

WHALLONSBURG BLACK WILLOW PROJECT

Since forming as an organization, BRASS has attempted to control excessive streambank erosion, first by planting hundreds of thousands of small "Streamco" willows, then by structural log cribbing and stone rip rap projects. The small non-native willows, although highly recommended for streambank stabilization by the Soil Conservation Service, have not proven very successful. We receive seedlings from the state nursery in the spring when the water level is high. The toe of streambanks—that area most susceptible to erosion and undercutting—is under water. As the water level lowers, roots of the planted seedlings dry out in the predominately sandy banks. Log cribbing structures and rip rap projects have proven highly effective, but they require the procurement and transport of materials, applications for permits, hours of coordination and a lengthy construction period.

This May, BRASS tried another erosion control technique: willow posts. Large branches from native black willow trees were cut and placed into deep holes at the toe of badly eroded banks near Angier Hill Road in Whallonsburg (on property belonging to Gerald Evens and Patrick Esposito). Black willow (*Salix nigra*) is the largest native willow in the U.S., most often found along streams and rivers growing nearly 100 feet tall. According to the U.S. Forest Service, black willow flourishes at or slightly below water level and is not appreciably damaged by flooding and silting. In fact, they help to elevate the land by trapping more sediment. Often as much as 20 feet of the lower part of the tree will be buried in sediment, but the roots continue to develop along the entire covered stem.

With small funds from the Clean Water Act, the Lake Champlain Basin Program, and the Kelsey Trust, BRASS shaped 800 l.f. of eroded streambank to a 1:1 slope and hired an arborist to cut black willow branches and a machine operator to dig the planting holes. Essex residents agreed to donate branches from their black willow trees, and Spooner's Garage fabricated a 6-foot steel ram to bolt onto a back hoe bucket to create the deep planting holes. Willow shrubs were interplanted between the live posts then the whole bank was seeded to conservation grasses.

Eight days later, all the smaller posts (those up to 3 inches in diameter) had leafed. Within three weeks every post had produced leaves and the grass seed appeared well established in most areas. Branches emerged on most posts a month after planting. This is important since leaf development does not necessarily mean root development because the bark retains sufficient moisture and sugar to produce leaves.

BRASS hopes for massive root development and a successful project. This willow post technique is used extensively in Illinois where 125 Soil Conservation Service employees have been trained specifically for planting the live posts.