



Environmental Protection Network

Resetting the Course of EPA

Cleaning Up Superfund Sites



This paper is part of the [Resetting the Course of EPA](#) project by the [Environmental Protection Network \(EPN\)](#), a bipartisan network of more than 500 former EPA career employees and political appointees across the country who served under multiple Democratic and Republican administrations.

Resetting the Course of EPA outlines specific and actionable steps that EPA leadership can take to reset the course of the agency to address the most significant and pervasive threats to public health and our environment. As there is no single roadmap, EPN looks forward to collaborating with others to advance the dialogue around the future of EPA and set ideas into motion that will better protect the health and wellbeing of everyone.

Additional Resetting the Course of EPA documents are available here:

<https://www.environmentalprotectionnetwork.org/reset>

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Summary

Since 1980, EPA’s Superfund program, authorized by the [Comprehensive Environmental Response, Compensation, and Liability Act \(CERCLA\)](#), has managed the cleanup of the nation’s worst hazardous waste sites and responded to environmental emergencies. A strong Superfund program is central to any effort to address the cumulative toxic effects faced unjustly by too much of the population.

For Superfund’s first 20 years, dedicated taxes on petroleum, chemical feedstocks, and corporate income primarily funded the program through a trust fund (the Superfund). After these taxes expired in 1995, funding for the Superfund program generally relied on congressional appropriations from general revenues and cost recoveries. These appropriations have declined significantly between 1999 and 2019, aggravated by inflation. This sizable decrease has had a negative effect on the Superfund program’s ability to carry out its core mission.

Recommendations

1. **Increase funding for Superfund and focus on orphan sites.** Many sites on the National Priorities List (NPL) of the nation’s most hazardous waste sites are “orphan sites,” which do not have any viable potentially responsible parties (PRPs) that EPA can enter into negotiated agreements with to perform necessary response work. EPA funds these cleanups from its appropriation. The number of unfunded construction projects has almost tripled since 2016. This growing backlog clearly illustrates that the Superfund program is underfunded. Other areas weakened by lack of funds include emergency response; enforcement actions; and support to communities, states, and tribes. [\[Read More\]](#)
2. **Complete cleanup at sites with partial deletions and add new sites to the NPL in a timely manner.** The number of sites at which construction has been completed annually has steadily declined from 1999 to 2019. EPA’s increasing tendency is toward “partial deletions” of sites from the NPL, actions taken when work in some areas of sites is complete, while additional work is still needed in others to ensure protection of human health and the environment. EPA needs to ensure that adequate funding and staffing are available for the necessary investigations, remedy selections, remedial designs, and construction activities needed to complete work at these sites. Recently, new NPL listings have been delayed and should be processed in a timely fashion. [\[Read More\]](#)
3. **Improve remedy selection process.** Recent changes have moved some remedy decision-making away from the EPA regions, reducing the role of science and the National Contingency Plan (NCP) criteria. EPA should revisit these changes, including the role of the National Remedy Review Board (NRRB) to promote remedy consistency at NPL sites. The NRRB reviews cleanup decisions for sites to promote national consistency. [\[Read More\]](#)
4. **Strengthen the Superfund enforcement program.** “Enforcement first” has been a key approach for decades, ensuring that PRPs conduct or pay for cleanups, preserving taxpayer dollars for sites without viable PRPs. Reduction in resources has adversely affected EPA’s ability to identify PRPs and take enforcement action against them. [\[Read More\]](#)
5. **Increase attention to contaminants of emerging concern (CECs).** Significant gaps exist in regulating and providing guidance for CECs that pose risks to health and the environment. For example, polyfluoroalkyl substances (PFAS) lead to adverse health effects. EPA needs to list these as hazardous substances and establish maximum contaminant levels (MCLs) for them. [\[Read More\]](#)

Recommendation #1: Increase funding for Superfund and focus on orphan sites.

After the Superfund tax expired in 1995, funding for the program relied mainly on general revenue through congressional appropriations. These appropriations have declined from about \$2.0 billion in 1999 to about \$1.2 billion in 2019, with additional impacts due to inflation. This sizable decrease in funding has had a negative effect on the Superfund program’s ability to carry out its core mission to protect human health and the environment.

