EPA

Environmental Justice FY2017 Progress Report

Blank Page

U.S. ENVIRONMENTAL PROTECTION AGENCY
ENVIRONMENTAL JUSTICE FY2017 PROGRESS REPORT
TABLE OF CONTENTS

Mention of trade names, products, or services does not convey official EPA approval, endorsement, or recommendation.

EXECUTIVE SUMMARY

Marking the 25th anniversary of the establishment of its Office of Environmental Justice, EPA's Environmental Justice FY2017 Progress Report highlights the considerable ongoing environmental justice (EJ) work that continues throughout the Agency. Its focus on demonstrating tangible results in minority, low-income, tribal and indigenous communities affirms through action how deeply environmental justice is ingrained in EPA's fabric. The report illustrates the meaningful and impactful work that EPA staff are doing every day and how we can build on them to achieve more for the nation's most vulnerable communities. It focuses on four themes: (1) delivering environmental results; (2) cooperative federalism; (3) rule of law and fair process; and (4) building community capacity and engagement.

1. Delivering Environmental Results

EPA identified significant national EJ challenges and reported measurable environmental outcomes for them. These measure were:

- **Fine Particle Air Pollution ($PM_{2.5}$)** – In United States (US) counties with $PM_{2.5}$ monitors, the percentage of the low-income population in the US living in areas in attainment for the $PM_{2.5}$ National Ambient Air Quality Standards increased from 43% in 2006-2008 (baseline period) to 92% in 2014-2016. This is a significant improvement in helping low-income populations breathe cleaner air.
- **Small Community Drinking Water** – Small community drinking water systems with repeat health-based violations decreased from 1.2% to 0.5% nationally in FY2017, from 754 to 326 systems.
- **Tribal Drinking Water** – People living in Indian County served by drinking water systems meeting all applicable health-based standards increased from 87.9% to 90.5% in FY2017. The number of systems out of compliance decreased from 92 to 65.

Examples of tangible environmental benefits for overburdened and underserved communities included:

- Percentage of children with elevated blood lead levels in the area around the Omaha Lead Superfund Site reduced from 25% in 1999 to 0.3% in 2017;
- $12.7 million in water infrastructure technical assistance awarded nationally;
- 38 out of 44 small public drinking water systems in exceedance of lead standards and 31 out of 181 such systems in exceedance of arsenic standards were returned to compliance in the Pacific Southwest;
- 312 Brownfields grants totaling $63.3 million, representing $16.59 in additional benefits leveraged per dollar spent; and
- Improved air quality around ports, rail yards and freight distribution centers through Diesel Emissions Reduction Act program grants totaling $23.8 million.

2. Cooperative Federalism

EPA's partnerships with state, local, tribal governments and other federal agencies produced tangible benefits for the nation's underserved and overburdened communities that included:

- Over $1 million in state, local and EPA Brownfields funding awarded to the City of Lawrence, MA;
- Community visioning to shape reuse plans for the Kerr-McGee Superfund Site in Navassa, NC;
- Supporting Louisiana Department of Environmental Quality's regulatory oversight of creosoting facilities in Alexandra and Pineville, LA;
- Assisting Detroit, MI, to comprehensively achieve environmental quality and economic revitalization in its recovery from municipal bankruptcy;
- Facilitating health care, economic advancement and environmental progress in communities with federal interagency and stakeholder partnerships through Brownfields to Healthfields efforts; and
- Deploying hundreds of EPA staff in response to Hurricanes Harvey, Irma and Maria.

Cooperative efforts aimed at building EJ capacity within partner agencies involved:

- Identifying best practices on community involvement and equity in state permitting programs (Environmental Council of the States report), training communities on how to participate in regulatory processes (Clean Air Act training), and incorporating EJ in joint planning (Virginia Performance Partnership Agreement);
- Strengthened consideration of EJ in the National Environmental Policy Act review process and sharing lessons on collaboration through the federal Interagency Working Group on Environmental Justice; and
- Working with 11 federal departments and agencies and 6 White House offices to harness their expertise and resources through the development of a federal inventory of lead programs – *Key Federal Programs to Reduce Childhood Lead Exposures and Eliminate Associated Health Impacts*.

3. Rule of Law and Fair Process

- **Enforcement and Compliance** – EPA's enforcement and compliance program focused on sustaining progress in integrating EJ into all parts of the enforcement life cycle. It compiled important summary national enforcement results related to EJ, three of which are below. In addition, cooperative efforts with states represent new opportunities for EPA's EJ efforts with enforcement. This was illustrated by EPA Region 9's participation in California EPA's environmental justice enforcement initiative, which focused on East and West Oakland, and Pomona in FY2017.

Enforcement Actions	National Total	Number in Areas with Potential EJ Concerns	Percent in Areas with Potential EJ Concerns
Final Administrative Penalty Orders	1,259	457	36%
Supplemental Environmental Projects	94	42	45%
Estimated Environmental Benefits			
Pollutants Reduced, Treated, or Eliminated (*millions of pounds*)	217	77	35%

- **Science** – EPA strengthened the foundational link between EPA science and the needs of underserved and overburdened communities, in areas of air, water, land, health disparities, and in tribal science grants.
- **Coordination between EJ and Civil Rights Programs** – EPA's two-pronged effort included: (1) investigation of complaints filed with EPA pursuant to Title VI of the Civil Rights Act of 1964; and (2) training and technical assistance to 38 states, as well as local agencies and tribes, across all ten EPA Regions, on how to proactively address their civil rights obligations.
- **EJSCREEN** – EPA continued engagement around EJSCREEN, a tool to further integrate EJ in the Agency's work, and updated it to include a revised surface water data layer and other enhancements.

4. Building Community Capacity and Engagement

EPA maintained a comprehensive program to ensure engagement with and build capacity within communities, including:

- Providing recommendations to the EPA Administrator and lifting up community, tribal and state voices through the National Environmental Justice Advisory Council;
- Providing financial and technical assistance through 36 EJ Grants totaling $1.08 million, the Urban Waters Small Grants program, the Technical Assistance Services to Communities program, the Office of Sustainable Communities and EPA's work on equitable development;
- Training by EPA Regions and programs on issues such as lead exposure, grant writing and leveraging resources, and on the *Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples*; and
- Convening past and current recipients of EPA Region, state or local agencies' EJ grant(s) to share successes related to citizen science, partnering and environmental education.

INTRODUCTION

2017 marked the 25th anniversary of the creation of the Office of Environmental Justice (OEJ) at the U.S. Environmental Protection Agency (EPA), a testament of EPA's commitment to furthering environmental justice (EJ) by addressing the environmental and public health concerns of minority, low-income, tribal and indigenous communities. We believe that after a quarter century of progress, EPA's dedication to environmental justice is deeply ingrained in the fabric of the Agency. In the years leading up to the establishment of OEJ and since, many voices have demanded that EPA do more to ensure that all Americans see the full benefit of environmental protection. While many of these stakeholders agree that we have come a long way, they also remind us that we have a long way yet to go.

Furthering environmental justice in our work and through our leadership across the federal government is a responsibility of everyone at EPA. The work highlighted in this Environmental Justice FY2017 Progress Report represents an affirmation of our ongoing commitment to the mission and goals of the Agency's environmental justice program – to engage with and meet the needs of our nation's most vulnerable communities to improve disproportionate environmental impacts, health disparities, and economic distress. We will continue to strengthen and complement our environmental justice work with the activities of all parts of the Agency, enabling EPA to provide better support to communities as we work to improve health, protect the environment and grow local economies. Most important, our commitment to environmental justice must demonstrate tangible results in our most vulnerable communities.

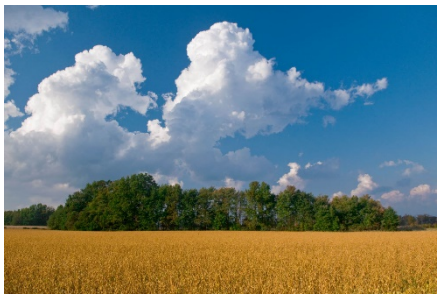
This report highlights EPA's accomplishments in advancing environmental justice to better address the issues confronting minority, low-income, tribal and indigenous communities throughout the nation. This report is not intended to report on all of the environmental justice efforts that have occurred at EPA in FY2017. It aims to highlight a number of accomplishments to increase transparency, promote accountability and provide opportunities for collective learning on how to advance the Agency's goals.

These accomplishments reflect the goals of the Agency's Draft FY 2018-2022 EPA Strategic Plan and EPA's long history of making direct investment in communities to build their capacities to address environmental justice issues, including:

1. Delivering results in air, water and land;
2. Cooperative federalism;
3. Rule of law and fair process; and
4. Building community capacity and engagement.

An overarching focus of this report is demonstrating tangible results in the nation's most vulnerable communities. This theme is reflected in all four of the goals listed above. As EPA's environmental justice program matures, the standard that we increasingly strive to achieve is measurable environmental and public health outcomes in minority, low-income, tribal and indigenous communities. This work is carried out by EPA's programs and Regions, and involves many facets, including outreach and engagement, capacity building, building partnerships, and developing and implementing analytical tools and guidance across the Agency's programs. All of these elements are important. They are significant steps in achieving our vision to help environmentally burdened and economically disadvantaged communities in America become healthier, cleaner and more prosperous places to live, work, play and learn.

SECTION I: DELIVERING RESULTS IN AIR, WATER AND LAND



EPA's mission is to protect public health and the environment. In carrying out this mission, EPA pays particular attention to vulnerable populations, including those minority, low-income, tribal and indigenous communities that may face greater risks because of proximity to contaminated sites or because fewer resources are available to avoid exposure to pollution.

As EPA's environmental justice program has matured over the past two decades, it has grappled with the critical endeavor of how to demonstrate measurable environmental outcomes in vulnerable communities. We are continuing to make progress on this complex task. The Agency has identified several important national environmental justice challenges in the areas of air, water, land and toxic substances. FY2017 represents the first year that EPA is able to report on several of these measures in an environmental justice context.

This section highlights three measures where EPA showed progress for FY2017, i.e., fine particle air pollution ($PM_{2.5}$), small community drinking water systems and tribal drinking water systems. It describes some of the programmatic activities that supported the achievement of these measures. In addition, it highlights other ways that EPA has demonstrated tangible environmental and health benefits for minority, low-income, tribal and indigenous communities.

MEASURABLE ENVIRONMENTAL OUTCOMES

In 2017, EPA's environmental justice work took on the challenge of beginning to document measurable environmental outcomes of its programmatic activities in minority, low-income, tribal and indigenous communities. We are able to provide measures for 2017 in three areas: fine particulate air pollution ($PM_{2.5}$), small drinking water systems, and tribal drinking water systems.

FINE PARTICLE AIR POLLUTION ($PM_{2.5}$)

- Percentage of low-income people living in counties with $PM_{2.5}$ monitors meeting the 2012 annual and 2006 24-hour PM2.5 National Ambient Air Quality Standards (NAAQS) since the baseline period of 2006-2008.
  - **2014-2016:** 92%
  - **2006-2008:** 43%

SMALL COMMUNITY DRINKING WATER SYSTEMS

- Number and percent of small community water systems and non-transient non-community water systems with repeat health-based violations of key contaminants.
  - **2016:** 754 systems (1.2%)
  - **2017:** 326 systems (0.5%)

TRIBAL DRINKING WATER SYSTEMS

- Percent of population in Indian country served by community water systems with drinking water that meets all applicable health-based drinking water standards.
  - **2016:** 87.9%
  - **2017:** 90.5%

  The number of tribal drinking water systems out of compliance decreased from 92 to 65.

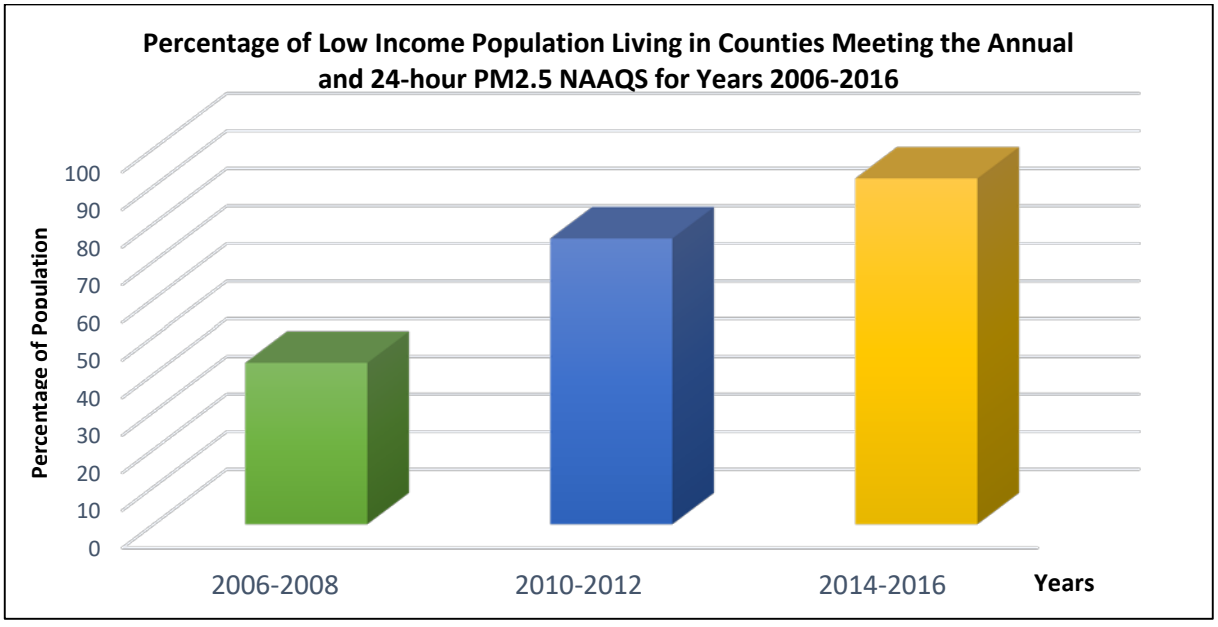
AIR

$PM_{2.5}$ Measure

EPA's air program works to improve air quality. Particle pollution, also called particulate matter or PM, is a complex mixture of extremely small particles and liquid droplets in the air. The environmental justice measure for air is focused on the reduction of $PM_{2.5}$. When inhaled, these particles can reach the deepest regions of the lungs. Exposure to particle pollution has been linked to a variety of significant health problems.[1] Low-income populations are among the populations that are most at-risk for adverse health effects from exposure to $PM_{2.5}$. People with low incomes generally have been found to have a higher prevalence of pre-existing diseases, limited access to medical treatment, and increased nutritional deficiencies, which can increase their risk of particle pollution-related effects.[2] Fine particle pollution is monitored throughout the country to identify whether an area is meeting EPA's $PM_{2.5}$ NAAQS.[3] Particle pollution monitors are placed in areas where high concentrations are expected.

EPA revised the $PM_{2.5}$ NAAQS most recently in 2012, and in 2015 designated several areas as not attaining the standard. The Clean Air Act specifies planning and control requirements to be implemented in these "nonattainment" areas. All areas are initially classified as "Moderate." Any area that cannot attain the standard over a 6-year timeframe are then reclassified as "Serious" and required to attain the standard by the end of the 10-year cycle. For this reason, the air quality measure is linked to air quality changes that will be achieved through 2025.

