

A retired hayfield plays a role in forest transformation, water quality



Nine-hundred and twenty trees.

Larry Johnson, 78, didn't wait for the Conservation Corps.

The trees arrived in early May, and he wanted to plant them before the ground dried out.

CLEAN WATER LAND & LEGACY

By the time the four-person Conservation Corps Minnesota & Iowa crew arrived in early

June, about three-quarters of the 920 red oak, bur oak, white pine, red maple, sugar maple, spruce and tamarack were in the ground.

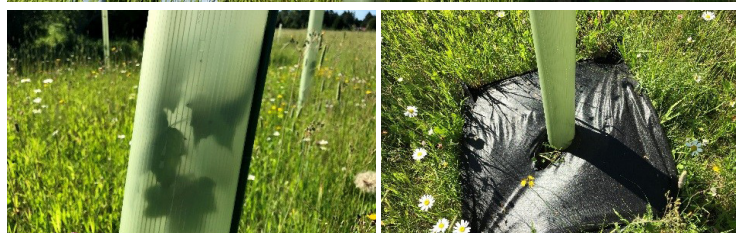
The planting is part of a \$160,440 Clean Water Fund pilot project.

Led by Lake Soil & Water Conservation District, it aims to reset pockets of forest to pre-logging days. If it succeeds, the project will curb erosion, clear up water and produce healthy seed trees that can jump-start regrowth after a disaster.

The grant is paying for the Conservation Corps crew to clear dead trees, plant new ones, and remove invasive shrubs. They'll work through Dec. 15 clearing invasives.

On the Johnsons' property, the crew installed the protective fences and tubes that would keep deer at bay. Johnson went a step further and angled the weed-detering tarps to funnel rainwater toward the roots.

Now, rows of plastic tubes form concentric rings around 20 acres he'd hayed up until this summer. There's just enough space between the outer ring of trees and the creek to run a brush hog. In the center, by early July waist-tall Timothy and oxeye daisies swayed in the breeze.



Larry Johnson, left, visits with Lake Soil & Water Conservation District Manager Dan Schutte on July 5, 2017, about the progress of trees planted around the edge of a former pasture. Bottom left: A Conservation Corps Minnesota & Iowa crew installed the protective plastic tubes. Bottom right: Larry modified the weed-detering tarps at the base of each tree so rainwater will funnel toward the roots.

"There are a number of birds that nest in the field. When we cut hay in the summer, we run over a lot of those nests. So that's why I just want to let it go natural and let the wildlife have a better opportunity to live and survive," Larry said.

"The bees and the birds and the animals and the butterflies. It's all for them, so they have a place to live," Debbie, 77, interjected.

Establishing trees around the perimeter of hayfields cleared long ago will cut the amount of sediment entering the rivers – in the Johnson's case, the Little West Branch of the Knife River.

Allowing a more open-canopy, white-pine-dominated forest with soil-stabilizing ground cover and shrubs to take hold will keep an estimated 750 tons of sediment out of the Knife River every year.

A designated trout stream, the Knife exceeds its turbidity goal by 90 percent every time it floods. The Knife and Skunk both empty into Lake Superior. Skunk Creek, impaired for turbidity and E. coli, contributes to Two Harbors' municipal drinking water supply.

"The punchline is what happens on the land is reflected in the water," said Dan Schutte, Lake Soil & Water Conservation district manager at the time.

Twenty-one private landowners signed up for the pilot project – some of them propelled by a spruce budworm outbreak that is decimating the balsams and, to a lesser extent, spruce.

The outbreak is in its fifth year of a Lake County infestation forecast to last through 2022. The swaths of dead trees are a fire hazard. Nothing grows under the dense canopy.

The Johnsons had heard about the spruce budworm, the forest in trouble. Then they heard about the North Shore Forest Collaborative's efforts to maintain native trees along a 3.5-mile-wide, 140-mile-long strip of coastal forest that started with Lake County. Finally. They could do something about it.

"We learned that there was all this help for us. Every time we'd think of it, it's just so overwhelming for Larry and I," Debbie said.

The Johnsons, both retired elementary school teachers, bought 80 acres outside Two Harbors in 1962. Over the years, they planted trees – including a few apple and nut trees just for wildlife. Next, they want to plant 100 yellow birch along a Knife River tributary. Debbie wants three more rows of trees around the fields, plus plots of corn and sunflowers.

Ordering 1,000 trees was a big commitment. The BWSR grant was like insurance – if the Johnsons couldn't plant the trees, someone else would.



Debbie and Larry Johnson check on some of the 920 trees they planted this spring. The trees will ring hayfields cleared long ago.

When we're gone the animals and the birds and the bees and the butterflies, they'll all live here in the flowers and the grasses. That's our purpose, you know? We just want it to turn out like that," Debbie said.