

Superfund Remediation and Redevelopment for Environmental Justice Communities

May 2021



National Environmental Justice Advisory Council
A Federal Advisory Committee to the
U.S. Environmental Protection Agency

ACKNOWLEDGEMENTS

The National Environmental Justice Advisory Council (NEJAC) acknowledges the efforts of the NEJAC Superfund Task Force Work Group in preparing the initial draft of this report and especially the leadership of Michael Tilchin in shepherding the group and this report throughout. The NEJAC also acknowledges the stakeholders and community members who participated in the Work Group's deliberation by providing public comments. In addition, the Work Group's efforts were supported by the U.S. Environmental Protection Agency (EPA) staff, notably, Tai Lung.

DISCLAIMER

This report of recommendations has been written as part of the activities of the NEJAC, a public advisory committee providing independent advice and recommendations on the issue of environmental justice to the Administrator and other officials of the EPA. In addition, the materials, opinions, findings, recommendations, and conclusions expressed herein, and in any study or other source referenced herein, should not be construed as adopted or endorsed by any organization with which any Work Group member is affiliated. This report has not been reviewed for approval by the EPA, and hence, its contents and recommendations do not necessarily represent the views and the policies of the Agency, nor of other agencies in the Executive Branch of the Federal government.

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May 6, 2021

Michael S. Regan, Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Dear Administrator Regan:

The National Environmental Justice Advisory Council (NEJAC) is pleased to submit this report titled *Superfund Remediation and Redevelopment for Environmental Justice Communities*. The NEJAC developed this report in response to a charge issued in November 2018 from the EPA Superfund Task Force (SFTF) to help integrate environmental justice into the cleanup and redevelopment of Superfund and other contaminated sites. The overall goal of the charge is to identify barriers, develop solutions, and recommend best practices for improving our ability to achieve clean-ups of Superfund sites more quickly and with better outcomes for local communities; taking central consideration of the unique burdens and vulnerabilities of environmental justice populations living in and around Superfund sites. EPA's charge to NEJAC consisted of five questions:

- What are specific ways in which the NEJAC, EPA, and other relevant stakeholders can facilitate strong, strategic relationships with stakeholders to facilitate effective cleanups and site reuse, and equitable decision-making throughout the entire Superfund (SF) process?
- What does NEJAC believe should be done to facilitate effective, efficient, and consistent decision-making regarding remediation and redevelopment of National Priorities List (NPL) sites?
- Can the NEJAC provide examples of case studies and models – Superfund and non-Superfund alike – that illustrate best practices and lessons learned (cleanup, redevelopment, risk communication, federal initiatives) which can inform ways to elevate equity in Superfund cleanup and redevelopment, to ensure all have a voice in EPA decisions?
- Which additional resources (e.g. water infrastructure investment, job creation) can be realized to support reuse and redevelopment of remediated Superfund sites from other sources?
- Does the NEJAC propose any additional issues related to the clean-up and redevelopment of Superfund sites that are not captured in the questions above?

To address this charge, NEJAC established a Superfund Working Group (SWG) composed of 30 members from diverse backgrounds in academia, financial, legal, brownfields, remediation, federal, state, local and tribal government, and community-based organizations. Building upon the research, analysis, and case study examples provided by the SWG, the NEJAC developed a broad set of strategies and recommendations that NEJAC believes will lead to a more effective Superfund program, cleaning up sites and improving the quality of life in environmental justice and other communities impacted by contaminated hazardous waste sites.



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The strategies and recommendations in this report describe steps the Superfund program can take to improve performance and achieve better outcomes for environmental justice communities. Those steps combine to form several overarching themes and key findings:

- **Remediation and Redevelopment:** Success is best achieved when both remediation and reuse/redevelopment efforts align with the impacted community's vision. EPA should engage the impacted community in establishing an end-state vision for the site in the early planning stage.
- **Community concerns, challenges and opportunities:** Early community engagement is crucial, and the emphasis of the early engagement efforts should be on listening and seeking to genuinely understand community concerns.
- **EPA Superfund Role:** Expand the role of Superfund to purposefully facilitate progress toward meeting broader community needs. This will require an expansion of program objectives, performance expectations, and a shift in program culture.
- **Consistency:** Consistent application of contaminated site policies and practices builds community trust and leads to a higher level and more sustained community participation.
- **Strengthen community voices in decision-making:** Expanding access to information and supporting community engagement in decision-making levels the playing field and fosters community consensus. Without enabling impacted communities to directly engage in the decision-making process, environmental justice will not be achieved in the Superfund program.

The report is organized around seven strategies:

1. Implement more intensive community engagement practices at Superfund sites
2. Revise and update guidance and strengthen policies focused on understanding and responding to community needs
3. Update, improve, and expand training that reaches impacted communities, EPA staff, and state staff
4. Elevate future use planning as a core element of the Superfund process
5. Leverage redevelopment and reuse as a catalyst for innovation and accelerated cleanup
6. Ensure equity in all aspects of the Superfund program
7. Increase access to resources for impacted communities

Each strategy is expanded into recommendations. Many of the recommendations describe implementing actions and the intended outcomes - a new "end state" for the Superfund program that will result in a more effective program, protective of human health and the environment, and enabling the creation of assets that improve the quality of life and expand opportunity, closely aligned with the community's vision. Taken together, we believe the implementation of these strategies and recommendations will have a positive, transformative impact on EJ communities and the Superfund program as a whole.

Thank you for this opportunity to provide recommendations for enhancing Superfund remediation and redevelopment in environmental justice communities. NEJAC strongly supports the administration's commitment embodied in Executive Orders 14008 and 13985: to make environmental justice a part of



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the mission of every agency, and to develop programs, policies, and to be intentional about infusing equity and racial justice in all aspects of what the federal government does. We believe the recommendations for the Superfund program in this report are in full alignment and offer a blueprint for translating those commitments into positive action. We look forward to hearing the Agency's response.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sylvia Orduno".

Sylvia Orduno, Chair

cc: NEJAC Members
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Executive Summary

In 2018, the National Environmental Justice Advisory Council (NEJAC) received a charge ([Appendix A](#)) from the EPA Superfund Task Force (SFTF) to help integrate environmental justice into the cleanup and redevelopment of Superfund and other contaminated sites. The overall goal of the charge is to provide recommendations to the EPA Administrator that will identify barriers, solutions, and best practices for improving our ability to achieve clean-ups of Superfund sites more quickly and with better outcomes for local communities, taking central consideration of the unique burdens and vulnerabilities of environmental justice populations living in and around Superfund sites.

To address this charge, NEJAC established the Superfund Working Group (SWG) composed of 30 members from diverse backgrounds in academia, financial, legal, brownfields, remediation, federal, state, local and tribal government, and community-based organizations. An interim report was issued by the SWG in February, 2020¹. NEJAC's final report, *Superfund Remediation and Redevelopment for Environmental Justice Communities*, includes a broad set of strategies and recommendations that NEJAC believes will lead to a more effective Superfund program, cleaning up sites and improving the quality of life in environmental justice and other communities impacted by contaminated hazardous waste sites.

Strategies and Recommendations

The strategies and recommendations in this report have the potential to move the Superfund program in a positive direction, integrating cleanup more closely with redevelopment and other beneficial uses, with both the cleanup and reuse aligned with the community's needs and vision. Table ES-1 summarizes the strategies and recommendations in this report.

Many of the recommendations in this report would be modifications to current practices and processes within the Superfund program, where greater attention and resources would benefit the Superfund program, especially in EJ communities. Other recommendations represent innovations to the existing program. The actions contained in these "innovation" recommendations are not, to NEJAC's knowledge, current practices, but we believe these can be readily implemented within the existing program. Several recommendations are for new programs to be designed, piloted and, once assessed and optimized, broadly implemented within Superfund, OLEM, or potentially at an Agency-wide scale. The recommendations in Table ES-1 are highlighted according to these implementation categories:

- Elevating and Expanding Current Components of the Superfund Program ^a
- Innovative Superfund Initiatives and Collaborations ^b
- New Programs within Superfund, OLEM, or Agency-Wide ^c

¹ https://www.epa.gov/sites/production/files/2020-08/documents/nejac_superfund_working_group_phase_1_report_february_2020.pdf

Taken together, we believe the implementation of these strategies and recommendations will have a positive and transformative impact on EJ communities and the Superfund program as a whole.

While implementation of these strategies and recommendations will require additional resources, most of the recommendations in this report do not have a significant impact on how the Superfund program is funded. However, the resources needed to make the program more responsive and effective in EJ communities are superimposed on a program beset by underfunding. As clear evidence, there is a growing backlog of sites that are ready to be cleaned up, but the work to protect communities is slowed or delayed indefinitely due to insufficient program funding^{2,3}. The opportunities to make Superfund more effective for EJ communities is by no means solely a matter of funding, but clearly there is a funding gap that needs to be addressed if NEJAC’s vision for the Superfund program is to be achieved.

Table ES-1: Summary of Strategies and Recommendations*

Strategies	Recommendations
<p>Strategy 1: Implement more intensive community engagement practices at Superfund sites</p>	<p>Recommendation 1.1 ^b: Identify and list Superfund sites impacting EJ communities</p> <p>Recommendation 1.2 ^b: Support and fund an ombudsperson role whose responsibilities would include improving community access to information and amplifying community voices in decision making</p> <p>Recommendation 1.3 ^a: Strengthen and standardize the use of EPA’s successful community engagement tools and resources</p> <p>Recommendation 1.4 ^a: Engage local government early and regularly throughout the cleanup process</p> <p>Recommendation 1.5 ^a: Improve EPA and state staff ability to address risk communication at Superfund sites through increased resources, training, and guidance</p>

² Environmental Protection Network, Resetting the Course of EPA. August 2020

³ Katherine Probst, NYU Law, Looking Back to Move Forward, Chapter 6, Superfund at 40: Unfulfilled Expectation. November 2020

<p>Strategy 2: Revise and update guidance and strengthen policies focused on understanding and responding to community needs</p>	<p>Recommendation 2.1 ^a: Develop a program-level <u>Decision-Making Engagement Guidance</u> aimed at more substantive and consistent involvement of impacted populations</p> <p>Recommendation 2.2 ^a: Develop and issue guidance on using an Impacted Community Centric/Concentric Circle Approach to Stakeholder Engagement</p> <p>Recommendation 2.3 ^b: Develop and issue revised guidance (and training) on remedy enhancement and betterment, as an update to <u>OSWER Directive 9200.3-110</u></p> <p>Recommendation 2.4 ^b: Establish and maintain a Case Study Repository, with structured data collection and search capabilities</p> <p>Recommendation 2.5 ^b: Establish/promote “Communities of Practice” among RPMs structured around technologies, site types, or other knowledge categories for sharing best practices</p>
<p>Strategy 3: Update, improve, and expand training that reaches the impacted communities, EPA staff, and state staff</p>	<p>Recommendation 3.1 ^a: Hold in-person and on-line training in the impacted communities on the relevant issues prior to the start of the remediation to give local stakeholders a basic understanding of the Superfund process, technologies associated with the remediation, and associated impacts</p> <p>Recommendation 3.2 ^a: Increase funding and expand community access to EPA training resources and tools</p> <p>Recommendation 3.3 ^b: Create and fund a core team of dedicated Superfund community training specialists</p> <p>Recommendation 3.4 ^a: Update/enhance EPA’s internal training on community engagement for staff working in communities around Superfund sites</p> <p>Recommendation 3.5 ^a: Provide community engagement mentoring for EPA staff</p> <p>Recommendation 3.6 ^b: Provide State Superfund staff broader access to EPA training and resources</p>
<p>Strategy 4: Elevate future use planning as a core element of the Superfund process</p>	<p>Recommendation 4.1 ^c: Develop and fund a Superfund Community-Based Reuse Area-Wide Planning Grant Program and implement an SCBR-AWP pilot project to develop a proof of concept</p> <p>Recommendation 4.2 ^b: Conduct a needs assessment combined with end state visioning with the impacted community as a routine and early step in the Superfund process</p> <p>Recommendation 4.3 ^a: Expand the size and scope of the Superfund Redevelopment Initiative to help communities in the process of planning for the beneficial reuse of Superfund sites</p>

<p>Strategy 5: Leverage redevelopment and reuse as a catalyst for innovation and accelerated cleanup</p>	<p>Recommendation 5.1 b: Establish a Remediation and Redevelopment “Innovation Incubator” within EPA focused on leveraging redevelopment and reuse as a catalyst for effective, accelerated cleanup</p> <p>Recommendation 5.2 b: Assign a TIFSD “project advisor” to facilitate RPMs’ access to technology expertise in order to promote innovation, adaptive management, and strategic risk-taking where innovative approaches may have significant benefits</p> <p>Recommendation 5.3 b: Expand the use of community-driven Health Impact Assessments (HIA) as needs assessment and business planning tools</p> <p>Recommendation 5.4 c: Re-institute the Community Action for a Renewed Environment grant program</p>
<p>Strategy 6: Ensure equity in all aspects of the Superfund program</p>	<p>Recommendation 6.1 c: Establish a Superfund Equity Pilot Program for impacted communities addressing contaminated site remediation and redevelopment</p> <p>Recommendation 6.2 c: Scale from a Superfund Equity Pilot to an established Equity Program</p> <p>Recommendation 6.3 c: Develop a Budget Equity Tool and build in equity as a key component of EPA budgeting and financing at Superfund sites</p> <p>Recommendation 6.4 b: Set site-specific goals for the percentage of EPA clean up spending that directly supports the impacted communities and publicly track performance toward meeting these goals</p> <p>Recommendation 6.5 c: Establish a workforce social enterprise demonstration project</p>
<p>Strategy 7: Increase access to resources for impacted communities</p>	<p>Recommendation 7.1 a: Expand availability and improve accessibility of EPA resources for impacted populations at Superfund sites</p> <p>Recommendation 7.2 b: Develop and implement proactive measures that minimize the displacement of long-time community residents due to gentrification and foster redevelopment that is beneficial to the community</p> <p>Recommendation 7.3 c: Form EPA cross-department partnerships to increase access to resources for impacted populations</p> <p>Recommendation 7.4 b: Increase access to funding for impacted communities by improving the funding/grant management process that is need based</p> <p>Recommendation 7.5 c: Form federal government partnerships to increase access to resources for communities impacted by Superfund sites</p> <p>Recommendation 7.6 b: Develop a roster of potentially interested national, regional and local foundations and convene a community of practice between these foundations and impacted communities</p> <p>Recommendation 7.7 b: Foster engagement of financial institutions in supporting revitalization through community EJ developers</p> <p>Recommendation 7.8 a: Increase program funding to address the backlog of unfunded cleanups in EJ communities</p>

*** Implementation Categories:**

- **Elevating and Expanding Current Components of the Superfund Program ^a**

- Innovative Superfund Initiatives and Collaborations^b
- New Programs within Superfund, OLEM, or Agency-Wide^c

Introduction and Background

This report, *Superfund Remediation and Redevelopment for Environmental Justice Communities*, has its origin in the work of the Superfund Task Force (SFTF)⁴. The SFTF, composed of over 100 EPA career employees, was commissioned on May 22, 2017, to provide recommendations on how the Agency can restructure the cleanup process, realign incentives of all involved parties to promote expeditious remediation, reduce the burden on cooperating parties, incentivize parties to remediate sites, encourage private investment in cleanups of sites, and promote the revitalization of properties across the country. On July 25, 2017, the EPA Superfund Task Force Report identified multiple opportunities to accelerate cleanup and reuse of Superfund sites. Specifically, the SFTF identified 42 recommendations under five overarching goals. EPA convened workgroups and developed implementing tasks for each of the recommendations. The SFTF Recommendation Number 42⁵ pinpoints cleanup and redevelopment of sites through integration of environmental justice and directed the creation of a charge to the National Environmental Justice Advisory Council (NEJAC) for development of recommendations that speak to these issues (for the charge, see [Appendix A](#)).

In establishing the NEJAC Superfund Working Group (SWG), the Office of Environmental Justice (OEJ) worked with NEJAC leadership to develop a diverse array of contamination, remediation, and revitalization experts from across the country representing different levels of government, business and industry, academia, non-profits, and impacted communities ([see membership table on page 3 of this report](#)). The purpose of the working group was to first provide recommendations for the Task Force final report and second, to provide recommendations on community engagement, integration of remediation and reuse, and risk communication at Superfund sites. The SWG issued its preliminary Phase 1 Report in February 2020⁶. As part of that initial effort, the SWG developed guiding principles, which provided the foundation for the strategies, recommendations and expected outcomes described in this report.

Guiding Principles

Guiding principles help set the standard and direction for how stakeholders can operate equitably, effectively, efficiently and consistently. In fact, delegates to the First National People of Color Environmental Leadership Summit (October 1991) held in Washington DC, drafted and adopted 17 principles of Environmental Justice. Since then, *The Principles of Environmental Justice* have served as a defining document for the growing environmental justice movement. It is therefore useful to consider guiding principles for this effort from the perspective of the people impacted by contaminated sites and the potential reuse of those sites. The following guiding principles were considered in the development of these recommendations:

- Issues that communities are most concerned about may not be the primary/same issues that the Superfund program is there to address.

⁴ <https://www.epa.gov/superfund/superfund-task-force>

⁵ SFTF Recommendation 42: Use a Federal Advisory Committee to work with a broad array of stakeholders to identify barriers and opportunities related to cleanup and reuse of Superfund sites

⁶ https://www.epa.gov/sites/production/files/2020-08/documents/nejac_superfund_working_group_phase_1_report_february_2020.pdf

- Be clear about the limits of Superfund’s authority and resources, and help the community identify other resources to address community needs.
- Focus early in the process on developing and maintaining trust within the impacted communities.
- Assure equitable community engagement to the most marginalized communities and stakeholders.
- Assist impacted communities in understanding the legal issues, clean up technologies, and other processes taking place at the site.
- It is the community members health, welfare, and future that are at stake; and information on contaminant levels measured in the environment should be shared with members of the community in a timely manner.
- Apply best practices and seek innovative solutions to achieve results in impacted communities.
- Identify the community’s desired end-use wants and needs early in the process and evaluate remedial alternatives that support that reuse.
- Resources that are available to EJ communities but not readily accessible have limited impact. Improve accessibility of resources to increase distribution of federal funding to EJ communities.
- Agency objectives and community needs are not always aligned. Balance the emphasis to incorporate the needs/issues of the underserved and overburdened communities with the mission objectives of the government programs.
- Support equitable partnerships with other eligible institutions that will increase access to significant resources and ease the burden of proposal development and funding management on impacted communities.
- Alignment between headquarters and regional programs is needed to deliver consistent, measurable benefits to vulnerable, overburdened, underserved and under-resourced communities.
- Regulatory (e.g. permitting, environmental reviews) and non-regulatory functions (e.g. training, funding, technical assistance) need to be coordinated to protect the environment, public health, and economic vitality of EJ communities.
- EPA has an essential role in building the capacity for the impacted community to effectively engage in remediation and redevelopment efforts.
- Commitments made to EJ communities must be backed up with clear accountabilities and performance measures, as well as corrective actions, when those are needed.
- In evaluating the accessibility of potentially available resources, consider and account for the impacts of poverty, disease, and pollution on the capacities of tribal nations and indigenous populations, local governments and non-governmental organizations.
- The mission of the Superfund program should be to protect human health and the environment and also serve as a change agent/facilitator for community engagement, economic renewal, better health, and asset creation.

