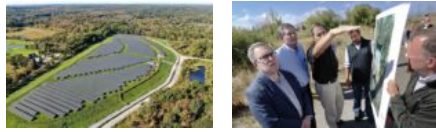


Superfund Still Struggling at 40



Kearsarge Energy built a 4.7-MW solar project on the Rose Hill Landfill Superfund site in Rhode Island, with engineering design, permitting and construction support by GZA.

PHOTO COURTESY GZA



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As it turns 40 this month, the Superfund program still hasn't hit its stride. The U.S. Environmental Protection Agency and environmental advocates, through almost every political administration—both Democratic and Republican—have sought ways to make the federal remediation program run more efficiently, so the nation's most hazardous waste sites can be cleaned up more quickly, be taken off the National Priorities List and put back to use.

The current EPA administration has spent a significant amount of effort to revamp the Superfund program. "Fixing" Superfund was a priority for former EPA Administrator Scott Pruitt, who established a task force in 2017 of 100 career EPA employees to make recommendations for improvements before he resigned the following year. The agency considers acceleration of cleanups and removal of sites from the list during the Trump administration one of its key successes.

In October, EPA announced that in fiscal 2020, it had removed, or deleted, part or all of 27 sites from the NPL, marking the third consecutive year in which historically high deletions were made.

But some observers suggest that simply removing sites from the list doesn't necessarily indicate progress, and focusing on the deletions doesn't address the program's problems. A better barometer of success, they suggest, is the number of construction completions. Between 2000 and 2009, they dropped to 20 from 87. In 2014, completions were in the single digits, eight, for the first time in over two decades. Since 2017, when there were only seven, there have not been more than 10 in a given year.

One criticism of the current EPA focus on deletions is that it essentially takes credit for sites when the agency's role may have been limited to just the deletion process, with most or all cleanup occurring in previous administrations, as highlighted by an Associated Press report.

Conversely, a criticism of the Obama administration is that it moved too slowly on deletions.

Once construction completion happens, the site is examined and monitored until it is determined that all actions have been completed, no further actions are necessary and the site is no longer a threat to public health or the environment. A site can then be eligible for deletion, a determination made after examination by EPA and the state where the site is located, and a public comment period.

"Getting from construction completion to deletion is not really in EPA's control," says Kate Probst, an independent consultant and policy analyst focused on the Superfund program. "What is in EPA's control is getting to construction completion, and in going after potentially responsible

parties to protect public health.” She adds that forcing PRPs to pay for cleanups through the Justice Dept. Environment and Natural Resource Division’s enforcement actions is a tool that has been underused over the years, including during the current administration.

According to EPA, the U.S. government in 2019 received \$471.8 million in combined federal administrative and judicial civil penalties and criminal fines related to Superfund, the highest total of all but four of the past 10 years. Additionally, a total of 137 criminal defendants were charged in 2019, an increase from 107 in fiscal 2018, reversing a downward trend that began after 2013.

Jim Woolford, director of EPA's Superfund remedial program from 2006 until his retirement in April, says former Administrator Pruitt approached Superfund’s woes as a management, rather than as a funding, problem. The Superfund task force released a [final report](#) in 2019 that recommended a variety of changes to accelerate cleanups and deletions.

But the biggest challenge the program faces is that “the funding hasn’t kept up with the cost of work ... All the improvements in the world won’t help that much” without more funding, Woolford says. Cutting funds impacts staffing levels and the agency’s ability to run and enforce the program, he adds.

The chronically underfunded program could face even more challenges. A 2019 U.S. Government Accountability Office [report](#) concluded that roughly 60% of 1,571 nonfederal Superfund sites overseen by EPA could be impacted by extreme events associated with climate change—wildfires, sea level rise, storm surge and flooding.

Those effects are already being felt—from wildfires closing in on closed mines to hurricane related flooding, such as in 2017 when floodwaters from Hurricane Harvey flooded 13 Superfund sites.

But, notes the GAO report, “the 2018 to 2022 EPA strategic plan does not include goals and objectives related to climate change or discuss strategies for addressing the impacts of climate change effects.”

As political Washington gears up for Joe Biden's presidency, a variety of groups hope that the best reforms the current administration implemented will remain, while the next one gives more aggressive attention to enforcement and environmental justice.

Assessing Superfund at 40

The Superfund program, established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, has been a lightning rod almost since its inception.

The law and policies underpinning the program were set up to encourage PRPs to pay for the bulk of the work, with EPA paying for cleanup of unfunded sites—those with no viable or identifiable responsible party, or sites where PRPs may be unwilling to reach a settlement to fund cleanups.

But over several administrations, annual appropriations dropped so much that the ability to pay for actions against those PRPs has made enforcement more difficult. In 1995, a tax on crude oil, specific chemical companies and certain large corporations—which had been a significant source of funding—expired, leaving the EPA to rely on declining annual appropriations.

Federal appropriations for the Hazardous Substance Superfund dropped to \$1.1 billion from \$2 billion between 1999 and 2013, adjusted in 2013 dollars, according to a 2015 GAO [report](#) on program funding trends. Appropriations have remained around the same levels since, although with inflation they are lower in real dollars.

