SUPERFUND ENVIRONMENTAL JUSTICE

BEST PRACTICES

EPA

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INTRODUCTION

A key EPA objective is to ensure everyone experiences the same degree of protection from environmental health hazards. About 73 million people live within 3 miles of a Superfund site. Many of the communities within this range have a higher number of low-income people, people of color or indigenous people. They are also more burdened by other environmental stressors (e.g., poor air quality, lead paint) when compared to the general population. EPA is prioritizing environmental justice throughout the cleanup process, including when engaging communities, making cleanup decisions and supporting Superfund site reuse. A cornerstone of environmental justice is to advocate for and strengthen early and meaningful community participation during Superfund cleanups to ensure communities have a voice throughout the decision-making process. The community engagement approach selected for each site draws on a robust set of tools and resources developed over the past several decades to specifically to address environmental justice through outreach, translation, needs assessments, technical assistance and capacity building.

This Environmental Justice Best Practices Guidance document outlines tools, strategies and approaches for site teams to consider while addressing environmental justice concerns throughout the cleanup and redevelopment process. Drawn from across the EPA Regions, these best practices, tools and lessons learned from one site team can inspire and fuel ideas and action in another. This report describes 13 successful practices that site teams have employed to reduce risks and improve environmental quality while providing significant benefits for underserved and overburdened communities.

Environmental Justice Best Practices

Environmental Justice in the Cleanup and Reuse of Contaminated Sites

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income, with respect to the development, implementation and enforcement of environmental laws, regulations and policies. For overburdened and marginalized communities, environmental justice means equal access to decision-making and protection from environmental and health hazards. EPA's goal is to provide an environment where all people enjoy the same degree of protection from environmental and health hazards and equal access to the decision-making process to maintain a healthy environment in which to live, learn and work.

In 2021, President Biden issued two executive orders – Executive Order 13985 (Advancing Racial Equity and Support for Underserved Communities Through the Federal Government) and Executive Order 14008 (Tackling the Climate Crisis at Home and Abroad) – that give direction to federal agencies to promote and work toward proactively achieving environmental justice. Federal agencies have been directed to develop and implement policies and strategies that strengthen compliance and enforcement, incorporate environmental justice considerations in their work, increase community engagement and demonstrate that at least 40% of environmental benefits occur in disadvantaged communities. Additionally, in 2023, President Biden issued Executive Order 14096 (Revitalizing Our Nation's Commitment to Environmental Justice for All) which reaffirms that the pursuit of environmental justice is a duty of all executive branch agencies and should be incorporated into their missions, directs federal agencies to actively facilitate meaningful public participation and just treatment of all people in agency decision-making, and charges federal agencies with conducting new assessments of their environmental justice efforts and developing, implementing and periodically updating an Environmental Justice Strategic Plan.

BUILDING COMMUNITY CAPACITY

WESTSIDE LEAD SUPERFUND SITE

Site Location: Atlanta, Georgia | ***Region:*** 4
Points of Contact: Alayna Famble (RPM), Ronald Tolliver (CIC)

Environmental Justice Best Practices

Data Transparency

Building Community Capacity

Context

The Westside Lead Superfund site is just west of downtown Atlanta. Lead contamination in site soils likely comes from use of waste material termed "slag" derived from metal smelting processes as fill material. Westside neighborhoods developed during the late 1800s and early 1900s, a period when there were few limitations on the management of industrial waste material.

Most residents in Westside neighborhoods are African American and many areas are low income. Community concerns include legacy contamination as well as gentrification driven by proposed development projects. In turn, these concerns have fueled local skepticism and distrust of EPA-led cleanup efforts. EPA Region 4's site team has reached out consistently during site investigations to understand and address these concerns. The site team is also part of EPA's Regional Lead Strategy Workgroup, helping ensure that resources and information are shared with the community to reduce community exposure to lead from multiple sources, improve health outcomes, communicate effectively with stakeholders and increase education opportunities to reduce lead exposure.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	75%	48%	74	40%	81
Low Income	61%	33%	86	30%	89
Unemployment Rate	9%	6%	78	5%	80
Limited English-Speaking Households	1%	5%	71	5%	60
Less than High School Education	12%	12%	57	12%	63
Under Age of 5	3%	6%	29	6%	28
Over Age of 65	6%	14%	16	16%	12
Low Life Expectancy	10%	21%	0	20%	1

Environmental Justice Best Practices

EPA works proactively with communities and stakeholders as an integral part of cleanup decision-making for lead-contaminated soils at residential properties. In the Westside neighborhoods, EPA used a combined removal-remedial strategy to address properties with the highest exposures while proposing the site's listing on the Superfund program's National Priorities List. Sampling of residential yards in adjacent study areas enabled EPA to adjust the site's boundaries over time. EPA also posted signs in the neighborhoods to help residents understand which yards had been sampled and then cleaned up. These updates helped raise community awareness of cleanup progress, encouraging other residents to sign sampling access agreements for their properties.

Through extensive community outreach and education initiatives, EPA's site team was able to expand the capacity of communities to address challenges. Some examples of these efforts include distributing fact sheets to ensure the community is notified of planned expansions, creating an interactive mapping tool enabling residents to search their addresses online and determine if their properties are in the study area, filming informative videos at locations familiar to the community to help residents understanding the sampling process and how to get their yards sampled, and maintaining a regularly updated webpage that serves as a central hub for site information and updates, including statistics, presentations, videos, mapping tools, facts sheets and contact information.

EPA has been actively engaged in transparent communication with residents, community groups, neighborhood associations and stakeholders, both individually and collectively. From the outset, EPA has kept the community well informed about the Superfund process and ongoing and upcoming activities. To achieve this, EPA's site team conducted listening sessions, hosted online meetings to discuss the site's NPL listing and site activities, and offered training on the tools and resources available on EPA's site webpage. EPA provided translation services for meetings, publications and other media to ensure that site-related information was accessible to as many residents as possible. EPA also created a dedicated community outreach number for residents without internet access, making it easier for them to access site-related information.

Outcomes

Extensive community outreach at the site has enabled the use of various cleanup authorities for commercial properties, while the Superfund program addresses residential, school and park properties in affected areas. EPA worked with state lead-based paint programs and regional multi-media programs to make this possible. Fact sheets on EPA's site webpage cover all possible sources of lead that could affect the community, provide contacts for addressing specific concerns, identify blood lead testing locations, and suggest ways to prevent lead exposure. The EPA site team's approach of gathering information from diverse sources and bringing it together to share a cohesive message is a holistic approach to managing lead contamination, in line with EPA policy. The site team's remarkable efforts in strategically leveraging EPA and other federal and state resources have expanded the capacity of communities to address challenges.

Challenges and Lessons Learned

To build trust with communities that may be skeptical about collaborating with government agencies such as EPA, it is crucial to take the first step by meeting with community leaders to explain the various aspects of the cleanup efforts. This step helps establish their support, enabling agency staff to then facilitate conversations and answer questions from the broader community. Additionally, combating misinformation requires providing comprehensive and easily accessible sources of information, meeting the community where they are, and leveraging existing community strengths by participating in established events and partnering with trusted local organizations.

