The Community Guide to Cumulative Impacts

Using Science and Organizing to Advance Public Health Policy

Union of Concerned Scientists coming clean

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The Union of Concerned Scientists puts rigorous, independent science into action, developing solutions and advocating for a healthy, safe, and just future.

The Center for Science and Democracy works to promote independent science, a responsive, transparent democracy, and evidence-based decisionmaking on issues that affect public health and safety.

Coming Clean is a nonprofit environmental health collaborative working to transform the chemical industry so it is no longer a source of harm, and to secure systemic changes that allow a safe chemical and clean energy economy to flourish. Coming Clean works in strategic partnership with the Environmental Justice Health Alliance for Chemical Policy Reform, in alignment with the Louisville Charter for Safer Chemicals. Our members are organizations and technical experts—including grassroots activists, community leaders, scientists, health professionals, business leaders, lawyers, and farmworker advocates—committed to principled collaboration to advance a nontoxic, sustainable, and just world for all.

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The People behind the Guide

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Organizational affiliations are listed for identification purposes only. The opinions expressed herein do not necessarily reflect those of the individuals who reviewed it. The authors bear sole responsibility for the Guide's contents.

Section 1: Introduction to the Community Guide and Cumulative Impacts

In This Section

Across the United States, health and environmental policies do too little to protect people and communities from harmful chemicals and pollution in the real world. One key reason is that the nation's environmental laws and rules consider each chemical or facility in isolation, but *no one is exposed to one chemical at a time from one source at a time.*

The real world exposes all of us to a multitude of harmful chemicals and through a number of pathways—from products we use in our homes and workplaces, to facilities in our neighborhoods that actively pollute the air and water, to legacy pollution that has accumulated in our community's water, soil, and food chains. Those exposures combine with health stressors that systemic racism and unjust public policies often intensify: barriers to getting good food, existing health conditions, and poor access to health care. This all adds up to harm people and communities.

About the Guide and Cumulative Impacts

Research and advocacy by environmental justice (EJ) leaders and experts are driving a new approach to regulating chemical and pollution exposures. Based on *what actually happens* in our communities, the movement to reduce chemical hazards comprehensively and achieve environmental justice is getting stronger day by day. Pushed by local and statewide organizers seeking to reduce real-world harms in overburdened communities, cities and states are enacting laws and regulations that assess and reduce what are known as "cumulative impacts." Federal agencies, similarly propelled by advocates, are beginning to acknowledge past regulatory gaps and incorporate language that assesses and addresses cumulative impacts into new rules and policy guidance.

The Guide is a resource to help community, statewide, and national organizing, research, and campaigns drive changes that protect us from cumulative chemical and pollution harms—especially in disproportionately impacted and overburdened communities. You can use its overview of proven strategies and tools to organize your community. You can learn from trailblazing grassroots community advocates across the United States as you introduce and advance local policies on cumulative impacts. Understanding *cumulative impacts* as both a concept and a policy strategy will strengthen your capacity to take action in your community or state.

> *"Our communities are where fossil fuels . . . are mined, are brought up out of mother Earth. They're the communities that are also in harm's way with pipelines and diesel emissions, and at the same time train emissions whichever way that fossil fuel is moving . . . and then we are impacted by those refineries, the chemical plants and those businesses that use those chemicals that are made in that process moving forward. Then a lot of our communities are impacted by . . . dollar stores, where those chemicals come back to our communities in the form of some kind of a widget."*
>
> — José Bravo, Just Transition Alliance

Guide Audience and Uses

This Guide is for individuals and organizations in communities facing cumulative impacts of pollution firsthand. Whether you are just learning about cumulative impacts or already organizing a campaign to enact local policy changes, the Guide will meet you where you are.

Use the Guide:

- As a resource when organizing your community and building a local campaign to address cumulative impacts;
- As a reference when preparing policy to safeguard your community;
- When demonstrating the disproportionate and cumulative levels of contamination in your community to decisionmakers;
- To set the record straight about the impact of disproportionality and multiple sources of pollution;
- To expand your persuasive repertoire when pushing government agencies to reduce emissions or clean up legacy sites and current sources of contamination;
- To use maps to show impacts on your community and how it has been historically marginalized and targeted;
- To learn about cumulative impacts laws in other states, and how they might work in your state;
- To align with labor to help workers at a facility find common cause with communities that live at the facility's fenceline;[1]
- To strengthen advocacy with science when you are educating legislators and dealing with agencies, businesses, and chambers of commerce about your right to live in a clean and safe environment.

Community Involvement in Cumulative Impact Assessments

A cumulative impact assessment integrates the lived experience of the people most affected by decisionmaking early in and throughout the process. As you campaign for cumulative impacts policies, ensure adequate inclusion and standing of the community in policymaking by advocating for requirements to engage and notify the public.

Health impact assessments include some best practices for engaging with people affected by a particular proposal and arrive at democratic decisions; thus, they can inform cumulative impact assessments. A health impact assessment, as outlined by the World Health Organization, is an established method for judging the potential health effects of a policy, program, or project on a population, particularly on vulnerable or disadvantaged groups. Multiple training videos are available, including these from the Institute of Public Health, the National Institutes of Environmental Health Sciences, and the Center for Community Engagement Environmental Justice and Environmental Health at the University of Maryland. This cumulative impact assessment grew out of a health impact assessment for the city of Chicago.

Building a Supportive Cumulative Impacts Network

A number of organizations and individuals co-developed the Guide and have expertise on cumulative impacts, gained from drafting laws, submitting public comments, and negotiating rule writing (Table 1, p. 4).

> *I would feel . . . everybody was an expert but me. . . . So, I spent a really long time looking at YouTube videos, . . . books that were simple to understand . . . Wikihows. . . . And as I started using some of those tools, I started to understand that even though I did have so many experts in the room, they knew the data. They understood the language, but I was an expert in my lived experience."*
>
> — Carolina Ortiz, COPAL

1 A fenceline (or frontline) community is located close to a pollution source and typically experiences the impacts of pollution.

