

CLEANER AIR CLEANER COMMUNITIES

6 Steps to Develop Environmentally Just State Implementation Plans



Environmental Justice
Leadership Forum

CLIMATE CHANGE

MISSION STATEMENT

The EJ Leadership Forum on Climate Change works to advance climate justice and impact policy to ensure the protection and promotion of indigenous communities, communities of color and low income throughout the United States.



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Metro St. Louis Coalition for Inclusion and Equity/Missouri

Environmental Justice Leadership Forum on Climate Change

PRINCIPLES OF CLIMATE JUSTICE

1. Establish a zero carbon economy and achieve this by limiting and reducing greenhouse gas emissions in accordance with the levels advocated by the scientific community (25% by 2020 and 80% by 2050) through mechanisms that are controlled by the public sector, generate revenue, are transparent, easily understandable by all, can be set-up quickly and have a track record of improving environmental quality;
2. Protect all of America's people - regardless of race, gender, nationality, or socioeconomic status - and their communities equally from the environmental, health and social impacts of climate change. Ensure that any solutions implemented to respond to or mitigate climate change do not violate human or environmental rights;
3. Ensure that carbon reduction strategies do not negatively impact public health and do not further exacerbate existing health disparities among communities. This includes crafting strategies that prevent the creation of pollution hotspots, eliminate existing emissions hotspots in vulnerable communities, and reduce the emissions of greenhouse gas co-pollutants in and near communities-of-color, Indigenous, and low-income communities;
4. Require those most responsible for creating the impacts that arise from climate change to bear the proportionate cost of responding to the resulting economic, social and environmental crisis. In setting the proportionate cost of climate impacting activity, the full environmental, health, social and economic cost of energy use from extraction to disposal must be included to accurately reflect the cost that energy use has on our environment, our health and our communities;
5. Develop a national goal supported by legislatively dedicated resources to transition us from the fossil fuel economy to the green, clean renewable energy economy by 2020;
6. Position the public sector to be a catalyst for change in the transition to the green, clean renewable energy economy by dedicating some of the revenues generated by carbon reduction strategies to support green clean renewable energy initiatives;
7. Create the opportunity for all Americans, especially people-of-color, Indigenous Peoples and low-income Americans, to experience a just transition as well as participate in the creation and operation of a new green economy by creating a workforce development program to grow living-wage, clean, safe, green jobs in the energy sector and beyond;
8. Provide an economic and social safety net for low-income, people-of-color, Indigenous Peoples and those vulnerable in the middle-income from the structural adjustments in the economy as we transition from the pollution generating fossil fuel economy to the green, clean and renewable economy;
9. Ensure that the green economy has enough jobs for those who need to be retrained and those who historically have been chronically underemployed, unemployed and/or excluded from unions; and
10. Ensure that people-of-color, Indigenous Peoples and low-income communities, who are and continue to be disproportionately impacted by climate change, have the inalienable right to have our voices shape what is the most significant policy debate of the 21st Century.

The Environmental Justice Leadership Forum on Climate Change believes that climate change policies that incorporate these principles are the way forward for the United States of America to restore our credibility nationally and globally on the issue of climate change while preserving the livelihood, health and safety of all Americans.

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Background

This guidance document was developed by the Environmental Justice Leadership Forum on Climate Change (EJLF) to provide state agencies, local governments and community-based organizations with a step-by-step process, tools and case studies to integrate environmental justice considerations into Clean Air Act State Implementation Plans (SIPs). This tool complements the *Environmental Justice State Guidance: How To Incorporate Equity & Justice Into Your State Clean Power Planning Approach*. The toolkit was informed by interviews with EJLF member organizations and research on existing SIPs, environmental justice tools and best practices.

The inspiration for this toolkit grew out of the extensive community engagement process U.S. Environmental Protection Agency (EPA) used to develop the Clean Power Plan (CPP) and the CPP requirements to include environmental justice considerations. Despite setbacks in CPP adoption, power plants remain the largest stationary source of greenhouse gas (GHG) emissions and sulfur dioxide, nitrogen oxides, particulates, and hazardous air pollutants. The Clean Air Act requires that emissions from these sources be reduced through SIP development and implementation.

What is a Clean Air Act SIP?

The Clean Air Act SIP is a federally-required plan under Section 109 of the Clean Air Act that describes how each state will reduce criteria air pollutants to meet the National Ambient Air Quality Standards (NAAQS). The six NAAQS criteria pollutants include nitrogen oxides (NO_x), sulfur dioxide (SO₂), carbon monoxide (CO), ozone (O₃), lead, and particulate matter (PM₁₀ and PM_{2.5}). National air quality standards are maximum allowable levels of pollution established by EPA to protect public health and welfare. The SIP is a living document which can be revised by each state as necessary to address the unique air pollution problems in their state.

EPA reviews and approves the SIP to ensure states are in compliance with the Clean Air Act. When a state is not in compliance or has not completed a SIP, EPA has the authority to intervene and develop a Federal Implementation Plan. EPA has done this for a number of issues such as preventing significant deterioration of air quality from new facilities. EPA encourages agency staff to engage the public for input before a plan is developed.

The SIP provides a consistent opportunity for communities to engage in clean air policy. Additionally, citizens can have a role in enforcement. Once approved by EPA, state regulations under the SIP become federal law in that state. The Clean Air Act's citizen suit provision allows any person to file suit in federal court if the regulations are violated or not properly enforced.



Cholla Power Plant in Arizona (Magnus Manske) (Source: commons.wikimedia.org/wiki/File:Cholla_power_plant.jpg)

Environmental Justice in SIPs

What goes into a SIP?

- Standards for air emissions, existing (ambient) air quality, movement of air pollution across local or state boundaries and impacts on visibility.
- Results from air quality monitoring, analysis of trends in emissions, modeling that predicts air quality conditions before and after implementation of the SIP and potential impacts on human and ecosystem health.
- Strategies to reduce emissions, including development of attainment demonstrations, showing that pollution control strategies can meet air quality standards.
- Enforcement mechanisms and regulations.
- Progress towards meeting emissions standards.