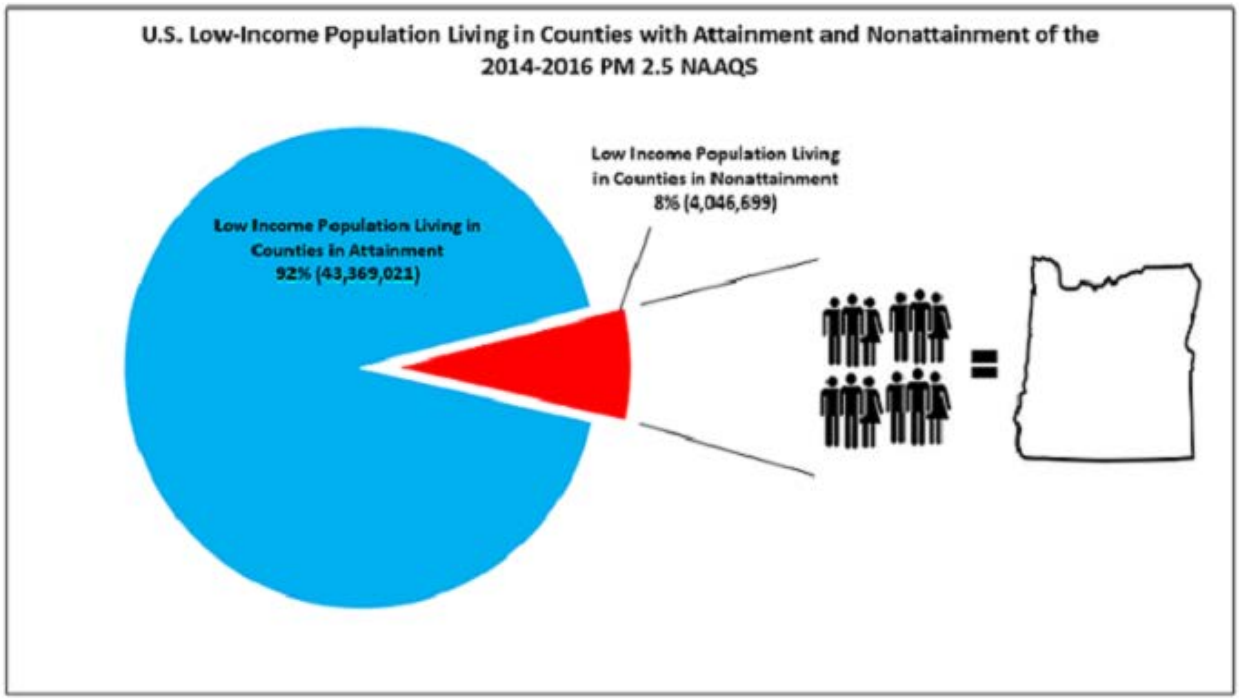
When compared to a baseline period of 2006-2008, recent (2014-2016) monitoring data show that of the low-income population living where monitoring data are available, 92% live in counties where the $PM_{2.5}$ NAAQS are being met. This reflects a significant improvement since



[1] See 78 FR 3086, January 15, 2013

[2] U.S. EPA, Integrated Science Assessment for Particulate Matter. December 2009, EPA/600/R-08/139F.

[3] The Clean Air Act, which was last amended in 1990, requires EPA to set National Ambient Air Quality Standards (40 CFR part 50) for pollutants considered harmful to public health and the environment. EPA has set National Ambient Air Quality Standards for six principal pollutants, which are called "criteria" air pollutants, one of which is particle pollution (PM).



2006-2008, when the percentage of the low-income population in attainment areas was 43%.

However, a challenge with achieving the goal of 100% is that the more severe nonattainment areas contain a high population of low-income people. The proportion of low-income to non-low-income people in the remaining nonattainment counties has risen slowly; as more counties come into attainment, the remaining (more severe) nonattainment areas highlight a disparity in health protection. These areas include urban areas which equate to a population of over 4 million people, about the population of Oregon, still living in non-attainment areas. With continuing efforts, EPA's Office of Air and Radiation (OAR) strives to close the gap between communities. Some activities that will contribute to achieving this goal are highlighted below.

Diesel Emissions Reduction Act Helps Overburdened Communities

EPA began awarding clean diesel grants in 2008 under the Diesel Emissions Reduction Act (DERA), a grant program authorized by Congress as part of the Energy Policy Act of 2005. The DERA program improves public health in communities by reducing diesel emissions from older engines which are replaced and then scrapped. For the last several years, EPA has prioritized ports and goods movement diesel emissions reduction projects that replace engines with newer, cleaner engines that reduce particulate matter as well as other pollutants such as nitrogen oxides. In particular, DERA FY2017 grants have been, or will be, awarded for seaport projects totaling approximately $14.5 million of the total $60 million available. In addition, $9.3 million was awarded for goods movement projects near seaports, and $1.7 million for airports.

These DERA projects tend to take place in communities that are disproportionately impacted by higher levels of diesel exhaust, such as those near ports, rail yards, and distribution centers. Clean diesel projects reduce exposure to air pollution for people living in these communities, and the improved air quality provides immediate health benefits. Since the first DERA grants in 2008, EPA has increasingly focused attention on PM and ozone nonattainment areas to achieve maximum benefits for every dollar spent. Below are examples of DERA projects that have

benefited communities with environmental justice concerns.

- **Port of Los Angeles Electric Crane Project:** Cargo handling equipment at the Port of Los Angeles is a major contributor of pollutants in the South Coast Air Basin where communities with environmental justice concerns are located. The $1.3 million DERA project replaced a 1987 diesel crane with an all-electric crane. Over the course of its life, the crane will eliminate harmful nitrogen oxides, particulate matter, hydrocarbons, carbon monoxide and greenhouse gases. The eliminated particulate matter emissions from this crane will be equivalent to taking 3,400 heavy duty trucks off the road for a year.

- **Houston Independent School District School Bus Replacement Project:** The Houston Independent School District recently scrapped ten older 1999 school buses and replaced them with new 2017 school buses with DERA funding. The new school buses, which will serve several low-income communities, will reduce harmful particulate matter and nitrogen oxides by 90% over the old buses, helping reduce the exposure of children to diesel exhaust pollution.

- **Chicago Transit Authority Electric Bus Project:** Utilizing $1.8 million in DERA funding, the Chicago Transit Authority is replacing five 1998 model year transit buses that would have run for several more years with zero emission all-electric buses. The route of the five buses takes them through communities with environmental justice concerns. Replacing the older, dirtier buses with electric models will reduce exposure to harmful diesel exhaust by more than 16,000 tons over five years.

- **Southwest Detroit Urban Trucking and School Bus Fleets:**

The Southwest Detroit Environmental Vision (SDEV) diesel project focused on decreasing diesel emissions through the retrofit of various diesel vehicles, including the replacement of 24 medium heavy-duty diesel trucks and eight school buses. SDEV received a total of $1.2 million in grant funding to work with Greater Lansing Area Clean Cities, NextEnergy Center, and nine fleet partners. This project impacted multiple economically disadvantaged and underserved urban areas in Michigan (Detroit, Dearborn, Flint, Lansing), as well as vulnerable populations in suburban and rural areas with poor air quality.

EPA's Near-Port Community Capacity Building Project: Shaping Environmental Justice and Goods Movement Near Ports

Ports are a hub of commerce and are critically important for a thriving U.S. economy. For the estimated 39 million[4] people in the United States living and working near ports, freight transport activities can present air pollution and other environmental concerns. Overburdened and underserved communities near ports can also experience challenges with access to information about the planning, development, and permitting of projects and the availability of resources that support meaningful engagement in the decision-making process.

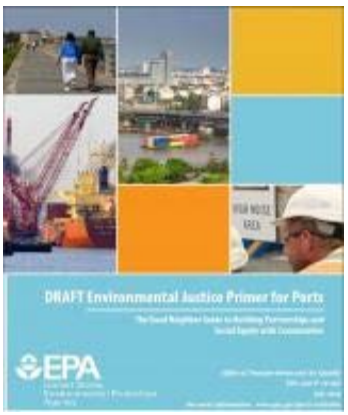
In partnership with EPA's Office of Environmental Justice (OEJ) and Regional Office colleagues, the Office of Air and Radiation (OAR) established EPA's Near-Port Community Capacity Building Project to support effective stakeholder engagement in conjunction with the overall EPA Ports Initiative. The key goals of the Near-Port Community Capacity Building Project include improving environmental health outcomes and environmental performance at ports by building the capacity of community stakeholders and industry through new tools that support effective engagement, partnership building and direct technical assistance. Early, frequent and ongoing collaborative problem-solving between stakeholders supports the foundational principles and practices of environmental justice and is at the core of this project.

Capacity Building Toolkit

The Agency has developed a set of draft tools and resource materials to address key challenges noted by stakeholders who are directly involved with, and impacted by, port-related goods movement activities. Stakeholder outreach, listening and collaborative action have guided the development of this suite of tools. During the early planning and draft stages, EPA sought input from its federal advisory committee members representing environmental justice community organizations, environmental advocacy groups, and industry sector stakeholders, and consulted members of EPA's National Environmental Justice Advisory Council (NEJAC) and the Mobile Sources Technical Review Subcommittee (MSTRS) Ports Workgroup. The draft toolkit was also posted for public comment on EPA's Ports Initiative webpage.

> The Agency has developed a set of draft tools and resource materials to address key challenges noted by stakeholders who are directly involved with, and impacted by, port-related goods movement activities.

The toolkit has three components. The *Draft Ports Primer for Communities: An Overview of Ports Planning and Operations to Support Community Participation* (Ports Primer) is intended to help community members participate effectively in the decision-making process about port actions that may impact local land use, the environment and quality of life. The *Draft Community Action Roadmap: Empowering Near-Port Communities* is a companion document that provides a step-by-step process to apply the information in the Ports Primer for building capacity and



[4] Based on U.S. Census Bureau data for people living within 5 km of ports.

empowering communities. The *Draft Environmental Justice Primer for Ports: The Good Neighbor Guide to Building Partnerships and Social Equity with Communities* is designed to inform the port industry sector of the perspectives, priorities and challenges often unique to communities with environmental justice concerns and provides a step-by-step process to improve the effectiveness of port-community engagement.

Innovative Pilot Projects

In Summer 2016, OAR announced the opportunity to participate in pilot projects for ports and nearby communities and invited interested near-port communities and ports to apply. EPA conducted outreach for the Pilot Project Opportunity through a variety of channels. Of the nearly two dozen applicants, three pilot locations were selected: New Orleans, Louisiana; Savannah, Georgia; and Seattle, Washington. The Pilot Project Opportunity provides ports and near-port communities with direct technical assistance from EPA to: 1) enhance skills in building partnerships; 2) develop an engagement/capacity building action plan for collaboratively addressing stakeholder priorities; 3) utilize the draft capacity building tools in assessing local conditions and testing capabilities in challenging real-world situations; and 4) collect feedback and refine the content of the draft tools. Since kickoff in early 2017, all three pilot projects have progressed significantly and achieved planned milestones, including completion of initial site visits to assess stakeholder needs, outreach to broaden project awareness and support, press coverage, interagency support opportunities and initial feedback. Pilot project participants have embraced the opportunity to leverage the draft capacity building tools and are providing feedback to enhance utility.

Early and Projected Benefits

The draft tools and pilot project activities are providing port industry sector and community stakeholders with information, skills and guidance to effectively develop and implement collaborative actions that reduce environmental pollution and accommodate more efficient goods movement. A number of early pilot project implementation achievements have occurred. On a tour of one near-port community during an initial site visit, residents brought to the port's attention concerns regarding adverse impacts that an unmaintained port-leased property was having on the neighborhood. The port not only took corrective action with the lease holder, but also restructured their leasing policy to prevent repeated conditions from occurring. What was believed to be illegal dumping activity was also noted during the tour and immediate corrective action was taken. As a result of this initial site visit, a communication network has been established to facilitate ongoing interaction.

As implementation of the pilot projects progress, OAR anticipates durable partnerships and increased capabilities will result through use of the draft capacity-building tools. After completion of the pilots and finalization of the draft capacity building tools, their outcomes will be shared with additional stakeholders, creating the potential to replicate successful community-port collaboration throughout the country. OAR is also developing an interactive network to support peer-to-peer exchange among ports and nearby communities and to extend the reach and impact of the neighborhood solutions that emerge from the Near-Port Community Capacity Building Pilot Projects.

Asthma Control and Healthy Homes

EPA has led federal efforts to help communities, states, and tribes find local solutions for delivery and sustainability of in-home environmental asthma interventions. EPA supports widespread delivery of in-home environmental asthma interventions, with a particular emphasis on communities with environmental justice concerns. These interventions seek to improve health outcomes, reduce health care costs, increase savings, and expand the health care workforce. Together with the Centers for Disease Control and Prevention (CDC) and the U.S. Department of Housing and Urban Development (HUD), EPA has co-led 12 Regional Summits across the nation covering 18 states' best practices related to asthma education and in-home assessments. The Regional Summits helped spur Missouri and Pennsylvania to pass legislation expanding Medicaid[5] coverage to include in-home assessments. In addition, asthma home visit pilot projects in New Jersey and Colorado were funded and new coalitions and workgroups have formed in Illinois and California with the Associated Tribes of Northwest Indians to pursue asthma assessments and interactions through the Regional Summits.

In addition to the Regional Summits, EPA supports and promotes several cooperative partnerships with grant funding to develop educational, training and intervention-based programming aimed at providing a sustainable home and learning environment for children living with asthma, particularly those most in need. In FY2017, the partnerships involved the National Center for Healthy Housing, the Public Health Institute, the Regional Asthma Management Program, the Allergy and Asthma Network and the National Tribal Air Association. In addition, EPA awarded nearly $8 million in grant funding to states and tribes to support testing and mitigation of homes, schools and other buildings for radon and promote the building of new radon-resistance structures.

DRINKING WATER

Drinking Water Measures and Office of Water Program Activities

EPA continues to engage in key activities that advance the nexus between environmental justice and safe drinking water by partnering with states, public water systems, tribes, laboratories and water sector stakeholders to assist public water systems in delivering safe water and working to improve drinking water infrastructure across the United States. Of the approximately 52,000 community water systems nationwide that supply drinking water to more than 95% of the U.S. population, the vast majority (82%) are small community water systems that typically serve fewer than 3,300 people. Many of these small drinking water systems serve disadvantaged communities. In addition, these small community water systems and tribal systems are often disproportionately impacted by lack of financial resources, aging infrastructure, lack of economies of scale, management limitations and lack of qualified and experienced operators and personnel.

For these reasons, the activities described below contributed to the achievement of the environmental justice measures for small community drinking water systems[6] and tribal

[5] Medicaid is the nation's main public health insurance program for low-income people of all ages, spending more than $10 billion annually to treat asthma in children and adults.

[6] The environmental justice measure around small community drinking water systems focuses on systems serving less than 3,300 people and the number and percent of small community water systems and non-transient non-community water systems with repeat health-based violations. EPA defines a community water system (CWS) as a public water system that serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents. A repeat health based violation is defined as a system that triggers more than one health based violation in a 12-month period.

drinking water systems.[7] Between 2016 to 2017, the number of small community systems and non-transient non-community water systems with repeat health-based violations of key contaminants decreased from 754 systems (1.2%) to 326 systems (0.5%). Between 2016 to 2017, the percentage of the population in Indian Country served by community water systems with drinking water that meets all applicable health-based drinking water standards increased from 87.9% to 90.5%. The number of tribal drinking water systems out of compliance decreased from 92 to 65.

EPA provides training and technical assistance to help public water systems achieve technical, financial and managerial capacity in an effort to promote effective management of the systems' assets and infrastructure. In addition, EPA provides grant funding to primacy agencies and third party technical assistance providers to help small systems achieve compliance with the National Primary Drinking Water Regulations and to build their managerial and financial capacity. Since its inception, the Drinking Water State Revolving Fund (DWSRF) has provided $9.2 billion to small systems through more than 8,000 assistance agreements. Since FY2012, the Agency has awarded over $42 million in grants to technical assistance providers to help small systems build their technical, managerial and financial capacity.

FY2017 WATER TECHNICAL ASSISTANCE GRANTS AND SUPPORT

In FY2017, EPA awarded approximately $12.7 million in technical assistance grants. Recipients include the National Rural Water Association, the Rural Community Assistance Partnership, and the Environmental Finance Center Network. EPA also launched the Water Finance Clearinghouse, a web-based portal that provides communities with a searchable database with more than $10 billion in water funding sources and over 550 resources to support local water infrastructure projects.