TABLE 1. Guide Co-Developers with Expertise in Cumulative Impacts Policy

Organization		Expertise	Contact
coming clean	**Coming Clean** https://comingcleaninc.org	An environmental health coalition with a work-group dedicated to reducing harm from cumulative impacts and advocating for mandatory emissions reductions; aligns with the Louisville Charter for Safer Chemicals	Kathy Curtis kccspecialist@gmail.org
Union of Concerned Scientists	**Union of Concerned Scientists** www.ucsusa.org	The Union of Concerned Scientists puts rigorous, independent science into action, developing solutions and advocating for a healthy, safe, and just future	Kristie Ellickson KEllickson@ucsusa.org
CLEAN + HEALTHY	**Clean and Healthy** https://cleanandhealthy.org	Involved in winning a statewide cumulative impacts law that gives community members in New York State tools to deny permits for polluting facilities	Sophia Longsworth sophia@cleanhealthyny.org
COPAL	**COPAL (Communidades Organizando el Poder y la Acción Latina)** https://copalmn.org/en/home	Educates communities about environmental and worker health; worked in coalition to enact a cumulative impacts law in Minnesota, along with rulemaking to implement the law	Carolina Ortiz carolinao@copalmn.org
The Farmworker Association of Florida, Inc.	**The Farmworker Association of Florida** https://floridafarmworkers.org	Works to reduce and eliminate exposure to multiple pesticides for farmworkers and their families	Jeannie Economos Jeannie@floridafarmworkers.org
INDIGENOUS ENVIRONMENTAL NETWORK	**Indigenous Environmental Network** www.ienearth.org	An organization of grassroots Indigenous peoples and individuals working on environmental and economic justice	Loren White loren@ienearth.org
Just Transition Alliance	**Just Transition Alliance** https://jtalliance.org/	Works internationally to reduce exposure to chemicals from all aspects of manufacturing, petroleum processing, and petroleum products like plastics	José Bravo jose@jtalliance.org
	**Los Jardines Institute** https://losjardinesinstitute.org	In coalition, forwards local cumulative-impact rules to address exposures from the environmental, economic, and social injustice of polluted air and water resources	Xavier Barraza justice@losjardinesinstitute.org
	Overbrook Environmental Institute www.overbrookcenter.org	Teaches about and participates in research on environmental health; works on approaches to community-based cumulative impacts	Jerome Shabazz jshabazz@overbrookcenter.org Felicia Fred ffred@overbrookcenter.org
Rise4EJ	**Rise4EJ** https://rise4ej.org	A newer grassroots organization working to reduce and eliminate environmental toxicants, chemical exposures, environmental racism, and ecological destruction	Beto Lugo Martinez betomtz.lugo@gmail.com
REACT RUBBERTOWN EMERGENCY ACTion	**REACT (Rubbertown Emergency ACTion)** https://ej4all.org/react	Advocates for reducing pollution from permitted facilities, busy roads, pesticides, etc. in the Louisville, Kentucky, "Rubbertown" cluster of chemical plants	Eboni Cochran rubbertownstinks@gmail.com
SciCAN .ORG	**SciCAN (Science and Community Action Network)** https://scican.org	Centers community and EJ expertise in research and policy; connects grassroots movements, scientists, and technical and issue-area experts across the country	Jessica Thomas jessica@scican.org

Section 2: Cumulative Impacts Basics

In This Section

Cumulative Impacts in Brief

The term "cumulative impacts" is a scientifically based concept and type of analysis. When talking about a community, it brings together *all* possible ways decision may affect their environment and health. The nonprofit environmental health network Coming Clean defines cumulative impacts as "the combined chemical and non-chemical stressors on a community's health, well-being and quality of life." Chemical stressors are health-harming pollutants that may be linked to cancer, reproductive, developmental, or other harms. Non-chemical stressors are social and physical burdens a community might face, such as poor housing and a lack of affordable health care. Non-chemical stressors are also referred to as social determinants of health.

Cumulative Impacts Policies in Brief

Public policies affect our health and our environment. For example, based on health and environmental considerations, state regulators decide about permits for polluting facilities, located in specific neighborhoods. Federal regulators make decisions under the Toxics Substance Control Act (TSCA) about which chemicals to consider safe—and which pose "unreasonable risks" to human health. TSCA includes the threshold "unreasonable risk," and the EPA made this type of determination in 2022 for two chemicals.

Communities and their allies advocate for **cumulative impacts policies**, based on real-life exposures and experiences, in order to reduce stressors on community health. For decades, environmental justice and frontline communities have called on decisionmakers to assess and reduce cumulative impacts, as opposed to evaluating—in isolation—the safety of one chemical or one facility.

Cumulative impacts policies require a holistic approach to health and environmental decisionmaking. For example, state policymakers may be deciding whether or not to approve a permit for a new or existing facility in a particular community; cumulative impacts policies can require regulators to evaluate

BOX 1. SIGNS THAT YOU LIVE WITH CUMULATIVE IMPACTS

- You have asthma, which can be triggered by chemicals in perfume, cleaners, and other common household products or by living near a bus garage, garbage incinerator, power plant, or other industrial facility.
- You live in the Gulf Coast region near petrochemical plants and experience increasing numbers of climate-related weather disasters during which you lose water and power, your home is made less habitable, or you get a burst of pollution from damaged facilities and even when those facilities get back up and running.
- You work with hazardous chemicals in your job—for example, cleaning for a living—and you also live near polluting facilities.
- Despite the COVID-19 pandemic, you could not work from home. You do not get paid sick leave, you suffer from higher underlying rates of chronic disease, or you are exposed to air pollution in your neighborhood and along your commute.
- A highway or railroad cuts off your community from food sources, work, and emergency services while exposing you to diesel emissions and other harmful pollution.
- Although you live near only one pollution source, it emits a host of pollutants, such as toxic chemicals and particulate matter, and you have feelings of hopelessness and helplessness.

all the current and historic pollution in that community—as well as the social and health burdens that might make residents more susceptible to harm. *No* additional polluting facilities should be constructed or expanded in a community where cumulative impacts already pose potential harm to people's health.

Origin and Perpetuation of Cumulative Impacts

Cumulative impacts affect everyone, but racist, biased systems and laws drastically exacerbate cumulative impacts. History matters. US policies have long situated sources of environmental pollution more densely near and among communities of color and low-income communities.

Early in US history, the government stole land from Native peoples and gave it to colonialists to farm, extract resources, and advance transportation and electrification across the nation. Colonial occupation and these policies and practices forever changed the landscape. Forest clear-cutting, mining, and a host of impacts related to processing, generating, and burning fossil fuels separated people from access to their cultural practices and food and exposed the land itself to damage.

This Guide cannot do justice to detailing how colonialism, racism, and discrimination have created and perpetuate environmental injustices in this country, but you can draw on many books and essays and rich storytelling that portray this well (see Box 2).

One set of racist policies dates from the 1930s and the New Deal when multiple policies and practices to encourage homeownership identified neighborhoods as more or less credit-worthy for lenders. This identification, which included race and ethnicity, categorized neighborhoods with people of color as more hazardous for lenders. This "redlining" contributed to segregation and set up a system that placed people of color, immigrants, Indigenous populations, and other marginalized groups near polluting industries and major roadways. For communities of color, racist Jim Crow policies and laws reduced access to and participation in health and environmental decisionmaking.

This did not happen by accident or overnight. To eliminate the unfair burdens of pollution set up in history and perpetuated by unchanged policies and white dominant culture, we need systemic change that includes cumulative impacts policies at all levels of government. Without restorative policies, including cumulative impacts policies, the disproportionate damages will continue.

BOX 2. RESOURCES TO LEARN MORE ABOUT ENVIRONMENTAL RACISM AND INJUSTICE

The many harmful impacts of US colonialism, both its historic and its ongoing effects in US culture and systems, are well-documented.