Why is air pollution an environmental justice issue?

Over the past three decades, mounting evidence has suggested that people of color and low-income communities in the U.S. are more likely to live closer to sources of pollution. As a result, these communities often experience negative health outcomes such as higher levels of asthma and heart disease. African American, Asian-American and Latino communities have some of the highest rates of asthma, and African Americans are three times more likely to die from asthma-related causes than the white population. Recent work has found that ongoing residential racial segregation in rural, suburban and urban communities contributes to



(Source: commons.wikimedia.org/wiki/File:Nice_sweet_children_playing_in_sand.jpg)

exposure to higher particulate matter levels. African American and Latinos are, on average, are more likely to be exposed to higher levels of nitrogen oxide and particulate matter than whites. For instance, nitrogen oxide concentrations, a byproduct found in vehicle exhaust and fossil fuel-fired power plants, are 38% higher for communities with people of color than for white people. Reducing nitrogen oxide exposure for people of color to the same levels experienced by white people would reduce heart disease mortality by about 7,000 deaths per year. Addressing these disparities is critical for achieving social and health equity in the country's most vulnerable communities.

Environmental Justice in EPA's Particulate Matter (PM) 2.5 Rule

Particulate matter (PM) or soot, is emitted into the air from diesel or gas engines and when air pollutants like nitrogen oxides and sulfur dioxides combine. Human health effects associated with long or short-term exposure to PM include premature mortality (death), respiratory and cardiovascular disease. In the recent PM 2.5 Rule that outlines SIP criteria, EPA encourages the following activities to address environmental justice concerns:

- Map the relationship of environmental justice communities to sources of air pollution.
- Identify and address hotspots and unmonitored areas in overburdened communities.
- Integrate environmental justice impacts in alternatives analysis.
- Evaluate control technologies for benefits or impacts to affected communities.
- Conduct meaningful community engagement with affected communities.

SIPs require collaboration between neighboring states and stakeholders

EPA prohibits one state from permitting air pollution that will affect the ability of a neighboring state to meet Clean Air Act standards. A state must show that new or modified sources of air pollution do not affect air quality in neighboring states. Like watersheds, airsheds show the direction and how far pollutants will travel based on wind speed, topography such as mountains, and the amount and type of pollutant.

Due to the cross-state movement of pollutants, agencies, community organizations and other stakeholders could form coalitions and coordinate across state lines to ensure the SIPs work in concert to attain air quality standards in the region. Multi-state airsheds are important when considering the life cycle impacts of fossil fuel extraction, transport, combustion and waste product disposal.



Potential movement of air pollution across multiple states.
(Source: Chesapeake Bay Program. www.chesapeakebay.net/maps/map/chesapeake_bay_airshed)

Multipollutant Analysis: A win-win for state agencies and local communities

Many of the six criteria pollutants regulated under the Clean Air Act come from similar sources. States may find a multipollutant analysis can be a more efficient compliance method. EPA states in the PM 2.5 SIP Rule that it is more "efficient for states to develop integrated control strategies that address multiple pollutants rather than separate strategies for individual air quality programs".

Maryland proposed a multi-pollutant framework to take advantage of co-benefits of reducing co-pollutants along with greenhouse gas reductions. Co-pollutants include nitrogen oxides, sulfur dioxides, ozone, fine particulates and mercury. Since a third of the nitrogen polluting the Chesapeake Bay comes from cars and trucks, power plants and industry, the health of the Bay also depends on co-benefits from reduced carbon emissions.

Maryland's framework is part of a regional approach through the Northeast States for Coordinated Air Use Management (NESCAUM). A key program is the state's Healthy Air Act and the Regional Greenhouse Gas Initiative. As a result of these efforts, Maryland's Department of the Environment stated that Maryland was in attainment with criteria air pollutant standards in 2016 after nitrogen oxide emissions were reduced by 70 percent, sulfur dioxides by 80 percent and mercury by 80 percent.



Sparrow's Point in Baltimore (Source: IAN-UMCES)

Six Steps to Develop Environmentally Just SIPs

Integrating Environmental Justice into the SIP development process

The diagram on the right outlines six steps to develop environmentally just SIPs. Although the steps are outlined in a specific order, the process is dynamic and iterative. Some agencies may be farther along than others and some may want to revisit a step that needs more attention. The steps include:

