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House Fish, Wildlife & Water Resources Committee

I have been asked to speak with you today in regards to the value of the VTrans Rivers & Roads Training that has been offered at our VTrans Training Center. I took the 3-day- class in August of 2013 and found the course very informative and helpful.

The first day we spent the morning learning about and getting a brief understanding of the shapes of rivers and streams and how they change over time. The change of a river channel is a direct result of the rivers composition and erodibility of its bed and banks (e.g., sand, clay, bedrock); vegetation, size and composition of the sediment moving through the channel. Slow moving sediment can change the direction and flow of the channel just as much as quick moving sediment. The difference being that the slower moving sediments take longer to change the channels direction. We then moved outside to actually look at a small stable stream to see where and how it is affected by its environment. This particular brook wasn't too severely affected by the recent storms that we had in the area. This can be contributed to the lack of activity at its origin. Nothing has changed in the area in quite some time.

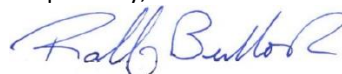
The second day of classes was focused on natural channel adjustments and evolution. The point being that a channel is always changing. As more activity happens along a channels route more of the channel is influenced. We identified what types of triggers were likely to change a channels path. We visited another, larger brook to see what happens to an unstable brook. It meandered along a roadway. One side of the brook was lined by ledge and the other by the road so it was pretty obvious which way the brook would alter its path when the flow increased. To address this problem the Town reinforced the edge of road with large stones. This then forced the brook to deepen its channel or overtop the roadway, both of which occurred at this site.

The third day was spent addressing channel stability with the use of different structural options. Structures placed in the channel can both be a detriment to the brook or used to stabilize it. It all depends on what you're putting in and where. A culvert or bridge abutment that constricts the flow will inevitably cause a washout, overtopping or major structure failure. Placing stabilization structures like rock vanes or a log cross vane can help redirect or slow the flow of the channel while also creating areas for aquatic life to thrive.

The last exercise on each of the days was to create a working Diorama. The diorama allowed us to actually put what we learned into action. We created the different scenarios in the sand and then put water to the channel to see what occurred. This exercise drove home the lessons of the day. I felt that the 3 day course was very beneficial to the Operations Division. I now feel that I am better equipped to make sound decisions when rebuilding a road or structure after any type of storm event or when replacing structures during normal maintenance operations.

Should you have any questions, please feel free to contact me at 828-1986.

Respectfully,



Ralf Bullock
District Technician
District 6