

The plight of Rainbow Lake

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The plight of Rainbow Lake By: The Shores Lake Committee | 0 comments

The very namesake of our community, Rainbow Lake, is under siege caused by the accelerating growth of aquatic weeds.

Unless action is taken quickly, Pinetop-Lakeside and the greater White Mountain region will lose a valuable recreation and economic asset. The lake literally will become a swamp or wetland. Sadly, the tourism draw of the lake would be gone and property values in the area will suffer.

Rainbow Lake was declared impaired by the state of Arizona in 2000. All of the local and state agencies and the irrigation company have agreed that there is a serious problem but none have offered or allowed a solution to stop the slow strangulation of Rainbow Lake by aquatic weeds.

At last we are pleased to report that the Town of Pinetop-Lakeside has agreed to work with The Shores Lake Committee. The town agrees with the seriousness of the problem but has said they will not provide financial support.

First, some background information.

Over the years, erosion from upstream and heavy monsoon storms have deposited four to six feet of sediment in many areas of Rainbow Lake. This sediment contains a heavy concentration of nutrients leached into the lake in the past from septic tanks, which promotes the rapid growth of weeds.

In addition, sediment raises the floor of the lake, allowing sunlight to promote the rapid growth of aquatic weeds.

The Shores at Rainbow Lake, in cooperation with state agencies, and the Town of Pinetop-Lakeside participated in a joint project these past two years during which local volunteers planted native trees. The buffer strip created by the trees will prevent further erosion during storm run-off.

More of this type of erosion prevention must be done upstream and on the west and south shores of the lake.

In past years, the Shores and Arizona Game and Fish have used an aqua-weed machine that has helped remove some of the weeds. However, any Eurasian milfoil clippings left in the lake by the machine drift to all parts of the lake and begin growing.

In essence, the short-term solution of removing the weeds temporarily might possibly be causing a long-term problem by allowing the weeds to spread and grow throughout the entire lake.

Based on hours of research and meetings, the Shores Lake committee is recommending a three-step program of weed eradication from Rainbow Lake. Each program is being used by public and private lakes, with proven success, throughout the United States.

1. Apply aquatic herbicide to the weeds.

In 2008 the Shores experimented by applying herbicide to a small area of the lake. Based on encouraging results of the experimental application last year, the Shores Board has authorized an expenditure of \$15,000 to be used to apply an EPA-approved herbicide along the Shores property lake front at a distance of 100 feet from the shore.

The \$15,000 comes from a transfer of money budgeted in the past for the weed machine. The application of herbicide to Rainbow Lake will take place this spring.

The committee is now asking "non-Shores" residents to donate to the program. In addition, if any Shores residents would like to contribute to expanding the area of herbicide application, please let us hear from you. The cost for each 100 feet from the shore is \$1.75 per front foot.

2. Introduce weed-eating amur carp into the lake.

You may have noticed that Lake of the Woods located on the north side of the State Route 260 is literally weed-free. That is due to the introduction of weed-eating amur carp several years ago.

However, the Arizona Game and Fish department has classified amur carp as an exotic fish which must be deployed only in a "closed system." Therefore, before these fish, which are sterile, can be released into the lake, fish containment barriers must be erected and approved by the Arizona Fish and Game Department.

The Lake committee is now searching for the best barrier location. We will then begin the design of the barrier and apply for a permit to stock the lake with carp. A rough estimate of the cost to release weed-eating fish into Rainbow Lake is \$50,000.

3. Dredge the sediment from the lake.

The most effective, as well as the most expensive, action recommended by the Arizona Department of Environmental Quality is dredging the sediment out of Rainbow Lake.

There are two methods that can be employed. One method is to partially drain the lake to a minimum pool and use a dragline bucket and bulldozer to pile up the sediment in the lake bed until it can be hauled out by truck. Experience has demonstrated that this method is expensive.

In addition the work must be completed during the non-irrigation period in the winter. The second method is the use of a small portable floating dredge. It has a proven record of partially removing sediment from lakes at a relatively nominal cost by sucking the sediment from the lake bottom and transporting it through a portable pipeline that can extend up to 3,000 feet in length to a designated area to dry.

After drying, the sediment is hauled off in trucks. To complete dredging of the lake with this method would take two to three years. Cost estimates range from \$1.5 to 4 million. Obviously we must acquire a large grant to begin this process.

Dredging will be a long-range project which must be done with the cooperation of the county, town, irrigation company, landowners and Arizona Game and Fish Department.

Another alternative being explored is to establish a legal "water improvement district" with bonding authority to secure the necessary funds, but this can take up to three to four years for this alternative to become approved by those affected.

It has become evident that a Homeowners Association, such as the Shores, does not have any power or authority to solve a community problem. Thankfully, Pinetop-Lakeside has agreed to partner with the Shores (without financial support) to find and implement a solution.

In addition, it is hoped that Navajo County and Show Low representatives will be joining us. With the help of these leaders, your Shores Lake committee is encouraged in believing that we can save Rainbow Lake for the town, county, state and residents who reside on or near the lake.

If you would like to expand the herbicide coverage to specific locations, please send your check made out to Aquatic Consulting & Testing Inc., to Doris Morin, P.O. Box 475, Lakeside, AZ 85929.

Any amount received will be put to good use to help make the lake more enjoyable this summer.

The Shores Lake Committee members Al Crawford, Ernie Modzelewski and Jim Peterson contributed to this article.