



# Southern New Jersey (Coastal Plain) Fish Index of Biotic Integrity

**HEALTHY**



The streams of southern New Jersey have a low gradient due to the flat topography of the coastal plain. Therefore we expect to see less riffle habitat than northern streams. A healthy southern stream typically has a run/pool sequence with a diverse mixture of substrate including gravel, firm sand, root mats, and submerged aquatic vegetation. The diverse habitat and cover created by this substrate supports a fish community of specialized feeders, with species sensitive to pollution and stream alterations.



Chain Pickerel



Creek Chubsucker



Tadpole Madtom



Mud Sunfish



Bluespotted Sunfish



In moderately impaired southern streams, sedimentation would be expected to affect the available habitat for fish as bars and islands form due to deposition of sand and mud caused by agricultural and urban runoff. The fish species composition will be less diverse in a moderately impaired streams with more generalist species present which can tolerate the degradation of stream habitat.



Largemouth bass



Golden Shiner



Pumpkinseed



Bluegill



The impaired waterways of the coastal plain suffer from degraded habitat and water quality due to human disturbance. Increased flooding from stormwater runoff causes erosion, reduces bank stability, and scours the streambed of any submerged aquatic vegetation. Bank vegetation is highly disturbed or absent and the stream is channelized by cement, gabion, and other embankments. The fish community is often populated by non-native species that can tolerate the degraded conditions. Not all trophic levels may be represented in the fish community as specialized feeders become replaced by generalist feeders.



Green sunfish



Banded killifish



Mummichog

**IMPAIRED**