Aquatic Organism Passage

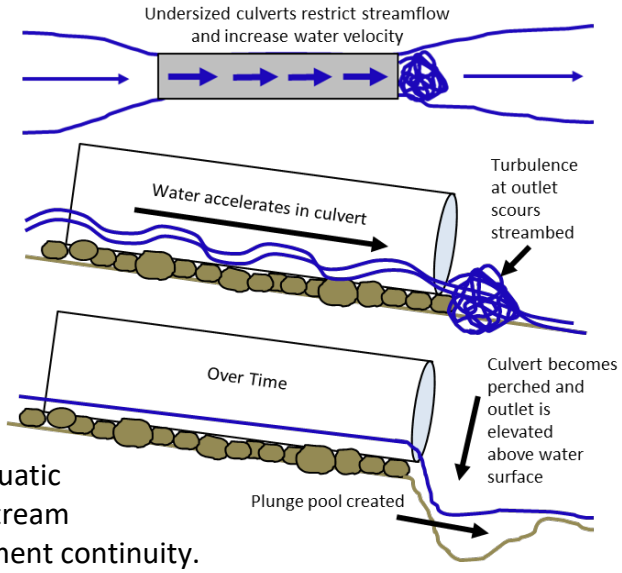
What is Aquatic Organism Passage (AOP)? This identifies whether aquatic animals such as fish, turtles or amphibians can pass through a stream crossing without restrictions such as:

- A large vertical drop between the crossing and the stream (known as a perched culvert).
- Water in the crossing that is either too shallow or too fast.
- Physical barriers that block the crossing inlet or outlet.
- A lack of natural substrate in the crossing.

Culverts can block access to important aquatic habitats!

Just like we need roads to get us places, aquatic animals require a connected stream network to get around!

How a culvert becomes perched



How do we know if a culvert is a barrier to animals?
Information is collected on the culvert and river channel in the field and the data is used to assign a score.

Full AOP – The crossing functions like the natural stream for all aquatic organisms, maintaining a connection between the up- and downstream environment without changes in slope, a drop in height, and sediment continuity.

Reduced AOP – The crossing can have any of the following conditions: (1) the stream cascades over steep rocks on the downstream side; (2) consists of multiple culverts; (3) an obstruction at the entrance; or (4) the structure lacks natural sediment. These conditions limit AOP for some species or life stages, but may allow strong and moderate swimming fish to pass.

Fish-friendly culvert

No AOP except adult salmonids – The crossing is perched with a vertical drop of ≤1 foot to the water surface and there is a >1 foot deep plunge pool immediately downstream. Only strong swimming and leaping fish such as Eastern Brook Trout and other salmonids can pass these crossings.

No AOP including adult salmonids – The crossing is perched with a >1 foot drop to the water surface, or the drop is <1 foot and no downstream pool is present or the depth of water in the culvert is <0.3 feet.

*For more information on the **Stream Crossing Initiative** contact the Flood and Geologic Hazards Program at NHDES:*
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