A Seattle librarian created a short list of books on the environment and Native peoples in conjunction with an exhibit called "Beyond the Frame: Native Americans and the Environment." The University of South Florida provides a list of books on environmental justice as a means of "addressing the systematic racism that leads to disproportionate pollution in the areas inhabited by people of color." Sierra Club provides a list of resources, as does *New York* magazine. The Environmental Law Institute's list includes journal articles. And to continue bringing in next generations, Social Justice Books: A Teaching for Change Project created a list by reading level. More specific articles and books offer information about advocating for environmental justice within environmental agencies and about the impact of environmental policies on LGBTQ+ populations and people with disabilities.

> *"In a historical context, a lot of indigenous folks, we're dealing with the effects of colonization . . . genocide, relocation, dispossession, all would play a huge part in the overall health and well-being of ourselves. . . . On top of that, any type of pollutant coming out of an industry near us."*
>
> — Loren White, Indigenous Environment Network

Section 3: Defining, Quantifying, and Mapping Cumulative Impacts

In This Section

- What is a cumulative impact assessment? What is important to include?
- How do different organizations define cumulative impacts?
- What are some established ways of estimating cumulative impacts? What tools are available? What are mapping tools?
- How could my community use some of these maps and tools?
- What are "indicators" of cumulative impacts? For example, what kinds of evidence can we use to show that our community is experiencing cumulative impacts?

You can draw on a number of models for defining cumulative impacts, selecting criteria and thresholds for what counts as cumulative impacts, and identifying when communities are actually experiencing cumulative impacts.

Defining cumulative impacts carefully—and broadly—is essential. Why? Say you want to give local regulators the power to deny permits for facilities that are or would be located in communities facing cumulative impacts. First, you must define cumulative impacts *and* establish a method for identifying communities that need additional health protection.

Some Basic Components of a Cumulative Impact Assessment

A *cumulative impact assessment* names and measures all chemical and non-chemical "stressors" that affect a community's health, well-being, and quality of life.

- *Chemical stressors* include the various pollutants in a community's air, water, and soil, as well as the food and other products that people regularly use. This includes chemicals stored in people's bodies from past exposures.
- Non-chemical stressors are social and physical burdens on an individual or a community. These can include lack of access to healthy food, lack of affordable health care, heat stress, and poverty.

As noted, communities of color face many stressors—both chemical and non-chemical—that result from systemically racist policies favoring white communities.

A rule or law that defines cumulative impacts must include in the definition both multiple chemical stressors and the social context. Sometimes, the definition lacks the social context, such as exposure to social adversity that may make a community more vulnerable to harm. In such cases, it is critical to advocate for the inclusion of social contexts in assessments and decisions during the rulemaking process, the period when regulations are developed. Community engagement and participation are essential throughout the process.

Defining Cumulative Impacts

Organizations, government agencies, and others define cumulative impacts for different purposes and in different contexts. The Louisville Charter definition focuses on the work of environmental justice groups. The US Environmental Protection Agency (EPA) definition informs EPA research activities and funding. Other definitions are written in laws to direct how agencies must implement relevant laws.

Agencies and organizations wrote the definitions in Table 2, p. 8, with intention and lots of review. Most of the definitions reflect compromises negotiated between regulators and regulated parties. Identifying which cumulative impacts components your group wants included in a definition may help you decide how to apply them to informing a rule, building a tool, or communicating with community groups.

EXERCISE 1

In Table 2, p. 8, think about what components might be missing or better explained in each definition. Which definition best captures the concept? Which is the most strategic? You can use these flip cards on Cumulative Impacts Elements!

TABLE 2. Sample Definitions of Cumulative Impacts

	Impacts from multiple chemicals	Multiple pathways of exposure (ingestion, inhalation, dermal)	Multiple sources of pollution or stressors	Combined impacts across non-chemical stressors	External/systemic factors that make a community more susceptible to harm	Historic pollutant burden and exposures over time	Multiple environmental media	Intrinsic susceptibility (age, pre-existing conditions)
Louisville Charter for Safer Chemicals "[T]he risks and impacts caused by multiple pollutants, both in isolation and through their interaction with each other and any social vulnerabilities that exist in a community. These pollutants are usually emitted by multiple sources located within or nearby a community." The Louisville Charter derived this definition from community work on New Jersey's cumulative impacts law.	X		X		X			
California Office of Environmental Health Hazard Assessment "[E]xposures, public health or environmental effects from the combined emissions and discharges, in a geographic area, including environmental pollution from all sources, whether single or multimedia, routinely, accidentally, or otherwise released. Impacts will take into account sensitive populations and socio-economic factors, where applicable, and to the extent data are available."	X		X		X		X	X
State of Minnesota "[T]he impacts of aggregated levels of past and current air, water, and land pollution in a defined geographic area to which current residents are exposed."	X		X			X	X	
US Environmental Protection Agency "[T]he totality of exposures to combinations of chemical and nonchemical stressors and their effects on health, well-being, and quality of life outcomes. . . . Cumulative impacts include contemporary exposures to multiple stressors as well as exposures throughout a person's lifetime. They are influenced by the distribution of stressors and encompass both direct and indirect effects to people through impacts on resources and the environment. Cumulative impacts can be considered in the context of individuals, geographically defined communities, or definable population groups. Cumulative impacts characterize the potential state of vulnerability or resilience of a community."	X		X	X	X		X	X
European Union The impacts (positive or negative, direct and indirect, long-term and short-term impacts) arising from a range of activities throughout an area or region, where each individual effect may not be significant if taken in isolation. Such impacts can arise from the growing volume of traffic, the combined effect of a number of agriculture measures leading to more intensive production and use of chemicals, etc. Cumulative impacts include a time dimension, since they should calculate the impact on environmental resources resulting from changes brought about by past, present and reasonably foreseeable future actions."	X		X			X	X	
Centers for Disease Control and Prevention "Cumulative impacts are the total harm to human health that occurs from the combination of environmental burden, pre-existing health conditions, and social factors. Cumulative impacts can result from long-term exposure to environmental pollution and community stress such as noise pollution, odor pollution, loss of natural resources, or lack of access to quality health care or other resources."	X	X	X	X	X	X	X	X
City of Chicago "In our daily lives, people can be exposed to pollution through the air, water, and land. These exposures add up over time, together with health conditions and social factors that can affect individuals and communities in both positive and negative ways. Certain communities experience unequal exposure to multiple environmental, health, and social stressors – and this is referred to as cumulative impacts."	X		X	X	X	X	X	X

Mapping Cumulative Impacts

Many free, online tools "map" cumulative impacts (Table 3, p. 10). Called "mapping tools" in this Guide, they are essential to building a case that communities in your city or state face cumulative impacts. Some of these tools screen for cumulative impacts or environmental justice concerns, and therefore include "screen" in the tool's name. Mapping tools help you:

- Visualize cumulative impacts;
- Decide where and what to prioritize;
- Identify communities with higher cumulative impacts;[2]
- Determine how many or how high stressors and burdens are in an area;
- Compare communities to characterize environmental justice.

