Identifying the Aquatic Plant Control Alternatives,Their Effectiveness, Environmental Impacts, Human Health Risks and Costs

The management strategies appropriate for use in Offut Lake include a variety of approaches.

No Action:

There are both short and long term impacts of continuing to do nothing to manage the aquatic plant and algae growth in Offut Lake. Short term, individual property owners are left to attempt to control the vegetation as best they can adjacent to their property shoreline. Long term impacts, at this point can only be hypothesized by studying other nearby lakes in Thurston County. One of the lakes closest to Offut Lake, MacIntosh has changed from a quiet recreational lake to an unusable swamp. No one wants that at Offut Lake.

Manual Control:

Hand-pulling or raking to control aquatic vegetation are options currently being used by several Offut Lake shoreline residents. As the aquatic plants have continued to increase in volume, more and more residents have been attempting to use these manual methods of control with limited success. One significant problem with this methods of control is that small pieces of the aquatic plants break off as they are being harvested, only to float to another adjacent area to begin growing again. Additionally, the aquatic plants seem to be stimulated by receiving a cutting or harvesting and grow even more thickly than the previous growth. Property owners who are unable to harvest their own weeds must hire someone to remove the weeds. This can easily cost property owners several hundred dollars annually.

Bottom barriers are yet another method suitable for aquatic plant control. The Offut Lake Resort is in the planning stages of installing a barrier in their public swimming area. At the time of this writing the cost of such a project is not known.

Diver dredging has been determined not to be an option at Offut Lake both because of the thickness of the silt that already exists on the lake bottom as well as the potential environmental impact of dredging on a spring fed lake.

Environmental Manipulation Methods:

Water level draw down is not a suitable aquatic plant method of control at Offut Lake because of the nature of it’s water source. Because the water originates from tiny springs located all over the lake bottom, it is impossible to control the flow of these springs and maintain any level of acceptable water quality..

In theory, nutrient reduction and or sediment reduction might be suitable aquatic plant control or algae control methods. There is clearly a need for public education as to sound environmental practices and a commitment to prioritizing water quality of the lake over permitting over use of fertilizer or unmonitored septic systems or storm runoff to enter the lake. Because Offut Lake has not experienced substantial residental growth, residents have had the luxury of living a very relaxed, unregulated life style. One they cannot longer ecologically afford.

Mechanical Methods:

It is not known whether mechanical cutting or harvesting or rotovation methods for aquatic plant control at Offut Lake are suitable for aquatic plant control at the time of this writing.

Similarly, at the time of this writing it is not known whether sediment agitation devices, such as weed rollers would be suitable for aquatic plant control in Offut Lake. However, since most of the water enters Offut Lake through the underwater springs, it would seem that sediment agitation of any kind would adversely affect water flow into the lake and thus adversely affect water quality.

Biological Control Methods:

The question of whether certain types of fish (i.e. triploid grass carp) might be suitable for aquatic plant control in Offut Lake will need to be discussed with WDFW (Washington Department of Fish and Wildlife) since they routinely stock the lake for recreational fishing. It would seem that any fish species introduced would be in direct competition with the fish stocked by the WDFW.

Chemical Control Methods:

To address both the uncontrolled aquatic plant growth as well as the toxic algae in the most effective and efficient manner, it is necessary to use the least toxic chemicals in the smallest quantities. Additionally, only a third of the area of the lake needing treatment would receive these chemicals in any given year. Thus minimizing harm to fish and other wildlife.