Background

The NEJAC has been at the forefront of contaminated site cleanup and redevelopment initiatives since its founding. In 1995, the EPA and NEJAC co-sponsored a series of dialogues across the country that provided an opportunity for environmental justice advocates and residents of impacted communities to

provide input on revitalization of abandoned properties called “brownfields.” In December of 1996, NEJAC finalized an extensive set of advice and recommendations for EPA to consider titled *Environmental Justice, Urban Revitalization, and Brownfields: The Search for Authentic Signs of Hope*. A consistent theme throughout the recommendations was the importance of seeking and including communities in decisions and planning. NEJAC’s advice has improved the environment and public health in communities disproportionately burdened by environmental harms and risks by ensuring meaningful involvement in EPA decision-making, building capacity in disproportionately burdened communities, and promoting collaborative problem-solving for issues involving environmental justice.

In addition, several other NEJAC recommendations have provided major contributions to EPA’s thinking and policy development around contamination, local impacts, and community revitalization. These include multiple iterations of recommendations on meaningful public participation and involvement in regulatory processes, a 2004 report *Environmental Justice and Federal Facilities: Recommendations for Improving Stakeholder Relations Between Federal Facilities and Environmental Justice Communities*, in 2015 with *Recommendations for Promoting Community Resilience in Environmental Justice Industrial Waterfront Areas*, and more recently in 2018 with *EPA’s Role in Addressing the Urgent Water Infrastructure Needs of Environmental Justice Communities*.

In 2018, the National Environmental Justice Advisory Council (NEJAC) received a charge ([Appendix A](#)) from the EPA Superfund Task Force to help integrate environmental justice into the cleanup and redevelopment of Superfund and other contaminated sites. The overall goal of the charge is to provide recommendations to the EPA Administrator that will identify barriers, solutions, and best practices to improve our ability to achieve clean-ups of Superfund sites more quickly and with better outcomes for local communities while maintaining our focus on protecting human health and the environment, taking central consideration of the unique burdens and vulnerabilities of environmental justice populations living in and around Superfund sites.

Organization of this Report

The report is organized around seven strategies, with multiple recommendations associated with each strategy. The seven strategies include:

1. Implement more intensive community engagement practices at Superfund sites
2. Revise and update guidance and strengthen policies focused on understanding and responding to community needs
3. Update, improve, and expand training that reaches impacted communities, EPA staff, and state staff
4. Elevate future use planning as a core element of the Superfund process
5. Leverage redevelopment and reuse as a catalyst for innovation and accelerated cleanup
6. Ensure equity in all aspects of the Superfund program
7. Increase access to resources for impacted communities

Each strategy is expanded into recommendations. Many of the recommendations describe implementing actions and the intended outcome - a new “end state” for the Superfund program that

will result in a more effective program, protective of the community from hazardous and toxic chemicals, and enabling the creation of assets aligned with the community's vision that improve the quality of life and expand opportunity.

Superfund is a complex program, with broad variation in the types of contaminants and the media contaminated; whether a site is in an urban, rural, or remote location; whether it is a federal facility or a non-federal site; whether the cleanup is led by EPA or by a Potentially Responsible Party (PRP); and whether a PRP owns the contaminated property. Those site-specific conditions will have a bearing on how best to implement the strategies and recommendations in this report.

As directed in NEJAC's charge⁷, the final section of the report addresses Additional Issues of Concern and Areas of Opportunity related to the Superfund Program. This section lists several additional issues of concern related to the Superfund program that merit further evaluation of impacts and opportunities to improve outcomes for communities.

⁷ Question 5: *Does the NEJAC propose any additional issues related to the clean-up and redevelopment of Superfund sites that are not captured in the questions above? Does the NEJAC identify any issues related to the implementation of the SFTF Plan and Recommendations?*

Strategy 1: Implement more intensive community engagement practices at Superfund sites

Community engagement is crucial to the Superfund program. Meaningful community engagement facilitates understanding and improves decision making by involving those who are most impacted by the decisions. Effective community engagement facilitates bidirectional communication and builds trust and credibility between EPA and the community. Successful community engagement engages affected residents in the decision-making process at the beginning of the investigation and sustains that involvement throughout the cleanup process. As part of EPA's early engagement, the core concerns of the community that are both directly related to the actual and potential release of hazardous contamination should be identified, as well as other concerns regarding community health and welfare that may be less directly related to actual or potential releases. Understanding those concerns can overcome barriers to building trust and active community involvement. Engaging all stakeholders early and often in decision-making ensures that the community's voice and vision are considered throughout the process.

Bringing local experience and knowledge to the table improves the quality of cleanup decisions and builds community support

Stakeholders are likely to come to the table with a range wide range of voices and different visions regarding remediation and redevelopment. For example, people living in the immediate vicinity of the site might be mainly worried about exposure to contamination, or the eyesore of a vacant lot. Others may have a personal attachment to a site where they once worked or feel a special responsibility for the natural resource values of the site. Others may be involved in development initiatives within the community and take an interest in the site from that perspective. All of those perspectives will improve the quality of the cleanup decisions, and an effective engagement process can harmonize the voices and create a vision backed by a broad community consensus.

NEJAC asks EPA to go beyond the regulatory requirements and think creatively when conducting community engagement throughout the Superfund process: proactively host community meetings to address emerging community concerns as work plans are being developed, prepare informational materials for the communities, and use plain language when communicating with the public.

Lack of trust between communities impacted by contaminated sites and government agencies responsible for addressing these sites can be barrier to effective cleanup. A robust community engagement process provides for two-way communication and forms the basis of a working relationship with impacted residents. By regularly and routinely sharing information, bringing people together, collecting information and gathering feedback, trust and respect are earned. Communication gives decision makers insights into past uses of an area as well as access to local experience and knowledge to inform the development of future-use scenarios that support the community's values and culture, and community members bring knowledge to this process that can improve understanding of potential risks. When stakeholders are present at the table and contribute to decisions, it improves the quality of decisions and increases community support for cleanup and redevelopment activities that follow.

In addition to factoring community concerns into the decision-making process, EPA staff should foster ways to encourage robust, honest, and wide-ranging community ideas on tackling Superfund-related issues and engage with an intent to empower the community to be constructively engaged in finding solutions. An important aspect of fostering community engagement is developing communications that are linguistically and culturally appropriate and effective. Ensure that EPA provides materials in the preferred language of the community and has the cultural competencies to communicate respectfully and effectively.

EPA should adopt the core tenets of risk communication in written and oral communications with the community. Risk communication is the process of informing impacted communities about potential hazards to their person, property, or community to enable people to make informed decisions to protect themselves and their loved ones; *it is ultimately the community members' health, future, and welfare that are at risk*. In following these core tenets, trust is more likely to follow. With trust, the intended long-term benefits to the community from cleanup and redevelopment are more likely to be realized and maximized.

Recommendations aligned with Strategy 1 include:

1.1: Identify Superfund sites impacting EJ communities

1.2: Support and fund an ombudsperson role whose responsibilities would include improving community access to information and amplifying community voices in decision making

1.3: Strengthen and standardize the use of EPA's successful community engagement tools and resources

1.4: Engage local government early and regularly throughout the cleanup process

1.5: Improve EPA and state staff ability to address risk communication at Superfund sites through increased resources, training, and guidance

Recommendation 1.1: Identify Superfund sites impacting EJ communities

EPA's own data show that Superfund sites disproportionately impact minorities, people living under the poverty level, and communities who are linguistically isolated.⁸ EPA should perform an NPL-wide analysis of the demographics in the communities surrounding Superfund sites to give the program and the public a clearer picture of the impacted communities. From that information, develop a list of sites currently on the NPL that are impacting EJ communities. Within that list, identify those sites where the community impacts are greatest. That basic information is essential in order to implement many of the strategies and recommendations in this report.

On a periodic basis, measure and report on remediation and redevelopment progress at these sites, and on other measures associated with the strategies outlined in this report.

⁸ U.S. EPA, Office of Land and Emergency Management 2020. Data collected includes: (1) Superfund site information from SEMS as of the end of FY2019 and site boundary data from FY 2014 FOIA Request; and (2) population data from the 2015-2018 American Community Survey. <https://www.epa.gov/sites/production/files/2015-09/documents/webpopulationrsuperfundsites9.28.15.pdf>

Recommendation 1.2: Support and fund an ombudsperson role whose responsibilities would include improving community access to information and amplifying community voices in decision making

The Agency should expand community access to information by supporting (including financial support) a community ombudsperson role to improve communications between EPA and the community. The duties of this position should include facilitating and building consensus; serving as a liaison between the community, EPA, local/state government, and other stakeholders; and keeping project information up to date and accessible to affected stakeholders. Improving the flow of information to the impacted population is especially important at active sites where conditions are regularly changing. For sites with Community Advisory Group (CAG), the role of the ombudsperson would supplement and complement the work of the CAG.

While EPA's Community Involvement Coordinators (CICs) in the regional offices currently implement some of these roles, the CICs are often working on many different sites and are not able to keep up with the site-specific issues at any given Superfund cleanup site. Using a local resident in this role would not only increase the focus on the selected site but would also provide the community more influence in the process.

Recommendation 1.3: Strengthen and standardize the use of EPA's successful community engagement tools and resources

EPA has a wide range of tools and resources focused on community engagement. The Superfund program should expand and improve those programs that have demonstrated their effectiveness in giving a voice to communities during the cleanup process. Further, and more importantly, EPA needs to focus on the consistent application of these tools. Some tools and resources that have helped communities but need more focus include, but are not limited to:

- *The Superfund Community Involvement Handbook*⁹ – Update the Superfund Community Involvement Handbook to stay current with major advances in information technology and tools for communicating with the public. NEJAC recommends that EPA review and, as appropriate, update the handbook every five to seven years.
- *Community Involvement Plans* – CIPs should be updated and shared with the community as conditions and/or cleanup schedules change in order to effectively engage stakeholders over the duration of the cleanup process. Engage the community in the development of the CIP and actively publicize how the community can access the CIP. Build/develop the CIP based on a robust understanding of the community's concerns and develop the CIP to promote long-term community engagement.
- *Access to Information Repositories/Administrative Records* – At each site, EPA should be accountable for ensuring that the community has timely, economical, and easy access to Administrative Records and other information needed to support the community's ability to provide informed comment on the cleanup. Many of the documents in an Administrative Record

⁹ <https://semspub.epa.gov/work/HQ/100002505.pdf>

are highly technical in nature, and the community should receive technical support to help interested community stakeholders understand key assumptions, evaluations, and conclusions in those reports.

- *Getting Risk Communication Right: Helping Communities Plan at Superfund Sites*¹⁰– Adopt and broadly implement the tools and resources in EPA’s recent planning guidance.
- *International Association of Public Participation’s Public Participation Spectrum*¹¹ – EPA should regularly utilize this tool as a basis for determining what level of communication/information is needed to maximize the impact and the benefits of community input.
- *Language and Cultural Sensitivity Resources* – Expand the available resources for Superfund Program staff related to language and cultural competency/sensitivity.
- *EPA Superfund Website*¹² – Configure a streamlined website update process that RPMs can manage and update without undue effort. Improve frequency and consistency in updates of EPA’s Superfund website. Many communities rely on EPA’s website as a primary source for current information. Maintaining a regularly updated website, summarizing recent activities and the path forward, keeps the community informed and engaged.

As part of community engagement, EPA should inform and demonstrate to the community its Contaminated Site Clean-up Information (CLU-IN) website¹³. The range of topics and the knowledge base covered in CLU-IN is extensive, and EPA should help the community select and access the available webinars and tools most relevant to their site.

Recommendation 1.4: Engage local government early and regularly throughout the cleanup process

Local government is often the first source of information for residents on local issues and matters of local concern. Engaging local government staff in the Superfund project throughout the process increases transparency, communication, and can help reduce challenges as the project progresses. Developing relationships with local government also facilitates the identification of opportunities for increasing resources and local government-assistance.

Early in the process, EPA technical and community involvement staff should meet with appropriate local government staff. This may include, but not be limited to, environmental services, neighborhood/community services, planning and zoning, and economic development. EPA should provide information on site conditions, plans (technical and community involvement), and proposed schedules, and coordinate with local government. EPA can further support local governments by helping those governments identify relevant federal grant opportunities. In turn, municipal staff can provide knowledge of the area and available information on the surrounding community, permitting requirements, zoning requirements, land use plans, market analysis, development connections,

¹⁰ <https://semspub.epa.gov/work/HQ/199587.pdf>

¹¹ <https://www.iap2.org/mpage/Home>

¹² <https://www.epa.gov/superfund>

¹³ <https://clu-in.org/>

community involvement opportunities, public facilities available for meetings, and insights on community leaders.

An effective strategy for engaging local governments may include the identification of a Point of Contact (POC) from the municipality to serve as the liaison with EPA. EPA staff should provide notification of significant community involvement and technical activities to the POC, who in turn can engage other municipal staff and facilitate partnerships, as appropriate. The POC should also engage with local elected officials to assist with community outreach and potential pursuit of federal, state, and local funding opportunities.

Recommendation 1.5: Improve EPA and state staff's ability to address risk communication at Superfund sites through increased resources, training, and guidance

In order to fill the gaps in skills and resources that may impact the effectiveness of risk communication, the agency should provide additional training for EPA and state staff. Recommended steps in this process include:

- As part of Remedial Project Manager (RPM) training, build skills and establish expectations that the RPM's role includes understanding the impacted community's needs and concerns, including concerns that may not be directly related to the Superfund site.
- Build skills and competence in: 1) responding to difficult questions in a manner that is responsive to the question and respectful of the questioner, without escalating tension; 2) developing an effective risk communication strategy; 3) recognizing differing values within their audience; and 4) identifying why people perceive and respond to risk the way they do.
- Increase resources for building capacity in local community organizations to effectively use risk communication measures.
- Broadly disseminate *Getting Risk Communication Right: Helping Communities Plan at Superfund Sites*¹⁴, a product of the Agency's Superfund Task Force effort which provides tools, strategies, and a wide range of risk communication resources. Expand the scope of this guidance to address the full Superfund process (it currently focuses on post-construction/long-term stewardship) and add more granular recommendations on specific actions.
- Increase resources for community engagement through cooperative agreements made available to impacted community organizations who can engage academic, nonprofit, local government and private sector partners.
- Include local community leaders as experts to help with engagement and provide resources for their participation including payment for their time.
- Share data and information on contaminant levels measured in the environment with members of the community in a timely manner. It is not appropriate to hold data that bears on community members' health until such time as all data uncertainties are resolved. EPA should make data available to the public as soon as practical, explaining relevant uncertainties in the data or mitigating factors as appropriate, along with EPA's plan for resolving those uncertainties.

¹⁴ <https://semspub.epa.gov/work/HQ/199587.pdf>

- Explore and leverage emerging online community engagement tools that allow community members to participate and provide their contributions when they are able. These platforms allow for more time flexibility (24/7), more creative contributions (e.g., community visioning, open house, comments), and collaborative responses and engage a potentially broader audience (e.g., youth, families, evening, or weekend workers).

Expected Outcomes (and Accountabilities):

- Perform an analysis of the demographics in the communities surrounding Superfund sites and share it with the public (OSRTI Director)
- Issue program guidance that describes and promotes an ombudsman/community liaison role (OSRTI Director)
- Develop and publish a plan for strengthening and sharing Superfund tools and resources (OSRTI Director)
- Develop briefing and training curriculum based on *Getting Risk Communication Right*, with training delivered at NARPM (OSRTI/Community Involvement and Program Initiative Branch Chief)
- Adapt/update *Getting Risk Communication Right* to cover the full Superfund process (Community Involvement and Program Initiative Branch Chief)

Case Study: Memphis Defense Depot

Location: Memphis, Tennessee

Timeline: 1992 placed on NPL, 1998 start of remedial action, 2012 remedial construction completed

Site History:

At the height of World War II, the Memphis General Depot had nearly 5,000 civilian and military personnel helping supply the Army. The 632-acre site, now Memphis Defense Depot, was a warehousing and distribution center for the U.S. military where waste handling and disposal occurred. The Memphis Depot closed in 1997.



Because this was a Federal Facility there were multiple partners involved over the years: Department of Defense, the Environmental Protection Agency, and the Tennessee Department of Environment & Conservation. All three major agencies shared roles of monitoring, evaluating and informing the public. Initially, this may have added to some of the confusion the community had in understanding who was in charge of specific aspects of the remediation process and navigating the flow of information.

In 2006, a multi-phase, multi-approach cleanup with remedial actions was performed concurrently, including the removal of contaminated waste and soil. Some in the community felt the cleanup was not a thorough cleanup that would protect the health of the community.

Community Role:

The African American community around the Depot formed an organization in the mid-1990's. The organization believed the Depot had been a source of toxic contamination in their community for almost 50 years. Community members provided numerous testimonies from people in the neighborhood that had and/or died of cancer over the years and complaints from Depot workers about miscarriages and other medical issues they felt may have been connected to the contamination.

The EPA provided a scientific expert to explain the recommended groundwater treatment process. Because of a lack of trust that was built over decades, many in the community were suspicious about the accuracy and completeness of the information. The community organization leaders made regular visits to the National Environmental Justice Advisory Council meetings to testify to what they saw as a cover-up and incomplete remediation efforts, that would result in an inadequate cleanup that was not protective of the community's health and safety.

Challenges/Barriers:

- Information was not easily understood and was slow to be released to the community, which allowed time for conspiracy theories and doubt to flourish.
- Initially, there was conflicting information about the extent of contamination at the Defense Depot and there were workers trying to discredit the community group by saying there was not contamination at the facility.
- The lack of information in the community led to mistrust of those in charge.

Successes:

- The City of Memphis was involved and committed to ensuring the site would not end up as a contaminated eyesore.
- A federal facilities agreement was made between the Department of Defense, EPA, and the Tennessee Department of Environment & Conservation.
- The City of Memphis, Shelby County, Tennessee Department of Environment, and other organizations offered incentives to bring business to the area such as tax breaks, gas and electricity use credits, and other incentives.

Outcomes:

There are now new uses and developments on the old Defense Depot site, such as a homeless shelter, golf course, and lake. However, there are two areas of concern that remain troublesome to community members: occupancy and land restrictions. The most recent land restrictions document made it clear that none of the installation should be used for housing, gardening, or food consumption. There may be restrictions for children as well. The shelter, which houses homeless, mentally ill, and disabled veterans, and has been planting a vegetable garden in the area near the living quarters. There are on-going questions about the land restrictions and whether they are being enforced. The non-profit that runs the homeless shelter said they have had a garden for the past five years or more.

Key Takeaways:

- Communication got off to a poor start, and trust was damaged. This lack of trust persisted throughout the remediation process and lingers today. Early engagement to hear the community's concerns, communicate site information in plain language, and provide regular updates would have improved the process.
- Meeting planners and facilitators should be keenly aware of their audience and use site-specific considerations when planning and conducting outreach and information sharing/gathering meetings.
- Once spokespersons for the cleanup agencies have lost the trust of the community, use trusted 'messengers' or facilitators to communicate with the public.
- Where there are ongoing questions about the safety of the site, EPA should support the community by maintaining an ongoing oversight role and identify a community contact. That contact must be knowledgeable about the site and the cleanup history.