Step 1. Assess Social and Environmental Disparities

Step 2: Structure Meaningful Community Engagement

Step 3: Identify Community Needs

Step 4: Evaluate Community Impacts and Benefits

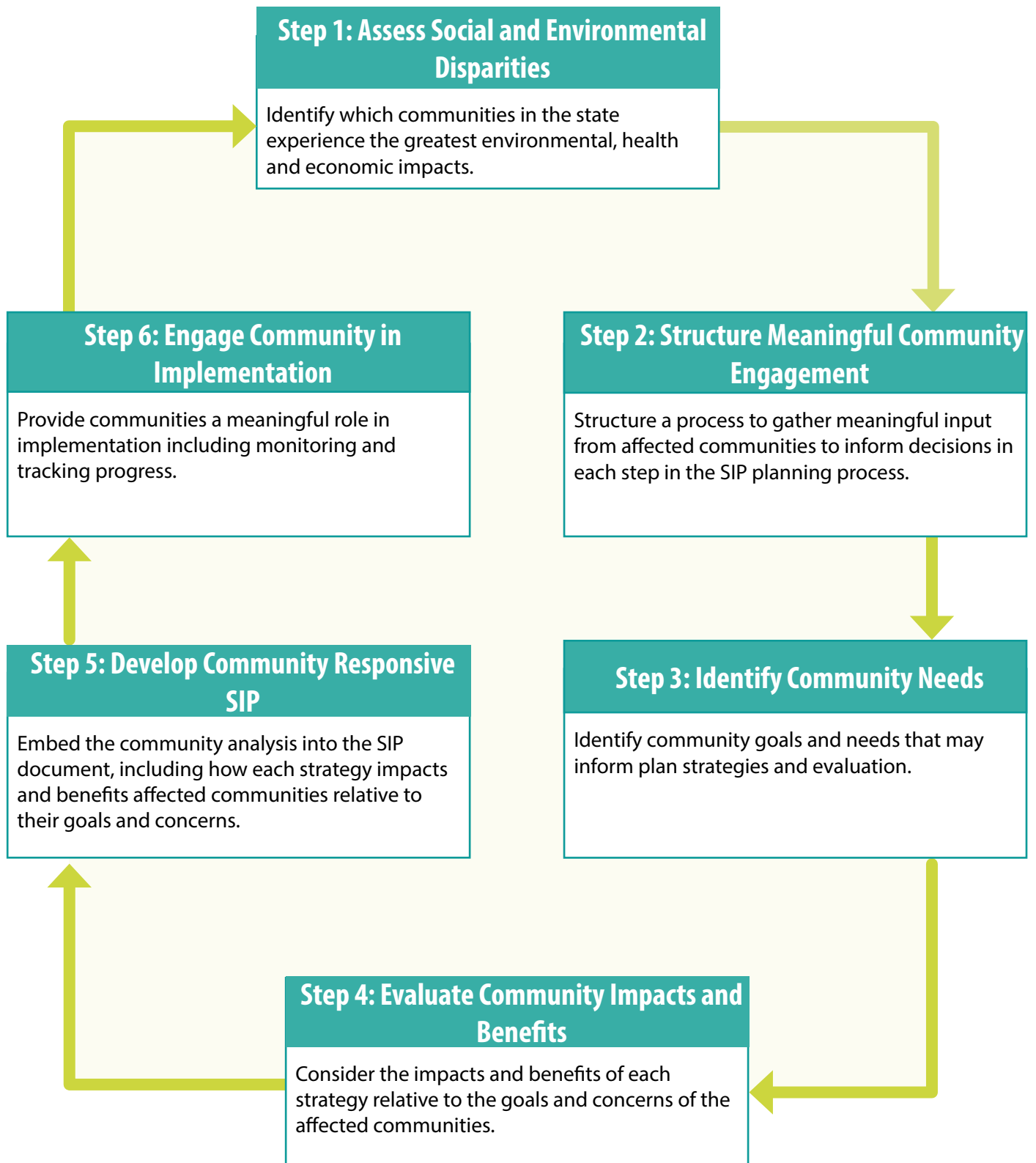
Step 5. Develop Community Responsive SIP

Step 6. Engage Community in Implementation



The following assessment can be used to determine which steps may be most useful to the state agency at this time.

Step	Assessment	Mark "yes," "no" or "in part"
1	Does your agency know which communities are most affected by air pollution?	
2	Does your agency have an iterative and inclusive stakeholder engagement process to integrate community feedback into the SIP?	
3	Has your agency identified community needs related to air pollution and reduction strategies (e.g. improving health outcomes and job creation)?	
4	Has your agency evaluated the community benefits and impacts of pollution reduction strategies in the SIP?	
5	Does your SIP and subsequent policies, guidance and regulations benefit the most impacted communities?	
6	Does your SIP implementation approach allow communities to participate collaboratively in compliance, enforcement, guidance development, monitoring and tracking progress?	



Step 1: Assess Social and Environmental Disparities

Evaluating Disparities

Disparity refers to an unequal distribution in pollution across communities, so that some communities are subjected to a much greater or inequitable amount of contaminants and resulting health impacts. A baseline understanding of community vulnerabilities is needed to develop effective pollution control strategies, create regulations and invest resources in places of most need. Types of tools include mapping tools, regional airshed analyses and Life Cycle Analyses for specific sources. EPA guidance generally recommends looking at a one mile radius around a source to understand potential impacts of emissions on communities. However, if the one mile radius indicates emissions impacts go beyond that point, the radius could be expanded. Proximity is just one factor in understanding air quality impacts in a community.

An evaluation of the impacts of facility air pollution on people could include cumulative impacts of multiple environmental hazards, the life cycle of the source, where people live, go to school, work and play. Often those with the greatest social inequities live closest to these facilities and may have less access to services, technical assistance and may experience language barriers.

The evaluation can also consider how benefits of the SIP might affect the community. For example, funding to support renewable energy and energy efficiency programs as part of the SIP has the potential to benefit environmental justice communities with clean jobs and lower energy costs. The SIP is a place to prioritize green energy job development to benefit residents from the communities who have borne the highest burden of air pollution exposure. The checklist to the right outlines additional factors to consider during an impact analysis.



Air pollution affects respiratory health.

Factors to consider during impact and disparity analysis

Proximity

- Facility emissions and status
- Fossil fuel extraction, transport and waste facilities
- Cumulative impacts
- Cultural, historic and religious places
- Homes, schools and parks
- Outdoor workers

Health Impacts

- Health Impact Assessment
- Exposure analysis (Community and Individual)
- Medically underserved
- Medically sensitive
- Respiratory disease
- Heart disease

Economics

- Workforce transition
- Energy cost burdens
- Distribution of state funding
- Life cycle analysis

Social

- Education level
- Language barriers
- Poverty and unemployment
- Race
- Age
- Gender

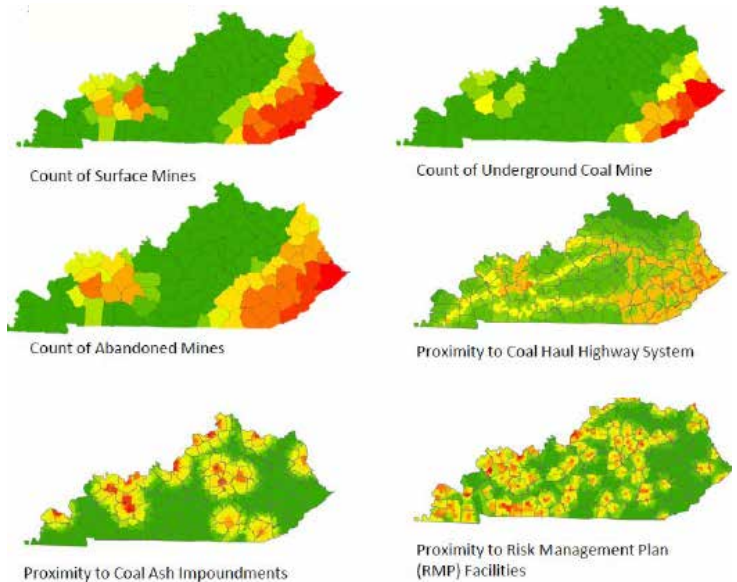
Evaluation Options

State agencies and community groups can develop partnerships with universities, environmental organizations, or consulting firms to collect and evaluate scientifically defensible data. A Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) can ensure agreements are in place to share ownership, data and results among partners and the public. The text boxes on this page share two approaches that can be used to understand the broader impacts of energy use and air pollution on communities.

