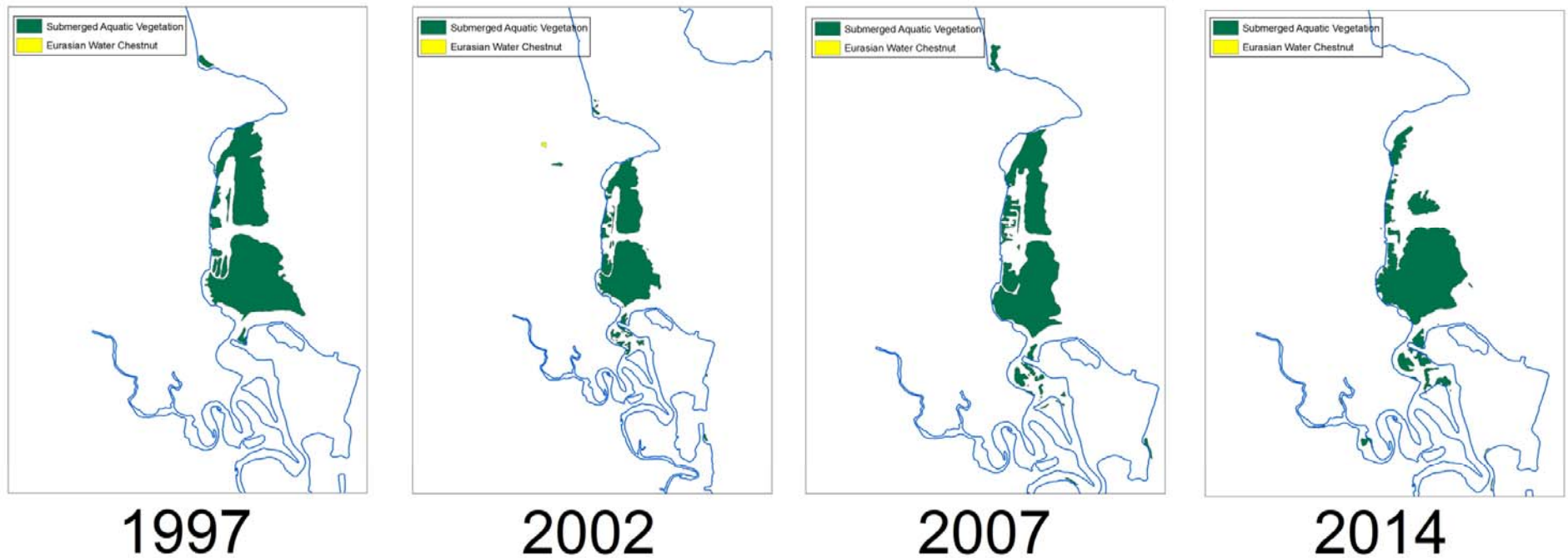
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- SAV (Vallisneria) ~ **6%** River bottom area in 2007
- SAV (Vallisneria) ~ **2%** River bottom area in 2014

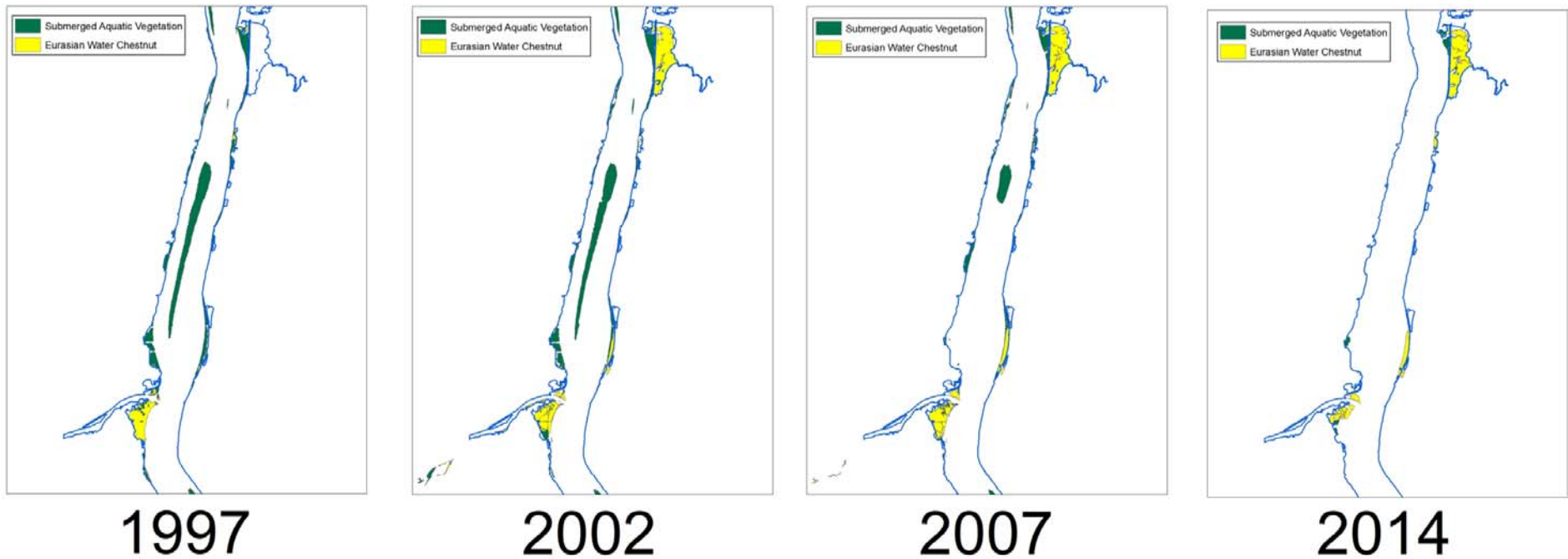
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Persistent SAV...