President Trump’s proposed \$1.08-billion budget for fiscal 2021 is lower than the previous year’s estimated enacted budget by \$100 million.

The Environmental Protection Network, a group of hundreds of former EPA staff, including Woolford, which launched in 2017, suggests that reinstating the Superfund tax would “would give EPA more enforcement clout when responsible parties are performing cleanups, because there is a real possibility that EPA will take over any site work that is being performed below established standards,” it [says](#) in its August 2020 [Cleaning Up Superfund Sites](#) paper. The Obama administration tried, but failed, to get Congress to reinstate the tax through legislation.

“Funding hasn’t kept up with the cost of work ... All the improvements in the world won’t help that much” without more funding, Woolford says.

Environmental Justice

Some groups are taking a critical eye to where the deletions are taking place. An [analysis](#) by Juan Declet-Barreto, climate vulnerability social scientist, and Jacob Carter, research scientist, both with the Union of Concerned Scientists, found that the share of communities of color within sites deleted from the National Priorities List, based on data from census tracts, decreased to 24.8% between 2017 and 2020, compared with 33.5% for the period from 2009-16, covering the Obama administration. The share of communities of color within undeleted sites is 31.7%.

“The difference of nearly 9 percent points indicates that recent Superfund site cleanups have neglected communities of color,” they conclude in the analysis.

Carter says a partial explanation lies in the agency’s current focus on tackling sites that have identified responsible parties, which “tend to be in more white and affluent dominated areas compared to what are known as orphan sites,” he says.

Pruitt, in an attempt to improve the Superfund program, created a list of 21 “emphasis” sites the agency could focus on. While the list was widely criticized as being arbitrary, Woolford says regional EPA offices were asked to submit sites “where the administrator’s involvement could help”

get sites that might be stalled moving forward again. Those ultimately were the sites where most resources were focused.

One task force recommendation that Woolford finds problematic calls for the EPA administrator to sign off on Superfund remedies costing more than \$50 million. This takes away the authority of regional offices to make decisions and can further slow an already cumbersome process.

In addition to the list of emphasis sites, EPA's Superfund task force recommended changes that would allow more flexibility to remedial contractors and PRPs through adaptive management. Rather than being overly prescriptive, a project using adaptive management allows for changes in remedies and technologies as more is learned about the site. Steve Lamb, a principal at consultant GZA, says that adaptive management is consistent with "having the end use in mind." It "creates a kind of nimbleness in a project ... and is not as regimented as in the past."

Another change was to allow some design work to begin or continue even before a settlement is negotiated with PRPs. EPA was able to use this approach at the B.F. Goodrich site in Kentucky and at the Portland Harbor site in Oregon.

Charlie Howland, a former EPA attorney now in private practice, says that separating the remedy design (RD) from the consent decree can be useful when PRPs are unwilling to commit.

For example, on sites where it is unclear as to who is paying for the work—EPA or the PRPs—the agency can choose to perform the design work independently of a settlement, and PRPs may then be more willing to sign on to pay for the cleanup. At that point, "PRPs can see what [EPA] wants them to do and costs are a little more certain," Howland says.

Some attempts to improve Superfund have been counterproductive, notes Steve Hall, vice president of government affairs for the American Council of Engineering Companies. In 2015, during the Obama administration, the EPA adopted the Remedial Action Framework for contractor procurement on Superfund projects.

The framework relies less on full-service contracts and instead tends to favor lowest price, technically acceptable (LPTA) bids. It was intended to increase competition and lower costs, but framework "goals are not lining up with execution," Hall says. Using price as the predominant criterion rather than the expertise of firms that do the work can ultimately end up costing more, he adds. EPA counters that the frameworks are working as intended and the use of the LPTAs are at the discretion of the contracting officer.

ACEC's Hall and others have been working with EPA staff over the past few months and are hopeful that those discussions will continue in coming months and lead to some positive adjustments.

Looking Forward

As the clock winds down on the Trump presidency, firms and analysts alike are looking forward, not back.

Carter, who as a postdoctoral fellow at EPA during the Obama administration focused on improving the inclusion of climate change considerations in Superfund decision-making, would like to see the Biden administration return to climate science in site analysis, and figure out how site remediation project managers can use science to guide adaptation measures.

“They’re not going to be starting from scratch,” says Carter. The EPA Office of Land and Emergency Management released a [Climate Change Adaptation Implementation Plan in 2014](#), which includes priority actions for the Superfund program, as well as Climate change adaptation [plans](#)—the most recent in 2014. But, “they will need to update their plans given that the science has changed over the past four years and predictions have definitely become more dire since then.”

One of the Superfund task force’s recommendations called for establishment of a group to work with the National Environmental Justice Advisory Committee to look at ways to improve engagement and communication with environmental justice communities. This work group is expected to release a report with recommendations soon.

President-elect Biden and his transition team have vowed the new administration will be committed to looking at environmental justice issues. That might bode well for the Superfund program, with sites that are disproportionately located in environmental justice communities. “I think the Biden administration is much more interested in leveraging all resources under CERCLA, both Superfund and brownfields,” Howland says.

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