

Aquatic Invertebrate and Fish Communities Are Impaired in Urban Streams

Despite the observed improvements in stream conditions since the 1970s related to improvements in waste-water treatment, **fish and invertebrate communities are commonly impaired in urban streams** (figs. A and B; Kennen, 1999).

Invertebrate community impairment was related to:

Total urban land and total wastewater flow upstream of a site.

Total forested area in a basin was a strong mitigating factor, however, and greatly increased the likelihood of having an unimpaired invertebrate community.

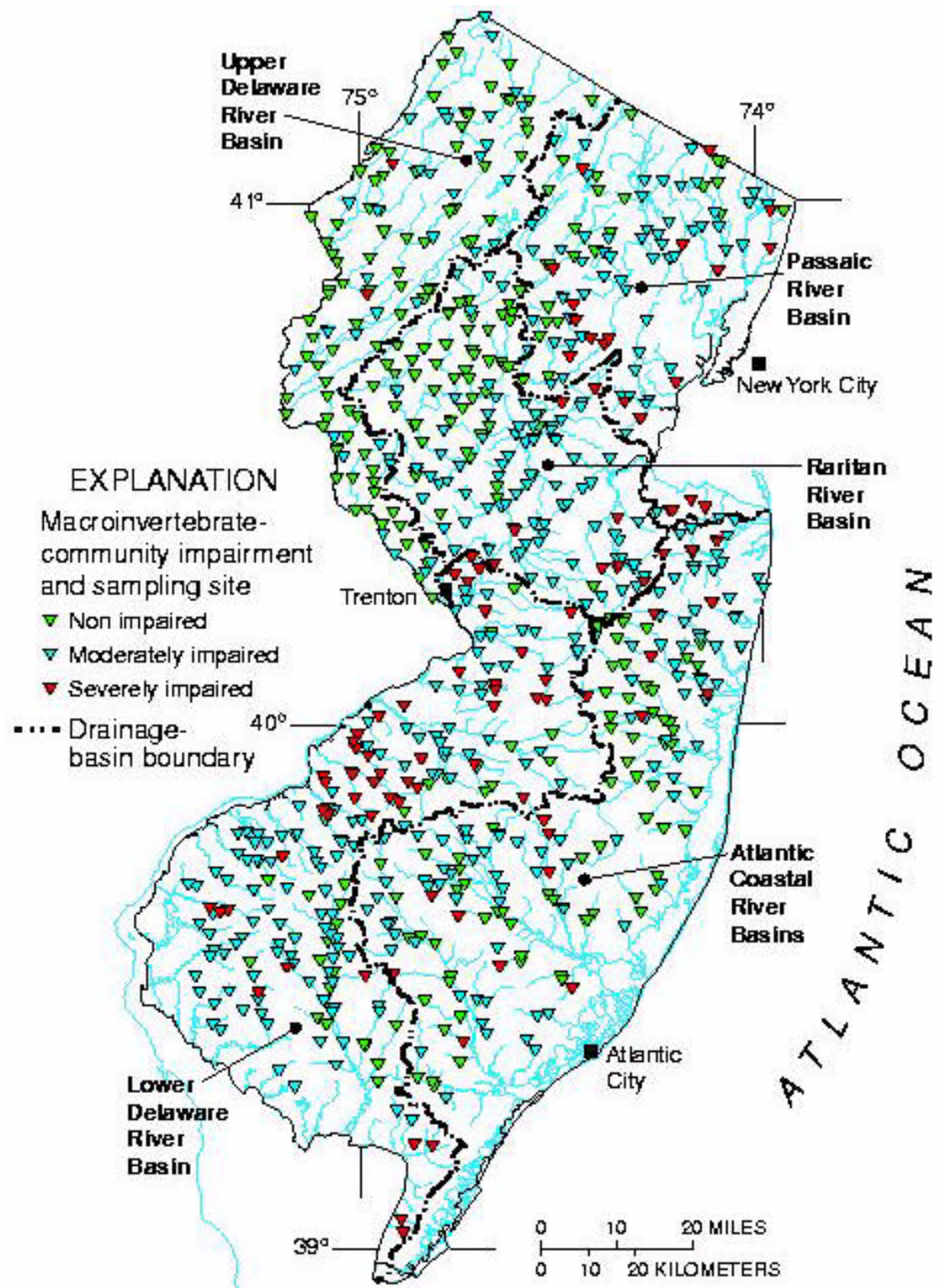


Figure A. Invertebrate communities at more than 780 NJ AMNET sites commonly were moderate to severe impairment in higher density urban areas.

