

Open Pit Sulfide Mining on the Menominee River?

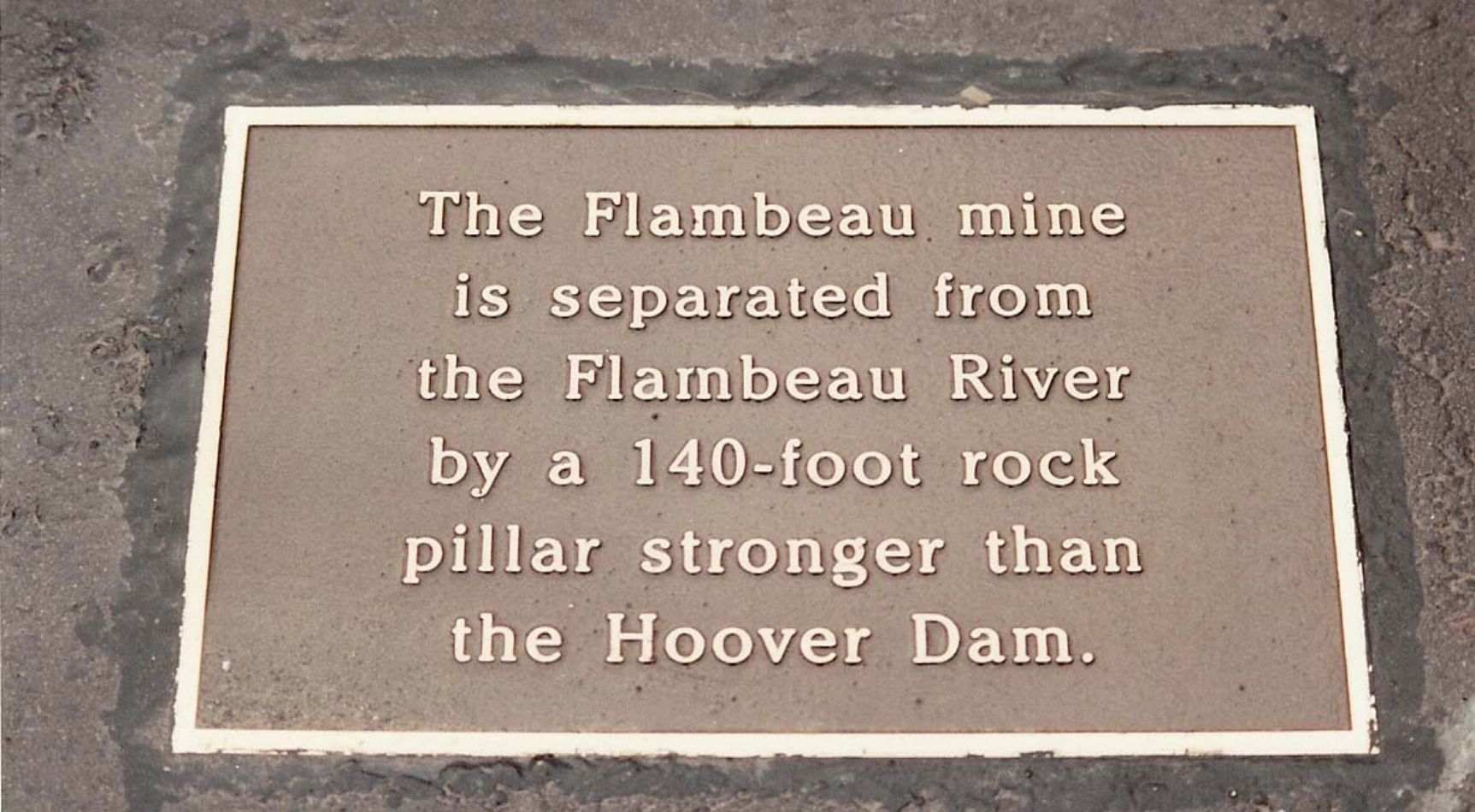


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Aquila Resources wants to develop an open pit (2000 ft. wide, 2500 ft. long and 800 ft. deep) massive gold-zinc sulfide mine 150 feet from the the Menominee River, encroaching upon the floodplain. Underground mining plans have not been disclosed to the DEQ, but would double the life of the mine project and increase waste and discharges and increase environmental risks.



An open records request to the Wisconsin DNR revealed that in 1989, before the mine was built, that the rock between the pit and the river was “fractured” and that contaminated groundwater leaving the mine pit would flow directly into the Flambeau River.



