



EXTRA

Transcript:

Season 1, Episode 5a: Fixing Culverts and Bridges to benefit fish

HOWELL: The other thing that I was very interested in: We've got roads and trails that are all through the forest, and you mentioned that you're you're getting some money for culvert replacements. I did not realize how much... because the culvert to me, you know, is kind of a pipe that goes underneath the road. And that can actually cause some problems out in the forest, right?

HANRAHAN: It sure can. Yeah. Where those pipes have either been improperly placed, or perhaps it was properly placed but then through erosion and, you know, all this water action over the years, the pipe can shift. Again, we didn't know as much as we do now. So, some of our pipes are really undersized and that's a lot of the problems we're dealing with now -- is where you have a culvert, it's just not big enough to be able to pass all the water that wants to move through it.

So you may have, in the winter time, you know when the water really comes up, it can be a velocity issue where fish can't make it through on the downstream side. You might get some carving action where the water drops out and creates pools, and those pools.... you know, fish need kind of a running start if they're gonna get over something, and those pools can be too shallow. And again, if that drop between the lip of the culvert and the top of the pool is too great, fish can't make it. And then it winds up being an impediment to some other aquatic organisms like lamprey, salamanders, that kind of thing. So again, you know, we didn't know some of this stuff in the past, and we know better now, and so we're trying to replace a lot of barriers because we do know better now.

HOWELL: That was an interesting piece of engineering that I remember seeing. What's the different approach then that we're trying to take -- instead of a pipeline going underneath, what do we look like now? Because it sounds like they need that, they need that stream bed, they need the gravels in order to be able to navigate.

HANRAHAN: Yeah, we do have some statewide direction and federal direction for sort of a hierarchy of what fish biologists would like to see. If possible, we would get rid of this structure. In many areas, that's just not possible. We have reciprocal agreements with folks, and of course our public likes to use our roads. So what we aim to do is something that you would call a "bottomless structure." And so, if we can put a bridge in, some type of a bridge, we will. And so that, you know, has the top and the sides, but that bottom is allowed to move freely. So not just water, but also bed load. We'd like to see gravels and "etcetera" moving through the system. We can also put a pipe in called a "squash pipe" or a bottomless arch, where at the top it looks the same -- it looks like a metal culvert -- but the bottom is kind of engineered, so we'll actually mimic what the stream bed

looks like above and below for the very thing that you're talking about in order to be able to have, you know, proper passage for all different organisms at all stages of life.