Strategy 2: Revise and update guidance and strengthen policies focused on understanding and responding to community needs

EPA has developed a substantial body of guidance addressing a wide range of technical and community involvement aspects of the Superfund program. However, much of that guidance is dated, and does not describe the processes and practices necessary to realize EPA's commitment to effectively infuse equity and racial justice in all aspects of what the federal government does. The NEJAC recommends revising existing guidance and developing new guidance focused on identifying and integrating the needs of the community in the Superfund process. Two additional areas that we examine are improving the consistency in application of the Superfund policies and promoting the use of best practices through robust information sharing tools and forums. Employing these strategies will allow decision makers to develop skills, result in a higher level of consistency of interaction with communities and improve decisions regarding community involvement.

Expand the goals and objectives of Superfund to include:

- Promoting redevelopment
- Improving community health
- Creating durable community assets

Recommendations aligned with Strategy 2 include:

- 2.1: Develop and issue a program-level Decision-Making Engagement Guidance aimed at more substantive and consistent involvement of impacted populations.
- 2.2: Develop and issue guidance on using an Impacted Community Centric/Concentric Circle Approach to Stakeholder Engagement.
- 2.3: Develop and issue revised guidance (and training) on remedy enhancement and betterment, as an update to OSWER Directive 9200.3-110.
- 2.4: Establish and maintain a Case Study Repository, with structured data collection and search capabilities.
- 2.5: Establish/promote "Communities of Practice" among RPMs structured around technologies, site types, or other knowledge categories for sharing best practices.

Recommendation 2.1: Develop a program-level Decision-Making Engagement Guidance aimed at more substantive and consistent involvement of impacted populations

Develop guidance that describes consistent, efficient, and effective planning procedures and commitments for including impacted populations in relevant phases of the remedial process, both before and after EPA makes a remedy selection decision. The core principle underlying the guidance is achieving consistent early community engagement to develop a community-supported vision for the desired re-use "end-state" of the project. The guidance should describe the elements of a site-specific Decision-Making Engagement Plan (Plan). Listening to the community and understanding community concerns and needs and early engagement on community visioning are essential parts of the Plan. The Plan should engage/connect with non-EPA entities involved with reuse/redevelopment planning and

implementation including both local redevelopment and planning agencies, and community groups. The guidance should delineate:

- Phases for EPA decision-making,
- Legal criteria,
- Site history and conditions, and other relevant components; and
- Stages at which community group input will be formally taken.

The Plan should provide for impacted population engagement at multiple points in the decision-making process. Engagement should be initiated early, continue through multiple phases of the project, keep the community informed of changing conditions, and be inclusive.

RPM training should emphasize the importance of getting input from all impacted communities and obtaining their perspectives and understanding of the site. For instance, when working on a tribal reservation, tribes are a sovereign nation. Based on that status, tribes should not be treated any differently than a state. Many of these Nations signed treaties and are left to reside on these lands if they want to exercise their treaty rights. Furthermore, in making decisions concerning the future of a site, tribes may consider a seven-generation time frame, which may lead to a different set of priorities when compared to a 50 to 100-year time horizon. Determinations about the level of cleanup should be fully informed by concerns and priorities of the impacted community, as it is the community's health and welfare that has been harmed by past exposure, and the community's future that is at stake.

More consistent practices across the EPA Regions would assist with increasing community involvement. Keeping site-specific websites up to date allows the impacted community to stay informed about current and upcoming cleanup activities. If those activities deviate from that public information or create concerns in the community, it can set back the trust-building that is essential to effective community engagement. For instance, site specific experiences in EPA Regions 9 and 10 reported to the NEJAC indicate that Region 9 addresses some of their impacted communities' cultural beliefs on a site-specific basis while Region 10 relies more on regional protocols. The latter type of "regional solution" does not take into account variances in community practices and beliefs.

Recommendation 2.2: Develop and issue guidance on using an Impacted Community Centric/Concentric Circle Approach to Stakeholder Engagement

EPA's 2016 Superfund Community Involvement Handbook¹⁵ lays out effective tools and processes that promote early and meaningful community engagement. One of the challenges facing EPA's community involvement process is to identify the full range of impacted communities. NEJAC recommends that EPA adopt a community-centric/concentric circle approach, starting with the impacted population at the center, and "radiating" outward to fully engage other stakeholders, partners, and resources. Provide opportunities for other organizations outside of EPA to come to the table to cultivate a broader base of

¹⁵ <https://semspub.epa.gov/work/HQ/100000070.pdf>.

community knowledge, and better understanding of available resources. [Appendix B](#) includes a concentric circle framework for identifying stakeholder groups to engage.

Recommendation 2.3: Develop and issue revised guidance (and training) on remedy enhancement and betterment, as an update to OSWER Directive 9200.3-110

Revisit/revise existing guidance on remedy enhancement and betterment. Expand that guidance to promote redevelopment and creation of community assets through collaboration with government, NGO and private sector partnerships. Develop/issue guidance that provides tools and strategies for leveraging Superfund cleanups to engage communities in site redevelopment, improve community health, and create community assets. Incorporate principles from that guidance into existing RPM training materials

Recommendation 2.4: Establish and maintain a Case Study Repository, with structured data collection and search capabilities

Establish and maintain a Case Study Repository configured for use as a best-practices implementation tool. The repository should include cases that reflect successful approaches, as well as those where goals and objectives were not fully realized. By using a structured template and maintaining a repository

While site narratives are a key part of a case study, the narrative alone does not serve as an effective knowledge tool for understanding what worked, and why.

with robust search capabilities, case study information will be more accessible, retrievable, and readily analyzed in planning and preparing for other projects. The repository becomes more useful as more case studies are added. While site narratives are a key part of a case study, the narrative alone does not serve as an effective knowledge tool for understanding what worked, and why. Promote best practices and learn from failures. Those failures often are the most valuable and important “lessons learned”. A proposed template for case study data collection is in [Appendix C](#).

Recommendation 2.5: Establish/promote “Communities of Practice” among RPMs for sharing best practices

Under Superfund’s Technology Innovation and Field Services Division, establish communities of practice for groups of RPMs who share a concern and expertise related to technologies, site types, or other knowledge categories to interact regularly to share what they know and build their expertise.

Expected Outcomes (and Accountabilities):

- Develop/issue Decision-Making Engagement Guidance which incorporates community-centric/concentric circle approach to more comprehensive stakeholder engagement (OSRTI/Community Involvement and Program Initiative Branch Chief)
- Develop a case study repository template (a proposed template is included in [Appendix C](#)) and implement a process for transferring information from previously published case studies and capture data from future case studies. (OSRTI Director)

- Create and charge an internal EPA stakeholder group to re-evaluate and update OSWER Directive 9200.3-110, with the goal of removing or reducing constraints and providing tools and strategies for leveraging Superfund cleanups to create community assets (OSRTI Director)
- Form Communities of Practice structured around technologies and major site “types” within the Superfund program. Designate CoP leaders and invite RPMs nationwide to participate in CoPs. Establish goals and objectives for CoPs for communications and information sharing. (OSRTI Director)

Case Study: Eastern Michaud Flats

Location: Pocatello, Idaho

Timeline: Listed on the NPL in 1991, interim remedy construction began in 2010 at the Simplot OU, and in 2014 at the FMC OU

Site History:

The 2,530-acre Eastern Michaud Flats (EMF) Superfund Site is divided into three separate cleanup areas called operable units (OUs): the former FMC Plant (OU1), the Simplot Don Plant OU (OU2) and the Off Plant (OU3). OU1 and OU2 started processing phosphate ore in the 1940s. OU1, the FMC site, is located within the exterior boundaries of the Fort Hall Reservation, on Bureau of Land Management (BLM) land and was historically used to hunt wild game and gather culturally significant plants. OU2 is an operating facility located directly to the east of the reservation on state land, producing fertilizer products. It includes a mountain-size gypsum stack which has residual radioactivity. Water contaminated with heavy metals continues to discharge to an adjacent river that flows onto the Fort Hall Reservation and into a culturally significant site.

Community Impacts:

The community suffered severe air quality impacts for decades until the OU1 plant shut down in 2001. Members of the community frequently complained of upper respiratory illnesses, and a Fort Hall Health Study conducted by University of Oregon found an increased rate of upper respiratory illness in children living on the Fort Hall Reservation. Although air quality has improved, impacts still are present from the OU2 plant, which continues to operate. While OU2 has air permits issued by the State of Idaho, some of the contaminants permitted for release were identified as contributors to adverse human health and ecological risks in the Remedial Investigation completed in the 1990s. Fluoride emissions are permitted for OU2, but the plant frequently violates air permit discharge limits, depositing increased amounts of fluoride on private landowners property and the Fort Hall Reservation. Contaminated groundwater continues to flow off of both the OU1 and OU2 plant sites onto the Fort Hall Reservation.

Historic source of/nature of contamination:

FMC/OU1 has over 16,000 tons of elemental phosphorus buried beneath the old furnace building area and 22 rail cars with unknown amounts of elemental phosphorus buried within a slag pile. It has over 12 ponds with varying amounts of metal and radioactive materials which are capped on-site. These ponds continuously generate phosphine gas which seeps into the soils and at times outside the ponds; and the ponds continue to serve as sources of groundwater contamination at the site. The OU2 plant is an



operating facility whose day to day operations are regulated by the state. Its gypsum stack is a source of groundwater contamination as are some of the process areas including historic leaking lines.

Impediments to cleanup:

Political differences have hindered the cleanup of this site, and the responsible party has been recalcitrant in its willingness to clean up. OU1 has been re-graded; radioactive slag that was piled up on the site was spread throughout the site with a 14-inch soil cover to prevent contamination. There is disagreement whether the aquifer must be restored and whether the contamination must be contained on site or treated to reduce the contamination. These issues have been debated for almost 30 years and remain unresolved. The OU2 plant continues to violate state issued permits for fluoride emissions, and the groundwater contamination is not fully contained and continues to flow off-site. The gypsum stack has been lined and the amount of water flowing through the stack has decreased but the concentration of the contamination is thought to have increased due to less dilution. There has been at least one breach to the gypsum stack liner which caused contaminated water to flow onto the BLM land near the reservation.

Outcomes:

Portions of the OU1 have been redeveloped. The state portion of the site includes an agricultural business that was developed prior to the remediation being completed. This business is a specialty agricultural mixing facility that was built on top of one of the capped areas. All groundwater extraction and treatment work at the site was put on hold, at the request of FMC, the owners of OU1, and with permission of EPA to facilitate this new business. The remainder of the site continues to work through the capping, maintenance, and groundwater extraction studies.

Some elemental phosphorus contaminated material excavated during their re-grading phase is shipped offsite from OU1. Phosphine monitoring and treatment of the ponds continues. The tribes are in communication with EPA to address groundwater impacts as well as other contaminant releases from the 22 rail cars. The tribes continue to work to have the rail cars removed and permanently treat the elemental phosphorus in the ground at this site.

Community Engagement

EPA leads the Superfund cleanup work at EMF, while the state is responsible for the existing permits. There has been little community involvement related to OU2. Tribes continue to be involved in the both sites, focusing on the cleanup. The owner of OU1 and the tribes are in an ongoing lawsuit regarding jurisdiction and permitting; in January, 2021 the US Supreme court refused to hear a request from FMC to review a lower court finding that the Tribes had jurisdiction of the site. The Tribes now have recognized court jurisdiction and will work with EPA on asserting Tribal laws. The Tribes have another lawsuit pending against OU2. The owner of OU2 is working with the government to increase their gypsum stack and ponds. The tribes are adamantly against such actions that will limit their use of federal lands in the area and lead to greater contamination.

EPA failed to complete its first 5-year review for the site. On-going air discharge violations from the OU2 are not made public, and there is no apparent follow up when complaints regarding air odors are made by the community to the state. The community has not been kept adequately informed regarding the ongoing phosphine generation or emissions from the site. The second 5-year review was completed with no Tribal government consultation, despite being located on Tribal lands.

The population in the surrounding area has increased in recent years. There are now housing developments, schools, and other structures in the area. Newer members of the surrounding community generally have limited awareness of the radioactive properties of the nearby gypsum stack.

Key Takeaways:

- Pollution on tribal lands are often not addressed in a timely manner and cleanup standards can be lower than in other areas.
- Native American risk scenarios should be conducted at sites impacting tribal communities.
- EPA staff working on sites with tribal governments should have relevant cultural training.
- There needs to be more consistency across Superfund site responses and engagement.

Strategy 3: Update, improve, and expand training that reaches impacted communities, EPA staff, and state staff

Investments in training community members promotes more - and more effective - community engagement

Training is a critical aspect of EPA’s work at Superfund sites. Training helps EPA and state government staff understand the community’s role in the process, and it equips community members and other local stakeholders with a knowledge base that enhances the impacted community’s ability to engage effectively and fully. The three areas of training addressed under this recommendation are:

- **Elevating the environmental health literacy within the community** – Elevating the community’s environmental health literacy enhances community members’ capacity to make informed decisions about environmental exposures that can affect health and more effectively contribute to the site remediation decision-making process.
- **Providing additional training to EPA Superfund staff** – EPA staff working at Superfund sites have a responsibility required by law to engage the community in the cleanup process. Build the capabilities of EPA staff through community involvement and risk communication training. Provide that training to EPA Community Involvement Coordinators, Remedial Project Managers, On-Scene Coordinators and other EPA staff to build the necessary skills, techniques and practices to engage the community more effectively in the Superfund process.
- **Providing State Superfund staff greater access to EPA training and resources** – State and tribal governments are assuming a larger role in Superfund cleanups, and EPA’s performance expectations and requirements do not change when state governments are in the lead role, including those requirements for community engagement and involvement. However, many states do not possess sufficient training resources related to Superfund cleanups. EPA should provide more training opportunities to the states and tribes on Superfund related activities, specifically the community engagement skills necessary to undertake these cleanups.

Employing these strategies will allow government staff to build engagement skills; bring about a higher level of consistency when interacting with communities and provide stakeholders with the knowledge that is vital to making informed decisions. Training must be available in various forms to accommodate the availability of stakeholders (face-to-face, webinars, and virtual methods of training).

Recommendations aligned with Strategy 3 include:

- 3.1: Hold in-person and on-line training in the impacted communities on the relevant issues prior to the start of the remediation process to give local stakeholders a basic understanding of the Superfund process, technologies associated with the remediation, and associated impacts
- 3.2: Increase funding and expand community access to EPA training resources and tools
- 3.3: Include funding for dedicated Superfund community training specialists

3.4: Update/enhance EPA’s internal training on community engagement for staff working in communities around Superfund sites

3.5: Provide “community engagement mentoring” for EPA staff

3.6: Provide State Superfund staff broader access to EPA training and resources

Recommendation 3.1: Hold in-person and on-line training in the impacted communities on the relevant issues prior to the start of the remediation process to give local stakeholders a basic understanding of the Superfund process, potential technologies associated with the remediation, and associated impacts

Face-to-face training supplemented with on-line training options should be made available in communities prior to the start of the cleanup process (during pre-remedial activities or at start of the Remedial Investigation) to give the impacted community critical information related to the complex set of processes that take place at Superfund sites. This training should be grounded in an initial needs assessment with the impacted community at the commencement of the Superfund process (See Recommendation 4.2 on revising existing practices to make a community needs assessment a required step in the process at environmental justice sites). Where face-to-face training is feasible, that creates an opportunity to build trust between EPA, local government, and the community. Training should be tailored to the issues surrounding the remediation and the information requested by the community. Community training is not a “one and done”; it should occur at appropriate points throughout the cleanup process. As part of this process, EPA should include community leaders in the development and delivery of training. That community leadership input will help tailor the training to address the unique needs and cultures of the community.

While training should be tailored to the needs of individual communities, common training modules for the community should address: 1) Building capacity and leadership; 2) General environmental issues and EPA/regulatory roles and policies; 3) Human health exposures, risks, assumptions and assessment of cumulative impacts; 4) General cleanup options (e.g. source removal, institutional and engineering controls, natural attenuation); 5) Redevelopment and reuse options; and, 6) Grant opportunities.

Recommendation 3.2: Increase funding and expand community access to EPA training resources and tools

EPA has a wide range of informative and skill-building resources on Superfund cleanups. Much of this training is only available to EPA staff. Training programs available to communities are limited, not readily accessible, generally underfunded, and vary by region. For example, NEJAC recognizes the positive work in EPA Region 4 that led to the establishment of the EJ Academy, which encourages collaborative problem solving between community-based organizations, local government, small businesses, academic institutions and industry, to create a shared vision so that all who are a part of the community can have a voice. However, NEJAC is unaware of similar training resources in other EPA Regions.

Accessibility and promotion are complementary. EPA should more actively promote the available training materials so impacted communities are aware of these resources. These include resources such

as the Superfund Community Involvement Handbook¹⁶, Community Involvement Toolkit¹⁷, Citizen's Guide to Treatment Technologies¹⁸, EJSCREEN¹⁹, and Trainex²⁰. Information on these programs and how to access them should be provided as part of community outreach.

Funding for EPA's Community Involvement University (CIU)²¹ should be increased, and access should be expanded to all interested stakeholders, states, and the general public. NEJAC's understanding is that training through the CIU is available only to EPA staff. Additional training modules may need to be developed and/or modified to meet the needs of communities.

Recommendation 3.3: Create and fund a core team of dedicated Superfund community training specialists

Effective training depends on both the quality of the course content and the ability to convey that material clearly and effectively. The teaching part is both an art and a skill, and not everyone is cut out to teach and train. To make training more effective, EPA should add or redeploy current staff to serve as dedicated trainers (training specialists), who would work across the EPA Regions for both internal community involvement training for EPA staff ([Recommendation 3.4](#)), and external training for communities ([Recommendation 3.1](#)).

Recommendation 3.4: Update/enhance EPA's internal training on community engagement for staff working in communities around Superfund sites

Community involvement training should be part of the core curriculum for EPA staff working in communities surrounding Superfund sites. This training should be periodically refreshed to help EPA staff retain and build these skills.

A Superfund Community Involvement training module should emphasize the fundamentals of public participation, working with environmental justice communities, risk communication, collaborative problem solving, and resources, tools and techniques for working effectively with communities associated with a Superfund site. The targeted outcome from this training should be to: 1) elevate the priority of community involvement among staff; 2) enhance communication with the public; 3) encourage the use of plain language; and, 4) improve community involvement overall. The Office of

¹⁶ <https://semspub.epa.gov/work/HQ/100002505.pdf>

¹⁷ <https://www.epa.gov/superfund/superfund-community-involvement-tools-and-resources>

¹⁸ <https://www.epa.gov/remedytech/citizens-guide-treatment-technologies>

¹⁹ <https://www.epa.gov/ejscreen>

²⁰ <https://www.trainex.org/>

²¹ <https://www.epa.gov/superfund/superfund-community-involvement-university>

Environmental Justice and the Superfund program should collaborate in the development of this updated training.

Internal conferences and training opportunities should be made available to stakeholders outside the agency. Conferences such as NARPM, the National Brownfields Conference, the Community Involvement Conference and other EPA-hosted EJ-related conferences present an opportunity for stakeholders to learn, alongside EPA staff, about the issues impacting their communities.