The Flambeau mine
is separated from
the Flambeau River
by a 140-foot rock
pillar stronger than
the Hoover Dam.

Flambeau open pit copper-gold sulfide mine near Ladysmith, WI compared to proposed Back Forty mine.

- Flambeau operated from 1993-1997.
 - 220 feet deep, half a mile long and 32 acres.
 - Produced 1.9 mt of ore and 9 mt of waste rock.
 - No on-site processing, no tailings storage on site
 - Water treatment: 5 years.
 - Mine environmental footprint: 181 acres.
- Back Forty open pit gold-zinc sulfide mine (16 years)
 - 2000 ft. wide, 2500 ft. long, 800 feet deep, 83 acres (3x size)
 - Estimated 12.5 mt of ore, 54 mt of waste rock and 11 mt of tailings; 75% of waste rock expected to generate acid.
 - Cyanide used for on-site processing. Permanent tailings storage on site.
 - Water treatment: indefinite
 - Back Forty footprint: 865 acres or 4.5 the size of Flambeau

The Menominee River is the largest river system in the Upper Peninsula with a 4,000 square mile area that drains into Lake Michigan. The federal government has invested more than \$41 million to clean up the lower part of the river.



- Both Michigan and Wisconsin DNR have worked over the past decades to again make this river a viable habitat for sturgeon, now threatened by sulfide mining.
- The Menominee Nation's sacred sites and other cultural resources are contained within the footprint of the mine.
- “Our place of origin at the mouth of the Menominee River may be destroyed by any adverse impacts on the land, environment and water from mining disasters.”

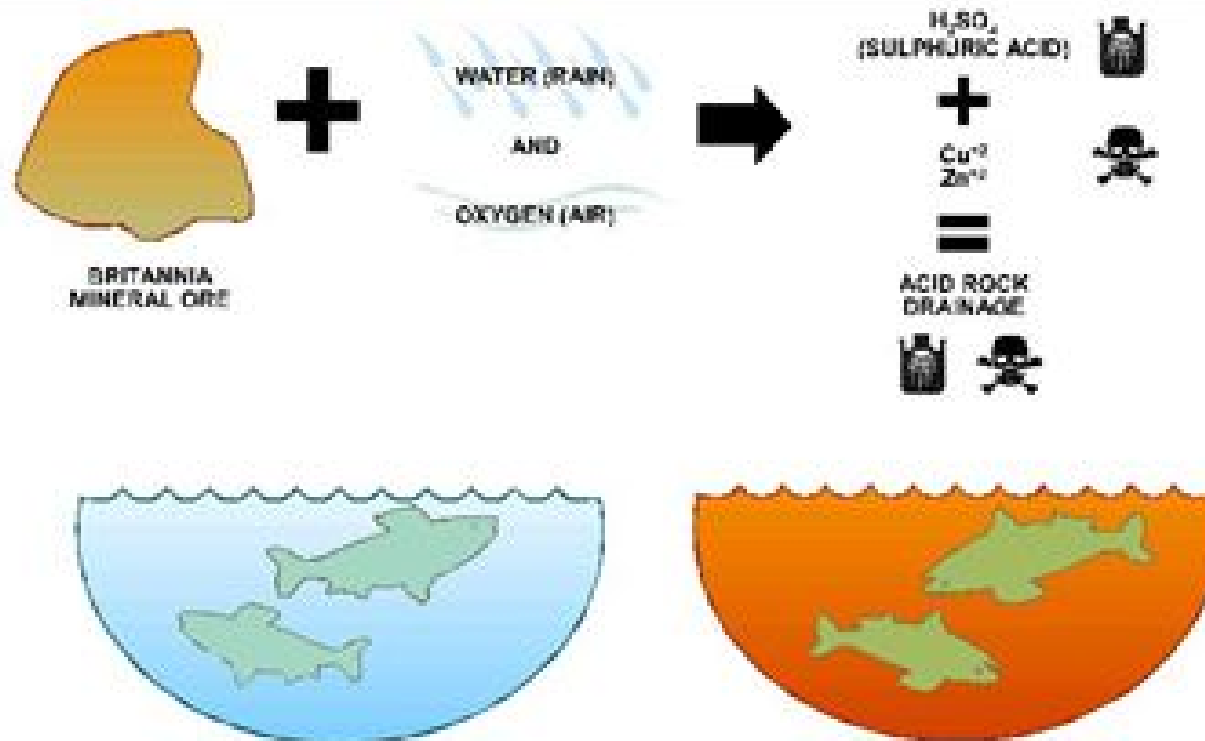
Dewatering the mine pit can lower groundwater levels around the mine, harming the Shakey Lakes Savanna, a 1,520-acre Natural Area, part of the Escanaba State Forest, and a globally unique habitat.



