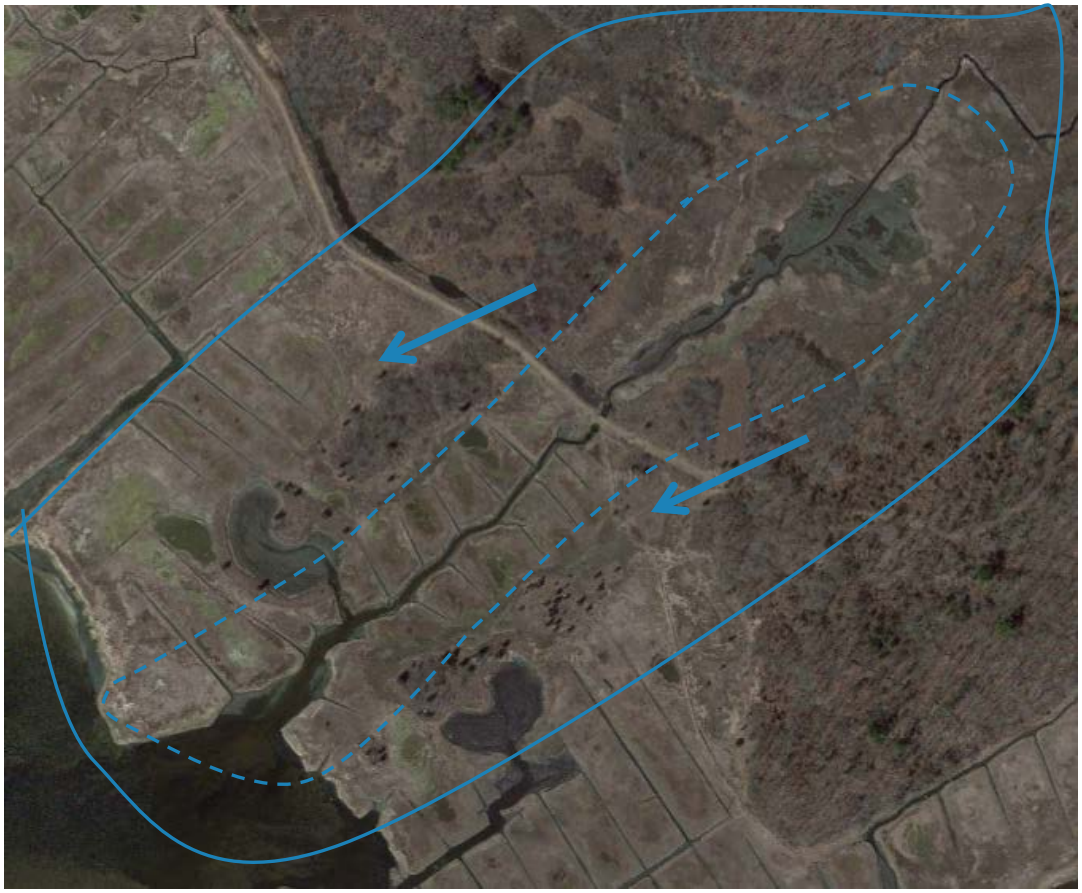
Vargas Marsh – marine transgression

- *Juncus gerardii* is the understory grass (marine transgression pioneer)
- Trees are BlackGum/Tupelo (*Nyssa sylvatica*) – stresses from groundwater, later salt water
- *Nyssa* Forested Wetland is a coastal seepage forest (the treed version of the *Panicum* fen)

