## After many years, Utah Lake's carp removal project starting to see some desired results

- Katie England Daily Herald
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Just about every day — weather permitting — Loy Fisheries is out on Utah Lake, capturing several tons of common carp for disposal.

The fishermen have been at the job steadily for nearly eight years as part of the June sucker recovery program. The original goal? To remove 30 million pounds of the invasive species from the lake to improve the habitat for the endangered native, the June sucker.

More than 25 million pounds of removed carp and \$4.9 million later, biologists are already beginning to see some of those desired results — including the return of vegetation crucial to the June suckers' continued survival.

The original goal was to remove 5 million pounds of carp each year in order to reduce the population enough for the vegetation to come back, said Mike Mills, coordinator for the June sucker recovery program. Though the 5 million per year goal has never quite been reached, the density of the carp population in the lake has dropped drastically.

Since 2012 (when the carp population was first measured using density, rather than estimated lake population), the carp population has been reduced by a total of 60 percent — apparently enough for the desired vegetation to make a reappearance.

The June sucker population had reached dismal levels in the late 90s — experts estimate there were fewer than 1,000 fish. Though that population has recovered drastically, due in part to adult fish released in the lake after being raised in hatcheries, there is still one key to the species' survival missing.

"There is still this hurdle," Mills said. "Even though we have thousands (of June suckers) come up the Provo River every spring and spawn, we still struggle to find a larval fish that survives to become even a year old."

The reason the young fish aren't surviving is lack of refuge habitat, Mills said. They have nowhere to hide from predators before they mature — which is the main reason the carp removal program was started in the first place.

Carp are responsible for that lack of habitat because of the way they feed off the bottom of the lake. They tear up the bottom as they feed, destroying the underwater plant life, like pond weed and duck weed that provide refuge habitat for young June suckers.

"It's almost like a pig in that they get down on the bottom of the lake and they just rummage through the sediments trying to stir up roots or bugs or anything, and they're taking mouthfuls of mud and water, holding that in their mouth, then straining out the things they don't want to eat back out through their gill slits," Mills said.

Vegetation monitoring has been a part of the project all along, and for years none of the desired type of plants were found.

"That all changed last spring when we went out and started to find some of these submerged vegetation beds out in the lake," Mills said.

The discovery of the plants was an encouragement for a program that, though there is some precedent, was largely an experiment as far as boosting the June sucker population.

Mills said if they reach the desired levels of vegetation in the lake, the carp removal program could eventually be shifted to more of a maintenance strategy.

"We've known all along, we can't just walk away," Mills said. "We're starting to see vegetation come back, and we want to keep removing for a couple more years still, but at that point we can't just say, 'OK, we're done.'

"Because it would probably only take two or three years before the carp population would rebound and come back."

For maintenance of the carp population, they could keep removing them, though Mills said research is currently underway at Utah State University looking into other methods. For instance, there are certain types of fish that could be introduced to the lake that are really good at eating carp eggs.

Either way, though, the shift to a maintenance strategy is several years down the road.

"This year will be telling, because when the lake comes up a lot in the year, that's typically when the carp do really well," Mills said. "So our monitoring this year and also next year will be really important."

