

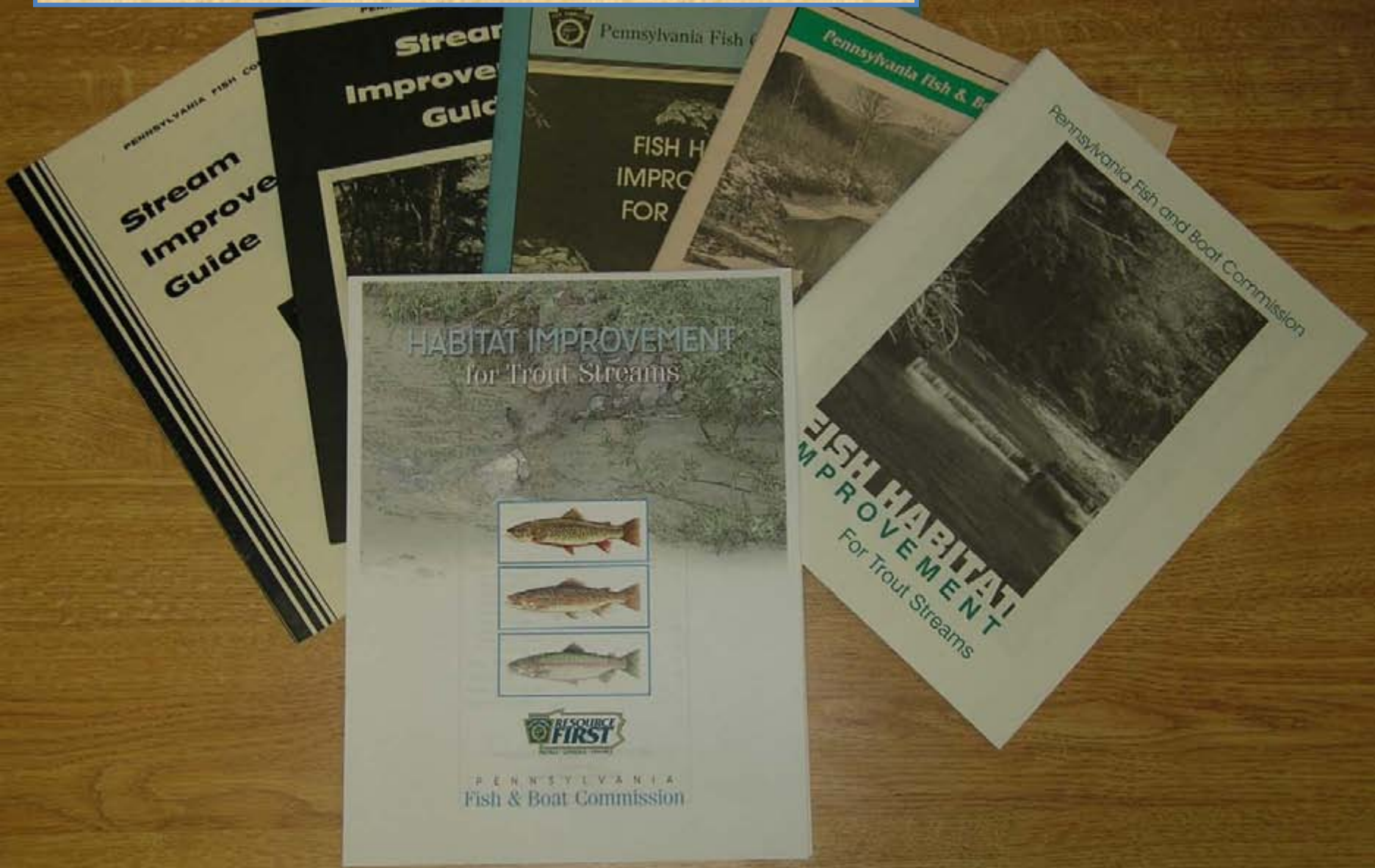


Trout

Habitat

Improvement

The Fish & Boat Commission has been doing fish habitat improvement since at least the 1950's.





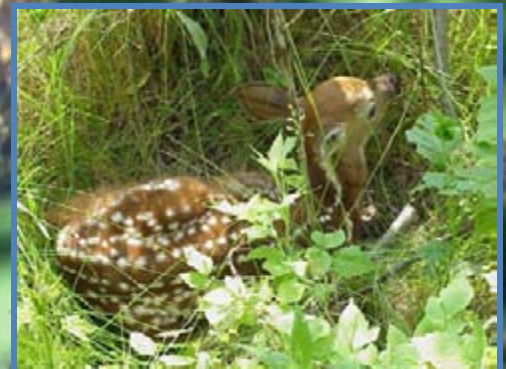
Managing the whole stream ecosystem is the key.....



.....a healthy ecosystem will support all of these organisms.....



....including trout!!





Having a well vegetated buffer zone along a stream channel will provide fish and wildlife habitat as well as bank stabilization.





