



MASSWILDLIFE

Stream Clearance Guidelines: A Fisheries and Wildlife Perspective

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The Santuit River: Death of a thousand cuts?

- Santuit Pond – Water Quality Problems
- Road Crossings – Runoff, Improperly Sized
- Water Withdrawals: Willowbend, Cotuit #5
- Clearing of trees and woody habitat intended to improve herring run
- Loss of nearby population (Quaker Run)
- Increased predatory birds (i.e Osprey platforms next to river)
- Loss of eel grass
- Resurgence of otter

From Russ Cohen Talk Oct. 2014

“Before” and “After” photos



Note what was removed and what was not.



“before” photos (see above left and right), looking upstream at apparent blockage - but water is getting through (moving underneath) – could the fish as well?

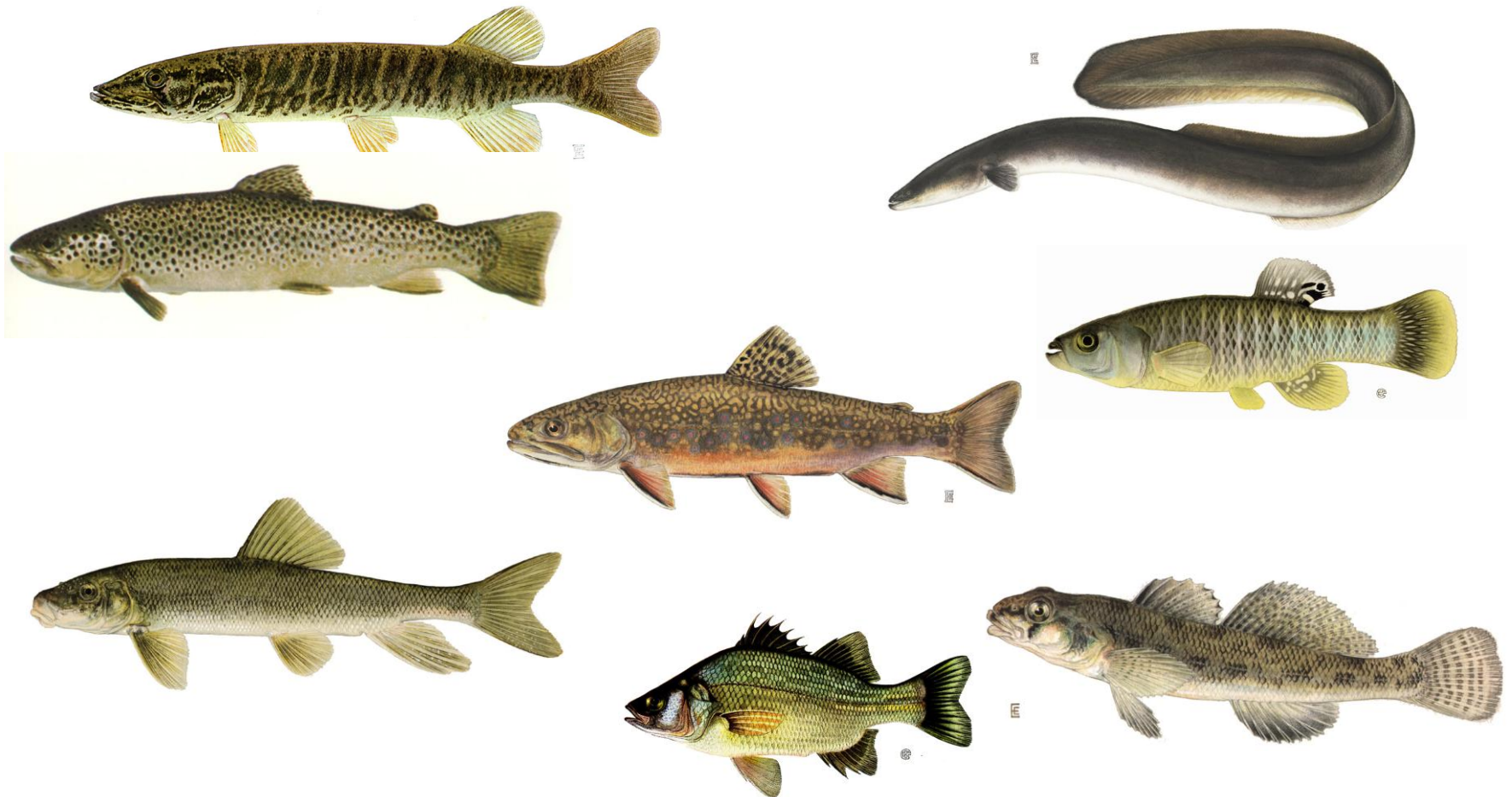
“after” photo (at right)