Using Environmental Justice and Cumulative Impacts Tools

Using the online mapping tools in Table 3, p. 10, yields information on your community's environment, health, and the social conditions. With most of the tools, you can search for your address or city and select the kinds of stressor or types of information (environmental, health, social) you want to get.

Use the results from these tools as evidence for action. For example, the results could support an argument like this:

> *"Our community is majority low-income, has a lot of permitted facilities, and several highways emitting air pollution. It also has higher-than-average rates of asthma and cancer. We need more federal investments and stronger local laws to address these burdens."*

Sometimes a tool may identify only geographic areas larger than your community; if so, the results may dilute or "average out" what your community actually experiences. If the results of mapping tools do not reflect the cumulative impacts you know your community actually faces, consider using the information in the tools as a *starting point for a more focused* door-to-door, phone, or online survey of your community. Or use the information as is while also providing community data, pictures, and people's stories as further validation showing how your community might have more or different impacts and stressors.

Some mapping tools use "cumulative impacts" and "environmental justice" interchangeably. To achieve environmental justice requires reducing *both* cumulative impacts and the gaps in cumulative impacts faced by different communities.

Usually, mapping tools represent social factors (race, ethnicity, income, language spoken at home) *and* environmental factors (pollution levels). In addition to its definition of cumulative impacts, the EPA defines "environmental justice" as:

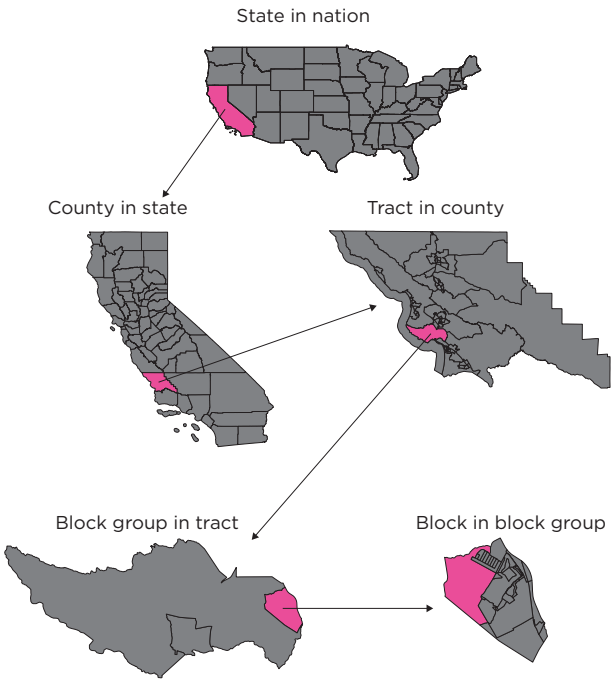
> *"the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."*

Many online cumulative impacts and EJ mapping tools show geographies or locations using information from the US Census (see Box 3).

BOX 3. THE US CENSUS AND MAPPING CUMULATIVE IMPACTS

Census geographies include smaller and smaller pieces, the biggest being the whole United States and states, and the smallest is a census "block." In the middle are counties, census tracts, and census block groups (a group of census "blocks"). Most national cumulative impacts mapping tools are based on the census tract (example).

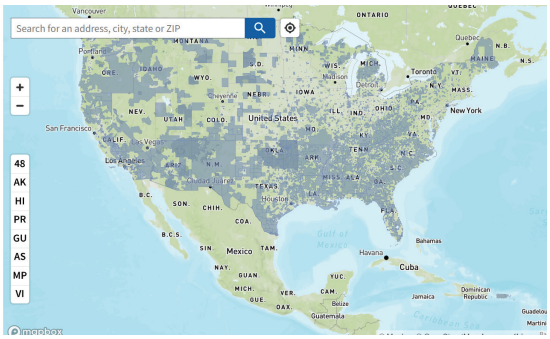
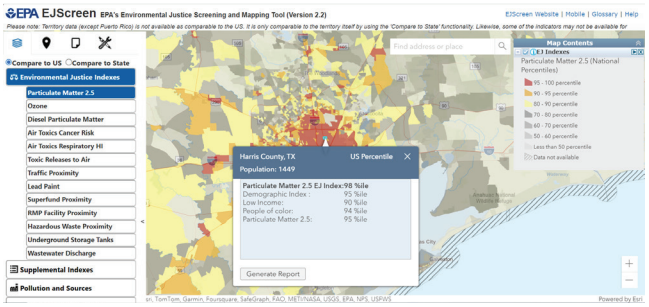
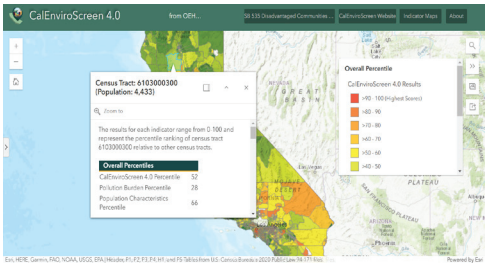
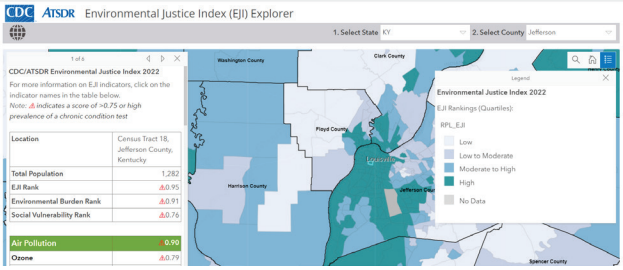
A census block group is a geographic location with 250 to 550 housing units or 600 to 3,000 people. A census tract ranges from 1,200 to 8,000 people, with the goal of including about 4,000 people.



DATA SOURCE: US CENSUS

2 Sometimes communities with higher cumulative impacts are referred to as "disadvantaged," "historically disinvested," "overburdened," "vulnerable," "communities with EJ concerns," or "EJ communities."