Metallic sulfide mines in the United States will pollute up to 27 billion gallons of fresh water per year. The main reason is acid mine drainage which occurs when mineral deposits containing sulfides are exposed to air and water during excavation.

Figure 1: Britannia Mine - What is Acid Mine Drainage?

The natural mineralization at Britannia contains metal sulphides which when exposed to air and water react to form a sulphuric acid solution containing dissolved metals. This mixture is known as Acid Rock Drainage or Acid Mine Drainage and can be very toxic to aquatic life.

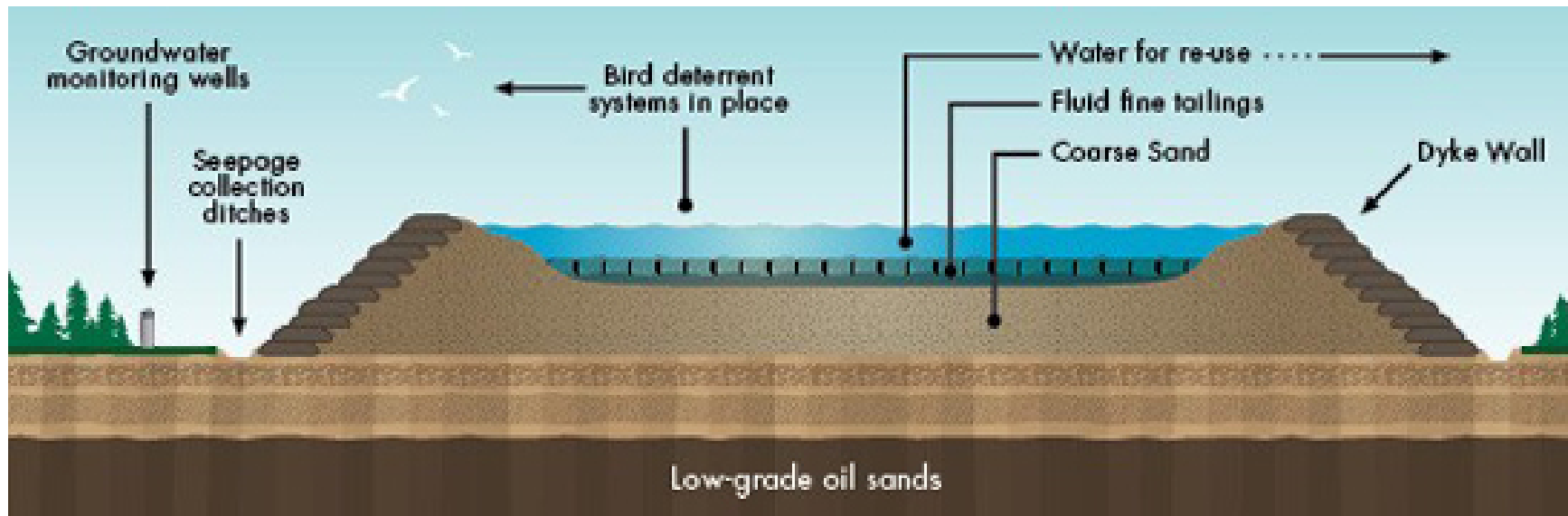


Metallic sulfide mining has contaminated 12,000 miles of rivers and streams in the United States.



- When exposed to air and water the resulting sulfuric acid can release harmful metals like arsenic, lead and mercury into surface and groundwaters, threatening local water supplies and human health.

The vast majority (97%) of the rock excavated ends up as sulfide-bearing waste rock that will generate acid and that is stored in tailings dams at the mine site. The waste contains cyanide used to extract gold during processing on-site.



Poorly regulated tailings frequently discharge wastes into the environment, as in the January 2000 spill of 100 tons of cyanide contaminated water at the Aurul gold processing plant in Baia Mare on the Romanian-Hungarian border.