JACKSONVILLE INTEGRATED PLANNING PROJECT

Site Location: Jacksonville, Florida | ***Region:*** 4
Points of Contact: David Keefer (RPM) and LaTonya Spencer-Harvey (CIC)

Context

In addition to fostering economic growth and providing jobs for area communities for decades, industrial operations in Jacksonville, Florida, resulted in environmental challenges. The Jacksonville Integrated Planning Project addresses the city's urban core, otherwise known as Health Zone 1. HZ1 is one of six Health Zones established to address health disparities in diverse areas of the county, and includes several Superfund sites, dozens of brownfields, impaired waterways and air pollution from industry, traffic and a port. HZ1 has an 81% people of color population and makes up 31% of Duval County's African American population. Communities in the area experience the highest poverty rates in the county and suffer from significant disparities in mortality rates and other health indicators. Due to a broad range of socioeconomic and environmental factors, EPA classifies Jacksonville HZ1 as an environmental justice community.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	72%	47%	76	40%	79
Low Income	76%	33%	96	30%	96
Unemployment Rate	11%	5%	84	5%	83
Limited English-Speaking Households	1%	7%	46	5%	59
Less than High School Education	32%	11%	94	12%	92
Under Age of 5	12%	5%	92	6%	91
Over Age of 65	10%	20%	22	16%	28
Low Life Expectancy	27%	19%	96	20%	96

Environmental Justice Best Practices

The Jacksonville Integrated Planning Project grew out of several related initiatives at EPA. In 2010, EPA selected Jacksonville's HZ1 as an Environmental Justice Showcase Community. The city received a $100,000 grant to advance environmental justice projects and priorities. The project brought a renewed focus on environmental justice issues in center-city Jacksonville. It identified community needs and priorities for guiding environment-related investments in the area.

As the Environmental Justice Showcase Community work moved forward, EPA and local leaders identified an opportunity to align community quality-of-life concerns and government agency program objectives as part of a single, community-based improvement plan. The Jacksonville Integrated Planning Project was the result. EPA funded this areawide planning project for all of HZ1 to evaluate ways to align Superfund land use planning, other agency programs and redevelopment opportunities with local quality-of-life priorities. The project represents an innovative expansion of EPA's site-based approach to reuse planning.

From the outset, the Jacksonville Integrated Planning Project reached out to a broad cross-section of stakeholders, including EPA staff, state and municipal partners, and local businesses, community organizations

and residents. The group came together and formed a committee. During Phase 1, its meetings focused on developing shared goals and priorities. During Phase II, committee members reviewed an analysis of existing conditions and local quality-of-life issues and refined project goals and priorities based on their findings.

The committee then focused project strategies and actions on three quality-of-life goals:

- Improve access to healthcare.
- Improve access to open space.
- Improve access to healthy, affordable food.

The committee identified five priorities to help address each goal:

- Increase job training opportunities and employment opportunities.
- Involve local youth.
- Improve air quality.
- Increase neighborhood safety and perception of safety.
- Increase cross-cultural competency and coalition building.

During this time, the project's leadership transitioned from the committee to a community-based coalition to prioritize needs and champion their implementation over time. Through this process, working across several EPA programs, community organizations, local governments, government leaders, non-profit organizations and many others, community capacity building was provided, and the project transitioned to the community for implementation. It is imperative that the process provides follow-up on implementation progress over a period of time after community takeover.

Outcomes

The project offers an innovative, robust model for community engagement that builds local capacities to address environmental justice concerns. This integrated planning approach provides a range of benefits. It brings together diverse stakeholders in productive dialogue, documents measurable environmental justice disparities, considers site reuse options in a neighborhood context, identifies roles for communities, non-profits and agency staff, and builds local capacities to effect positive change.

The project team worked with residents and local community organizations to identify three main goals: improve access to healthcare, open space and healthy food. Project participants formed work groups and are taking steps to build a sustainable coalition to advance and support these goals. As a result of this work, the Local Initiatives Support Corporation's Empower People to Inspire Change Communities Project has agreed to align investments with these community goals and has enlisted the project's community leaders in the new LISC Advisory Group to guide investments. A specific goal of this process was to increase the capacity of Eastside environmental justice neighborhoods by building partnerships with the adjacent, more-resourced Springfield neighborhood. This partnership resulted in National Park Service funding to establish a Groundwork Trust for park and creek improvements and programming to benefit both communities.

Challenges and Lessons Learned

EPA's initial outreach in the community identified extensive distrust of local and federal governments, due to the area's history of contamination and limited communication. EPA's follow-on outreach in Jacksonville shows how by validating local concerns and prioritizing community-defined quality-of-life goals, EPA can better align Agency initiatives to support community efforts and priorities. Building and improving shared understandings between EPA and the communities it serves can result in more collaborative working relationships and strengthened outcomes for all parties. Collaborating with other institutions and EPA programs can assist with achieving the goals and priorities of the community outside of the Superfund process. The Jacksonville Integrated Planning Project can serve as a model for projects focused on equitable development outcomes in communities with environmental justice concerns across the country.

KERR-MCGEE CHEMICAL CORP – NAVASSA SUPERFUND SITE

Site Location: Navassa, North Carolina | ***Region:*** 4
Points of Contact: Erik Spalvins (RPM), Charles King (RPM) and LaTonya Spencer-Harvey (CIC)

Context

The Kerr-McGee Chemical Corp – Navassa site is in Navassa, North Carolina. A wood-treating facility was active at this 100-acre area from 1936 to 1974. Its operations contaminated groundwater, soils and sediments. In 2010, EPA added the site to the NPL. The community was concerned about past health issues, current contamination and inequities that were mostly not site related.

EJScreen results for the site indicate significant environmental justice concerns in the community. The site exceeds the 75th percentile for two indexes at the state and national level – people of color and unemployment rate – and exceeds the 65th percentile for low life expectancy and low income at the national level.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	68%	37%	83	40%	77
Low Income	38%	33%	58	30%	65
Unemployment Rate	13%	5%	88	5%	88
Limited English-Speaking Households	0%	2%	0	5%	0
Less than High School Education	14%	11%	63	12%	68
Under Age of 5	3%	6%	28	6%	26
Over Age of 65	12%	16%	33	16%	36
Low Life Expectancy	21%	21%	60	20%	70

Environmental Justice Best Practices

EPA used frequent communication and collaboration with the community to align the cleanup with community priorities, allow the local government time to make informed land use decisions, and connect the community to non-Superfund capacity-building resources for non-site-related community concerns.

Site strategy aligned with community priorities

Prior to 2010, EPA's approach was to prioritize the most-contaminated areas above the least-contaminated areas (human exposure was already under control at the site). During community meetings in 2010 and 2011, residents told EPA that redevelopment of the site and public access to the river were higher priorities than the cleanup of the source area. EPA and the state shifted their focus to site areas with the easiest path and highest potential for reuse. EPA aligned its site strategy with the community's priorities. As a result, EPA took 20 acres of the site off the NPL in 2021 and another 15+ acres will be proposed for deletion in 2024. Under EPA's original strategy, no part of the site would be deleted from the NPL until the entire cleanup finishes, which will not be before 2036.

Engage the community when determining the reasonably anticipated future land use

From 2015 to 2018, the site team discussed reuse planning with the community. Until 2019, the community was most comfortable with future land uses that mirrored historical land uses (commercial and industrial) to avoid gentrification and displacement. Commercial/industrial land use guided EPA's risk assessments and a 2019 Proposed Plan for no action for about 31 acres of contaminated soils. After reviewing the Proposed Plan, the implications of the land use determination became clear to the community. At the Proposed Plan public meeting, the community and local government demanded that the site's remedy be compatible with residential uses. EPA requested more sampling to refine the risk assessments. In 2021, EPA issued a revised Proposed Plan for about 20 acres, with a no action decision based on residential land use assumptions. EPA deleted operable unit 1 from the NPL in 2021. EPA provided time for the local government and community to understand the Superfund process and land use considerations, then adjusted the remedy based on better-informed town input about future land use.

Connect communities with non-Superfund resources for support on non-Superfund needs

EPA's regular community discussions often included local concerns and priorities outside of EPA's Superfund authority. To help the community address these needs, EPA involved other agencies and organizations as appropriate, including the Multistate Trust, created to investigate and clean up the site, the University of North Carolina Wilmington and Brunswick Community College for community health issues, recording local cultural history, job training and local governance support, and the North Carolina Department of Health and Human Services and county DHHS for non-site-related fish contamination. This was coordinated with EPA's community involvement efforts, including quarterly community meetings, a Technical Assistance Grant and two technical assistance needs assessments in 2015 and 2023 through EPA's Technical Assistance Services for Communities program.

