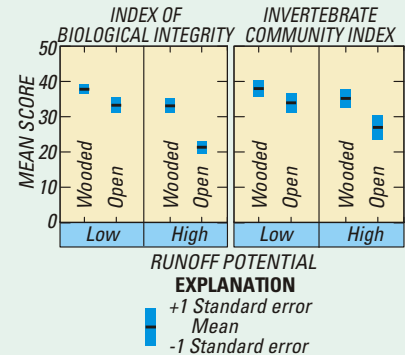


RIPARIAN COVER AND RUNOFF POTENTIAL AFFECT AQUATIC BIOLOGY

An investigation of 24 streams in the Minnesota River Basin during August 1997 determined that there were differences in fish- and invertebrate-community compositions, due to both riparian cover and runoff potential (the ability of water to infiltrate the land surface) (Stauffer and others, 2000; ZumBerge, 1999). An Index of Biotic Integrity (IBI - a measure of biological conditions based on several fish-community attributes), an Invertebrate Community Index (ICI - a measure of biological conditions based on several invertebrate community attributes), and species richness were used as measures of resource quality. Streams with wooded riparian cover had better IBI scores, ICI scores, and greater fish and invertebrate species richness than streams with open riparian cover indicating better resource quality. Streams with low runoff potential had better IBI scores, ICI scores, and fish species richness than streams with high runoff potential.

These results suggest that streams with wooded riparian cover had greater resource quality as indicated by fish and invertebrate community measures.



This figure taken from: Stark, J.R., Hanson, P. E., Goldstein, R.M., Fallon, J.D., Fong, A.L., Lee, K.E., Kroening, S.E., and Andrews, W.J., 2001, Water quality in the Upper Mississippi River Basin, Minnesota and Wisconsin, South Dakota, Iowa, and North Dakota, 1995-98: U.S. Geological Survey Summary Circular 1211, 35 p.