

# Sandgate Conservation Commission 2020

Jean Eisenhart, Chair; Jim Henderson, Harry Rich, Phoebe Sheres

As it increases in size, the Green River landslide across from the Town Office continues to raise considerable concern. Here is an update on efforts made on behalf of the landowners to address the issue. The Basin 1 Clean Water Advisory Committee, its members including representatives of The Bennington County Regional Commission, Bennington County Conservation District, Batten Kill Watershed Alliance, Trout Unlimited, Vermont Department of Environmental Conservation and The Green Mountain National Forest met on site this summer to discuss potential strategies to stabilize the slide and initiate revegetation. Although the size of the slide presents major challenges, there was optimism that the slide could be remediated. We all agreed that a survey establishing the river width, depth, top of bank and other river dynamics was needed as the critical first stage of the project.



In October trained members of Trout Unlimited, Batten Kill Watershed Alliance and Bennington County Conservation District spent three days conducting the surveys which will provide the needed baseline data. It is clear that the landslide was most likely created when a roadway was constructed across the base of the hillslope in conjunction with field berming.

Ongoing channel processes reacting to the upstream channelization and on site hillslope disturbance contribute to what we see today, which will continue until a natural angle of repose (stable slope) is reached by natural slumping processes. However, several things have been identified to mitigate this erosion, including the reduction of upstream energy inputs.

Reducing high energy inputs from the upstream channel requires: 1) elimination of severe channel incision within the existing 2' high berms by cutting openings and reconnecting the bankfull channel to an active floodplain and 2) fostering the natural redevelopment of an acceptable level of stream meandering in this 900' segment. By reducing excess flood energy the channel bed can locally redeposit to regain stable dimensions, reconnect with its natural floodplain, and reducing stress along the slump. These results, combined with recruitment of large wood into the channel,

are anticipated to “congest” that portion of the channel against the base of the hill. The increased flow resistance will shift the stream to adopt a new lower resistance path cutting across the back of the existing point bar which will allow natural hillslope recovery.

Jacob Fetterman, Project Coordinator for The Batten Kill Home Rivers Initiative, a project sponsored by Trout Unlimited, has recently submitted a Design and Implementation Grant Application through the Vermont Clean Water Program to develop several design alternatives to breach the berm to allow the river to reclaim its former floodplain.

While this action will alleviate the high water pressure at the toe of the landslide it will also lead to additional flooding and the movement of debris (wood, rock and other sediment) across the lower edge of the hay field. This will necessitate the establishment of a riparian buffer zone setback at least 50 feet from the top of bank where easements will prohibit any development while encouraging the growth of native shrubs and trees. The impacted landowners have agreed to the riparian buffer. Meanwhile we are looking into a number of potential programs to compensate for the loss acreage of high quality hay.

We need to understand that fixing the landslide is a multi-stage project which will likely occur over several years. All of the identified partners have agreed to continue to work cooperatively to secure grants and other funds to move this project toward completion.

Meanwhile The Batten Kill Watershed Alliance continues its efforts to restore riparian buffer zones throughout the Batten Kill watershed. Over the past year we have planted several hundred stems of sycamore, maple, oak, poplar, walnut, black cherry, American elm, apple and red dossier dogwoods on seven private properties along the main stem. I am currently trying to recruit property owners along The Green River. Please contact me if you are interested in learning more. [jhenderson@bcrcvt.org](mailto:jhenderson@bcrcvt.org) or 375-9461.

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