Climate-Informed Buffer Ordinance Language

Create a model ordinance that requires buffers between wetlands and certain activities and uses

Buffers are important tools to protect space around valued resources. They can be recommended practices or incorporated into local laws (i.e., ordinances). Many municipalities have adopted ordinances specifically to protect sensitive coastal resources and wetlands generally (both inland and coastal). Buffers can be designed to reflect anticipated climate change impacts (e.g., changing lake levels and expanded ranges of invasive species). Indeed, some municipalities along the U.S. marine coasts have also adopted ordinances dealing with sea level rise adaptation. The appropriate counterpart in the Great Lakes would be a local ordinance to adapt to changing lake levels. The concept can be further enhanced so that buffers are designed to minimize vulnerabilities and maximize resiliency of coastal wetlands to the anticipated impacts of climate change. Expanding traditional floodplain buffers to consider more frequent flood events under climate change is one example.

Many municipal planners and decisionmakers say that seeing example or model ordinances makes it easier for them to understand the issue and to write their own ordinances. Model ordinances can be aimed at reducing wetland climate vulnerability generally, or they may focus only on particular vulnerabilities (e.g., lake level change or altered runoff) and related adaptation techniques. Model coastal wetland ordinance language provides planners and decisionmakers with adaptation-specific language that is ready to integrate into a new or existing ordinance. Where model ordinance language is not available, simply borrowing relevant ordinance language that is already developed can serve the same purpose. Either way, this practice enables existing coastal wetland and related ordinances to be readily modified to reflect adaptation considerations. Integrating such ordinances into broader awareness and education campaigns can increase both support and compliance.

Case Example | Huron River Watershed Council

The Huron River Watershed Council (HRWC) recognizes climate change as an overarching threat to the watershed and to their work, e.g. through decreased water quality and quantity, increased temperatures and flooding. The Winter 2009 edition of their quarterly Huron River Report focused on climate change, including implications for different subsections of the watershed and for fish, as well as adaptation options and examples, including a model stream buffer ordinance. The U.S. Environmental Protection Agency and the Michigan Dept. of Environmental Quality funded the creation of the model stream buffer ordinance. This model was based on an existing ordinance used in other townships that was modified by the HRWC and members of an advisory committee.

HRWC initiated many programs aimed at addressing climate change, including a stream buffer initiative recognizing the ability of forested buffers to reduce water temperature, help absorb and store water during floods, and reduce moisture loss during droughts. Scio and Green Oak townships have adopted the model ordinance, which addresses issues such as allowable uses and activities within the buffer zone and buffer zone width.

Challenges and Benefits

Having a model ordinance makes it easier for governments to adopt climate-informed ordinances and increases the likelihood that ordinances will address issues important for wetland resilience. The flip side of this is that model language may be seen as part of an effort to push an environmental agenda or undermine local authority, although a strong outreach and education campaign leading up to adoption of the ordinance can reduce this perception.

Depending on how they are written, model ordinances can also highlight how actions not directly affecting wetlands can nonetheless influence the ability of wetlands to adjust to climate change.

Who should implement the practice?

While ordinances must be implemented by bodies with regulatory authority, typically local governments, model ordinances can be written or supported by any group concerned about wetlands. They are typically created by groups whose interests cover multiple municipalities.

When should this practice happen?

Tools and Resources

National Environmental Law Institute – Planner's Guide to Wetland Buffers for Local Governments (2008) | This guide identifies practices in the protection of wetland buffers by local governments through wetland buffer ordinances. | www.eli.org/sites/default/files/eli-pubs/d18_01.pdf

Huron River Watershed Council – Model Ordinance for Riparian Buffer | This document provides a model ordinance developed by the HRWC. | www.hrwc.org/wp-content/uploads/2009/11/HRWC_riparianbuffer_model_ordinance.pdf

Huron River Watershed Council's Guide to the Model Wetland Ordinance | www.planningtoolkit.org/natural_resources/wetland_ord_guide.pdf

Climate Adaptation Knowledge Exchange – Building Capacity for Climate-Resilient Communities and Water Conservation in the Huron River (2012) | www.cakex.org/case-studies/building-capacity-climate-resilient-communities-and-water-conservation-huron-river-wate