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TRAVERSE CITY RECORD EAGLE

Sunday, November 8, 2015

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A NEW RIVER



Record-Eagle/Jan-Michael Stump

The Boardman River flows through the Brown Bridge Quiet Area where the former Brown Bridge Pond was created by the former Brown Bridge Dam. The dam was deconstructed in 2013.

River restoration project marks a decade, with three dams ahead

BY CAROL THOMPSON
cthompson@record-eagle.com

TRAVERSE CITY — Nate Winkler waded knee-deep into the clear, rippling Boardman River, thermometer and worn leather notebook in hand.

He dipped the thermometer into the cool water and logged his observation: 52 degrees. Just right for a midday in October.

"This stream is supposed to be a cold-water stream, which means the temperature rarely gets above 65 in the summertime," said Winkler, a biologist with the Conservation Resource Alliance.

The stretch of the river in which Winkler stood wasn't always so cold. A dam built in the 1920s trapped water in a nearly 200-acre pond just a few feet upstream for nearly a century. That pond absorbed sunlight, warmed the water and hurt insects, fish and other wildlife downstream.

It was "thermal pollution," Winkler said.

But the mammoth, aged dam is gone, taken out following an engineering failure in 2012 that resulted in scores of flooded downriver properties.

Winkler is part of a team charged with the biggest dam removal undertaking ever seen in Michigan — The Boardman River Dams Ecosystem Restora-



Record-Eagle/Tessa Lighty

Steve Largent, left, inspects a piece of wood, which is important for habitat in the river. Nate Winkler, right, finishes taking the temperature of the water.

tion Project. It includes removing three dams and modifying a fourth on the waterway that stretches from a Kalkaska swamp to downtown Traverse City. The effort will restore more than 250 acres of wetlands and reconnect 160 miles of Grand Traverse Bay tributaries.

The project

Dam removal and healthy streams don't come without money, dialogue or time. Nearly \$12 million of federal, local and

grant money has been spent to date on the project that started a decade ago.

Traverse City Light & Power decommissioned the Sabin, Boardman and Brown Bridge dams in 2005. The future of those structures returned to their owners — the Sabin and Boardman dams to Grand Traverse County, Brown Bridge and Union Street dams to Traverse City. The governments launched a multi-agency effort to decide their fate.

The city, county, Grand Tra-

verse Band of Ottawa and Chippewa Indians, TCL&P, nonprofits and state and federal environmental agencies worked with the public to come up with a strategy, write a plan and start fundraising.

Boots finally hit the ground in 2011 when crews waded into Brown Bridge Pond to find the Boardman River's original channel, remove 250,000 cubic yards of sediment and build a structure to allow water to slowly leave the pond.

The flood

The water didn't leave slowly. It rushed down the river in six to 12 hours instead of the planned 15 to 20 days. It gushed below the structure, washing out sandy soils that couldn't hold steady. It flushed more than 10 miles downstream, devastating some riverside homes.

The river rose to the bridge that crosses the river at Dave Downer's property on West River Road. The flood destroyed the banks around his home, and carried with it contaminated sediment, Downer said.

"It was scary," Downer said, remembering the event from the living room of his warm, one-story red house, his dogs nestled in patches of afternoon sun. "We were ready to make a run for it."

SEE RIVER PAGE 5A

COMMISSION

City board shifts

New commission less representative of population

BY BRIAN MCGILLIVARY
bmcgillivary@record-eagle.com

TRAVERSE CITY — The average Traverse City resident is a white woman who works full time outside the home, commutes by car to work and makes less than \$36,000 per year.

But you'll find just one member of the city commission reflective of those U.S. Census Bureau statistics for the city.

Amy Shamroe doesn't always commute by car to work and her earnings are not public information, but she's the only member of the commission with a regular job and the lone woman on a commission

that represents a population that is 53 percent female. Shamroe, 35, is also the first commissioner who qualifies as a member of the Millennial generation which makes up more than 22 percent of the city's population.

"I don't feel I have any more weight to bear than anyone else," Shamroe said of her situation on the commission. "I may match those demographics, but we represent the city as a whole."