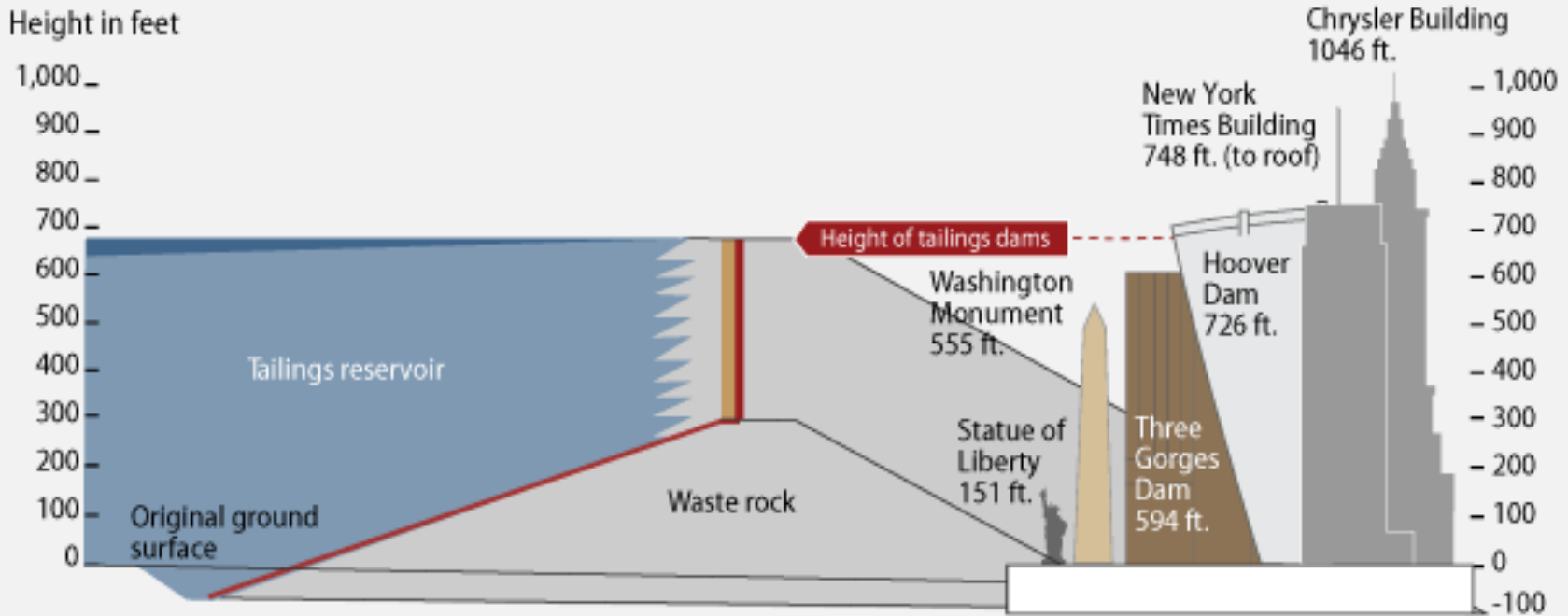


- More than 1400 tons of fish died as a result of this accident that also destroyed the livelihood for some hundred fishermen along the Tisza River in Hungary.
- In some Romanian and Hungarian towns the drinking water supply had to be shut down for some days.
- Montana voters banned the use of cyanide in mining in 1998; the Czech Republic banned it in 2000.
- Menominee County Board passed a resolution opposing use of cyanide in Menominee County.

A new study reveals that catastrophic mine waste failures are increasing in frequency, severity and costs all around the world. Nearly half of all recorded serious failures happened in modern times, between 1990 and 2010.

Pebble Project tailings dams

The estimated height of the proposed Pebble Project tailings dams compared to well-known existing dams and landmarks. Waste rock will be used to build massive dams for permanent storage of flooded toxic tailings (acid-generating rock) and other chemical waste.



Source: Wild Salmon Center, "Tailings Storage Facilities 2012" available at <http://www.wildsalmoncenter.org/pebble/pebblefacts>

On August 4, 2014, more than a billion gallons of mining waste spilled into rivers from a tailings dam at Imperial Metals' Mount Polley gold and copper mine at the headwaters of the Fraser River watershed in British Columbia. Aquila's plan only minimally addresses potential impacts of accidents or spills, dismissing potential impacts as "minimal."