Recommendation 3.5: Provide “community engagement mentoring” for EPA staff

NEJAC members representing state, tribal, and community groups who have worked at multiple Superfund sites have experienced inconsistencies in how information is communicated and how cleanup processes are implemented across different sites. Inevitably, some RPMs and CICs have well developed skills and the desire to engage with the community and others struggle to connect effectively with communities.

Learning from experienced staff will also help to build a culture of meaningful community engagement within the Superfund program.

To improve this, a greater reliance on training specialists (Recommendation 3.3) should be combined with a formalized mentoring program for new RPMs and CICs. Mentoring is valuable, not only because of the knowledge and skills new EPA staff can learn from mentors, but also because mentoring gives newer staff more opportunities and experiences working with communities. Learning from experienced staff will also help to build a culture of meaningful community engagement within the Superfund program.

Recommendation 3.6: Provide State Superfund staff broader access to EPA training

EPA should provide training access to state Superfund staff. Individual states vary widely in terms of how effectively they integrate community engagement or environmental justice personnel into their Superfund remediation efforts. Through this joint participation in training, involving both EPA and state staff, more state Superfund programs will improve performance and elevate community involvement as a core component of their Superfund programs. To strengthen the EPA-State alignment, state Superfund programs should be encouraged to assign a liaison to the agency.

Designated state personnel should be informed of upcoming activities/meetings with the public and have the responsibility of keeping their agency abreast of activities. The “state liaison” should have an open invitation to attend all events, including community interviews. This could aid in creating a stronger collaboration with states, helping state programs address environmental justice issues in a more effective manner and learning new techniques/approaches for working effectively with EJ communities.

Expected Outcomes and (Accountabilities):

- Expand access to the *Community Involvement University* to impacted communities and the public (Chief, Community Involvement and Program Initiatives Branch)
- Design, incentivize, and launch RPM Mentorship program (OSRTI Director)
- Create new positions and provide funding for 5-10 FTE training specialists within OSRTI (OSRTI Director)
- Develop briefing and training curriculum based on *Getting Risk Communication Right*, with training delivered at NARPM (OSRTI/Community Involvement and Program Initiative Branch Chief)

Case Study: Tar Creek

Location: Picher and Cardin, Oklahoma

Timeline: EPA added the site to the NPL in 1983. The site has multiple Operable Units. Long-term cleanup plans for OU1, OU2, and OU4 were selected in 1984, 1997, and 2008 Records of Decision. EPA has not selected a cleanup plan for OU5.

Site History:

The Tar Creek Superfund site is a 40-square-mile area of mine tailings, former mines, and acid mine drainage areas in Ottawa County, Oklahoma. The site is also part of the Tri-State Mining District, which spans parts of Oklahoma, Kansas and Missouri. Beginning in the mid-1800s, the district produced vast amounts of lead and zinc. The mining era left a legacy of open mine shafts, acid mine water, areas prone to subsidence, and large volumes of mining and milling wastes contaminated with lead, zinc, and cadmium.



Impacted Communities:

- *Community/Local residents* – Residents across a 40 square mile area of NE Oklahoma, including the towns of Picher, Cardin, Quapaw, Commerce, and North Miami
- *EJ Groups* – L.E.A.D. (Local Environmental Action Demanded) Agency
- *NGOs/Universities* – Tar Creek-Keeper (part of the Water Keeper Alliance); Northeast Technology Center at Afton
- *Local Government* – Quapaw Tribe Environmental Office

Community Impacts:

Waste in the form of large chat and tailing piles, and contaminated soils, surface and ground water are sources of exposure to the citizens. Children are the most sensitive population for lead and heavy metal exposures. Prior to yard cleanups, a percentage of young children living within the five-city mining area were known to have very high blood lead levels, with up to 34% of children having elevated blood lead levels in Ottawa County. Tar Creek has disproportionately affected the Quapaw Nation in Oklahoma.

Overall impacts included:

- Adverse health effects from exposure to heavy metals
- Over 1,300 open or poorly sealed mine shafts
- Extensive subsidence problems
- Approximately 75 million tons of remaining mine tailings
- Poor community drainage and chronic flooding
- Mine discharges that contaminate waters and impair water quality

Cleanup Status/Impediments:

The enormous size of the contaminated area (40 square miles; 75 million tons of chat and fine tailings with high concentrations of lead and zinc) and associated cost of cleanup were barriers to cleanup. Insufficient coordination within and between federal stakeholders, the State of Oklahoma, and the Quapaw Tribe were also an impediment to progress.

Activities include the cleanup of contaminated surface water and groundwater, remediation of residential properties, remediation of “chat” piles and other mining and milling wastes and smelter wastes, and cleanup of contaminated sediments in rivers.

Currently:

- Surface Water/Ground Water: Eleven years of ground water monitoring, installation of drinking water wells, and plugging of abandoned wells to protect the drinking water aquifer
- Residential Properties: Testing and remediation of yards, alley ways, and public areas throughout the site. EPA remediated nearly 3,000 residential and HAA properties from 1997 to 2014. Oklahoma DEQ continues to remediate additional properties.
- Chat Piles, Other Mine and Mill Wastes, Smelter Wastes: Cleanup of multiple “distal areas” with large chat piles and fine tailings; over 700 voluntary property buy-outs with relocation assistance to displaced residents and businesses.
- Contaminated Surface Waters, Sediments, and Mine Shafts: The final Remedial Investigation and the final Human Health Risk Assessment were issued in 2020. Work on the Feasibility study is ongoing.

Longer-term cleanup of mining and milling wastes and the area’s groundwater is expected to take several decades, with completion by approximately 2040. Primary future uses include agriculture, wildlife habitat restoration, and historic preservation of important cultural resources.

Community Engagement

The Quapaw Tribe received a Management Assistance Grant from EPA to ensure that the Quapaw would have meaningful and substantial involvement in oversight, reviewing and commenting on technical reports, attending technical and public meetings, and ensuring that remedial activities are completed in accordance with applicable laws. The Quapaw Tribe’s leadership role ensured that resulting reuse plans were grounded in cleanup and future use considerations, reflecting tribal priorities and protectiveness considerations.

Successful Outcomes:

- As measured in 1994, 34% of children in Ottawa County had elevated blood lead levels above the then reference level set by the Center for Disease Control (10 ug/dL). In 2018, the percentage of children with high blood lead levels above the revised reference level of 5 ug/dL is below 4%.
- Twenty-six members of the community participated in a training program focused on pre-employment, life-skills and technical training for hazardous waste site cleanup as well as other environmental work through the Superfund Job Training Initiative.

- The remediation of the “Catholic 40” portion the Tar Creek Site by Quapaw Tribe is the first tribal-led and managed remediation in EPA Superfund history. The Quapaw Tribe is a key stakeholder and is directly performing ongoing remediation
- Following the success of the Catholic 40 remediation project, the Quapaw tribe entered into additional cooperative agreements for cleanup of additional sites within Tar Creek.

Key Takeaways:

- Keys to this historic outcome of Tribal leadership in the remediation process include:
 - Sustained outreach and relationship building between the Tribe, Oklahoma DEQ, and US EPA
 - The Quapaw Tribe’s consistent pursuit of site cleanup work over the long term, building expertise, identifying resources and coordinating with site agencies.
 - Development of technical capacity over multiple years to be ready to lead a complex remediation effort

Strategy 4: Elevate future use planning as a core element of the Superfund process

Expanding the role of Superfund to purposefully facilitate progress toward meeting broader community needs will require an expansion of program objectives, performance expectations, and a shift in program culture. A core element of that expanded role for Superfund is planning for future use at Superfund sites. The benefits of such planning include expedited clean up, providing needed amenities to the impacted community, and improved efficiency. To achieve these ends, the cleanup approach must involve the community in the visioning process to define and plan for the future use for the site²². EPA has experience in reuse planning, from both the Superfund Redevelopment Initiative (SRI), the Brownfields program, and the Office of Community Revitalization. Reuse planning should be incorporated as a standard practice in the Superfund cleanup process, integrated and concurrent with initial planning and site characterization.

A hallmark of highly successful Superfund projects is the early establishment of a common, community-driven end-state vision. NEJAC understands that this type of community engagement is happening at numerous sites; however, its inconsistent application is concerning. EPA should elevate this practice and make it routine.

In the early stages of project planning, EPA should engage the impacted community in establishing an end-state vision for the site, which includes both remediation and redevelopment. The reuse of Superfund sites can provide many benefits to a community such as supporting the long-term effectiveness of the remedial action, maintaining or increasing property values, improving quality of life through amenities such as parks or open spaces, improving health within the community, and expanding economic opportunities for the impacted population.

Recommendations aligned with Strategy 4 include:

4.1: Develop and fund a Superfund Community-Based Reuse Area-Wide Planning Grant Program and implement an SCBR-AWP pilot project to develop a proof of concept

4.2: Conduct a needs assessment combined with end state visioning with the impacted community as an early step in the Superfund process.

Incorporate future use planning as a standard and routine practice in the Superfund process.

²² For a PRP-led cleanup, and where a PRP owns portions of the site (or all the site), the PRP is major stakeholder in this process.

4.3: Expand the Superfund Redevelopment Initiative to help communities in the process of planning for the beneficial reuse of Superfund sites

Recommendation 4.1: Develop and fund a Superfund Community-Based Reuse Area-Wide Planning Grant Program and implement an SCBR-AWP pilot project to develop a proof of concept

This action is focused on supporting community-driven equitable redevelopment of Superfund and other surrounding contaminated (and potentially contaminated) properties within the impacted community, recognizing the community's needs, vision, and recommended end uses for these sites. The resulting community-based area-wide plans provide direction for future Superfund (and other contaminated site) cleanup, reuse and related improvements that are reflective of the community's vision for the area.

The Brownfields Area-Wide Planning (BF AWP) Program can serve as a model²³ for the Superfund Community-Based Reuse Area-Wide Planning (SCBR AWP) Grant program. Develop, fund, and implement a program that provides planning resources, partnerships and technical assistance to communities impacted by Superfund sites and other contaminated (and potentially contaminated) properties surrounding the Superfund site. The area would be designated by the community and consider the Superfund site as the "anchor tenant". The area would not need to be contiguous.

Develop guidelines and potential funding sources and partnerships to develop and implement the SCBR AWP. Develop grant selection criteria that will result in a needs-based approach for bringing impacted communities into the program.

As the detailed aspects of the program are worked out, NEJAC recommends several core elements of an SCBR AWP Program:

- Collecting information and identifying community priorities for near- and long-term revitalization of the area
- Evaluating existing environmental conditions, local market potential, and needed infrastructure improvements
- Developing strategies for beneficial reuse of Superfund and other impacted properties within the boundaries of the AWP

²³ This recommendation has been modified from the EPA Brownfields Area Wide Planning Grant concept. The Environmental Protection Agency (EPA) created the Brownfields Area-Wide Planning (BF AWP) Program to assist communities in responding to local brownfields challenges, particularly where multiple brownfield sites are in close proximity, connected by infrastructure, and overall limit the economic, environmental and social prosperity of their surroundings. The BF AWP Program was part of the Partnership for Sustainable Communities collaboration among EPA and the Departments of Transportation (DOT) and Housing and Urban Development (HUD). [See Recommendation 7.5 on restoring federal partnerships.](#)

- Identifying resources or leveraging opportunities to help implement the plans, including specific strategies for public and private sector investments and improvements necessary to help with cleanup and area revitalization

For sites selected for an SCBR AWP pilot program, the scope of supported activities should include:

- Site Reuse Assessment
- Land Use Assessment
- Market Study
- Infrastructure Evaluation
- Community Health Assessment
- Site Disposition Strategy
- Planning activities to prepare your Superfund site for redevelopment
- Site Reuse Vision
- Revitalization Plan
- Resource Roadmap
- Evaluation of Market Viability

NEJAC proposes that EPA allocate \$600,000 over 3-4 projects that will be competitively selected and that align with the objectives of the Equity Pilot Program (see Recommendation 6.1), including the possibility of a joint project. Coordinate with the Equity Pilot Program so that the sites are not duplicative, but information, promising practices, and lessons learned are shared.

Recommendation 4.2: Conduct a needs assessment combined with end state visioning with the impacted community as a routine and early step in the Superfund process

Develop requirements for an end-state vision document and include that document as a routine and expected deliverable within the RI/FS process. This includes defining and connecting an end-state vision/end use to the remediation effort.

EPA should connect communities impacted by a Superfund site with reuse and redevelopment training and resources to explore future use opportunities. Training and resources should also be available to Agency staff to help them through the process.

As part of this vision process, EPA should conduct market studies. This would involve:

- Engaging in a community survey and an independent market study that collects data and analyzes the local and relevant real estate market, including demographics, sale and price information, and comparable real estate transactions.
- Involving the community in open working sessions before a report with market-based recommendations is issued.
- Assessing the market as a whole in order to understand the potential for similarly situated sites.
- Providing a grounded understanding of what is feasible in the current real estate market and/or what end uses the market might actually bear and sustain.

Elements of Inclusive Market Studies are described in Appendix D.

Under current practices, guidance and training in Superfund focus on the cleanup process, with limits on what can be done to address community needs beyond preventing exposure to hazardous substances. The Superfund program should revise/update and broaden the scope of activities that are eligible for grant funding, with eligibility criteria designed to enhance a community's ability to engage in redevelopment visioning and planning.

Recommendation 4.3: Expand the size and scope of the Superfund Redevelopment Initiative²⁴ to help communities in the process of planning for the beneficial reuse of Superfund sites

The Superfund Redevelopment Initiative has helped communities reclaim and reuse thousands of acres of formerly contaminated land. EPA should expand the use of this successful program to directly support communities interested in Superfund redevelopment. EPA should continue to publish case studies, fact sheets, and other online materials to provide examples, tools, and resources for communities and stakeholders to reference when considering site redevelopment. EPA should also expand the relevant trainings and information that allow interested communities to learn about and take part in the redevelopment process.

Expected Outcomes (and Accountabilities):

- Planning and funding for Superfund Community-Based Reuse Area Wide Planning Program (OSTRI Director)
- SCBR-AWP pilot projects selected: (Chief, Community Involvement and Program Initiatives Branch with Regional Superfund Directors)
- At all current Superfund sites at the pre-construction phase where EJ communities are impacted, and all future NPL sites impacting EJ communities, a needs assessment should be conducted during the RI/FS or design phase (Regional Superfund Directors)
- Double the number of new sites participating in the Superfund Redevelopment Initiative (Chief, Community Involvement and Program Initiatives Branch with OSRTI Director)

²⁴ <https://www.epa.gov/superfund-redevelopment-initiative>

Case Study: Harvest Hope Park

Location: Tampa, Florida

Website: [Brownfields 2017 Area-Wide Planning Grant Fact Sheet](#)

Timeline: Grant awarded in 2017, park opened in 2019

Harvest Hope Park sits on 7 acres of land in the heart of the Uptown/University Area in Tampa. The park opened in November 2019 and serves as a resident-friendly space that encourages family play, healthy eating, environmental sustainability, education and community interaction. The park was built in four development phases, the last of which is still underway (as of March 2021). Harvest Hope Park features a **community garden, teaching kitchen, multi-purpose sports field, playground, outdoor fitness stations, walking trail, and tilapia fishpond.**



Site History:

In 2017, EPA awarded a Brownfields Area-Wide Planning grant to University of South Florida in partnership with the University Area Centers for Disease Control (UACDC) to work with community residents to plan the redevelopment a seven-acre parcel in the heart of an underserved community. The neighborhood was blighted with vacant and abandoned lots, polluted with solid waste, and once was the home to multiple brownfield sites. Roughly 75 percent of residents in the neighborhood are people of color, primarily Hispanic and Black. When the project began, the per capita income was roughly \$12,000, with 58 percent of residents below the federal poverty level. The community had many other issues such as unhealthy housing stock, lack of access to fresh food, lack of economic opportunities, and a need for recreational space.

A needs assessment concluded that the primary needs identified by residents of the University Area community concern human and environmental health. The UACDC decided that one way to respond to residents' concerns while building on the community's strengths was turning brownfields into "healthfields," which would provide opportunities for outdoor recreation, community gardens and other healthy food options, and access to health care as well as improved housing. The area-wide planning project allowed the partnership to pursue a holistic planning process for the entire neighborhood that takes into account the integrated nature of the community's challenges as well as residents' sense of place.

The site, once the home to multiple brownfield sites, is now named "Harvest Hope Park."

Community Engagement:

Community outreach and collaboration has been key to the project's success thus far and has involved community meetings and workshops at the park, a needs-based assessment survey, monthly meetings, and capacity building with a community-based leadership group. A project website was developed to share information and receive feedback on the planning process. In addition to the community residents, this project includes a wide-range of partners including: USF faculty and students, the UA CDC, local schools, the Environmental Protection Commission of Hillsborough County, the Florida Department of Health, Hillsborough County Economic Development, Hillsborough County City-County Planning Commission, and three private consulting and social marketing firms.

Area Wide Planning Process:

The first step in the area-wide planning project was to collect data on all the facets of community life that could inform redevelopment including: a brownfields environmental inventory, a social impact assessment, a health impact assessment, and an economic market assessment. The partnership created a searchable online archive of all the data collected along with census data other sources. The archive also integrates the social, economic, and health assessment data into a GIS format so that users can see how different datasets overlap with or diverge from one another.

Outcomes:

The work is still beginning on redevelopment efforts at the park. However, the UA CDC has constructed a vegetable garden on the property and a small building onsite has been redesigned to serve as a model kitchen to teach area residents how to prepare healthy meals using produce from the garden. There is now a playground, and the partnership is in the process of developing a multi-purpose sports field on the property, walking trails around the pond, and other amenities, such as "art in the park."

The development of this park has the potential to spur redevelopment in residences and vacant lots, which in turn could play a role in further developments to surrounding businesses, local schools, and other properties. These changes can positively impact job creation for the area and therefore address concerns regarding unemployment and poverty.

The completion of the EPA Area-Wide Planning Grant also lead to the community receiving additional resources, including a \$300,000 EPA Brownfields Community-Wide Assessment Grant supporting the transformation strategy and specific redevelopment projects including multiple affordable housing projects, the future development of a cultural center, and other reuse planning efforts.

Key Takeaways:

- Community input in the planning process was a cornerstone of this effort
- The area-wide planning process addressed both the cleanup and the residents needs
- Through multifaceted partnerships, great gains were achieved

Strategy 5: Leverage redevelopment and reuse as a catalyst for innovation and accelerated cleanup

The integration of cleanup with redevelopment and reuse at Superfund sites can provide a foundation for accelerating cleanups, restoring a community’s access to vital services, and enabling infrastructure projects that address community priorities. The beneficial impact is greatest when that integration begins at the project planning stage, with initial planning for cleanup informed by an in-depth understanding of the impacted community’s needs and vision.

To achieve multiple benefits from integrating cleanup with redevelopment and reuse, additional community engagement efforts are needed. This type of expertise may be outside of many RPMs’ core knowledge and experience. With many carrying a heavy workload with responsibility for multiple sites, even the most highly energized and creative RPMs will need resources “at the ready” within EPA that can be accessed to develop solutions and overcome issues related to integrating cleanup with redevelopment and reuse. Both expertise and focused effort are required to realize the benefit of integrating remediation and redevelopment; an unfocused or ineffective effort can have the opposite impact and slow the cleanup process down.

