Conservation by Design: Promoting Resilient Coastal Wetlands & Communities

Brent Schleck
The Baldwin Group - NOAA Office for Coastal Management
Great Lakes coastal wetlands: trends and threats

Context – Upper Midwest & Great Lakes Landscape Conservation Cooperative (LCC)

Landscape Conservation Design

Next steps and opportunities to engage
Converted wetlands last 40yrs

Wetlands → Anthropogenic

Note: Red dots (34) indicate locations > 50 acres
“…(in the past), environmental threats were perceived as local. However, many recent threats to natural resources occur at much larger spatial scales. Ecosystem degradation is occurring at an unprecedented rate… …it is clear that the most significant conservation challenges facing the United States today transcend administrative and geopolitical boundaries.”

--National Academy of Sciences,
A Review of the Landscape Conservation Cooperatives
“WE are a community, composed of conservation agencies, organizations, and individuals with unique purposes, missions, and mandates, but we align our actions around shared goals and objectives for ecological challenges that transcend boundaries and jurisdictions in the Upper Midwest and Great Lakes geography.”

- UM&GL LCC Strategic Plan
Target Geography

30 counties

~6.3 million acres (blue area)

Approximately the same area as the state of Maryland
Target Geography

Large wetland complexes

Sporadic upland distribution

Wetland Area in 2010: ~804,654 acres (slightly larger than Rhode Island)

~13% of the total focus area
Set targets & goals

- WHY: Understand where goals/priorities align; use human well-being targets with ecological targets to meet multiple goals; engage new partners to advance aligned goals faster.

Gather data

- WHERE: Saginaw Bay to Old Woman Creek.
- HOW: Workshops to vet concepts; build datasets where none existed to translate goals.
- clean data, format for analyses

Analysis & map

- Develop website, factsheets, messaging
- Workshop: vet inputs and outputs with stakeholders
- Adapt, refine and share improved outputs.
- Assessed goal status to further refine where to work to fill specific "gaps"/advance specific goals.
- Identified focal areas/investment hotspots.
- Update website, include data viewer to serve data layers and output.

Implement

- Meetings
- Identify funding and delivery mechanisms
- Map → inform coastal community resilience planning & implementation
- Develop project-tracking and goal-tracking process - disseminate via Great lakes INFORM.
Ecological Targets

Key Native Migratory Fish

Yellow Perch Viability

Indicator: Population Size

Goal: Within historic range of variability or increasing abundance towards historic range
Human Wellbeing Targets

- Achieving Spiritual Enrichment
- Connection to Nature
- Defining Sense of Place
- Defining Sense of Self
- Cultural / Heritage Participation & Practice
- Improved Safety & Security
- Improved Living Standards
- Improved Leisure & Quality of Life
- Improved Human Health
- Preserving Cultural & Spiritual Heritage
- Strengthening Cognitive Development
- Strengthening Social Cohesion
- Strengthening Traditional & Local Knowledge
- Improved Human Health
- Improved Leisure & Quality of Life
- Improved Living Standards
- Improved Safety & Security
Initiate a coastal collaboration focused on conserving coastal wetlands across the landscape

Provide background on Upper Midwest and Great Lakes LCC and Landscape Conservation Design (LCD)

Identify needs and products that would be most useful to regional stakeholders

Gain meaningful feedback on coastal wetland targets (beginning to identify our collective goals)

Identify individuals/agencies that are missing
Coastal Wetland Monitoring and Prioritization

Matthew Cooper (Northland College)

Monitoring Program:
- Supports restoration, protection, enhancement
- ~1,000 wetlands sampled in 5-year cycles
- Data collected on number attributes

www.greatlakeswetlands.org
Coastal Wetland Prioritization Tool

Data aggregation/viewing
- Wetland condition
- Land ownership
- Land use and population
- Geomorphology

Interactive prioritization algorithms

User interface
- View data
- Select variables of interest
- Run prioritization
- Report results
Ongoing Projects

Potentially Restorable Coastal Wetlands

Kurt Kowalski (USGS)
Justin Saarinen (NCF)

Parameters:
- Wet areas
- Wetland soils
- Flow lines
- CARL boundaries
- Impervious
- Landuse
- Water Mask
Potentially Restorable Coastal Wetlands (con)
In Summary

The world and conservation challenges are changing, and in response conservation is changing…

HOWEVER, the challenges exceed the responsibility of any single agency…

THEREFORE, Landscapes Conservation Cooperatives are established as a forum to carry-out a 21st century landscape conservation approach.
Contacts

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