



Fisheries Resource Benefits of Riparian Buffers



CTDEP Inland Fisheries Division
Habitat Conservation & Enhancement
Program

Brian D. Murphy

Riparian Corridor Function

- **Provides Large Woody Debris to Streams in the form of Fallen Trees recruited from riparian zones**



Large Woody Debris Enhances Instream Fish Habitat



**LWD >4 in. diameter
> 6 ft. Length**

- (1) Scour creates deeper irregular habitat**
- (2) Velocity refuges downstream of wood**
- (3) Overhead cover**
- (4) Helps form step-pool habitats in high gradient streams**

Other Large Woody Debris Benefits



(5) Micro-ecosystem

Periphyton attaches to wood, food for aquatic insects
fish fed on insects

(6) Sediment Regulation

Helps hold streambed substrates in place, deposition
bars form upstream of LWD

Riparian Corridor Benefits

- Provides Shading Which Prevents Increases to Stream Water Temperatures
- Trout (coldwater fish) require water temperatures less than 72 ° F for survival.
- More critical on 1st to 3rd order streams



Riparian Corridor Benefits

- **Vegetation and Roots Protect and Stabilize Streambanks from Erosion**

**Want to
prevent
erosion**



**Sedimentation
of instream habitats**

DEP Inland Fisheries Division developed Riparian Corridor Protection Policy in 1991

- Policy developed in response to numerous development proposals (in particular subdivisions) that encroached within and adjacent to riparian zones**
- Policy development involved intensive research of scientific literature and polling of other government fisheries agencies: resulted in position paper**

DEP Inland Fisheries Division developed Riparian Corridor Protection Policy in 1991

Goals were to:

- Establish uniform buffer guidelines to apply statewide**
- Bring consistency to in-house environmental review**
- Wanted policy that was easy to administer**

Inland Fisheries Division Riparian Corridor Buffer Guidelines

Adopted Standard Setting Method

- **Maintain a 100 ft. wide vegetated undisturbed buffer along perennial streams**
- **Maintain a 50 ft. wide vegetated undisturbed buffer along intermittent streams**

Inland Fisheries Division Riparian Corridor Buffer Guidelines

Measurement of Buffer

- **In absence of riparian wetlands, landward from edge of streambank based upon bankfull conditions**
- **If riparian wetlands, from edge of wetlands landward based upon CT soil delineation methods**

Inland Fisheries Division Riparian Corridor Buffer Guidelines

- **Corridor should be kept in a naturally vegetated condition and all activities that pose a significant pollution threat should be prohibited.**
- **Our policy is a recommendation since IFD has no regulatory authority!**
- **Copies of IFD policy & position paper**