Recommendations aligned with Strategy 5 include:

- 5.1: Establish a Remediation and Redevelopment “Innovation Incubator” within EPA focused on leveraging redevelopment and reuse as a catalyst for effective, accelerated cleanup
- 5.2: Assign a TIFSD “project advisor” to facilitate RPMs’ access to technology expertise in order to promote innovation, adaptive management, and strategic risk-taking where innovative approaches may have significant benefits
- 5.3: Expand the use of community-driven Health Impact Assessments (HIA) as needs assessment and business planning tools
- 5.4: Re-institute the Community Action for a Renewed Environment grant program

An in-depth understanding of community needs and vision should inform initial planning for cleanup

Recommendation 5.1: Establish a Remediation and Redevelopment “Innovation Incubator” within EPA focused on leveraging redevelopment and reuse as a catalyst for effective, accelerated cleanup

EPA should establish an “Innovation Incubator” group with expertise in catalyzing private sector investment and fostering transactional opportunities that support revitalization of impacted communities. Recruit and assemble EPA subject matter experts, supplemented as needed by external subject matter experts, and charter that group to serve as an innovation and problem-solving resource available to OSRTI management and RPMs to develop tools and advise on projects that integrate remediation, community development, and investment at Superfund sites. Set up communication

mechanisms and define expectations for routine collaboration between RPMs and this panel of subject matter experts (aka, the Innovation Incubator). The roles and expectations for the Innovation Incubator group could include:

- Serve as consultative resource on a case-by-case basis to RPMs
- Conduct prospective case studies that apply a triple bottom line (i.e. environment, health and economics) approach to site remediation, reuse and revitalization
- Develop and standardize forums (e.g. facilitated dialogues, public-private community marketplaces) for engaging multi-sectoral private sector investment through understanding of barriers and incentives for beneficial reuse of contaminated sites
- Develop tools that align economic opportunities with environmental and health interests to stimulate private investment (e.g., health care in underserved and overburdened regions as an economic driver)
- Integrate cleanup and development strategies as part of the remedial design; plan and sequence construction to facilitate the anticipated reuse of the site.
- Apply brownfields redevelopment best practices and lessons-learned to inform Superfund practices:
 - Area-wide approach that factors in a range of contaminated sites (e.g. NPL sites, brownfields, petroleum brownfields, vacant lots)
 - Risk-based corrective action and long-term stewardship
 - Engagement of impacted population in decision-making on site remediation, reuse and revitalization

Recommendation 5.2: Assign a technical “project advisor” from the Technology Innovation and Field Services Division to facilitate RPMs’ access to technology expertise in order to promote innovation, adaptive management, and strategic risk-taking where innovative approaches may have significant benefits

Strengthen the connection between RPMs and OSRTI’s Technology Innovation and Field Services Division (TIFSD), as well as ORD’s Engineering Technical Support Center (ETSC), and improve access to those centers of remedial technology expertise through a routine outreach to RPMs from TIFSD and ETSC. Identify a TIFSD project advisor whose role is to expedite access to technical expertise across the Agency. More extensive application of innovative treatment technologies has the potential to accelerate cleanups, lower life-cycle costs, and ready sites for reuse.

Establish this expectation for greater communication between RPMs and EPA’s technology experts in RPM training and guidance ([see Strategy 3](#)).

Recommendation 5.3: Expand the use of community-driven Health Impact Assessments (HIA) as needs assessment and business planning tools

Promote the inclusion of HIAs when remediating and planning for redevelopment at Superfund sites and include the HIA in scoping and funding Superfund and Brownfields projects. The HIA will serve as a useful tool to assess how proposed decisions affect the health of a population; whether vulnerable

populations are more likely to be impacted, and to provide recommendations during the decision-making process that will protect health and reduce health inequities.

EPA should conduct HIAs as a routine/common part of the process and leverage HIAs as a foundation for a site-specific business plan for redevelopment to meet health, environmental and economic needs of the impacted community. Trained, external resources are often best equipped to conduct HIAs.

Recommendation 5.4: Re-institute the Community Action for a Renewed Environment grant program

The Community Action for a Renewed Environment (CARE) grant program²⁵, which existed from 2005 – 2011, offered innovative ways for communities to organize and take action to reduce toxic pollution in their local environment. The CARE program provided financial and technical assistance, helped build partnerships to implement solutions, and set communities on a path to becoming self-sustaining in their ability to address environmental issues long-term. Consistent with E.O. 14008 and EPA’s commitment to fully integrate environmental justice as part of its mission and throughout all EPA programs, NEJAC recommends that the CARE program be re-instituted, or that EPA create a more formal and consistently funded program based on the CARE model.

Expected Outcomes (and Accountabilities):

- OSRTI establishes an Innovation Incubator team, staffed by SMEs coming primarily from within EPA (OSRTI Director)
- Within six months of staffing the Innovation Incubator, members of that team are supporting remediation and redevelopment efforts at multiple sites (OSRTI Director)
- A TIFSD advisor is assigned to most complex sites, and is actively supporting the RPM’s development of site strategies (TIFSD Division Director)
- Revised/expanded roles and responsibilities are drafted for RPMs to include redevelopment and community engagement performance measures (OSRTI Director)
- Superfund and Brownfields grant program criteria are revised to include (and encourage) the conduct of HIAs (OSRTI Director, OBLR Director)
- Establish a management group to evaluate renewal/ re-implementation of Community Action for a Renewed Environment grant program (EPA Administrator)

²⁵ <https://archive.epa.gov/care/web/html/>

Case Study: Menomonee Valley Industrial Center

Location: Milwaukee, Wisconsin

Timeline:

1998: City of Milwaukee completes market study and land use plan, receives first EPA grant for environmental analysis.

1999: Formation of Business Improvement District.

2003 - 2009: Active remediation and redevelopment. Site awarded the 2009 Brownfields Redevelopment Phoenix Award.

Impacted Stakeholders:

The Menomonee Valley Industrial Center (MVIC) is directly adjacent to some of the City's most densely populated, racially diverse, and economically distressed neighborhoods.

Site History:

The former Milwaukee Shops site was an abandoned rail yard within Milwaukee's Menomonee River Valley corridor—a large region running through the core of the City of Milwaukee. During the mid-1870s, a regional effort was made to fill in the valley's wetland marsh and channelize the river to "make land" in the heart of the growing city. The area served as a major industrial center employing over 50,000 people through the 1950s and 1960s. In the 1970s and 1980s the entire Menomonee Valley region consisted of many non-functioning or abandoned industries and properties, an eyesore of environmental blight. The entire Menomonee Valley was classified as a Brownfield. The former rail yard (i.e., City of Milwaukee's former "Shops" site) occupied 140 acres at the west end of the Valley. It was the most visible and most contaminated part of the valley. The property has been referred to as the Menomonee Valley Industrial Center and Community Park, or "MVIC".

Significant contamination from 125 years of manufacturing activity included heavy metals, petroleum products, and chlorinated organics in soil and groundwater. In addition, there was approximately 120,000 cubic yards of asbestos-containing debris from demolished buildings left on site.

The integrated cleanup/closure/site redevelopment plan combined site decommissioning/demolition, regulatory closure, and site redevelopment activities into a single, synergistic plan. This plan developed parks (including a flood control/stormwater management park), greenways, trails, and multiple businesses.



Community Involvement:

EPA participated state and local agencies in initial workshops focused on the redevelopment plan and on identification of prospective funding sources. At the state level, Wisconsin DNR provided oversight of cleanup activities. The Department of Commerce, Wisconsin Housing and Economic Development Authority, and Wisconsin Economic Development Corporation provided funding for Valley projects.

The city led efforts to address key barriers to Valley and MVIC redevelopment by using eminent domain to acquire the largest brownfield site in the area, investing in infrastructure and pre-development work, overseeing cleanup, and investing in attracting businesses.

Community Role:

Menomonee Valley Partners (MVP), with its public-private partnership structure, was a creative, collaborative and essential force in making the project a success. MVP advocated for the plan and focused on project implementation. They recruited businesses, provided assistance in finding grants and tax credits, and supported local employment through work force training activities.

Through the establishment of aggressive minority business utilization goals, a strong local work-force capacity building program utilized almost 40% of personnel from small, disadvantaged business participation, inner city youth internships, college-bound training programs, and included extensive community participation., Over 20 local contracting entities delivered \$40 million in site work.

Communications:

The City of Milwaukee's commitment to the project and the in-depth community engagement in visioning workshops were critical to "launching" the project. Further on, both the City of Milwaukee and MVP took aggressive marketing roles to recruit businesses to locate in MVIC, and support those businesses in pursuit of funding, tax incentives, and in workforce development.

Business Involvement:

As noted above, MVP played a key role in the success of MVIC. In addition to the direct support in recruiting businesses, they served as a convener and communication channel between public and private sector entities. MVP also stepped in to purchase properties with contamination liabilities and performed cleanup and other pre-development work needed to make those properties ready and attractive for sale. Businesses that came in to MVIC have created well over 1,000 jobs.

More than 20 grants were secured from Federal (10 grants, \$6.8M), State (10 grants, \$5.5M) and local (multiple TIF districts and grants, \$24M) government sources. Combined pre-development funding was more than \$36M.

Innovative Funding:

In addition to Federal, State, and local funding sources, individual businesses used Federal New Market Tax Credits to make individual development deals work.

Multi-Agency Collaboration:

The City of Milwaukee/associated agencies, Wisconsin DNR, private-sector entities, design-competition winner, contractors, community groups, non-profit organizations, and prospective re-developers formed one team with one vision for the environmental cleanup and redevelopment project. Proactive multi-agency negotiations to settle on remediation requirements reduced life-cycle planning, remediation and construction costs of the project by more than \$25 million. The collaborative relationships were a critical factor in the successes of this project.

Sustainability:

Creating living wage jobs in close proximity to high-minority lower income neighborhoods north and south of the MVIC was a key goal of the City’s redevelopment strategy. During remediation, a strong local work-force capacity building program utilized almost 40% of personnel from small, disadvantaged businesses, inner city youth internships, college-bound training programs, and extensive community participation. What was formerly a heavily blighted area is now home to eight businesses – primarily manufacturers – that collectively employ well over 1,000 workers.

Creation of Community Assets:

The re-grading, re-vegetation, and bank stabilization work opened this stretch of the lower Menomonee River to public access and provided a well-used greenspace. The multi-use trail connects this part of the City with Lake Michigan to the east and Milwaukee suburbs on the west. A naturally landscaped buffer along the trail, along with a state-of-the-art stormwater treatment conveyance greenspace, mitigates flooding and improves Menomonee River and Lake Michigan water quality.

Table 2. Benefits from Menomonee Valley²⁶ Redevelopment

Economic Development	
Businesses moving to or expanding within Valley, 1999-2014	49 businesses
Net change in jobs located in the Valley, 2002-2011	+3,244 Jobs
Job density in Menomonee Valley Industrial Center, 2014	26 jobs/acre (goal was 22)
Change in taxable property values in Valley BID, 2002-2012	+94.4%
Valley workers earning at least \$40,000 per year, 2011	47.7% (31.2% in 2002)
Visits to Valley entertainment venues, 2012 (estimated)	9,200,000 (2,800,000 in 1994)
Environmental Improvements	
Acres of brownfields remediated and redeveloped in Valley, 1999-2014	300 acres
Acres of brownfields that remain undeveloped in Valley (estimated)	75-100+ acres
Square footage of sustainable designed buildings constructed, 2004-2014	Over 1 million sq. ft.

²⁶ Chart from *Redevelopment in Milwaukee’s Menomonee Valley: What Worked and Why*. Public Policy Forum, Sept. 2014

Number of LEED-certified buildings constructed 2004-2014	3 buildings
Acres of new parks and trails developed, 1999-2014	60 acres
Acres of native plants installed 1999-2014	47 acres
Community Integration and Development	
New pedestrian/bicycle connections into Valley	4 new connections
New automobile connections into Valley	4 new connections
New sidewalks added to Valley	10.8 miles
Change in transit ridership on MCTS bus routes in Valley, 2001-2011	Up 30%
Traffic counts on Canal Street at 16th 2001-2012 (Wisconsin DOT counts)	Up 39%
Parks and trails users (Urban Ecology Center estimate)	50,000+ per year
Participation in Urban Ecology Center programs	20,000+ in first year
Volunteers with MVP, Urban Ecology Center, Friends of the Hank Aaron State Trail	Over 1,000 per year
Volunteer hours: MVP, Urban Ecology Center, Friends of the Hank Aaron State Trail	Over 9,000 per year

Outcomes and Barriers:

- The redevelopment initiative was accompanied by a robust set of planning and design activities that establish both a common vision for the initiative and a detailed roadmap to achieve that vision. The MVIC’s extensive planning and visioning process engaged stakeholders, local design professionals, and the larger community to an unusually high degree.
- There was strong intergovernmental cooperation and public-private partnerships. The process was exceptionally collaborative.
- Funding was assembled from numerous sources to address the many barriers that impede brownfield redevelopment projects. The City was willing to invest heavily in infrastructure, environmental cleanup, and other pre-development work through tax increment financing (TIF) and other financial contributions were critical to the Valley’s redevelopment.
- The redevelopment project was accompanied by aggressive marketing of the area’s existing strengths and amenities.
- The vision and plan for the redevelopment project addressed multiple community objectives: economic development, enhanced the natural environment and other quality-of-life amenities for the community.
- A high emphasis was placed on local workforce development.

Key Takeaways:

- An innovative onsite management approach to site closure kept pace with redevelopment plans and allowed the City to avoid over \$7M in offsite management and disposal costs.
- The development of a detailed plan developed collaboratively with a wide array of stakeholders, generated support from funders, political leaders, and the community as a whole.
- Early engagement of state and federal agencies was a key contributor to the project’s success-getting buy-in and support to identify and pursue needed funding throughout the redevelopment process.

Strategy 6: Ensure equity in all aspects of the Superfund program

Equity describes the quality of consistent inclusion and impartial treatment of all individuals, including underserved communities. Underserved communities are populations that have been systematically denied full opportunity to participate in economic, social, and civic life. The goal of including equity is to act intentionally and effectively to reduce/eliminate the disparities and barriers that exist at Superfund sites in terms of the protectiveness of the cleanup, participation of local business and the availability of job opportunities for those local businesses as participants in the cleanup process, and in the creation of long-term community benefits following the cleanup, with those benefits aligned with the needs and priorities of the impacted community. Based on EPA's own research²⁷, Superfund sites are more likely to be located close to underserved communities. These communities have fewer resources with which to address concerns about their health and environment.

Underserved and overburdened communities can better reap the benefits of leveraged federal resources when federal agencies effectively, efficiently and consistently coordinate and collaborate, and when they foster *equitable partnerships* between beneficiaries and eligible entities of federal funding. Further, place-based efforts that leverage federal resources from across the federal family can foster healthy, thriving, and resilient communities when the primary motivation is on addressing the needs of environmental justice communities. Intention and directed effort are critical, because the fact is that agency mission objectives are frequently misaligned or only partially aligned with environmental justice community needs. Federal resources allocated solely and inflexibly on the agency mission objectives are not as likely to truly address those needs. Finally, capacity building for impacted communities should recognize the stages of development that begin with organizational management development for community organizations (i.e. 101 level), equitable partnerships to pursue funding opportunities (i.e. 201 level), and full capacity to independently pursue large scale funding opportunities (i.e. 301 level). The following challenges confront communities impacted by contaminated sites:

- Lack of equitable partnerships, when non-governmental, academic, or other partners use environmental justice community organizations to secure funding but then fail to distribute resources to the impacted community and to include those organizations in decision-making.
- Clarity on equitable partnerships with guiding principles, standard operating procedures, and templates for memorandums of understanding/operation.
- Lack of efforts that focus on “teaching to fish” whereby community organizations build their capacity to partner and then grow to become primary recipients of funding (e.g. progressing through 101 to 201 and 301).
- Contrived, symbolic partnerships catalyzed by government funding requirements that do not reflect the actual practice of collaboration in the community are cumbersome to environmental justice organizations, depleting time and resources.

Consistent with the goals and objectives described in E.O. 14008, redirect how federal grant resources are awarded and delivered to EJ communities to reflect a priority on meeting community needs rather than a singular focus on meeting federal agency mission objectives

²⁷ <https://www.epa.gov/sites/production/files/2015-09/documents/webpopulationuperfundsites9.28.15.pdf>

- Lack of partnership models and sharing of effective models for successful replication (e.g. under the Brownfields to Healthfields program²⁸ federally qualified health centers have resources for expansion that can be integrated into brownfields redevelopment).

Recommendations aligned with Strategy 6 include:

- 6.1: Establish a Superfund Equity Pilot Program for impacted communities addressing contaminated site remediation and redevelopment
- 6.2: Scale from a Superfund Equity Pilot to an established Equity Program
- 6.3: Develop a Budget Equity Tool and build in equity as a key component of EPA budgeting and financing at Superfund sites
- 6.4: Set site-specific goals for the percentage of EPA clean up spending that directly supports the impacted communities and publicly track performance toward meeting these goals
- 6.5: Establish a Workforce Social Enterprise²⁹ demonstration project

Recommendation 6.1: Establish a Superfund Equity Pilot Program for Impacted Communities Addressing Contaminated Site Remediation and Redevelopment

The Equity Pilot Program focuses investments and actions to both protect the impacted community and environment from harm, and to allow the impacted community to fully realize the benefits from a safer, healthier environment.

Design and fund an Equity Pilot Project for each EPA region. The Equity Pilot Program should include direct and indirect costs to impacted community organizations, education and training for the impacted community, area wide planning, site assessments, formation of connections with developers, and redevelopment of the site proper and surrounding area.

Design/establish eligibility requirements that ensure resources are distributed to impacted communities who are traditionally under-resourced, underserved and overburdened, and positioning those communities to develop collaborations with other organizations and institutions, as appropriate. Eligibility criteria should consider the urgency of the project (e.g. danger to local community, liability), as well as needs related to poverty and unemployment, health disparities, racial and ethnic diversity, and food security. The *primary recipients* and beneficiaries should be the impacted community, taking precedence over organizations/institutions that have established capacity and are otherwise “pre-positioned” to secure resources. The appropriate collaborative role for these institutions (e.g. local government; national, state, and local-level non-governmental organizations) should be to provide support to the grant recipients.

²⁸ <https://www.epa.gov/brownfields/brownfields-and-public-health>

²⁹ Social Enterprise organizations address a basic unmet need or solve a social or environmental problem through a market-driven approach.

Under the Equity Pilot Program, EPA should provide support in the application process, based on community need, including data collection, design, and document production. Existing technical assistance contract mechanisms and processes could be used to provide that support. EPA would also provide support for implementation, performance measurement, and adaptation.

Training curriculum should be culturally sensitive and responsive to interests and needs of the impacted communities. This includes conducting culturally effective and linguistically appropriate trainings, providing support for community champions, and including grassroots organizations in the development and delivery of trainings.