Outcomes

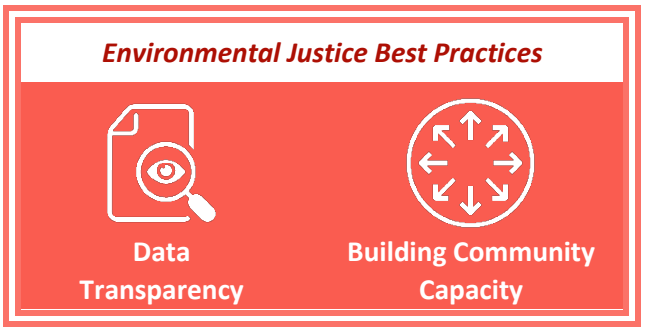
EPA was open to community input and prioritized making the correct decision, informed by all stakeholders, over meeting the schedule for the site's Record of Decision. By engaging the community early in the cleanup process, communicating frequently with community members, and collaborating with outside organizations, EPA was able to tailor the cleanup strategy to meet community needs, and to connect the community with resources for problems outside of EPA's scope of authority.

Challenges and Lessons Learned

- Due to the legacy of site contamination and history of neglect, EPA prioritized building trust with the community. This investment in EPA time and travel resulted in a solid relationship with the community and local government.
- The community did not understand the Superfund process well until EPA prepared the first Proposed Plan for the site. EPA stayed flexible and was willing to revisit the land use determination even though there was a timeline for ROD completion.
- The community faced significant non-site-related challenges. Connecting communities to appropriate resources helped people, helped EPA focus on the cleanup and built trust.
- Incorporating collaboration with local colleges and universities can benefit communities in many ways. These resources include assistance with grant and proposal writing, recognition of cultural diversity (such as the Gullah Geechee community) as part of community narratives, and assistance understanding environmental data, information and technology.
- Once communities start thinking about the future as well as the past, it becomes much easier for EPA to deliver results that benefit all stakeholders.

LANE PLATING WORKS, INC. SUPERFUND SITE

Site Location: Dallas, Texas | ***Region:*** 6
Points of Contact: Lisa Price (Superfund Deputy Director) and Craig Carroll (Response & Removal Branch Manager)



Context

The Lane Plating Works, Inc. Superfund site is a former electroplating facility in Dallas, Texas. The facility was active for more than 90 years. Due to violations, investigations and a bankruptcy filing, the facility shut down. Large volumes of liquid plating wastes were left at the site after closure. In November 2016, EPA removed 188,000 pounds of waste material from the site and disposed of remaining solid and liquid hazardous wastes at the electroplating facility. EPA added the site to the NPL in May 2018.

Dallas is the most populous city in the Dallas-Fort Worth metroplex, the fourth-largest metropolitan area in the country, with 7.5 million people. The five largest ethnic groups in Dallas are Latino or Hispanic (42.3%), White (Non-Hispanic) (28.1%), African American (22.9%), and Asian (3.7%). The community on and near the site is in the 92nd percentile for people of color in the state, the 95th percentile for low-income residents and the 77th percentile for people receiving less than a high school education. Several diverse neighborhoods bordering the site include constituents from Dallas City Council Districts 4, 7 and 8. These communities all have a vested interest in the site and are represented by the Lane Plating Community Advisory Group.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	98%	59%	92	40%	5
Low Income	77%	33%	95	30%	96
Unemployment Rate	8%	5%	77	5%	76
Limited English-Speaking Households	5%	7%	60	5%	75
Less than High School Education	27%	16%	77	12%	89
Under Age of 5	12%	7%	85	6%	90
Over Age of 65	10%	13%	38	16%	25
Low Life Expectancy	29%	20%	99	20%	98

Environmental Justice Best Practices

To integrate environmental justice priorities into the site's time-critical removal action, EPA Region 6 established an ArcGIS hub site to communicate site operations information in real time. The approach to designing the hub site was collaborative and strategic. EPA engaged with the Lane Plating CAG and local officials to gather their input and create a responsive webpage with many components to drive community engagement for residents near the site and concerned stakeholders. EPA and stakeholders also used EJScreen to identify neighboring communities that may have been impacted by the electroplating facility's 90 years of operations.

The removal action hub site is incorporated into existing Agency websites to share data, maps, infographics, charts and dashboards. It is a primary community engagement tool. The hub site displays near real-time operational field data on a satellite or street view map. The Lane Plating community air monitoring web map enables community members to search for their addresses and see where they live in relation to site perimeter

air monitoring locations. Community members can interact with the monitoring locations to review real-time data readings.

The hub site also displays performance-tracking initiatives and engagement indicators. For instance, real-time air monitoring data displayed on the hub site enable the Agency to engage with the community more effectively, demonstrating that removal action operations are not negatively affecting the area. Data transparency and proactive community engagement build a strong foundation that fosters collaboration and trust. The hub site displays progress percentage indicators that are updated by site personnel. The hub site also includes a photo/video media outlet that provides an engaging way to share Agency photo and video collections.

Outcomes

Since the launch of the hub site, EPA has received mostly positive feedback from the community. The community has engaged with the data and the platform and discussed the resource with EPA on multiple occasions. There has also been a decline in Freedom of Information Act requests and media inquiries.

Data are vital to decision-making, and the hub site provides a central location to share site-related data in documents, fact sheets and GIS-based data with communities and stakeholders. This tool allows users to search and download information through data download pages on the hub site. EPA can share authoritative data so the community and stakeholders can stay informed and share their concerns back with EPA. This open data-sharing capability is critical to building and maintaining trust between EPA and impacted communities.

Challenges and Lessons Learned

While there have been local concerns about power outages and a lack of accessibility for community members with limited digital literacy or internet access, the response to the hub site has been mostly positive overall. The hub site increases access to key site information for community members as well as the press and advocacy groups, allowing them to make well-informed decisions about which information to share with the public and how to best serve the communities that need it most. Providing easy access to relevant site information has helped combat misinformation, facilitated more robust discussions and strengthened the community's understanding of the site.

PADEN CITY GROUNDWATER SUPERFUND SITE

Site Location: Paden City, West Virginia | ***Region:*** 3
Points of Contact: Eric Pollard (CIC), John Brakeall (CIC) and Victoria Schantz (RPM)

Environmental Justice Best Practices

Community Assessment

Superfund Community Workshop

Context

The Paden City Groundwater Superfund site is located along the Ohio River in Paden City, West Virginia. The Ohio River has long served as the lifeblood for economic development in the region and is a vital resource for many industries, including coal-fired power plants, steel and aluminum manufacturers, and petrochemical plants. The region's past has left behind a legacy of environmental challenges. Paden City is at the 86th percentile for Ozone Pollution, the 91st percentile for 2017 Air Toxics Cancer Risk and the 96th percentile for Wastewater Discharge in West Virginia. Paden City is also at the 88th percentile for Linguistic Isolation and the 80th percentile for Individuals Over Age 64 in West Virginia.

Paden City uses three groundwater wells as the primary source of drinking water. Sampling found tetrachloroethylene above state and federal maximum contaminant levels in two of the three public wells. The West Virginia Department of Environmental Protection was notified and, in 2018, it requested EPA assistance to determine the source of the contaminated groundwater plume. EPA added the site to the NPL in 2022.

