Deepening the Pond to Control Vegetation*

Deepening to renovate an existing plant-clogged pond, can be achieved by dredging out the pond bed, or if a dammed pond, by raising the water level. One effect of greater pond depth on aquatic vegetation is to put more of the bed at a level that is too dark for rooted plants. It's hard to say what water depth will be critical in preventing nuisance growths of rooted plants. That depends on water clarity, the kinds of plants present and nutrient supply. Having 15 feet of water should greatly reduce plant growths reaching close enough to the water surface to interfere with boating and swimming. Depths of 18 feet or more will often rule out nuisance growths of plants. **Warning:** since late 1960s a new aquatic weed, Eurasian water milfoil, has entered Michigan. It "takes over" ponds and lakes which have abnormal nutrient enrichment. In some situations, it has grown to the surface in water 18-20 feet deep.

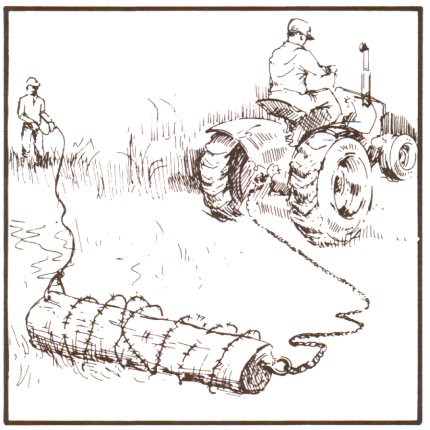
In the case of dredging, another effect on rooted plants is to deprive them of nutrients from organic deposits in shallow water. Dredging can also create steeper side slopes on which plants seem to grow poorly.

Increasing the depth and volume of the pond can have other beneficial effects with regard to its ability to deal with nutrient load and its suitability for fish. Consider these in deciding whether the expense is justified. The cost of deepening a pond can be immense, whether one modifies a dam, dredges by suction, digs with a dragline, or drains and bulldozes the bed. Finding a site for disposal of dredged materials and containing them so they do not flow back into the pond or spill into other water bodies can be difficult.

Waterlevel Drawdown*

Lowering the pond's water level and exposing all or much of the pond bed to air can have several favorable effects and may cost little. Many kinds of aquatic plants will be killed by drying. It is preferable to

*Contact nearest DNR office (Appendix) to secure permit for this procedure.



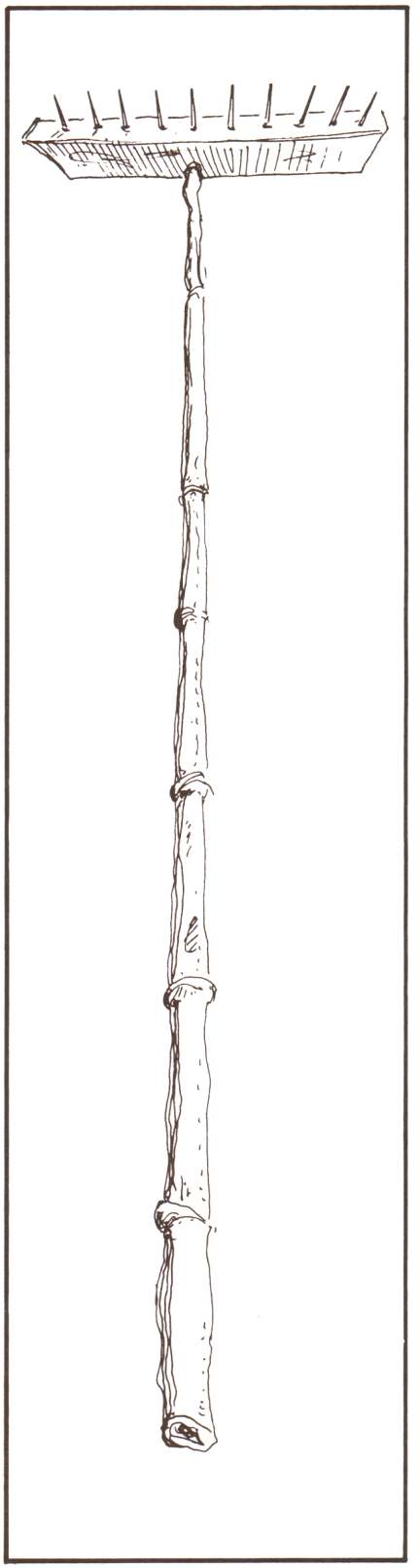
A log-and-barbed wire drag for removing vegetation.

do the drawdown in winter when the freezing of plant tissues, including perhaps the roots, will give even more extensive and lasting kill. Summer drawdown is particularly ineffective on plants such as coontail and elodea which grow as free-floating fragments. Still other plants increase as a result of summer drawdown. Summer drawdown seems actually to stimulate cattails. Winter drawdown does not adversely affect wild rice, a plant sometimes desired at the pond edge.

Where sediments are soft organic material, drying consolidates them, and several inches or feet of pond depth may be gained. Drawdown can also facilitate dredging.

For ponds formed by dams of proper design, draining is especially easy. In dug ponds, pumping is needed. Low-head, high volume pumps of relatively cheap operation can usually be used, as the water need not be lifted far. Pumps capable of draining ponds at least as large as 12 acres and 15 feet deep are available through contractors. In addition to mobile pumps especially designed for drainage, some people have, for small ponds, used old fire engines. It is also possible to make low-head pumps from outboard motors.

A word of caution: If shallow water is left for many days of the growing season in parts of the pond previously too deep for rooted plants, then the newly lighted environment may allow seeds or plant fragments to sprout and take root there. Upon refilling the pond, especially if the water level is raised too slowly, the plants may grow upward into the normally lighted zone and become a nuisance. To prevent



A floating rake.