Mapping the impacts of coal power plants in Kentucky

Kentuckians for the Commonwealth partnered with consultants to develop a comprehensive set of maps of demographics, cumulative pollution exposure, exposure-related health issues and power plant status. This foundation informed the development of Empower Kentucky, a people's plan to help the state transition to clean energy while supporting jobs and improved health outcomes. www.empowerkentucky.org

(Source: Kentuckians For The Commonwealth)



Life Cycle Assessment

A life cycle assessment estimates the environmental impact of an energy source or chemical from cradle to grave. A life cycle analysis of coal for instance would not just look at the amount of particulate matter released from burning coal, but would include the amount of particulate matter released during coal mining, transportation and disposal as well. Key factors to consider in a life cycle assessment of emissions for power plants include the following:

- Raw materials
 - Extraction
 - Materials used to construct the facility
 - Construction of the facility
 - Processing and transportation
- Facility operations
 - Maintenance, combustion and cycling of startup and shut down
- Disposal and Decommissioning
 - Transport and disposal of waste
 - Dismantling a facility



(Source: tk.wikipedia.org/wiki/Fa%C3%BDI:Strip_coal_mining.jpg)

Step 2: Structure Meaningful Community Engagement

Public input and SIP development

This step focuses on assessing your agency's community engagement policies, plans and relationships with stakeholders. Public input is an important and essential component of the SIP. Clean Air Act SIPs are required to include a public hearing, but only if a request is made by the public. Agencies must then respond to significant comments and any new data presented during the public comment period before finalizing the SIP.

In addition to public participation, National Environmental Policy Act (NEPA) and Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) require agencies to consider impacts to nearby communities, and Executive Order 13175 (Consultation and Coordination with Indian Tribal Governments) requires agencies to consult with tribes on all actions that could impact the tribal community.

Effective stakeholder engagement can improve community/government relations, increase support for SIPs and provide the community and agency an opportunity to leverage resources. Community engagement as a potential risk management strategy can help avoid losses from regulatory delays and litigation due to non-compliance, community opposition and negative public relations.

Broaden stakeholder outreach

A robust community engagement process will include a meaningful role for the full range of potential stakeholders. The following list provides a starting place to see where the state can expand public outreach during the SIP process.

Community Groups and Service Organizations: organizations working with impacted communities to support local community concerns and goals. Examples include health care providers, family support groups, cultural groups, faith-based groups and outdoor clubs and sports groups.

Community Liaisons and Leaders: those with a broader view of community needs beyond a neighborhoods, but with a vested interest in affected communities. Examples include local, state and regional commissions, elected officials, foundations and tribal organizations.

Tips for inclusive and meaningful stakeholder engagement

- Support **boards or advisory committees** of affected community members with a meaningful role in all aspects of the SIP.
- Provide **technical assistance** through technical advisors and workshops to increase capacity of the community to provide public comments.
- Engage **trusted messengers** such as scientists and public health experts to bridge community concerns and regulatory requirements.
- Build **cultural competence** to equip state agency staff with a deeper understanding of the cumulative impacts of historic and existing institutional racism.
- **Expand the conversation** to include community goals such as health, economy, equity and jobs.
- **Incorporate community input** directly into your process and SIP. The Illinois Commission on Environmental Justice developed guidance for identifying and engaging vulnerable communities for the State.

Educators and Students: K-12 students and teachers, local universities, colleges (including Historically Black Colleges and Universities, tribal universities, Hispanic serving institutions and Community Colleges), P-20 (Pre-K through college) and youth-based commissions, organizations and groups.

Industry Workers: blue collar workers and families involved at facilities or engaged in fossil fuel extraction and the processing cycle. Includes workers in clean energy, utilities, manufacturing, fossil fuel extraction, transport, use and disposal.

Residents along extraction, transport, use and disposal lines. Includes residents along rails and pipelines, near coal mines or oil and gas wells, near refineries, power plants or other facilities and near hazardous waste disposal sites.

Government Stakeholders: local, regional, tribal or federal government entities with air quality, energy and community responsibilities or technical assistance resources.

Tools for effective community engagement

Examples below provide models for the public to engage more meaningfully in the process.

Collaborative Problem Solving

The Environmental Justice Collaborative Problem Solving Model (CPS) is an EPA tool that encourages stakeholders and agencies to work together using a solutions oriented framework. The CPS aims to overcome often deeply rooted environmental and social issues. The CPS includes the following seven elements, 1) Issue Identification, Community Vision, and Strategic Goal Setting, 2) Community Capacity-Building and Leadership Development, 3) Consensus Building and Dispute Resolution, 4) MultiStakeholder Partnerships and Leveraging of Resources, 5) Constructive Engagement by Relevant Stakeholders, 6) Sound Management and Implementation and 7) Evaluation, Lessons Learned, and Replication of Best Practices.