Barber Marsh

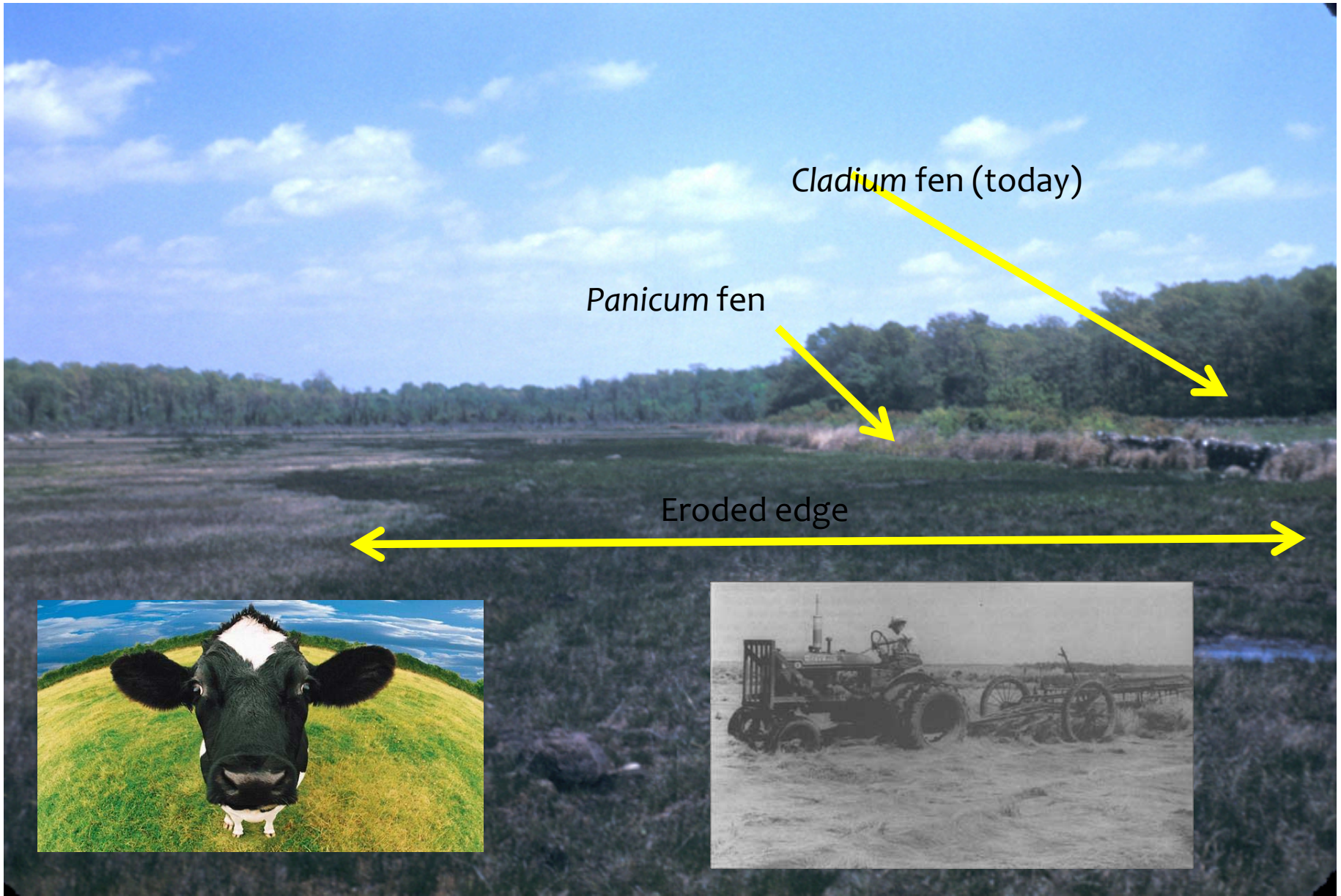
- SET
- Glitter
- Nutrient studies
- Marine transgression transects
- *Ligusticum scothicum* (plant) – no longer present on dike 3.
- Marsh sparrow nest counts – veg. plots (2002 - 2014)

