



Roy Philpot's one-of-a-kind pontoon is driven by a pair of 4-ft. dia. paddle wheels about halfway back on the boat. They're powered by an old zero-turn riding mower.



After removing mower's wheels and deck, he extended the drive axles out to both sides of boat. Each paddle wheel contains eight 12-in. sq. paddles cut out of plastic barrels.

## Paddle Wheel Pontoon Powered By Zero-Turn Mower

"It's very maneuverable and fun to drive. It also has a lot of pulling power and can go through heavy weeds without slowing down," says Roy Philpot, Scott, Ohio, who built a one-of-a-kind paddle wheel pontoon boat powered by an old Dixon zero-turn riding mower.

The boat measures 18 ft. long by 8 ft. wide and floats on a pair of 20-ft. long pontoons. There's no outboard motor on back. Instead, propulsion is provided by a pair of 4-ft. dia. paddle wheels about halfway back on the boat. The paddle wheels are powered by the mower, which is bolted to the deck.

Philpot started with a 1980's Dixon mower equipped with a hydrostatic transmission, which he bought used from a neighbor. He removed the wheels and deck, then used 3/4-in. cold rolled steel to extend the mower's

drive axles out to both sides of the boat. He installed a sprocket with keyway on the outside ends of the axles in order to drive the paddle wheels. He installed another sprocket with keyway on the inside ends of the axles, welding the sprocket to a metal plate that matches the bolt pattern on the rear wheel flanges of the mower.

Each paddle wheel contains eight 12-in. sq. paddles, cut out of 55-gal. plastic barrels and bolted to lengths of angle iron welded to a 15-in. dia. metal plate.

Philpot uses the mower's steering levers to steer the boat. "Stopping one wheel causes the pontoon to turn in that direction, and by rotating one wheel forward and the other one backward I can turn around on a dime," he says.

He says the pontoon looks a little

unconventional, but works great and was inexpensive to build. "I paid \$900 for the pontoon and \$100 for the mower. I spent most of one winter building it. It took quite a bit of engineering to figure out how many paddles to use and how far to space them apart to be the most effective. When I started working on the idea my fishing buddy thought I was nuts, but now he likes it.

"I came up with the idea because we have a lot of weeds on the lake where I use the boat, and they can easily get caught on propellers. I started out using an ordinary riding mower that drove a paddle wheel mounted on back of the boat. I was able to go through weeds okay but if there was any wind at all steering was a problem, because strong side winds pushed the front end of the pontoon around. "Side-mounting the paddles solved that

problem. Heavy weed beds do cause some drag on the floats, but the paddle wheels will continue to push the boat right on through."

Philpot says the plastic paddles are designed so the top edge of each paddle stays above the water to avoid picking up weeds. "The paddles just push off the weeds without pulling them up," he says. "They're configured so that as one paddle comes out of the water, the next one goes in which results in constant contact with the water. The steady forward motion makes for a comfortable ride and is also easy on the drivetrain. I drilled a series of holes 2 in. apart vertically into the paddles so they can be adjusted up or down as needed."

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## "Rowatonna" Paddleboat At Home On Land Or Water

"My cousin had an Owatonna swather and we had a boat. So we put them together," says Ken Heley, who can drive his amphibious "Rowatonna" paddleboat on land or on water. It's powered by the swather's 300 cu. in. Ford engine.

"It was a project to do with my 2 sons," explains Heley. "We wanted to make something that we could use on land and water."

Heley cut out the fiberglass insulation on the floor of the boat and added an interior and exterior frame, sandwiching the sides of the fiberglass boat between 1 by 3-in. steel. When finished he re-insulated the bottom with foam.

One of the swather's rear caster wheels mounts on front. The hydrostatic drive wheel motors and wheels mount at the back.

The original swather operator's platform is mounted inside the boat. The valves that once controlled the swather now control the wheels. Linkages for the drive wheels had to be shortened when they were mounted to the steel frame. Rather than cut holes in the boat,

Heley ran them over the side to the wheel motors and to the paddle wheels at the rear.

Initially Heley had tried several different propeller systems. After seeing a paddle wheel boat while vacationing in Alaska, he returned to fabricate a set for the Rowatonna.

"Once we drive it into the water, the oil flow is redirected to hydraulic motors on the paddle wheels," says Heley. "Turn the steering wheel either direction and the opposite paddle wheel goes faster while the paddle wheel to that side slows down or even goes in reverse."

Small pontoons on either side provide additional flotation and stability in the water.

Heley says the Rowatonna is street legal, complete with turn signals. With a top speed of 11 mph, he doesn't take it far on land, though he does drive it in a local parade each summer. He also drives it to nearby water bodies, no boat launch needed.

"The big question was how to register it, as a boat or for the road," says Heley. "My insurance agent just shook her head and said not to even try to insure it."



Ken Heley's amphibious "Rowatonna" paddleboat is powered by the engine off an Owatonna swather, and also uses swather's hydrostatic drive wheels and operator's platform.

Check out the Rowatonna in action at FARMSHOW.com.

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Pontoons are added when using machine in water.



## Farmer Teaches How To Work With Draft Horses

Walt Bernard works with draft horses on his own farm and also teaches others to work with them. From 3-day introductions to week and month-long programs, Bernard loves to pass on his passion for draft horses.

"We will train 30 to 40 people each year," says Bernard. "Working with draft horses has become way more popular the past few years."

Bernard and his partner, Kris, use horses daily on their Dorena, Ore. farm. The horses are used for haying, tillage and cultivation, including inside the farm's twelve 150 by

20-ft. high tunnels. The workshops grew out of that use.

"People kept asking me to teach them how to work with horses," recalls Bernard. "About 10 years ago, I started doing a workshop, and they just developed over time."

Students can choose from a 2-day introduction for \$350, a 3-day private instruction for \$1,500, or a week-long program with up to 5 other participants for \$2,000. A month-long program runs \$4,000.

"The short workshop is a good way to find out if you like it; then the follow up programs

can make you a decent teamster," says Bernard. "The longer programs involve more hours, but not more hours per day. Students have more time on their own to practice and absorb the concepts that have been presented.

"I love it when students come to learn, but also brings their own horses," says Bernard. "I will teach using my horses to learn plowing, for example. Then they will work with their horses plowing, and then we may put my horses and their horses together."

One thing all workshops have in common is the opportunity to actually do work with

draft horses. Classes aren't just for the purpose of teaching the student. They also complete work around the farm.

"It is learning with a purpose," says Bernard.

The classes themselves are broken up into steps. Each step has to be mastered before the participant can move on to the next one.

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