# Mattapoisett Bogs Wetland Restoration Project

*Photo by Halsey Fulton*

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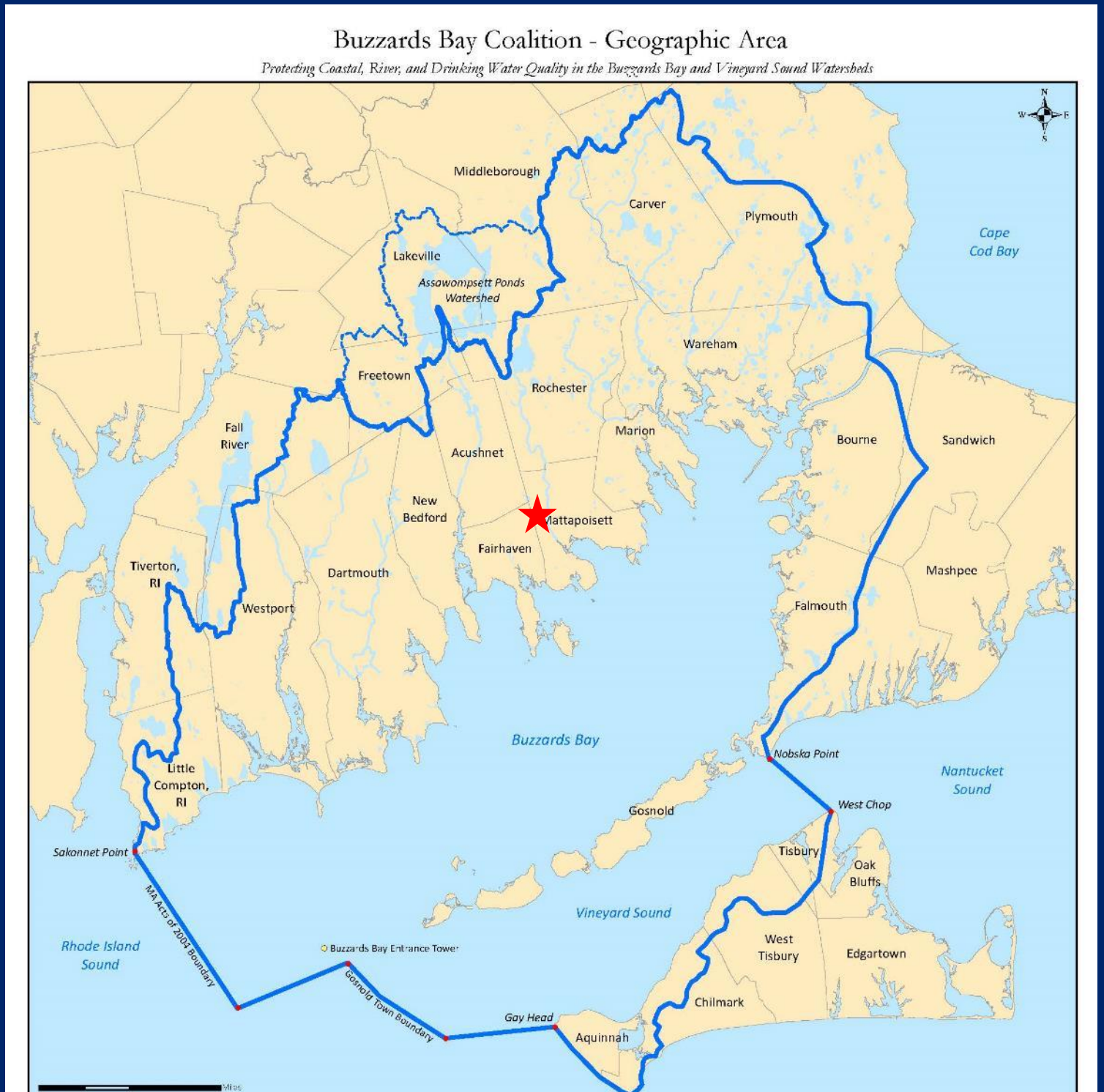
buzzards BAY COALITION

- **Est. 1987**
- **Membership-supported non-profit organization**
- **Working to protect clean water and improve the health of the Bay through:**
  - **Land Conservation**
  - **Education**
  - **Research**
  - **Advocacy**
  - **Restoration**



50 acres of retired cranberry bogs (originally wetlands and uplands)

