

Glossary of Terms

Benthic macroinvertebrates: Aquatic larval stages of insects such as dragonflies; aquatic insects such as aquatic beetles; crustaceans such as crayfish; worms; and mollusks. These small creatures live throughout the stream bed attached to rocks, vegetation, and logs and sticks or burrowed into stream bottoms.

Biological assemblages: Key groups of animals and plants—such as benthic macroinvertebrates, fish, or algae—that are studied to learn more about the condition of water resources.

Biological integrity: State of being capable of supporting and maintaining a balanced community of organisms having a species composition, diversity, and functional organization comparable to that of the natural habitat of the region.

Ecoregions: Ecological regions that are similar in climate, vegetation, soil type, and geology; water resources within a particular ecoregion have similar natural characteristics and similar responses to stressors.

In-stream fish habitat: Areas fish need for concealment and feeding. These areas include large wood within the stream banks, boulders, undercut banks, and tree roots.

Intermittent (ephemeral) streams: Streams that flow only during part of the year, such as in the spring and early summer after snowmelt.

Macroinvertebrate Index of Biotic Condition: The sum of a number of individual measures of biological condition, such as the number of taxa in a sample, the number of taxa with different habits and feeding strategies, etc.

National Hydrography Dataset: Comprehensive set of digital spatial data—based on U.S. Geological Survey 1:100,000 scale topographic maps—that contains information on surface water features such as streams, rivers, lakes, and ponds.

Nutrients: Substances such as nitrogen and phosphorus that are essential to life but can overstimulate the growth of algae and other plants in water. Excess nutrients in streams and lakes can come from agricultural and urban runoff, leaking septic systems, sewage discharges, and similar sources.

O/E (Observed/Expected) Ratio of Taxa Loss: A ratio comparing the number of taxa expected (E) to exist at a site to the number that are actually observed (O). The taxa expected at individual sites are based on models developed from data collected at reference sites.

Perennial streams: Streams that flow continuously throughout the year.

Physical habitat: For streams and rivers, the area in and around the stream or river, including its bed, banks, in-stream and overhanging vegetation, and riparian zone.

Probability-based design: A type of random sampling technique in which every element of the population has a known probability of being selected for sampling.

Reach: A discrete segment of a stream.

Reference condition: The least-disturbed condition available in an ecological region; determined based on specific criteria and used as a benchmark for comparison with other sample sites in the region.

Riparian: Pertaining to a stream or river and its adjacent area.

Riparian disturbance: A measure of the evidence of human activities in and alongside streams, such as dams, roadways, pastureland, and trash.

Riparian vegetative cover: Vegetation corridor alongside streams and rivers. Intact riparian vegetative cover reduces pollution runoff, prevents streambank erosion, and provides shade, lower temperatures, food, and habitat for fish and other aquatic organisms.

Stream order: Stream size, based on the confluence of one stream with another. First-order streams are the origin or headwaters. The confluence or joining of two 1st-order streams forms a 2nd-order stream, the confluence of two 2nd-order streams forms a 3rd-order stream, and so on.

Streambed sediments: Fine sediments and silt on the streambed. In excess quantities, they can fill in the habitat spaces between stream pebbles, cobbles, and boulders and suffocate macroinvertebrates and fish eggs.

Stressors: Factors that adversely effect—and therefore degrade—aquatic ecosystems. Stressors may be chemical (e.g., excess nutrients), physical (e.g., excess sediments on the streambed), or biological (e.g., competing invasive species).

Taxa: Plural of taxon; groupings of living organisms, such as phylum, class, order, family, genus, or species. Scientists organize organisms into taxa in order to better identify and understand them.

Transect: A path or line along which one counts and studies various aspects of a stream, river, or other study area.

Wadeable streams: Streams that are small and shallow enough to adequately sample by wading, without a boat.

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Wadeable Streams Assessment



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