



SYSTEM DIMENSIONS	CHEMICAL AND PHYSICAL	BIOLOGICAL COMPONENTS	HUMAN USES
Extent Pattern	Nutrients, Carbon, Oxygen Contaminants Physical	Plants and Animals Communities Ecological Productivity	Food, Fiber, and Water Recreation and Other Services

② Stream Habitat Quality

What Is This Indicator, and Why Is It Important?

This indicator would describe the habitat quality of farmland streams by comparing a number of key attributes to those of relatively undisturbed streams in the same general area. The index would incorporate the presence of riffles and pools, the size of streambed sediments and the degree to which larger gravel and cobbles are buried in silt, the presence of branches, tree trunks, and other large woody pieces, and the stability of the bank. A companion indicator (p. 149) would report on all streams, not just on those in farmlands.

Streams with higher condition ratings (those that resemble undisturbed streams) have a more natural and diverse array of underwater and bank habitats and are therefore capable of supporting diverse native species. These streams are also more likely to have relatively undisturbed flow patterns (see p. 142) and to have vegetation along their banks—features that help maintain the conditions necessary to support a healthy biological community over the long term.

Like their counterparts on land, stream-dwelling animals and plants require specific habitat conditions in order to survive and reproduce. Because each species has its own particular habitat requirements, a variety of habitats along a stream are needed to maintain the stream’s natural complement of plants and animals.

Why Can’t This Indicator Be Reported at This Time? Scientists generally agree on the key stream attributes that should be measured to evaluate stream habitat quality (riffles and pools, streambed sediments, and so on), and there is a considerable work under way by the Environmental Protection Agency, the U.S. Geological Survey, and state agencies to gather data and develop ranking methods. However, there is still no generally accepted method for combining data on individual attributes into a single index. In addition, habitat values for any particular stream must be evaluated in relation to the plants and animals in that region, so any stream habitat index would have to be tailored for different regions.

The technical note for this indicator is on page 237.

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Indicator Development Needed