Many community members believe that Paden City officials knew about the contamination for many years and failed to address the problem. This led to widespread mistrust and anger in the community. In addition, due to COVID-19 protocols, EPA staff were not able to travel in person to Paden City from 2020 to 2022, causing additional frustration and lack of trust in government.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	3%	8%	44	40%	9
Low Income	38%	37%	50	30%	66
Unemployment Rate	6%	7%	57	5%	66
Limited English-Speaking Households	0%	0%	0	5%	0
Less than High School Education	11%	12%	52	12%	61
Under Age of 5	7%	5%	74	6%	69
Over Age of 65	21%	20%	53	16%	70
Low Life Expectancy	23%	22%	65	20%	81

Environmental Justice Best Practices

EPA quickly recognized the need to engage the community early and effectively to rebuild trust among local residents. The site team used EPA's Conflict Prevention and Resolution Center program to conduct a situation assessment by a neutral third-party facilitator as the first step. As part of the assessment, the facilitator interviewed community members and summarized their concerns and questions. With this information, EPA was better able to understand community sentiments and respond accordingly. According to community feedback, the situation assessment helped the community members feel heard through a third party, which provided a safe space to share their feelings and concerns, building trust.

EPA then hosted a Superfund workshop through the TASC program. This was the first Superfund workshop in the nation held as part of a Headquarters pilot program to strengthen early community engagement at Superfund sites.

As part of its outreach efforts, EPA distributed fact sheets to high school students to take home to parents, posted on local social media and advertised on billboards in town. The workshop included an open house, presentations with question-and-answer sessions, and a listening session. During the presentations, EPA tailored discussions to focus on three community priority topics (health effects, an air stripper and vapor intrusion) identified during the situation assessment.

About 40 people attended the workshop; most attendees had many comments, questions and concerns to share with EPA. Engaging the trained CPRC facilitator who had performed the situation assessment was fundamental to the workshop's success. The facilitator was able to keep the workshop on schedule, address difficult and tense situations, and identify when conversations should be paused and continued later.

Initiating the situation assessment and workshop early in the Superfund process, after NPL listing, but prior to the start of remedial investigation fieldwork, was beneficial to the community and the site team. EPA was able to explain to community members what they could expect during the RI before work began, including general timelines, the types of sampling to be performed and what to expect from EPA concerning community engagement. EPA was able to adjust the draft RI Workplan and make meaningful modifications based on community input. Additionally, residents were able to understand common roadblocks and challenges that can occur during the RI, such as denied access requests for sampling. Many community members expressed interest in participating in upcoming sampling efforts and offered to help EPA address sampling access-related challenges.

Outcomes

Performing the situation assessment and hosting the Superfund workshop early in the Superfund process was critical for reestablishing trust in the community, planning for the RI, and ensuring the community had access to EPA, partners and reputable sources of information from the beginning. The workshop also helped show the community that federal, state and local agencies are working together and that EPA needs the support of all involved to be successful in the cleanup.

The site team is using the Situation Assessment Report and feedback gathered during the workshop to guide development of the site's Community Involvement Plan and to prepare a Frequently Asked Questions document that will be posted to the site's webpage. The FAQ document will be updated regularly during the Superfund process.

Challenges and Lessons Learned

Engaging early and often is a key tenet for effective community engagement. Using a facilitator helped build trust through effective and productive communication. The facilitator helped identify key issues in the community that were addressed during the workshop. The Superfund workshop provides a model for early engagement at other sites newly listed on the NPL.

COMMUNITY-INFORMED OUTREACH

FLINT DRINKING WATER EMERGENCY RESPONSE

Site Location: Flint, Michigan **|** ***Region:*** 5
Points of Contact: Mark Durno, On-Scene Coordinator (OSC), Diane Russell (CIC) and Janet Pope (CIC retired)

Environmental Justice Best Practices

Local Partnerships

Community-Informed Outreach

Context

EJScreen results for the Flint Drinking Water Response site identified significant environmental justice concerns in the community. The site scored above the 80th percentile for eight out of 12 indexes at the state level and four indexes at the national level. Several socioeconomic indicators – people of color, low-income status and unemployment rate – exceeded the 80th percentile at the state and national levels in Flint.

As part of an effort to save money, the city of Flint began to source and treat water from the Flint River in April 2014, switching from purchasing water supplies from the Detroit Water and Sewerage Department. This change took place in April 2014. However, the city failed to treat the water for corrosion, and lead contaminated the drinking water. By February 2015, residents were sharing concerns with EPA. At least a quarter of Flint households experienced lead levels above the federal standard of 15 micrograms per liter, with some households reaching 13,200 µg/L. The city of Flint's failure to treat municipal water resulted in increases in blood lead levels in children. According to the Centers for Disease Control and Prevention and the National Center for Environmental Health, lead exposure in young children can lead to damage to the brain and nervous system, slowed growth and development, learning and behavior problems, and hearing and speech problems. In early 2016, President Obama declared a state of emergency after testing showed increased amounts of lead in Flint's drinking water.

For the community, EPA's efforts came two years late. Flint residents struggled to trust EPA. They preferred to talk to people and groups they already knew – their neighbors, pastors, area colleges, community organizations – to tackle the water crisis.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	67%	26%	87	39%	76
Low Income	62%	31%	89	31%	89
Unemployment Rate	19%	7%	92	6%	94
Limited English-Speaking Households	1%	2%	76	5%	59
Less than High School Education	15%	9%	83	12%	72
Under Age of 5	7%	5%	72	6%	69
Over Age of 65	13%	18%	36	17%	40
Low Life Expectancy	23%	20%	79	20%	83

Environmental Justice Best Practices

EPA's initial outreach efforts focused on water and filter distribution. This information did not address the community's priority concerns. The people of Flint needed risk communication assistance so that they could make informed, independent judgments about local risks to health, safety and the environment. The result: the community quickly grew less receptive to EPA's efforts.

As EPA staff spent time with residents to understand the outreach challenges, they learned that EPA's fact sheets did not include the information that people needed, that content needed to be simplified and shared in pictures and graphics as well as text, and that information needed to be translated for Spanish and American Sign Language speakers. In addition, people were overwhelmed by information from local media and other sources. The community also distrusted government agencies, including EPA, as a result of delayed intervention and a history of neglect.

Building on its renewed understanding of the importance of building relationships and working closely with local entities, EPA developed a new outreach approach. Messaging shifted from focusing on EPA's response activities to focusing on what people can do to keep themselves and their families safe, using graphics and pictures to communicate. EPA also communicated with residents using a wider range of media, including billboards and videos. EPA's efforts to work more closely with the community included connecting with local organizations to ask for their feedback on draft materials, having staff at church events and local meetings to share updates and ask for feedback, and providing staff and expertise for community filter trainings. EPA also maintained a core group of staff in Flint to maintain established relationships and reinforce their position as a trusted source of information.

EPA continued to prioritize the feedback shared by the community as its efforts became intertwined with the efforts of local organizations and leaders addressing the water crisis. Collaborative efforts resulted in communication/action plans, community filter trainings, lead abatement trainings and education grants. These efforts helped EPA work on rebuilding trust and relationships in the community.

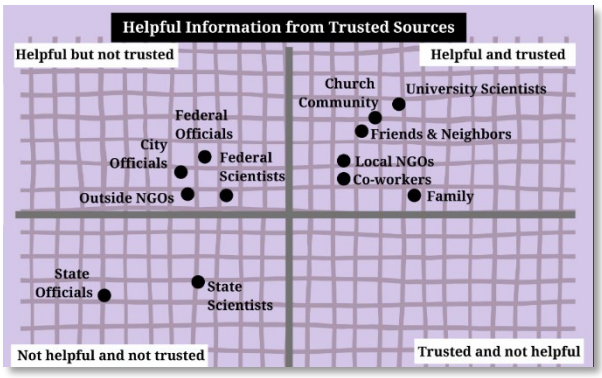
Outcomes

EPA initial outreach efforts in Flint did not address community priorities and concerns effectively. As a result, immediately implementing EPA's emergency response framework was not an option. Instead, EPA listened and learned, shifting its focus to collaborating with local leaders and organizations to build working relationships. Learning more about community needs on the ground helped EPA understand more about the information that people needed and how they needed to receive it. Over time, the community transitioned back to working directly with EPA, rather than gathering information through trusted entities first.

