Community columnist

Power plant has a history of groundwater contamination, and floodwaters could be making it worse

By Gregory Manni/West Mich. Environmental Action Council Jul 17, 2020 0

High waters flooded two of the three coal ash ponds at the Harbor Island J.B. Sims power plant in mid-May, according to Dave Walters, general manager of the Grand Haven Board of Light & Power (BLP).

The increasingly high water levels come as the BLP was preparing to begin remediation work on the island, aiming to clean up the power plant's coal ash ponds after the plant closed earlier this year. The arrival of floodwaters before remediation began may be threatening the health of the Grand Haven community, and follows a trail of regulation breaches in the BLP's handling of coal ash ponds on Harbor Island. But what happens to the ground over time, as mountains of ash are deposited and hauled away, over and over again?

Often, the answer is, the ground gets contaminated. Coal ash ponds have a long history of polluting the groundwater that runs beneath them. According to the Environmental Integrity Project (EIP), a nonprofit environmental watchdog, "91 percent of U.S. coal-fired power plants with monitoring data are contaminating groundwater with unsafe levels of toxic pollutants." These pollutants generally include "arsenic, radium and other carcinogens, several metals that can impair children's developing brains, and multiple chemicals that are toxic to aquatic life."

The J.B. Sims power plant is on the EIP's list of power stations polluting

beyond safety regulations set by the U.S. Environmental Protection Agency (EPA). As recently as March 2018, according to the EIP's report, the Sims plant had contaminated Harbor Island groundwater with boron at concentrations 41 times higher than levels considered safe, as well as cobalt and sulfate, which exceeded safe levels at concentrations one and two times higher, respectively.

Because Harbor Island sits in the middle of the Grand River, upstream from Lake Michigan, groundwater contamination on the island could pose a health risk to the Grand Haven community, and beyond. That's because groundwater migrates slowly underground, and contributes to adjacent rivers and lakes. When it rains or floods, chemicals in the soil can leach into surrounding waterways. On the impact of boron contamination, the EPA wrote that the element "can pose developmental risk to humans when released to groundwater," and can poison or even kill aquatic plants and animals when released to water on the surface.

Moreover, the intake pump that collects drinking water for the Grand Haven area is located in Grand Haven State Park, not far from the mouth of the Grand River. A staff member from the Northwest Ottawa Water Treatment Plant said that as far as he knows, the plant does not test boron levels in the water – though he didn't explicitly confirm that fact. If boron is in fact exceeding safe levels near the mouth of the Grand River, it's possible the water treatment plant is not filtering it out of drinking water. According to a report by the World Health Organization on boron in drinking water, "conventional water treatment (coagulation, sedimentation, filtration) does not significantly remove boron."

Documented issues with coal ash ponds at the Sims plant go back at least eight years. When the EPA assessed the stability of one of the ponds in 2012, they gave it a "poor" rating due to the BLP's missing documentation of structural stability, inadequate monitoring and "lack of formal maintenance procedures." Based on groundwater samples collected in 2017, the BLP reported elevated concentrations of lithium, fluoride, boron, cobalt and sulfate – all of which exceeded levels considered safe, according to the EIP.

These reports of mismanagement all pertain to the active, regulated, clay-lined pond at the power plant – but there are actually two other ponds on the island. The other two ponds have been inactive since 2012, and were built before coal ash ponds were required to have linings, according to Walters. These two inactive ponds are the same ponds that were flooded by the Grand River in mid-May, and remained flooded at least as late as mid-June.

"Ponds 1 and 2 are literally attached to the (Grand River) right now," Walters said during a BLP board meeting in mid-May, as reported by the Grand Haven Tribune.

In a June 15 interview with Walters, he stated that coal ash was still sitting in the inactive ponds when they were flooded, but that the river wasn't flowing in and out of the ponds, per se. The groundwater is likely the bigger problem, he said, estimating that the water table was currently "2 feet" below dry ground, and high enough to fill the inactive ponds.

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The BLP's pond remediation plan, which was set to begin in June, tells a more alarming story. According to the plan, there was approximately 17,400 cubic yards of coal combustion residue, or coal ash, waiting to be removed from the two ponds before they were flooded. For scale, that would be about the same volume as 165 school buses worth of coal ash. That much ash could be mixing with the Grand River right now, moving downstream in a dark plume, undetected.

Mercury, selenium, and cadmium – metals commonly found in coal ash – have a propensity to biomagnify, or increase in concentration up the food chain, over time. While the toxicity is harmful to aquatic life, it might also mean that the fish caught downstream from Harbor Island, and beyond the pier, have increased concentrations of these pollutants, which would then be ingested by anyone eating the fish.

Following remediation work on the island, the BLP plans to build a costly fracked gas plant in place of the decommissioned J.B. Sims plant. Under advisement from the Grand Haven city council, the BLP chose this option, as opposed to the alternative: purchasing all of Grand Haven's power from the market, and investing in more energy capacity through renewable energy projects. According to the BLP website, purchasing the power and extra capacity would be the cheaper option, compared to a new gas plant. It would also provide the greatest opportunity for a shift toward long-lasting sustainability.

In the past, Grand Haven residents have expressed a desire for renewable energy sources, as well as local power production.

According to a related poll conducted at local town hall meetings, 41 percent of respondents said they were willing to pay 10 percent more than the market price for local energy. While many residents want their energy to be produced locally, and some are willing to pay the price, it doesn't mean residents support a non-renewable gas plant on Harbor Island. One group of residents, the Citizens for Community Driven Energy Solutions, requested to form a citizen-led, nonpartisan advisory committee to explore and review potential energy options for the city – a historical practice in Grand Haven. Thus far, the city has refused granting the committee a seat at the table.

Before it's too late, residents should take a serious look at whether it is in their best interest for the city of Grand Haven to build a new power plant on Harbor Island, especially as extreme flooding continues to threaten its shores. Contamination levels around and beneath the J.B. Sims power plant, and downstream, should be assessed immediately – for the safety of the Grand Haven community, and all those who call the coastline home.

Gregory Manni wrote this op-ed for the West Michigan Environmental Action Council. For a comprehensive list of the sources that contributed to this column, readers may contact him at gregorymanni.info@gmail.com.

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