

## Fisheries Resource Benefits of Riparian Buffers



CTDEP Inland Fisheries Division
Habitat Conservation & Enhancement
Program

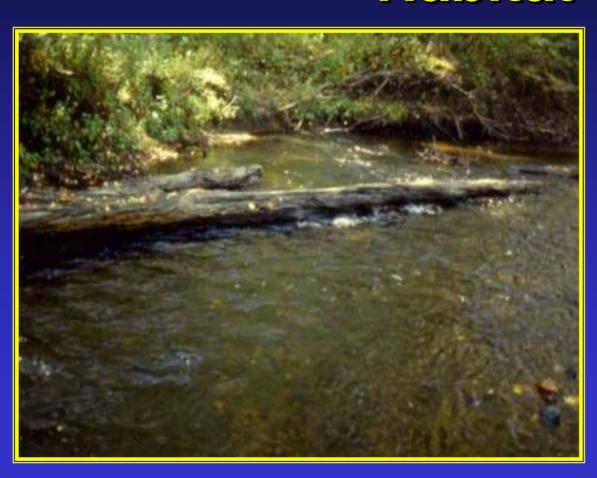
Brian D. Murphy

### 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



#### 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