Some Things to Remember

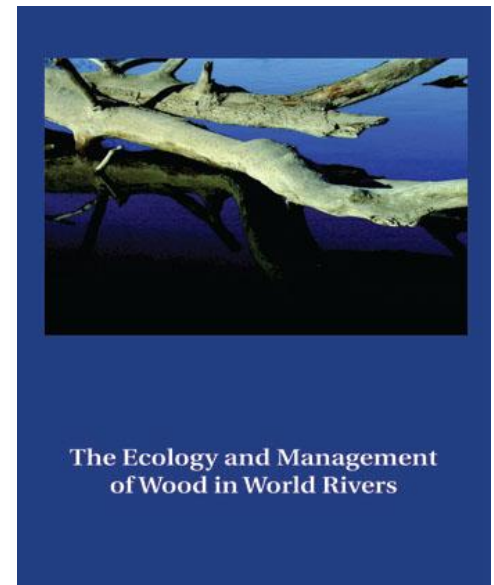
- River herring are not year round residents of coastal streams
- Many herring runs are not natural systems
- Dams and other man-made structures are often the biggest impediments to fish passage
- Wood and organic “debris” is a natural part of coastal stream ecosystems

Streams are habitats for a wide variety of species other than River Herring



Large Wood (aka LWD or LWS)

- Importance of Large Wood in Stream Ecosystems has been recognized primarily in the last few decades
- Research driven by salmonid streams of Pacific Northwest
- Stream ecosystems historically had much greater amounts of large wood (> 3ft and 4 inches in diameter)



Importance of Wood

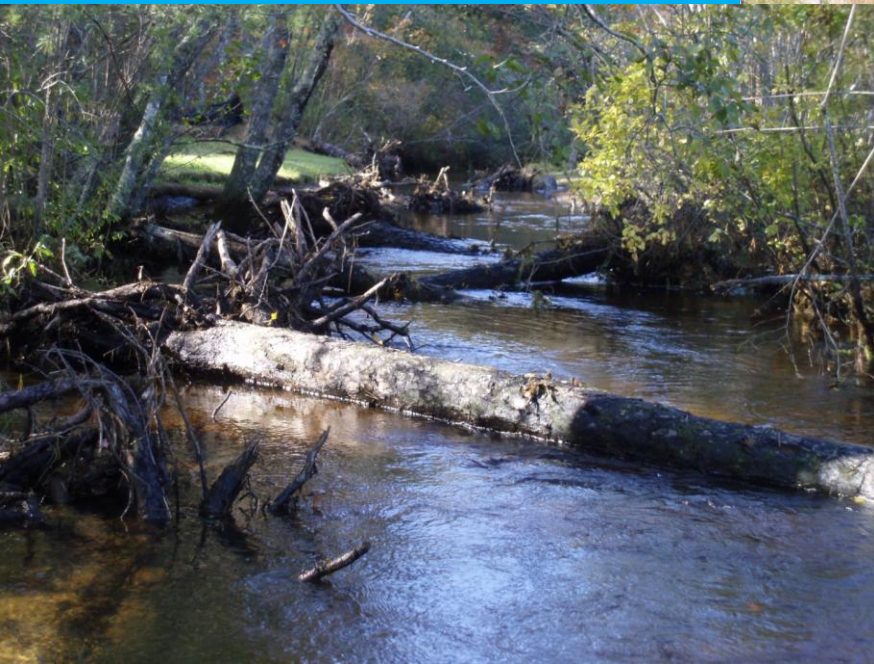
- Hard substrate for invertebrates
- Increased habitat diversity through modification of flows
- Shelter from avian and other predators
- Pool formation
- Storage of organic matter

Stream Improvement

- Additions of large wood are now an important part of most stream improvement projects (Red Brook, Eel River, Beaverdam Brook)



Woody Structure Additions



Wood offers excellent fish habitat



Importance of Trees as Trout Habitat



Overhead cover helps protect fish from bird strikes



Tagnumber 985.121001851405 Recaptured
September 20 2011 Last Hit January 9, 2012



YOY Herring in Thick Vegetation



A small opening can improve passage



Some Final Thoughts

- **Think like a fish!**
- Look for fish movement barriers during migration periods
- Herring are small fish! They can move through very small openings
- Chainsaws should only be used in exceptional circumstances
- If it cannot be cut easily with a clippers or a folding saw **does it really need to be cut at all?**



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Questions or Comments?