Sites without viable responsible parties are known as “orphan sites.” EPA must request adequate funding from Congress for cleanup work to proceed in a more expedited fashion on such sites. In the past, these sites have been left to languish due to the lack of funding. EPA recently reported that 34 orphan sites went unfunded in 2019. This number has almost tripled from 12 in 2016 and will likely increase each year. Additionally, because immediate funding is limited, EPA can only allocate funds at a less-than-optimal amount, thereby increasing overall cleanup costs and timeframes, in some cases by tens of millions of dollars and several years.

Adequate appropriations based on a Superfund tax 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. More funding would also enable Superfund to better support informed stakeholder participation as envisioned by CERCLA and the [NCP](#), which stipulate important roles for communities and state and tribal governments.

IMMEDIATE ACTIONS

- ❖ Dramatically increase EPA’s Superfund funding and staffing request in the Fiscal Year 2022 (FY22) budget for programs by:
 - ◆ Accelerating cleanups at orphan sites.
 - ◆ Providing more technical support and training for stakeholders (e.g., communities) and state and local regulators, with a focus on environmental justice communities.
 - ◆ Increase staffing of regional community involvement coordinators who facilitate community engagement and the development of required community involvement plans (CIPs) for every site.
 - ◆ Increase staffing of regional remedial project managers who must integrate community concerns into the development of alternatives and the selection of remedies.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Request an increase in the remedial Superfund budget of \$250 million per year for the next three years to effectively eliminate the backlog of unfunded construction projects and to optimize cleanup at sites already under construction.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Seek reinstatement by Congress of one or more environmental taxes on industry to increase available funding for Superfund.
- ❖ Seek congressional approval for direct access to money in the trust fund, without further appropriation, so that EPA could use the funds for necessary cleanup expenses.

Recommendation #2: Complete cleanup at sites with partial deletions and add new sites to the NPL in a timely manner.

Recently, EPA has been focusing on deleting parts of sites that have been cleaned up. These partial deletions, while important, should not be considered as important a metric as site-wide construction completions. Construction completions remain the best measure for assessing progress at NPL sites. Adequate funding and staffing necessary for cleanup consistent with the reasonably anticipated future land use should be directed to sites with partial deletions, in addition to other priority sites.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Initiate a review of sites with partial deletions—how many are there, where are they, and what work remains?
- ❖ Process all NPL listing packages that are under review at headquarters.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Set priorities for moving forward with the remaining portions of sites.
- ❖ Provide adequate funding to complete the entire remedy at these sites.
- ❖ Return to publishing new NPL listings twice per year.

Recommendation #3: Improve remedy selection process.

Traditionally, career regional Superfund managers made remedy decisions. EPA needs to return to that practice, strengthen the role of these career staff, and make decisions based on science and the criteria provided in the NCP and related policies and guidance. To implement science-based and public policy-based decisions, EPA should fully utilize the well-established [NRRB](#), which promotes national consistency with CERCLA and its implementing regulations in the NCP.

In April 2020, EPA proposed a change to the selection and operating principles of NRRB, concluding: “The revised process is expected to result in a more collaborative remedy development process that allows for early stakeholder engagement and improved national consistency.” EPA needs to reconsider if these new procedures will help or hinder the goal of national consistency in the remedy selection process.

In addition, many Superfund sites are located in communities with environmental justice concerns. These concerns must be considered, along with options for site reuse, as a part of the remedy selection process.

IMMEDIATE ACTIONS

- ❖ Revise existing remedy selection delegations to return all remedy decision-making on priority/high-cost sites to regional offices (per existing delegations), and explicitly state the need to rely on science in evaluating the NCP criteria for remedy selection.
- ❖ Enhance community outreach, with a focus on understanding how racism and other environmental justice concerns played a role in creating current site conditions, and incorporate the information into a required site CIP.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Revise delegation to return decision-making authority to the regional level.
- ❖ Include environmental justice considerations in site histories by developing profiles of unique community issues including: language barriers/linguistic isolation; health challenges such as proximity to facilities with Risk Management Plans; air quality, including particulate matter, etc. Incorporate these profiles in site CIPs. Factor environmental justice into the remedial alternatives considered in the feasibility studies conducted for all sites.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Make sure the NRRB is adequately staffed, utilized, and supported at the regional and headquarters levels.
- ❖ Expand environmental justice competency for Superfund staff by updating and more frequently offering courses, such as Cultural Competency and “Plain Writing,” and sharing best practices for addressing environmental justice concerns in remedy development and selection.