Water system partnerships strengthen technical, managerial and financial capabilities of small systems and provide more reliable services to customers through a variety of approaches, including informal management agreements, contracting for operations and maintenance services or mergers and acquisitions to consolidate small systems. EPA has been working closely with state programs, technical assistance providers, utilities and other stakeholders to promote water system partnerships to reduce costs, increase operational efficiency and decrease vulnerability to disaster and emergency situations.

EPA also works closely with other federal agencies, states and technical assistance providers to build small system capacity through technical assistance, trainings, and workshops. Additionally, EPA's Office of Water and Office of Research and Development host a monthly webinar training series on drinking water implementation challenges and emerging technologies that can help states and public water systems address compliance issues. In addition, EPA hosts a highly attended national Capacity Development and Operator Certification workshop every three years. This workshop provides states and technical assistance providers an opportunity to inform each other about the challenges small systems are facing and some of the best practices being implemented across the country.

EPA also works collaboratively with tribal governments, tribal utilities and tribal members to implement the Safe Drinking Water Act (SDWA) to improve access to safe drinking water on tribal

[7] The environmental justice measure on tribal drinking water systems focused on the percent of population in Indian country served by community water systems that meet all applicable health-based drinking water standards. Safe drinking water that meets all health-based drinking water standards does not exceed a maximum contaminant level (MCL) nor violate a treatment technique.

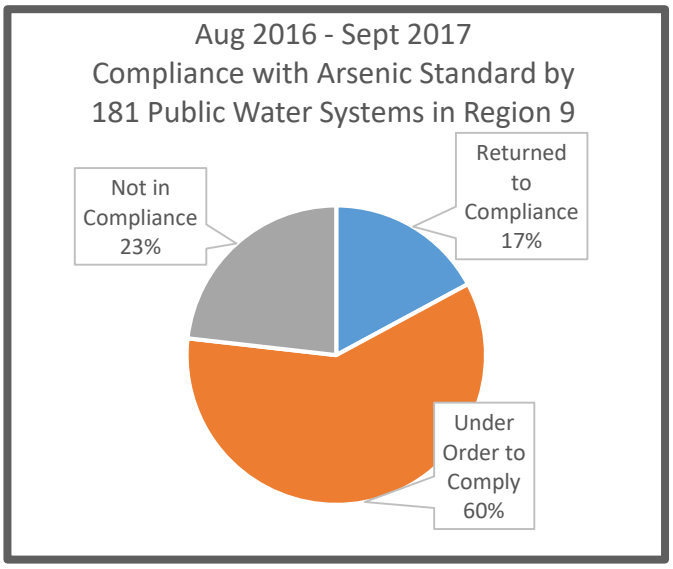
In FY2017, EPA's DWIG-TSA funding level was $20 million. EPA's Tribal Direct Implementation PWSS Supervision Funds were $6.45 million in FY2017, including a $457,000 grant to the Navajo Nation.

lands. Where EPA has primacy, EPA Regional offices implement the Public Water System Supervision (PWSS) program and have enforcement authority over tribal drinking water systems. To date, only the Navajo Nation has applied for and received primacy. EPA administers the Drinking Water Infrastructure Grant Tribal Set Aside (DWIG-TSA) Program, which provides financial support for infrastructure projects to achieve compliance with drinking water regulations. EPA also administers the Tribal Direct Implementation PWSS Funds, which are distributed to EPA's Regional tribal PWSS programs for direct implementation activities with an emphasis on compliance assistance activities. They are used for technical assistance, sanitary surveys, and operator training and certification. Under the National Tribal Drinking Water Operator Certification Program, EPA recognized the Inter-Tribal Council of Arizona, the United South and Eastern Tribes, and the Association of Boards of Certification as drinking water operator certification providers.

Regional Highlight

EPA Region 9 includes the states of Arizona, California, Hawaii and Nevada, the Pacific Islands and 148 Tribal Nations. Many of Region 9's disadvantaged communities are served by small public drinking water systems (PWSs) lacking sufficient capacity to assure consistent compliance with the Safe Drinking Water Act (SDWA). To underscore the challenge, greater than 90% of PWSs in the Region are small systems (no more than 3300 persons) serving 2.8 million people. In August 2016, a Region 9 Small Public Drinking Water System Action Plan (Plan) was developed to improve the safety of public drinking water supplied to residents, schoolchildren and tribal members in these communities, building on efforts described in EPA's national strategic plans for environmental justice and drinking water. The Plan focuses on reducing exposure to two contaminants with long-term health effects: arsenic and lead. Arsenic is a known human carcinogen and is naturally prevalent in groundwater in the West. Lead exposure poses serious health risks for young children and is a national priority. The Plan also includes an initiative to voluntarily sample for lead at taps in tribal schools and supports Region 9 states that have initiated similar school sampling programs.

By the close of FY2017, 31 of the 181 systems not in compliance with the arsenic standard in August 2016 had returned to compliance. Of the



remaining systems, 72% are under orders with an enforceable schedule. Of the 18 school water systems which were not meeting the arsenic standard, all are now providing alternative water or serving compliant water. Of the 44 systems that had exceeded the lead action level in August 2016, only 6 continued to exceed the lead action level by the end of FY2017. School water systems not meeting this level are providing alternative water. Working with Indian Health Services and contractor support, over 25% of tribal schools had their drinking water tested for lead and were provided technical and financial assistance information to reduce the presence of lead where found.

LAND

Brownfields Program

EPA's Brownfields Program empowers states, communities, and other stakeholders to work together to prevent, assess, safely clean up, and sustainably reuse contaminated properties. Revitalizing brownfield sites and putting these properties back into productive reuse creates many economic and environmental benefits throughout the community. The Brownfields Program helps address the inability of many communities to pay for assessing and cleaning up brownfield sites. The program makes grant funding and technical assistance resources available to communities for assessing and cleaning up brownfields, capitalizing revolving loan funds for brownfields cleanup, and providing environmental job training.

In FY2017, EPA's Office of Brownfields and Land Revitalization (OBLR) conducted brownfields grant competitions that resulted in the award of 208 Assessment Grants (for $43.1 million); 71 Cleanup Grants (for $13.7 million); 14 Environmental Workforce Development Job Training Grants (for $2.7 million); and 19 Area-wide Planning Grants (for $3.8 million). As part of the brownfields grant competitions, applicants are evaluated on the extent to which they demonstrate need for funding to address their brownfields challenges, and how these needs relate to other social, economic and environmental challenges within their community. OBLR also awarded $46.9 million to support state and tribal response programs. If states and tribes are using funding to perform site-specific activities, EPA's Brownfields Program encourages them to prioritize sites in communities with the greatest need, including communities with environmental justice issues. OBLR also awarded $5.4 million in supplemental revolving loan fund (RLF) funding to 11 existing, high-performing brownfields RLF grantees.

Through FY2017, on average, $16.59 in benefits was leveraged for each EPA Brownfields dollar expended and 8.5 jobs leveraged per $100,000 of EPA brownfields funds provided for assessment, cleanup, and revolving loan fund cooperative agreements. Brownfield sites tend to have greater location efficiency than alternative development scenarios. Results of a five-city pilot study show a 32 to 57% reduction in vehicle miles traveled when development occurred at a brownfield site rather than a greenfield. Fewer vehicle miles traveled means a reduction in pollution emissions including greenhouse gases. These same site comparisons show an estimated 47 to 62% reduction of stormwater runoff for brownfield site development. A 2015 study concluded that cleaning up brownfield properties leads to residential property value increases of 5 - 15.2% within 1.29 miles of the sites.[8]

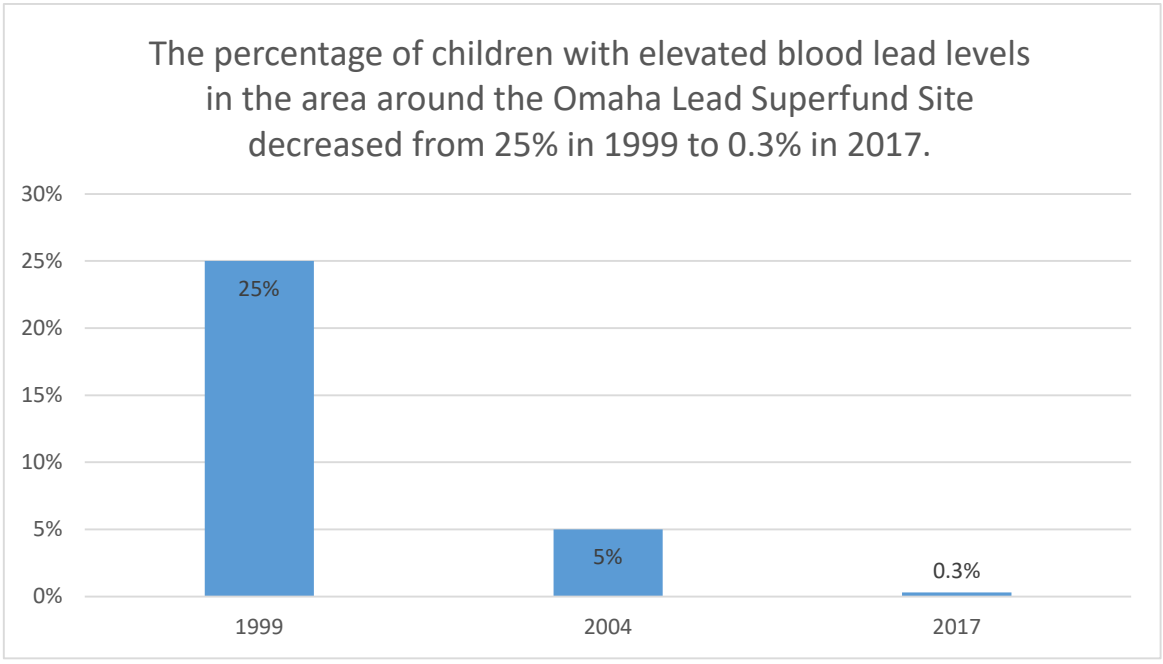
The former Harrison Avenue Landfill in Camden, New Jersey, is one of many noteworthy Brownfields Program success stories. It is an inactive 83-acre city dump located in the Cramer Hill neighborhood that was owned and operated by the City of Camden from approximately 1952 to 1971. The types of waste disposed of at the dump for almost two decades were unrestricted, and included household refuse, demolition debris, and bulk, industrial, chemical, and medical wastes. Although the use of the dump was officially discontinued by 1971, uncontrolled illegal dumping reportedly continued

[8] Haninger, K., L. Ma, and C. Timmins. 2017. The Value of Brownfield Remediation. *Journal of the Association of Environmental and Resource Economists, 4(1): 197-241*.

for many years thereafter. Following the completion of assessment work under an EPA Brownfield grant, the revitalization of the landfill property was made possible through technical and remediation assistance provided by the New Jersey Department of Environmental Protection (DEP) under their EPA CERCLA 128 (a) grant, as well as a major grant from the Joan Kroc estate. The work commenced more than eight years ago and includes $26 million in remediation funding of the former Harrison Avenue Landfill, as well as several EPA Brownfields Program grants (including funding in FY2017). The former Harrison Avenue Landfill in Camden is now home to the Ray and Joan Kroc Community Center. The 120,000-square-foot community center provides Camden with a gymnasium, an indoor competition pool and water park, black box theater, community gathering plaza, media center, learning center, culinary arts teaching kitchen, choice food pantry, early childhood education center, teen center, senior center, athletic fields and health clinic.

Omaha Lead Superfund Site

Over 175,000 people live within the 27-square-mile foot print of the Omaha Lead Superfund Site, in Omaha, Nebraska, where EPA has focused efforts to protect people from exposure to lead. This includes residential properties, as well as child day-care facilities, schools, and playgrounds where children may be exposed to lead-contaminated soil as a result of deposition of historic lead smelting and refining operations in the area. After 18 years of work on the cleanup, child blood lead levels have dropped measurably in the city. The percentage of children with elevated blood lead levels in the area around the Omaha Lead Superfund Site decreased from 25% in 1999 to 0.3% in 2017.[9] This is one example of how, under the Comprehensive Environmental Response, Compensation and Liability Act, EPA's Superfund program works to protect human health and the environment. EPA involves the community to clean up polluted, abandoned or uncontrolled hazardous waste sites to return previously polluted land to productive use.



Source: Douglas County Health Department

[9] This most recent data is from Douglas County Health Department.

The Agency began to investigate this community in 1998 when Omaha City Council sent a letter to EPA to address the high incidence of elevated blood lead levels found in children. Between 1999 and 2015, EPA remediated more than 13,000 residential properties at the site. The testing and cleanup of soil, exterior lead-based paint, and interior dust was conducted at no cost to the property owner. The cleanup action included the excavation of soil exhibiting lead concentrations greater than 400 ppm, replacement of contaminated soil with clean backfill, placement of sod, stabilization of lead-based paint to protect the remediated soil, testing of indoor dust, and public education and outreach to assist the public in recognizing other potential sources of lead contamination.

Special considerations for outreach and education were needed since the population of the Omaha Lead site is complex (60% low-income, 57% minority, and 10% linguistically isolated.[10])[11] Since 2000, EPA has provided $2.2 million in health education-related funding from Agency programs through Superfund, Technical Assistance Grant program, Regional Geographic Initiatives, Toxic Substances Control Act, and Environmental Education and Environmental Justice grants to several nonprofits. In the mid-2000's an Omaha Lead Site Community Advisory Group and the Omaha Healthy Kids Alliance, a nonprofit organization to help address elevated blood lead levels in children, were established.

In May 2015, at the city's request, EPA entered into a $42 million cooperative agreement with the city of Omaha to collect soil samples and clean up the remaining properties. EPA is currently working to renew and consolidate existing cooperative agreements with the Douglas County Health Department (DCHD). These include a $6 million cooperative agreement to compile blood lead data from health care providers and obtain access to homes and collect interior dust samples.

> The most recent data reported by the Douglas County Health Department indicated that the percentage of children with elevated blood lead levels was 0.3% in 2017.

Fort Peck Indian Reservation Community Projects

In FY2017, EPA harnessed many Agency resources to produce tangible public health, environmental and economic benefits for the residents of the Fort Peck Reservation in Poplar, Montana. The work built on engagement with Fort Peck Assiniboine and Sioux Tribes, and a partnership with the U.S. Department of Housing and Urban Development and U.S. Department of Transportation. EPA's Brownfields Program selected the Fort Peck Tribes for a $200,000 grant in FY2017 and worked with Region 8 and the city of Poplar to leverage human resources, equipment and funding. EPA's Superfund program provided funding and contract assistance to remove two abandoned buildings. EPA also assisted with infrastructure planning and supported green infrastructure planning for multiple tribal programs and for the city of Poplar. Region 8 also provided support for the redevelopment of the 260-acre Old Airport property, which included partial development of a Sustainable Village where 20 LEED Platinum-certified homes were built. An EPA enforcement settlement, including a Supplement Environmental Project, resulted in the removal and proper disposal of 88 abandoned or inoperable vehicles from the Fort Peck Indian Reservation. These efforts help reduce blight and make the community a cleaner and safer place to live.

Robust engagement with government and tribal partners are also leading to visible and collaborative actions to revitalize the community, improve housing, and further economic development in Poplar. EPA's Conflict Prevention

[10] According to the US Census Bureau defines, "linguistic isolation" is dependent on the English-speaking ability of all adults in a household. A household is linguistically isolated if all adults speak a language other than English and none speaks English "very well." Adult is defined as age 14 or older, which identifies household members of high school age and older.

[11] Demographic information provided by EJSCREEN (January 2018).

and Resolution Center supported several dialogues between the tribes and the city of Poplar leading to better coordination on addressing blight on tribal and private properties. The tribes began collaborating with students from Montana State University to create landscaping designs for two properties in downtown Poplar that will include edible landscaping (e.g., fruit trees and berry bushes) to help address food insecurity issues. The town of Poplar and the tribes have also begun laying the foundation for a Community Resource Assessment, which in turn, will lay the groundwork for a City Master Plan.