Brucker Marsh – only location where there are glacial sands



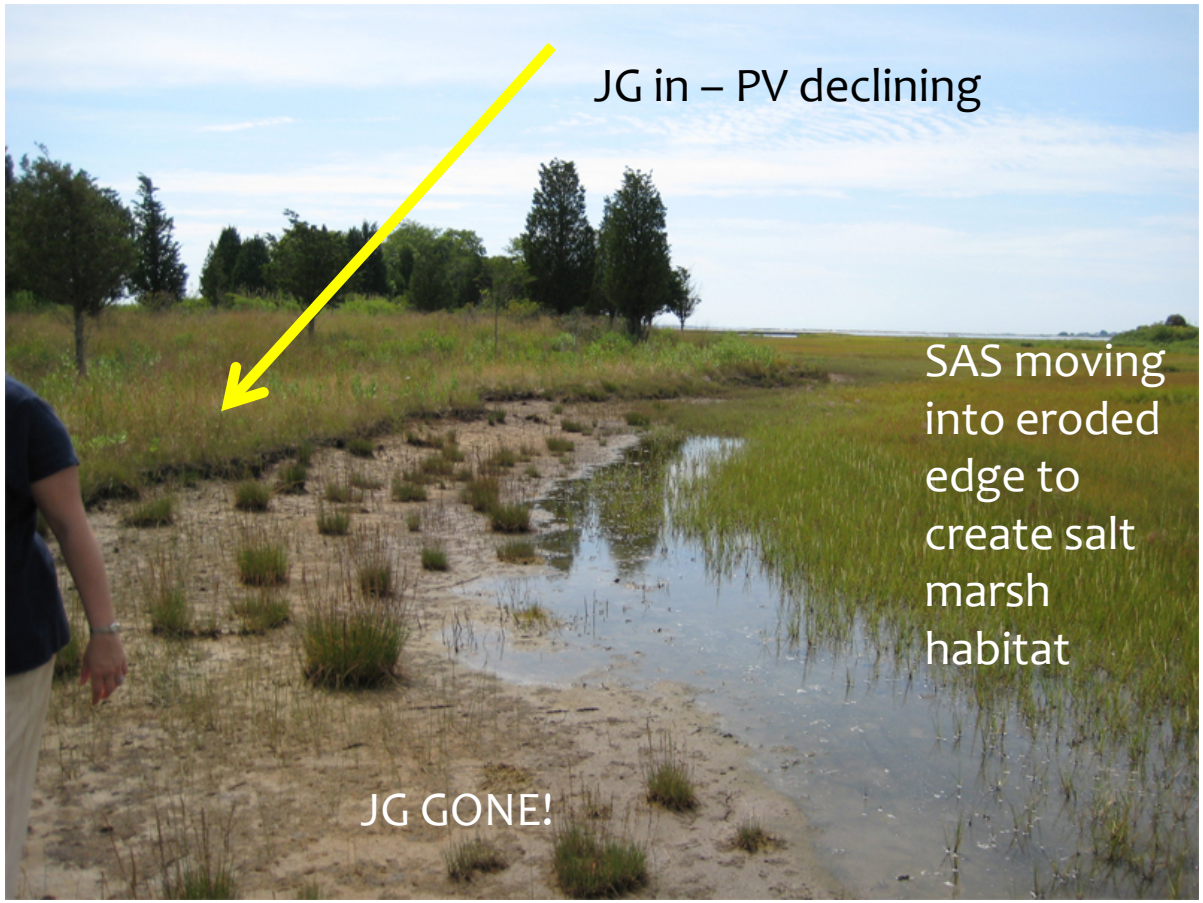
- Vegetation transects (1965)
- Photostations (1947, 1976, 2014)
- Extensive eroded edge
- Sea Level Fen

