

## *Poisoned Waters -* **Toxic Pollution Leaking from Coal Ash Dumpsites Threaten Fish and Wildlife**

Throughout the United States, hundreds of pits and ponds filled with coal ash are leaking deadly poisons like arsenic and selenium into our rivers, streams, and waterways. These and other coal ash pollutants pose dangers to fish and other aquatic life, but there are no federal rules requiring safeguards at these sites. After the spill of over 1 billion gallons of coal ash at a TVA Kingston coal ash pond in 2008, the EPA responded by proposing two options for regulating coal ash disposal in June 2010, and more than 500,000 people submitted comments. However, the EPA has not yet made a decision about how to regulate coal ash.

### **Coal ash heavy metals poison waterways and wildlife.**

The U.S. EPA and environmental groups have already documented over 200 coal ash “damage cases” – cases where levels of coal ash pollutants in lakes, rivers, streams, ponds, or groundwater already exceed state or federal standards for the protection of health or the environment or where there have been documented impacts to human health or the environment – in at least 37 states.<sup>i</sup>

The devastation to wildlife at these coal ash damage cases has been dramatic. For example, in 1974 coal ash effluent flowed into Belews Lake from a coal-fired power plant, and the concentration of selenium reached only 10 ppb. Soon the 20 species of fish that had lived in the lake were eliminated to 3, and two of these species were rendered sterile. By 1978, 19 of 20 fish species had been killed off and *only 1 species remained*.<sup>ii</sup>

**Our most treasured waterways at risk.** The nation-wide poisoning of our waterways does not only endanger remote rivers – some of the waters most used for recreation, fishing, and water supplies may be impacted by improper coal ash disposal.

Chesapeake Bay. There are several coal ash damage cases in close proximity to the Chesapeake Bay, most notoriously including one in Gambrills, MD, where coal ash from two Maryland power plants was dumped into two unlined sand and gravel quarries and leaked aluminum, arsenic, beryllium, cadmium, lead, manganese, sulfate and/or thallium into groundwater at levels that exceeded maximum contaminant levels (MCL) at 34 of 83 homes tested and exceeded secondary MCLs at 63 of 83 homes tested. Residents received a \$54 million settlement from Constellation Energy on top of the fines and cleanup fees levied by the state.<sup>iii</sup>

Long Island Sound. The Montour Generating Station coal ash damage case poses one of the greatest threats to a treasured waterways, as it has been discharging pollutants into the adjacent Thames River in Connecticut at a point only about 8 miles from the Long Island Sound. At this damaces case, there has been demonstrated damage to groundwater on-site discharging to the Thames River, including exceedances of MCLs for arsenic and beryllium, and exceedances of secondary MCLs for iron, manganese and pH. There has also been demonstrated damage to soil above health-based compliance standards.



**Figure 1. Coal Ash Pollution in Belews Lake, NC: Fish Deformation and Sterilization from Selenium in Coal Ash Discharges (fish at right is normal).**

**National Academy of Sciences found coal ash is toxic to humans and aquatic life<sup>iv</sup>:**

- Coal ash disposal has caused harm. “[C]ontamination of surface waters [at coal ash dumps] has resulted in considerable environmental impacts; in the most extreme cases, *multiple species have experienced local extinctions.*” (p. 86, emphasis added)
- Wildlife absorb coal ash toxins. “As a consequence of CCR disposal in surface impoundments, contaminants have been found to accumulate in the tissues of organisms utilizing the impoundments or downstream habitats. . . .*Uptake of some contaminants can be high, exceeding the concentrations known to be toxic to many organisms.* . . .[B]enthic invertebrates collected from streams and wetlands downstream from CCR surface impoundments have *concentrations of arsenic, cadmium, and selenium that can exceed the concentrations in uncontaminated sites by orders of magnitude.* (Cherry et al., 1997b; Brieger et al., 1992; Rowe, 1998; Lohner and Reash, 1999; Reash et al., 1999; Hopkins et al., 2004).” (page 74, emphasis added)
- Coal ash has sterilized organisms. “Most importantly, reproductive failure has repeatedly been observed in organisms exposed to CCRs or CCR effluent (Lemly, 1996; Sidebar 4.3).” (page 75)

***EPA must act now to protect fish and wildlife from exposure to toxic coal ash pollutants like arsenic and selenium at coal ash disposal sites.***

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<sup>i</sup> See Earthjustice, “In Harm’s Way: Coal Ash Contaminated Sites,” <http://earthjustice.org/features/campaigns/in-harm-s-way-coal-ash-contaminated-sites>; U.S. Environmental Protection Agency (EPA), Proposed Rule, Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. 35,128 (proposed June 21, 2010) [hereinafter EPA’s Proposed Rule]; Environmental Integrity Project (EIP), Earthjustice, & Sierra Club, *In Harm’s Way: Lack of Federal Coal Ash Regulations Endangers Americans and their Environment* (Aug. 26, 2010), available at [http://environmentalintegrity.org/news\\_reports/documents/INHARMSWAY\\_FINAL3.pdf](http://environmentalintegrity.org/news_reports/documents/INHARMSWAY_FINAL3.pdf); EIP and Earthjustice, *Out of Control: Mounting Damages from Coal Ash Waste Sites* (Feb. 24, 2011), available at; Office of Solid Waste, EPA, *Coal Combustion Waste Damage Case Assessments* (July 9, 2007), available at [http://environmentalintegrity.org/news\\_reports/documents/OutOfControl-MountingDamagesFromCoalAshWasteSites.pdf](http://environmentalintegrity.org/news_reports/documents/OutOfControl-MountingDamagesFromCoalAshWasteSites.pdf).

<sup>ii</sup> See, e.g., A. D. Lemly, “Belews Lake: Lessons Learned,” *U.S. EPA Publication EPA-822-R-98-007*, at 3–6 and E15–20 (1998); A. D. Lemly, “Symptoms and implications of selenium toxicity in fish: the Belews Lake case example,” *Aquatic Toxicology*, vol. 57, at 39–49 (2002).

<sup>iii</sup> EPA’s Proposed Rule, *supra* note 1, at 110; Karl Hille-Balt, “Constellation to Pay Out Millions in Fly Ash Lawsuit,” *Washington Examiner* (Dec. 31, 2008), available at <http://washingtonexaminer.com/news/constellation-pay-out-millions-fly-ash-lawsuit>.

<sup>iv</sup> National Research Council, National Academy of Sciences, *Managing Coal Combustion Waste in Mines* (2006), [http://www.catf.us/resources/filings/power\\_plant\\_waste/NAS\\_Coal\\_Ash\\_Full\\_Report.pdf](http://www.catf.us/resources/filings/power_plant_waste/NAS_Coal_Ash_Full_Report.pdf).