(Source: Skeo)

EPA's TASC program

EPA's Technical Assistance Services for Communities (TASC) program uses independent experts to help communities better understand the science, regulations and policies of environmental issues and EPA actions. Communities may request assistance from EPA to access the resources they need to participate as informed partners in environmental discussions, problem solving and decision-making. The results include strengthened community capacities, enhanced environmental outcomes, and new partnership and job opportunities. www.epa.gov/superfund/technical-assistance-services-communities-tasc-program



(Source: Skeo)

Local community organizing to inform policy in Kentucky

In the fall of 2015 Kentuckians For The Commonwealth (KFTC), launched Empower Kentucky to engage the public in developing a people's energy plan. The plan focuses on renewable energy and energy efficiency and is a blueprint for their state to help communities become more livable, healthier, strengthen their economies, and support a just transition for workers and communities. KFTC held "A Seat At The Table" community conversations in each congressional district to gather ideas for the Empower Kentucky plan. Stakeholders shared meals around a table, sharing stories of their experiences with their states's energy system, including coal mining stories, utility bill concerns, health concerns and hopes for access to renewable energy. The informal, facilitated event allowed stakeholders to candidly share their concerns and ideas for a statewide energy plan without passing judgement. www.empowerkentucky.



(Source: Kentuckians For The Commonwealth)

Step 3: Identify Community Needs

Community goals and concerns

Once impacted communities have been identified, Step 3 focuses on methods to engage these communities, understand their needs and how they may be incorporated into the SIP development process such as focus groups, one-on-one interviews, public tele-conferences and webinars. This step can benefit from setting up a process to gather the concerns and challenges community members experience. For each concern, it might be useful to ask community members to provide as much detail as possible. For instance, when are emissions most noticeable and how does it affect them and their neighborhood?

Once community concerns and impacts have been collected, state agencies can work with the community and partner agencies to prioritize and align their goals with the components of the SIP. For instance, is there a need for additional monitoring and if so can the community participate in the monitoring efforts?

Working with the community to create a set of shared goals creates a sense of ownership and shared commitment to implementation. When these goals are achieved, groups gain a sense of pride and accomplishment, which can strengthen trust and community-building.

Collecting feedback from the community

Explore strategies to continuously gather input and feedback from key stakeholders during the development of the SIP. This could include engaging an environmental justice task force or community advisory group. Feedback can be provided on each phase of developing the SIP as well as the outreach and engagement strategies being used by the state. Community input can be more effective if the agency staff are clear about the stage in the process and what input could help inform the next set of decisions.

Types of activities include:

- Regular informal checking-in with members via stakeholder tele-conferences.
- Scheduling a formal feedback time at the end of meetings.
- Have opportunities for written feedback, such as comment cards for people not comfortable speaking

up or where English is a second language.

- Consider the use of workshops, which give longer and more extensive ways to get more detailed feedback.

Common Community Goals and Concerns

- Noise/Traffic/Idling/Diesel emissions
- Odor
- Health impacts
- Light pollution
- Freight trains
- Additive impacts of facilities and pollution
- Public safety
- Jobs and lack of training
- Spills and explosions

Trade-offs of Cap and Trade

Cap and trade sets pollution limits per business, but allows unused capacity within each cap to be bought and sold among entities. While this system maintains a maximum pollutant level for the greater region, communities can be disproportionately impacted in the areas where businesses are buying the ability to pollute beyond their cap. Cap and trade is an example of how community input can play a valuable role in providing input that prevents disproportionate impacts on vulnerable communities.

Community concerns to be addressed in a cap and trade program may include hotspots near facilities, offsets outside of these communities, and disproportionate funding distribution from auctions.

Formalize partnerships

The case studies below highlight how structured partnerships between agencies and the community can improve relationships and leverage resources.

Identifying Violations Affecting Neighborhoods (IVAN)

IVAN is a proactive Environmental Monitoring System, similar to a neighborhood watch, used in 8 communities across California. It is intended to improve health and conditions in disadvantaged communities where residents face high levels of environmental hazards and low levels of the economic, political, and social resources needed to address them. IVAN connects the community with public agencies that have the mandate and capacity to investigate and resolve them. Residents can report concerns online and IVAN staff will document and report the complaint to relevant agencies. Monthly task force meetings are held to review the status of reported violations in a collaborative dialogue between environmental justice organizations, community residents and public agency staff at the local, state and federal level. ivanonline.org



(Source: Bay View Hunters Point IVAN)

New York partners with communities to address neighborhood pollution

The State of New York's Department of Environmental Conservation (DEC) created the ECO-Quality program to improve compliance of small and mid-sized facilities with the Clean Air Act. DEC's Environmental Conservation Officers (ECOs) work with community leaders and neighborhood residents to understand issues in environmental justice communities. As a result of these community engagement activities the ECOs follow up with sources of air pollution, such as auto repair shops and dry cleaners to provide education on compliance with the Clean Air Act. The ECOs continue to work with these facilities to assess compliance. ECOs also patrol areas with heavy diesel truck traffic and issue tickets for idling, excess smoke emissions and inadequate emissions controls. www.dec.ny.gov/public/333.html



Step 4: Evaluate Community Impacts and Benefits

Expanding evaluation criteria

Once community goals and concerns are understood, specific pollution control strategies and SIP components can be considered that align with these goals. Both qualitative and quantitative assessments can be used to understand the impacts and benefits of each strategy as it relates to community goals.

To bring pollution levels below the national standards and maintain them at healthy levels, each state considers the costs and effectiveness of various control measures. The control strategy includes implementation dates, outlines requirements facilities must undertake to reduce emissions and identifies actions the state or EPA will take if facilities are not in compliance.

Prevention is clearly the most effective approach for protecting communities. When not possible, the EPA allows for a range of approaches and technologies such as cap and trade, energy efficiency, incentives, compliance and enforcement to be used to reduce emissions. The most cost-effective way to reduce emissions is to use energy more efficiently. Most states fund energy efficiency programs or have adopted energy efficiency resource standards. Communities can offer feedback on whether these strategies would be beneficial. Universities, environmental advocacy groups, or consultants could provide an independent review of each of these components to build credibility and trust.

How much does clean energy reduce power plant emissions?