Buffer vegetation should be native species, unlike above!!

Woody debris in the stream channel is not always easily fished, but provides some of best habitat value there is. If it is causing problems, remove only what is necessary.



Fish habitat improvement structures are required to be permitted by DEP and the USACOE. Some typical structures used by the PFBC are shown in the following slides.

PERMITS: General Permit – 1 Fish Enhancement Structures (Issued by DEP)



Department of
Environmental Protection



US Army Corps
of Engineers

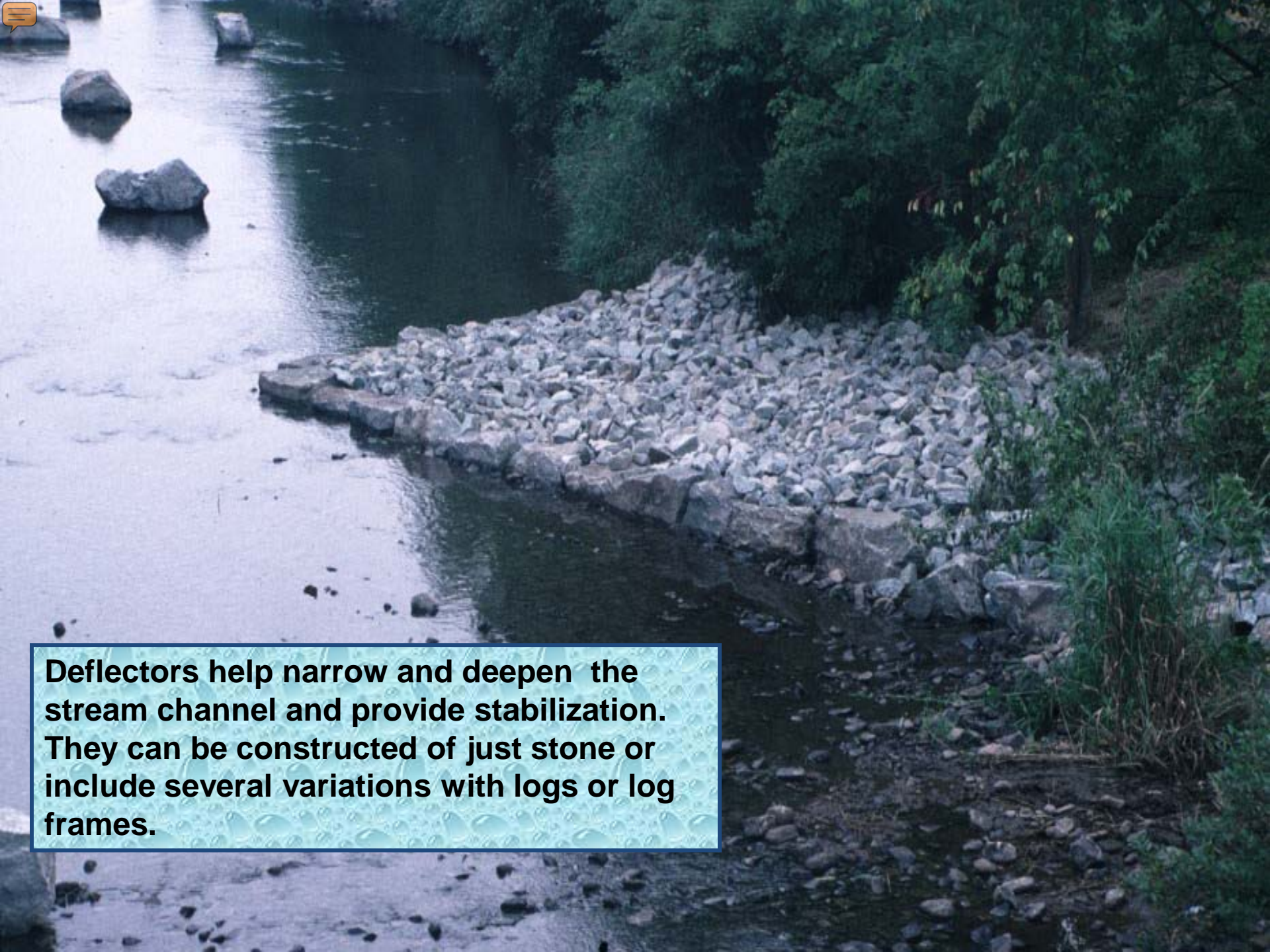


An aerial photograph of a river with several large, dark boulders placed in a line across its width. The water is turbulent as it flows over the rocks, creating white foam and rapids. In the foreground on the right, there is a large pile of tangled, bleached driftwood. The water is a mix of blue and green, indicating varying depths and possibly some algae or sediment. The overall scene illustrates how the placement of boulders can create a more complex and diverse river environment.

Boulder placement can add diversity to uniform areas.



Saw-tooth deflectors are a good alternative to straight rip-rap, providing more edge effect and some backwater resting areas for fish.