SECTION II: COOPERATIVE FEDERALISM

EPA recognizes that protecting human health and the environment cannot be achieved by any single entity. We need to work with states, tribes, local governments, our sister federal agencies and communities in a spirit of trust, collaboration and partnership. Stronger engagement with states in the spirit of cooperative federalism is absolutely essential. EPA has developed a comprehensive suite of tools and guidance to integrate environmental justice into its own programs and policies. Sharing these tools and guidance with our partners, who are responsible for a majority of environmental decisions that directly affect communities, has been an important extension of these efforts. For instance, EPA reached out to the Environmental Council of the States (ECOS) and other state associations to obtain input on the public release of EJSCREEN, an environmental justice screening and mapping tool that combines environmental and demographic indicators to identify and analyze the most vulnerable geographic areas. This engagement helped to greatly improve the tool and resulted in greater use by state agencies.

Likewise, states are proactively making significant advancements in environmental justice. At the National Environmental Justice Advisory Council meeting in Minneapolis, Minnesota on April 26, 2017, EPA highlighted the efforts of four states – Minnesota, California, South Carolina and Mississippi. The meeting was held in Minneapolis because ECOS President John Linc Stine, Commissioner of Minnesota Pollution Control Agency, made advancing equity one of his priorities for ECOS. Other efforts include collaboration between ECOS, EPA and several law schools to update the Hastings Law School/American Bar Association's *Environmental Justice for All: A Fifty State Survey of Legislation, Policies and Cases*. EPA also conducts All States Environmental Justice Calls (East and West) to provide an interactive forum for meaningful discussion and dialogue among EPA Regional and Headquarters staff and state and local EJ counterparts. The forum promotes learning, discussion of issues of interest, provides training and fosters capacity building among EPA and its state and local government partners on environmental justice.

This section on cooperative federalism highlights examples of how state, tribal and local governments' collaborations with EPA have resulted in tangible benefits for overburdened and underserved communities. It builds on EPA's engagement with states around issues of mutual concern, such as incorporating community involvement and environmental justice considerations into the permitting process. Of particular importance is the collaboration between ECOS and EPA, which resulted in the ECOS Green Report entitled, State Approaches to Community Engagement and Equity Considerations in Permitting, along with collaborative efforts between EPA and states to build capacity within communities to participate in the regulatory process. Another important instance of cooperative federalism is joint planning between EPA's regions and their respective states, as exemplified by how the Performance Partnership Agreement developed by EPA Region 3 and the Virginia Department of Environmental Quality focuses on strengthening partnerships with Historically Black Colleges and Universities (HBCUs) to educate communities about local environmental impacts.

These are just a few examples of EPA's EJ efforts on cooperative federalism. They reflect EPA's commitment to working with partners to develop the Agency's strategic planning on environmental justice to increase public participation and produce tangible benefits for the nation's most overburdened and underserved communities.

STATES

Cooperative Federalism and Community Work in Lawrence, Massachusetts

EPA Region 1, Massachusetts Department of Environmental Protection (MassDEP), the city of Lawrence, and the Merrimac Valley Planning Commission (MVPC) have been coordinating their efforts to foster funding opportunities, new investments and the cleanup of brownfields in Lawrence, Massachusetts. Lawrence is among the poorest communities in New England (92nd percentile), among the highest in minority populations (95th percentile)[12], and has a post-industrial legacy of contamination with over 270 state-recognized brownfields sites. EPA's Brownfields Program has played a significant role in fostering better environmental and health outcomes for this community. Collective efforts with partners in FY2017 resulted in an investment of more than $1 million in new Brownfields Program funding, more than any other community in New England.

In FY2017, EPA awarded Lawrence two Brownfields Program grants for assessment ($350k) and cleanup ($200k) for the Tombarello Site, a former junkyard contaminated with PCBs, arsenic, barium, chromium, and mercury. EPA conducted a time critical removal action on one of the Tombarello Site parcels and upon completion of cleanup the site will be a prime candidate for redevelopment. EPA also awarded Lawrence a Brownfields Program job training grant ($200k), which will fund the Merrimack Valley Workforce Investment Board's training programs for unemployed and underemployed local residents seeking careers in the environmental cleanup and construction fields. Merrimack Valley Planning Commission (MVPC) also received a new EPA Brownfields Program assessment grant ($300k) in FY2017 based on its plan to focus on Lawrence and two other nearby communities. This spirit of interagency cooperation spans the federal, state, and local levels and has included a prominent EPA-funded Brownfields area-wide planning (AWP) project for a former rail corridor, which runs through a downtown neighborhood. As a result of this collaboration, MassDEP made the city a top priority by dedicating the majority of its 2016 statewide Brownfields Program assessment grant funding ($400k) to Lawrence.

Superfund Cleanup and Revitalization in Navassa, North Carolina

EPA Region 4, the North Carolina Department of Environmental Quality (NCDEQ) and the Multistate Environmental Response Trust (Multistate Trust) are partnering with the leadership of Navassa, North Carolina, to engage citizens and partners at the local, state and federal levels to promote community sustainability. The collective goal is to leverage Superfund cleanup, future redevelopment, and natural resource restoration for Navassa – a small, rural and industrial community where over 75% of the town's 1,800 residents are African-American and have a history rooted in Gullah-Geechee culture. Industrial plants and facilities that previously provided jobs have long since closed, with many leaving behind a legacy of pollution. Four facilities in Navassa have been addressed by EPA cleanup programs, with ongoing work being conducted on the Kerr-McGee Chemical Corp – Navassa Superfund Site, a former wood treatment facility.

EPA Region 4, NCDEQ and the Multistate Trust continue to protect people and the environment

[12] Demographic information provided by EJSCREEN (October 2017)

from site contamination by investigating and cleaning up the Kerr-McGee Chemical Corp – Navassa Superfund Site. EPA and NCDEQ are planning the Superfund cleanup in a manner that will facilitate community-supported redevelopment. The Multistate Trust is sponsoring a community-based redevelopment visioning process that allows the residents of Navassa to shape the future of the Kerr-McGee Site. Funds were recovered from the polluters to both remediate the site contamination and to restore natural resources. EPA coordinated outreach with the natural resource restoration effort led by the National Oceanic and Atmospheric Administration, U.S. Fish and Wildlife Service, and NCDEQ. The Agency's coordination efforts helped the community to better understand the restoration process. As a result, the town of Navassa increased submittals from local entities for restoration projects. EPA Region 4 has also facilitated other community partnerships, including one between Navassa and the University of North Carolina-Wilmington. The faculty and students provide support to the community about health issues, cultural identity, local policy and citizen science projects.

Empowering Communities with Environmental Data in Alexandria and Pineville, Louisiana

EPA Region 6 provided assistance to the Louisiana Department of Environmental Quality (LDEQ) for the regulatory oversight of creosoting facilities in Alexandria and Pineville as part of on-going cleanup efforts. About 26,600 low-income and minority persons in Alexandria and Pineville live within a 2-mile radius of both creosoting sites. To address community concerns of potential impact on children's health from the facilities, in 2016, EPA conducted soil and sediment sampling events in Hunter Park, Pineville Soccer Park and at Rapides Training Academy.

Due to the presence of pentachlorophenol, EPA sampled for dioxins. The LDEQ collected 24-hour air sampling data from the mobile air monitoring laboratory from both creosoting sites from 2013-2015. The data collected was sent to the state Louisiana Department of Health for review and the results were posted to LDEQ's electronic data management system in 2017. The Community Data Assessment Report, which summarizes the focused projects carried out since 2015, is in the process of being finalized with LDEQ.

In addition to empowering the Alexandria and Pineville communities with environmental data to guide the decision-making process at the community level, EPA facilitated improvements with internal and external communications in 2017. EPA used a collaborative approach to address the communities' multiple environmental issues and incorporate concepts of sustainability. The Community Sustainability Network, a network of members from the community and industry, was developed to discuss and resolve community issues. EPA also hosted a Healthy Homes and Healthy School Training, conducted by the Pediatric Environmental Health Specialty Unit in Alexandria, Louisiana, and assisted the Alexandria/Pineville cross-divisional team to create a safer environment for children in the community by empowering the community with the resources to discuss and resolve environmental issues.

Incorporating EJ into Joint Planning: Virginia Performance Partnership Agreement

EPA's Region 3 Office of Enforcement, Compliance and Environmental Justice (OECEJ) and the Virginia Department of Environmental Quality (VADEQ) are jointly developing a Performance Partnership Agreement (PPA) to improve collaboration between VADEQ and EPA. Goals established for this PPA are providing training on environmental justice to VADEQ, local communities, and other interested parties, and soliciting academic support from colleges and universities within Virginia to educate impacted communities about environmental justice. Elements of the plan include utilizing an existing Memorandum of Understanding to engage

Historically Black Colleges and Universities in the Tidewater Area, and developing and reviewing an outreach strategy to educate communities about local environmental impacts. OECEJ and VADEQ seek to combine expertise and resources to educate government officials, citizen groups and students on the most effective use of environmental justice tools and lines of communication (e.g., EJSCREEN, outreach and engagement, and citizen support lines). These collaborative efforts will include a variety of stakeholders and will increase general knowledge of environmental justice and improve citizen involvement in all levels of government.

Identifying and Disseminating Best Practices

In February 2017, the Environmental Council of the States (ECOS) published ECOS Green Report entitled, State Approaches to Community Engagement and Equity Considerations in Permitting. This report summarized innovative efforts conducted by state agencies in California, Minnesota, Mississippi, New York, South Carolina, and Tennessee. The report provides highlights of information presented in webinars held by ECOS for states in which representatives from the Office of Air and Radiation (OAR), Office of General Counsel and Region 2 leadership, and regional air programs also participated. The report showcased elements of the states' strategies for considering environmental equity in the permitting process such as increasing public participation, maintaining community relationships, transferable practices, and internal aids and guidance.

In addition, OAR developed a series of program profiles and case studies and hosted a series of webinars to highlight effective efforts by state and local agencies, non-profits, and utilities to bring energy efficiency and renewable energy to low-income communities. EPA selected programs for inclusion based on their demonstrated ability to achieve results through on-the-ground implementation and their potential to be scalable, replicable, and sustainable, and to highlight a diverse range of communities (geography, size) and types of energy efficiency and renewable energy programs.

Partnering with States to Empower Communities to Participate in the Regulatory Process

The Office of Air and Radiation (OAR) continues to conduct both webinars and in-person trainings to help communities with environmental justice concerns work with EPA and state agencies on rules and permits that impact them. The webinars and in-person trainings are designed to help develop a fundamental level of understanding of Clean Air Act programs. They also create an understanding of the communities' concerns early in the process. The FY2017 webinars included an overview of how the National Ambient Air Quality Standards (NAAQS) are established and implemented, how EPA establishes the status of air quality for any given areas against those standards, how communities can engage their state or local air agencies to participate in implementing the NAAQS, and how communities have used citizen science and sensor technology to support their engagement with their state and local air agencies. OAR has also provided in-person trainings tailored to the needs of the specific community. In each instance, OAR partnered with state agencies, community leaders, industry (where possible), and EPA Regions to design programs that support improved communications with impacted communities. Trainings in FY2017 included partnerships with the states of North Carolina, Oregon, Minnesota, and Mississippi.

TRIBES AND INDIGENOUS PEOPLES

Ensuring Environmental Protection on the Fort Berthold Indian Reservation

EPA Region 8 formed a cross-program team, called the Bakken Team, to coordinate the Region's direct implementation of environmental programs on the Fort Berthold Indian Reservation (FBIR) in North Dakota. This area has experienced population growth and environmental justice challenges (e.g. wells with storage tanks that emit air pollution, spills, etc.), resulting from the exploration, development, and production of oil and natural gas from the Bakken shale formation. The Bakken Team aims to strengthen relationships with government and tribal partners and facilitate engagement with impacted communities to help address the highest environmental threats, especially those in potentially disproportionately impacted areas, within existing authorities. The Bakken Team works with state and tribal partners through various statutory and regulatory mechanisms (e.g., Clean Air Act, Safe Drinking Water Act, Clean Water Act and Resource Conservation Recovery Act) and through compliance assistance efforts. Region 8 assures compliance by conducting inspections annually on the FBIR as well as by providing technical assistance to the Mandan, Hidatsa, and Arikara (MHA) Tribes in the procurement, training and field protocols for using a thermal infrared camera to detect hydrocarbon emissions in the field.

Region 8 has worked closely with the MHA Tribe and federal partners to implement an ambient water quality monitoring program, which is a foundational requirement for MHA to pursue their own Tribal Water Quality Standards. Over the past four years, EPA has trained and assisted MHA staff to collect surface water and groundwater samples, analyze those samples, and upload the data to the EPA Ambient Water Quality Monitoring System. Region 8 also coordinated closely with MHA Tribal government, the Bureau of Indian Affairs, and the U.S. Army Corps of Engineers to address the impacts from a sizeable produced water spill by Crestwood Equity Partners on FBIR and Lake Sakakawea. This effort resulted in a comprehensive administrative settlement with Crestwood filed in April 2017. The settlement addressed the collective concerns of the MHA and interested federal agencies in a single remediation plan that includes on-going sampling, monitoring, mitigation or restoration of surface water, soils and groundwater of the lake, its tributaries and the right-of-way impacted. Based on the concerns of both the MHA and FBIR communities expressed during a community involvement meeting in April 2015, the penalty negotiated between Region 8 and Crestwood in January 2018 included a Supplemental Environmental Project. It called for the purchase and delivery of emergency response equipment at a minimum of $173,088 and will enable the MHA to improve its ability to quickly and effectively respond to future oil and produced water spills on the FBIR.

Efforts with State Recognized Tribes and Indigenous Peoples

EPA's responsibilities for indigenous peoples go beyond the important government to government relationship we have developed with federally recognized tribes. They include coordinating with state recognized tribes and indigenous community groups regarding EPA's programs and environmental justice efforts. For example, in FY2017, the Office of Air and Radiation (OAR) invited a representative from a state recognized tribe to participate in EPA's staff training on working with tribes and included an EJ community representative as an auditor in an EPA Clean Air Act and Permitting Course for tribes. OAR also

coordinated participation of a Tribal Representative at the Vulnerable Communities Summit to discuss monitoring and sensor technology and incorporated the *Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples* into OAR's *Working Effectively with Tribes* handbook.

OAR's FY2017 efforts were highlighted by participation in the North Carolina Commission on Indian Affairs Environmental Justice Forum, held in the traditional area of the Haliwa-Saponi Tribe, a state-recognized tribe. EPA staff discussed the role of EPA's environmental justice program in working with federally recognized tribes, state recognized tribes, and all other indigenous peoples. The EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples was also discussed, along with the Agency's work with tribes on air quality. Most of the dialogue centered around concerns that the tribes expressed regarding a proposed natural gas pipeline, and the role and responsibility of the state of North Carolina in considering and assessing the appropriateness of permits for the pipeline. Six representatives, including senior leadership, from the state of North Carolina's environmental program participated in the meeting. This state's participation was appreciated by the eight tribes represented. The state of North Carolina officials expressed an interest in working with EPA on addressing environmental justice issues in their state, including concerns facing tribes and indigenous peoples.

LOCAL GOVERNMENT

Building Resilience and Sustainability in Detroit, Michigan

EPA Region 5 is working with federal partners, state agencies, municipal staff, and local stakeholders to align resources to support the city of Detroit's economic, environmental and social revitalization. Much of this work addresses challenges that linger from Detroit's industrial past and recent bankruptcy. While the entire city faces challenges to environmental justice, the SW Detroit neighborhood is especially burdened with longstanding industrial uses. EPA Region 5 has not only been delivering more projects throughout Detroit over the past year, but has been increasing local capacity through internal and external coordination of its initiatives and those of the White House Detroit Federal Working Group.

