

Executive Summary

The Hydrilla Program's goals are to eradicate every hydrilla plant in California, and to find any new invasion when it is small and easy to eradicate. While the Hydrilla Program continued to make progress on every infestation in 2006, two major infestations entered a critical period. Surveys to find new infestations need to continue, with an increased effort on checking small, private ponds. Outreach holds the best promise for discovering new infestations in private ponds.

Hydrilla is an invasive, non-native water plant and has been called the world's worst submersed weed. It reduces water storage and water movement, chokes water control structures and hydroelectric generators, interferes with boating and fishing, damages fish and wildlife habitat, and produces good mosquito breeding habitat. Hydrilla once heavily infested canals in the Imperial Irrigation District of Southern California, where it reduced water flows as much as 85 percent. Control costs in highly infested states, such as Florida, are in the tens of millions of dollars each year.

Parts of what makes hydrilla such a successful weed are its excellent survival and dispersal capabilities. It breaks apart easily, and fragments no more than one inch long grow new plants. It also develops "tubers" on its roots. Each tuber produces a new plant, and a single tuber can lead to several hundred new tubers in one season. Tubers survive for four to seven years, presenting a major challenge in eradicating the plant.

Key accomplishments for 2006 include:

- 2006 was the third year in a row where the Department surveyors could not find any hydrilla in Clear Lake, despite searching the lake six times. 2005 was the final year for treatments under the eradication protocol, and 2006 was the first year since the eradication effort began in 1994 where we did not have to treat for hydrilla. It is very encouraging that no hydrilla appeared despite the absence of herbicide.
- The situation was similar in the Chowchilla River system. Surveyors found no hydrilla, and none has been found since 2002. As in Clear Lake, the eradication protocol called for no treatments this year, making this the first year since eradication began in 1989 where we did not have to treat for hydrilla.
- The Department surveyors found no plants for the second year in a row in the Hesseltine Pond / Bear Creek area of Calaveras County.
- No new infestations of hydrilla were found in California this year, despite visiting 371 lakes, ponds, and access points along streams, and surveying over 3000 points in the Sacramento/San Joaquin River Delta, as well as responding to reports from the public.

Remaining challenges include:

- Maintaining the vigil in the Chowchilla system and Clear Lake. 2006 was the first year where the herbicide pressure on the plant was lifted. The major herbicide we use, fluridone, is effective for a relatively long time. As the herbicide wears off, any remaining plants have more opportunity to re-grow. The Chowchilla System presents logistic difficulties, but can be

thoroughly inspected in one or two passes. Clear Lake is, literally, a big job. It has an area of 43,000 acres, more than 100 miles of shoreline, and heavy populations of other aquatic weeds. We are stepping up the intensity of survey in 2007 in Clear Lake.

- Keeping the pressure on the other remaining infestations. Most infestations are responding well to treatments, but one small infestation, in Shasta County, made a surprising resurgence last year, and the infestation in Yuba County may require a new strategy. We have been laying the groundwork for major new efforts on the Yuba County Water District Canal and the Nevada County Fairgrounds pond.
- More outreach. The last three new infestations in California were in ponds in the Sierra foothills. The foothills are laced with small ponds, most of them private. The Program has always looked hard at areas which have been considered "high risk", meaning places with heavy traffic and public access. The Program needs to generate more invitations to inspect private ponds. Expanded outreach efforts can lead to more invitations, as well as more eyes looking for the target. All the new infestations were found by people outside the Department, but two of them were found because of an early outreach effort after the first detection.

Hydrilla was first found in California in 1976, and it has been introduced on 30 separate occasions. The Hydrilla Program has eradicated 22 of those infestations and several other infestations are approaching eradication. The prime requirement for eradication is persistence. A single eradication of a large infestation requires six to 20 years of continuous attention, due to plant's excellent growth, dispersal, and survival strategies. In addition, infestations are easier to eradicate when they are small. Finding small infestations requires routine, vigilant, widespread survey.