Challenges and Lessons Learned

In order to engage effectively with a community, it is important to recognize that each community is unique and has its own set of challenges and needs. Meeting community members where they are and having a flexible approach is crucial.

During EPA's interactions with the community in Flint, it because apparent that a lot of misinformation was circulating. It was also clear that EPA's messaging was not reaching the community effectively. Community meetings helped EPA identify where people were getting trusted information, as shown in the graphic to the right.



While building relationships is a critical first step, it is equally important to maintain these connections over time. In Flint, EPA staff have remained in the community, continuing to work on sustaining and expanding local relationships, recognizing that a consistent presence is a vital part of addressing evolving community needs and concerns.

CENTRAL METAL SITE INVESTIGATION

Site Location: Los Angeles County, California | ***Region:*** 9
Points of Contact: Matt Mitguard (SAM) and Chip Poalinelli (RPM)

Context

The Central Metal site is in Los Angeles, California. The community surrounding the site is densely populated, mostly Hispanic, Spanish-speaking and low income. The site is within 5 miles of six other contaminated sites where EPA is involved: the Waymire Drum Vapor Intrusion Superfund emergency response site, the South Gate Superfund sites (three sites), the Pemaco Maywood Superfund sites, and the former Exide facility. About 11,000 people live within a half-mile radius of the site.

In 2018, EPA began a site inspection to see if waste from the site blew off site and was a threat to human health or the environment. As part of the inspection, EPA tested soil and groundwater. In 2019, EPA found a soil waste pile on site that had been packaged for disposal by the Los Angeles County Fire Department. The fire department disposed of the waste at an off-site facility and told EPA that the pile was contaminated with lead and arsenic. EPA used aerial photos to show that similar piles had been on site since at least the early 2000s, indicating a legacy of contamination in the community resulting from past industrial practices.

When EPA tested the soil and groundwater, community members shared concerns that contaminated soil from the site was blowing onto their properties. In response, in 2019, EPA asked for permission to test the soil of yards in parts of the Walnut Park and Florence-Firestone neighborhoods near the site to determine whether contaminated soil from the site blew onto nearby properties. EPA will use the test results to see if the site is eligible for NPL listing, is not eligible for NPL listing but should be cleaned up by another EPA program, should be referred to the state of California for follow up, or does not require any further action.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	99%	63%	96	40%	96
Low Income	49%	29%	81	30%	78
Unemployment Rate	9%	6%	74	5%	77
Limited English-Speaking Households	25%	9%	91	5%	95
Less than High School Education	50%	16%	95	12%	98
Under Age of 5	7%	6%	68	6%	69
Over Age of 65	9%	14%	27	16%	22
Low Life Expectancy	18%	18%	60	20%	40

Environmental Justice Best Practices

Early on, EPA determined that in-person and door-to-door interactions and high levels of local involvement were necessary to begin building trust, to thoughtfully address COVID-19 concerns, and to communicate effectively with the community. Direct mail fact sheets and information booths were not effective in enlisting residents to sign sampling access agreements.

EPA met with community members and representatives in early 2022 to discuss the project. Despite community involvement not being a required component of site assessments, the site team engaged with residents directly, using TASC support and enlisting local, bilingual community members to go door to door and discuss soil testing at selected properties in the Walnut Park and Florence-Firestone neighborhoods. EPA's TASC program provided increased staff capacity, bilingual expertise, large-scale printing services and EPA logos for vehicles. Talking face to face with residents was essential to building trust and gaining access to properties for sampling. Once access agreements were in place, EPA returned to meet with residents to schedule sampling. To make sure community members stayed engaged and up to date, EPA held regular community meetings with a variety of stakeholders, including local organizations, congressional representatives and the local government. Additionally, based on the feedback and priorities identified by residents, EPA contacted the California Department of Toxic Substances Control to help address non-Superfund-related topics such as possible follow-up activities under state authorities.

EPA is mindful that state governments and the federal government have different action levels for addressing contamination. In California, the state has stricter regulations. Including county and state partners as part of site investigations is key to ensuring that concerned community members get their questions answered.

Outcomes

By July 2022, EPA selected and scheduled eligible properties for soil testing. Residents with yards eligible for sampling received access agreements by mail or in person. EPA reviewed the signed agreements to decide how many of the eligible homes it could test. In August 2022, EPA tested soils at 84 residential properties near the site to determine whether contaminated soil from the site has spread to nearby properties. Test results were analyzed at a lab and shared with the community in 2023.

EPA will update the Los Angeles Department of Public Health, other county and state agencies, Communities for a Better Environment, and Florence-Firestone community leaders on the status of this work. EPA is preparing the site's Site Inspection Report. EPA shared the results with the property owners and residents in spring 2023. The Site Inspection Report, which will be finalized in summer 2023, will include EPA's final evaluation and determination whether the site and surrounding areas are eligible for NPL listing.

Challenges and Lessons Learned

Due to existing tensions between the community and the federal government and limited success with mail-in and online outreach efforts, EPA realized early on that significant community engagement efforts would be crucial to ensuring a successful remediation process. Additionally, discussions with the community quickly identified that some local concerns were outside the scope of the site team's expertise, and the team would need to coordinate with outside organizations to address them. By working with other organizations such as the county and DTSC, EPA was able to clarify roles, promote coordination regarding cleanup and reuse, and ensure that the broad range of needs in the community were addressed.

EPA quickly learned that it was necessary to update its communication strategy after mail and online options failed to generate community interest. While site assessors may not be equipped for this kind of risk messaging and informed community engagement, setting up site assessment teams with unified, proactive communications capacity can help tremendously. Overall, making an early effort to identify potential obstacles, maintain open and consistent communication with communities, facilitate strategic partnerships with outside agencies, and leverage available resources such as the TASC program can allow for the best chance of success when navigating sites with complicated community dynamics and a legacy of contamination and neglect.

CROSS-AGENCY COLLABORATION

ABEX CORP. SUPERFUND SITE

Site Location: Portsmouth, Virginia | ***Region:*** 3
Points of Contact: Lavar Thomas (Environmental Justice Coordinator for OSRTI Community Involvement & Program Initiatives Branch) and Alex Mandell (CIC)

Environmental Justice Best Practice

Cross-Agency Collaboration

Context

The Abex Corp. Superfund site is in Portsmouth, Virginia. A brass and bronze foundry was active on site for 50 years. It recycled used railroad journal bearings and recast the metal to make new bearings. The disposal of foundry waste sands and emissions from the smelting furnaces contaminated site soils, a small playground, a rehabilitation center and surrounding residential properties, including the Washington Park affordable housing complex. Three other contaminated sites are nearby – the Atlantic Woods Industries, Inc. Superfund site, the Peck Iron and Metal Superfund site and the Norfolk Naval Shipyard Superfund site.

EJScreen results for the site indicate that adjacent communities score above the 80th percentile for 11 out of 12 environmental justice indexes at the state level and 10 out of 12 indexes at the national level. Several socioeconomic indicators – people of color and low-income status – exceed the 80th percentile at the state and national levels, while unemployment rates exceed the 75th percentile.

In February 2018, EPA held a public meeting to discuss the fourth five-year review of the site's remedy. Current and former residents attended the meeting. During the meeting, people voiced their concerns regarding present-day exposure to lead. Residents had concerns about the scope of the initial testing phase and asked why testing was only done in certain areas. Former residents were also vocal about environmental justice challenges posed as a result of the cleanup. Questions were raised about why a 700-foot radius was used to determine cleanup locations in the site study area. Residents living outside the 700-foot-radius boundary expressed concerns that the soil on their properties may be contaminated with lead. Additionally, Portsmouth residents have historically raised health concerns about potential long-term exposure to lead from the site, and these health concerns remained a priority issue for community members and former residents.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	68%	37%	83	40%	77
Low Income	38%	33%	58	30%	65
Unemployment Rate	13%	5%	88	5%	88
Limited English-Speaking Households	0%	2%	0	5%	0
Less than High School Education	14%	11%	63	12%	68
Under Age of 5	3%	6%	28	6%	26
Over Age of 65	12%	16%	33	16%	36
Low Life Expectancy	21%	21%	60	20%	70

Environmental Justice Best Practices

Recognizing the need for more education resources and open communication, EPA representatives met with the community, distributed fact sheets, held public availability sessions and public meetings, and conducted door-to-door outreach to update affected residents. As a result, residents were able to share their concerns and speak with experts about their community and health-related needs.