EPA Region 5 supports the city's recovery efforts to build resiliency and sustainability into everyday municipal activities in every neighborhood so that Detroit is *not just bouncing back, but bouncing forward*. For this reason, EPA activities contribute to the city's efforts to rethink and improve the urban systems that supply its energy, transportation, food, water and housing. Examples include redeveloping contaminated

brownfields sites, adopting green practices on over 11,000 residential demolitions, converting vacant lots into rain gardens, and repairing roads as green streets. EPA is also investing in aging infrastructure while meeting Clean Water Act requirements, training workers on lead safe practices along with hazardous materials safety, and incorporating new clean diesel trucks to transport heavy goods near the Port of Detroit.

EPA Region 5 also continues to emphasize air quality monitoring and enforcement to reduce environmental impacts in overburdened neighborhoods in Detroit. In response to community concerns, EPA deployed its mobile monitoring resources and the state installed a new air quality monitor in SW Detroit in FY2017. EPA also resolved several air cases with Supplemental Environmental Projects (SEPs) that resulted in local projects designed for schools and parks to benefit residents of SW Detroit. EPA Region 5 also maintains the Great Lakes program that strategically targets threats to the Great Lakes ecosystem and accelerates progress toward long term goals by administering grants, cooperative agreements and contracts, as well as works with nonfederal partners to implement protection and restoration projects. The Great Lakes program continues to address legacy contamination by dredging contaminated soil from the Rouge River Old Channel around Zug Island. This dredging project addresses a longstanding community desire to see local waterways cleaned up from decades of heavy industry. In 2017, the Great Lakes program took additional outreach steps to ensure that local residents are included in the cleanup process starting in Spring 2018.

The EPA-funded Wayne County effort to lead a Brownfields Area Wide Planning project is another example of how the Agency addresses legacy contamination and community infrastructure issues. This funding supports the community to research, plan and develop implementation strategies for brownfield cleanup and revitalization. This project is centered around DTE Energy's River Rouge power plant near SW Detroit and is timed to precede the closing of the coal-fired power plant. The effort brings together many organizations that previously fought each other over the health impacts to discuss the 'just transition' of a prime waterfront site that represents one-third of the community's tax base. Whether closing a power plant or manufacturing site, a 'just transition' is holistic support of the immediate community impacted by a closing facility that includes workforce training, economic development, site cleanup, and redevelopment. The action plan for this project will focus on brownfield redevelopment and community revitalization opportunities located in this area along the Rouge River and Detroit Rivers.

FEDERAL GOVERNMENT

Federal Interagency Working Group on Environmental Justice (IWG)

Established under Executive Order 12898, the Federal Interagency Working Group on Environmental Justice (EJ IWG) actively engages 16 federal agencies and the White House Council on Environmental Quality to "identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority populations and low-income populations." The Administrator of EPA chairs the EJ IWG and EPA's Office of Environmental Justice plays a critical role in its leadership and day-to-day management. The EJ IWG brings partners together to address complex, place-based environmental justice challenges and has been a champion of effective interagency collaboration, which led to the Environmental Justice Collaborative Problem-Solving Model and associated place-based successes. The collaborative problem-solving model provides a systematic approach for communities to build partnerships with other stakeholders to improve their environmental and public health conditions. In response to requests from federal agencies to learn more about effective environmental justice approaches, FY2017 EJ IWG efforts centered on creating meaningful spaces to foster a common

understanding of challenges and solutions and explore opportunities for collaboration. Recognizing that knowledge empowers action, the EJ IWG showcased successful models that deliver tangible results to communities to help in form and inspire environmental justice practitioners.

Recordings of the EJ IWG Access & Awareness Webinar Series is on the EPA EJ IWG webpage and showcases the collaborative work of nearly 30 partner organizations from an array of sectors. In FY2017, over 3,000 individuals registered and 1,650 individuals ranging from federal, state, local governments and community groups attended the live broadcasts.

In FY2017, the EJ IWG organized and led a monthly Access and Awareness Webinar Series - a national platform to strengthen connections and share environmental justice best practices in federal and local, place-based collaborations. The "Brownfields to Healthfields: Championing the Triple Bottom Line (Health, Environment and Economy) for Community Infrastructure" webinar showcased a community in Central Appalachia that used a grassroots-driven and inclusive approach to leverage resources from multiple federal and state partners to establish a health center on a former brownfields site. The series also highlighted interagency activities at the federal level. The "Discrimination Protections and Promising Practices in Federally Assisted Emergency Management" webinar provided new guidance and resources to states and local governments and the "Whole Community Disaster Planning" webinar discussed how the federal government is working to build community resilience through inclusive public engagement. The Regional IWG Committee also developed best practices, tools and resources for place-based multi-stakeholder, interagency collaboration, including a compilation of *Lessons Learned* that showcases how communities can drive collaborative problem-solving (bottom-up approach), as well as how federal staff working in communities can initiate place-based collaborations (top-down approach).

Brownfields to Healthfields

EPA uses the Brownfields to Healthfields (B2H) approach to help local organizations access state and federal resources to transform brownfields and blighted properties into community spaces that improve the environment, public health and economic potential of vulnerable communities. Health benefits include reducing exposure to pollution; increasing patient, family and community centered health care; increasing food security, and creating public space for physical activity. This approach also catalyzes private investment by increasing economic potential through the tax base, developing new jobs and worker skills, and supporting economic resiliency. This approach is inclusive, collaborative and involves multiple stakeholders (e.g. federal, state, tribal and local governments; business and private sector, academia, nonprofits and community-based organizations) who each play a significant role. EPA's role involves identifying

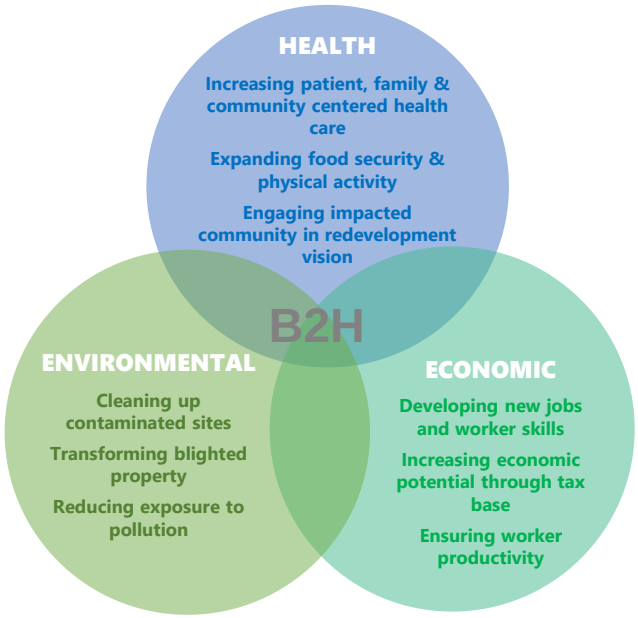


Figure: The Brownfields to Healthfields approach transforms brownfields into community spaces that strengthen community health, equity, sustainability and resilience for impacted and underserved populations. The B2H approach has triple bottom line benefits - health, environmental and economic. Examples of each benefit are noted above.

and analyzing opportunities; convening and facilitating stakeholder engagement; and providing expertise, guidance and counsel to help successfully move the process forward. EPA also supports engagement of the impacted populations throughout the decision-making process.

In New Haven, Connecticut, the B2H approach supported the Yale Child Study Center's Mental Health Outreach for Mothers (MOMS) Partnership™, to transform a petroleum brownfields site into a MOMS Partnership™ HUB – a neighborhood space that provides resources, accessible job-readiness workshops, and mental health services to serve low-income and minority populations. The B2H approach also helped obtain a $6.2 million Hurricane Sandy Social Services Block Grant to expand MOMS Partnership™ HUBS. In Compton, California, EPA, through the Rural Communities Committee of the EJ IWG, supported the Los Angeles Neighborhood Housing Services' Center for Sustainable Communities by connecting them with USDA Natural Resources Conservation Resources for a community garden and community café on land occupied by an abandoned grocery store. This approach is also aiding the planning of an innovative community 3D virtual reality classroom combined with a primary and vision and eye health care center.

The B2H approach also has resulted in environmental, health and economic benefits in the rural former coal areas of Appalachia communities. Data reported annually by Federally Qualified Health Centers (FQHC) in eastern Kentucky showed that high risk residents of Central Appalachia are going without necessary eye care services with many FQHCs not yet providing vision care services.[13] In response to this community's needs, the Rural Communities Committee of the EJ IWG educated stakeholders about the application of the B2H approach, which informed the University of Pikeville as it leveraged resources to expand the FQHC on a former brownfields site. The U.S. EPA and the state of Kentucky funded contaminated site assessment and cleanup of the brownfields site in order to expand the FQHC at Eula Hall Health Center to include vision care. Vision care was extended at the clinic in 2017 and preparation for onsite expansion is ongoing. EPA; other federal, regional and state partners; community leaders; academia and professional healthcare organizations partnered together to collaborate on this effort. These B2H efforts complemented the University of Pikeville's launch of the Kentucky College of Optometry in the fall of 2016, being the first and only optometry school in Kentucky. This school fosters a new generation of eye care professionals to train in B2H facilities to serve Appalachia. The benefits of this collaboration include:

"Vision and eye health care are tremendously important to the vitality of a small community. Besides providing vision care for a community, we bring professionals to the community. We bring staff to the community. We bring business to a community." - William T. Reynolds, O.D., member of American Optometric Association Board of Trustees

- Regional economic impact of $26.8 million over four years (expected);
- Approximately 30% of graduates are expected to practice in medically underserved areas of Appalachia;
- Operating rural clinics that will serve an estimated 18,000 unique patients annually; and
- Faculty have already performed hundreds of eye exams.

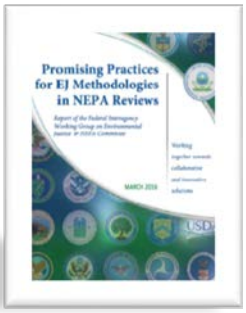
National Environmental Policy Act (NEPA)

Under the 1970 National Environmental Policy Act (NEPA), federal agencies must assess the environmental effects of their proposed actions prior to making decisions and provide opportunities for public review and comment on those evaluations. EPA's Office of Environmental

[13] https://bphc.hrsa.gov/uds/datacenter.aspx?q=d&year=2016&state=KY#glist

Justice (OEJ) is the founding co-chair and current member of NEPA Committee's Leadership Team on the Federal Interagency Working Group on Environmental Justice. Through these roles, OEJ has helped to improve effective, efficient and consistent consideration of environmental justice principles in the NEPA process by sharing lessons learned and promoting the use of Promising Practices for EJ Methodologies in NEPA Reviews *(Promising Practices)* in FY2017.

Promising Practices is a compilation of methodologies from current agency practices that shares the lessons learned for NEPA practitioners to incorporate robust, efficient and consistent environmental justice efforts into their daily practice. With 14 departments, agencies and White House offices and over two hundred federal NEPA practitioners working together to create this product, this report is a significant model of partnership, collaboration and transparency for the federal government. To promote *Promising Practices*, OEJ trained over 1,000 NEPA practitioners in all major departments responsible for NEPA implementation (e.g., Department of Transportation, Department of Interior, U.S. Department of Agriculture, Department of Energy, Federal Energy Regulatory Commission) on *Promising Practices* in FY2017. OEJ and the EJ IWG are also completing a Citizen Guide to build the capacity and engagement of minority, low-income, tribal and indigenous communities who want to ensure that their environmental justice issues are adequately considered with federal agency actions. EPA's Office of Federal Activities is leading efforts to finalize a National Training Product for *Promising Practices* (NTP) for use by all federal agencies. The NTP is an on-line training that explains the promising practices and methodologies and provides examples of their application. To ensure the effectiveness of *Promising Practices*, the NEPA Committee is designing a Performance Measures Survey that will also solicit suggestions for improvement. The goal is to help ensure that *Promising Practices* is a living, breathing document that grows and adapts as our collective knowledge and experiences on NEPA increases.



NEPA PRACTITIONERS REPRESENT THESE FEDERAL AGENCIES
US Department of Agriculture
US Department of Energy
US Department of Health and Human Services
US Department of Homeland Security
US Department of Housing and Urban Development
US Department of Interior
US Department of Justice
US Department of State
US Department of Transportation
US Department of Veteran Affairs
Environmental Protection Agency
General Services Administration
Nuclear Regulatory Commission
White House Council on Environmental Quality

CHILDHOOD LEAD DISPARITIES

Lead exposure among young children has been drastically reduced over the last three decades[14] due to federal, state and local regulatory efforts to reduce or eliminate sources of lead that children are exposed to, such as: lead-based paint, leaded automotive gasoline, lead service lines containing drinking water and plumbing, contaminated food, and consumer products. As of 2013-2016, there are approximately 200,000 children ages 1-5 years with blood lead levels at or above 5 µg/dL, the 97.5th percentile of recent national blood lead estimates, set as the reference level at which CDC currently recommends public health actions be initiated.[15]

Despite federal and state efforts, reduction in lead exposure has not been realized equally across the United States and it remains a top childhood environmental health problem, disproportionately impacting minority and/or low-income populations. Average blood lead levels remain higher among non-Hispanic black children when compared to Mexican-American and non-Hispanic white children. Non-Hispanic

[14] Learn More about CDC's Childhood Lead Poisoning Data. Centers for Disease Control and Prevention. 2017. https://www.cdc.gov/nceh/lead/data/learnmore.htm

[15] Forum on Child and Family Statistics. Forthcoming, July 2018. www.childstats.gov

black children, children living in families below the poverty level and children living in older housing have statistically significantly higher risk for higher blood lead levels. In 2013-2016, the 95th percentile blood lead of children ages 1 to 5 years in families with incomes below poverty level was 3.0 µg/dL, and among those in families at or above the poverty level it was 2.1 µg/dL, a difference that was statistically significant.[16] Today, about 3.6 million U.S. families live in a home with one or more conditions that can expose their child to levels of lead that EPA considers hazardous. EPA recognizes that reducing childhood lead exposures continues to be a complex challenge in overburdened communities, requiring stronger strategic collaboration with other agencies and within the Agency. In collaboration with federal partners, EPA is taking action to address childhood lead exposures and health disparities.

In FY2017, the *President's Task Force on Environmental Health Risks and Safety Risks to Children (Task Force)*, which is co-chaired by the EPA Administrator and comprised of 11 departments and agencies and 6 White House offices, agreed to develop a collaborative federal strategy to reduce sources of childhood lead exposures and associated health impacts in the United States. This strategy, as currently envisioned, would address sources of lead in children's environments; improve surveillance and monitoring of lead exposure to children; and improve the health of children exposed to lead. The strategy is expected to improve federal communications with communities, policy makers, and families, and jointly plan cross-federal research to improve scientific understanding of lead exposures and health impacts, and inform cost-effective decision-making. In FY2017, the Task Force published the *Key Federal Programs to Reduce Childhood Lead Exposures and Eliminate Associated Health Impacts*, which catalogs federal efforts to understand, prevent, and reduce various sources of lead exposure among children. It is a step toward expanding the existing collaborative federal effort to address lead exposures in children in the United States, by providing a basis for the development of a new strategy to further reduce childhood lead exposure.

In FY2017, EPA convened an intra-agency team to develop a method to identify concentrated geographic areas with the most overburdened communities where lead exposures are highest, using a consistent approach. By coordinating efforts across several programs and regional offices, EPA can better target actions to reduce sources of childhood lead contamination. EPA also partnered with the National Tribal Toxics Council, the National EPA-Tribal Science Council, and other EPA Tribal Partnership Groups to increase understanding of issues in Indian country, educate tribal communities, and convene and build partnerships to take multi-media approaches. To date, the partnership has been designing a curriculum to educate tribal communities and parents about the dangers posed to children from lead exposures, as well as identifying an approach to facilitate future federal conversations on tribal childhood blood lead levels. This approach is expected to be ready for use by Summer 2018.

Through the Lead Hotline (1-800-424-LEAD), The National Lead Information Center (NLIC) provides the general public and professionals with information about lead, lead hazards, and their prevention. The NLIC operates under a contract with EPA, with funding from EPA and the Department of Housing and Urban Development. For questions about lead in drinking water, contact the Safe Drinking Water Hotline (1-800-426-4791).

