Shoreline classification of the St. Louis River Estuary using geographic information systems and standard landuse/landcover data sets

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The St. Louis River Estuary (SLRE) shoreline is ~300 km in length and borders MN and WI from the MN highway 23 downstream to Lake Superior. The shoreline is a complex and diverse mixture of many features from industrial docks and slips in the lower SLRE to complex wetlands and natural areas in the middle and upper SLRE. Healthy and productive shorelines are valuable resources and if managed in a sustainable manner can provide social, economic, and environmental benefits to the Twin Ports community. To this purpose we developed a GIS based scheme to classify and estimate shoreline cover types (rock, vegetation, structures, ore docks, rip-rap, forests, grass/shrub, wetland, etc.) within 60m buffers for both the riparian and littoral shoreline of the SLRE. Point features (recreational docks) and linear features (sheet piling) will also be enumerated. To our knowledge no contiguous shoreline cover estimates have been developed for the SLRE. Potential benefits of this classification scheme include: baseline data to guide restoration and development projects, assist in identification of sensitive areas (erosion, flooding, etc), increase community awareness of healthy shoreline practices, and assist in the development of an estimate of condition for SLRE shoreline. The results of this works will be presented in a poster format. *The views expressed here are those of the authors and do not necessarily reflect the views and policies of the US Government.*