

# ***Fish survival dependent on watershed management***

Fish survival is tied to habitat - to their water. And, like most species of wildlife, their habitat condition is often dependent on actions taken by private landowners.

Simply put, fish need food, water, shelter, and favorable conditions to breed and raise their young. A more complex story emerges when you manage habitats for many different fish species, with very different life cycles and needs. Some fish need cold water, others need warm. Some use sandy bottoms, others like to hide under rocks and wood, and on and on.

Overall, it's watershed management, particularly the management of the land nearest the stream, that's most important to fish. Healthy plant life along streams and a steady flow of clean water are critical.

Land development or poor forestry or agricultural practices can cause erosion those results in sediment that can cement stream gravels and smother fish eggs. Stream bank erosion can also mean less overhanging vegetation that contributes leaves and twigs that host some of the insects fish eat. While coldwater fish such as trout have different habitat needs than warm water fish like bass, there are some general management tips that fit all streams to improve habitat:

- 1) Control upland erosion on fields, pastures, and forests.
- 2) Maintain vegetation on stream banks, protected from trampling and erosion.
- 3) Plant riparian (streamside) buffers of trees, shrubs and grasses, preferably native.
- 4) Install grass filter strips and waterways to trap sediments.
- 5) Irrigate efficiently, managing water so enough water flows through the stream for fish to move up and down stream to their different habitats.
- 6) Keep farm chemicals, manure and other harmful ag products out of the water.

## **In-stream practices.**

Meandering streams with riffles and pools, undercut banks with overhanging vegetation, and submerged wood are ideal for trout and other fishes. Keeping streams free of barriers to fish movement up and downstream, and maintaining wetlands and backwaters in floodplains are also important management techniques. For more information visit the NRCS Wildlife Habitat Management Institute's website at [www.whmi.nrcs.usda.gov](http://www.whmi.nrcs.usda.gov) or the NRCS home web site at [www.nrcs.usda.gov](http://www.nrcs.usda.gov).

*Controlling erosion, both in the watershed and along streams, is critical for fish habitat. Streamside plantings are helpful, the more diverse the better.*

## **Did you know....**

That slime you feel when you handle a fish is a type of mucus secreted from the skin that's very important to a fish.

It's a coating that provides protection against parasites and diseases, covers wounds to prevent infection and helps fish move through the water faster.