Recommendation #4: Strengthen the Superfund enforcement program.

The Superfund program has implemented an “enforcement first” approach for decades, ensuring that viable PRPs conduct or pay for cleanups and preserving taxpayer dollars for sites without viable PRPs. Historically, EPA has obtained far more value from PRP cleanup commitments than the amount of federal resources expended.

However, a reduction in resources in the last decade has adversely impacted EPA’s ability to identify viable PRPs and take enforcement action against them. An “enforcement first” approach should include federal facilities, particularly Department of Defense sites, since they have substantially more resources than EPA to conduct cleanups. But because they do not have the same expertise in Superfund law, policy, and guidance as EPA staff, EPA regulatory oversight is critical to ensuring that federal facility cleanups protect human health and the environment.

IMMEDIATE ACTIONS

- ❖ EPA should intensify its efforts to identify sites with viable PRPs that are at a stage where enforcement actions can be initiated, with particular emphasis on sites in communities with environmental justice concerns.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ EPA should work with the Department of Justice (DOJ) to prioritize cases to initiate as well as identify ongoing enforcement cases that need greater attention.
- ❖ Increase Superfund enforcement funding in the FY22 budget for both EPA and DOJ, which receives Superfund enforcement funding by pass-through from EPA.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Maintain adequate funding for Superfund enforcement, which includes the financial ability to take over any site work when PRP actions are out of compliance.

Recommendation #5: Increase attention to contaminants of emerging concern (CECs).

Past Superfund cleanups have primarily focused on contaminants frequently found in the environment, relying on established regulatory standards and toxicological data. The program has developed testing procedures and remedial actions to protect health and environment against the risks of these contaminants.

However, there are additional CECs that also pose risks to health and the environment. Significant gaps exist in regulating and providing guidance for detection and quantification, environmental fate and transport, health and environmental risk assessment, and site investigation and remediation for CECs.

One such group of CECs are PFAS. The two highest-volume PFAS are perfluorooctanoic acid (PFOA) and perfluorooctanesulfonate (PFOS). They have been widely used and are a known source of groundwater contamination, and yet MCLs have not yet been established. PFAS can lead to adverse health effects and are very persistent in the human body and the environment.

In 2016, a court-ordered consent decree required EPA to issue a drinking water standard for perchlorate, but in June 2020, EPA announced it will not do so. Perchlorate is a component of rocket fuels, munitions, and fireworks found at several federal facility Superfund sites. Exposure to perchlorate by drinking contaminated water and eating contaminated food can inhibit the thyroid’s uptake of iodine and consequently threaten the health or development of pregnant women, fetuses, infants, and young children. A national standard would create consistent health protection across the country.

Many other CECs (for example, 2,4-dioxane) require development of toxicological data, regulatory standards, and/or cleanup guidance.

IMMEDIATE ACTIONS

- ❖ Follow up with the Office of Management and Budget to expedite rulemaking listing PFOA and PFOS as CERCLA hazardous substances.

EARLY ACTIONS, INCLUDING THE FIRST 100 DAYS

- ❖ Establish PFAS chemicals as toxic pollutants under the Clean Water Act.

FIRST YEAR AND SUSTAINED ACTIONS

- ❖ Recommend legislative action to most efficiently address the more than 2,000 PFAS compounds, which otherwise might take years or decades of EPA rulemaking.
- ❖ Establish [Safe Drinking Water Act \(SDWA\)](#) MCLs for high-volume PFAS chemicals (see 3-10-20 Fed. Reg.).
- ❖ Establish a SDWA MCL for perchlorate.
- ❖ For other CECs, develop toxicological data, regulatory standards, and/or cleanup guidance.
- ❖ Update toxicological values with new data as appropriate.

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