A key to this effort would be the formation of partnerships for coordinated funding across EPA and the federal family. The Equity Pilot Program should be aligned with related initiatives and programs within EPA. Identify and align with programs of high environmental justice value across the federal family. A “Resources for EJ Needs” matrix ([Appendix E](#))³⁰ was developed as a starting point for identifying and increasing access to sources of funding based on community need rather than solely aligned to agency mission objectives. Convene a “Boot Camp for Equitable Partnerships” between EJ organizations and academic institutions that would catalyze equitable collaborations for accessing federal resources. Core elements would include community leaders as trainers, guiding principles for collaboration, partnership agreements (e.g. MOUs), projects specifically purposed to address high priority EJ concerns, budgets developed through an equity lens, and project application and management.

Training curriculum should be culturally effective and responsive to interests and needs of the impacted communities.

Recommendation 6.2: Scale from a Superfund Equity Pilot to an established Equity Program

Conduct performance reviews and incorporate lessons learned from the Equity Pilot Program, and establish a long-term program, with new projects selected on a biannual basis. The status of the program should be reported on as a standing agenda item at NEJAC meetings. Conduct annual performance reviews of Equity Program projects.

Recommendation 6.3: Develop a Budget Equity Tool and build in equity as a key component of EPA budget and financing at Superfund sites

Develop a Budget Equity Tool within the Superfund program specifically, and more generally into EPA programs working in underserved communities. NEJAC identified several existing tools developed by states and cities³¹ that can be used to inform the development of EPA’s budget equity tool. Couple this

³⁰ A “Resources for EJ Needs” Matrix ([Appendix E](#)) has been developed as a *Proof of Concept* for an exercise to create a roadmap for equitably allied stakeholders to access resources from federal agencies for a place-based project on contaminated site remediation and reuse. The product is NOT meant to be a compilation of all available resources related to an EJ issue.

³¹ Examples include : California Office of Planning and Research; The City of Portland [Budget Equity Assessment Tool](#); City of Antonio [Budget Equity Tool](#); City of Seattle [Racial Equity Toolkit](#).

budget equity tool with Opportunity Zone initiatives³², considering the demographics of populations who have received benefits and those that have not benefited from the effort.

Recommendation 6.4: Set site-specific goals for the percentage of EPA clean up spending that directly supports the impacted communities and publicly track performance toward meeting these goals

NEJAC believes that the Biden Administration made an important and appropriate commitment that the benefits from federal investments in clean energy, clean water, and cleaning up pollution would be directed in a very substantial manner to environmental justice communities. As described in Executive Order 14008, Section 212, the administration has committed to bringing economic opportunity to “communities too often left behind—places that have suffered as a result of economic shifts and places that have suffered the most from persistent pollution, including low-income rural and urban communities, communities of color, and Native communities.” Section 223 of E.O. 14008, the “Justice40 Initiative”, establishes a goal of 40% of overall benefits flowing to disadvantaged communities for a range of federal investments, including “remediation and reduction of legacy pollution”³³. In all respects, that commitment to environmental justice communities and that goal for how benefits should flow is appropriate for Superfund. NEJAC does not have access to data that would show the amount of Superfund site cleanup spending that flows directly to the local impacted community, but our perception is that local businesses near Superfund sites in EJ communities are performing a minimal amount of the direct cleanup work and minimal level of supporting services to enable that work. This recommendation addresses both issues: limited opportunities for local businesses and organizations to participate in and influence the cleanup effort, and no means of tracking where the money is actually being spent. For Superfund sites in EJ communities, EPA should:

1. Establish site-specific goals for local spending, and
2. Provide up-to-date, readily accessible information on how the total cleanup spending is being allocated, including dollars and percentage of dollars going to local businesses.

In addition to promoting direct spending by EPA in the local community, the local spending goal can and should be translated into prime contracts and major subcontracts, with contractor performance evaluations tied to meeting those goals.

Recommendation 6.5: Establish a Workforce Social Enterprise³⁴ demonstration project

Build on the success of EPA and NIEHS worker training programs (for example, the Superfund Job Training Program) that focus on hazardous waste remediation to incorporate social enterprise business opportunities as end uses of the remediated property. In addition to employment skills, the demonstration project should address life and soft skills, with a focus on career advancement and sustainable industry creation. The demonstration project should recruit, train, and place unemployed

³² <https://www.epa.gov/opportunity-zones>

³³ <https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad>

³⁴ Social Enterprise organizations address a basic unmet need or solve a social or environmental problem through a market-driven approach.

and under-employed residents from communities impacted by contaminated sites. It will further environmental justice by ensuring that residents living in these communities benefit from the remediation and revitalization of these sites. Finally, it will help graduates develop wider skill sets that improve their ability to secure full-time, sustainable employment in various aspects of hazardous and solid waste management fields, social enterprise businesses, and other workforces that advance community health and well-being.

Steps in this effort would include:

- Design and fund two Workforce Social Enterprise demonstration projects for contaminated site remediation and redevelopment, one each for an urban and rural setting
- Produce training curriculum, materials, and delivery systems including:
 - Developing training on core health and safety courses
 - Developing training on core soft skills courses that provide job search, life skills, and community-focused environmental justice training
 - Developing career-specific training
- Form partnerships for coordinated funding by:
 - Identifying and aligning with related initiatives and programs within EPA
 - Identifying and aligning with programs of high environmental justice value across the federal family (e.g. HHS, DOL, DOT, HUD)
- Derive promising practices and lessons learned from the Workforce Social Enterprise demonstration project and apply to related programs within EPA's Office of Land and Environmental Management
- Develop performance measures and conduct annual performance reviews that evaluate findings and recommendations from Workforce Social Enterprise demonstration project

Expected Outcomes (and Accountabilities):

- Completed design of the Equity Pilot Program (OSRTI Director, OEJ Director (joint accountability))
- Within 12 months of program design, Equity Pilot Program sites selected (OSRTI Director, OEJ Director (joint accountability))
- Superfund Budget Equity Tool developed and used in planning for program and individual project funding
- Assess and finalize Superfund local spending goals (OSRTI/ Resources Management Division Director, OSDBU Director (joint accountability))
- Site-specific spending allocation dashboards available on the Superfund Website (OSRTI Director)

Case Study: USS Lead

Location: East Chicago, Indiana

Timeline:

1920 – 1985: Lead smelting operations

1990s: 40% of children in the West

Calumet Housing Complex show elevated blood lead levels

2009: Site added to the National Priorities List

2016: Mandatory relocation of residents in the West Calumet Housing Complex



Impacted Stakeholders:

- **Community/Local residents** – Residents of the West Calumet Housing Complex and surrounding residential areas. East Chicago Calumet Coalition Community Advisory Group
- **EJ Groups** – Calumet Lives Matter, We the People of East Chicago,
- **NGOs/Universities** – Shriver Center on Poverty Law, Abrams Environmental Law Clinic at the University of Chicago Law School, Northwestern’s Environmental Advocacy Clinic
- **Local Government** – East Chicago Housing Authority (ECHA)

Site History:

The 79-acre USS Lead Superfund site is located in East Chicago, Indiana. A copper smelter and a lead refinery and smelter operated on site from 1906 to 1985. These activities resulted in the contamination of soil and groundwater with lead and arsenic. The West Calumet Housing Complex was constructed on the former site of the Anaconda Copper Company lead refinery and an Eagle-Picher Company white lead plant.

Community Impacts from Site Contamination:

- Soil in the yards surrounding the West Calumet Housing Complex (Operable Unit 1, Zone 1) had high concentrations of lead, and 40% of the children tested at West Calumet had elevated blood lead levels. The risks from soil lead contamination were extremely high, and residents had to be relocated. In 2016-2017 all public housing complex residents were provided relocation vouchers by HUD. The public housing complex was demolished in 2018.
- Residential areas in OU1 Zones 2 and 3 also had high concentrations of lead in residential yard soil. Soils were excavated where lead levels exceeded 400 parts per million. The excavation areas were filled with clean soil and landscaping was performed.

Historic/Ongoing Impediments to Progress on Cleanup and Redevelopment:

- Long term failure to notify directly impacted residents that they were exposed to high levels of lead contamination
- Inconsistent information provided to residents on the relocation process, and unrealistic time frames to relocate

Primary Elements/Primary Activities of The Site Cleanup and Redevelopment:

In 2012, EPA selected a cleanup remedy for the residential area. It includes excavation and off-site disposal of contaminated soil. Along with yard cleanups, indoor dust samples were collected and tested for lead and arsenic. Houses showing results above EPA screening levels were cleaned. Residential and public service uses at the site are ongoing.

Current Cleanup Condition and Primary Site Use/Purpose:

- OU1-Zone 1/former West Calumet Housing Complex: The housing units were demolished.
 - Ongoing sampling to delineate the extent of soil pollution
- OU1-Zone 2: All targeted residential properties cleaned up and restored
- OU1- Zone 3: 287 out of 297 residential properties cleaned up and restored
- OU2: Groundwater investigation ongoing. All residents are served by municipal water

Supporting approaches for cleanup and for reuse:

- The residents of the West Calumet Housing complex reached out to the Shriver Center on Poverty Law, who helped the residents file a housing discrimination suit related to the relocation process a suit on behalf of residents. The community intervened in EPA's suit against the PRPs with support from The Abrams Environmental Law Clinic at the University of Chicago Law School, and Northwestern's Environmental Advocacy Clinic.³⁵

Grant Utilizations:

- Technical Assistance Grant to The East Chicago Calumet Coalition Community Advisory Group designed to support community members in the comment process.

Barriers to Success:

- Superfund's restrictions on "betterment" can be a barrier to providing meaningful assets to the community during the cleanup process. Superfund's restrictions prevent EPA from funding small but meaningful benefits to the residents through actions such as improved landscaping.
- Risk communication to the impacted community is made more difficult at sites where different cleanup levels (e.g., residential v. industrial) are applied to different portions of the site.

³⁵ Poisonous Homes: The Fight for Environmental Justice in Federally Assisted Housing. Shriver Center on Poverty Law. September 2020, <https://www.povertylaw.org/report/poisonoushomes/>

Successful Outcomes:

- Through a partnership between EPA and remedial site contractors, the Superfund Job Training Initiative provided local job seekers with new skills, certifications and hands-on training linked to construction and cleanup. Several of the Super JTI graduates obtained jobs with the on-site remedial contractors.

Unsuccessful Outcomes:

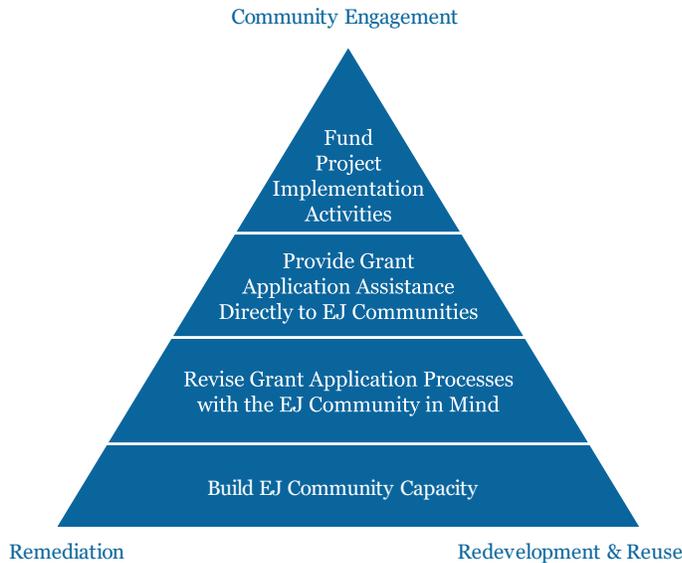
- Failure to inform the impacted residents of the presence of contamination as soon as that data were available. It is the community's health that has been harmed by past exposures, and their future that is at risk.
- The failure of HUD and EPA to communicate and coordinate led to high levels of exposure to hazardous and toxic substances at USS Lead. Federal agencies need to act in a coordinated fashion to address community safety and community needs.

Key Takeaways:

- The impacted community should be involved in all stages of decision making.
- Environmental information on contaminant levels must be shared with the impacted community in a timely manner. It is not appropriate to hold data that bears on community members' health until such time as all data uncertainties are resolved.

Strategy 7: Increase Access to Resources for Impacted Communities

Environmental justice community-based organizations have consistently lacked access to resources to build their capacity to address the key issues of community engagement, remediation, and redevelopment/reuse in their communities. The recommendations aligned with this strategy are designed to improve performance and results in the Superfund program along these three axes.



Fundamental to environmental justice is the right and capacity to participate in and influence decision-making by those who live with the consequences of those decisions. People of color, low income communities, and indigenous populations face enormous challenges that affect their health, environmental and economic well-being. Ultimately, communities face internal and external challenges in accessing resources to ensure safe environments to live, learn, play and pray.

The recommendations under this strategy related to increasing resources to EJ communities at Superfund sites were informed by a dialogue convened by the NEJAC Superfund Working Group and a full range of stakeholders, including communities impacted by contamination, federal-state-local government, brownfields consultants, financial institutions and others.

Accessing federal resources:

Even though significant federal resources are potentially available for communities impacted by contaminated sites, these same communities are often unable to access these resources. Efforts are needed to increase accessibility to resources that goes beyond simply making communities aware that resources exist. Thus, concerted government action is needed to connect resources available at EPA and other federal agencies with EJ communities. Hurdles to accessing federal resources emanate from the lack of capacity within community organizations to apply for federal grants and from the complexity and burden of the government grant process. Communities impacted by contaminated sites face the following challenges:

What's missing? What's needed to effectively connect EJ communities to federal resources?

- Availability
- Access
- Equity

Community Capacity

- Limited technical expertise and experience to identify funding opportunities and navigate web-based portals
- Program development skills to apply for federal funding

- Financial and administrative skills to manage federal grants

Government Funding Process

- Insufficient direct technical assistance for funding opportunity identification and evaluation, project visioning, planning, proposal development, and project implementation
- Lack of streamlining for related funding opportunities that would reduce the need to submit multiple proposals
- Inflexibility (e.g. federal cost share/matching requirements) in federal funding that impose the same grants management requirements on small organizations as large institutions
- Federal matching grant and reimbursement grant funding structures penalize, exclude, and potentially collapse smaller and newer organizations with less stable funding and upfront capital
- Funding criteria that do not account for organizations making first-time applications in a newly expanded funded area (e.g. points are based on experience in the funded area)
- Use of a centralized approach for technical assistance to impacted communities whereby large sums of funding are provided to a limited number of national organizations to provide community based services; centralized technical assistance gravitates toward general, web-based materials responding to government interests rather than materials that are aligned and culturally consistent with needs of environmental justice communities
- Lack of support for community champions, with training and capacity, to lead revitalization efforts. Instead, federal resources are provided to outside organizations who use community organizations as in-kind support without providing meaningful funding resources
- Funding opportunities that are limited in amount and length (i.e. one grant may be provided but just as the community begins to make progress, the funding ends and the federal government abandons the community)

Accessing non-government resources:

In addition to government funding, resources for impacted communities potentially exists from philanthropy, lending institutions, local government, academia, and the private sector. However, as with government funding, the accessibility of these resources for impacted communities remains challenging. Hurdles include skepticism toward supporting projects on contaminated properties, project development and management capacity within community-based organizations, and limited capacity of local government staff (e.g. number of staff, time to develop proposals). EPA and the federal agencies can play an important role in helping impacted communities leverage these non-government resources. For example, EPA can provide targeted education that addresses the concerns with using remediated properties (this could be one of the roles of the “Innovation Incubator” - see Recommendation 5.1). Also, EPA can convene stakeholders to address the benefits of a remediation and redevelopment approach. Federal agencies can play a role by providing technical assistance regarding amplification of federal and non-federal resources (e.g. cost share/matching requirements). Areas of great potential that can benefit from targeted attention by EPA to meet the needs of impacted populations include: 1) Philanthropy; 2) Lending institutions (e.g. CRI/CDFI); and 3) Local Government.

Authorities & Direction for Increasing Access to Resources for Impacted Communities:

The imperative to increase allocation of federal resources for environmental justice communities extends back to Executive Order 12898 and EPA’s definition of “environmental justice.” Executive Order

12898 establishes the expectations for the Federal Government regarding environmental justice by providing: *Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.* Those expectations are amplified under “Justice40 Initiative” of Executive Order 14008, which directs to Federal Government to develop recommendations on how certain Federal investments might be made toward a goal that 40% of the overall benefits flow to disadvantaged communities.³⁶

In addition, Executive Order 12898 created the Federal Interagency Working Group on Environmental Justice (EJIWG). Since its inception in 1994, the EJIWG has championed environmental justice through policy development, place-based practices, and special initiatives. Further, the EJIWG maintains a crucial role in assisting federal departments and agencies in meeting their statutory duties and mission objectives. In FY19, the EJIWG created the Place Based Effort Subcommittee to examine ways for better connecting government resources with communities experiencing EJ challenges and for addressing their environmental, health and economic needs. This subcommittee identifies and implements strategies that foster healthy, equitable, sustainable and resilient communities. Under E.O. 14008, the work of the EJIWG will continue under the newly established White House Environmental Justice Interagency Council (WHEJIC), whose mission is to “*develop a strategy to address current and historic environmental injustice by consulting with the White House Environmental Justice Advisory Council and with local environmental justice leaders. The Interagency Council shall also develop clear performance metrics to ensure accountability and publish an annual public performance scorecard on its implementation*”³⁷.

EPA, as Chair of the EJIWG and successor WHEJIC reinforce the role of federal government in addressing environmental justice *with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.* As advisor to the US EPA Administrator, NEJAC has provided independent advice and recommendations to the EPA Administrator on a broad range of strategic, scientific, technological, regulatory, community engagement, and economic issues related to environmental justice. NEJAC’s advice has improved the environment and public health in communities disproportionately burdened by environmental harms and risks by ensuring meaningful involvement in EPA decision-making, building capacity in disproportionately burdened communities, and promoting collaborative problem-solving for issues involving environmental justice.

Accordingly, there are numerous opportunities to achieve environmental justice for minority, low-income and indigenous populations across the federal government by leveraging federal resources for communities impacted by pollution and lack of access to essential services and amenities. These opportunities exist throughout federal government programs, policies and activities. All the EJIWG and NEJAC efforts to strengthen environmental and public health protections for low-income, minority, and indigenous populations help vulnerable communities become cleaner, healthier and more prosperous places to live, work, learn and play.

³⁶ Executive Order 14008, Section 223, Justice40 Initiative

³⁷ Executive Order 14008, Section 220, White House Environmental Justice Interagency Council

Recommendations aligned with Strategy 7 include:

- 7.1: Expand availability and improve accessibility of EPA resources for impacted populations at Superfund sites
- 7.2: Develop and implement proactive measures that minimize the displacement of long-time community residents due to gentrification and foster redevelopment that is beneficial to the community
- 7.3: Form EPA cross-department partnerships to increase access to resources for impacted populations
- 7.4: Increase access to funding for impacted communities by improving the funding/grant management process that is need-based
- 7.5: Form federal government partnerships to increase access to resources for communities impacted by Superfund sites
- 7.6: Develop a roster of potentially interested national, regional and local foundations and convene a community of practice between these foundations and impacted communities
- 7.7: Foster engagement of financial institutions in supporting revitalization through community EJ developers.
- 7.8: Increase funding to address the backlog of unfunded Superfund cleanup projects impacting EJ communities.