The past two city elections have helped the commission reach a better age balance but also made it less representative of women. It has changed from a commission dominated by the Baby Boomer generation to just three: Mayor-elect Jim Carruthers, Commissioner-elect Richard Lewis and Commissioner Ross Richardson. Commissioners Gary Howe, Tim Werner and Commissioner-elect Brian Haas fall into Generation X.

But the past two elections have reduced the number of women on the commission from three to one.

Shamroe said she would like to see the number of women serving improve and it's something she's looked at as a member of the American Association of University Women.

"I don't feel I have any more weight to bear than anyone else."

Amy Shamroe, Commissioner-elect

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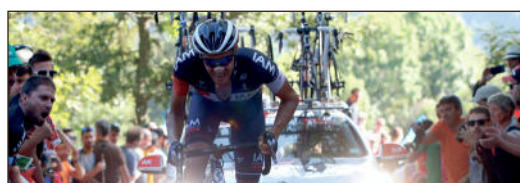
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Keno: 01-05-07-08-22-23-34-36-37-39-43-44-46-48 -51-52-53-59-61-66-67-72
Mega Millions jackpot: \$180 million
Powerball jackpot: \$40 million

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Record-Eagle file photo/Tessa Lighty
The Union Street Dam in Traverse City was built in 1867 to power a flour mill. It is planned to be the one dam left on the Boardman River following completion of The Boardman River Dams Ecosystem Restoration Project. It will be modified, but still maintain water levels on Boardman Lake and prevent invasive sea lamprey from getting upstream.



Record-Eagle file photo/Jan-Michael Stump
The Sabin Dam was built in 1902 to provide hydropower to the region. It was decommissioned by Traverse City Light & Power in 2005 and now holds water in Sabin Pond in Garfield Township. It is scheduled to be removed after the Boardman Dam.

 For an interactive map go to www.record-eagle.com



Record-Eagle file photo
Brown Bridge Dam was built in 1921 to provide hydropower to the region. It was decommissioned by Traverse City Light & Power in 2005 and deconstructed in 2012, as shown above. Sandy soils underneath the dewatering structure gave out during dam removal, allowing water collected in a pond behind the dam to gush miles downstream, flooding many properties.



Record-Eagle file photo/Jan-Michael Stump
The Boardman Dam was built in 1894 to supply hydropower to the region. It was decommissioned by Traverse City Light & Power in 2005 and now holds water in Keystone Pond in Garfield Township. The Michigan Department of Environmental Quality instructed its owner, Grand Traverse County, to repair or remove it. The Boardman Dam is next in line for removal, slated to start in 2017.

RIVER

River restoration project marks a decade, with three dams ahead

FROM PAGE 1A

Downer is vocally opposed to dam removal. He didn't like the idea even before the flood. He would have preferred to see the dams repaired and reused.

The thought of anglers tromping up and down the river's shores is unnerving, as is the thought of big Lake Michigan fish like coho salmon or steelhead trout competing with smaller fish and carrying big-lake contamination up the river. He believes invasive sea lamprey are poised to move upstream once Sabin Dam is removed, and said sediment from the former Brown Bridge Pond will continue to wash downstream for years.

"I'll never see this river run clear again in my lifetime," he said.

Parties involved in the dam removal, including the City of Traverse City, contractors and planning agencies, faced lawsuits from property owners. Subcontractor Molon Excavating, Inc. was saddled with most of the liability. Some property owners received settlements late last year following years of litigation.

The flood was devastating for the implementation team, too. Frank Dituri, chairman of the team and

wetland ecologist for the band, lives downstream of the dam; his house was flooded. Steve Largent, Grand Traverse Conservation District's Boardman River Program Coordinator, watched it happen.

"It was like a geyser coming up from the center of the dewatering structure," he said.

The breach mangled much of the public's trust in the project, and made many wary of future phases. Largent said contractors will use a pump system on future dam removals to prevent flooding.

The next dam

The 121-year-old Boardman Dam, located beneath the Cass Road bridge at the north end of Keystone Pond, is slated for removal beginning in 2017. The Michigan Department of Environmental Quality considers it a deficient structure and mandated the county either fix or destroy it.

"It doesn't have adequate spillway capacity," said Jim Pawloski, a DEQ dam safety engineer. "When a flood and rain fall occur, Boardman does not have enough stability to pass the water around or through or over the dam."

