

Lakes, Ponds and Reservoirs

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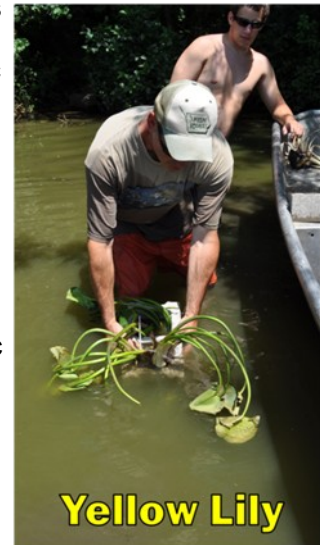


Aquatic Plants – Monitoring, Control and Enhancement



In recent years Iowans have come together to improve water quality in our lakes by addressing soil conservation and other issues in a lake's watershed. These efforts pay off, and water quality and clarity improve dramatically. So how do underwater plants respond to clearer water? They grow...and sometimes too well! Because of the tendency of grass carp to eliminate all rooted aquatic plants, they are no longer stocked into Iowa's public lakes. With clear water and abundant plant nutrients, some kind of plant management may be necessary, and we want to make best use of limited time, labor and financial resources.

As managers of public fishing waters we want to provide the best fishing possible using a combination of good water quality, balanced fish populations and adequate angler access. Aquatic plants play a part in each of these three aspects. Our first task is to develop a method to survey aquatic plants. We have to know what we have in order to manage it. We are testing transect, point and acoustic sampling methods. For our constructed lakes, it appears that the transect sampling provides the most information for time spent. Our second task will be to see how the plants in a lake influence water quality as well as fish, fishing and the balance of plant and animal life (see Morris report on next page). Information from the two jobs above will better equip us to complete our third task; to see if and what method or combination of methods work best to control nuisance aquatic plants. Not all plants are a nuisance, and sustainable fisheries require a good deal of plant habitat. Therefore, our fourth goal is to find and introduce non-invasive plants to our lakes that benefit both water quality and fish while not



hindering those who fish and enjoy other forms of lake recreation. We know that aquatic plants will grow but we also want to encourage the growth of those that provide benefits without creating barriers.

To that end we have been working at Lake of Three Fires near Bedford to remove the lotus and introduce desirable plants. Lotus is a type of water lily that can spread to waters up to 15 feet deep, and is a barrier to anglers and boaters. We have removed much of the lotus growth with herbicide and are now concentrating on introducing plants of other kinds. With a team of 19 people from around the state we introduced over 2,000 plants to 7,000 feet of shoreline in one day. We are hoping that this kind of concentrated effort will result in quick establishment of desirable plants and result in improved water quality and fishing. In other waters where we have introduced fewer plants to smaller areas, it has taken over 3 years for these plants to begin to spread. Like many landscape-scale revegetation projects, patience is necessary.