TABLE 3. Mapping Tools to Screen for Environmental Injustices

Mapping Tool	Description
The White House Council on Environmental Quality's Climate and Environmental Justice Screening Tool 	This interactive map, created in 2021, identifies "disadvantaged" communities to help prioritize federal investments in climate, clean energy, and pollution mitigation as part of the White House's Justice40 Initiative. It indicates burden in eight categories: climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development. This tool is unique in using multiple indicators to evaluate census tracts as either disadvantaged or not. If your community faces cumulative impacts but does not appear as disadvantaged in the map, that is likely a flaw of the tool. Many organizations and individuals are advising the Council on Environmental Quality on how to improve the tool. You can provide feedback to the council using this survey.
EPA EJ Screen 	This tool enables you to view the environmental, health, and social stressors your community faces, but you can view only one kind of stressor at a time. For example, you can see whether your community is in a high percentile for exposure to fine particulate matter ($PM_{2.5}$). If your community is in the 95th percentile, that means your community experiences more $PM_{2.5}$ air pollution than 95 percent of other communites or, in other words, that your community is in the top 5 percent for $PM_{2.5}$ air pollution. By clicking the "Tools" icon at the top of the map, you can input information like mapping data, community comments and stories, and hyperlocal measurements. Then select "add shapefile," which is a format of data with the locations included. Contact Coming Clean, the Union of Concerned Scientists, or SciCAN for help making a shapefile of your data.
CalEnviroScreen 	Created by the California Office of Environmental Health Hazard Assessment, this is one of the first cumulative impacts mapping tools the state has used to prioritize environmental investments. You can look at one stressor at a time or compare combinations of many stressors. If one area has a higher CalEnviroScreen result, it has a much higher burden of environmental pollutants—in other words, higher cumulative impacts. This tool only applies to California, but materials available with it and the indicators it uses may be a useful starter list for other communities.
CDC Environmental Justice Index 	This mapping tool combines data from several federal government agencies to provide a comprehensive idea of a community's combined social, environmental, and health stressors and burdens to determine which areas are impacted by environmental injustice. The materials with this tool are useful as well. This video explains how it works. The environmental, social, and health stressors are pulled together into an Environmental Justice Index (EJI) that is reported in the form of a rank. One area may have an EJI of 0.95, which would mean that the combined stressors and burdens in that area are higher than 95 percent of all other areas in the country. Click on an area to find the area's population, total EJI, environmental burden, social vulnerability, and individual stressor and burden ranks.

BOX 4. RESOURCES FOR COMPARING AND FINDING CUMULATIVE IMPACTS MAPPING TOOLS

These two organizations provide resources to help you find and use cumulative impacts mapping tools.

- The Urban Institute has created a table of Cumulative Impacts and Environmental Justice mapping tools. The accompanying report includes the indicators and data used in all mapping tools, and a comparative report.
- Building on past work, a team of academics developed a comprehensive website linking to EJ mapping tools, definitions, and information state by state.

Cumulative Impacts Indicators

You may look around your community and see multiple sources of pollution (e.g., highways, polluting facilities) and also know people with many chronic health issues (e.g., asthma, kidney disease). Facts like these are often referred to as ***indicators***. Indicators are values, data, or parameters that relate to or are measures of environmental health burden or harm. Some indicators may be in the form of different kinds of data reflecting the same type of harm—for example, measured levels of lead in blood in children paired with the percentage of local housing stock built before 1980, when lead was more prevalent in paint.

Many indicators in cumulative impacts mapping tools are adverse estimates of:

- Pollutants in the environment;
- Proximity to pollution sources;
- Exposure to racism and racist practices (e.g., the majority-Black public schools in a state are non-accredited or underfunded; previous zoning laws produced segregated neighborhoods with Black and Brown neighborhoods closer to highways and Superfund sites);
- Barriers due to colonialism (e.g., the great distance of the nearest hospital on a US protectorate or Indian reservation; adaptability measures for climate change focus predominantly on temperate/mainland US conditions);
- Social adversities that can make pollution exposures worse (e.g., material hardship);
- Access to healthy food;
- Access to greenspace and shade, which can exacerbate health issues like kidney disease;

EXERCISE 2

Search for your zip code in the Center for Disease Control and Prevention-Environmental Justice Index, Climate and Environmental Justice Screening Tool, and EJ screen tools in Table 3, p. 10. Compare the results. What missing data might capture how your community experiences cumulative impacts?

- Human sensitivity and variability (e.g., age, existing health conditions); and
- Language barriers.

Some cumulative impacts mapping tools include indicators related to health:

- Access to health care;
- Health burden in people;
- Estimates of access and proximity to physical health benefits (e.g., walkable communities, green space, playgrounds, medical services and facilities); and
- Estimates of access and proximity to mental and social health benefits (e.g., Head Start programs, culturally competent clinics access).

Cumulative impacts mapping tools *average* results over areas that may be larger than impacted communities; therefore, they can underestimate harm. In such cases, you will need data that are more localized to accurately inform decisions about protecting your community. For example, you may find it useful for community members or groups to measure localized water and air pollution. A valuable source of information and data that can supplement the results of mapping tools are the lived experiences of community experts in the form of their stories.

BOX 5. HOW DO CUMULATIVE IMPACTS AND DISPROPORTIONATE IMPACTS DIFFER?

Cumulative impacts and disproportionate impacts are different but related concepts. *Cumulative impacts* refers to the totality of stressors and burdens. *Disproportionate impacts* refers to the fact that some communities have greater stressors and burdens relative to others. Assessing cumulative impacts is one way to bring attention to and acknowledge the full magnitude of both types of inequality.

Both community measures of data and lived experiences improve the understanding of local impacts from polluting sources and are useful for informing policy improvements. Combining indicators of environmental, health, and social stressors is similar to combining temperature and humidity to create a "heat index" or the temperature and wind speed to create a "wind-chill" so that communities can gain a better understanding of the full impact of multiple factors. Table 4 lists some of the advantages and limitations of mapping tools.

A valuable source of data that can supplement the results of mapping tools are the lived experiences of community experts.

TABLE 4. Advantages and Limitations of Environmental Justice Mapping Tools

Advantages	Limitations
• Provide a baseline for comparing the potential impacts of future proposals • Provide information to support setback requirements for extractive industries • Connect environmental, social, and health data • Make a variety of environmental data publicly and transparently available	• Data averaged over spaces larger than an impacted community may not represent a real-life local experience. • National tools can only include data for the entire United States; state tools can only include data for the whole state. • Data may be underestimated or overestimated due to missing data or erroneous reporting. • Some important indicators are often unavailable, such as the quality and cultural competence of health care, stress of immigration status, emotional distress, odors, displacement vulnerability, access to grocery stores and fresh produce, and certain diseases that are not reported.

Section 4: Cumulative Impacts Laws and Regulations

In This Section

Some cities and states have already enacted cumulative impacts policies, and some tracking tools follow the progress of local cumulative impacts legislation nationwide. That foundation is important as you consider advocating for your own cumulative impacts bill or policy and as you make strategic decisions and compromises. Because a fundamental principle of this work is for approaches to be community-led and community-driven, take time to compare the approaches that different local laws have taken.

In addition to state and local activities, the federal government has begun to consider cumulative impacts in some ways. The work can only progress with ongoing advocacy and long-term government commitment.

Early Cumulative Impacts Efforts Focus on Air Permitting

State governments have authority to review, issue, and deny environmental permits statewide. A permit is a legal document that describes how a facility must be constructed and operated in order to comply with federal and state laws and rules. Some states issue separate permits for construction and operation; others combine these together. When you comment on an operating-only permit—including permits under the Clean Air Act's Title V program[3]—the facility will already have permission to be built.

The authority to issue permits and what goes into them derives from federal laws like the Clean Air Act, as implemented by state, local, and tribal authorities. The Clean Air Act categorizes air pollution sources into "major" and "minor." These categories are based on the levels of emissions of air pollutants, not levels of potential harm to health.

The Clean Air Act is one of the best tools to lessen air pollution and protect community health, but it is far from perfect. The act requires the EPA to update emissions standards for various different "sources" of pollution periodically, but the agency often fails to issue new rules when they are due. And even when the EPA issues new rules, they tend to apply very narrowly to a subset of facilities and to set emissions standards chemical by chemical.