Its removal is scheduled to be paired with construction of a new Cass Road bridge. The bridge, slated for construction beginning next year, will be built across the river's future path, said Grand Traverse County Road Commission manager Jim Cook.

The Army Corps of Engineers announced recently it will pay up to \$8 million toward the Boardman

Dam removal, waiving a 35 percent local match requirement levied on most federal grants. The strings-attached money should cover the cost of Boardman Dam removal, but requires local governments sign on to finish the next two dam projects. The agency also agreed to fund 65 percent of Sabin Dam removal, an estimated \$1.8 million. The rest of the money, an estimated \$945,000, must come from local sources.

The Grand Traverse County Board of Commissioners likely will discuss continuing with the project and accepting the Army Corps' offer during a Ways and Means Committee meeting Nov. 18.

Groups involved have raised \$2.5 million for Boardman Dam removal, said CRA director Amy Beyer. Most of it is earmarked for Boardman, has timelines associated and can't cover the local match the Army Corps needs because it came from federal grant sources. That means the city and county would need to raise \$2 million to satisfy the local cost share for Sabin removal and Union Street modification.

"That \$2.5 million we've had raised is definitely going to go to good use and it's going to help, but it's not going to eliminate that need (for local money)," Beyer said.

The money could go toward tasks like coordination, restoring the river or bidding out the project, she said.

Dituri opined on the time and energy he's invested in the Boardman River as he paddled between

its shores, yellow maple leaves drifting beside his canoe. He considers the Army Corps' offer a gift, something most communities would clamor to receive.

"This decision (to remove the dams) took five years," he said. "Hundreds of meetings, thousands of people. I don't understand — I would be very disappointed if there was some change in that."

Sabin Dam removal is slated to follow Boardman. Sabin, built in 1902, is not considered deficient, Pawloski said. Grand Traverse County could keep the dam as-is at the north end of Sabin Pond, avoiding the cost of removal but incurring future maintenance costs. Letting the structure fall into disrepair could be dangerous.

"(Removal) removes this large kind of ticking time bomb upstream of a populated community," Pawloski said. "If the structures are not maintained and kept in good repair then there's a risk of failure and the consequences of that are deadly."

Union Street Dam, built in 1867, is the oldest of the dams and the only one planned to remain in place. It once powered a flour mill, but now maintains the water level in Boardman Lake and prevents sea lamprey from moving upstream from the bay. Reconstruction of the dam is still in the conceptual phase, Largent said. Traverse City leaders can do what they like with it — they looked into building a whitewater park this summer — as long as it contin-



Record-Eagle photos/Tessa Lighty
Above, Steve Largent shows off a stonefly he found in a piece of submerged wood in the Boardman River. Insects like this show improved water quality on the river, Largent said. Left, Nate Winkler takes the temperature of the water in the Boardman River.

ues to block lamprey and maintain the lake's level.

The new river

The Boardman River's future is undetermined. It will likely have fewer dams and more insects and fish, but also challenges that accompany more hikers, paddlers and anglers streaming to the recreation mecca.

"We're going to have a new river," Largent said.

Downer doesn't want to see the river turned into a factory for big Great Lakes sport fish.

Largent wants to see a management plan developed to limit the recreational activity, particular-

ly the number of boats, on the river — too much could degrade its quality.

The new river will be chilly, much like the stretch south of what once was Brown Bridge Pond, where Largent reached into the water to extract a piece of slick, wet wood. He plucked a camouflaged stonefly from its ridges.

"Not a lot of people realize that there's such a whole different world under the water," he mused while holding the wriggling creature in an open palm. "The river's ecology, as you can see, is not wiped out. There's a lot of life in that river."

Traverse City Record Eagle Restoration Progresses

Wednesday July 20, 2016

jtravis@record-eagle.com

TRAVERSE CITY — Members of the Boardman River restoration project’s partner organizations looked out over lush growth and a ribbon of river that now flows where a pond and dam once stood.

“Standing here always makes me smile, because I remember standing here and seeing that power house, and now the river flows right there,” said Frank Dituri, Grand Traverse Band of Ottawa and Chippewa Indians ecologist and restoration project implementation team member.