AVERT is a free tool created by the EPA to determine where and how a range of renewable energy and energy efficiency projects will reduce power plant emissions. The tool can be used to assess changes in nitrogen oxides, sulfur dioxide, and carbon dioxide within the state or at the regional level. The tool includes visual maps and tables and could be used by state agencies in working with communities, but is also designed to be used directly by the public. www.epa.gov/statelocalclimate/avoided-emissions-and-generation-tool-avert

The table below illustrates how states could expand beyond a simple cost-effective analysis and evaluate each of the potential pollution control strategies in the SIP relative to specific community goals. Examples include evaluating changes in health risk, employment and agency resources for each control measure on community assets, low income households and small, minority, woman owned or disadvantaged businesses.

This broader community benefits analysis could open a more flexible range of possibilities such as energy efficiency programs, incentives and evaluating the effectiveness of cap and trade programs to achieve targeted emissions reductions.

Pollution Reduction Strategy	Relevant community goals	Emissions reductions in focus communities	Change in health risk disparities	Change in socioeconomic conditions	Distribution of resources to focus communities
Prevention					
Technology					
Cap and Trade					
Energy Efficiency					
Incentive Based					
Compliance and Monitoring					
Enforcement					

Case studies in innovation

An integrated approach to reduce freight emissions

EPA's Smartway program is a public-private partnership with the freight industry to improve energy efficiency, reduce greenhouse gas and air pollutant emissions and improve energy security. SmartWay helps companies improve efficiency by measuring, benchmarking and streamlining freight supply chain operations. SmartWay partners have saved 6 billion gallons of fuel, lowered fuel costs by \$20.6 billion and reduced carbon emissions by over 60 million metric tons since 2004. SmartWay is developing its carbon assessment and monitoring tools to cover all modes of freight transport, including truck, train, barge, air and marine. EPA in collaboration with other experts in the scientific community plans to refine its methodologies and tools to incorporate black carbon, so that SmartWay partners can track and monitor their progress in achieving particulate reductions. www.epa.gov/smartway

EPA's "Next Generation Compliance" practices

EPA released a set of best practices in 2016 for going beyond business as usual for compliance with Clean Air Act regulations. The document highlighted six best practices: 1) clear requirements, 2) transparency, 3) electronic reporting, 4) advanced monitoring, 5) independent third-party verification and 6) innovative enforcement. Key examples of these practices include:

- The state of Oklahoma encourages permit writers to collaborate with enforcement staff to consider potential barriers to enforcement in permits.
- EPA shares data on pollution trading allowances, emissions and other facility data in an interactive database (ampd.epa.gov/ampd) to increase transparency and public awareness.
- EPA uses mobile air monitors while driving through neighborhoods to measure air pollutants and assess source emissions, exposure and develop risk management strategies. EPA's Village Green Project places solar powered air monitors in benches to monitor air where people live and play, at parks and libraries.

North Carolina Division of Air Quality's Energy Assessment Program

Energy efficiency measures are a win-win for communities, states and facilities. They can decrease operating costs at facilities, reduce multi-pollutant emissions in adjacent communities and decrease demand for energy especially during peak times. The North Carolina Division of Air Quality, North Carolina State University and Waste Reduction Partners conducted energy assessments at over 70 facilities. The group identified energy conservation measures to reduce facility energy demand that resulted in additional benefits of reduced fuel consumption, energy costs and emissions of greenhouse gas, and hazardous air pollutants. Between 2011 and 2014, the energy assessments reduced annual energy use by 15 percent, saved \$100,000 per facility and reduced emissions of sulphur dioxides by 160 tons; nitrogen oxides by 90 tons; and carbon dioxide by 54,000 tons. deq.nc.gov/about/divisions/air-quality/air-quality-planning/energy-assessments

Texas taps wind energy and energy efficiency to meet SIP goals

States are using solar energy to meet clean air requirements in SIPs. The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy provided technical assistance to use renewable energy and energy efficiency to meet SIP requirements in Texas. The state of Texas recognized that accelerating use of non-renewable energy sources helped put Texas cities at the top of lists for "dirtiest air." The state created the Texas Emissions Reduction Plan, an incentive-based program that included vehicle incentives, grants to support energy efficiency and a new energy efficiency building code. The state later added wind power to the set of strategies. EPA approved the state's use of energy efficiency as part of its air quality SIP to reduce ozone levels.

Step 5: Develop Community Responsive SIP

Integrating EJ into the SIP

Aligning community needs and air quality impacts to specific components of the SIP will help communities and agencies work better together. During the development of the SIP, EPA and/or state agencies are required to hold public hearings on the draft SIP and to consider any data presented by stakeholders before the SIP is finalized.

The table below illustrates how environmental justice components highlighted throughout this toolkit can be aligned with specific elements of the SIP. Within each SIP element is a set of actions a state could take to address disparities in environmental justice communities. As states engage communities in the SIP process, discussion outcomes may include additional opportunities that could benefit communities and meet standards more efficiently.

Recap of environmental justice steps to include in SIP

- Describe state-wide disparities and prioritized communities.
- Describe the stakeholders involved and community engagement process used.
- Describe the range of strategies considered, evaluation methods utilized and their potential impacts on vulnerable communities.
- Identify the selected strategies.
- Outline implementation roles, resources and timelines.
- Recognize local versus regional impacts.
- Understand and communicate gaps in information.

SIP Element	Potential EJ Component
Emissions Inventories	<ul style="list-style-type: none">• Inclusion of minor sources• Role of energy efficiency• Multi-pollutant analysis• Life Cycle Analysis (extraction, transport, storage and disposal)
Monitoring Network	<ul style="list-style-type: none">• Unmonitored Air Analysis• Regional Collaboration• Community-based Monitoring/Citizen Science• Mobile Monitors• Personal Monitors
Enforcement and Regulations	<ul style="list-style-type: none">• Distribution of staff and funding• Cultural competence of agency staff• Incorporation of community needs and vulnerabilities
Contingency/Emergency Plans	<ul style="list-style-type: none">• Trigger actions to protect health• Engage with existing social networks• Establish a robust emergency notification and evacuation plan

Leverage points in the compliance process

“The EPA believes that states have sufficient flexibility and discretion under the CAA in implementing their attainment strategies to focus resources on controlling those sources of emissions that directly and adversely affect low-income and other at-risk populations.”

