Hydrilla – 2005

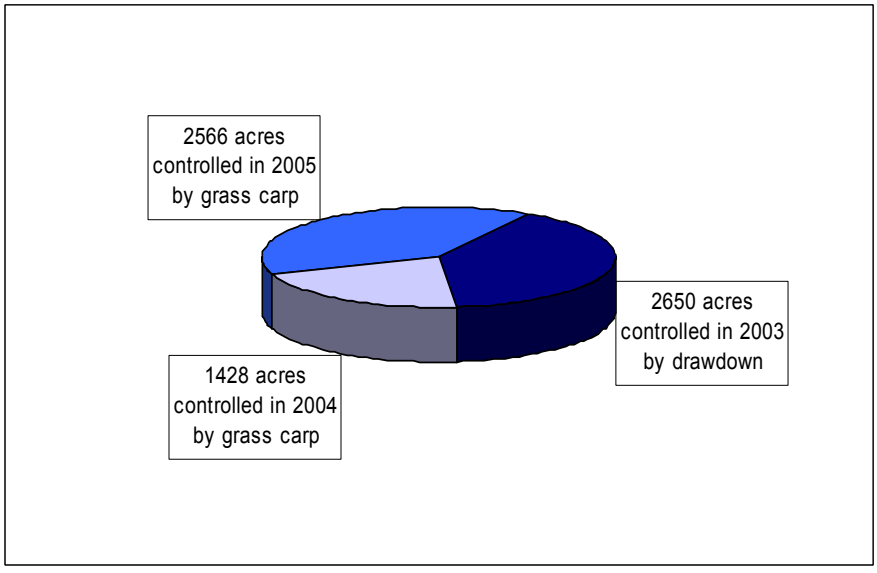
Lake Murray, South Carolina

The 64,500 grass carp stocked in Lake Murray in 2003 have achieved the goal of control of hydrilla. Based on extensive searches using SCUBA divers, an underwater video camera and fish finders, near-complete control of hydrilla appears to have been achieved within 2 ½ years of the initial stocking of grass carp.

