

### Culverts Don't Kill Fish!

Dear Robert,

The article "With Friends Like This" (June 2013 issue) was sent to me by one of your readers who is an avid hunter and fisherman, as am I. The reader is also a culvert manufacturer in Alberta and a member of the Corrugated Steel Pipe Institute (CSPI) [www.cspi.ca](http://www.cspi.ca). Our members are the same people who fund research initiatives at several Canadian Universities to study safe fish passage. They also work with government ministries and agencies throughout Canada to ensure proper protocols and techniques are specified and followed in culvert manufacturing, construction and installation. They build everything from frog crossings to large elk and grizzly overpasses used on the Trans Canada Highway in Banff National Park.

While Kevin Van Tighem's article identifies some very serious issues regarding several of Alberta's threatened fish species, some of his conclusions regarding causality are off-target, perhaps due to a limited awareness of the technical options and resultant efficacy offered by today's corrugated steel pipe solutions.

Do guns kill people? Do culverts kill fish? I suspect any one of your readers

could answer the first question in a most eloquent and informed manner; however, the second question might be tougher for some, especially after reading Kevin's article.

Alberta Transportation (AT) has a staff biologist I would rate as a world authority on Bull Trout, and who authored the 163 page, "Fish Habitat Manual Guidelines and Procedures for Watercourse Crossings in Alberta." While the document states "Bridges are generally the preferred structure type for crossings on fish bearing streams, they do not create fish passage obstructions when designed and constructed to TRANS standards. However, culverts are widely used as an alternative to bridges at sites where they may be more suitable and/or may provide a greater cost benefit." The document is very clear on how and why proper watercourse crossings—including culverts—are constructed.

The reality is that, in the past—and even currently, in some instances—both culverts and bridges have been incorrectly sized, designed, installed and maintained. Eliminating culverts with excessive fish nose velocities—which preclude fish passage—can be accomplished by installing larger culverts, culverts with gravel infill, open bottoms and corrugated walls to slow the flow and provide continuance of the natural stream bed.

The claim that each and every culvert installation is unique is not hyperbole; consequently, to perform effectively throughout its service life, every installation must be custom designed and installed.

Throughout Canada, perched outlets or hanging culverts are indeed an important issue that can and must be eliminated through thoughtful design and precise construction. Working with the Environmental Scientist for Newfoundland Transportation (ESNT) and the University of Sherbrooke, CSPI is currently developing a fish ladder to immediately rehabilitate perched outlets. But, in the majority of cases, the problem can be most economically solved by replacing the culvert with one that is properly designed, as the AT Minister has suggested for Powderface Trail. In Newfoundland, the ESNT often solves the problem by simply, "piling rocks and recreating the plunge pool."

So, the problem is not that culverts per se kill fish, but rather that improperly designed and/or built culverts do. Yes, there are legacy problems out there resulting from poorly designed and/or improperly installed culverts in the past, which is why we all need to take collaborative ownership of the problem and begin doing it right, starting today.

— email David J. Penny  
Executive Director, CSPI



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*Thanks for your letter David. Even the best-designed culverts won't save fish or allow for fish passage if improperly installed, which was the point of the article.*

— Rob Miskosky

### Wabamun Winner!

Hi there,

I thought I would submit this photo for *Alberta Outdoorsmen*.

I caught this pike yesterday, after work, trolling in Wabamun Lake—93 centimetres and 10 pounds.

— email David Silva



*I can't think of a better way to spend an evening after work than on a boat tackling big pike. Good job!*

— Rob Miskosky