Eroded Edge - 1947

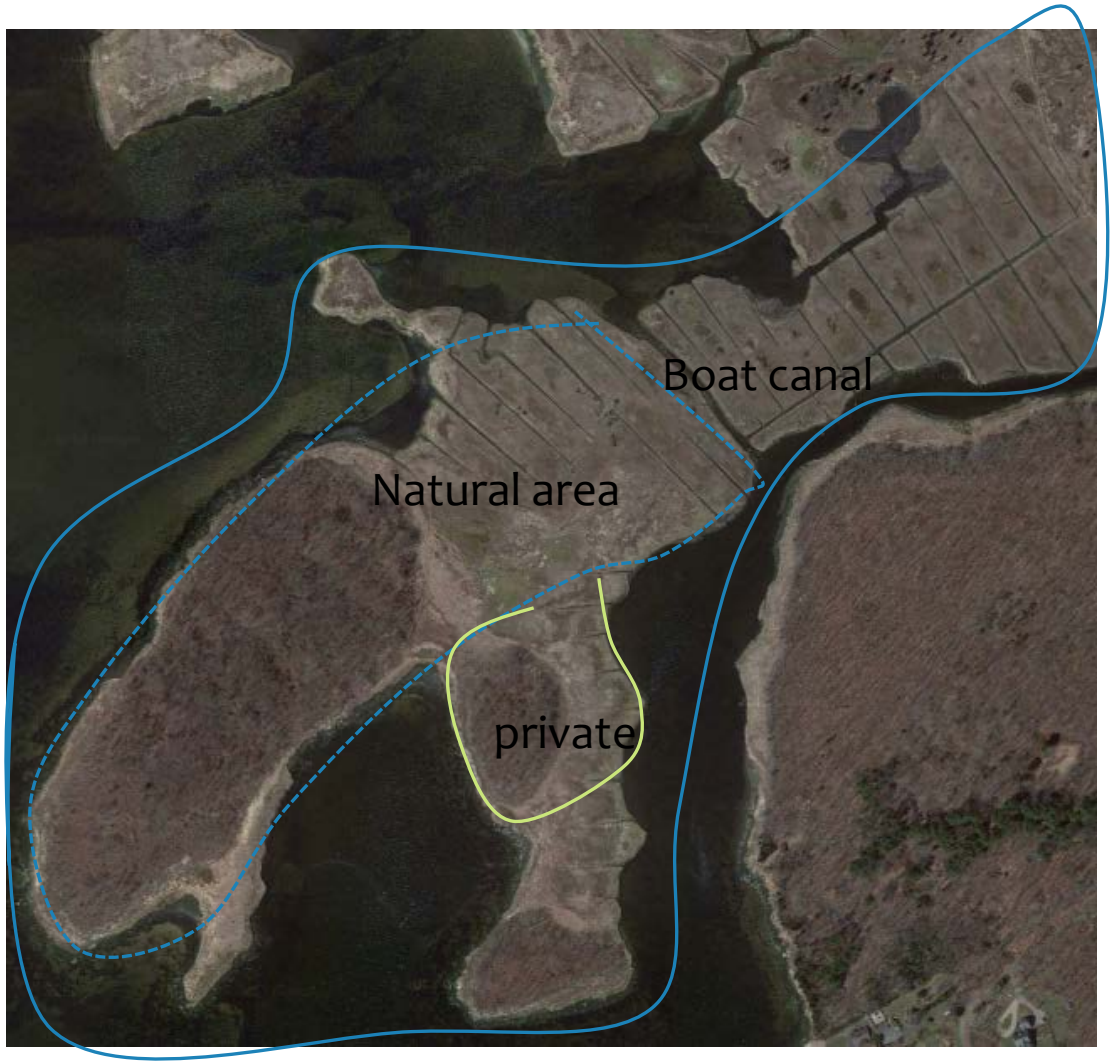


Brucker Marsh – eroded edge

- Build JG peat towards the end of metonic cycle – wettest phase
- Peat then becomes aerobic – groundwater discharge washed peat away
- JG moves into the Sea Level Fen
- Salt marsh vegetation advances into EE



Barber Marsh east



- Vegetation transects (1965)
- Vegetation map (1976) – called lower Brucker Marsh (east of canal to upland)
- Sediment accumulation rates
- "Great Marsh" adjacent to Barn Island – aka Stanton Island (deed reference)
- 1965 Natural area preserve 3 year trial – status unknown.
- Photostations (1965)

