Husky Bay Wetland Restoration

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Background

- Coastal wetlands in the Great Lakes provide:
  - Important habitat for fish and wildlife
  - Shoreline protection from wave action
  - Improved water quality (especially nutrients and sediments)
  - Recreation (wildlife viewing, kayaking, photography)
- Coastal wetlands are often destroyed or harmed due to human development

Objectives

- Restore a degraded coastal wetland on Michigan Tech’s campus
  - Improve ecosystem structure and function
  - Increase wildlife habitat and vegetative diversity
  - Promote environmental stewardship
  - Increase public awareness on coastal wetlands and their functions and benefits
- Provide an educational tool for K-12 and MTU students

Site Location

- On campus of Michigan Tech, west of Facilities Building and on the Keweenaw Waterway (Figure 1)
- Previously bare sand with weeds such as reed canary grass, sweet vernal grass, Virginia creeper, Eurasian tansy, and spotted knapweed (Figure 2)

Restoration Timeline

- Spring 2012 – restoration began
  - Installed ~150 ft of coconut fiber logs and matting to minimize wave erosion and protect young plants
  - Over 4,644 plugs were planted (86 native species) including emergent taxa
- Fall 2012 – Planted 100 small shrubs and trees in shrub zone
- Spring 2013 – seeded upland area with herbaceous species
- Fall 2013 – Created vegetation plots and installed two groundwater monitoring wells

Results

- About 8,000 ft² of wetland was planted and restored
- Established four zones:
  1. Emergent marsh
  2. Wet Meadow
  3. Shrub zone
  4. Upland buffer strip
- Slow growth in emergent zone due to wave action, beaver, waterfowl
- Excellent survival of all woody species
- Provided nesting and foraging habitat for native songbirds
- Sightings of beaver, fox, wood turtles, great blue herons, mallard ducks, common mergansers, common loons, fish, upland birds, and pollinators including the monarch butterfly

Future Work

- Mainly performed by the SWS – MTU Student Chapter (Wetlands Club)
  - Maintenance: weeding and debris removal
  - Planting: until plant communities reach proper density
  - Monitoring: ground and lake water levels and vegetation
- Integrating the site into more K-12 classes and MTU courses

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