Deflectors help narrow and deepen the stream channel and provide stabilization. They can be constructed of just stone or include several variations with logs or log frames.



Logs can be embedded into deflectors to add more fish cover.

Log Framed Deflector



Brush Deflectors trap silt and form new stream bank on lower gradient streams.



2 years later

Root wads provide stabilization and excellent habitat. In this case they are used to reclaim an over-meandering bend in the stream.



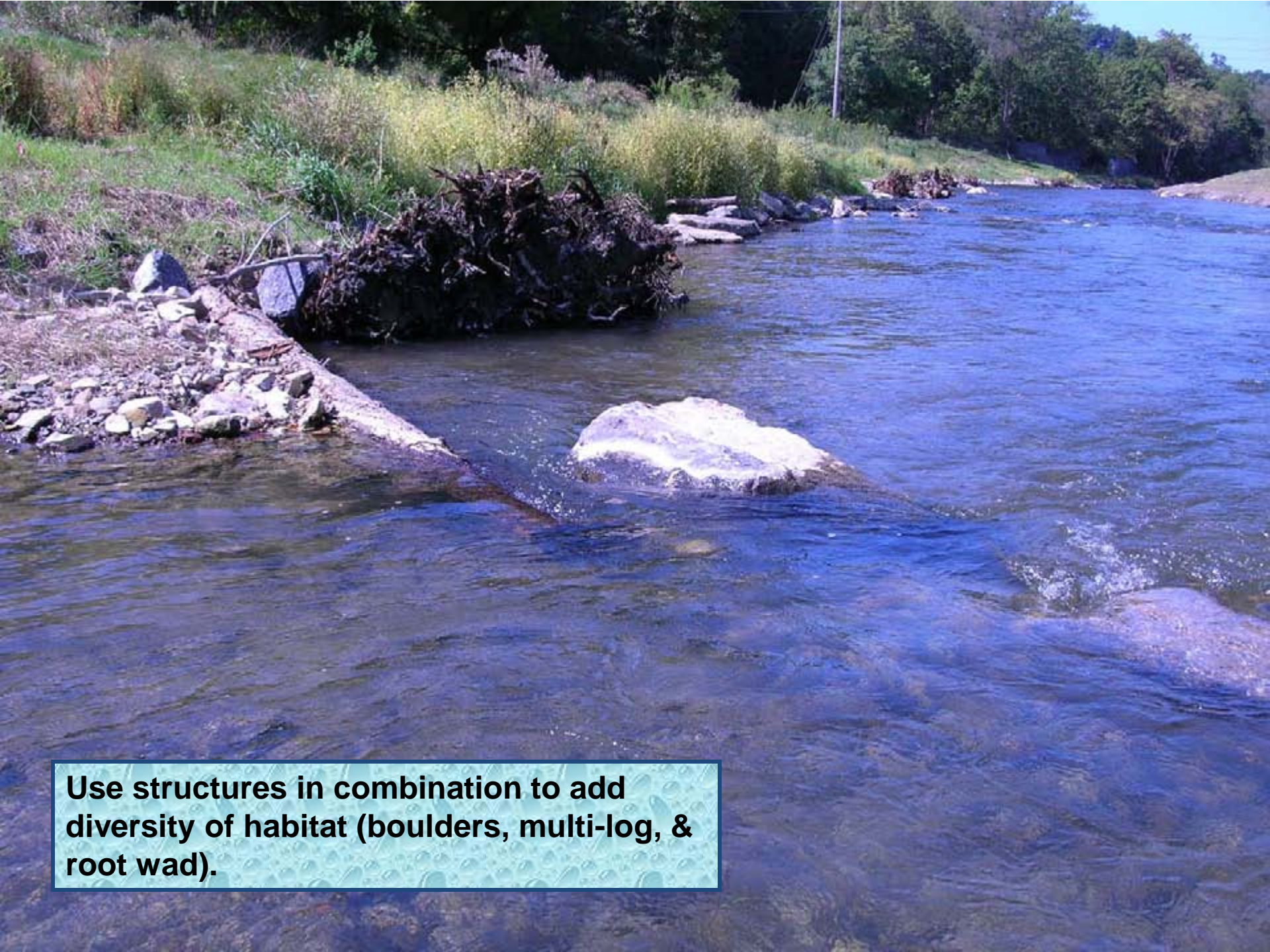
1 year later

Single log vanes help turn flows away from the bank providing plunge-pool habitat as well as stabilization.





Multi-logs serve the same purpose as single logs or can be arranged more randomly for added habitat.



Use structures in combination to add diversity of habitat (boulders, multi-log, & root wad).



Mud sill cribbing will provide a stable undercut bank and can help reclaim outside bends in the channel (during & after).



**Log cross vanes help center flows,
create plunge-pool habitat and
establish grade control.**



Large and small rock cross vanes





**Good habitat
makes good
fishing!!**

Wild Brown Trout

**Wild Brook
Trout**





**Occasionally we get
some unexpected
results!!**