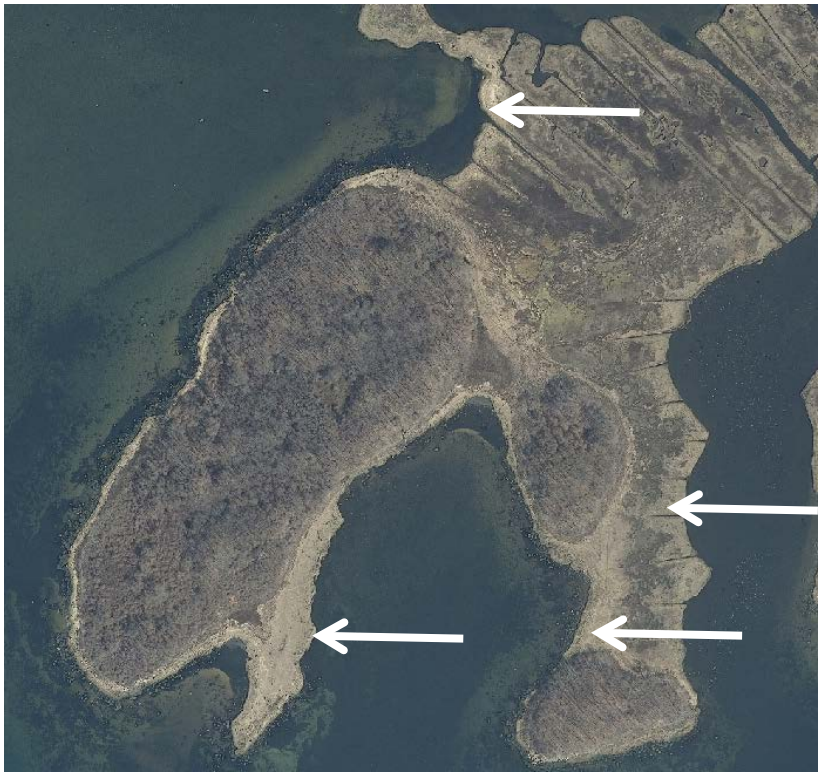
Barber Marsh east

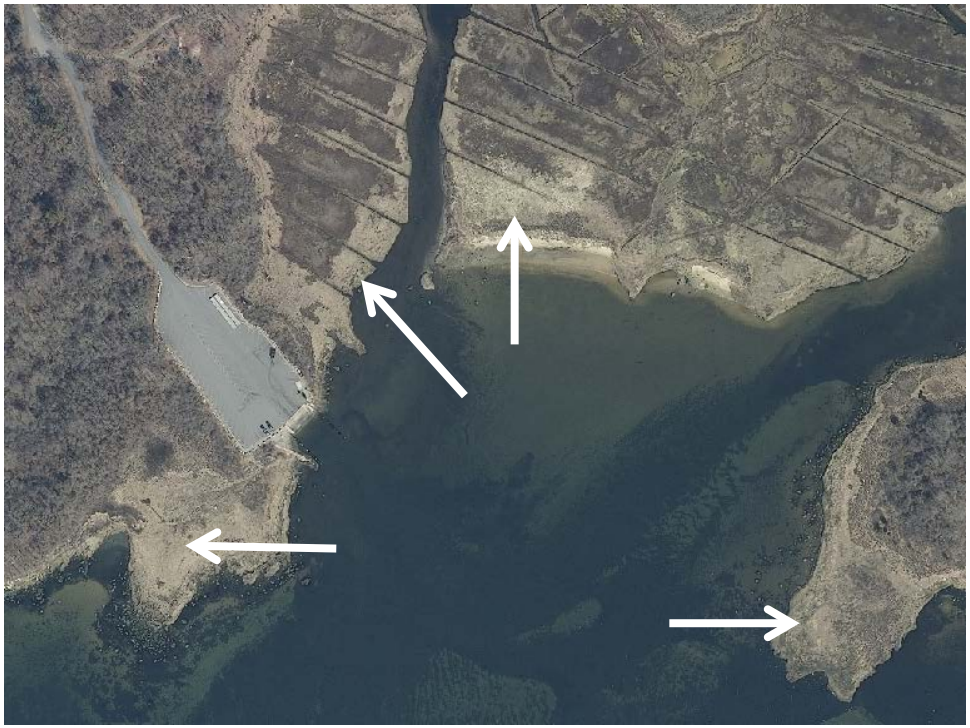
Boat canal and bridge (1965) – bridge is now one with the canal

Barn Island 1965 – winged sumac, goldenrod and bayberry.