A poor fish-community IBI score was related to:

Total urban land upstream and total human population in proximity to the sampling site.

The presence of forest in a basin again was a mitigating factor.

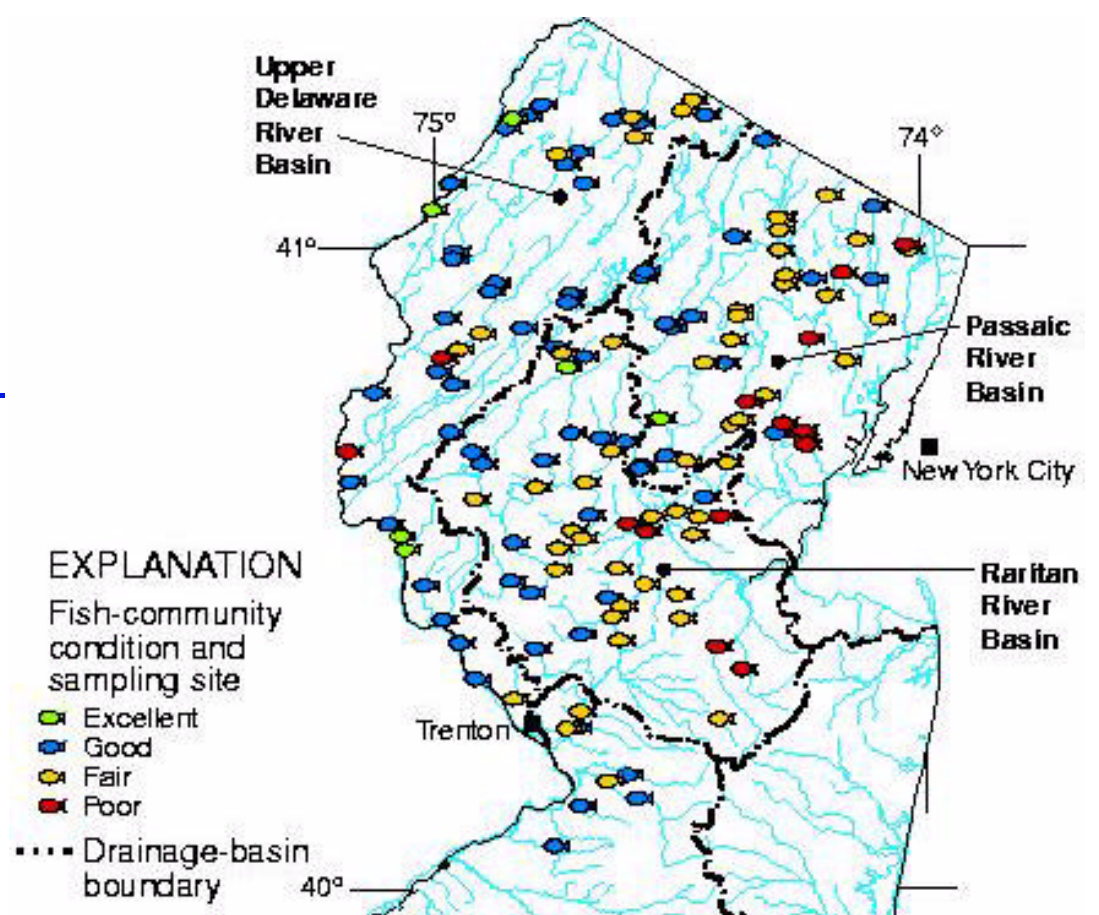


Figure B. Fish-community IBI scores at more than 150 sampling sites in northern NJ indicate that streams in urban areas are in poor to fair condition (data from Kurtenbach, 1993).