Impervious surface restricts or does not allow infiltration of water into the ground. These surfaces can generally be thought of as Streets, Parking lots, and Buildings. These surfaces direct untreated water directly into a stream and are classified as a non-point source of pollution. This type of stress can affect benthic macroinvertebrates by disrupting water quality and habitat.

Aquatic biological monitoring is the use of living organisms to assess the quality of the environment. Benthic Macroinvertebrates are sensitive to environmental monitoring. Because they are invertebrates, they have adapted to eutrophication in the aquatic environment, they are relatively easy to study, and their biocenosis allow for the study population changes. Monitoring macroinvertebrates provides information about the water composition (TPA).

EPT (Ephemeroptera, Plecoptera, Trichoptera) taxa have been shown to decrease in response to environmental stressors (LAFT, LASO). These data are generally more widespread for other environmental stressors than other aquatic invertebrates, such as in Caddis and Odonata, which are more specific to specific areas (TPA).

Benthic Macroinvertebrate Non-Insect Taxa have been shown to increase in response to environmental stressors. Non-insect benthic Macroinvertebrates like Gastropoda and Chilopoda are generally more tolerant to environmental stressors, but they have no conditions when aquatic pebbles occur.