

January 18, 2016

Coopers Mills Dam Committee
c/o Atlantic Salmon Federation
14 Main Street, Suite 202
Brunswick, ME 04011

Dear Committee:

I am offering my opinion of the proposed new dry hydrants in the Coopers Mills Village. I have enjoyed being involved in consulting with you, the Atlantic Salmon Federation and their engineers as the design process has evolved since last spring. This includes my visit to Whitefield to the site last July.

As the manager and engineer for the State of Vermont's Rural Fire Protection Program for almost 20 years, I have overseen the installation of hundreds of dry hydrants (DH) in ponds, lakes, rivers, and streams. I think the work your committee has done looking at the options for the Coopers Mills Dam has been very impressive and thorough. Coopers Mills is very fortunate to have been given this opportunity for over-all improvement of river dynamics and evolution of the village fire protection and I would highly recommend the town move forward with the proposal to remove the dam and install the new dry hydrants (with maintenance \$). The proposed system is much better than what is there currently. If this were in Vermont, I would accept applications for the three proposed hydrants, and potentially approve funding for systems that would function year round, but I would not approve what's there now.

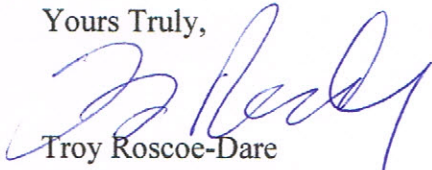
I think I have told you before that yes, river and stream DH application/systems are more problematic than pond DH systems in general, but they do work and I have put hundreds of them in rivers and streams across VT for almost 20 years now. If done and maintained right, they are just as valuable and effective as pond DH's.

In my experience, the issue of debris deserves more consideration than the issue of gravel uptake and the proposed design addresses both these items. In the design, in addition to a foot under the intake, there's a screen on the intake itself with very small holes. Then typically there's a screen in the hydrant head itself, and there's another screen just as the suction piping enters the truck (I believe these holes are as big as 1/2"). As for debris, the design addresses this by burying most of the piping and only using welded steel piping for whatever is exposed. The intake is pointed downstream and located out of the main flow of the channel to help avoid debris and I have provided your engineer with some examples that involve welding a metal plate above the intake to protect it even further. Certainly, with the generous maintenance fund in mind I have a lot of confidence in the longevity of the proposed system.

The West Branch DH design looks good and will provide another reliable source of water for the fire department. I originally preferred the location below the bridge but with sufficient water and only 5 feet of lift on the upstream side of the bridge I say go for it as the less lift the better.

I have enjoyed working with everyone on this project and am envious of the resources you have to come up with a good solution. I would be happy to provide further consultation when it comes time to actually construct the new DH system.

Yours Truly,



Troy Roscoe-Dare

VT Rural Fire Protection Program Manager

14 Crab Apple Ridge, Randolph, VT 05060

dryhydrantguy@yahoo.com – 802-828-4582