

Appendix C

Mapping of Potential Commercial Navigation Related Bank Erosion Sites

Results of the system screening have been plotted on a series of forty-two, 17” by 22” maps depicting the high and medium risk sites for potential navigation induced bank erosion. The data set used to create the map set consists of 30 ARC/INFO line coverages documenting river bank conditions and physical parameters for the Upper Mississippi River (UMR) and the Illinois Waterway (IWW) as observed during a system-wide field inspection conducted in the months of August, September, and October of 1995. Each coverage in the data set includes data for a single navigation pool associated with a Lock and Dam in the UMR or the IWW. The data set includes the UMR from the confluence with the Ohio River (River Mile 0) to Lock and Dam 3 (RM 797) and the IWW from Grafton, IL (RM 0) to Joilet, IL (RM 286).

The data were developed by segmenting and attaching attributes characterizing bank condition and physical parameters to an existing line coverage depicting the land-water interface of the UMR and IWW. The land-water interface line used as the base for the UMR coverages was extracted from existing coverages of land use developed from 1989 aerial photography by the USGS / Biological Resources Division / Environmental Management Technical Center, Onalaska, WI. The land-water interface line used as the base for the IWW coverages was extracted from existing National Wetland Inventory (NWI) data provided by the US Army Engineer District Rock Island. Land use and NWI attributes were carried over from the existing coverages and were attached to the erosion line coverages.

The identified barge facilities were taken from ARC/INFO coverages containing points representing the locations of the barge docking facilities along the Upper Mississippi River and Illinois Waterway. Information for the ARC/INFO Point Attribute Table (PAT) was obtained from the Navigation Data Center and updated with the aide of the 1993 Inland Waterway Guide booklet.

The location of the primary, secondary, and alternate waiting points were provided by the Rock Island and St. Paul District’s Operations Divisions, and were

augmented with interviews conducted with lockmasters and tow captains. An alternate waiting point can represent either a third waiting point or a waiting point which is only used under certain flow conditions.