Insight

What will EPA's Toxic Animas River Spill Cost?

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On August 5, EPA officials working along the Animas River caused the release of more than three million gallons of toxic wastewater, including the neurotoxins lead and arsenic. There has already been a tremendous environmental impact in three states. But what will it cost? If we were to trust past agency estimates: between $338 million and $27.7 billion. There is no direct precedent for the toxic Animas River spill in Colorado and past regulatory actions from agencies, but we can learn from previous benefit-cost estimates. The American Action Forum (AAF) evaluated four recent regulations' benefit figures to approximate the cost of the current spill in the Mountain West.

The High-End Scenario

In its recent proposal to protect the Beaufort and Chukchi seas in the Arctic, the Department of Interior (DOI) provided a range of benefits from avoiding a "catastrophic oil spill." In the Chukchi Sea, the costs of such a spill could range from $10 billion to $15 billion; for the Beaufort Sea, those figures varied between $12 billion and $27 billion. A 2012 DOI rule provided approximate figures as well: $16.3 billion "per spill avoided" in the outer continental shelf.

However, these costs result from oil spills in the Arctic and outer continental shelf, not from the release of toxic metals in U.S. waterways. Despite this, agencies routinely claim that quantified figures of environmental benefits are understated. For example, "Individuals place a value on environmental amenities by knowing that preservation and protection of the region exists even if those individuals do not intend to visit the region." Thus, even if the direct costs of the spill are quantified with some precision, certain "non-use values" might drive up the qualitative costs.

Mid-Range Costs

In its controversial "Waters of the United States" (WOTUS) rule, the Environmental Protection Agency (EPA) estimated annual clean water benefits of $338 million to $349 million. However, these benefits were to the nation as a whole and not just one or two states. Luckily, EPA did provide benefits figures for each region in the U.S. The "Mountain" region's benefits ranged from $8 million to $13 million, although many believe the current spill's costs will likely exceed those figures.

Perhaps the best approximation to the current disaster is from a rule set to be final this fall: "Effluent Limitations Guidelines for Power Plants." The aim of this regulation is to limit the "amount of toxic metals and other pollutants discharged to surface waters." This measure is national, not regional in scope, but it informs the current situation.

EPA estimates annual benefits of $424 million through a 0.47 billion-pound reduction of toxic discharges. These numbers are instructive because the regulation is designed to prevent the release of arsenic and lead, toxic

metals that were also released into the Animas River. This spill released more than three million gallons into the river, which translates into more than 25 million pounds. Assuming a monetary equivalent of 90 cents per gallon of toxic wasted avoided ($424 million/470 million gallons) would yield at least $2.7 million in costs for the Animas River spill.

However, EPA's affluent discharge rule was not designed to regulate acute pollution events, but rather the gradual effects of water pollution. For example, the Animas River had 300 to 3,500 times the normal levels of arsenic and lead. In addition, the figure of $2.7 million probably does not account for the value of "non-use" benefits that EPA and DOI have attempted to quantify in the past. Here, there are direct use costs because thousands of local residents, farmers, anglers, and tourists cannot use the river in its polluted state.

Conclusion

In the president's FY 2015 Budget, he and EPA proposed to cut more than $555 million from clean water protection while increasing the climate change budget by $46 million. Perhaps we are seeing the results from those budget decisions now. The full costs of the Animas spill might range between $2.7 million, $424 million, or $16.3 billion, but it will probably take months to assess the full damage. From qualitative non-use costs, a direct environmental toll, to the commercial losses from a damaged river, EPA's clean-up task will involve more than just talk.