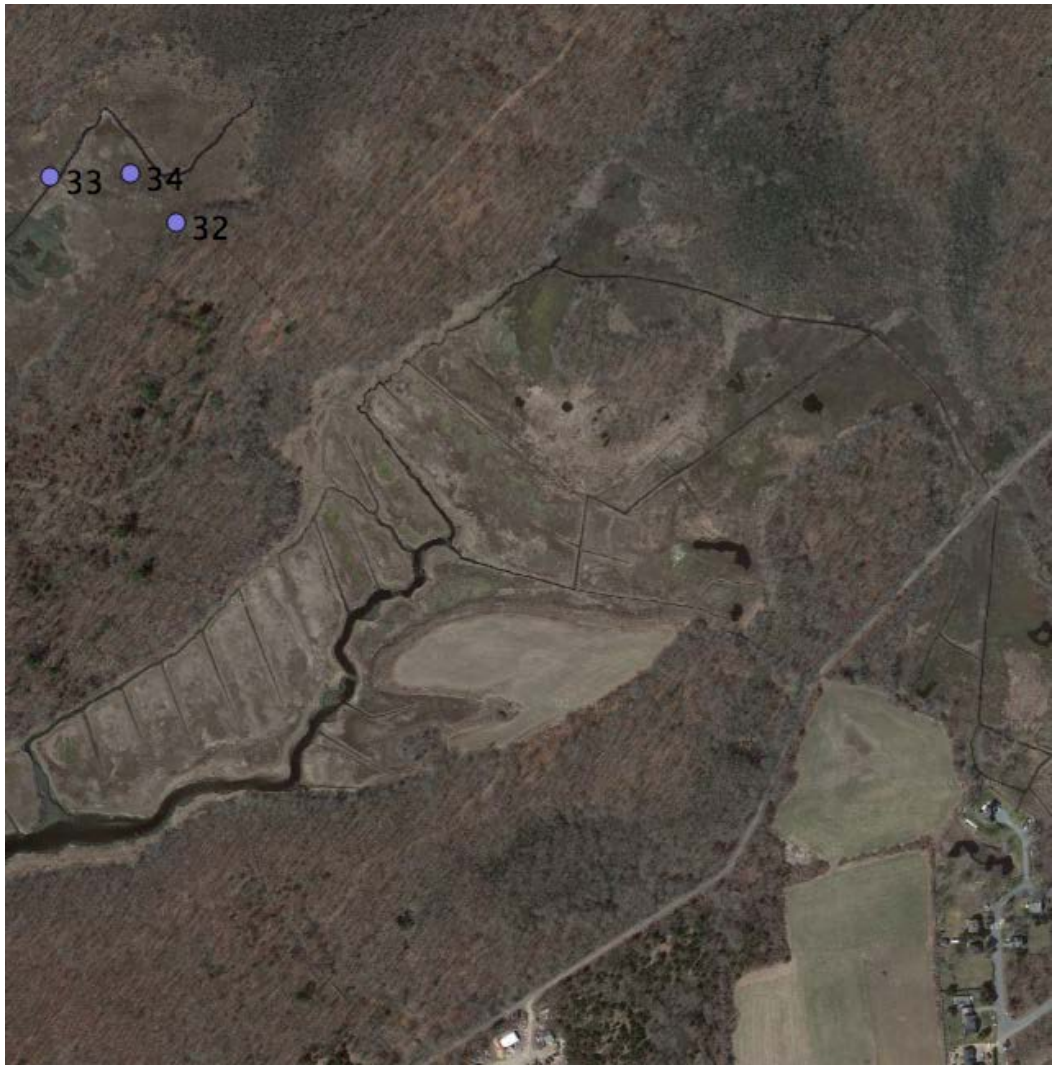
Barn Island - unditched

Barn Island – high marsh levees





Davis Marsh – Not Impounded – but!



Hayed, ditched for haying, grazed in the past – a managed reference site?