Brown Bridge Quiet Area’s verdant valley represents the “after” scene for what project leaders hope to see in Keystone and Sabin ponds in 10 years, AECOM project engineer Dan DeVaun said. He and Troy Naperala, another project engineer with AECOM, went with Conservation Resource Alliance, Environmental Protection Agency, Grand Traverse Band of Ottawa and Chippewa Indians, Grand Traverse County, U.S. Army Corps of Engineers and U.S. Fish and Wildlife Service members for an update on the river restoration project.

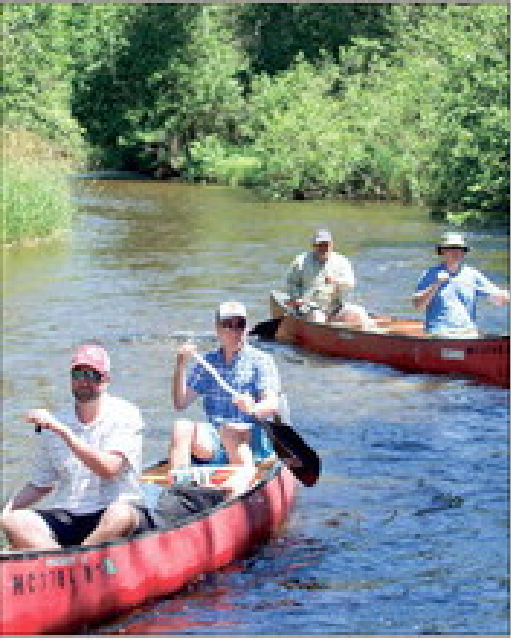
They stopped by Boardman and Sabin dams during the tour Tuesday to see the “before” scenes.

The Michigan Department of Natural Resources and Department of Environmental Quality have approved permits to remove the Boardman Dam, and construction firms will soon bid on the removal contract, said Army Corps Great Lakes Program Manager Carl Platz. Design work for Sabin Dam’s removal is underway, and the project should be ready to bid next summer.

Members of the Boardman River Restoration Project Partner Organizations give a tour to the Environmental Protection Agency near Boardman Dam.



Record-Eagle photos /Tessa Lighty



Members of the Boardman River Restoration Project Partner Organizations give a tour of the river by canoe between Scheck's Place State Forest Campground and Brown Bridge dam to the Environmental Protection Agency.

The restoration project also calls for restoring the Boardman River to its historic channel, both downstream and upstream of Keystone Pond, DeVaux said. For the upstream portion, the river once ran along the valley's west side but a dam failure in 1961 and drawdown of Keystone Pond in 2007 caused it to cut a new channel. Now, the channel is unstable and the river is eroding its banks. Rerouting the river should stabilize the river channel and its banks, and help fish reproduction, DeVaux said.

Kevin O'Donnell, environmental scientist with the EPA's Great Lakes National Program Office, came along to see how the restoration is progressing. CRA Director Amy Beyer said the project has brought in \$20 million in Great Lakes Restoration Initiative Funds, which the EPA oversees, so the tour gave O'Donnell the chance to see how that money has been spent so far. He and a handful of others on the tour got to see the difference up close on a canoe ride from Scheck's Place State Forest Campground back to the former site of the Brown Bridge Dam.

"It really shows what a program like GLRI can do," O'Donnell said. "It's also good to remind yourself it's not the acronym but a group of partners assembled up here that get the work done."

Funds from the GLRI have been crucial to the restoration project, Beyer said. The initiative will put up \$8 million through the Army Corps to remove the Boardman Dam, with local project partners contributing anything beyond that. This outside funding has helped leverage and attract other funding as well, like Michigan Department of Transportation funds to replace the Cass Street bridge.

Overall, GLRI funding has helped move the river restoration project forward, Beyer said.

"We have a great car that goes down the road really fast with great drivers, but this is the first time we've been able to fill the gas tank all the way up," she said.

Now project leaders are in search of local money to remove the Sabin Dam, Beyer said. The Army Corps' Great Lakes Fisheries and Ecosystem Restoration Program will put up about \$2 million to remove the dam, and CRA has a preliminary goal of \$2 million for local matching funds.