Final PM 2.5 State Implementation Rule



Indirect source review to manage for smart growth and freight emissions

According to the Clean Air Act, an indirect source is any “facility, building, structure, installation, real property, road, or highway which attracts, or may attract, mobile sources of pollution.” In environmental justice communities, diesel trucks travelling to ports and distribution warehouses, barges and trains may be common sources of air pollution for the people in these communities. Indirect sources also include new developments and emissions from energy use, construction and cars and trucks attracted to these developments from new residents and businesses along roads and highways. Indirect sources are an optional, but important component of SIPs.

In December 2005, the San Joaquin Valley Air Pollution Control Board, in California adopted an indirect source rule (ISR). The San Joaquin Valley’s mountain ranges trap air pollutants from major interstate highways in addition to farming, rapid growth and oil and gas wells. The Board proposed an ISR after realizing it would not meet national standards for ozone and particulate matter. The ISR covers nitrogen oxides and particulate matter from residential, commercial and industrial development for ten years after the start of construction. Strategies to reduce emissions often align with smart growth principles and community goals such as improving public transit, walkability and opportunities for affordable housing. The San Joaquin Valley Air Pollution Control Board incorporated the ISR approach into the 2003 Particulate Matter and Extreme Ozone Demonstration Plan. www.valleyair.org/

Contingency and accidental release planning

Environmental justice communities are at the front line of air pollution emissions. When air quality standards are not met or an accident occurs, people living in these communities are more likely to notice the hazards and experience them as adverse health impacts. The Clean Air Act SIP process addresses these issues with requirements for contingency measures and the accidental release prevention rule. Communities play a unique role in sharing first-hand and historical knowledge about prior accidental releases, their impact on the community and the best strategies for reaching community members.

Contingency measures are additional control measures required if facilities or areas are not meeting air pollution standards. These measures are required to be in the SIP along with levels of air pollution that trigger the use of contingency measures and a timeline for implementation. The goal of the accidental release prevention and risk management plan rule is to prevent serious chemical accidents that have the potential to affect public health and the environment. Within Risk Management Plans (RMPs), facilities must identify hazardous chemicals likely to be part of a release, design and maintain the facility to prevent accidents and minimize the impacts of releases to communities. The RMP is required to include a prevention program, training for employees and procedures for notifying the public. www.epa.gov/emergency-response

Step 6: Engage Community in Implementation

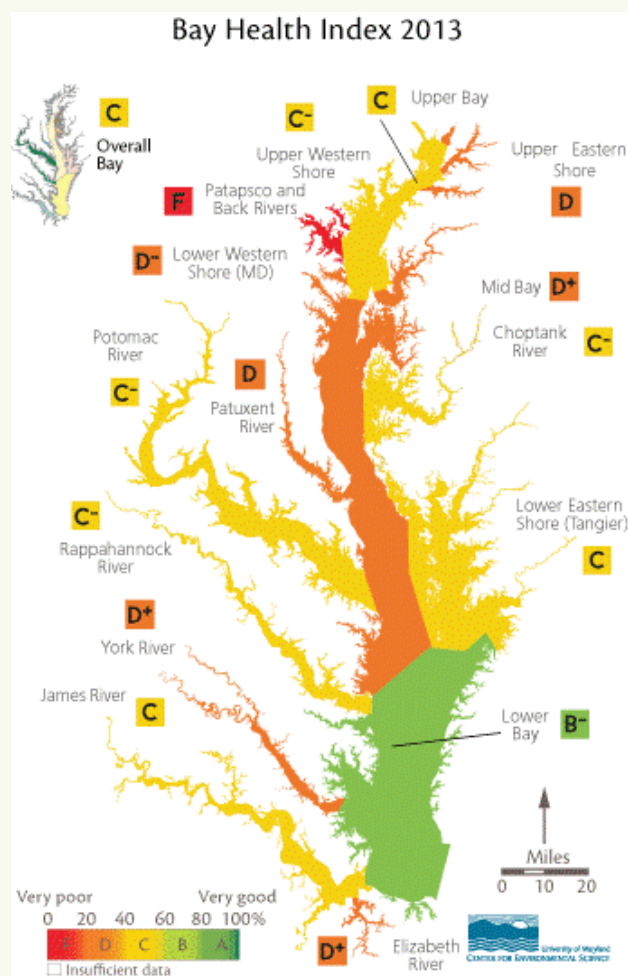
Keeping your stakeholders engaged

Once the SIP is approved by EPA, the real work begins to implement and track the status of strategies and whether they are on track to achieve the SIP goals. During this step, agencies can build on relationships and trust established during the development of the SIP to support implementation, conduct outreach, partner on grants and help monitor progress. Maintaining the momentum through ongoing collaboration will contribute to a successful clean air program. States can continue to work with the stakeholders to prioritize implementation actions and build trust by creating a consistent and transparent system for tracking progress. For instance, nationally 20 percent of permits for major sources of pollution are backlogged and only 38 percent of facilities in states have had full compliance evaluations. An engaged community can help advocate for more resources and political support to address these barriers to achieving SIP compliance.

Strategies and tools for tracking progress could be developed and decided on with the input of stakeholders. States can identify communications strategies for regular updates with stakeholders. One approach is to develop a report card that includes emissions of air pollutants, socioeconomic indicators and stakeholder engagement progress. The report card could be supported by an in-depth description of each performance metric, gaps and strategies to address deficits in meeting air pollution and community goals. Another example is the Star Community Rating System which can be used to track changes in community concerns and is built around eight goals and objectives, including built environment, climate and energy, economy and jobs, education, arts and community, equity and empowerment, health and safety, natural systems, and innovation and process.

