

# Slow, Spread, & Sink Storm Flow

## One Waterbar at a Time

Recently, a cost-share program designed to reduce phosphorous pollution from forested watersheds has become available in Vermont's Lake Champlain Basin. We assessed eight truck road units here on the Seth Hill property. We found that seven were actively eroding and contributing significant quantities of phosphorus to the headwater stream and ultimately to Lake Champlain, so we applied for and received funding to mitigate this.

To date our project has added erosion control to the two permanent truck roads on the property:

- Broad-based dips have been installed on road sections that are 12% slope or less, in full compliance with the AMPs.
- Deep waterbars have been installed on steep sections (more than 12% slope) in full compliance with the State of Vermont's *Acceptable Management Practices Manual for Logging Professionals* (AMPs).

## Reducing Concentrated Flow on Old Skid Roads

This watershed is also carved by many old skid roads (paths where logs were dragged during logging—often running straight up the hillsides). Our assessment of major portions of these skid trails revealed that they do not meet the erosion control structure specifications prescribed in the AMPs. However, because most sections of the skid trails have been minimally disturbed over the past 20+ years, they have rewilded enough on their own to stabilize soil erosion. The skid trails were therefore deemed ineligible for the cost-share program at this time.

Our concern with these trails is that past extensive erosion of these trails turned them into deeply incised dugways (often several feet deep) that continue to significantly concentrate storm flow. Such fast-moving, ditched runoff significantly contributes to the “flashiness” of Vermont's waterways—the quick, dramatic rise in water levels after heavy rains that can cause extensive flood damage. We believe that by carefully adding more waterbars—perhaps by hand!—in key skid trail locations, we can help reduce peak flows. We hope to install these as a next step to enhance forest ecosystem health in a rapidly changing climate. Stay tuned!

## Healthy Streams, Healthy Lake

The streams that flow through this land form the headwaters of Downingsville Creek, which flows into the New Haven River and on into Lake Champlain. Building adequate erosion control on access roads in headwater forests reduces the speed and volume of stormwater runoff. That keeps soil sediments **out** of streams, where they reduce water quality, and **in** the forest, where they nurture the forest community.

