Kristen Coveleski's research and restoration project experience
Master’s thesis:

• Charles City, VA- tributary to the James River

• Developed a conceptual evolution model for channel formation following dam removal
PhD dissertation:

- Rethinking Dredging: A Quantitative Analysis of Dam Removal Techniques
- Evaluated the impact that removal technique, sediment composition and hydrology had on downstream sediment deposition patterns
A PLAN SUGGESTED BY
THE TORONTO BOARD OF TRADE
FOR THE DEVELOPMENT OF
ASHBRIDGE BAY
Showing provisions for the
entry of all Railways
under City Control.
Don River, Ontario
Habitat Communities

- Upland Forest: TOB - 75-75
- Floodplain Forest: 75.0 - 75.75
- Thicket Swamp: 74.7 - 75.75
- Meadow Marsh: 75-75-50
- Emergent Marsh: 74.2 - 75.0
- Submergent Marsh: 72.5 - 74.2
- Vernal Pool
- Planted Armour Stone
- Tree
- Shrub

MVVA
January 2022

Fabric Encapsulated Soil lifts

wetlands

Drowned Tree Habitat/ nesting

Large wood crib wall for bank stability and habitat

Submerged habitat structures

River
Howland Bypass, ME
Before bypass

Bypass Design

- Maintain impoundment at spillway crest
- Maximize bypass flow attraction
- Balance bypass stability
- Passive operation
- Provide upstream and downstream migration for multiple species and life stages (Atlantic Salmon, Alewife, blueback Herring, American Shad, American Eel, Sea Lamprey)
River: 1,300 cfs; Bypass: 450 cfs
Project experience

Piscataquis & Penobscot Rivers, ME

ACKNOWLEDGEMENTS

- Penobscot Trust
- Penobscot Indian Nation
- USFWS
- NOAA Fisheries
- ME Dept Marine Resources
- Kleinschmidt
- Haley and Aldrich
- CES
- Sumco
Cranberry Bog Restoration Considerations

- Water table depth
- Excess sand
- Channel uniformity
- Ditches and berms
- Flow control structures
- Sediment balance
- Plant species uniformity
- Pesticides/herbicides/fertilizers
• Channel creation
  – Restoring relic channels (1)
  – New channel (2, 3, 4, 6, 7)
• Large wood within channels
• Microtopography, depressions
  – Expose peat/seed
  – Onsite spoils
• Spring connections
• Raise groundwater with grade controls
• Atlantic white cedar (cell 3, 4, beaver brook headwaters)
• Open shrub fen
• Ditch plugs
• Access/crossings
Team effort. For more information visit livingobservatory.org

– Project Background
– Photo gallery
– Live cam
– Blogs
– Research

• Instagram: @livingtidmarsh

http://www.livingobservatory.org/
Ms. Mary’s biggest fan

Thank you.

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