# Sausal Creek Watershed
# Total Impervious Surface and Benthic Macroinvertebrate Taxa

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 stressor can affect benthic macroinvertebrates by disrupting water quality and habitat.

## Surface Composition

- Vegetated
- Open Space (Up to 20% Developed)
- Low Intensity ( 20 - 29% Developed)
- Medium Intensity (50 - 79% Developed)
- High Intensity (80 - 100% Developed)
- Streets (100% Impervious)

Total Impervious Area Percentage



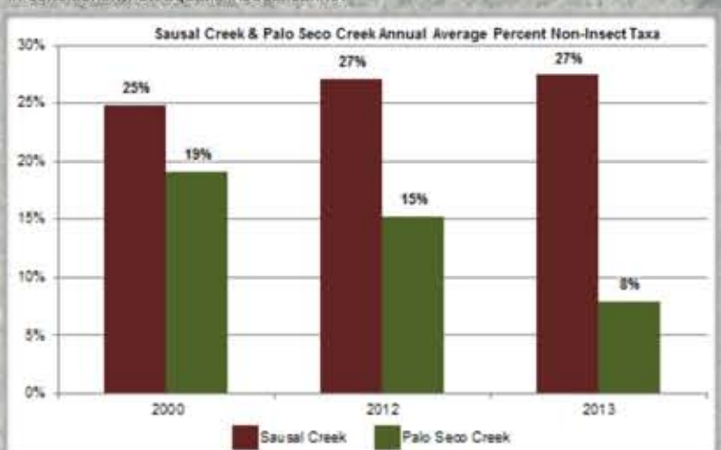


Aquatic biological monitoring is the use of living organisms to assess the quality of the environment. Benthic Macroinvertebrates are used in aquatic biological monitoring because they are ubiquitous, they have adapted to niches in the aquatic environment, they are relatively sessile, and their lifecycles allow for the study population characteristics. Benthic Macroinvertebrates respond to environmental stressors, studying their population provides information about water quality and the overall health of the ecosystem (EPA).

EPT (Ephemeroptera, Plecoptera, Trichoptera) Taxa have been shown to decrease in response to environmental stressors (EPA, USGS). These taxa are generally more intolerant to environmental stressors than other aquatic insect orders, such as in Diptera and Odonata, which can survive in harsh conditions (EPA).




Benthic Macroinvertebrate Non-Insect Taxa have been shown to increase in response to environmental stressors. Non-Insect Benthic Macroinvertebrates like Gastropoda and Oligochaeta are generally more tolerant to environmental stressors, they can thrive in conditions when aquatic insects cannot.

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Geospatial data obtained from the The National Map of the USGS, The National Atlas of the United States, and Friends of Sausal Creek.
Benthic Macroinvertebrate data collected by Friends of Sausal Creek Volunteers.

Created by Travis Peterson September 28, 2013