Recommendation 7.1: Expand availability and improve accessibility of EPA resources for impacted populations at Superfund sites

Increase resources for impacted communities to engage with EPA and other stakeholders by focusing on *accessibility* of resources rather than simply addressing *availability* of resources and by balancing the emphasis to incorporate the needs/issues of the underserved and overburdened communities with the mission objectives of the government programs. As part of this effort, broaden the scope of activities that are eligible for grant funding to strengthen the capacity of impacted community organizations, with eligibility criteria designed to enhance a community's ability to engage in redevelopment visioning and planning.

Actions EPA could take include but are not limited to:

- *Develop and fund cooperative agreements with impacted community organizations.*
- *Expand the scope and applicability of EPA Superfund Technical Assistance Grants such that they can be used for activities related to site reuse/redevelopment.* Include remediation and redevelopment in the scope of services supported by Superfund Technical Assistance Grants. An alternative or complementary approach to achieving these objectives would be to expand the scope and applicability of Brownfields Technical Support and Area-Wide Planning Grant programs to include Superfund sites.
- *Apply funding more directly to the needs/issues of the underserved and overburdened communities.* In making funding decisions, EPA needs to give greater weight to the needs of the

community, and balance those needs with the mission objectives of the government programs, consistent with statutory authority.

- *Increase support for Reuse Planning Technical Assistance and Funding Resources for Impacted Population Engagement.* The overarching intent is to provide technical assistance and funding resources for impacted populations to participate in reuse and redevelopment visioning, planning and other site decisions. Funding should be considered along the points/vertices of a triangle: community engagement, remediation, and beneficial reuse. When addressing resources, it is key to consider availability, accessibility and equity. Efforts to secure funding from federal departments beyond EPA should be implemented.
- *Add technical assistance and funding resources for impacted populations to participate in reuse and redevelopment visioning, planning and other site decisions.*
- *EPA educational funding should be made available for EJ and contaminated site response.*
- *To support community EJ developers, the operational model for EPA brownfields funding, utilizing consulting firms to prepare and help administer grants, should be expanded and implemented in other EPA funding programs.*
- *Revise/update and broaden scope of activities that are eligible for grant funding, with eligibility criteria designed to enhance a community's ability to engage in redevelopment visioning and planning.*

Recommendation 7.2: Develop and implement proactive measures that promote redevelopment that is beneficial to the community and limits gentrification impacts that displace long-time community residents

As part of this effort, recognize the distribution of benefits and burdens that fall on different pockets of communities. Understand that even if the adverse impacts are not intentional, they may nevertheless worsen environmental injustice, health disparities, and poverty.

The positive impacts of revitalization that follow cleaning up a Superfund site can raise land values and housing prices to the point that environmental justice communities, after fighting for years to clean up a site and protect their homes and their families, are at risk of being displaced.

A critical aspect of engaging with the community is to ensure that working with partners and stakeholders, existing residents surrounding the site can continue to afford to live in their neighborhood once the site is cleaned up, whether that is through affordable homeownership or rental opportunities nearby. In working with the EJ community, EPA should help connect local residents to resources and information regarding housing opportunities in nearby neighborhoods. EPA should facilitate coordination with local agencies and existing non-profits active in the housing community, and support strategies to preserve existing affordable housing (rental and ownership).

Recommendation 7.3: Form EPA cross-program partnerships to increase access to resources for impacted populations

A multi-agency, cross-disciplinary approach is essential to effectively meeting the needs of environmental justice communities.

This will help communities improve remediation and revitalization of contaminated sites in a manner that improves their community health, environment and economy. The effort is intended to foster collaboration and reduce silos between relevant EPA Offices (e.g., OSRTI, OBLR, OUST) and the Superfund Task Force (SFTF) working teams so that the full scope of resources can be accessed by impacted communities.

Recommendation 7.4: Increase access to funding for impacted communities by modifying the funding/grant management process to one that is largely needs-based

Evaluate current policies and practices that hinder funding allocation for EJ communities. Coalesce funding resources from across the partnership's departments to align federal resources that support the goals and create joint funding opportunities with multiple departments.

The grants management process can also be improved. Identify consistent language and evaluation criteria to be included in applicable partnership grant/technical assistance solicitations; modify funding opportunities to require percentage of grants to be dedicated to community-based organizations from the affected area and include eligibility criteria for inclusion of impacted population; conduct joint cross-department reviews of funding applications.

Recommendation 7.5: Form federal government partnerships to increase access to resources for communities impacted by Superfund sites

EPA should help communities improve remediation and revitalization of contaminated sites in a manner that improves their community health, environment and economy by establishing through Executive Order, through Memorandums of Understanding, or other means a cross-department partnership, based on guiding principles and a Partnership Agreement, that will guide the distribution of federal resources and funding³⁸. These partnerships should be established at the department level and implemented at individual sites. These formal partnerships should establish requirements for sharing environmental information between agencies and accountabilities for sharing environmental and other information related to health risk with the impacted community.

The effort is intended to foster collaboration and reduce silos across federal department programing with high value for environmental justice to increase distribution of federal resources (i.e. funding and

³⁸ The existing partnership between EPA and the Agency for Toxic Substances and Disease Registry (ATSDR) on health investigations around Superfund sites is an example of an existing multi-agency collaboration that should be expanded.

technical assistance) for impacted populations facing contaminated site remediation and redevelopment.

Identify federal departments/agencies to lead and participate in this partnership. The Partnership for Sustainable Communities³⁹ between EPA, HUD and DOT provides a recent and effective model of such partnerships. The potential partnership agencies could be expanded (e.g., EPA, USDA, HUD, DHS/FEMA, HHS, DOT, EDA, and SBA). Establishing the principles that guide the activities of the partnerships and the execution of partnership agreements between the Departments/Agencies appear fully compatible with the mission and work of the WHEJIC, as described under E.O. 14008.

Action 7.6: Develop a roster of potentially interested national, regional and local foundations and convene a community of practice between these foundations and impacted communities

Enhance the ability for impacted populations facing contaminated site remediation and reuse challenges to successfully access resources from private philanthropy. The Superfund program should play an active and intentional role in addressing the hesitation of philanthropies to support community-driven revitalization actions that address contaminated sites, and in connecting private foundations with community-based organizations whose members are impacted by contaminated sites.

Convene a community of practice between these foundations and communities impacted by contaminated sites that identifies specific functions to be undertaken by EPA (e.g. sharing of applications for funding; presentations to NEJAC). This would include conducting training for foundations on contaminated site remediation and redevelopment, including community leaders as instructors.

Action 7.7: Foster Engagement of Financial Institutions in Supporting Revitalization through Community EJ Developers

Increase understanding of remediation and redevelopment implications for banks and lending institutions in support of community driven revitalization. Do this by conducting training, including community leaders as instructors, and to convene multi-sector engagement from EPA, financial/lending institutions, and community EJ developers.

Gather stakeholders from aligned Superfund Task Force Recommendations to identify tools (e.g. instruments addressing liability) and modify them for the impacted community audience. Convene events (e.g. facilitated dialogues) for cross exchange and trust building between impacted community developers, financial institutions, and government.

7.8 Increase funding to address the backlog of unfunded Superfund cleanup projects impacting EJ communities

Concerns about the availability, accessibility, and distributional equity of resources for EJ communities are superimposed on a Superfund program beset by underfunding. According to recent analysis, funding for the Superfund program has decreased by 43% since FY 2000⁴⁰. The growing backlog of sites that are

³⁹ <https://obamawhitehouse.archives.gov/sites/default/files/uploads/SCP-Fact-Sheet.pdf>

⁴⁰ Katherine N. Probst in Environmental Law Institute/New York University School of Law. *Looking Back to Move Forward: Resolving Health & Environmental Crises*, Chapter 6: *Superfund at 40: Unfulfilled Expectations*. November 2020

ready to be cleaned up, where the work to protect communities has been slowed or delayed indefinitely due to insufficient program funding presents clear evidence that Superfund is unable to achieve its overall mission for EJ communities and for the program as a whole.

Expected Outcomes (and Accountabilities):

- Revision and expansion of the Technical Assistance Grant program, and revisions to application criteria for multiple grant programs to make them more need based (OSRTI Director, Office of Grants and Debarment (OGD) Director)
- Formation of a team to develop and issue a model Equitable Development Plan for the Superfund Program designed to promote proactive outreach to EJ communities aimed at preserving affordable housing and preserving home ownership as land values rise in response to cleanup activities in Superfund and other cleanup programs (Assistant Administrator, OLEM)
- Reinstating multi-federal agency partnerships designed to support, protect, and increase economic mobility in EJ communities, based on the successful EPA-HUD-DOT Partnerships for Sustainable Communities. (EPA Administrator and Partnering Agency Secretaries)
- Form a Community of Practice with EPA specialists and philanthropic entities to provide technical and financial assistance to support community-driven revitalization efforts at Superfund sites (OSRTI and OBLR Directors)
- Identify and list the unfunded Superfund construction sites that impact EJ communities and develop a plan of action to commence and expedite cleanup (OSRTI Director)

Case Study: 5th Street & Buckeye Road

Location: Phoenix, AZ

Timeline:

1999: Placed on Arizona State Water Quality Assurance Revolving Fund (WQARF)/State Superfund registry list

2001: Cleanup of surface hazardous and solid waste and placement of protective soil cap

2013: Removed from WQARF registry

2017: Redevelopment of 200,000 square feet of industrial warehouse space

Site History:

The former East Washington Fluff WQARF site is an excellent example of a brownfields site that is more than a typical environmentally challenged site, yet not quite complex enough to be named a federal Superfund (NLP) site. The history of the site reads like a great mystery novel that is solved by characters from many different places, with twists and turns and roadblocks throughout the 30-year history of the property. The story begins with the property being used for auto shredding and salvage operations in the 1970s and early 1980s, at a time when environmental regulations were in their infancy. The operation included dismantling cars, and placing the material, affectionately referred to as “fluff” in the ground, in the same way you might create a landfill. Transformers containing PCBs (a carcinogen) were dismantled and salvaged at the property too. The contaminants of concern at the site include: lead, cadmium, arsenic and PCBs, a substance historically used as cooling oil in electric components. They are present only in the soil. When the ground below the surface was filled up on the 10-acre property, fluff piles, were created on top of the surface, some 18 feet high.

Then in 1986, the owner of the property filed bankruptcy and abandoned the property. The former owner walked away leaving the hazardous fluff behind. It was a call about criminal activity that brought the Phoenix Police Department to the site, who then contacted the city’s Office of Environmental Programs to ask whether the site was safe to enter. Quick research by environmental staff indicated that there was a high potential for hazardous substances to be on the ground and Police were outfitted in protective gear to enter the property.

The site was fenced and in 1998, with the arrival of the federal Brownfields Redevelopment initiative, City staff asked for help from the Environmental Protection Agency, Arizona Department of Environmental Quality, Arizona Department of Health Services, and Maricopa County. These agencies worked together to conduct environmental investigations, cleaned up surface hazardous and solid waste, placed a protective cap to prevent exposure to the hazardous waste, and addressed delinquent property taxes to bring this property back into productive use. All the while communicating with residents and business adjacent to and near the site.



The City of Phoenix designated the site as a Brownfields and asked the EPA for assistance, which was provided through a Targeted Brownfields Site Assessment, which set the foundation for completion of a Public Health Risk Assessment by the Arizona Department of Health Services. This risk assessment then provided the information needed by the Arizona Department of Environmental Quality to initiate an Early Response Action to construct an engineered barrier to eliminate exposure to the contaminated soil under the State WQARF (Superfund) program. The ADEQ provided approximately \$3 million to remove 5,907 tons of hazardous waste and 819 tons of solid waste from the site, placed a cap/barrier over the entire site, and now the site was more attractive for redevelopment.

In 2006, Harrison Properties purchased the property in 2006 through a county auction, including the abatement of delinquent property taxes, which was done through a new state statute that was created by the County in collaboration with the City and state. In 2014, the developer approached the city for assistance and the city awarded a \$250,000 municipal grant from the city's brownfields program to help offset the additional costs related to the environmental conditions of the property as well as technical assistance during construction of the site. The developer also coordinated with the city's Workforce Development division to encourage residents from the area to apply for jobs at the site. The site is now fully occupied with a special unit of the Phoenix Police Department as tenant on the site, and it is befitting that they now occupy space in the new development.

Understanding the redevelopment challenges on sites like these is important. Remedial solutions were designed with the goal of eliminating exposure to contaminated soil and in consideration of future redevelopment. At the redevelopment stage, municipalities are generally the agency involved in zoning, permitting, and approving sites plans, and in this case with city staff involved from the beginning there was a greater understanding of the complexities of the site and staff could respond to those challenges more effectively.

Community Engagement:

A community advisory board (CAB) was formed for this site. During cleanup and placement of the cap, a community office was set up by ADEQ across the street from the site and was staffed on a regular schedule throughout the months-long remediation. This enabled residents and businesses near the site to get immediate information about the activities at the site. This resulted in fewer complaints and concerns and built trust within the community. Local city government was involved and consulted as well and provided information and directed inquiries to ADEQ's office. The City of Phoenix also engaged the community through presentations to neighborhood block watch associations and local business associations in the area to educate on the environmental investigation and cleanup process and to provide details on the work being conducted. The city also engaged respected community and nonprofit organizations in the area to participate in the CAB and to act as conduits for sharing information and receiving feedback.

Outcomes:

- Adding the site to the WQARF registry provided access to funding for remediation.
- Elimination of exposure to contaminated materials was achieved with removal of hazardous and solid waste and placement of the protective cap.

- Removal of the site from the WQARF registry paved the way for redevelopment of the site.
- The site was redeveloped and is now generating new jobs, sales and property tax revenues and has been a catalyst for new development within the immediate area.
- The collaboration between the City of Phoenix, Environmental Protection Agency, Arizona Department of Environmental Quality, Arizona Department of Health Services, and Maricopa County resulted in the success of this project

Key Takeaways:

- Local government can play a critical role as a convener, advocate, and driver with other government agencies to address contaminated sites.
- Collaboration by multiple government agencies from federal, state, county, and municipal levels is necessary to fully accomplish the activities required on a complex site.
- The establishment of a hyper-local community office was key to effective communication with residents and businesses in the area.
- Engaging the community through coordinated efforts by the state and the city resulted in greater opportunities for public input and a greater understanding of the remedial solution and the constraints of development.
- The cleanup and redevelopment options were analyzed in context of each other with remediation designed to eliminate exposure and in consideration of future redevelopment.
- Funding from multiple levels, public and private, is necessary to enable completion of all facets of cleanup and redevelopment.

Additional issues of concern and areas of opportunity related to the Superfund program

In its charge ([Appendix A](#)), NEJAC was asked (Question 5): Does the NEJAC propose any additional issues related to the clean-up and redevelopment of Superfund sites that are not captured in the questions above? Does the NEJAC identify any issues related to the implementation of the SFTF Plan and Recommendations? This section raises several areas of concern and areas of opportunity related to the Superfund program that merit further evaluation and the development of new recommendations, strategies and actions:

Legacy Sites

There are a large number of sites that have been on the NPL for decades – “legacy sites” – and where the site has not achieved construction completion or where human exposure is not under control. What factors are causing the slow pace of cleanup, and which of these legacy sites are impacting EJ communities? Are these legacy sites more likely to be impacting EJ communities than Superfund sites as a whole? What does the Superfund program need to do to get these sites cleaned up in a reasonable time frame, and ensure adequate funding to conduct the cleanup work?

Enforcement

Sites that have been on the NPL for decades (legacy sites) and where PRPs are responsible for conducting the cleanup highlight the need for more robust and effective enforcement in the Superfund program. In listing sites impacting EJ communities (Recommendation 1.1) EPA should identify those sites where PRP inaction has delayed cleanup and develop and implement stronger and more effective enforcement strategies and actions to prevent ongoing threats to EJ communities.

Long-Term Stewardship and Institutional Controls

Even after cleanup activities are “completed” at many Superfund sites, hazardous materials are left behind and protection of public health and environment depends on some combination of engineering controls and institutional controls (ICs)- the latter limiting or prohibiting certain activities that could lead to exposure to dangerous levels of contamination. The need to maintain long-term stewardship (LTS) may extend for decades. There are costs to maintaining these engineering controls and significant challenges to maintaining effective ICs as local leadership, local businesses, and the resident population change over time. Those burdens may fall particularly hard on EJ communities. How many of these sites requiring LTS are impacting EJ communities? Are LTS Superfund sites (with wastes left behind) more likely to be impacting EJ communities than Superfund sites as a whole? Forty years into the program, what is the track record of preventing exposure and keeping communities safe at Superfund sites where LTS and ICs are needed?

Climate Change and Natural Disasters

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. In 2017 floodwaters from Hurricane Harvey flooded 13 Superfund sites, including the San Jacinto River Waste Pits site near Houston, where the containment structure eroded, releasing highly toxic wastes including dioxins into the river. In 2018, the Carr Fire in California burned through the Iron Mountain Mine site near Redding, California, nearly destroying the water treatment system. According to the GAO report, some high-density propylene lines that caught fire nearly resulted in an explosion in the mine⁴¹.

Which of these vulnerable sites are impacting EJ communities? What actions are being taken to ensure that Superfund remedies will withstand the impacts of climate change and the increasing intensity of natural disasters, including sites where the remedy is already in place, currently being designed and built, or will be designed and built in the future?

Sustainability and Health

Many of the strategies and recommendations in this report are directed at deeper engagement with EJ communities in decision making. NEJAC also believes that the criteria for making decisions regarding Superfund actions should be reexamined and revised to reflect sustainability and community health issues, which are most acutely felt in EJ communities. Under a true sustainability framework, decisions are made, and actions are taken to achieve as many positive outcomes as possible in environmental, economic, and social systems. NEJAC strongly believes that better community health is an essential social system outcome that Superfund should strive to achieve.

In the nine criteria that EPA uses to make Superfund remedy decisions⁴², none of those criteria directly address economic conditions or social systems. The cumulative impacts on health from past exposures and from multiple sources of contamination (e.g., industrial air pollution, contaminated water supplies) and lack of access to health care, healthy food, recreation, and other basic necessities for healthy living are outside of what is considered what is required to be considered when clean up decisions are made. How can EPA modify the current Superfund remedy decision process and criteria to specifically address the “triple bottom line” objectives that define sustainability, maximizing environmental, economic, and social system outcomes?

Federal Facilities

Federal facilities make up about 12% of the final NPL sites (excluding proposed or deleted NPL sites), but only about 7% of the final NPL sites that have achieved construction completion. How many of these

⁴¹ US Government Accountability Office. *Superfund: EPA Should Take Additional Actions to Manage Risks from Climate Change*. GAO-20-73. October 2019.

⁴² <https://semspub.epa.gov/work/HQ/174412.pdf>

Federal Facility sites that have not yet achieved construction completion or do not yet have human exposure under control are impacting EJ communities? What are the factors that contribute to the slow pace of cleanup at these sites (slower than the NPL as a whole)? As EPA has reduced enforcement authority at Federal Facility sites, how can EJ communities be assured of being fully engaged in the decision-making process at these sites?

