

Abstract for proposed presentation at 2001 NALMS conference

Effects of Recreational Boating on the Upper Mississippi River System

Daniel B. Wilcox St Paul District, U.S. Army Corps of Engineers

Boating is the most popular and highly valued recreational activity on the Upper Mississippi River System (UMRS). Effects of recreational boating were assessed by the U.S. Army Corps of Engineers as part of the Upper Mississippi River – Illinois Waterway Navigation Study. We examined the effects of recreational boating traffic in order to better assess the effects of increased commercial navigation traffic in context of other stresses on the UMRS ecosystem. A traffic allocation and forecasting model was developed to estimate recreational boating traffic throughout the UMRS through the year 2050. The spatial distribution of boating traffic was estimated through interviews with resource managers and development of a navigated areas GIS. Hydraulic disturbances by recreational vessel traffic include vessel wake waves, propeller jet turbulence, propeller entrainment of water, sediment resuspension in shallow areas, and bank erosion. Ecological effects of these hydraulic disturbances include effects on aquatic plants through breakage and light limitation, entrainment, impingement, and stranding of fish, habitat disturbance, and impingement and disturbance of wildlife. Experiments and models were used to estimate the ecological effects of recreational boating traffic on the UMRS.