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Developing a Process and Technical Criteria for Evaluating Wisconsin's Lake Superior Freshwater Estuaries' Ecological Characteristics, Research Potential, and Education Opportunities

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Abstract:

The University of Wisconsin-Extension collaborated with a diverse array of partners, including the National Oceanic and Atmospheric Administration and other state agencies, to evaluate 35 candidate sites on Lake Superior for nomination as a National Estuarine Research Reserve. The evaluation process was designed to consider and assess the ecological characteristics, research and monitoring potential, and educational opportunities associated with the candidate sites. Wisconsin adapted federal marine estuary evaluation criteria to be used in the Lake Superior freshwater estuary evaluation process. This effort represented the first time that freshwater estuary evaluation criteria have been developed for a National Estuarine Research Reserve site selection process.

This presentation will outline and discuss the unique aspects and ecological characteristics of Great Lakes freshwater estuaries and the criteria developed to evaluate those characteristics. Factors related to freshwater estuary structure and function will be discussed, along with the geomorphic characteristics of these systems. In addition, the presentation will cover the methodology that was used to concurrently evaluate research and education potential of each of the sites. The process involved input from a team of over thirty individuals with expertise related to freshwater estuary ecology, education, and outreach. The team of experts met 10 times over a 15-month period to complete the evaluation process. The results of this effort represent the first national model for evaluating Great Lakes freshwater estuary research and education potential relative to the National Estuarine Research Reserve Program.

Impact Statement:

The results of this effort represent the first national model for evaluating Great Lakes freshwater estuary research and education potential relative to the National Estuarine Research Reserve Program and contributed to the nomination of the St. Louis River Freshwater Estuary as a Wisconsin Lake Superior National Estuarine Research Reserve.

Category: Watershed Assessment and Restoration

Type of Presentation: Oral Presentation