To address these concerns and the community's interest in learning more about potential health risks, EPA worked with federal, state and local partners to coordinate an environmental health workshop at the Wesley Community Service Center in September 2018. The Portsmouth Environmental Health Workshop was a collaborative educational event that offered area residents the opportunity to learn more about locally focused environmental health topics such as urban lead exposure and nearby Superfund sites. The workshop offered free soil lead screening for residents and free blood lead screening for children, with results available in minutes. Adults interested in blood lead screening were offered a free referral to the Hampton Roads Community Health Center.

Holding the environmental health fair at the community service center provided a several benefits. The service center was a comfortable and convenient location for residents. Center staff were known and trusted by residents and therefore could effectively encourage residents to attend.

Outcomes

After these efforts, the majority of people interviewed said that they felt well informed by EPA about health risks and cleanup activities. EPA has worked closely with the community to offer resources and tools to address environmental and health concerns. Following the health workshop, testing results showed extremely low levels of lead in blood and soil, which helped reduce residents' concerns about potential exposure. Regarding how to best keep the community informed, most residents requested to be contacted via mail, phone or email, with some residents noting that EPA's house-to-house visits are welcome.

Challenges and Lessons Learned

Due to a lack of trust in government and a feeling of neglect among residents, early community meetings were tense and largely unproductive. EPA found that the conversations were often dominated by a vocal minority who did not always accurately represent the opinions of the community as a whole. Holding events such as the health workshop gave EPA an opportunity to hear from community members in a calmer environment, and provided the site team with a better understanding of community perspectives while simultaneously working to educate the community, address concerns and build trust between residents and the site team. Simultaneously, EPA was able to build a network of agency partners and identify roles and resources to help respond to community concerns.

PORTLAND HARBOR SUPERFUND SITE

Site Location: Portland, Oregon | ***Region:*** 10
Points of Contact: Laura Knudson (CIC) and Caleb Shaffer (Team Lead)

Environmental Justice Best Practice

Community-Driven Coalition

Context

The Portland Harbor Superfund Site includes a 10-mile stretch of contaminated water, sediment and lands along the lower Willamette River from downtown Portland to near its confluence with the Columbia River. Added to the NPL in 2000, the site is contaminated with many hazardous substances, including polychlorinated biphenyls, polyaromatic hydrocarbons, dioxins/furans, pesticides and heavy metals. Despite the contamination, the river continues to play an important part in the community, supporting fish and wildlife, recreation and the industrial economy.

Neighborhoods next to the site experience negative impacts from living in an industrial corridor, including poor air quality and proximity to contaminated sites, truck traffic and noise. In addition to six federally recognized tribes, people living near the site include African Americans, immigrants and refugees, unhoused people, business and industrial workers, people who catch and eat fish, shellfish and other seafood, and people who recreate along the Willamette River. Local environmental justice concerns include human health, air quality, fish consumption, a disproportionate number of contaminated sites, flooding, reduced trust of government and limited access to decision-making.

Given the scale and complexity of the site, EPA faced challenges in communicating productively about the cleanup with diverse stakeholders, including potentially responsible parties, governmental entities, economic interests, environmental and recreation advocates, and community members.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	31%	24%	71	39%	50
Low Income	26%	29%	49	31%	49
Unemployment Rate	8%	6%	72	6%	73
Limited English-Speaking Households	0%	2%	0	5%	0
Less than High School Education	2%	9%	22	12%	19
Under Age of 5	3%	5%	35	6%	31
Over Age of 65	9%	19%	18	17%	23
Low Life Expectancy	20%	19%	60	20%	54

Environmental Justice Best Practices

To respond to the complex stakeholder landscape, EPA developed an inclusive forum (the Portland Harbor Collaborative) for interested and affected parties to share and receive updates, provide feedback, and make cleanup recommendations to EPA and the Oregon Department of Environmental Quality.

As outlined in EPA's Community Involvement Plan for the site, many community members and other interested groups envisioned the Portland Harbor Collaborative as a hub for all parties with a stake in the cleanup, so different topics can be discussed with everyone present, creating a culture of transparency. Since many community members have environmental justice concerns, this transparent approach is particularly important for building trust.

EPA Region 10 staff worked with a neutral third-party facilitator to develop an initial charter for the Portland Harbor Collaborative in collaboration with community members and leaders as well as gaining buy-in from community organizations, business groups, PRPs, government organizations (local, regional, state), tribes and other groups. As of December 2022, the Portland Harbor Collaborative includes over 40 members, and its quarterly meetings are well attended by members and the public (anyone is welcome to attend). The Portland Harbor Collaborative continues to grow, improve and adapt as a venue for effective community involvement where environmental justice concerns may also be discussed, in addition to the site's cleanup.

Outcomes

Thanks to the Portland Harbor Collaborative, EPA has been able to streamline communication and engagement with the site's diverse stakeholders. During its quarterly meetings, EPA provides updates to members and the public, helping ensure that stakeholders have the same information at the same time about the cleanup process. These regular touch points provide the community with an opportunity to bring up issues that EPA can respond to proactively. Meeting regularly over many years also builds the capacities of stakeholders to participate in the remedial decision-making process, increasing understanding of the contaminants, environmental and health risks, potential cleanup approaches, and the roles of various agencies involved. The collaborative also provides a forum to share related initiatives, such as the status of restoration activities by the site's natural resource trustees. Finally, EPA has been able to engage resource partners, such as city, county and state agencies, to help parties understand and address environmental justice issues that are beyond the authority of the Superfund program. The process has provided regularity and certainty and helped build relationships among EPA and site stakeholders, laying a strong foundation for discussions and decision-making.

Challenges and Lessons Learned

The Portland Harbor Collaborative differs from a traditional CAG in several ways. It was created with the help of a third-party facilitator enlisted through the CPRC. The facilitator worked collaboratively with the co-founders and members to draft a charter and agree on membership, structure and decision-making. Broad representation was a priority. The collaborative's agenda is community driven and can address issues beyond the scope of the cleanup. The third-party facilitation fosters productive dialogue and a culture of respect among the site's diverse stakeholders and agencies.

NORTH LOWER WEST MICHIGAN – CULTURAL RESOURCES TABLETOP EXERCISE

Site Location: Grand Rapids, Michigan | ***Region:*** 5
Points of Contact: Jackie Cole (OSC), Betsy Nightingale (OSC); Jenny Manville (Tribal Environmental Liaison) and Kristina Miller (Oil Planner)

Context

The North Lower West Michigan U.S. EPA Sub-Area spans 17 counties in central and western Michigan. Lands bordering water resources in the Sub-Area are part of an Anishinabek cultural landscape that includes former locations of villages, places where tribal members gathered subsistence resources, areas where cultural/religious practices took place, and burial sites. It is uncommon for a tribal area such as this area to be found in planning documents due to concerns about theft, damage and cultural appropriation. As a result, any contamination caused by a spill or from cleaning a spill are unlikely to be reported to non-tribal responders. It is important that relevant parties are aware of the sensitive nature of the community and have a pre-established plan in place to ensure a swift, effective and culturally informed response in the event of an environmental emergency.

Environmental Justice Best Practices

In October 2022, the NLWM Sub-Area Cultural Resource Tabletop Exercise took place at City Commission Chambers in Grand Rapids. Representatives from the U.S. Department of the Interior, the Michigan State Historic Preservation Office and the Gun Lake Tribe discussed cultural resources and ways to respond to emergencies that pose a potential threat to them.