It is important to engage in the permitting process—by submitting public comments or even petitioning the EPA or the state to object to a permit that is vague and difficult to enforce. However, even when communities successfully petition the EPA with objections to a proposed permit, this rarely prevents a facility from operating. This is another reason why many communities advocate for cumulative impacts policies. A community experiencing pollution from many pollution sources must deal with many environmental permits. Chasing after each individual permit is a drain on the resources of grassroot groups, with limited emissions reductions.

The good news is that *some states have the power to enact laws and set permitting rules that are more stringent than the federal floor.* Cities also can enact laws that grant them additional authority to assess the cumulative impacts of proposed permits.

3 The Clean Air Act only requires public engagement be conducted after a facility applies for a Title V (i.e., operating) permit.

The concentration of fossil fuel heavy-duty trucks and locomotives, in our neighborhoods and the indirect mobile emission sources (i.e. warehouses), add to the cumulative exposure and impacts from industrial chemical, power generating pollution facilities. The contribution of co-pollutants and ultrafine particles travel deep into our lungs and bloodstream.

The close proximity to hazardous waste facilites classified as Superfund sites contribute to the cumulative impacts. We also have multiple industrial recycling facilities emitting heavy metals. The chemical facilities are sited in a floodplain with no chemical disaster or emergency plan in place. So that is an added risk, while its flooding, the legacy contamination in the soil and groundwater that flows into the neighborhood with no stormwater infrastructure.

— Beto Lugo Martinez, Rise4EJ

Authority to limit or deny permits that contribute to environmental injustice is how frontline communities envision and advocate for permitting to happen every time.

State-Level Cumulative Impacts Outcomes

At the state level, cumulative impacts policies can:

- Require enhanced community engagement upfront before facilities are approved for construction;
- Require state permitting authorities to assess how a proposed facility would contribute to or exacerbate cumulative impacts in a community;
- Give state permitting authorities the authority to reject permits for new facilities or expansions; and
- Give state permitting authorities the authority to impose additional conditions, like increased pollution controls, on existing facilities applying for permit renewal.

State laws in Colorado, Connecticut, Massachusetts, Minnesota, New Jersey, and New York require a cumulative impact assessment in order to limit, deny, or issue environmental permits. New Jersey requires facility applicants to engage communities upfront *before* applying for Title V permits. State governments can also write rules that limit pollution outside the permitting process. Cities (and counties in some cases) can also enact laws giving them more authority to limit or deny permits.

Some Groundbreaking City Policies

Some cities have the authority to accept, limit, or deny environmental permits. A Newark, New Jersey, law requires an environmental justice review; Wilmington, Delaware, has a similar resolution. Camden, New Jersey, requires reviews that include some components of a cumulative impact assessment for proposed projects. Chicago has incorporated this type of requirement through a mayoral executive order and published a city cumulative impacts report.

Many cities also oversee and write zoning laws that mandate the types of businesses and residences they allow in certain places and how close they can be from one another. Cities can write rules that limit, ban, or heavily tax pollution sources (e.g., PERC, plastic bag bans, air toxics control), and local governments can support and make decisions related to Green Zones or environmental impact areas.

City ordinances can provide the impetus for state laws. In New Jersey, Camden enacted a cumulative impacts–based ordinance in 2015, then Newark followed in 2016. The statewide law came in 2020. Minnesota enacted a cumulative impacts law in 2008 for a part of Minneapolis, with the statewide law enacted in 2023. In both states, environmental permitting now must consider many types of impact on public health, with greater authority to limit and deny permits that would contribute to cumulative impacts in a community.

> *A cumulative impacts regulation . . . [is] being heard in the largest city in the state of New Mexico, and one thing we know about the significance of what happens when we pass regulation in the county and in this city is that it goes statewide."*
>
> — Xavier Barraza, Los Jardines

Multiple Jurisdictions

Some cities have authority to write rules that apply beyond the city limits. Referred to as "delegation of authority," this is when the federal government or a state government (or both, in the case of Philadelphia) give rulemaking authority to other jurisdictions. Usually with environmental law, it is the EPA that designates rulemaking authority to the states. The state can then decide to exercise its authority so long as its environmental regulations are at least as stringent as the federal ones. With some exceptions, states can delegate that same authority to certain localities. In one example, Pennsylvania delegated to Philadelphia County the power to regulate air quality for the state. The Albuquerque-Bernalillo County Air Quality Board has authority to write air quality rules and has considered a community-written cumulative impacts rule in 2023 that would apply to the city of Albuquerque and the surrounding county. Preemption, on the other hand, refers to a government's restriction of a lower level of government's authority to enact more stringent regulations.

State Cumulative Impacts Laws at a Glance

These two sources describe existing cumulative impacts requirements at the local, state, and federal levels:

- The New School Tishman Environment and Design Center offers information on cumulative impacts, including a report and a database on all cumulative impacts and environmental justice laws and ordinances in the United States.
- The National Caucus of Environmental Legislators tracks *proposed* state-level cumulative impacts bills. The map stops representing a bill when the state enacts it as law.

Some Trailblazing State Cumulative Impacts Policies

Table 5, p. 16-17, summarizes the state-level cumulative impacts policies in Colorado, Connecticut, Massachusetts, Minnesota, New Jersey, and New York with links to the full text of the laws. Each of these laws is complex and nuanced; use the table as a starting point rather than the final source of information on any of the laws' requirements. Once you follow the link to a bill as introduced or as final law, look at its history, from its introduction to its revisions and its final wording. The final language of most laws reflects negotiations among proponents, opponents, experts, and others. Often, a bill as introduced represents more stringent environmental health protections. It is always useful to look at the bill's history to see what communities may have wanted compared with what finally became law. Finally, please note that even enacted laws can change over time.

Communities often want cumulative impacts laws to cover both new and existing facilities. Generally, existing facilities are covered under "permit modifications" or "permit renewals," so look for those phrases in a law, bill, or rule.

Watch the Exemptions!

There is a common false choice between jobs and environmental health. *Communities do not have to choose.* Some communities have advocated hard for decisionmaking to exclude economic benefits from cumulative impacts: those benefits often do not go to the communities that a proposed facility would impact the most. Other communities have looked to community-benefit agreements as a way to ensure greater health protections over the long term.

Also watch out for exemptions for facilities "serving in the compelling public interest." The "public" may not include everyone in your community or may only serve certain, more privileged groups.

Requirements for Public Participation and Engagement in Cumulative Impacts Laws and Rules

State laws vary widely on requirements for public participation and engagement regarding permit applications. For example, some states require that a facility applying for a construction air permit[4] hold a public meeting. This is very important: it gives community members a chance to oppose a polluting facility *before it is built*. The Clean Air Act requires all facilities applying for an operating (Title V) permit to post a public notice of draft

4 A construction air permit is a legal document allowing new construction of equipment, or a process, operation, or whole new facility. The permit outlines how the owner must construct the facility or conduct the proposed activity.