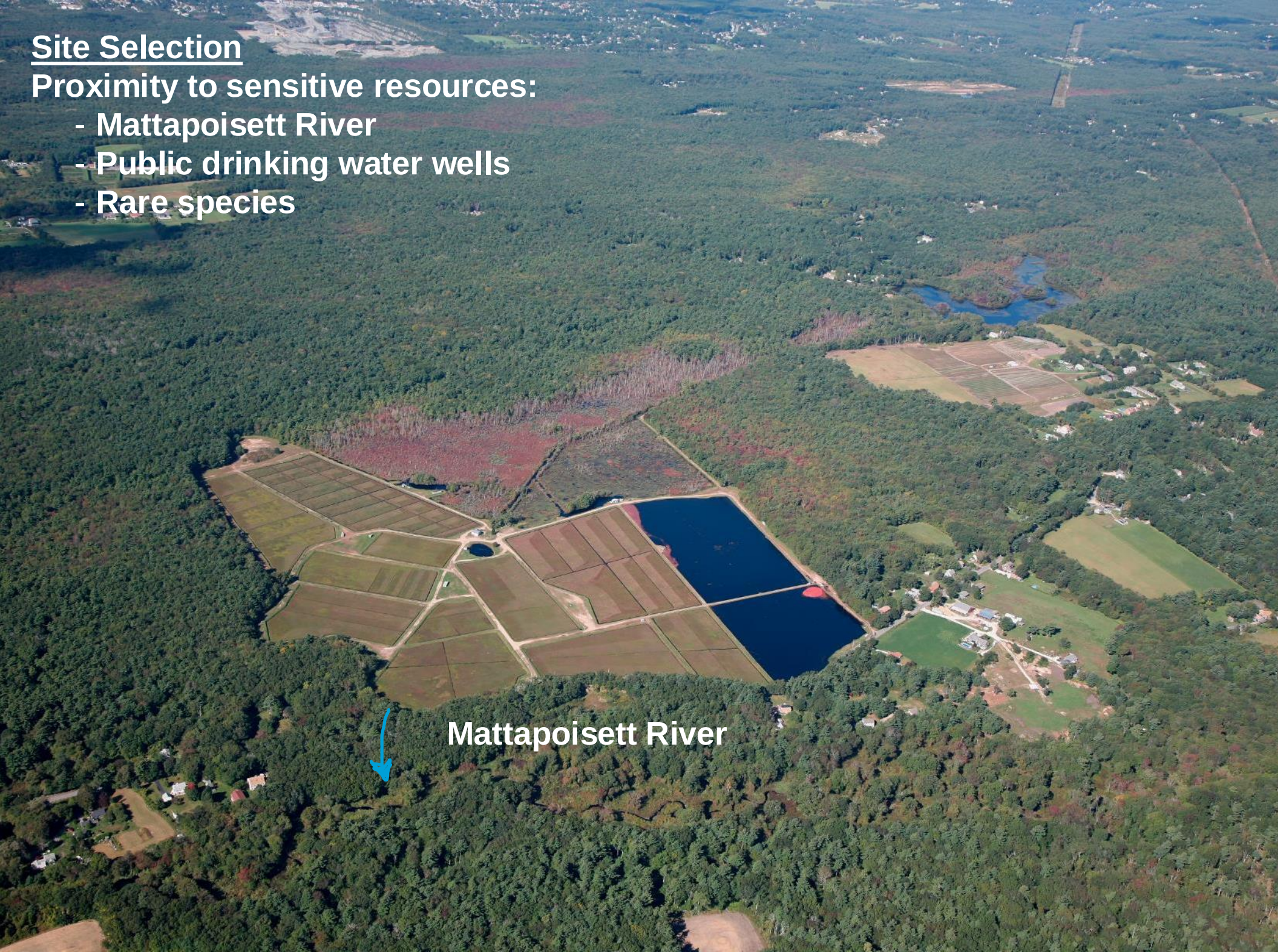
**Goal:** Restore natural wetlands on former farmed cranberry bog

**Approach**: remove 'stressors' that prevent the site from functioning naturally

**Benefits:** improve water quality, expand floodplain, wildlife habitat, and recreation


Stressors:

- Highly manipulated site
- Water diversion structure
- Ditches & filled wetlands
- Culverts/pipes (26 total)


Site Selection
Proximity to sensitive resources:
- Mattapoisett River
- Public drinking water wells
- Rare species
Mattapoisett River

## Proposed Plan

- Remove dikes, culverts, pipes
- Scrape sand to expose buried wetland soils
- Replace water diversion structure with natural stream channel
- Install bridges and boardwalks over restored water ways
- Use excavated sand on site to:
  - ❖ Fill ditches
  - ❖ Naturalize topography
  - ❖ Create sandplain grassland
  - ❖ Maintain open vistas

# Construction

**Oct. 2023-May 2024 (Bogs)**

**July – Aug. 2024 (Diversion Structure)**

*Photo by Jay Soares, Luciano's Excavation, Inc.*

**August 2024** (3 months later)

*Photo by Halsey Fulton*


Retired bog (Pre-restoration)


3 months after restoration
Photo by Halsey Fulton


DEVELON

# August 2024

*Photo by Jay Soares,*
*Luciano's Excavation, Inc.*


Winter 2024


August 2024


Pre-restoration
Irrigation Canal
Tripps Mill Brook
Photo by Sara Quintal


August 2024

# Vegetation Monitoring (40 plots)

| Habitat Sampled, 2024 (3 months post-completion) | Mean Native Cover | Mean Wetland Cover | Mean Upland Cover |
|---|---|---|---|
| Wetland | 65% | 60% | 5% |
| Grassland | 57% | 28% | 31% |
| | | | |
| Total Richness: Pre-restoration = 111; Post-restoration = 114 | | | |

# Lessons Learned

- Bogs: Sand scraping (scratched down to surface of original peat)
  - + / - 6” microtopography creates variability and interconnected pools
  - Ponds 2+ feet deep
  - No seeding necessary on bog surfaces, and possibly lower slopes
  - Ditches maintain rootstock; revegetate quickest
  - Revegetation evident within 2 months - July (completion by early May; areas completed in early winter revegetated quickest)
- Bogs: Surface roughening
  - Removal of irrigation tubing, selective grubbing, tracked surface
- Confidence in accuracy of bog surfaces critical

# Lessons Learned

- Winter construction –
  - Helpful to complete excavation prior to start of growing season, but winter water levels can be challenging (warmer climate, limited freeze days)
  - Consider outlet stabilization measures in final engineering plan AND interim conditions until full vegetation
  - Phased water control plan important
- Sandplain Grassland Uplands
  - Warm-season grasses only for majority; added forb seeds in select areas
  - Watering helped establishment
  - No import of loam
  - Trails not seeded
- Mosquito considerations
  - Eliminating ditches (shallow, stagnant water) and restoring natural water flow reduces mosquito-breeding habitat in abandoned cranberry bogs
  - Predator habitat created with ponds > 2 feet deep and healthy marsh habitat

*Photo by Halsey Fulton*
*(Aug. 2023)*