Worker Safety and Job Training

A highlighted in Recommendation 6.4, and now underpinned by the “Justice40” provisions in E.O. 14008, a larger share of the investment in cleanup at Superfund sites impacting EJ communities should flow to the people and the businesses of that community. There are unique risks and special training required to ensure that work can be performed safely at a Superfund site, both to protect the workers themselves and the friends and family they come home to. To achieve the community investment goals for Superfund cleanups, how will EPA ensure that the local work force is properly trained and equipped in a full and timely manner, so they are ready to perform and support cleanup activities?

Cumulative Impacts

EJ communities are more likely to have underlying vulnerabilities to exposure to hazardous substances from Superfund sites due to contaminated drinking water, unhealthy air from industrial and transportation-related air emissions, social and economic stresses related to poverty, and limited access to health care, healthy food sources, and other wellness-promoting infrastructure. How will the Superfund program assess and mitigate the disproportionate health impacts on EJ communities, accounting for cumulative impacts in its cleanup decisions? How will EPA not only prevent future exposures to Superfund site releases, but holistically protect human health from the historic contamination burden these communities face, improve health outcomes, and expand opportunity?

APPENDICES

Appendix A:

Charge to the National Environmental Justice Advisory Council on Superfund Remediation and Redevelopment for EJ Communities

Background

The National Environmental Justice Advisory Council (NEJAC) has been at the forefront of contaminated site cleanup and redevelopment initiatives since its founding. In 1995, the EPA and NEJAC co-sponsored a series of dialogues across the country that provided an opportunity for environmental justice advocates and residents of impacted communities to provide input on revitalization of abandoned properties called “brownfields.” In December of 1996, NEJAC finalized an extensive set of advice and recommendations for EPA to consider titled Environmental Justice, Urban Revitalization, and Brownfields: The Search for Authentic Signs of Hope. A consistent theme throughout the recommendations was the importance of seeking and including communities in decisions and planning. Taking these recommendations into consideration, EPA took numerous actions to improve its brownfields initiative. For example, EPA agreed to create a Brownfields Job Training Grants Program targeted toward residents living close to Brownfield sites. EPA initiated brownfields pilots with the U.S. Department of Health and Human Services to focus on an assessment of health risks associated with revitalizing brownfields sites. The NEJAC recommendations also led to the creation of the EPA National Brownfields Conference and the Brownfields Showcase Communities.

After a decade of brownfields program implementation, it became apparent to environmental justice leaders and many others that the clean-up and redevelopment of contaminated sites could just as easily lead to the gentrification of neighborhoods and displacement of local populations as it could to local revitalization. The NEJAC thus made substantive recommendations relevant to these issues with a follow-on report in 2006 titled Unintended Impacts of Redevelopment and Revitalization Efforts in Five Environmental Justice Communities. In addition, several other NEJAC recommendations have provided major contributions to EPA’s thinking and policy development around contamination, local impacts, and community revitalization. These include multiple iterations of recommendations on meaningful public participation and involvement in regulatory processes, a 2004 report Environmental Justice and Federal Facilities: Recommendations for Improving Stakeholder Relations Between Federal Facilities and Environmental Justice Communities, and more recently in 2015 with Recommendations for Promoting Community Resilience in Environmental Justice Industrial Waterfront Areas.

With its long history of involvement in EPA’s implementation of regulatory programs focused on contamination and contaminated sites, it is natural that EPA’s current focus on the Superfund program should include the creation of a charge for the NEJAC. Recommendations from the 2017 EPA Superfund Task Force (SFTF) Report address expediting cleanups; reducing financial burden on parties; encouraging private investment; promoting redevelopment/revitalization; and building/strengthening partnerships. The 2018 update to the Task Force’s Recommendation Number 42 pinpoints cleanup and redevelopment of sites through integration of environmental justice and directs the creation of a charge to the NEJAC for development of recommendations that speak to these issues.

RECOMMENDATION 42

Use a Federal Advisory Committee to Work with a Broad Array of Stakeholders to Identify Barriers and Opportunities Related to Cleanup and Reuse of Superfund Sites The NEJAC will undertake the task of preparing a report of formal consensus advice and recommendations related to long-term stewardship and risk communication at Superfund sites. Additional stakeholder and partner engagement processes will be used to seek feedback from targeted stakeholders, including engaging other EPA federal advisory committees to inform them about what EPA is doing. In addition to using this mechanism to elicit individual feedback from advisory committee members, consideration is being given (in accordance with FACA obligations to hold open meetings) to seek additional stakeholder and partner input related to long-term stewardship and risk communication at Superfund sites.

This recommendation from the SFTF Report and the following charge to the NEJAC provide an opportunity to continue the momentum of NEJAC's involvement in this sphere of EPA's regulatory and policy work and help shape outcomes for the next generation of Superfund cleanup and reuse. It is important to note that the NEJAC's efforts will not be carried out in a vacuum. There are in fact at least two other recommendations in the SFTF second year report which are relevant and have significant overlap with the charge for the NEJAC. Specifically, recommendation 40 on development of communications strategy which will largely take on the issue of advancing EPA's ability to effectively communicate risk, and recommendation 39 which contains several elements of communication, community revitalization, and local stakeholder engagement and collaboration, provide opportunities for the work of the NEJAC to align and provide synergy with other EPA efforts related to the SFTF1.

Overall goal of this charge

EPA is committed to continually improving our ability to achieve clean-ups of Superfund sites more quickly and with better outcomes for local communities while maintaining our focus on protecting human health and the environment. The overall goal of this charge is to provide recommendations to the EPA Administrator that will identify barriers, solutions, and best practices to achieve this above goal in a manner that takes central consideration of the unique burdens and vulnerabilities of environmental justice populations living in and around superfund sites. The recommendations produced should not be overly focused on the immediate activities of the Superfund program but instead look out five to ten years into the future and describe a horizon that the Superfund program can aspire to achieve through the adoption of NEJAC's recommendations over time. The recommendations should account for the importance of the intersection between remediation and redevelopment. And the recommendations should also everywhere include consideration of improving EPA's ability to effectively communicate risk to local communities and other stakeholders.

As outlined in the SFTF Report recommendations, the EPA reaffirms the Agency's commitment to incorporating advice and recommendations from the NEJAC to determine best approaches to integrating environmental justice considerations and the perspectives of multiple stakeholders into cleanup and redevelopment of sites. The EPA intends to integrate EJ considerations into site cleanup and redevelopment by collaborating with NEJAC to include a diversity of voices in driving the best outcomes for underserved and vulnerable communities.

For more information and the text of recommendations 39 and 40, please see the [Superfund Task Force report \(PDF\)](#) .

Charge Questions

Specifically, the EPA requests that the NEJAC consider the following issues related to cleanup and redevelopment of Superfund sites to provide feedback on barriers and opportunities:

Phase 1: Completed by June 1, 2019

1. What are specific ways in which the NEJAC, EPA, and other relevant stakeholders can facilitate strong, strategic relationships with stakeholders to facilitate effective cleanups and site reuse, and equitable decision-making throughout the entire SF process? How can NEJAC and EPA most effectively and efficiently identify EJ stakeholders and their interests, capacity and needs (community education, engagement, and capacity building) and ensure that interests and needs are considered in redevelopment planning and implementation processes?
 - a. Who are the impacted populations?
 - b. What are best practices and important considerations to achieve meaningful engagement and fair treatment when there are different impacted communities and disparities exist between those communities?
 - c. What are methods and innovations for community capacity building?
 - d. Are there other essential services and needs providers (e.g. health care, healthy food, recreation)?
 - e. What are specific ways in which all communities can be encouraged to move from passive stakeholders to active partners?
 - f. Are there additional/unique educational needs related to the technical aspects of clean up and redevelopment?
 - g. What do equitable cleanups of Superfund sites look like to EJ stakeholders?
2. What does NEJAC believe should be done to facilitate effective, efficient, and consistent decision-making regarding remediation and redevelopment of NPL sites? How can EPA better ensure that all parts of the community – especially vulnerable, overburdened, and underserved populations – are able to meaningfully engage in every phase of the Superfund process and have the information they need to understand the data and issues? How can EPA more clearly communicate the risks at sites and ensure that concerns and knowledge from all parts of the community are being heard and considered in remediation and redevelopment decision-making? Please consider these questions relevant to the following major items/areas within the Superfund process:
 - a. Remediation Approaches, especially Institutional and Engineering Controls: assumptions, considering cumulative impacts, community awareness of requirements, etc.
 - b. Long Term Stewardship: notice of ICs, maintenance of ICs over time, adapting operation and maintenance plans, etc.
 - c. Risk Communication and Community Engagement: cultural and linguistic differences, learning strategies, access, and availability of current site-related information, etc.

- d. Barriers and Opportunities for community participation in the Remedial Process (Discovery to Deletion), and ensuring that EJ stakeholder interests and needs are considered in redevelopment planning and implementation
- e. How can EPA be more proactive in avoiding the creation of Superfund sites in the first place?

Phase 2: Completed by March 30, 2020

- 3. Can the NEJAC provide examples of case studies and models – Superfund and non-Superfund alike that illustrate best practices and lessons learned (cleanup, redevelopment, risk communication, federal initiatives) which can inform ways to elevate equity in Superfund cleanup and redevelopment, to ensure all have a voice in EPA decisions? How has the EPA Superfund Task Force’s plan and recommendations advanced contaminated site remediation and redevelopment in vulnerable, overburdened, and underserved communities?
 - a. Are there certain practices and tools (e.g. Health Impact Assessments) that are especially effective in facilitating relationships with all stakeholders?
 - b. How can EPA best implement the Superfund Redevelopment Initiative? Are there certain practices and tools that can be improved as part of this process?
 - c. Are there certain practices and tools from other waste media programs (e.g. wastewater management) that have been effective?
 - d. Are there retrospective and/or prospective case studies that best illustrate the barriers and opportunities?
- 4. Which additional resources (e.g. water infrastructure investment, job creation) can be realized to support reuse and redevelopment of remediated Superfund sites from other sources? Specifically, resources including but not limited to:
 - a. Federal, Tribal, state, and local agencies
 - b. Private sector/third party investors.
- 5. Does the NEJAC propose any additional issues related to the clean-up and redevelopment of Superfund sites that are not captured in the questions above? Does the NEJAC identify any issues related to the implementation of the SFTF Plan and Recommendations?
 - a. Legacy contamination that impacts multiple generations
 - b. Disposal of contaminated materials

Appendix B:

Concentric, Community-Centered Outreach to Stakeholders and Community Resources

Stakeholders and Resources

- Impacted Populations
- Parties Responsible for Contamination
- Community Based Organization
 - Land conservation organizations and other NGOs focused on environmental protection and social welfare
- Government:
 - Federal (including ATSDR)
 - State
 - Local Economic and Redevelopment Agencies; Land Banks
 - Tribal (including Indian Health Service, Bureau of Indian Affairs)
- Private Sector
 - Private Redevelopment Sector
 - Equitable Development Sector
 - Remediation Sector
- Academic institutions—local and regional
- Health Providers and other Service Providers for Impacted Populations
- Businesses in site area
- Emergency Managers:
 - State
 - Local Emergency Planning Committees (LEPCs)

Appendix C:

Conceptual Case Study Summary Template/Data Fields

1. Name of Site and Location (Region, State, City/Town)
2. Impacted Stakeholders (identify those that apply)
 - a. Community/Local residents
 - b. EJ Groups
 - c. NGOs and allied organizations (e.g. essential service providers, equitable developers)
 - d. Local businesses
 - e. State/local government (including quasi-governmental redevelopment authorities)
 - f. Others (describe)
3. Circumstances of Site
 - a. Brief site history/historical uses of the site
 - b. Overview of the impacts on the community from site contamination
 - c. Historic source of/nature of contamination
 - d. Historic impediments to progress on cleanup and reuse/redevelopment (if any)
 - e. Primary elements/primary activities of the site cleanup and reuse/redevelopment
 - f. Current site status (current cleanup condition, current primary site use/purpose)
 - g. Currently expected future use
4. Facilitating/Supporting approaches for cleanup and for reuse (all may not apply)
 - a. EPA, state, or local community outreach and involvement
 - b. Community role in EPA, other governmental, and private decision making
 - c. Communication tools
 - d. Business involvement
 - e. Grant/subsidized loans/other financing utilizations
 - f. Other sources of funding and their use (e.g. private 'social impact' investments)
 - g. Collaborative planning, visioning, and problem solving
 - h. Others (describe)
5. Successful outcomes/What worked, and why?
 - a. Current/projected benefits to the community resulting from cleanup, and reuse
 - b. What about the process and practices at the site facilitated positive outcomes for cleanup and reuse? What barriers were overcome, and how?
 - c. What other "catalysts" enabled these successes?
6. Outcomes that fell short/Challenges and barriers/What didn't work well, and why?
 - a. Impact on population exposed, local businesses, etc.
 - b. Direct, indirect and social costs
 - c. Impediments in the decision-making process
 - d. Liability barriers/concerns (to what extent did fear of liability a factor?)
 - e. Funding barriers
 - f. Lack of community interest
 - g. Lack of apparent reuse opportunities
 - h. Others (describe)
7. If available: EJ Screen Assessment
8. Findings and Recommendations
9. Other comments (i.e. issues not captured above which helped or hindered site cleanup and reuse.)

Appendix D

Elements of Inclusive Market-Based Studies

1. Perform supplemental market study updates every 24-36 months.
2. Match Community Needs Assessment to the Site's Potential: Develop market matrix that marries community needs assessment, market study and health study to whittle down potentially feasible end use pathways. Engage the community in this process to identify locally acceptable land uses.
3. Conduct a comprehensive community visioning and decision-making workshop once site characterization, HIA, community assessment, market studies *etc.* are complete. Give the community the opportunity to build the vision on real data and analysis.
4. Develop a decision-making prospectus summarizing the results of the process, including an outline of the key variables, but-for causes, potential end uses and determined next steps.
5. Record decision-making in a summary document that considerations potential scenarios for different, considered end uses, including ultimately rejected end uses if necessary or illustrative. Top 2 or 3 pages built as tear off summary prospectus.
6. Ensure that focus on training addresses on needs and interests of the impacted community and not just on explaining government positions
7. Ensure that the efforts to engage impacted population (e.g. Decision-making Engagement Plan) incorporates and supports capacity of impacted population to participate.
8. When considering the contaminated sites, establish a timeline that addresses long term implications (e.g. population migration, exposure and contaminants).
9. Ensure that engagement and decision-making improvements account for rural populations, conditions and areas.
10. Foster shared learning from contaminated site stakeholders (e.g. peer to peer programs, mentoring, debriefings).
11. Increase the role of federal departments in capacity building for site reuse/redevelopment, especially to address essential services and needs of impacted populations.
12. Align potential benefits from **Opportunity Zone** designations with needs of populations impacted by the contaminated site from environmental, health and economic conditions.
13. Apply authorities and appropriations for public health monitoring (e.g. brownfields).

Appendix E

Resources and EJ Needs Matrix: [Federal Family] EJ and Contaminated Site Remediation and Reuse

A Resource Matrix has been developed as a *Proof of Concept* for an exercise to create a roadmap for equitably allied stakeholders to access resources from federal agencies for a place-based project related to a specific EJ issue (e.g. contaminated site remediation and reuse). The product is NOT meant to be a compilation of all available resources related to an EJ issue.

Federal Agencies' Programs ⁴³ with available funding and information ⁴⁴ on accessing resources (e.g., eligible project activities, funding cycles, eligibility requirements, etc.)						
EJ Needs ⁴⁵	GSA	USDA	HUD	DOT	HHS	DOC EDA
IMPACTED COMMUNITY ENGAGEMENT						
Awareness/ Access to decision-making processes						
Capacity/Skills/Resources to participate				X= FHWA	X= grants management skills	
Understanding of technical issues					X= Environmental Health Literacy	
Community Assets						
Visioning & Planning			X= Choice Neighborhood	X= FHWA Planning X= FHWA Innovative Planning Practices	X= Community Commons	X= Planning Program
Workforce: Development, Safety, Health, Professionalism					X= NIEHS Worker Protection	X= Economic Adjustment
Natural Disasters: Natural		X= Rural Development in Natural Disasters			X= NIEHS Natural Disaster Preparedness and Response	X= Disaster Supplemental
Natural Disasters: Man-made						
REMEDICATION						
Site assessment: Remedial; Investigation Feasibility Study; Decisions about testing restricted to property owners			X= Environmental Reviews			X= Remediation
Routes of exposure						
Vulnerable population exposure						

Superfund Remediation and Redevelopment for Environmental Justice Communities

Removal of contamination and source		X= site cleanup X= emergency response				
Institutional and Engineering Controls						
Long-Term Stewardship: Monitoring and Maintenance Authority and Responsibility					X= Site Reuse	
REUSE/REDEVELOPMENT						
Demographics of impacted population			X= US Government Data X= HUD geospatial datasets and maps	X= FHWA Data Tools	X= data X= Poverty X= HRSA Area Health Resources File X= CDC Environmental Health Tracking Population Data	
Health status of impacted populations					X= HRSA Area Health Resources File X= medically underserved areas X= CDC Causes of Death	
Disease Disparities						
Economic conditions of impacted populations			X= Map of Enterprise Renew and Empowerment Zones X= Envision Center Data sets			X= Market Assessment
Gentrification and displacement						
Renters lacking standing in standard restitution programs						
Environmental Conditions		X= Brownfields Redevelopment			X= CDC Environmental Public Health Tracking	
Essential service gaps and needs (e.g health care, food security)					X= health care shortage area X= HRSA Area Health Resources File	
Construction design and impacts		X= Rural Development Community Facilities				EDA can do construction; Have to be public facilities

Superfund Remediation and Redevelopment for Environmental Justice Communities

Operation of Redeveloped Property					X= FQHC	
Personal Property	X= Personal Property					
Leveraging Resources and Partnerships	X= User Guide	X= Rural Development Programs X= Agricultural Marketing Services Grants X= Innovation Centers	X= HUD Neighborhood Stabilization Centers X= Envision Centers X= Philanthropic and Sector Partnerships		X= grant management support X= NIEHS Worker Training Funding X= CDC Environmental Health Tracking Partnerships X= BROWN	
Matching Funds/Cost share requirements						
Transportation Modal Access				X= FTA Transit Oriented Development		
Services: water, sewer, electrical, waste		X= Rural Development Water X= Rural Development Energy X= Telecommunication				X= Public Works Program
Capturing Benefits/Measurements		X= Agricultural Marketing Service				
Resilient Revitalization			X= Sustainable Communities Hot Report			

⁴³ This iterative draft Resource Matrix is not intended to be a comprehensive list of available resources. Rather, it serves as a proof of concept approach to shifting focus beyond availability of funds toward increasing accessibility to resources for impacted populations. The Resource Matrix serves as an exercise for project stakeholders to identify federal programs with resources relevant to the project.

⁴⁴ In addition to information on the funding opportunities themselves, links are provided on programs that offer funding, programs that provide data and information to support funding requests, and programs that provide technical assistance in program development and implementation.

⁴⁵ The Resource Matrix approach is applied to a specific environmental justice need, in this case contaminated site remediation and redevelopment. The steps involved in the Resource Matrix commence with the understanding of the environmental justice needs as expressed by the impacted population. The delineation of the environmental justice needs provides the milestones of the roadmap for identifying federal department programs that may have resources to address these needs.