- Vegetation map (1976)
- Marine transgression transects
- Photostations

Bayside levee vegetation

- Note light band of bayside vegetation
- High marsh *S. patens*
- bay/creekside levees

Pre-1947

- In the past decades wildlife fulfilled an important need of landowners by supplementing staple foods and by forming a source of income from the marketing of game and peltries.
- Game was plentiful 50 years ago. Most of the coastal birds were waterfowl and shorebirds.
- Hunter from Newport killed 1,362 yellow-legs over an eight year period from 1867-1874. Yellow-legs were sold in Boston Markets. Mrs. Burdick claims to the killed enough yellowlegs in one day to pay for a plow harrow.
- Duck hunters in the last 20 years tell of expending three or four boxes of shells to bring in a mixed daily bag of 25 ducks in day's hunt. The main bag of duck was composed of diving ducks.

Impoundments

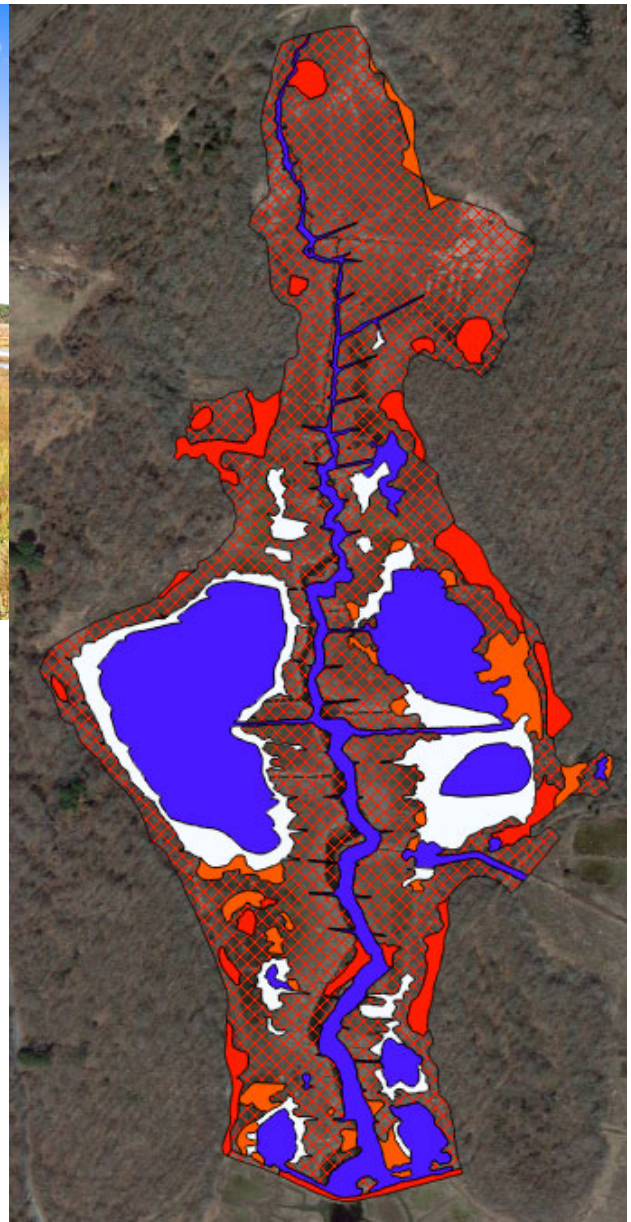
Impoundment construction began in 1946 as a means to restore bird use of the marsh and to control mosquito breeding.

The Board of Fisheries and Game in conjunction with the Department of Forestry and Wildlife Management at UConn underwrote several research projects. They sponsored the research of William Miller to focus on the impacts of impoundment construction.

