

Native Ecological Restoration at Rich Harvest Farms

Rich Harvest Farms seventh hole silver has a one and three quarter acre peninsula that is visible from three different holes. This area had become overgrown with invasive ground cover including thistle, prostate weed, medic, velvet weed, lambsquarters, burdock, ragweed, milkweed, and a few other common broadleaf weeds. The watershed immediately surrounding the peninsula had become silted in with sediment from upstream agricultural fields. This degradation had left several exposed mud flats that had become unsightly to the membership. Something needed to be done that was ecologically sound and aesthetically pleasing in this high profile area.



The dredging of the watershed and the grading of the shoreline at Rich Harvest Farms number seven.

We decided to dredge the flats, create a diverse plant and animal habitat and then maintain the area as a high-quality watershed. In order to achieve our goals, we understood the need to reintroduce many native plants and encourage their growth. Furthermore, we decided to add a buffer zone between the water and land to minimize any new potential nutrient loading from runoff into the watershed. In planning, we had to take into consideration a native oak and hickory savanna that would somehow be linked to our new native area. This connection corridor from the new water's edge to the established oak-hickory savanna influenced our plant selection.

Hollebeak Construction Company dredged the area in November 2003. The sediment was distributed on the shoreline of the peninsula. The dredging and redistributing of the sediment was accomplished in only two weeks time due to keeping the spoils onsite. The following spring, a non-selective herbicide was applied over the sediment at two different intervals. These applications helped to suppress any competitive broadleaf weeds once they germinated. In August, the area was graded and seeded

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with native species consisting of many different native forbs, sedges, and grasses. An annual grass was added to the mix to provide cover for the slower germinating native plants. Pizzo and Associates of Leland, Illinois seeded the area using a Truax seeder. The area was then irrigated as needed. A non-selective herbicide was applied to the shoreline with a backpack applicator to keep the weeds in check. The whole peninsula was hand weeded weekly to control some of the invasive weeds still left in the seed bank. The following year selective herbicide applications were utilized followed up by more hand weeding. The irrigations were decreased by half at this time.

At the end of the 2005 season the peninsula was supporting twenty different native species of forbs, sedges, and perennial grasses. It created a corridor for wildlife, connecting the water to the oak hickory savanna using plants that fit. The aesthetics improved with native plant diversification. Game fish, vertebrae,

and invertebrate populations increased by eliminating the mud flats that carp seemed to solely populate. Once the native plants were established, three irrigation heads were removed from the area. The watershed is completely protected by the surrounding buffer. Furthermore, the area is now pleasing to the eye. Many compliments have been shared from the owner and membership as the mud flats have been completely eliminated and replaced with colorful foliage that supports an array of song birds and butterflies.

Surprisingly, for the extent of this project, the costs were low. The most expensive part was the dredging, costing \$15,000. Seed preparation and installation cost \$4,800, including seed. Three maintenance employees weeded and sprayed the peninsula for eight hours per week. The cost to the club for this labor has totaled \$3,600. Labor costs are expected to diminish but not disappear once burning practices can be implemented to control many invasive

weeds. The project has been a success on many different fronts. Improving the aesthetics also increased plant diversification, created more wildlife habitat and created new food sources not previously there. Because of the high profile location of this area, continual maintenance will still be performed and budgeted accordingly.

In retrospect, we should have installed an erosion control blanket to the shoreline and plugged directly into it with native aquatics. We did not expect the native plant species to take as long as they did to germinate and become established. If taking on a project like this, be prepared that first year for slow plant establishment and a shortened bloom. It is normal.



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