

WHY MORE FREQUENT FLOODING?

Is it a change in climate and global warming? Are we getting more rainfall, or more intense storms? Is more frequent flooding attributable to land use changes in the watershed? These are questions BRASS mulls over as it tries to think of ways to reduce flood hazard.

Floodwaters along the Boquet River in Whallonsburg.



According to the Northeast Regional Climate Center, the average November precipitation for Elizabethtown is 3.12 inches. Before the 8th, the most recent wet November month registered 6.08 inches. Rainfall during the 8th measured anywhere from 4 to nearly 7 inches, depending upon the location within the Boquet watershed. With this amount of rain, an already high groundwater table, and dormant vegetation, flood conditions were ripe. Are storms more intense and is the climate changing? These are points over which climatologists battle.

A cursory look at land use changes shows far fewer persons living in the watershed today than in the 1800's, and less activity along the river. Forests are no longer stripped for ship building, for stoking the kilns at iron forges, or for the pulp mill. Indeed, the headwaters of the Boquet are now in a "forever wild" protective status. The mills have vanished, along with most dams. Wetlands in upland areas and along the river still exist. What changes, then, could exacerbate flood conditions.

Setting 1800's and contemporary maps side by side reveals a population decrease, and a new railroad and interstate highway. The railroad, in certain places, takes up areas of former floodplain. Increase run-off from the Northway might somewhat affect Lincoln Pond, the Black River, and the Deerfield area.

There is also a scattering of homes in new areas along the river. The 1800's witnessed floods. Old newspapers are filled with articles about flood and spring freshet destruction to dams and mill businesses. But homes were less likely damaged as they were built on higher ground. Many of the 1900's homes, however, are on the floodplain. It is understandable; it's easier to build where it is flat, and lovely to live near a river. But homes and roads in the floodplain will not be immune to flood damage. They also, due to the impermeability of their materials, add to run-off.

There are two more land use differences too subtle for the maps: types/size of roads and their maintenance, and farm field drainage. As autos and trucks came into the Adirondacks, roads changed. They were widened and many paved. To make sure they weren't washed out during heavy rains, roads were severely ditched. Today, to make sure ditch vegetation doesn't trap debris and water during the winter that could cause small ice dams and road flooding, many ditches are scraped every fall. Into the ditches runs water from farm field drains. Farmers with clay soils drained their fields several decades ago. Walk along a rural road at any season during a heavy downpour and you can see the water gushing from field pipes into roadside ditches. Where does this water go? It goes very, very quickly into the river from every road along the whole course of the Boquet and its tributaries.

What can we do, knowing about these changes? Can we stop or slow the additional water run-off put in the river? How big is the challenge? Well, the difference between the Boquet River staying pretty much within its banks, and a Boquet River that floods homes and businesses is - discounting ice and debris jams - anywhere from 100 to 300 cubic feet per second. That translates into 67,000,000 - 200,000,000 gallons of water a day. The smaller gallon amount would require a thousand foot diameter lake ten feet deep to hold the water; the larger amount would put one foot of water into a lake the size of Lincoln Pond (600 surface area acres). How many gallons of run-off from impermeable surfaces and farm/road ditching goes into the river in a severe storm? Could it be as much as 67,000,000 gallons? BRASS doesn't know. But if there were water coming rapidly out of a ditch in about a 6" diameter stream, that would amount to around a gallon per second.

Given the unanswered questions, we can only advocate the following steps to lessen the constant destruction and expense: reassess flood zone maps and make them reflect known flood conditions; educate residents and officials about flooding, zones, and codes; try to find ways to assist floodplain residents who wish to move; encourage wetland restoration on farm fields where possible; and figure out ways to divert or temporarily hold road run-off without sacrificing road safety.