She expects that money will come from Traverse City, Grand Traverse County, private grants and grants from the state, federal government and the Grand Traverse Band of Ottawa and Chippewa Indians, she said.



Dan DeVau, center, talks to members of the Boardman River Restoration Project Partner Organizations as they give a tour to the Environmental Protection Agency near the Boardman Dam powerhouse.

Record-Eagle/TessaLighty

DAM REMOVAL BEGINS



Record-Eagle/Jan-Michael Stump

Fourteen 30-inch pipes will siphon water from Boardman Pond to the restored Boardman River channel under Cass Road when the dewatering process begins.

Next Boardman Dam drawdown scheduled for this week

BY MATT TROUTMAN
mtroutman@record-eagle.com

TRAVERSE CITY — It's all water under the Cass Road Bridge.

A long-running joke by officials tasked with restoring the Boardman River's natural course soon will become reality. Army Corps of Engineers crews late Thursday or Friday, weather depending, will turn on 14 siphons and begin drawing down the Boardman Dam's impoundment.

Carl Platz, the corps' Great Lakes program manager, said the two-to four-week

process will eventually coax the river back to its original flow — which was diverted about 100 years ago with the dam's construction.

The river's course previously cut through what is now dry land underneath the new Cass Road Bridge.

"The channel has been excavated under the new bridge," Platz said.

A viewing area on the south side of Cass Road near Keystone Road will give the public a chance to watch the dewatering process.

Corps' on-site field engineer Alec Higgins said the siphons will lower the dam impoundment's water by about one foot a day. That's enough for about 10 percent more flow, likely not enough to be noticeable for downstream canoeists, kayakers, boaters and river watchers, he said.

There will be more sediment in the water temporarily, which engineers hope to catch with traps, he said.

"It's expected to increase and it's just

SEE DAM PAGE 2A

DAM

Dam removal begins; scheduled for this week

FROM PAGE 1A

temporary,” Higgins said. “We’re doing what we can to keep all that flotation out of the water.”

The siphons will lower the water by about 13 feet before an auxiliary spillway — cut into the earthen dam itself — draws the level down another four feet, Platz said. He said crews will remove the dam after the river’s course is effectively back in its original channel.

“We are not completely removing any part of the dam until the water behind the impoundment is lowered significantly,” Platz said.

The draw down and eventual dam removal is the latest phase of a long-term project to restore the Boardman River and hundreds of acres of wetland and upland habitat. Three former hydroelectric dams — the Brown Bridge, the Boardman and the Sabin — were slated for removal and the fourth, the Union Street Dam, will be altered.

The first dam removal at Brown Bridge, upstream from the Boardman Dam, was botched.

An October 2012 flood during a dam drawdown damaged 66 downstream properties, filled the river with sediment and prompted multiple lawsuits against the City of Traverse City, the Boardman River Dams Implementation Team and engineering and construction firms



Record-Eagle/Jan-Michael Stump

Fourteen 30-inch pipes will siphon water from Boardman Pond to the restored Boardman River channel under Cass Road when the dewatering process begins.

“We’re relying on the expertise of the Army Corps ... I think this continues to provide the community with environmental and economic benefits by removing the dams and restoring the river to its natural state.”

**Jen DeHaan,
Grand Traverse County deputy administrator**

involved in the dam’s removal.

A subsequent investigation by Michigan Department of Environmental Quality Water Resources engineers found a control structure designed to lower the pond behind the dam was too short. The massive weight of water pushed sand from underneath, eroded the dam and drained the 160-acre pond in hours.

Platz said Army Corps engineers weren’t involved in the Brown Bridge project. He said the Boardman Dam drawdown and removal will utilize “wholly different” techniques than those that failed at Brown Bridge. No project has zero risk, but engineers reviewed and selected the

safest method, he said.

Grand Traverse County deputy Administrator Jen DeHaan said Army Corps engineers conducted drills in preparation for any emergencies.

“We’re relying on the expertise of the Army Corps,” she said.

DeHaan noted implementation team members often joked about sending water under the Cass Road Bridge — an old look for a river turned new. She said the controversial Boardman River project is proving its worth.

“I think this continues to provide the community with environmental and economic benefits by removing the dams and restoring the river to its natural state,” she said.