

## Fish Sticks Installation for Habitat Improvement

Fish Sticks is the name that has been given to the habitat improvement practice that involves securing bundles of 3 to 5 trees perpendicular to the shoreline. The trees extend approximately 30 feet into the water and as a near shore practice, the trees provide cover, spawning areas, and a food source for fish populations. They also improve shoreline protection from wave action created by winds or boat traffic.

Like any work done within public waters, a permit is required from the DNR. The requirements for installing the trees are also closely regulated and must follow the published guidelines. More in-depth information is available in the Best Practices Manual...

<http://dnr.wi.gov/topic/fishing/documents/outreach/fishsticksbestpractices.pdf>

After winter lake ice formation, cable anchors are installed along the shoreline in locations where there are not standing trees for anchor points. We used a duck billed anchor which has a holding capacity of 5,000 pounds. They are installed using a jackhammer with a 5 foot long driving rod. After inserting the anchor to the 5 foot depth, the cable end is pulled out with a handyman style jack to turn the anchor 90 degrees and set the anchor in place.

Live trees are cut and transported into place across the ice. Live trees must be used so that they will not float in the water. Holes are drilled through the trunk and the bundles are cabled together and tied to the shoreline anchor or tree. When the winter ice melts, the trees sink into the water for structural habitat.

In our first installation, we wanted to start small to test the methodology and see how much planning, physical effort, and financial support was necessary. We installed 13 bundles, of 4 trees each, along the shore of the State-owned island that is in the southeastern Conservancy Area of Lake Sherwood. This is an area where we were able to secure permission from the State to begin fish habitat improvements. We are maintaining a 150 foot navigational clearance from our installation as required by the DNR. Being a no wake area, it seemed like the ideal place to begin this practice. With a 5-year permit issued for Fish Sticks, we plan to install more around the island at locations where we can maintain the 150 foot boating clearance. It is hoped that after examining the installation along public land, that a few private landowners will be interested in putting a bundle by their shoreline to improve fishing. The DNR guidelines recommend installing fish sticks bundles along any lake shoreline that does not have at least 200 trees naturally fallen in the water per mile of shoreline. We have a long way to go to replicate that kind of natural lake habitat, but everything we can do will improve the fish production in our lake.

Funding for the 2018 project came from Tri-Lakes Management District (\$1,000 towards project supplies) and LSPOA Conservation Funds (\$675 towards supplies, contracted services, and equipment rental). The value of donated equipment rental, services, and labor was \$1,500.

The location is on the map below:



Equipment and other resources were contributed by Steve's Rental (discounted jackhammer and generator rental), Central State Landscape (discounted tree transportation), Adams County Park (tree source), and Sand Valley Golf Resort (tree source). Thanks go out to Laurie Francis, Norm Abler, Frank Bardwell, Ron Stowell, David Trudeau and Vern Long, who all assisted with the labor for completing this 2018 effort.

Following are some pictures documenting the project:



Installing the cable anchors with a jackhammer.



Loading trees from Sand Valley property.



Hauling trees out onto the ice near the island.



Placing trees along the shoreline by Hoffman Excavating.



Drilling through the trunks for cabling the bundles together.



After threading the cable through the trunks and anchor, it is cut and crimped.



Crimping cable that is anchored to a shoreline tree.



Tree bundle crimped to a shoreline cable anchor.



Tree bundle attached to on shore tree.



Workers for the project: Frank Bardwell, David Trudeau, Ron Stowell, and Norm Abler

Not pictured: Laurie Francis and Vern Long