A local state of emergency was called and a ban was put on using surface and groundwater in the area. The mine was a state of the art, modern copper mine that had been touted as an example of how sulfide mining can co-exist with clean water. Scientists say it is ‘virtually impossible to clean up’ the mess left behind this spill.



In April 2017 the conservation group, American Rivers listed the Menominee River as one of America's 10 most endangered rivers due to the threat from open pit sulfide mining. Aquila provides almost no information on the impacts of a spill, how long the impacts would last and whether the impacts could be reversed.



Kennecott/Rio Tinto's Flambeau open pit copper-gold mine operated from 1993 to 1997. Fourteen years after mining operations ended, water samples on the site of the Flambeau mine near Ladysmith show high levels of toxic pollutants.



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While lawmakers consider easing restrictions on mining, monitoring shows elevated copper and zinc levels in stream at closed Flambeau site



This photo shows the Flambeau mine site in 2006, nine years after it closed. Much of the site has been reclaimed, with trails, forests and wetlands, but some tests still show elevated levels of copper and zinc in a stream on the property.

Tests find toxins at model mine

By LEE BRAGQUST
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Fourteen years after mining operations ended, water samples on the site of the Flambeau mine near Ladysmith show high levels of toxic pollutants.

In the most recent tests, state records show that copper and zinc levels have exceeded state toxicity standards for surface waters, potentially threatening fish and other aquatic life.

The findings come as mining regulation looms as a legislative issue this fall, and the Flambeau mine has been cited as a model of mineral extraction without environmental harm. Lawmakers are poised to rewrite mining laws and ease restrictions after Gopibic Tacoma, based in Harley, put plans on hold this year for a \$1.5 billion iron ore mine until regulations are streamlined.



Deadly force bill passes

But Senate delay could stall bid to shield homeowners

By JASON STEIN and PATRICK MARLEY
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Madison — Homeowners using deadly force against intruders would get powerful legal protection, under a bill approved by the Assembly late Tuesday.

The bill passed on a bipartisan 71-24 vote and now goes next to the Senate, which like the Assembly is controlled by Republicans. But it was unclear Tuesday if the Senate would take it up Wednesday, the only day it is slated to be in session this week.

If the Senate doesn't vote on it Wednesday, it may not consider the bill until January or later because after this week the Legislature isn't scheduled to be on the floor for the rest of the year.

Rep. Fred Kessler (D-Milwaukee), a former judge, criticized the bill and said that Republicans were wrong to focus on issues like the deadly force bill and the state's new concealed carry law rather than on the state's struggling economy.

"I am deeply troubled with the whole trend," Kessler said. "I am troubled with the fact that in this jobs session we are not dealing

