

## Harvesting giant salvinia

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CADDO LAKE \— In preparation for its grand unveiling today, a floating mechanical harvester has been operating for three days out of Tucker's Fishing Camp on the South Shore of Caddo Lake. The harvester currently is privately owned and operated by John Sanders. Today, its potential to aid in the fight against giant salvinia and other invasive vegetation at the Northeast Texas lake will be studied by officials from the Texas Parks and Wildlife Department and other state and regional officials.

"When we started out here Friday this section of the lake looked sort of like pasture-land. You could hardly get a boat in or out," said Jack Canson, Caddo Lake Institute. "When I came out here (Sunday) afternoon, there were people right out there fishing." "It's doing a magnificent job," said Barbara Tucker, owner of Tucker's Camp. "It (the salvinia) was really thick in here Friday. Now you can paddle a boat out into the lake and fish."

Sanders was the instigator in bringing the harvester to Caddo. "He lives over in Buzzard Bay and (the giant salvinia) was so thick there he couldn't get his boat out," Canson said. "He told me he wanted to get one of these harvesters just to clear out the area around his place."

Canson said he, Sanders and Marshall Mayor William "Buddy" Power began researching the use of mechanical harvesters, finding that they are widely used in waterways across the United States. "John and Buddy went to look at one in Florida and the three of us went to see one in use in California," Canson said. "They're very effective in those areas."

Canson said he was surprised one day when he got a phone call from Sanders saying he had purchased a used harvester at an auction in New York. "I completely overhauled it," Sanders said. "I guess I've got about \$70,000 in this thing \— not counting time, trouble and effort."

Canson convinced Sanders to take a slow, methodical and scientific approach to introducing the machine to Caddo. "I thought if we could document the effectiveness of the harvester, maybe we could drum up some financial support for it," Canson said. "For this thing to take off and have an impact, it's going to take state or state-and-federal money." To date, only the city of Marshall has contributed financially to the project \— a total of \$25,000.

The machine itself consists of a stainless steel conveyor belt on an adjustable head that can be lowered into the water at varying depths. At the end of the head is a set of cutters that snip through the stems of water lilies and other vegetation that root at the lake's bottom. The belt on the harvester's head moves the material toward the back, under the steering deck, onto another similar conveyor belt that pushes the material to the rear. The whole thing is propelled by a pair of paddle wheels mounted on either side.

When the harvester is full, it is steered to the bank where the conveyor belt pushes the vegetation onto the shore conveyor, which moves the material to a waiting dump truck.

Canson said a resident near Tucker's Camp volunteered to take in the collected vegetation and is "plowing it into his field. It's great for that, full of nutrients." One harvester-load weighs about four tons, Canson estimated. But, since giant salvinia is more than 90 percent water, "you get about 240 pounds of material per ton once it dries," he said.

Not salvation: Canson sees the harvester as another weapon in the fight against invasive vegetation in the lake. "Chemicals alone aren't getting the job done," he said. "We first discovered salvinia in Caddo Lake in May 2006, in the farthest area from (Tucker's Camp) that you can get and still be in Caddo Lake. It was about 30 acres then. "We've had two summers of growth and look at what we've got."

One of the problems with spraying, Canson explained, is that the plants \— especially the giant salvinia \— grow so tightly packed that they protect themselves against the chemicals. "And, when it's in these huge floating masses, it's impossible to spray it all."

Canson said the harvester, in addition to picking up literally tons of the material, helps to break up the masses so that the smaller patches can be more easily reached with chemicals. "The number one advantage of having a harvester like this would be to keep the boat roads open," he said. "It represents immediate relief whereas spraying takes five to seven days, if you can get a good coat of chemicals."

In addition, the harvester can be used in areas where herbicidal spraying is prohibited, such as near water intakes. "I think it should be integrated with the spraying program," Canson said.

If Sanders had his way, it would take the place of chemical spraying. He feels that allowing the dead and decaying vegetation simply to settle to the bottom of the lake is adding to the damage being done to the ecosystem. To prove his point, Sanders digs the head of the harvester into the lake bed at a shallow point to pull up black, silty-looking mud and water lily roots as big around as a man's arm.

"Look at that. That's all organic material. That's not good for the lake," he said.

Joint attack: Today, teams from TPW will be joining up with the spray team from the Cypress Valley Navigation District to conduct chemical spraying in an attempt to remove giant salvinia from about 1,000 acres of Caddo Lake. "Cypress Valley is going to have its air boat and Go Devil and TPW is bringing in more air boats and small boats for the effort," Canson said. "They're going to be at it all week." So will Sanders and his harvester.

In conjunction with the CVND/TPW joint effort, Caddo Lake Institute will be showing off the mechanical harvester. "We're going to have to get some state and/or federal money if we're going to keep this up," Sanders said as he steered toward the shore with yet another four-ton load of vegetation. "I don't understand it. The R&D (research and development) has been done. They're using this method all over the country.

"We've got to show them that it works here as well, If we wait for the government to do something, we'll never get anything done."

After emptying his load, Sanders backed the harvester around and headed back for another pass. "We're finding some mighty pretty lake out there under all this stuff," he yelled back at the shore.