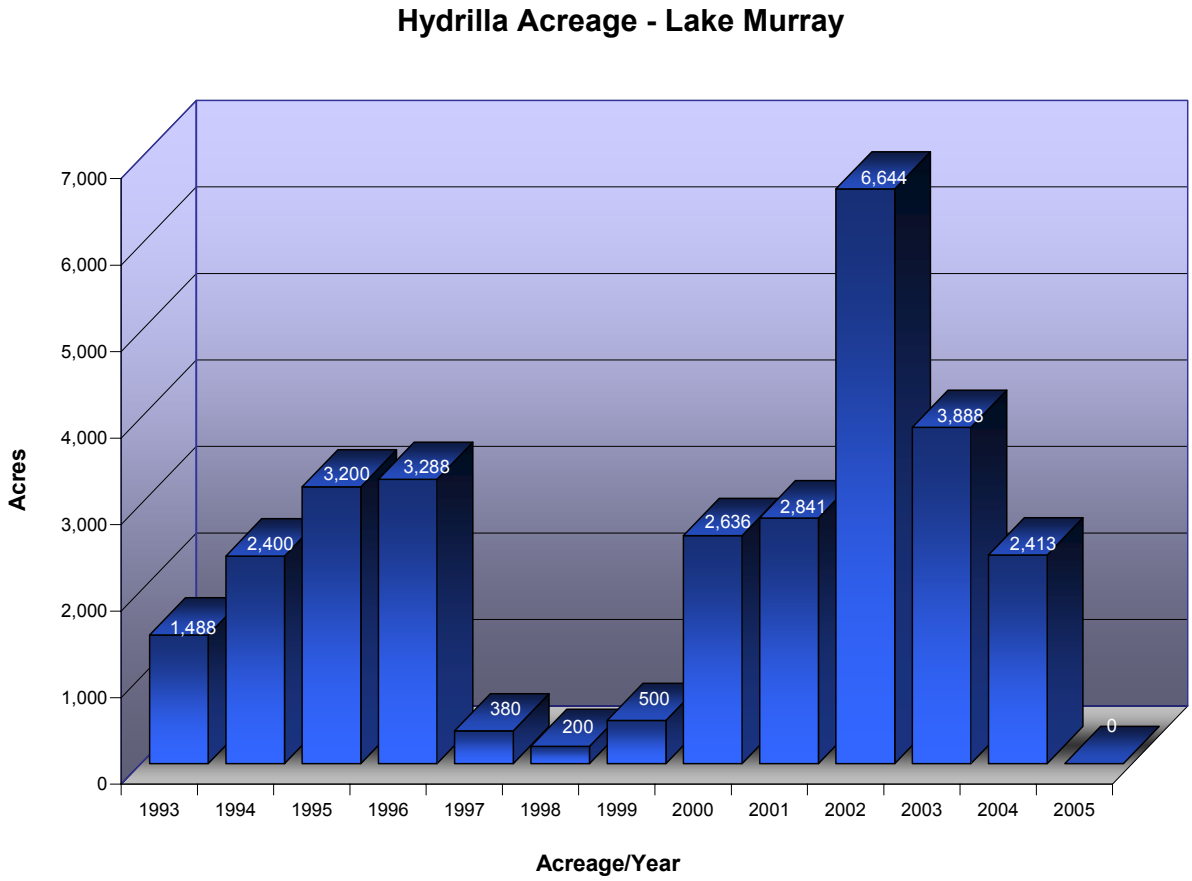
The most intensive searches for hydrilla this year were focused on the southeast shore where hydrilla was still growing well at this time last year. A large cove just SW of Providence Point had an extensive growth of hydrilla in September and October of 2004; hydrilla was topped out throughout the entire area. This year, the SCUBA divers found only one hydrilla shoot, about ½ inch long. Otherwise, the entire bottom of this large cove, as well as all the other areas that were searched, consists of silty sediments and Asiatic clam shells. This was the only evidence of hydrilla found in the lake this year.

In 2002, hydrilla covered 6,645 acres. Over 2,700 acres of hydrilla were controlled by exposure during the major drawdown commencing in 2003. In 2004, grass carp controlled an additional 1,475 acres of hydrilla and by the end of the growing season of 2005, the final 2,566 acres were controlled by grass carp as shown in figure 1.

Figure 1 – Hydrilla control



The graph below illustrates the history of hydrilla in Lake Murray from its first appearance in 1993, through the drawdown in late 1996, its recovery in 2000, the dramatic increase in 2002 as a response to several years of drought, and the decline in recent years due to the drawdown and grass carp stocking.



In addition to hydrilla, other submersed plants previously found in Lake Murray were also notably absent. These include slender pondweed *(Potamogeton pusillus)*, slender naiad *(Najas minor)*, southern naiad *(Najas guadalupensis)*, and Illinois pondweed *(Potamogeton illinoensis)*. However, most of these haven't been found in Lake Murray for the last few years.

As the grass carp continue to keep hydrilla under control, it's anticipated that they will probably turn to water primrose as a source of food, if they haven't done so already. Although water primrose is mostly an emergent plant, it does have some submersed leaves. The tender, young, new growth is formed at the surface of the water and is readily available to grass carp.

For over a decade, there's been much speculation as to how hydrilla managed to enter Lake Murray. One of the SCUBA divers who worked with me searching for hydrilla this fall is a local businessman whose business is dependent on lake users. He informed me that in the early

1990's, fishermen told him that they brought hydrilla to Lake Murray from the Santee Cooper lakes in large barrels or drums and intentionally introduced it into the lake.

SUMMARY:

From a high of over 6,600 acres in 2002, hydrilla is now considered to be completely under control in Lake Murray. Intensive searching turned up only one small shoot of hydrilla this year. The grass carp are effectively keeping the hydrilla and other submersed plant species well under control and will probably continue to do so for the foreseeable future.