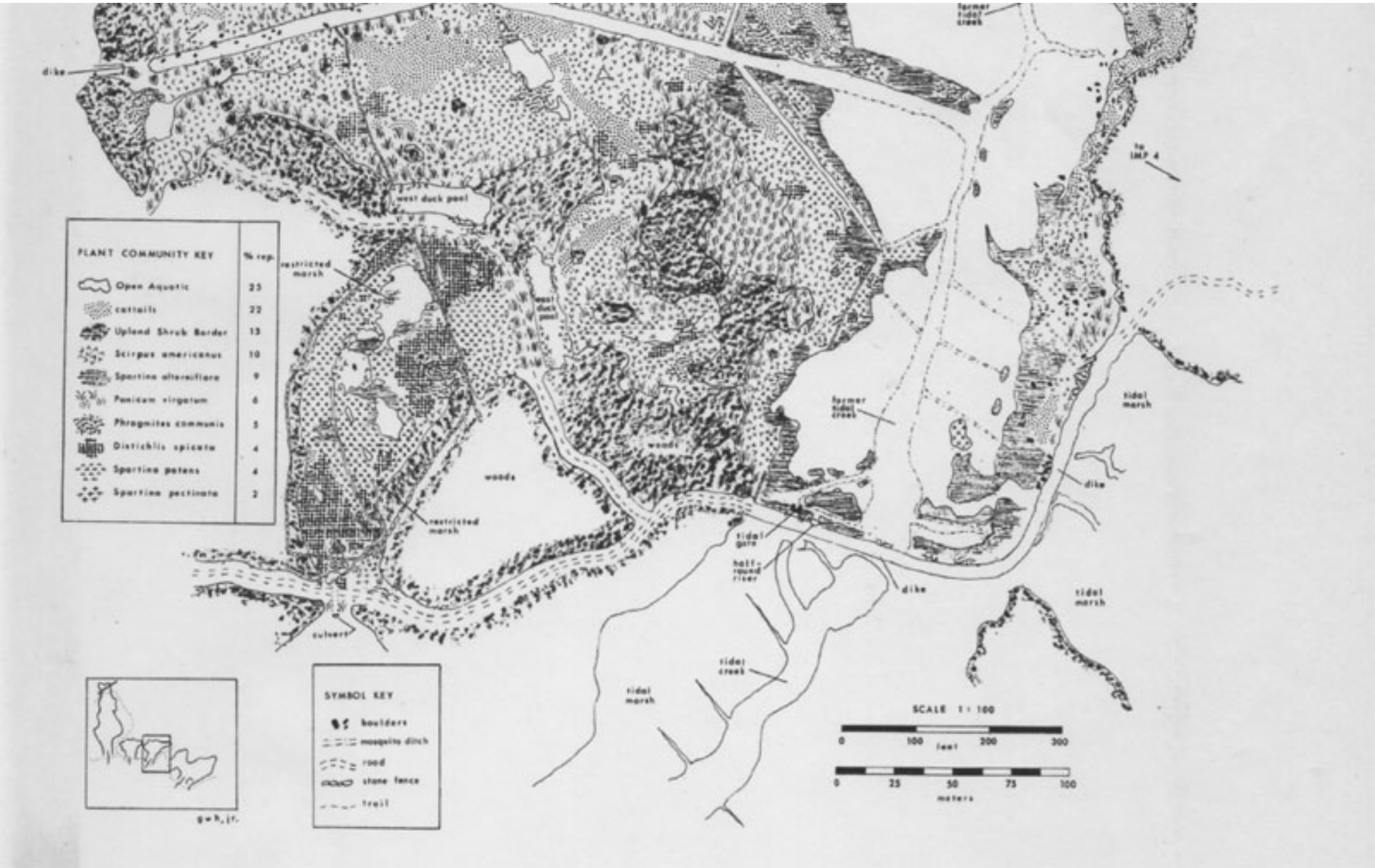
Impoundment 3

Impoundments

- Vegetation maps (1947, 1978)
- SET's (impoundment 1)
- Transects (1978) veg and peat depth
- Photostations
- Warren & Fell restoration/reference comparisons (trajectories)



Impoundment 3 – 1978 (30yrs)



Upland Vegetation

- Forest plots – major species and diameter using prism
- Invasive species survey (most abundant in youngest vegetation and adjacent to unimproved road
- Trail map survey – compared to 2010 survey – new trails from mountain bikes
- Major communities mapping – tidal marsh; terrestrial forests; grasslands; forested wetlands