



December Board Cycle

Milwaukee County Parks

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Date: November 12, 2020
To: Marcelia Nicholson, Chairwoman, County Board of Supervisors
From: Guy Smith, Executive Director, Milwaukee County Parks
Subject: **Parkland Coastal Bluff Policy and Coastal Asset Inventory (INFO)**

Issue

Milwaukee County Parks has received two grants through the Wisconsin Coastal Management Program and is working to develop both a coastal bluff management policy as well as a coastal asset inventory.

Background

Coastal Bluff Management Policy

In accordance with file 19-342, the Milwaukee County Parks Division of Planning and Development has been working with the Environmental Services section the County Department of Administrative Services of the Architecture & Engineering Division as well as the Southeastern Wisconsin Regional Planning Commission, SEWRPC, to develop a coastal bluff management policy that will help guide land use and management decisions in consideration of the high risk of slope failure and erosion on coastal bluffs. The project team held a meeting with local officials from lakefront jurisdictions in late 2019 and have worked to consolidate research with the assistance of SEWRPC. Goals of the project include:

- Protect Milwaukee County's financial investment in County-owned assets within the Lake Michigan Coastline Management Zone.
- Protect the ecology, resources, and natural character of County-owned lands within the Lake Michigan Coastline Management Zone.
- Provide efficiency and consistency when reviewing proposals for a scope of work to be completed. within the Lake Michigan Coastline Management Zone.



The document that has been drafted defines key terms related to coastal bluff management, delineates the areas of parkland that would have the guidelines applied, sets standards for project submittals within the coastal bluff zone, and sets forth recommendations for management actions and project reviews. Work has taken place to identify different types of projects that could be proposed in the applicable areas including landscape management, shore protection modifications, and structures. In all cases, guidelines have been created with a goal of protecting bluffs from development or management actions that could make slopes unstable, thereby threatening assets at the top of the slope, on the slope, and below the slope. Unfortunately, several sections of Milwaukee County Parkland have already experienced such failures so proactive guidance is necessary for all parkland of this type.

Importantly, comprehensive attention was given to identify the coastline management zone, both with language as well as with figures. Whenever existing research or policy could be referenced, data was validated to be appropriate for Milwaukee County and applied in this policy. For example, the University of Wisconsin Sea Grant Program research was used to clarify bluff recession rates and therefore informed the designation of areas considered part of the coastal management zone. It is important to keep in mind that some areas of Milwaukee County have coastal bluffs that have human-made (filled) land on their lakeward side, but the geology and recession characteristics of these bluffs remain the same as those in other sections of the County. Maps of the lakeshore coast of Milwaukee County have been included in the report, with both the crest and the toe of the coastal bluffs shown.

Coastal Asset Inventory

In addition to the development of a coastal bluff management policy, a second project has been undertaken to create a coastal asset inventory for Milwaukee County. Work has been summarized in a report, and data can be used both through a spreadsheet database as well as an interactive GIS application. Work on this effort followed the previously mentioned definition of the coastal management zone, which was used to identify coastal bluffs (including slope crest and toe), and compile data on existing assets into a matrix that was used to evaluation condition, vulnerability, and replacement/stabilization costs.

Extreme weather has damaged Milwaukee County's coastal resources and is expected to continue to occur in the future, with the possibility that the severity will be greater because of climate change. Milwaukee County has approximately nine miles of coast on Lake Michigan, which includes beaches, bluffs, and other assets that are continually degraded from storms and erosion. As landowner and steward of parklands, Milwaukee County needs these assets to provide and uphold recreational space, protect natural habitats and ecology, and in some cases provide revenue opportunities. These assets are currently under threat, as evidenced in January 2020 when a single storm caused approximately \$8 million in damages to County-owned coastal assets.

Bluff and shoreline studies on Wisconsin's Lake Michigan have been occurring since 1977. These studies helped create condition and vulnerability metrics to coastal assets for this report. Milwaukee County found, added, and updated coastal assets, including ownership information.



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Approximately 13% of assets identified were classified as being in poor condition and 22% assets were deemed highly vulnerable. The assets with the highest risk were the beaches, groins, and parking lots. Different infiltration basins, revetments, and parking lots in the vicinity of McKinley Marina all appeared in the top 40 most at risk.

The total Milwaukee County coastal asset valuation is estimated at \$2,927,425,276 with approximately 50% of the cost attributed to bluff stabilization needs.

Recommendation

No action necessary as this report is informational in nature. Parks expects to return to the County Board with an action item in early 2021.

Prepared By: Sarah Toomsen, Manager of Planning and Development, Milwaukee County Parks

Approved By: Guy Smith, Executive Director, Milwaukee County Parks

Guy Smith

Attachments

- A1 - Draft Section 3, Coastal Management Guidelines
- A2 - Final Report, Milwaukee County Coastal Resources Inventory
- A3 - Coastal Inventory Asset List
- A4 - Coastal Inventory Asset List, Sorted by Risk

Copy

- David Crowley, County Executive
- Mary Jo Meyers, Chief of Staff, County Executive's Office
- Sheldon Wasserman, Parks, Energy & Environment Chair, Supervisor District 3
- Steven Shea, Parks, Energy & Environment Committee Vice-Chair, Supervisor District 8
- Felesia Martin, Parks, Energy & Environment Committee Member, Supervisor District 7
- Sylvia Ortiz-Velez, Parks, Energy & Environment Committee Member, Supervisor District 12
- Liz Sumner, Parks, Energy & Environment Committee Member, Supervisor District 1
- Kelly Bablitch, Chief of Staff, County Board
- Julie Landry, Director, Department of Administrative Services
- Joseph Lamers, Fiscal & Budget Director, DAS
- Vince Masterson, Fiscal & Strategic Asset Coordinator, DAS



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- Pamela Bryant, Capital Finance Manager, Comptroller's Office
- Justin Rodriguez, Capital Finance Analyst, Comptroller's Office
- Kelsey Evans, Committee Coordinator, Office of the County Clerk
- Emily Peterson, Research & Policy Analyst, Office of the Comptroller
- Lindsey Peterson, Budget & Management Analyst, DAS-PSB