Report Cards

Report cards provide a simple and easy way to understand a visual summary of the status of air quality in the state or region. For example, the University of Maryland Center for Environmental Science created an annual report card for water quality in the Chesapeake Bay. The report card includes a series of indicators that track water quality trends using best available science. Community members and local, state and federal agencies use the report card to prioritize advocacy, funding, monitoring and future restoration projects, all characteristics that are transferable to an air quality report card. ecoreportcard.org/report-cards/chesapeake-bay



(Source: University of Maryland Center for Environmental Science)

During the development of evaluation tools or programs, consider:

- What indicators will signify “success”?
- How measures of success will be assessed?
- How the group will make sense of the results (e.g., how data will be analyzed; how those affected will be involved in interpreting the information)?
- How the information will be used to improve the SIP update?

Does your plan?

- Identify a clear, meaningful role for communities?
- Include community-based guidance?
- Support participatory and community-informed budgeting and local hiring principles?
- Highlight and utilize citizen monitoring and enforcement?
- Engage universities or other third-party in tracking progress to increase transparency and accountability?
- Include easy to understand tools for tracking and communicating progress?

Invest in Cultural Training

Unconscious bias may influence agency policy and implementation. For example, in some parts of the country, land-use and zoning decisions have been based on racial segregation, and positioned industrial facilities, landfills, train routes, transportation corridors and other environmentally noxious facilities near African American and low-income communities. This practice, known as ‘expulsive zoning,’ is the historical basis for modern-day siting of many environmentally noxious facilities. Unconscious bias may create barriers to improving, modifying or restructuring programs and policies in ways that are intended to distribute benefits and burdens equitably. It may also influence the everyday practical interpretation of policy and its implementation. Unconscious bias among agency staff and decision-makers can be addressed via Building Cultural Competence training. Portland’s Department of Environmental Quality (DEQ) has taken the initiative to do the following for all permitting programs:

- Maintain an online training on environmental justice that is available to all employees.
- Strongly encourage all managers and staff whose primary work responsibilities include permitting or field work to complete the online environmental justice training.
- Provide all DEQ employees opportunities to access training in cultural competency and understanding implicit cultural bias.
- Provide all DEQ employees opportunities to access training about DEQ’s tool to evaluate demographic indicators for prioritizing work and engaging communities.

Global Community Monitor: Community monitoring to support regulatory decisions

Tracking the emissions of air pollutants in each neighborhood can shed light on community exposures and health status. However, many state air quality monitoring stations do not provide sufficient coverage to evaluate neighborhood-level trends in emissions. Although community members often have first-hand knowledge of when emissions are likely to occur and can help monitor these pollutants during accidental releases, federal and state agencies often hesitate to use citizen information due to concerns with data quality and reliability of the collection process.

To overcome this issue, some communities have developed data quality assurance plans that are approved by government agencies and include specific monitoring protocols and equipment. To facilitate such an effort, Global Community Monitor developed the Bucket Brigade program to train refinery community residents in how to reduce the impacts of fossil fuel industry pollution on their health and the environment. Through the Bucket Brigade program, Global Community Monitor has developed agency-approved protocols and helped communities monitor neighborhood-level emissions from diesel exhaust, oil and gas refineries and hydraulic fracturing. www.gcmonitor.org

Summary and Additional Resources

Summary

Clean Air Act SIPs provide an opportunity to meaningfully engage communities and build a SIP that will improve air quality, address environmental justice and other community concerns, improve health in areas most affected and ensure that solutions to air pollution, including both controls and clean energy opportunities, are placed where the need is highest.

Guided by the six steps in this tool, state agencies can increase interagency collaboration and build trust with the community. By addressing multiple needs and benefits concurrently, states can also be more cost effective in programs to reduce air pollution, providing an opportunity for enhancements beyond their existing plans.

Key resources

Association of Air Pollution Control Agencies. 2017. The Greatest Story Seldom Told Profiles and Success Stories in Air Pollution Control. 48 pp.

Clean Air Act Advisory Committee. 2011. Moving Towards Multi-Air Pollutant Reduction Strategies in Major U.S. Industry Sectors. Final 76 pp.

E. Massetti, M. A. Brown, M. Lapsa, I. Sharma, J. Bradbury, C. Cunliff and L.Yufei. 2017. Environmental Quality and the U.S. Power Sector: Air Quality, Water Quality, Land Use and Environmental Justice.

D. Jacobson, P. O'Connor, C. High and J. Brown. 2006. Final Report on the Clean Energy/ Air Quality Integration Initiative Pilot. Project of the U.S. Department of Energy's Mid-Atlantic Regional Office. 138 pp.

J. J. Scruggs, R. Navarra and S.W. Tack. 2016. Meaningful Community Engagement in the Clean Power Plan. 32 pp.

U.S. EPA. 2015. Guidance on Considering Environmental Justice During the Development of Regulatory Actions. 56 pp.

U.S. EPA. Pollution Prevention. <https://www.epa.gov/p2/>

Zero Waste Network. Pollution Prevention. Success Story Database. <http://www.zerowastenetwork.org/success/>



Beyond SIP requirements to health-based clean air policies in Oregon

States can go beyond the requirements of the Clean Air Act. In 2016, the State of Oregon launched Clean Air Oregon to do just this. The Oregon Health Authority (OHA) and the Department of Environmental Quality (DEQ) are partnering to create health-based air quality regulations for stationary industrial facilities. The program would require facilities to regularly report emissions on approximately 660 toxic air pollutants and permitting for 225 pollutants from this list.

The proposed framework for Cleaner Air Oregon's health-risk based permitting program includes requirements for cumulative risk assessments of multiple pollutants from a single facility and cumulative risk assessments from multiple facilities near each other. The framework includes an extensive community engagement approach that includes requiring all facilities with health risks greater than allowable to develop community engagement plans that include identifying and engaging community groups and potentially sensitive people. Facilities would also be required to tailor engagement efforts to the identified groups including creating a complaint line, a community advisory committee, notification of potential health risks, provide input to risk reduction plans.

cleanerair.oregon.gov/about/



Environmental Justice
Leadership Forum
CLIMATE CHANGE

This guidance document was developed for the Environmental Justice Leadership Forum on Climate Change by Skeo.







For further information contact:

WE ACT For Environmental Justice
Washington, D.C. Office:
50 F Street, NW, Eighth Floor
Washington, DC 20001
Tel: (202- 495 – 3036