TOWN OF SCARBOROUGH, MAINE
CONSERVATION COMMISSION

Economic and Environmental Importance of Wetlands Protection in Scarborough, Maine

January 2025

Introduction

The Conservation Commission recommends adopting measures to protect upstream wetlands and strengthen the resilience of Scarborough Marsh. Wetlands play a vital role in safeguarding water quality, reducing flood risks, and supporting diverse ecosystems, making their protection essential for the town's future. By implementing these protections, Scarborough can fill critical gaps in current regulations, enhance climate resilience, and avoid the high costs of future restoration. This proactive approach ensures sustainable development that benefits the environment, the economy, and the well-being of our community for generations to come.

Key Points for Protecting Inland Wetlands

Economic Benefits

- Flood Mitigation: Inland wetlands reduce the frequency and severity of flooding by absorbing stormwater.
    - Wetlands in the U.S. save over $30 billion annually in flood damage costs (NRDC).
    - The protective effects of wetlands vary across regions, with an average value of about $1.8 million per square kilometer annually in U.S. coastal counties.
- Water Treatment Savings: Wetlands naturally filter pollutants, reducing reliance on costly water treatment infrastructure.
    - Chesapeake Bay restoration studies highlight significant savings from natural filtration.

- Commercial Fishing: Healthy wetlands and marsh ecosystems provide critical habitats for juvenile fish and shellfish, which are vital to Scarborough's local fishing industry and economy.
- Boost to Property Values: Proximity to protected natural areas stabilizes or increases property values, maintaining Scarborough's appeal as a desirable place to live.
- Tourism and Recreation: The Scarborough Marsh attracts vacationers and recreation enthusiasts, contributing to the local economy. Wetland health ensures this revenue stream continues.

Environmental Importance

- Interconnected Ecosystem: Scarborough's wetlands form a hydrological network that directly impacts the quality of the Scarborough Marsh.
    - Inland wetlands act as filters, removing excess nutrients (e.g., nitrogen, phosphorus) and sediments that would otherwise degrade the marsh. They regulate water flow, preventing erosion and sedimentation in the marsh.
    - Wetland buffers act like screens, reducing sediment and excess nutrients in runoff before they reach wetlands, preventing algal blooms and maintaining water quality.
- Wildlife Habitat: Inland wetlands support biodiversity by providing habitats for species needing both wetlands and uplands, offering cover from human disturbance and supporting ecological diversity.
- Climate Resilience: Wetlands buffer the impacts of sea-level rise and storm surges, protecting human and natural communities.
- Human Impacts: Healthy buffers protect wetlands from direct impacts like construction runoff, garbage dumping, and invasive species intrusion.

Cost of Ignoring Wetlands Protection

- Increased Flood Damage: Without wetlands, flood risks rise, increasing infrastructure repair costs and property damage.
    - Example: Flood-prone regions without adequate wetland protections face billions in damages annually.
- Water Quality Degradation: Loss of wetlands leads to higher pollution levels, increasing public health risks and water treatment costs.
- Biodiversity Loss: Degraded ecosystems disrupt habitats and reduce species populations, including those essential for fisheries and pollination.

- Economic Risks: Deteriorating natural resource quality diminishes tourism and recreation revenue, while increased development-related infrastructure costs burden taxpayers.

Why Current Regulations Are Insufficient

- Regulatory Gaps: Scarborough's current ordinances lack clarity and consistency, leaving inland wetlands vulnerable to incremental degradation. This mirrors findings in the Vermont report, which emphasized that inconsistent regulations undermine long-term ecosystem protection.
    - Federal rulings (e.g., Sackett v. EPA) have further narrowed Clean Water Act protections, exacerbating these vulnerabilities.
- Cumulative Impacts: Incremental wetland losses from development that lacks adequate environmental safeguards lead to long-term ecosystem degradation, even if each individual loss appears minor.
- Climate Change Risks: Rising sea levels, increased storm intensity, and altered hydrological patterns demand proactive local measures beyond current state and federal standards.

By acting now to implement inland wetland setbacks, Scarborough can safeguard its natural resources, maintain its economic vitality, and ensure a sustainable future for our entire community and the Scarborough Marsh.

Supporting Sources

- Vermont Department of Environmental Conservation: Importance of consistent wetland regulations. (dec.vermont.gov)
- Wetlands Watch: Economic Benefits of Wetlands (https://www.wetlandswatch.org/wetlands-economic-benefits)
- Chesapeake Bay Foundation: Economic benefits of natural resource protection (cbf.org).
- Natural Resources Defense Council: Flood damage mitigation savings (nrdc.org).
- EPA: Wetlands' role in water quality and ecosystem health (https://assessments.epa.gov/risk/document/%26deid%3D296414?)
- Focus Areas of Statewide Ecological Significance: Scarborough Marsh (https://www.maine.gov/dacf/mnap/focusarea/scarborough_marsh_focus_area.pdf)