

Multi-author, multi-agency poster presentation to be submitted to the Coastal Estuarine Research Federation Conference, Daytona Beach, FL, Nov 6-10, 2011....

TITLE: The Future of Great Lakes Rivermouth Research

AUTHORS (FIRST NAME, LAST NAME): James H. Larson², Joel Hoffman¹, Jeff Schaeffer³, William B. Richardson², Anett Trebitz¹, Michael Sierszen¹, John Morrice¹, Paul Seelbach³

INSTITUTIONS (ALL): 1. U.S. Environmental Protection Agency, National Health and Environmental Effects Research Laboratory, Mid-Continent Ecology Division, Duluth, MN, United States.
2. U.S. Geological Survey, Upper Midwest Environmental Sciences Center, La Crosse, WI, United States.
3. U.S. Geological Survey, Great Lakes Science Center, Ann Arbor, MI, United States.

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ABSTRACT BODY:

Abstract Body: The Great Lakes Rivermouth Collaboratory, a group of scientists and stakeholders representing academics, federal and state agencies, and non-governmental organizations (NGOs) are developing a conceptual model that draws upon existing data sources to synthesize the 'state of the science' for Great Lakes rivermouths. Great Lakes rivermouth ecosystems are the freshwater analogs to estuaries, although the physical dynamics of these systems are controlled by river discharge and lake seiches (as opposed to tides). These systems encompass a mosaic of riverine, littoral, wetland, and coastal habitats; these are primary productivity and metabolic hotspots relative to pelagic waters and serve as important nursery and refuge habitat for Great Lakes fishes. Rivermouths are important hubs of human interaction with the Great Lakes because they are generally surrounded by dense population centers, they serve as the physical connection between the watershed and the Great Lakes, and they provide important ecosystem services. Collectively, however, these systems have received relatively little study. Intense focus has been restricted to a relatively small number of systems (e.g., St. Louis River, Muskegon River, and Old Woman Creek) or has been focused on a related class of coastal ecosystems (e.g., coastal wetlands). The Rivermouth Collaboratory represents a novel multi-agency and academic research partnership to achieve shared research, management, and restoration goals. For example, recent studies led by the US Geological Survey and US Environmental Protection Agency are focused on understanding the connections between rivermouth ecosystem disturbance, function, and ecosystem services. Watershed-based site selection is used as a shared sampling design to synthesize research project results and provides a means to study relevant system responses along a disturbance gradient.