Tabletop exercises provide participants with resources to plan for, respond to, and evaluate incidents and challenges related to specific scenarios. The exercise for the site was a simulated oil spill in Michigan's Grand River, near cultural resources. Some participants were in person; others joined via videoconference. A Cultural Resource Coaching Team coached participants. The team was a group of cultural resource subject matter experts, including staff from SHPO, area tribal historic preservation offices, DOI and the EPA Region 5 tribal liaison. The format was discussion-based, with questions and topic-area prompts added as the exercise progressed. Resources discussed included the Programmatic Agreement, the SHPO and THPO roles and notification procedures, and potential cultural resources that may be affected during a response. A case study also highlighted a recent success of partnerships between federal, state, tribal and local response organizations in responding to an oil spill in the Upper Peninsula.

The exercise began at hour zero of the incident. The response included formation of a Unified Command among EPA, the Michigan Department of Environment, Great Lakes and Energy, the city of Grand Rapids, Kent County, and the responsible party. The exercise involved working through incident discovery, identifying potential effects on cultural and historical resources downstream, notifications, National Historic Preservation Act and programmatic agreement compliance, historic property specialist activation, response priorities, unanticipated discovery scenarios, staging area considerations, and documentation. Discussions also covered how non-federal government agencies and entities would address potentially affected cultural resources during a response.

Outcomes

The exercise successfully engaged cultural resource experts at the local, state, federal and tribal levels. Developing relationships among these cultural resource experts and the response community, including private stakeholders, has increased overall preparedness in the area and strengthened communication and notification processes. The exercise also raised awareness of the importance of protecting cultural resources, shared resources to use during situations that threaten cultural resources, and identified state and tribal cultural contacts.

Challenges and Lessons Learned

Cultural resource experts working with the response community was a beneficial collaboration. It increased preparedness and improved communication among the parties, ensuring that a variety of cultural resource concerns were addressed. Responsiveness to cultural resource concerns is only improved through partnership with cultural resource experts. The success of this tabletop exercise also aided a decision to engage tribal cultural/historic preservation offices in future planning efforts by EPA.

Cultural resource concerns can vary greatly, and Regions should strive to work closely with their cultural resource partners to maximize preparedness and develop key response relationships. All EPA planning sub-areas should incorporate similar activities to engage tribal cultural/historic preservation offices in planning and preparedness efforts. EPA Region 5's tribal liaison role was crucial in planning and coordinating with area cultural resource experts. The materials developed for this exercise are available for use in similar efforts nationwide.

CULTURALLY APPROPRIATE EDUCATION

LOWER DUWAMISH WATERWAY SUPERFUND SITE

Site Location: Seattle, Washington | ***Region:*** 10
Points of Contact: Laura Knudson (CIC); Elly Hale (RPM) and Piper Peterson (RPM)

Environmental Justice Best Practices

Culturally Appropriate Education

Resident Outreach Coordinators

Context

The Lower Duwamish Waterway Superfund site is a 5-mile segment of the Duwamish River in Seattle. The river flows between the neighborhoods of Georgetown and South Park and through the industrial core of Seattle into Elliott Bay. Serving as Seattle's major industrial corridor since the early 1900s, the river contains contaminated sediment, which has also affected fish and shellfish. Most of the human health risk comes from PCBs, arsenic, carcinogenic PAHs, as well as dioxins and furans. As a result, consumption of resident fish and shellfish, as well as contact with contaminated sediments, pose a risk to human health. The Washington Department of Health issued a fish advisory recommending no one eat crab, shellfish and fish from the Lower Duwamish Waterway.

In 2016, EPA completed the Fishers Study, which found that more than 20 ethnic/language groups fish on the Duwamish River. Fishers from Asian, Pacific Islander and Latino immigrant communities are catching, eating and sharing contaminated seafood from the river. The health warning signs have not been effective in reaching fishers who speak little to no English – most of these fishers speak Vietnamese, Cambodian (Khmer) and Spanish.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	78%	33%	96	40%	82
Low Income	36%	24%	76	30%	63
Unemployment Rate	4%	5%	54	5%	52
Limited English-Speaking Households	16%	4%	94	5%	91
Less than High School Education	25%	8%	93	12%	87
Under Age of 5	7%	6%	69	6%	69
Over Age of 65	11%	15%	35	16%	33
Low Life Expectancy	18%	18%	47	20%	35

Environmental Justice Best Practices

In January 2017, EPA entered into a Cooperative Agreement with Public Health Seattle-King County to establish a community-based Healthy Seafood Consumption Institutional Control Program for the Duwamish Superfund site. The CA establishes a community-based participatory process to develop culturally appropriate institutional control tools that can be implemented throughout the site's cleanup. The program promotes healthy seafood consumption before, during and after the cleanup. EPA's Fun to Catch, Toxic to Eat program for the site uses innovative community-based approaches to promote safe seafood consumption. The goal is to promote culturally appropriate healthy choices that protect the health and wellbeing of fishing communities, especially for subsistence fishers, pregnant women, nursing mothers and young children, from contaminated seafood during cleanup.

To address the disproportionate burden of health risks associated with consuming PCB-contaminated seafood among low-income and immigrant/refugee fishing communities near the site, EPA and PHSKC established a cooperative agreement to launch a community-based program to confront longstanding environmental justice issues associated with fishing and seafood consumption in the lower Duwamish Valley. The program engages affected communities in designing culturally appropriate health promotion tools and building community capacities for sustainable outcomes.

Community health advocate teams developed outreach tools with input from their communities. This effort included the development of the program's logo, digital story videos, a training curriculum for new CHAs, a video series on fishing in the Duwamish River, a multi-lingual coloring book, a guide on where to catch and eat safe seafood in King County, and culturally appropriate recipe cards. The CHAs also participated in outreach events, including cooking demonstrations at community events, speaking on boat tours of the Duwamish River, and presentations in community members' homes.

The CHA program is guided by the site's Institutional Control Implementation and Assurance Plan. This plan describes key strategies to promote healthy seafood consumption that can be carried out within the scope of the Superfund program. In addition, the ICIAP has recommendations for partnerships to address additional barriers that are outside the scope of EPA's program. The ICIAP was developed with community input. From June 2018 to May 2019, PHSKC facilitated seven Community Steering Committee workshops. Fifteen CHAs who had received prior training on this issue participated on the CSC. They represented fishers and community members who receive local seafood catch (including mothers). They are also well connected to the local Vietnamese, Cambodian and Latino fishing communities. The CSC shared valuable insights and cultural expertise about the primary audiences for this program: Duwamish fishers and pregnant mothers or caregivers of young children who receive local seafood catch. They discussed the barriers these groups face in protecting themselves from consuming contaminated local seafood. They worked together to identify and prioritize key institutional control strategies and recommendations for partnerships.

Outcomes

Program outcomes include:

- Capacity building – hire and train community members as CHAs to do outreach.
- Meaningful involvement – design tools and plans with community input.
- Empowerment – support the community's voice in decision-making.

After completing the first five-year cooperative agreement, the program has entered a second seven-year cooperative agreement. Recent activities included creating a Fisherman's Club and mother and caregiver workshops. Participant self-assessments before and after the workshops found that people's knowledge of the seafood advisory and how to change fish consumption practices improved after the workshops.

Challenges and Lessons Learned

A key to the success of the program was to partner with local public health agencies and a community-based organization partner. PHSKC launched a Request for Proposal process to select a new partner organization to create and implement a community centered/faith-based strategy. The CHAs and public health selection committee identified the Lao Community Service Office as the new partner organization in part due to its ability to effectively engage the Laotian, Mien, Hmong and Khmu communities.