12/2/2018 **Stony Point Bay SAV bed change comparison 1997-2014**

Lost SAV...



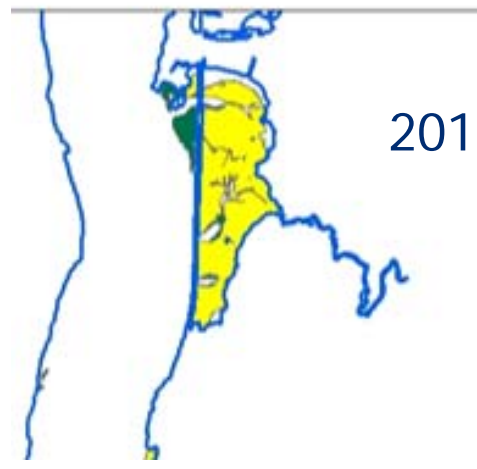
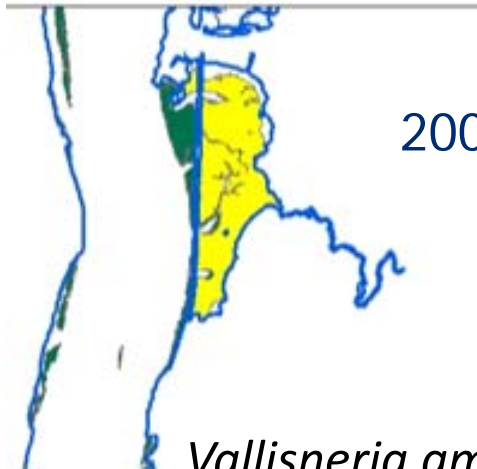
12/2/2016 **Kingston-Rhinecliff Bridge SAV bed change comparison 1997-2014**

Different SAV...



12/2/2016

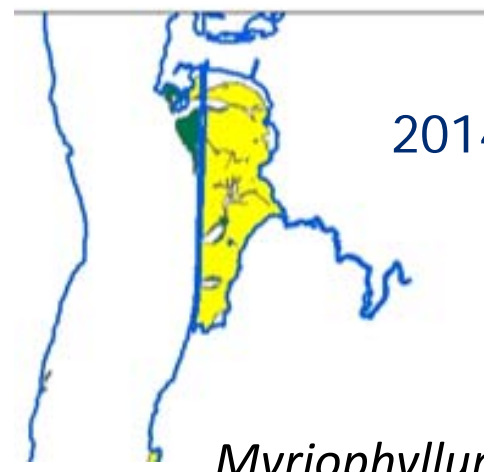
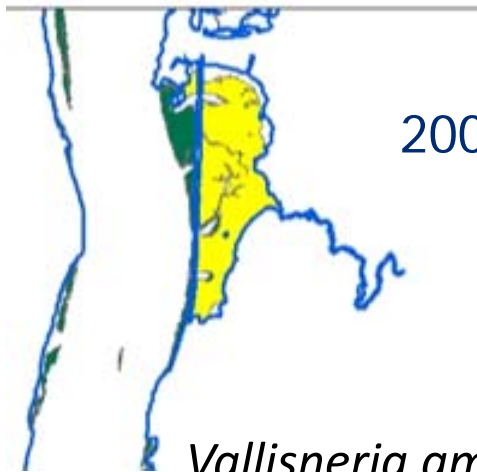
Different SAV...



Vallisneria americana



Different SAV...



Low Density SAV...



12/2/2018 **Upper Flats / Cheviot 2014**

2014 Aerial Photos: Croton Point



Hydrilla verticillata

2016 SAV Aerial Photo Inventory



SAV bed south of Cruger Island/Tivoli Bays

12/2/2016

Schedule for Future SAV Inventories

Product	2016	2017	2018	2019	2020
SAV 2014 Maps	Accuracy Assessment FINALIZED				
SAV 2016 Maps	Aerial Photos Acquired Groundtruth	Digital Interpretation	Accuracy Assessment FINALIZED		
SAV 2018 Maps			Aerial Photos Acquired Groundtruth	Digital Interpretation	Accuracy Assessment FINALIZED
SAV 2020 Maps					Aerial Photos Acquired Groundtruth

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Thank You

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