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YOUTH CENTER: Community creates haven PAGE 9A

Treatment coming soon for nuisance milfoil

BY DEBRA NEUTKENS
EDITOR

WHITE BEAR LAKE — Patches of Eurasian watermilfoil will be zapped with herbicide this summer, but first the Lake Conservation District has to pinpoint trouble spots with help from aquatic expert Steve McComas. Treatment will start after permission is received from the Department of Natural Resources (DNR).

Grant funding from the DNR won't be provided this year, noted Mike Parenteau, White Bear Lake board member. Current funds in the budget will treat only 80 acres.

That might be sufficient, but the conservation district won't know until the survey is complete, Parenteau said. Enough is budgeted — \$35,000 — to cover 80 acres.

"I've been on the lake and there's plenty of milfoil to treat," Parenteau pointed out at the district's monthly meeting June 21.

The number of acres requiring treatment can vary year to year. In 2010, 174 acres of the invasive weed were treated; in 2011, 41 acres; in 2012, 144 acres; in 2013, 100 acres; in 2014, 32 acres and last year, 85 acres were treated.

In case the number is up this year, Parenteau requested \$5,000 be added to the treatment program out of the reserve fund and \$3,000 be added from an unused fund for boat inspection, another program that received no DNR grant money. The extra \$8,000 brings the total to \$43,000, enough to treat 99 acres. The board approved his request.

SEE CONSERVATION DISTRICT, PAGE 8A

PATENT: Fire-resistant shutter protects homes from wildfires

FROM PAGE 1A

melt and the shutter would fall to cover the window, thereby protecting the window and the home," said Megan Malvey, one of the coaches of the team. The boys' goal was to invent something that would encourage people to evacuate rather than stay to try to protect their home.

"Sitting around the Ruzynski's kitchen table as they came up with the idea to mount the shutter above the window and use gravity to deploy it was a pretty awesome moment — it was truly their idea," said Malvey. Mindy Ruzynski was another coach.

The shutter also acts as a warning system. "When it falls, it is really loud when it hits the siding," said Nick, which warns those inside of an approaching fire. "It wakes up people inside the house," said Ryan.

"It closes fast enough so the fire doesn't get inside and it gives the owner of the house enough time to get out with everything they need," said Liam.

The boys did fire testing using a variety of materials for their prototype shutter.

"We had to make sure it wouldn't start in fire," said Samuel. "We tested sheet-rock, cement, wood, steel and glass."

They ended up using wood covered by a cement board. Ryan said the wood gives heat resistance and the cement prevents fire from reaching the wood.

They used a wax birthday candle as a meltable trigger held by a wire and hasp. They tested its melting level by using a

blow dryer on low and high heat. They wanted to make sure it wouldn't melt on a sunny day.

The boys won the project portion in their division at their regional FLL tournament in 2013.

"That was just the beginning," said Malvey.

Pursuing a patent

Steve Wolgamot, another coach and grandfather of one of the boys, thought the boys could stretch their learning further by going through the U.S. patent application process.

Wolgamot has received several industrial patents himself, and Malvey has several through her job at EcoLab. Wolgamot wrote a provisional patent application for the fireproof shutter. During an Internet search he found an organization, LegalCORPS, which offers free legal counsel to low-income entrepreneurs, nonprofits and small businesses, including the nonprovisional patent application process. Legal counsel to obtain a patent runs in the \$5,000-10,000 range.

The boys were represented by a nonprofit, the Mahtomedi Area Educational Foundation (MAEF), and their project was approved for assistance by LegalCORPS.

The LegalCORPS volunteers with whom the boys were matched were also 3M employees — Adrian Pishko, a patent agent, and Jean Lown, an attorney specializing in intellectual property. Pishko and Lown had the boys examine other

similar ideas patented or in the process to determine whether their idea was patentable.

"The LegalCORPS volunteers who we worked with put the boys to work with reading prior art and asking them to explain why they thought their idea was worthy of a patent," said Malvey. The boys thought none used the exact same system as theirs.

Sam recalls, "We had to make sure there was nothing really like it." Lown said she treated the boys like adult inventors.

"We tried to interact with them in such a way that it would be a learning opportunity for them," said Lown.

Pishko and Lown submitted an application in December 2014.

Almost a year later, a rejection notice came. Pishko said rejections are common and most patents need to be revised several times before approval.

"An examiner will look at prior art and determine if your claims are novel and inventive over the art," said Lown. "If not, 99 percent of examiners will reject claims and tell you why they are not novel and inventive."

Pishko, Lown and the boys had to look at previous art the examiner had cited that was too similar to theirs and respond with how theirs was different. Then came the second rejection.

Pishko contacted the examiner to let him know it was a pro bono case and the examiner then advised her on what needed to be changed. There were minor



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The boys do fire testing on the materials for their fireproof shutter prototype.

amendments made to differentiate the boys' art from others.

In April 2016, the patent was granted. "I think the kids should be very proud of what they invented," said Lown. "They really did everything our inventors at 3M do."

The patent is owned by MAEF, but the boys are listed as inventors on the U.S. patent website.

The boys cited getting into colleges, learning about the patent process and learning about teamwork as what they will take away from the experience of being officially recognized as young inventors. And their advice for other young inventors?

"You're probably going to be turned down a couple of times, so don't give up," said Sam.