Licking County Soil and Water Conservation District

Stream Team:
Habitat Survey and CQHEI

Habitat Survey

The stream habitat survey is an easy way to evaluate the streams surroundings. This can be used as a screening tool to identify water quality problems along with an educational tool to teach citizens about pollution and stream ecology.

Evaluate the assessment elements. Your survey site is everything you can see.

I.   Substrate (Bottom Type)
>a. Size – This is referring to the size of stone or rocks in the bed of the stream
>b. Smothering – This is referring to if there is a presence or no presence of silt deposits around the stones or rocks on the stream bed. If it is hard to move the rocks, they are probably smothered. Smothered rock bottoms are black with very few insects attached.
>c. Silting – Lightly kick the bottom of the stream resulting in clouding of the stream. If this clouding lasts for more than a minute, then silting is present.

II.   Fish Cover (Hiding Places) Mark all that apply.
>a. Underwater Tree Roots (Large) – Are there large visible tree roots (.5 inches in diameter and larger) that are exposed in the water? These make good hiding places for fish and other aquatic animals.
>b. Underwater Tree rootlets (Fine) – small visible tree roots (.5 inches in diameter and smaller) exposed in the water that make good hiding places for fish and other aquatic animals.
>c. Boulders – Large oversized rocks
>d. Backwaters, Oxbows or Side Channels – Inflow of anther water source merging with stream /river
>e. Downed Trees, Logs, Branches – These are great hiding places for fish and other aquatic animals.
>f. Water Plants
>g. Shallow Slow Areas for small Fish
>h. Deep Areas (Chest Deep)
>i. Shrubs, Small Trees that hang close over the bank
>j. Undercut Banks – Where erosion has started to eat away the bank

III.   Stream Shape and Human Alterations
>a. Look at Pictures – Which one best fits your sampling area
>b. Read descriptions – Which one best fits your sampling area

IV.   Stream Forests & Wetlands (Riparian Area) & Erosion
>a. Width – Which one best fits your sampling area
>b. Land Use – Mark all that apply.
>c. Bank Erosion – Which on best fits your sampling area
>d. How much stream is shaded – Which on best fits your sampling area

V.   Depth & Current Velocity
>a. Deepest pool is at least – Which one best fits your sampling area
>b. Flow types that you see – Mark all that apply.

VI.   Riffles / Runs (Areas where the current is fast and or turbulent; Surface may be broken).
>a. Riffles / Runs – Riffles are where the water flows over rocks and makes the "stream sound", adding oxygen back into the water. Runs are straight free flowing water areas.
>b. Riffle / Run Substrates – Observe the size of the stones and rocks that make up the riffle areas.

Once you have completed the Citizen's Qualitative Habitat Evaluation Index sheet – add up the total score. This score will give you your Citizen's Qualitative Habitat Evaluation Index (CQHEI) Score. The

descriptions of scores are below and on the back of the form.

Citizen's Qualitative Habitat Evaluation Index (CQHEI) Scoring Guideline
(Scores adapted from OEPA QHEI Form)

CQHEI Scores:

0 – 49   Moderate to extensive human-made modifications to stream/river. These water bodies would generally be classified as "Modified Warm Water Habitats". Channelized treeless ditches with very little depth and poor flow rate could have a CQHEI score of 30 or 40. Silt and muck included in the same stream scores could range in the 20s.

50 – 60   Streams/rivers with this score range generally can attain Warm Water Habitat biological communities. Although, depending on which features (e.g. flow, depth) are missing, the biological communities may fall short of Warm Water Habitat classification.

61 - 69   Streams/rivers scoring in this range have enough positive habitat features available to attain Warm Water Habitat (e.g. depth, flow, forest canopy over stream/river).

70 – 100   Streams/rivers scoring in this range are capable of supporting "Exceptional Warm Water Habitat" biological communities (e.g. good flow, good riffles and pools, good substrates, and good riparian quality).