DEPUE/NEW JERSEY ZINC/MOBIL CHEMICAL CORP. SUPERFUND SITE

Site Location: DePue, Illinois | ***Region:*** 5
Points of Contact: Sarah Rolfes (RPM), Charles Rodriguez (CIC), Rose Guardino (RPM) and Daniel Rodriguez (RPM)

Environmental Justice Best Practice

Bilingual Community Involvement

Context

The 950-acre DePue/New Jersey Zinc/Mobil Chemical Corp. Superfund site is in north-central Illinois. About 1,600 people live there; 56% are Hispanic and 38% speak a non-English language at home. A zinc smelter and a phosphate fertilizer plant were active on site from 1905 to 1990. Their operations contaminated soils, sediments, structures and groundwater with heavy metals. EPA added the site to the NPL in 1999. The site includes former smelter operations as well as residential, agricultural and ecological areas.

To clean up residential yards, EPA selected soil excavation, backfilling with clean filling and revegetation as the long-term remedy. The process includes several steps, starting with access agreements and sampling. Sampling findings then guide excavation locations. Ongoing dialogue with homeowners is a key part of the cleanup.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	61%	39%	74	40%	73
Low Income	43%	27%	76	30%	72
Unemployment Rate	7%	6%	69	5%	72
Limited English-Speaking Households	3%	4%	69	5%	69
Less than High School Education	22%	10%	86	12%	83
Under Age of 5	5%	6%	52	6%	55
Over Age of 65	18%	16%	62	16%	61
Low Life Expectancy	10%	20%	0	20%	0

Environmental Justice Best Practices

To kick off outreach efforts with site homeowners, EPA hosted a community meeting in December 2019. EPA focused on making sure that its efforts reached Spanish-speaking community members. For example, the meeting took place in the gathering space at a local church after a Spanish-speaking service. EPA's site team also lined up translation services for the meeting, using resources from EPA's Office of Civil Rights. Contractors translated the meeting's PowerPoint presentation, a site fact sheet and a sampling access agreement into Spanish, and provided copies of these materials in English and Spanish to meeting attendees. Two interpreters provided live translation of presentation audio. Spanish speakers in the room wore headsets to listen to the translated audio. Questions asked in Spanish were translated into English for presenters and other meeting attendees.

The community meeting was successful. Open houses the next day attracted community members seeking more copies of fact sheets and access agreements to share with friends and neighbors. Since then, EPA has maintained its bilingual outreach efforts at the site. Members of EPA's site team are bilingual. EPA sends out bilingual sampling flyers periodically. EPA also shares bilingual newsletters every six months to provide cleanup progress updates.

Outcomes

EPA received positive feedback on the community meeting from area residents, local leaders and congressional representatives. By prioritizing bilingual communication, EPA has been able to reach more people in the community and streamline the process of obtaining access agreements.

Challenges and Lessons Learned

EPA took lead responsibility at the site in 2019, after negotiations with the site's PRPs reached an impasse. EPA recognized that broad community outreach and engagement was vitally important to ensuring the successful cleanup of contamination in residential areas. Further, EPA's site team identified the area's large Spanish-speaking population, and that bilingual communication was key to avoiding language barriers and facilitating access to residential properties for sampling and cleanup. EPA's ongoing outreach and regular bilingual communication continues to build trust and relationships at the site, laying a strong foundation for remaining cleanup and long-term stewardship activities.

NEW BEDFORD HARBOR

Site Location: New Bedford, Acushnet, Fairhaven and Dartmouth, Massachusetts | ***Region:*** 1
Points of Contact: David Dickerson (RPM) and Kelsey Dumville (CIC)

Environmental Justice Best Practice

Resident Outreach Coordinators

Context

The 18,000-acre New Bedford Harbor Superfund site is bordered by the towns of New Bedford, Acushnet, Fairhaven and Dartmouth in eastern Massachusetts. Two companies made electronic devices (capacitors) containing PCBs on site from about 1940 to the late 1970s. Operations discharged industrial wastes into the harbor, which contaminated the estuary from the upper Acushnet River into Buzzards Bay. EPA added the site to the NPL in 1983.

New Bedford is a diverse city with a population of about 100,000 people and is home to one of the region's largest Superfund sites. While predominantly white, the community includes many foreign-born immigrants (16.7% Hispanic or Latino), many of whom speak English as a second language. About 8,000 immigrants in New Bedford are not U.S. citizens and roughly 10,700 immigrants are naturalized citizens. About 23.5% of the population lives below the poverty line.

Based on ongoing fish tissue sampling, EPA periodically issues updated seafood consumption advisories based on site-specific risk information using conservative (health-protective) assumptions to protect sensitive populations from health concerns. There are also state regulations from 1979 that place a total ban on fishing and shell fishing in place for 1,000 acres of the 18,000-acre site, as well as species-specific bans on the remaining 17,000 acres. Historically, EPA has communicated the ban via signage around the harbor, public meetings, outdoor bulletin boards and fact-sheet distribution to local health departments, residents and community groups.

In 2010, EPA added consumption advisories that go beyond the 1979 state regulations for certain species in the 17,000-acre outer harbor area, based on site-specific fish-tissue monitoring data. Recreational fishermen and shell-fishermen need to be aware of these additional EPA advisories, but language and cultural barriers can present a challenge in reaching local residents through traditional outreach methods.

Community Demographics *(Source: EJScreen 2023)*

Socioeconomic Indicators	Value	State Average	Percentile in State	USA Average	Percentile in USA
People of Color	46%	29%	77	40%	64
Low Income	49%	22%	88	30%	78
Unemployment Rate	6%	5%	67	5%	63
Limited English-Speaking Households	9%	6%	78	5%	84
Less than High School Education	22%	9%	87	12%	83
Under Age of 5	6%	5%	66	6%	59
Over Age of 65	18%	17%	60	16%	60
Low Life Expectancy	22%	17%	93	20%	77

Environmental Justice Best Practices

In summer 2015, EPA established a program to hire local bilingual residents as outreach coordinators to communicate EPA's message about seafood consumption to local recreational fishermen at the site. Through a cooperative agreement with the City of New Bedford Community Economic Development Center, EPA allots $10,000 annually for oversight and salary at $15 per hour for three to five outreach coordinators who work during summer months, when fishing is most likely to take place.

EPA CICs meet with the CEDC and outreach coordinators before each summer to give an orientation. EPA provides two forms for the outreach coordinators to document their efforts and collect data on where people are fishing, languages spoken, type(s) of fish most often consumed, and any concerns EPA should be addressing to a greater extent in the community. EPA provides a map of locations to cover and the outreach coordinators divvy up location coverage responsibilities. The outreach coordinators record the hours spent at each location for CEDC, which tracks the project budget, timekeeping, coverage and accountability. In addition to regularly visiting locations along the waterfront, the outreach coordinators attend public events such as ethnic and faith-based events and festivals where they connect with members of the community and share information about local seafood consumption. At the end of each season, the CICs work with CEDC to compile all project data, report out to the public via a public meeting and document all project activities in a memorandum.

Outcomes

The outreach coordinator program is multi-purpose, benefiting EPA and the community. The outreach coordinators are locals who are trusted by the community, speak the local language(s) and value the work. As community members, they are better suited to engage with the community and share information in a way that will be well received. In turn, EPA receives valuable data on the fishing population and habits of the local public. Funding for this work comes from a settlement with a site PRP and will cover work for the next decade, as seafood consumption recommendations stay in place for some time after cleanup. The program has been well received by all involved.

Challenges and Lessons Learned

To ensure the accuracy of the data, EPA determined that it is best to work closely and regularly with outreach coordinators. Collecting and analyzing data from the coordinators on a regular basis allows EPA staff to ensure geographic territory is being covered as directed and that progress of the outreach coordinators is being measured appropriately. The data collected supports the need for continued education and outreach about the seafood consumption advisories and recommendations. EPA believes that having local residents serve as outreach coordinators was effective. These residents know the areas well, speak multiple languages and are generally well received by the public.