TABLE 5. Some Early State Cumulative Impacts Laws and Rules at a Glance

	Colorado	Connecticut	Massachusetts
Permits in these states can be conditioned or denied when . . .	approval of permit would result in adverse cumulative impacts higher than those borne by other communities	the proposal and other environmental and public health stressors result in adverse cumulative stressors that are higher than those borne by other communities	with consideration of cumulative impact analyses, facility air toxics exceed cancer risk of 10 in 1 million or hazard index of one
Rulemaking status	Due 4/28/2024, process was paused on 4/29/2024	Completed	Completed
Which regulatory agency does this law apply to? **Who must assess cumulative impacts when considering permits?**	Colorado Department of Public Health and Environment	Connecticut Department of Energy and Environmental Protection	Massachusetts Department of Environmental Protection
What kinds of permits or projects can be denied? **Which can be approved with more restrictive conditions?**	Oil and gas expansion projects	Major individual facility permits and major modifications	Air permits
Exemptions	determined in rulemaking not completed at the time of publishing the Guide	Renewable resources, certificate of environmental compatibility and public need, state system of higher education, environmental impact evaluation	Existing facilities if increasing emissions by less than one ton per year; exemption does not apply to facilities that plan to decrease emissions over the long term but with a short-term increase (e.g., phasing in more fuel-efficient boilers)
Where this applies	Statewide	Statewide in EJ areas	Statewide in EJ areas

permits; this requirement about posting notice also applies to public meetings about draft permits.

In addition, states can improve upon federal government public participation and engagement requirements. The six states with state-level cumulative impacts policies have strengthened requirements for public participation, engagement, and notification (Table 6, p. 18-19).

Federal Action around Cumulative Impacts

At every level within regulatory agencies, leadership and staff are charged with protecting people from harmful chemicals and environmental pollution. The federal government sets up the baseline for these protections. Traditionally, it bases health and environmental standards and risk-based guidance on a series of considerations—a chemical's release, its movement through surroundings, its entry into the body and reaching a part of the body where harm is most likely—and then determines how much and how likely it is that harm may occur. These standards and risk-based guidance inform federal rules. Federal agencies (e.g., the EPA, the Food and Drug Administration) can write rules that direct states in how and what to permit, ban, limit, and manage harmful chemicals, and they can mandate other reductions in pollution sources.

This process generally considers one source and one pollutant or chemical at a time, and it often does not take into account that people might already be sick or have barriers to getting good health care. Cumulative impact assessments provide a broader look and better reflect real life in order to inform regulatory decisionmaking.

New guidance and rules on the federal level are beginning to address the regulatory gaps and take a "cumulative impacts" approach. Executive orders in 1994, 2021, and 2022 increasingly charged the EPA to assess and address cumulative impacts. In addition, the National Research Council and the National

TABLE 5. Some Early State Cumulative Impacts Laws and Rules at a Glance (cont.)

	Minnesota	New Jersey	New York
Permits in these states can be conditioned or denied when . . .	the permit, in combination with the environmental stressors and the socioeconomic impact, would have a substantial adverse impact	a proposed facility would cause or contribute to cumulative impacts higher than those borne by other communities	it is shown that a proposed facility would cause or contribute, either directly or indirectly, to a disproportionate or inequitable (or both) pollution burden
Rulemaking status	Due 5/24/26	Completed	Completed commissioner policy
Which regulatory agency does this law apply to? **Who must assess cumulative impacts when considering permits?**	Minnesota Pollution Control Agency	New Jersey Department of Environmental Protection	New York State Department of Environmental Conservation
What kinds of permits or projects can be denied? **Which can be approved with more restrictive conditions?**	Major or state air permit	New major facility permits can be denied; permit renewals for existing major facilities cannot be denied outright but may be required to increase pollution controls	Major individual facility permits and major permit modifications
Exemptions	Approved community benefit agreement	Serve a compelling public interest in the community (not economic)	For "minor" (as defined under the state Environmental Conservation Law) permits, permit renewals, general permits, and registration permits
Where this applies	EJ areas in Twin Cities 7-County Metro, Duluth, Rochester	Statewide in overburdened communities	Statewide in disadvantaged communities

Environmental Justice Advisory Council have recommended a more holisitic approach to reducing pollution in communities.

Cumulative Impact Authorities in Federal Laws

Unfortunately, the movement of those recommendations from research to guidance to integration into regulatory action has been too slow to provide relief for frontline communities. Many of the organizations in Table 1, p. 4, "Guide Co-Developers with Expertise in Cumulative Impacts Policy," have argued that the EPA often underestimates its existing authority (and legal responsibility) to consider cumulative impacts. For example, comments submitted in 2023 comments by Earthjustice, Coming Clean, the Los Jardines Institute, the Natural Resources Defense Council, the Union of Concerned Scientists, and Women's Voices for the Earth argued that the Toxic Substances Control Act *already* requires the EPA to consider the real-world, cumulative risks that toxic chemicals pose to communities.

Right now, the EPA has the power to consider and address cumulative impacts and environmental justice in many ways, as described in the EPA Legal Tools to Advance Environmental Justice: Cumulative Impacts Addendum. That document describes the EPA's *existing* authority, as of January 2023, to consider the components of cumulative impacts under every major federal environmental law. The EPA Office of General Counsel contributed to the document by reading federal laws and amendments and relevant court cases. Sometimes, the EPA has authority to take cumulative impacts into account during regulatory decisionmaking—for example in setting standards, permitting, and mandating environmental cleanups. The EPA also can include components of cumulative impacts in analyses that inform decisions around grant allocation, prioritizing monitoring or locations for community outreach and engagement. Regulatory decisionmaking, such as rule making and permitting, is less likely to change in the future, and has more potential to result in long term pollution reductions.

Looking Ahead: The A. Donald McEachin EJ4All Act

The A. Donald McEachin Environmental Justice For All Act, introduced in each US Congress since 2019, would put many EJ resources and requirements into place, set up advisory bodies, and mandate programs and requirements to address disproportionate impacts on communities of color, low-income communities, and tribal and Indigenous communities. If enacted into law, it would require permitting under the Clean Air Act and the Clean Water Act to consider cumulative impacts. Also, it would strengthen public participation requirements under the National Environmental Policy Act.

The Environmental Justice Health Alliance for Chemical Policy Reform, Coming Clean, and a network of EJ organizations have submitted written comments in strong support of this bill. As the Natural Resources Defense Council notes, perhaps the bill's most important aspect is that it has been crafted in partnership with EJ leaders. UCS considers it a comprehensive EJ law that would provide many protections for EJ communities. Still, as with any law, enacting it could take many years and lots of negotiating, and the final language is uncertain.

Decisionmaking in Cumulative Impacts Permitting

Agencies already use cumulative impact assessments to prioritize their work, focus public education, and decide where to award funding. However, for long-term, stable environmental health protections that do not ebb and flow with administrations, cumulative impact assessments must consistently inform regulatory decisions (rulemaking, standard setting, and permitting).

