

## A TALL, STEEP, STREAMBANK STABILIZATION PROJECT IN ELIZABETHTOWN

It looked for a time like some Zorba creation with logs scattered on the slope. But now, thanks to superb work by ENCON Supervisor John Northup and Moriah Shock crews, the slope is nearly ready for seeding and erosion control fabric.

The steep embankment is at the west end of Water Street and the east side of the bridge going over The Branch. For years, the 70-foot tall embankment has eroded sand and gravels into the water. BRASS applied for Fisheries Across America funds to restore streambanks on the Boquet in '97, including this one. BRASS believed restoration of this bank a simple process: hire a hydroseeder. However a contractor took one look at the slope and said stabilization matting was required before any seed would stick. But, how does one apply matting to an embankment that steep, that tall, and with sands and gravel falling off the slope while you stand there looking?

During the design phase, BRASS considered nearly everything, including dangling workers in safety harnesses off the slope. Although NYSDEC was game to support harnesses and train workers in their use, the Moriah Shock safety inspector quashed the idea.

Eventually sanity prevailed. BRASS realized it had left over cedar logs from the Wadhams cribbing project, and some type of log ladder system laid against the hillside could provide safe footing for workers as well as create terraces to help halt the sliding material.

Prior to any work on the slope, something had to be done to keep the cobbles - head-size and larger - from careening down the embankment. So, hay bales were secured at the base of the hill. Then John Sheehan drew back a dangerous overhang with loose cobbles and shaped the top ten feet with an excavator.

Then came the International Volunteers sponsored by BRASS for 3 weeks during the summer. On their butts, and ever so slowly, they snail-slid down the hillside pushing loose cobbles ahead of them while others attempted to level dips and depressions with shovels and mattocks. Next the painful task of digging away all the trapped sand to remove the hay bales. The cobbles and boulders, however, had bounced over the hay into the river, so the volunteers spent the next day retrieving them and adding them to the stone bulwark protecting the base logs.

Now that the log ladder terracing system is in place, the next task is to fertilize, seed, mulch, and staple in jute stabilization matting. This will occur in early September, along with prayers for gentle rains conducive to good seed germination.