Aquatic Connectivity and Aquatic Organism Passage

EPCAMR
Eastern Pennsylvania Coalition for Abandoned Mine Reclamation

What is aquatic organism passage?

Aquatic passage is the ability for aquatic organisms (mainly fish) and wildlife to move freely through stream corridors without blockage.

Why is it important?

Aquatic passage allows species to migrate for food, mating partners, and more suitable habitats. It helps ensure the survival of species like the Eastern Brook Trout.

What affects it?

- Poorly designed and undersized bridges, pipes, and culverts

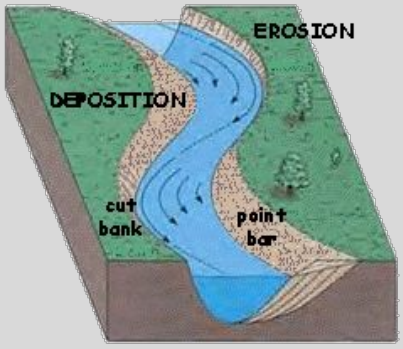
- Droughts

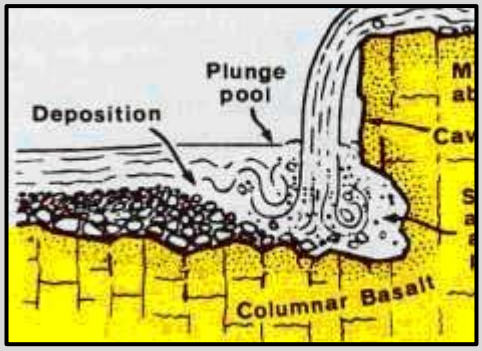
- Dams

- Woody debris blockages

The bridge above (left) is at stream level, allowing fish to move through it easily. It also is large enough to allow debris to flow through. Notice that the stream is aligned and flowing straight and not at an angle; This keeps rocks and sediment from piling in one side of the bridge, narrowing the stream (below).

The culvert above (right) is a poor example of aquatic passage. It is not at stream level, and fish would have to jump to make it through. The falling water will eventually dig a large hole (scour pool) into the stream bottom; causing sediment cut from the stream to pile up, eventually creating a gravel bar (see below). Lastly, it is much to small for debris to pass through.





What we do about it!

We conduct field assessments of stream crossings within a watershed; We then report any poor crossings to municipalities, state, and conservation partners to develop and implement plans to replace or repair them. **Want to get involved? Contact EPCAMR. We are a part of the North American Aquatic Connectivity Collaborative (NAACC). It requires a brief online aquatic organism passage protocol training, and being shadowed by a Lead Coordinator 1 in the field at 20 culverts.**

Sources:
https://vtfishandwildlife.com/conserve/aquatic-habitat-conservation/aquatic-organism-passage-at-road-stream-crossings
https://users.scc.spokane.edu/ABuddington/g210spr04/g1/?p=2
https://sites.google.com/a/comsewogue.k12.ny.us/mrs-azzara/earth-science/topic-10-deposition?tmpl=%2Fsystem%2Fapp%2Ftemplates%2Fprint%2F&showPrintDialog=1

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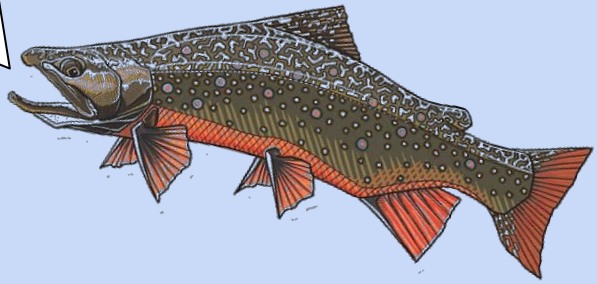
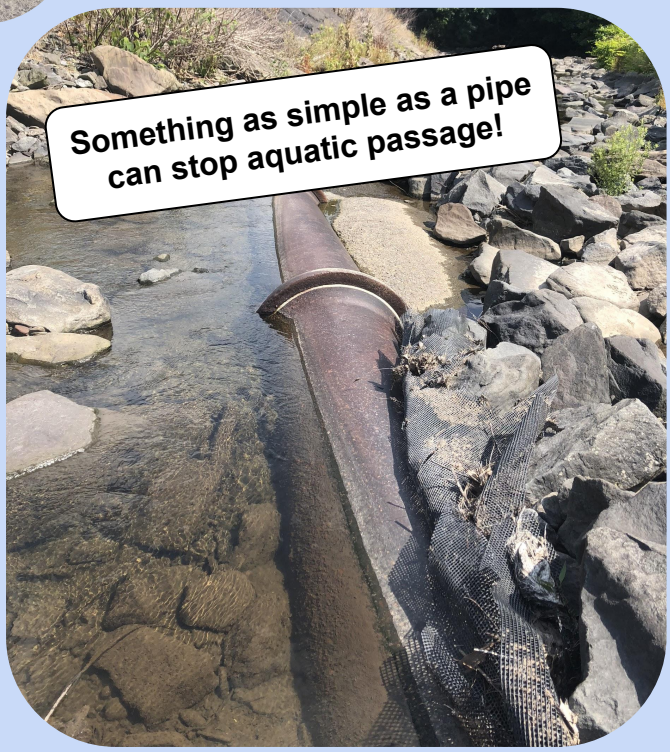
Scan above!

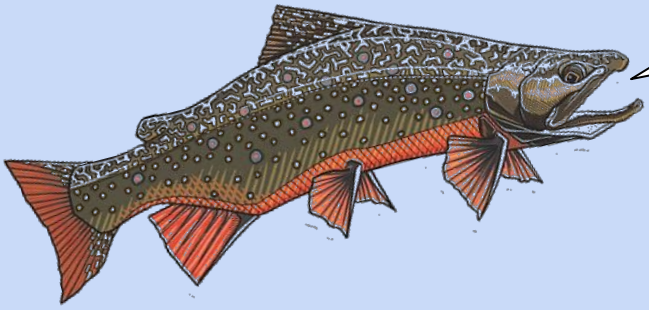
"Worst passage award goes to…"



All it takes is a stadia rod and measuring tape!



"Click on me to register as a volunteer! Then you can help!"



Sources:
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