[16] U.S. EPA analysis of data from Centers for Disease Control and Prevention, National Health and Nutrition Examination Survey, https://wwwn.cdc.gov/nchs/nhanes/Default.aspx

DISASTER RESPONSE

EPA coordinated response efforts with federal, state, territorial, tribal, and local partners to address human health and environmental impacts to support people and communities affected by natural disasters, such as Hurricanes Harvey, Irma and Maria. These disasters destroyed or severely affected power, water, and sewage services impacting millions of households, many of which are in minority, low-income, tribal and indigenous communities.

Since fall 2017, EPA has deployed hundreds of staff in response to Hurricanes Harvey, Irma and Maria. These response efforts were part of a coordinated federal response under the Stafford Act. They included providing assessment and technical assistance to drinking water and wastewater facilities, assessment of industrial facilities for the Comprehensive, Environmental Response, Compensation and Liability Act (CERCLA) Superfund sites and facilities covered by the Clean Air Act 112(r) Prevention of Accidental Releases program, and assessment and cleanup of public and private properties, to render properties safe from hazardous materials and household hazardous waste. These efforts are coordinated with a cooperative federalism approach across all levels of government to help minimize adverse social, environmental and economic impacts.

In response to Hurricane Harvey, EPA worked in communities to assess impacts to regulated facilities, drinking water, sewage treatment, and overall human health effects. In addition to monitoring air quality in neighborhoods near industrial areas, EPA staff were deployed alongside state and local partners to conduct drinking water and waste water system assessments, hazard evaluations, and container recovery operations. EPA also deployed community liaisons to the Houston area to support 38 County Emergency Operations Centers throughout the impacted area, which included disseminating information on the environmental hazards related to flood waters and mold, residential drinking water well testing, and an array of other issues. To facilitate communication and coordination, EPA regularly engaged environmental justice contacts in Texas and Louisiana to discuss community concerns in the affected areas, and then shared those concerns with EPA's community liaisons.

In FY2017, EPA continues to help Puerto Rico and the U.S. Virgin Islands (USVI) recover from the damage caused by Hurricanes Maria and Irma in close coordination with federal, commonwealth, territorial and local partners, along with non-governmental organizations. EPA on-scene coordinators, scientists, technicians and community involvement coordinators are conducting response efforts highlighted in this story map. These efforts include sampling drinking water and wastewater systems for immediate issues to be addressed by the appropriate agencies and systems providers, assessing Superfund sites, and informing communities of the many health and environmental hazards they face after a hurricane. EPA augmented these efforts by collecting household hazardous waste in Puerto Rico and the USVI, which prevented storm-related household hazardous materials from being improperly disposed of in backyards, landfills, or down drains. In addition, EPA staff supported Hurricane Irma Recovery efforts through FEMA's Community Place Based Recovery Support teams working in Monroe, Lee, Collier and Hendry counties in Florida, and identifying EPA resources and technical assistance opportunities to support the Joint Field Office in Orlando. EPA also coordinated with the Bureau of Indian Affairs to offer assistance as needed to tribes in Florida and other southeastern states impacted by Hurricane Irma.

SECTION III: RULE OF LAW AND FAIR PROCESS

This section focuses on EPA's efforts to ensure compliance and enforcement of EPA's environmental laws in overburdened and underserved communities. In keeping with our overall theme of tangible results in such communities, information is provided on national enforcement results related to environmental justice. This section provides details regarding EPA's efforts to strengthen its scientific capacity to better serve the needs of these communities, focusing on environmental problems where they are most acute for low-income, minority, and tribal and indigenous populations, with an emphasis on public engagement. It also provides updates about EJSCREEN and activities carried out under Title VI of the Civil Rights Act of 1964.

Enforcement and Compliance: Advancing, Sustaining, and Innovating on EJ Integration

FY2017 efforts in EPA's enforcement and compliance program focused on sustaining progress from the past several years, as well as advancing efforts so that consideration of environmental justice is more fully integrated into all parts of the enforcement life cycle across all Regions. This ongoing work includes reviewing all enforcement cases to determine whether they may affect overburdened communities and how the resolution of enforcement actions benefits affected communities. To advance the work, EPA built a mapping tool that combines EJSCREEN information with Enforcement and Compliance History Online (ECHO) data, to help Regions and co-regulators (states, tribes and local government) focus compliance reviews in overburdened communities. EPA added enhanced map layers to ECHO, which enable the Agency to identify overburdened communities or locations that also appear to have facilities presenting a high likelihood of non-compliance with environmental laws. EPA will use this mapping tool, along with on-the-ground knowledge from other EPA programs, states, tribes, and community members and groups, to facilitate consideration of compliance efforts that would make a difference to communities. These efforts illustrate EPA's continued commitment to embed consideration of environmental justice in the Agency's day-to-day compliance and enforcement work.

National Enforcement Results in Areas with Potential EJ Concerns

The following two tables provide important summary FY2017 national results on EPA's enforcement actions in areas with potential environmental justice concerns[17] and the environmental benefits that EPA estimates will be achieved from those actions.

Enforcement Actions	National Total	Number in Areas with Potential EJ Concerns	Percent in Areas with Potential EJ Concerns
Administrative Compliance Orders	601	198	33%
Final Administrative Penalty Orders	1,259	457	36%
Judicial Consent Decrees	103	33	32%
Supplemental Environmental Projects	94	42	45%

[17] Areas with potential EJ concerns are geographic areas which meet a threshold of 80th percentile nationally for one or more of the environmental indicators in EJSCREEN. Further review based on programmatic knowledge and other available information relevant to those geographic areas may then determine whether there are any appropriate opportunities to address EJ concerns through the enforcement action.

Estimated Environmental Benefits of Enforcement Actions	National Total	Number in Areas with Potential EJ Concerns	Percent in Areas with Potential EJ Concerns
Pollutants Reduced, Treated, or Eliminated (*millions of pounds*)	217	77	35%
Hazardous and Non-Hazardous Waste Treated, Minimized or Properly Disposed (*millions of pounds*)	245	245	100%*
Contaminated Soil/Debris to be Cleaned Up (*millions of cubic yards*)	433	219	51%

**Two enforcement cases that concluded in FY2017 accounted for almost the entire total reported for this measure. Both of those cases involved facilities located in areas with potential EJ concerns.*

Geographic Community-Focused Enforcement Initiatives

Region 9 has historically used a geographic focus when targeting a portion of its compliance and enforcement activities to address noncompliance in overburdened communities. Most recently, the Region has participated in the California Environmental Protection Agency (CalEPA) Environmental Justice Task Force. Initiated in 2013, the Task Force, made up of representatives of state and local environmental regulatory agencies, works to increase compliance with environmental laws in some of the most overburdened and vulnerable communities in California. Region 9 has participated in initiatives focused on Fresno, Los Angeles neighborhoods, East and West Oakland, and currently, in Pomona, and serves as an advisory member of the Task Force Steering Committee. These initiatives demonstrated the value of an approach that combines a robust community engagement process, with compliance assistance for regulated businesses and coordinated, multi-agency enforcement reviews to address environmental concerns. The success of these pilot initiatives helped to earn the Task Force permanent funding through California's 2016 Budget Act. The law created a mandate for CalEPA to continue its multi-agency compliance and enforcement approach and to give priority to disadvantaged communities.

For example, for the 2017 focus on East and West Oakland, the Region's storm water and lead paint inspection programs participated along with state and local inspectors, which was informed by up-front and meaningful engagement with community members to learn about sites of concern through community meetings and tours of the area. Participation in this initiative helped strengthen interagency coordination, emphasized accountability to community members and helped identify patterns of noncompliance across some sectors of the regulated community.

SCIENCE

The Office of Research and Development (ORD) works closely across the Agency to provide the science, data, tools, and other resources needed to advance environmental justice. ORD has also made important strides to strengthen the foundational link between EPA science and the needs of underserved and overburdened communities. This has helped EPA to better fulfill its mission of protecting the nation's health and environment by addressing environmental problems where they are most acute for low-income, minority and tribal and indigenous communities. In FY2017 EPA's science efforts have produced benefits for our most vulnerable communities in the areas of air, water, land and health disparities.

Air

- **Ironbound Citizen Science** - This collaboration provided community-based

participatory environmental monitoring of fine particles ($PM_{2.5}$) and gaseous nitrogen dioxide (NO2) in the heavily overburdened Ironbound community in Newark, New Jersey. The project used an environmental sensor pod designed by ORD for the particular needs of the community with respect to industrial emissions and freight transport activities. Similar air sensor research is now underway in the Argentine community of Kansas City, Kansas, leveraging activities in that community that were funded through an EPA Environmental Justice Grant.

- **Sensor Pods (SPods) for Fenceline Monitoring** - ORD worked with fenceline communities and industries interested in detecting leaks and reducing unintentional or fugitive release to develop and use new, specially designed sensors to detect and measure emissions. ORD scientists have evaluated sensors called SPods in communities near refinery fencelines in Philadelphia, Pennsylvania, and have recently launched a similar project near facilities in the Rubbertown industrial district of Louisville, Kentucky.
- **Wildfire Smoke Guide** - ORD designed *A Guide for Public Health Officials*, Wildfire Vulnerability Index and a Smoke Sense app to facilitate preparation at all levels of governance and citizen science to reduce the adverse health impacts of wildfire events. This extremely timely science tool empowers stakeholders so that they can be more engaged with addressing the growing issue of wildfires in many communities across the nation.

Water

- **Proctor Creek Boone Boulevard Project Health Impact Assessment** - This collaboration between Region 4, the Centers for Disease Control and Prevention, Georgia state agencies, the city of Atlanta and

community groups developed a unified solution to urban water quality compliance, flooding, heat stress, and community economic development. This project is a major success featuring public participation in generating environmentally sound solutions with multiple benefits including slowing stormwater runoff from impermeable surfaces, improved access to community gardens and green space, increasing shaded corridors for walking and biking, and expanded opportunities for community small businesses.

- **Lawrence, Massachusetts** - Region 1 focused on protection of Merrimack River water quality and planning for the resiliency of the water treatment facility in the face of periodic flooding. This project is key to the continued development of the Merrimack River as a recreational economic resource for the Lawrence community while also protecting vulnerable neighborhoods from flooding and vulnerable individuals from exposure to waterborne pathogens through drinking and/or recreational water.
- **Multimedia Modeling Analysis of Childhood Lead Exposure** - The objective of this study is to describe the relative contributions of water, soil, dust, food, and air to children's blood levels at different ages and how these might change under different exposure scenarios. The modeling analysis is currently being used in the development of potential options for the Office of Water's Lead and Copper Rule, and was published in the peer reviewed journal *Environmental Health Perspectives*[18] in FY2017. Additional research identifies locations of highest lead

[18] Zartarian, 2017 "Children's Lead Exposure: A Multimedia Modeling Analysis to Guide Public Health Decision-Making," *Environmental health perspectives*, *125*(9), 097009-097009.

exposure risk and focuses more closely on the contribution of soil lead to blood lead.

Land

- **St. Louis River Estuary Restoration and Health Impact Assessment (HIA)** - Reports in FY2017[19] will describe highly collaborative (ORD, region, state, local) studies in the St. Louis River area of Duluth, Wisconsin, on: (a) community valuation of ecosystem goods and services (EGS); (b) the institutional context for the use of EGS in planning decisions; and (c) the application of HIA in supporting decisions for transforming remediation projects into sustainable revitalization of the surrounding community.
- **Pilsen Site** - EPA is overseeing the cleanup of lead-contaminated soil in residential areas, which includes excavating contaminated dirt in the yards and gardens of homes with lead in surface soil. ORD collaborates with Region 5 on soil sample analysis and is working to identify lead sources using novel environmental forensics.
- **Coeur d'Alene, ID, Bunker Hill Superfund Site** - ORD collaborates with Region 10 on implementing a structured decision process engaging EPA, state agencies and the Spokane and Coeur d'Alene Tribes to prioritize cleanup of wetlands contaminated with mining waste. ORD and Region 10 also collaborated to use new tools for evaluating ecosystem services at this site to aid in selection of Best Management Practices.

Health Disparities

EPA-NIMHD Centers of Excellence on Environment and Health Disparities Research - EPA supported the work of ten Centers, each of which worked with local communities as part of the research process. These centers worked on solutions to environmental health disparities. One project was a collaboration between Georgia State University with local community organizations to evaluate innovative approaches to reducing school children's exposure to air pollution. Another project involved research by University of New Mexico to inform interventions to protect against DNA damage caused by arsenic and uranium exposure. Additionally, an EPA funded study at the University of Washington found that racial/ethnic disparities associated with exposure to NO2, a transportation-related pollutant, continues to persist.

Tribal Science Grants

- **University of Arizona** - The Center for Indigenous Environmental Health Research (CIEHR) is partnering with American Indian and Alaska Native communities (Hopi and Navajo) to build capacity to determine the contribution of chemical and other environmental exposures to health inequities and support efforts to address these threats. These efforts include characterizing the extent of contamination in culturally significant food (mutton), as well as in the plants and soil of the Navajo communities of Leupp, Arizona, and Cameron, Arizona.
- **Yurok Tribe Environmental Program, Northern Arizona University** - The study on Identifying, Assessing and Adapting to Climate Change Impacts to Yurok Water and Aquatic Resources, Food Security and Tribal Health aims to increase the tribe's adaptive capacity to prepare and respond to environmental change by identifying areas of water resource vulnerability and resiliency, and assessing impacts on Yurok food security and tribal health. They completed development of their Yurok Local Environmental Observer as a hub of the Alaska Native Tribal Health Consortium

[19] "State of the Estuary" - Developing a long term monitoring, assessment and reporting framework for the lower Saint Louis River and Utilizing a Health Impact Assessment (HIA) to Connect Natural Resource Management and Community(presentation)

(ANTHC) Local Environmental Observer Network (LEO), with a functioning 'app' now available for download to both Apple and Android products. This puts the observation tools of the LEO Network into the hands of citizens in the field and allows users to upload photos, audio, and text to make observations, thereby helping communities understand and document a range of environmental concerns.

- **Alaska Native Tribal Health Consortium** - With the Assessment, Monitoring and Adaptation to Food and Water Security Threats to the Sustainability of Arctic Remote Alaska Native Villages, grantees have developed a filter paper methodology to assess subsistence mammal (e.g., caribou) exposures to pathogens, and are working collaboratively with subsistence hunters, state and federal agency partners on sample collection and processing methodologies. They presented their work at the Arctic Council's Arctic Monitoring and Assessment Programme, Arctic Human Health Assessment Group, Arctic Council Science Conference International Circumpolar Surveillance Workgroup, and One Health Workgroup.

Tools and Research to Facilitate Community Action

EPA science directly supported EPA's Regions, states and state-delegated programs and communities, developed science tools geared towards action, and conducted research that connects environmental conditions and human health and well-being. Key tools that EPA produced to facilitate community-scale action included:

- **Health Impact Assessment (HIA) resources** - ORD has produced case studies, a HIA resource guide, and a guide to using EnviroAtlas for HIA. These resources help to expedite the HIA process and increase scientific rigor in this community-engaged process designed to make high quality decisions about the impacts on public health of proposed policies and actions.

- **Information Access Tools** - ORD's Materials Management Wizard and Green Infrastructure Wizard steer users at all levels of expertise and goals toward the most appropriate tools and resources to support and promote sustainable management of materials and water in community planning decisions. EnviroAtlas allows users to view data about their communities to facilitate the evaluation of options and generation of solutions to environmental issues.

The full range of ORD's science activities for environmental justice, including a wide assortment of outreach and training activities, is described in the EJ Research Roadmap. All of these science-based accomplishments help to advance EPA's mission by protecting the health and the environment of the nation's most vulnerable populations.

