

# Coal Ash Policy Brief

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Duke University  
BassConnections

- ▶ **More stringent guidelines** should be applied to disposal of coal ash, as its potential hazards to human and environment health are tangible.
- ▶ **Increased transparency** from utilities is necessary in disclosing reports of water quality monitoring and results from checkups of impoundment stability.
- ▶ **Prioritizing coal ash recycling** as the primary form of disposal allows for economic benefits and reduces volume of materials in landfills.
- ▶ **Closing high-risk ponds** wherever possible prevents leaching into nearby ecosystems and minimizes risk of spills in the event of natural disaster.

## What's the issue?

Coal ash is produced by coal burning power plants and has long been known to contain mercury, arsenic, barium, and a host of other contaminants. Almost 130 million tons of the material was generated in 2014, and 80% of all non-recycled ash is stored in enormous lagoons called coal ash ponds. These unlined ponds are at **great risk of spilling** during natural disaster events like hurricanes and heavy rains. Overflows into surrounding water bodies can lead to human exposure — exposure to this waste can cause **severe or even fatal health complications** and adversely affect local ecosystems for decades.

The Tennessee Valley Authority spill of 2008, the largest coal ash spill in the history of the US, demonstrates the health effects of exposure. In the following decade, 40 clean-up workers have died and another 400 became ill and injured as a result of close contact with large quantities of coal ash and minimal safety equipment: workers have reported such symptoms as rashes, breathing ailments, and migraines along with elevated incidence of high blood pressure and cancer.

Studies on bodies of water in close proximity to coal ash ponds have reported levels of selenium that exceed EPA standards.



Light gray material flows out of a flooded coal ash dump toward the Cape Fear River at Duke energy's L.V. Sutton Plant Station in Wilmington, NC. Photo: NC Department of Environmental Quality via AP

These include the Dan River and Sutton Lake in North Carolina, where fish populations have exhibited spinal and craniofacial malformations. These consequences allude to the exposure risks of surrounding communities, which are predominately low-income and minority populations.

## Why is this important?

The US currently does not have a uniform, nationwide standard for coal ash management, which is imperative in minimizing the possibility of future spillage and risk to human and environmental health. Reclassifying coal ash from an unregulated non-hazardous material to a Subtitle C hazardous waste material under the Resource Conservation and Recovery Act (RCRA) will ensure that facilities are abiding by regulations, properly storing the material, and following safety procedures during inclement weather. A Subtitle C classification would require federal monitoring (rather than self-regulation under Subtitle D), permits for existing dumps, and phasing out of wet storage of coal ash. It would also require an assessment that would ultimately support implementation of a “cradle-to-grave” policy, in which every aspect of coal from its creation to its disposal is safely managed. However, to allow for recycling of coal ash, it is necessary to include an exemption to Subtitle C policies similar to the classification of cathode ray tubes, which are conditionally considered non-hazardous if destined for recycling purposes and stored in safe conditions.

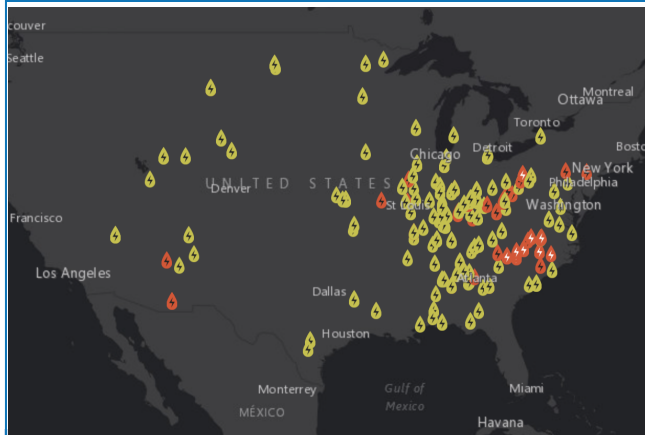
## What should policy makers do?

Past spills have incurred high economic costs — the Dan River spill in North Carolina was estimated to have a six-month cost of \$295 million, including the cost of ecological damage. Instituting more stringent coal ash regulation standards could protect against future events.



## Hazardous Coal Ash Ponds in the US

81 High Hazard Ponds and 250 Significant Hazard Ponds



### 🔥 HIGH HAZARD (81 PONDS)

Failure or mis-operation of these dams will probably cause loss of human life according to EPA.

### 💧 SIGNIFICANT HAZARD (250 PONDS)

Failure or mis-operation of these dams results in no probable loss of human life, but can cause economic loss, environment damage, disruption of lifeline facilities, or impact other concerns.

<https://earthjustice.org/features/high-and-significant-hazard-coal-ash-dump-sites>

**Reclassifying coal ash to ensure proper disposal** is an essential first step to reducing the risks posed by coal ash. The Eastern District of Tennessee District Court ruled that exposure to coal ash from the spill caused the effects experienced by the TVA clean-up crew, fulfilling the requirement of "a substantial present or potential hazard to human health or the environment when it is improperly treated, stored, transported, disposed of or otherwise managed" for a Subtitle C hazardous waste classification.

**Encouraging the recycling of coal ash.** Coal combustion residuals (CCR) are currently utilized in the production of products and materials like concrete and wallboard. In fact, Germany and the Netherlands have 97% and 100% recycling rates for coal ash, respectively.

Recycling lowers greenhouse gas emissions, reduces use of virgin resources, and diverts volume of residuals in landfills. It also provides revenue for the utility, creates jobs, and fulfills demand for fly ash materials that would otherwise be satisfied by foreign imports.

**Mandating public utilities to release all sampling results and monitoring reports** to an easily accessible public website is also key to reforming coal ash standards. Allowing companies the discretion to release environmental impact reports from coal ash ponds, materials, and impoundments has led to communities' misled assumptions of water quality and health risks.

Our understanding of the risks associated with coal ash leads us to conclude that without federal regulation of transparency, citizens would face a lack of information essential to their health.

Repeated spills after severe weather events like Hurricanes Matthew and Florence in NC case studies illustrate the **imminent need to close high-risk coal ash ponds**—the North Carolina Coal Ash Management Act of 2014 was the first comprehensive state law to manage coal ash in the nation. After reviewing all ponds in the state for risk and reviewing closure plans, the Department of Environmental Quality ruled that total excavation from the unlined ponds to lined landfills was necessary, despite the utility's proposal for a hybrid closure option of "capping-in-place." The hybrid closure would have involved the draining of ash water into the nearby Dan River, excavation of waste, and the placement of a stabilized ring buttress to cover the ash basin.

Taking inspiration from this decision and expanding it nation-wide to other high-risk impoundments will reduce risk in other communities and protect against foul weather.



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