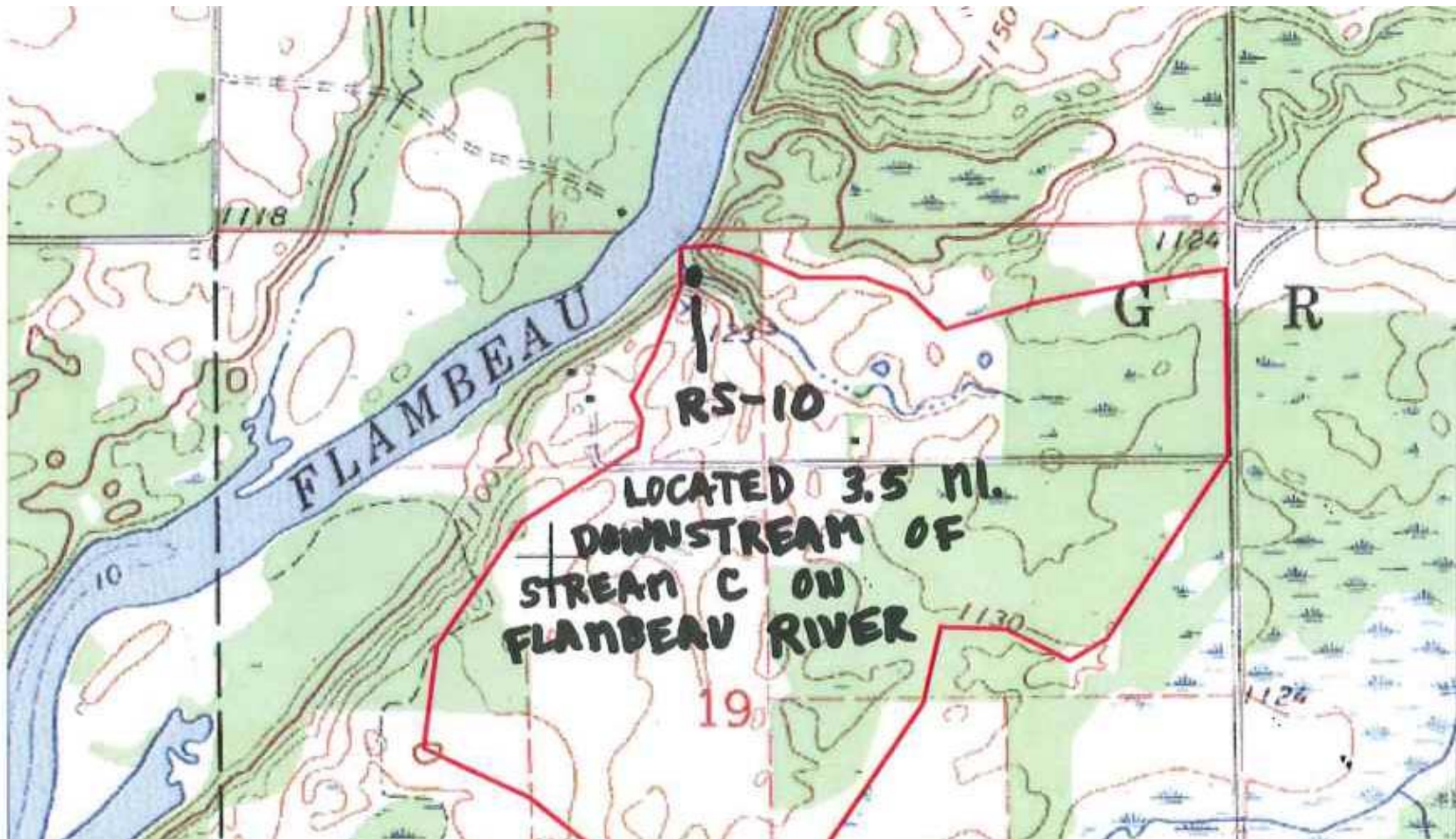
Please see **HOMEOWNERS, 7A**

Gun permit applications flooding in

In July 2012, U.S. District Court Judge Barbara Crabb ruled that the Flambeau Mining Company had violated the Clean Water Act on numerous counts by discharging toxic pollutants into a tributary of the Flambeau River on a repeated basis over the years.