EJSCREEN

To better meet the Agency's public health and environmental protection responsibilities, EPA developed an environmental justice (EJ) mapping and screening tool called EJSCREEN. EJSCREEN is an online tool that allows the user to combine environmental and demographic indicators in maps and reports. Based on nationally consistent data and a nationally consistent approach, this tool provides the Agency with a uniform way of looking at environmental justice across its programs and Regions. In 2015, EPA released EJSCREEN to the public to be more transparent about how the Agency considers environmental justice in its work, to assist our partners in making more informed decisions, and to create a starting point between EPA and stakeholders when looking at issues related to environmental justice. Since its public release, EJSCREEN has consistently ranked as one of EPA's most used tools available through the Agency website. Below are examples

of how EPA and external stakeholders utilize EJSCREEN.

As the Agency develops programs, policies and activities that may affect communities, EPA uses EJSCREEN to look for areas that may be candidates for additional consideration, analysis or outreach. For example, EPA uses the demographic data to inform outreach and engagement practices near Superfund sites and other facilities. EPA also requires the use of EJSCREEN review for most civil enforcement cases. In 2017, EPA performed almost 1,000 environmental justice screenings under the enforcement and compliance program. These EJSCREEN reviews serve two purposes: (1) to assure that EPA enforcement personnel working on a case are aware of the potential environmental justice concerns in a community and then look for opportunities to address those concerns, and (2) to allow the Office of Enforcement and Compliance Assurance to measure how much of our enforcement work is being done in areas with potential environmental justice concerns. EPA has also been actively working with partners and stakeholders to develop external uses of the tool. Today EJSCREEN is regularly used by other federal, tribal, state and local government partners, as well as by nonprofit and community groups, business and industry, and academia. In 2017, HUD datasets were incorporated into EJSCREEN, making it easy to analyze the proximity of public housing to Superfund sites and other facilities.

State Government - In FY2017, EPA researched how stakeholders are using EJSCREEN. One example showed that the Idaho Department of Transportation (IDT) used EJSCREEN in June 2015 for a major road construction project in Coeur d'Alene as a preliminary screening tool to identify vulnerable populations, and therefore potential impacts. As part of the planning process of this project, IDT's Communications Department collaborated with the Idaho Office of Civil Rights and used EJSCREEN to ensure that any impacts were identified and relayed to the public in a timely manner. The Office of Civil Rights found that the census block groups surrounding the wooded parcel were in the 80th-90th percentile in the state for low income population. Using this screening report, district staff were directed to conduct an assessment in the area to validate the EJSCREEN results and found that there was, in fact, a low-income population. They also found an encampment of "working poor" and homeless populations living in the wooded parcel where the proposed road would be built. The Office of Civil Rights in Idaho began working with surrounding local public agencies to make them aware of the encampment and help this community obtain the resources they needed. The City of Coeur d'Alene embarked on a massive effort to provide social services to the estimated 300 people living in the encampment, and eventually helped relocate residents to local shelters, halfway houses, and more permanent living situations. After this event, IDT now conducts environmental justice assessments for every project possible using the EJSCREEN tool, which is followed up with an onsite assessment by local staff.

Community - Clean Air Carolina is a nonprofit organization based in North Carolina that partners with policymakers in the state and applies science-based air quality standards to advocate for cleaner air for communities. As a part of a multi-year state-wide project, Clean Air Carolina used EJSCREEN to conduct preliminary air quality health reports for multiple counties in North Carolina. In the most recent report done for Catawba County in FY2017, EJSCREEN showed where a comparatively high number of point source pollution sites and high traffic emissions are located in the area. Using the findings from the EJSCREEN report, Clean Air Carolina

concluded that the population in this county consisted of a higher proportion of low-income residents who are exposed to higher levels of air pollutants emitted from stationary facilities and mobile sources. The numerical and graphical reports from EJSCREEN are directly referenced in Clean Air Carolina's official air quality health report. Clean Air Carolina plans to use this report to educate residents in Richmond County neighborhoods about the status of air pollution and to help state and federal agencies with their decision-making processes.

ENVIRONMENTAL JUSTICE AND CIVIL RIGHTS COORDINATION

The External Civil Rights Compliance Office (ECRCO) continues to coordinate with the Office of Environmental Justice (OEJ) and environmental justice program staff in the ten EPA Regions, as well as other program offices both in EPA Headquarters and Regions, to address underlying issues of concern in communities and to develop and secure positive partnerships with state and local agencies and other recipients that receive EPA funding. In particular, ECRCO has worked closely with EJ program partners in the investigation and resolution processes of several pending civil rights complaints. It has been able to leverage the significant involvement of OEJ and Regional EJ programs with the relevant recipients, industries and community stakeholders, in order promote the effective and efficient resolution of pending civil rights complaints. Going forward, ECRCO remains committed to working with the Agency's environmental justice program to ensure a meaningful and collaborative approach to civil rights complaint investigations and resolutions.

In addition, ECRCO provided training and technical assistance to state and local agencies, as well as tribal governments in FY2017. ECRCO engaged approximately 38 states across all 10 EPA Regions through regional environmental justice outreach calls and meetings. ECRCO and the environmental justice program will continue to utilize a comprehensive set of tools, including training and technical assistance, in working cooperatively with EPA funding recipients to address their federal civil rights obligations and to address underlying issues of concern in communities, in an effort to resolve issues outside of the civil rights enforcement process whenever appropriate.

SECTION IV: BUILDING COMMUNITY CAPACITY AND ENGAGEMENT

While much of EPA's environmental justice efforts are focused on advancing the policy and practice of environmental justice within different levels of government, all environmental justice work is built upon a foundation of working with and supporting the efforts of communities. Direct community support is, in fact, the most fundamental aspect of EPA's commitment to answering the challenges faced by communities throughout the United States. Without such support, EPA's focus on fair treatment and meaningful involvement would ring hollow, as the communities that need support the most would rarely gain the level of capacity necessary to pursue environmental justice goals over time and make use of the tools and policy advances of their government. The goal of engaging and building capacity is to empower communities to help determine and achieve their environmental and health goals.

EPA's commitment to supporting communities and their ability to increase their capacity underlies the varied means and methods of the Agency's support mechanisms. These include environmental justice grants that provide smaller levels of funding for short periods of time to help get communities started and then larger and longer-term funding to support a community's efforts to form collaborations and implement solutions. EPA community support also includes more specialized grants that look at specific media challenges, such as Urban Waters, and also targeted technical assistance to provide communities with detailed professional knowledge and guidance on specific issues, such as growing a local food economy. EPA also offers general technical assistance that is designed to meet a community's specific needs, and an assortment of trainings that range from

general leadership development to specific statutory based education. EPA's deployment of these various types of support is absolutely essential to ensuring that the nation's most overburdened and underserved populations can meaningfully engage their government at all levels and impact the decisions affecting their communities.

National Environmental Justice Advisory Council (NEJAC)

The purpose of the National Environmental Justice Advisory Council (NEJAC) is to provide independent advice and recommendations to the EPA Administrator on matters related to environmental justice, with a focus on key areas that include evaluation of a broad range of strategic, scientific, technological, regulatory, community engagement, and economic policy issues. As a federal advisory committee established in 1993, the NEJAC brings together a diverse set of stakeholders, who engage in a systematic and comprehensive review of the issues before it formulates recommendations.

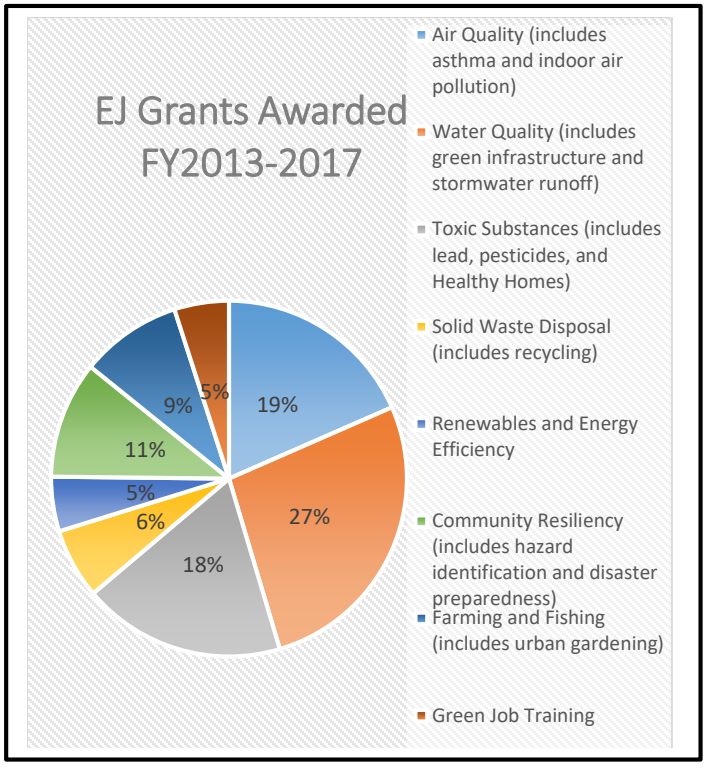
Independent advice from the NEJAC: (1) provides EPA with consensus recommendations about often controversial issues that encompass divergent viewpoints and interests; (2) comes from a unique set of appropriately experienced, knowledgeable, and sensitive multi-stakeholder representatives committed to consensus deliberations about environmental justice issues; (3) enables environmental justice considerations to be clearly and consistently articulated and appropriately visible within the Agency's decision-making process; and (4) provides the Agency with an existing mechanism by which to obtain advice from external stakeholders about environmental justice issues in emergencies and

other special situations. Since there are very few, if any forums convened by the federal government regularly available to vulnerable populations, citizens see the NEJAC as one of the most powerful means for lifting up their voices for federal agencies to hear and be responsive.

During FY2017, the NEJAC held two public face-to-face meetings with teleconference options, produced four reports, and worked on three charges that were requested for various EPA offices to address. These charges focused on providing monitoring data to communities, water infrastructure finance and capacity, and youth perspectives on climate change. One response to these charges was the *Recommendations and Guidance for EPA to Develop Monitoring Programs in Communities* report, completed at the April 2017 NEJAC meeting. This report offers ways EPA can address the needs of communities when providing monitoring data through negotiated enforcement settlements or permits, as well as how to provide environmental data to communities that is meaningful, relevant and empowers them to improve their environmental conditions. The NEJAC also completed four letter reports that provide advice and recommendations on four emerging issues that the NEJAC believes EPA should take action on to protect our most vulnerable communities. These emerging issues include: Toxic Exposures Found at Discount Retail Stores, EPA Implementation of Worker Protection Standard Regulation, Title VI of the Civil Rights Act of 1964 Complaints with EPA, and Flint Michigan Water Crisis. Many low-income, minority, tribal and indigenous communities throughout the United States see the NEJAC as an impactful forum where they can come together to speak directly to EPA. As evidenced by the NEJAC's 20-year retrospective report, EPA has benefitted tremendously from its historical commitment to the NEJAC. In both concrete and tangible ways, the NEJAC has proven to be a critical means of maintaining a direct channel of communication with citizens and communities throughout the United States.

Environmental Justice Grants

The Office of Environmental Justice manages EPA's Environmental Justice (EJ) Grants, Funding and Technical Assistance programs, which supports overburdened communities and builds partnerships to promote environmental well-being and improve public health. Since 1994, the program has provided financial assistance to community-based organizations, local tribal organizations, and tribal governments working on projects to address environmental and/or public health concerns in underserved communities. The program offers one of two funding opportunities annually: 1) Environmental Justice Small Grants and 2) Environmental Justice Collaborative Problem-Solving Cooperative Agreements (CPS). In FY2017, EPA provided financial assistance to



36 recipients in the amount of $1.08 million for the Environmental Justice Small Grants, placing special emphasis on projects in *under-represented states* (where three or fewer EPA environmental justice grants have been awarded over the last five years), and on *newer grantees* (eligible organizations that have not received EPA environmental justice funding over the last five years). Of the 36 total projects selected, 23 will take place in underrepresented states (64%) and 35 will be implemented by newer grantees (97%).

EPA has awarded environmental justice grants to more than 1,400 community-based organizations since 1994. In FY2017, the more than 50 organizations awarded environmental justice funding in 2015 and 2016 have made considerable progress on improving the conditions of their community. Environmental Justice Small Grant funds supported the Choctaw Nation of Oklahoma's (Nation) "Project Oka," which focused on maintaining clean sources of water through recycling support, litter mitigation, and educational activities to school children, elder groups, and civic groups. With $29,947 in environmental justice grant funding, the Nation: (1) partnered with schools, community centers, and local organizations to collect 12,100 pounds of electronics and 1,894 tires for recycling; (2) created a disaster recovery plan to address concerns including disaster preparedness, debris management, recycling and adaptation strategies; and (3) engaged 433 students in educational programming on school grounds and at lakes in the area.

For brief descriptions of past and present EPA environmental justice grant recipients, please visit: EJ Grants

EPA's Environmental Justice CPS grants are awarded every two years, with the projects awarded in 2014 closing in the first quarter of FY2017. Groundwork New Orleans (GWNO) is an organization that utilized their recent CPS funding for stormwater management, community engagement, education, and beautification work to improve the environment and quality of life of residents in underserved neighborhoods in New Orleans, Louisiana. Through this EJ Cooperative Agreement, GWNO developed partnerships with the Louisiana State University Agriculture Department, city officials, multiple nonprofits, and two local schools, engaging approximately 200 residents through 12 workshops. The workshops covered multiple environmental concerns, including stormwater management, rain barrel development, healthy soils, and community mapping. Additionally, GWNO developed an engaging environmental stewardship curriculum for students that incorporated environmental justice lessons along with the importance of community involvement and problem-solving. More than 100 volunteers joined four community gatherings and two community clean ups resulting in the planting of over 150 trees and 400 plants. More importantly, GWNO was able to utilize the EJ Collaborative Problem-Solving Model to develop critical relationships that will allow them to continue to address local environmental and public health impacts into the future.

"GWNO's curriculum development… has advanced our education model and enabled us to engage a wide range of educators, community leaders, and schools… The students took field trips, engaged with professionals in different career fields and presented their knowledge to adults and professionals in different settings." - Alicia Neal (Executive Director, GWNO)

Technical Assistance Services for Communities

Technical assistance, training and environmental education are often needed to build the capacity of a community to better understand the science, regulations and policies of environmental issues and EPA actions. Through an EPA contract in the Office of Environmental Justice, the Technical Assistance Services for Communities (TASC) program provides this independent assistance to communities through scientists, engineers and other professionals who explain technical findings

to a community and answer their questions. TASC-supported efforts assist communities in working with government agencies and other stakeholders and in participating meaningfully in environmental decision-making processes. These services are provided in response to a community's request – at no cost to the community – and are determined on a project-specific basis.

In FY2017, EPA provided technical assistance to a number of overburdened communities, including neighborhoods in North Central Massachusetts; Minneapolis, Minnesota; Camden, New Jersey; Mebane, North Carolina; Shell Bluff (and nearby communities), Georgia; Hidalgo County, Texas; St. Louis, Missouri; The Dalles, Corvallis and Portland, Oregon; and Providence, Rhode Island. In collaboration with communities, TASC conducted community trainings on making effective public comments on environmental issues (e.g., air monitoring regulations and proposed plans for Superfund site cleanup), community education on technical issues (e.g., stormwater management, vacant property development and feasibility studies), and a technical needs assessment and plan development. In Region 2, TASC funded a collaboration between the Coopers Ferry Partnership, Camden Collaborative Initiative and PowerCorps Camden to develop instructional videos in both English and Spanish for an online application created by the Coopers Ferry Partnership that allows residents to anonymously report illegal dumping and flooding in real time. This collaboration promoted community involvement, empowerment and environmental protection in Camden, New Jersey.

Urban Waters

EPA's Urban Waters Program makes environmental justice a priority by reconnecting communities, particularly those that are overburdened or economically distressed, with their waterways by improving coordination among federal agencies and collaborating with community-led revitalization efforts. EPA connects with underserved communities through the 15-agency Urban Waters Federal Partnership (UWFP), which has active projects in 19 designated locations. These locations demonstrate a sustainable model that is transferable to any location with an urban water. The Urban Waters Learning Network is the innovative sharing network for exchanging knowledge among Urban Waters practitioners. In 2017, the Federal Partnership's efforts to engage communities across the country were recognized by the nonprofit, nonpartisan Partnership for Public Service with the People's Choice Award Service to America Medal.

Approximately 83% of all Five Star and Urban Waters Restoration Grants fully or partially funded by EPA in FY2017 were awarded to projects planned in underserved communities.

EPA also provides assistance to communities through a direct Urban Waters Small Grants program, and co-sponsors the Five Star and Urban Waters Restoration Grants Program through the National Fish and Wildlife Foundation (NFWF), which gives priority to projects that advance water quality goals in communities with environmental justice concerns. In 2017, NFWF awarded 65 grants totaling $2.5 million to restore wildlife habitat and urban waters. Grantees have committed an additional $5.2 million in local project support, generating a total conservation investment of more than $7.6 million.

In FY2017, the Martin Pena Channel UWFP in Puerto Rico involved youth and adults in pollution prevention education. Community members from one of the poorest and most environmentally overburdened communities in San Juan learned about, designed, and planted an urban farm within their community. This farm is also an example of a green infrastructure project funded through a Small Grant in an Urban Waters Federal Partnership location. Key partners in this location, Corporación del

Proyecto ENLACE del Caño Martín Peña, and the Caño Martín Peña Community Land Trust Board, worked with the government of the Commonwealth of Puerto Rico to share new approaches, such as green infrastructure, to help meet water quality goals. These efforts will help ensure that the revitalization of the channel and the resulting water quality improvement does not lead to residents being priced or pushed out of their homes. These partnerships and tools are now being applied to Hurricane Maria recovery efforts as well, proving that healthy partnerships are worth cultivating well before they are needed.

Office of Sustainable Communities

EPA's Office of Sustainable Communities (OSC) supports locally led, community driven solutions to environmental and economic development challenges through our convening capabilities, tools and technical assistance. In FY2017, OSC and partners delivered technical assistance to more than 45 communities. OSC partners with government, community-based organizations, and the private sector to help communities develop action plans and identify strategies to support reinvestment and reuse of existing community assets (brownfields, open space, main streets, etc.) and infrastructure (water, sewer, road) in ways that support inclusive economic growth, and protect environmental quality. To accomplish this work, OSC collaborates with other EPA programs, federal agencies, regional, state, and local governments, and a broad array of nongovernmental and private-sector partners to bring additional resources to communities to meet environmental, economic and infrastructure challenges, and to promote equitable development. Assistance is provided at the community's request on issues, such as cleanup and reuse of abandoned and underused properties; diversifying economies through food systems, broadband infrastructure, light manufacturing, and health care institutions; disaster recovery and resilience, and "green and complete street" designs.

In FY2017, OSC and partners delivered technical assistance to more than 45 communities.

Through Local Foods, Local Places, an interagency program in which EPA is the lead coordinator, OSC focused on helping community stakeholders reimagine a future use for the former Paradise Inn, a beloved but now abandoned anchor of the city's Fayette area - an African-American neighborhood in Martinsville, Virginia, isolated from downtown by a busy state road. Through community engagement and guidance on implementing an action plan, in 2017, EPA and federal partners helped the community plan for a "healthy hub" that would bring together multiple food-related enterprises, such as a restaurant, community kitchen, and/or business incubator. In Miami, Florida, OSC examined policy and neighborhood-scale strategies for diversifying the economy while improving resilient infrastructure under the Building Blocks Program. In 2016, Miami had the highest income inequality in the country, compounded by poor public transportation, flood risk, and a heavy single-industry focus on tourism. EPA's efforts coupled equitable community development with Miami's ongoing resilience work with the Rockefeller Foundation *100 Resilient Cities* Program. OSC's work supports the Agency's mission by fostering outcomes in the built environment that protect environmental quality, public health and avoid disproportionate harm to disadvantaged communities.

Community revitalization efforts can take a variety of forms. A new story map, "Community Stories," shows how OSC has worked alongside state and local leaders in environmentally and economically distressed areas to help achieve their goals. Highlighted stories include efforts in Fresno, California, and Little Rock, Arizona, that helped spur downtown revitalization, collaborations with communities in Vermont's Mad River Valley and Iowa City, Iowa, to rebuild with resilience, and a partnership with residents and leaders in Williamson, West Virginia, that used

local food and health facilities to diversify the economy and increase main street investment. This new resource also includes an interactive map that provides information on the more than 400 communities that have partnered with EPA on technical assistance projects.

Equitable Development

The Office of Environmental Justice (OEJ) promotes equitable development, an approach for meeting the needs of underserved communities through policies and programs that reduce disparities while fostering places that are healthy and vibrant. Because planners, architects and preservationists have a significant role in the development of a community, the goal of these efforts is to help ensure that they are aware of sensitivities to environmental justice so that community planning is responsive to the needs of underserved populations, considers the social and cultural impacts of actions as required by the National Environmental Policy Act, and advances community-driven solutions that are effective and environmentally-friendly. In FY2017, OEJ helped raise awareness of equitable development through outreach, education, and partnership development, including with professional associations.

Professional associations, such as the American Planning Association (APA), National Trust for Historic Preservation, and the U.S. Green Building Council, look to EPA for expertise on equitable development. In response to wanting to learn more about the successful outcomes of environmental justice projects, OEJ published multiple postings and memos that were shared with the association's national audiences. This effort included a Planning Advisory Service Memo that communicated the necessity and benefits of equitable development, including case studies and resources, with 40,000 APA members. Also, OEJ's work on equitable development was cited in the California Environmental Justice Alliance's Tool-Kit to promote the implementation of the state's Senate Bill 1000. The law requires jurisdictions in California to address environmental justice in their general plans, either by creating an environmental justice element or integrating environmental justice goals, policies and objectives throughout their general plans' various elements. These actions send clear signals that environmental justice should be integrated as normal practice in the day-to-day work of planners, architects, designers, builders, and public administrators. Raising awareness of equitable development in the context of planning is a significant, proactive and comprehensive way to help raise the overall awareness of environmental justice concerns for overburdened communities.

National Environmental Justice Hotline

Developed by EPA's Office of Environmental Justice, *The National Environmental Justice Hotline Process and Protocol* (Hotline) is a system designed to offer citizens an accessible way to inform the Agency of environmental and public health concerns. *The Hotline* serves as a mechanism to promote the fair treatment and meaningful involvement of citizens who experience or have the potential to experience adverse environmental and public health impacts in their communities through a nationally centralized process. In FY2017, the Hotline achieved a 98% ticket closure rate for the 925 inquiries received. It was recognized with EPA's *Exemplary Customer Service Award* for lifting up the concerns of citizens across the United States by ensuring that their voices are heard and answered. It has also received a nomination for national recognition by EPA for the protocol's collaborative efforts across all of the Agency's regions and programs. The national Hotline has led EPA's regions to look into developing their own systems. For instance, Region 4 developed a process that involves collaboration across the Region and with state partners to more effectively respond to community issues and citizen inquiries, leading to improved joint resolution and positive results. Their *Environmental*

In FY2017, the Hotline achieved a 98% ticket closure rate for the 925 inquiries received.

Justice Complaint Lean Rapid Project Team received the Region 4 *Bronze Metal Award* for its effort in developing these procedures.

TRAINING

Empowering Government Partners and Communities to Achieve Better Environmental and Health Outcomes

- **Region 5 Collaborative Efforts to Eliminate Childhood Lead Exposure** - Region 5 is working to empower state and local governments and community leaders with information and tools in support of our shared goal of eliminating childhood lead exposure. In FY2017, Region 5's Children's Health and Environmental Justice programs hosted an all-day Lead Workshop for Communities to share the range of tools, strategies, and resources available to help eliminate lead poisoning with approximately 80 community leaders from every state in the Region. EPA's Children's Health Program (CHP) provided four healthy homes train-the-trainer training sessions to approximately 110 educational, social, health and housing services providers in Flint, Michigan. In collaboration with state and local partners, CHP also created "podcast webinars" that covered children's health and lead sources.

- **Region 8 Northeast Denver Lead-based Paint Place-based Initiative** - Region 8, in collaboration with the Colorado Department of Public Health and Environment and the city and county of Denver, continues to increase awareness of and compliance with the Toxic Substances Control Act Lead Renovation, Repair and Painting Rule in six Northeast Denver neighborhoods. Through the Initiative, almost 90 renovators and building code inspectors have received free Lead-safe Renovator training and became lead-safe certified to provide lead-safe renovations; lead-safe requirements were incorporated into Colorado child care licensing regulations and Denver building code and permitting operations; 52 compliance inspections were conducted; and 30 enforcement actions were taken.

In FY2017, Region 5's Children's Health and Environmental Justice programs hosted an all-day Lead Workshop for Communities to share the range of tools, strategies, and resources available to help eliminate lead poisoning with approximately 80 community leaders from every state in the Region.

Empowering Communities, Tribes and Indigenous Peoples to Enhance Meaningful Engagement

- **Region 10 Beacon Hill Environmental Health Collaboration** - The Region 10 Environmental Justice Program is partnering with the community group, El Centro de la Raza, to implement the *Beacon Hill Environmental Health Collaboration,* a two-year EPA Collaborative Problem Solving Cooperative Agreement that involves multiple levels of government, community-based organizations, university expertise, and federal agencies to address health impacts regarding air quality and noise in Seattle's Beacon Hill neighborhood. Located in close proximity to high traffic roadways and airports, residents experience high rates of cardiovascular, respiratory and other illnesses, as well as elevated rates of childhood asthma hospitalizations.

  The project aims to empower residents through educational outreach, engagement, and capacity building in a cross-culturally and linguistically-competent manner to engage the racially and linguistically diverse, recent immigrant, and low-income populations. Over 300 community members were informed of the health impacts and sources of air and noise quality issues, and provided an opportunity to generate ideas for both civic and governmental action steps. This collaboration also established a Steering Committee comprised of environmental justice and service providing community-based

organizations, and a Technical Panel with members from the University of Washington, King County Public Health, Puget Sound Clean Air Agency and others. They will help ensure a degree of environmental justice integration, technical expertise and local community knowledge to mobilize and focus resources on actions selected by the community. In the next year, there will be the opportunity to deepen interactions with the Port of Seattle, along with local, regional agencies and federal agencies, such as the EJ Interagency Working Group and the Federal Aviation Administration.

- **Networking Across Agencies to Highlight Environmental Justice Grantee Successes** - Region 9 led a collaborative planning effort to design a networking session for the environmental justice and community grantees of the Region, CalEPA and the Bay Area Air Quality Management District in October 2017. The planning team also included EJ grantees from the three agencies. Successes were highlighted over the course of two days for almost a hundred participants. A thoughtful critique and recommendations for stronger environmental justice grant programs from University of Colorado at Boulder's Dr. Jill Lindsay Harrison and Green Action for Health and Environmental Justice's Brian Butler kicked off the workshop. Tracks on citizen science, environmental education and innovative financing demonstrated the impressive accomplishments of environmental justice and community-based organizations. A workshop highlight was a tour of West Oakland, led by Margaret Gordon of the West Oakland Environmental Indicators Project.

- **Training for Tribes and Indigenous Peoples** - Several EPA regions held trainings on the EPA Policy on Environmental Justice for Working with Federally Recognized Tribes and Indigenous Peoples and EJSCREEN throughout 2017. Trainings were predominantly held during the annual or semi-annual meetings with tribal environmental professionals, and at the annual EPA Tribal Lands and Environment Forum, which focused on the "benefits of meaningful public engagement" in tribal environmental programs. To expand accessibility, a national training webinar was held in October 2017 for over 180 individuals representing tribal community-based organizations, tribal environmental staff, universities, and federal agencies.

Empowering Communities to Obtain and Leverage Resources

- **Environmental Justice Academy (EJ Academy)** - The Environmental Justice Academy in Region 4 is a 9-month training program that helps build the capacity for community leaders to better address a community's public health and environmental challenges. Thirty-six graduates from the FY2016 and FY2017 classes represented 32 communities and were empowered to help achieve significant benefits for their community. These include working with a local utilities company, who agreed to locate and replace over 10,000 lead water lines; receiving $4.2 million dollars in mitigation funds from the Palmetto Railway; and obtaining a $460,000 commitment from developers to build a community center and create 140 jobs. Additional graduate achievements include being selected to participate in EPA's Brownfields to Healthfields efforts and the Institute for Georgia Environmental Leadership, as well as being hired as an executive director of a nonprofit organization. Graduates have also been featured in articles, blogs, on National Public Radio and as presenters at national

The Environmental Justice Academy in Region 4 is a 9-month training program that helps build the capacity for community leaders to better address a community's public health and environmental challenges.

and international conferences. The EJ Academy uses EPA's Collaborative Problem-Solving Model to create a shared vision and drive community revitalization among community-based organizations, local government, small businesses, academic institutions and industry.

- **Grant Writing and Capacity Building Workshop** - Close to 150 participants from federal, state, local governments, non-governmental organizations, academia as well as residents attended Region 7's Grant Writing and Capacity Building Workshop in Kansas City, Missouri. This workshop covered the grant application process, along with environmental justice tools, best practices and approaches to increase the capacity of inexperienced and non-traditional organizations to seek, obtain, and manage grants more successfully and to improve the quality of grant project outputs and outcomes. Producing the workshop was a team effort that included partnering with EPA's Brownfields Programs, state Brownfields Programs and the Kansas State University Technical Assistance to Brownfields Program.

Environmental Justice and International Affairs

The Office of Environmental Justice's (OEJ) has two roles in international affairs. First, EPA supports the domestic implementation of international human rights agreements, which includes addressing the environmental and public health concerns raised within this context. In light of the Agency's support for these efforts, OEJ has played a more active role in international affairs in the past four years. Secondly, more countries are seeking to identify appropriate mechanisms for addressing the environmental and public health concerns of vulnerable communities within their respective countries. With that in mind, they are reaching out to EPA to learn from our experiences and expertise to help guide the development and implementation of their own environmental justice programs. In FY2017, EPA engaged in the following international activities to help address the environmental and public health issues of vulnerable communities:

- To fulfill obligations under the International Convention on the Elimination of All Forms of Racial Discrimination, all member countries are required to submit a report and participate in reviews conducted by the United Nations (UN). OEJ worked with EPA's Office of International and Tribal Affairs (OITA) to develop the environmental and public health sections of this report, which focused on the issues raised by the UN and acknowledged by the U.S. in 2014.
- OEJ worked with OITA to coordinate EPA's participation in the 2017 Permanent Forum on Indigenous Issues, which focused on the 10th anniversary of issuing the UN Declaration on the Rights of Indigenous Peoples. Agency staff participated in multi-state meetings to discuss EPA's work to effectively collaborate and coordinate with federally recognized tribes and indigenous peoples to address their environmental and public health concerns.
- The South Korean environmental department invited OEJ to participate in their Environmental Performance Review under their Organization of Economic Cooperation and Development (OECD). Since one of the focuses of the review was to effectively address environmental justice, OEJ provided comments on their draft report and was invited to participate via videoconference for the "in-person" OECD meeting to discuss the outcomes of the review with the South Korean government officials.
- The Chinese environmental department contacted various stakeholders, including EPA, to inquire about a visit to the U.S. to discuss our experiences with addressing the concerns of vulnerable communities in the siting of waste facilities and related issues. A date for the visit has not been set.

CONCLUSION: LOOKING FORWARD

EPA works on environmental justice to help overburdened communities become healthier, cleaner and more prosperous places to live, work, play and learn. The examples highlighted in this report illustrate how EPA is working to meet the needs of our most vulnerable communities to address disproportionate environmental impacts, health disparities, and economic distress. EPA is partnering with states, tribes, local governments and other federal agencies to provide all Americans with clean water, air and land. EPA is continuing to innovate and integrate environmental justice into our programs. EPA is engaging communities, conducting educational outreach and trainings, and building collective capacity to empower communities to help address environmental justice issues. Looking forward, EPA will continue to deepen and strengthen its commitment to support communities and protect the health and environment of all Americans.

240-R1-8001