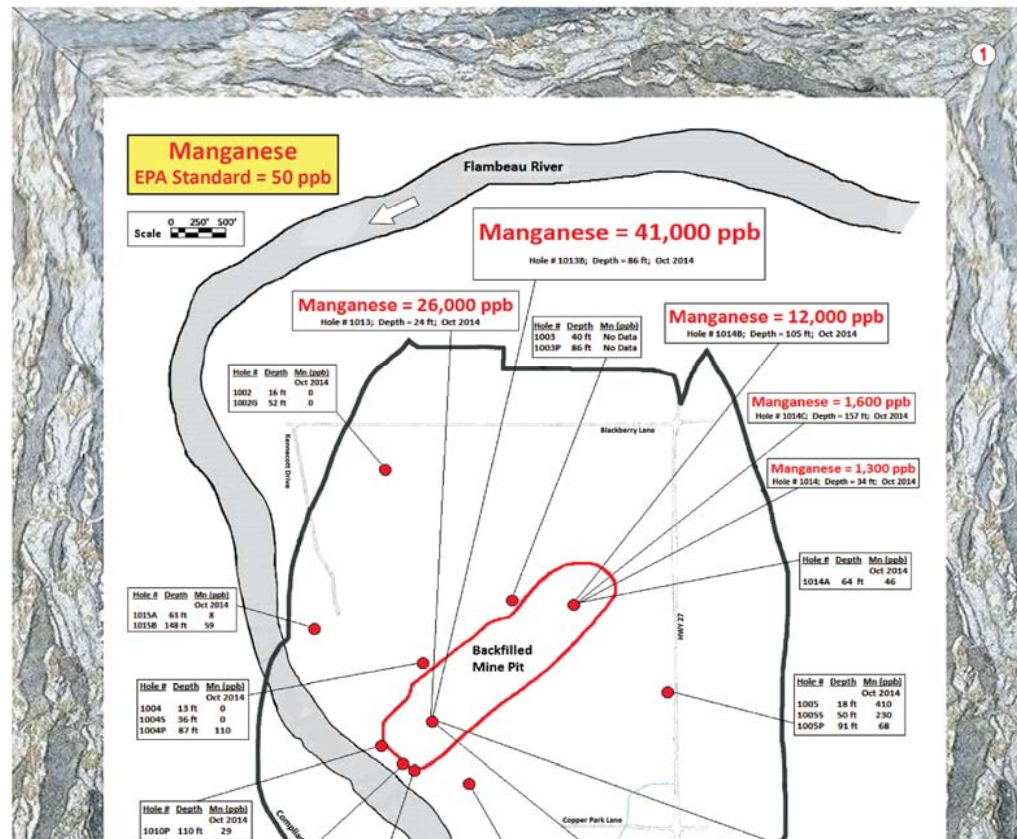


In June 2014, the U.S. Environmental Protection Agency listed the Flambeau River tributary at the Mine site as “impaired waters” due to copper and zinc toxicity linked to the Flambeau mine operation. As of fall 2016, copper levels in the tributary still exceed the acute toxicity level despite passive water treatment and FMC has not secured a mine reclamation certificate for this area.



Seven of the eight monitoring wells within the backfilled mine pit at the Flambeau mine site are highly contaminated with manganese, as documented on the company's own reports. One well had manganese levels at 41,000 ppb. Levels of 14,000 ppb can cause the kind of nerve damage seen in Parkinson's Disease.

THIS MAP SHOWS CONCENTRATION OF MANGANESE IN WATER FROM TEST WELLS AT THE FLAMBEAU MINE SITE, IN PARTS PER BILLION. THE EPA UPPER LIMIT FOR DRINKING WATER IS 50 PPB. LEVELS AT FLAMBEAU ARE AS HIGH AS 41,000 PPB.



If the mining industry was not able to keep the water clean and prevent long-term pollution problems at Wisconsin's Flambeau Mine ("the newest and smallest copper mine in the world"), what can we do to protect the Menominee River at the far larger Back 40 proposed open pit mine?



Aquila Resources now has 3 of the 4 permits they need for the project. However, neither Aquila nor the Michigan DEQ has consulted the Menominee Tribe about their sacred sites. The Marinette Co. board voted 28-0 to oppose the mine. The project has no “social license to operate.”



- Mining companies that fail to obtain the support of local communities are at greater risk of protests, blockades, media campaigns, or legal challenges to their mining permit.

During the legislative debate on the infamous Iron Mining bill, Aquila lobbyist Ron Kuehn pushed for repeal of Wisconsin's Prove it First law. Aquila is exploring the Bend and Reef deposits in Marathon and Taylor Counties.

Metallic mining in Wisconsin

Gogebic Deposit

Iron ore, magnetite

Status: License issued spring of 2011.

Bend Deposit

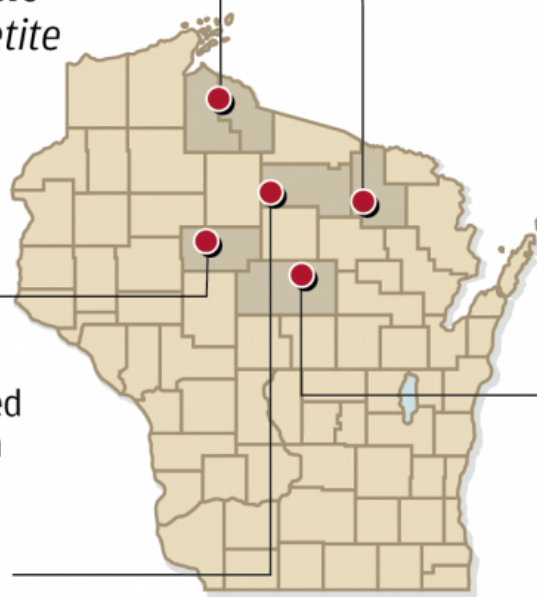
Copper, gold

Status: Considered for exploration in fall or winter.

Lynne Deposit

Zinc, lead, silver

Status: Two mining companies considering exploration.



Crandon Deposit

Zinc, copper, lead, gold, silver

Status: Site purchased by Chippewa and Potawatomi Tribes in 2003; all activity terminated.

Reef Deposit

Gold

Status: License issued spring 2011.

SOURCE: Wisconsin Department of Natural Resources

State Journal

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