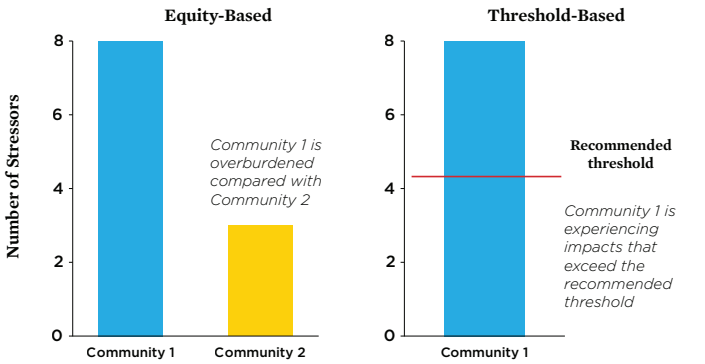
You may be organizing because you see significantly more pollution in your neighborhood than in other neighborhoods or simply because too much pollution already afflicts your neighborhood. In both cases, state laws can help by allowing state agencies to make regulatory decisions like limiting or denying permits based on cumulative impact assessments. The decisions under these laws currently come in two basic forms (Figure 1):

TABLE 6. Requirements for Public Engagement in Some Early Cumulative Impacts Laws and Rules

	Colorado	Connecticut	Massachusetts
Timing of meetings and hearings for a proposed permit	Public hearing request must be transmitted to the commission within 20 days of its receipt; commission must hold public meeting within 60 days	Public participation plan must identify a time and place where an informal public meeting will be held; it must be convenient for the residents of the community	Applicant must participate in a meeting with the Department Regional Office to discuss public outreach and involvement measures
Public notice for meetings and hearings	Removes the newspaper publication option and county clerk and recorder filing requirements and provides for alternative methods of giving public notice, including the Air Quality Control Commission website	Reasonably visible signage in languages spoken by 15% of population and posted online; notify by mail all residents within ½ mile; ¼ page ad in a newspaper in area affected, and any other local paper in the Monday issue of a daily or any day in a weekly or monthly	Provide outreach and meaningful public involvement nearby; hold community meetings and meeting with existing community-based organizations; create a project webpage and social media channels
Information requirements prior to and after meetings and hearings	Not stated	Public participation report with responses to concerns and questions (written and verbal), and any changes to the proposed activity; video record the informal public meeting and submit the recording to department or council	Not stated
Public participation (general)	Follows existing requirements	Defines "meaningful public participation"	Provide opportunity for public comment and meaningful public participation plan
Engagement (general)	Commission provides resources to support community engagement in process including translation and outreach.	Not stated	Applicant required to do public engagement

- Under New Jersey's cumulative impacts law, no facility or proposal can add pollution that "cause[s] or contribute[s] to environmental or public health stressors in the overburdened community that are higher than those borne by other communities within the State, county, or other geographic unit." This is known as an *equity-based decision*. It takes into account that one location might have more stressors than another and sets a limit on adding more.
- Other cumulative impacts laws, such as those in Minnesota and Massachusetts, determine a decision to limit or deny a permit based on *threshold impact* or a significant or substantial impact.

FIGURE 1. Two Approaches to Decisionmaking Informed by Cumulative Impacts



Some state and federal policies make equity-based decisions based on which community has more cumulative impacts. Some state cumulative impacts policies (e.g., Minnesota, Massachusetts) require threshold-based decisions comparing estimates of cumulative impacts with thresholds determined to pose some level of potential harm.

TABLE 6. Requirements for Public Engagement in Some Early Cumulative Impacts Laws and Rules (cont.)

	Minnesota	New Jersey	New York
Timing of meetings and hearings for a proposed permit	Two meetings in the EJ area prior to denying or issuing a permit, one meeting before analysis and one after	Organizes and conducts a public hearing in the overburdened community	To be determined in rulemaking
Public notice for meetings and hearings	Publish notice with date, time, and location of meeting and a brief description of the project in a newspaper of general circulation in the EJ area 30 days before meetings; post physical signage in affected EJ area	Notice in two newspapers, including one non-English paper; mail notification of informal public meeting to population within ½ mile	Not stated
Information requirements prior to and after meetings and hearings	Commissioner must post notice and cumulative impacts analysis on agency website at least 30 days before 2nd public meeting, providing public comments afterwards	Public meeting must be video recorded and made available; facility must submit public participation report; department must publish environmental justice impact statement on its website	Requires a meaningful public participation plan
Public participation (general)	Provide opportunity for robust public and Tribal engagement; accept written and oral comments; commissioner to consider cumulative impacts analysis conducted, the testimony presented, and comments submitted in public meetings	Applicant: provide clear, accurate, and complete information; accept written and oral comments; enable meaningful public participation; transcribe public hearing; submit transcript and written comments. Department: consider the testimony and written comments	To be determined in rulemaking; will include but not be limited to provisions regarding notice, review, public participation, and public hearings
Engagement (general)	During rulemaking, agency must engage in robust public engagement, including public meetings and Tribal consultation	Not stated	Not stated

EXERCISE 3

You can dig deeper into the Legal Tools document. Use the quoted words in keyword searches as an aid to navigating in the document, commenting about the EPA's existing authority (that it is or is not using), or providing comments suggesting additional authority.

EPA Water Program:
- "necessary to protect the health of persons"

- External and intrinsic factors, historic burden: "protections of people with very high exposures, subsistence level or unique," "adversely affect the health of persons," "not only acute contaminants but also those that lead to chronic health effects"
- Multiple chemicals: "co-pollutant reductions"
- Multiple pathways, media: "exposure to pollutant that is not related to drinking water or eating fish," "relative source contribution," "human use characteristics"
- Multiple sources: "multiple sources of discharges and effluent," "attributable to the collective effect of a number of individual discharges"
- Multiple pollutants: "including chemicals of concern to environmental justice communities"
- Non-chemical stressors: "inclusion of non-chemical stressors if related to water quality or to focus attention"
- Community participation and engagement: "discretionary authority to encourage states to improve public participation"

EPA Air Program:
- "ample margin of safety to protect public health"

- External and intrinsic factors: "vulnerable communities"
- Community participation and engagement: "reasonable notice and public hearing"
- Multiple chemicals: "potentially toxic substances in the mix of particulate matter"
- Multiple sources: "together with air pollution from other sectors," "pollution contributions from other sources"
- Multiple pathways: "assessing multi-pathway exposures," "persistent and bioaccumulative pollutants"
- Historic burden: "existing environmental burden"

EPA Pesticides and Toxics Programs:
- "unreasonable adverse effects"

- External and intrinsic factors: "protections of people with very high exposures, subsistence level or unique," "potentially exposed or susceptible subpopulations," "greater susceptibility"
- Community participation and engagement: "incorporation of public comments"
- Multiple chemicals: "common mechanism of toxicity," "cumulative effects"
- Historic burden: "persistent, bioaccumulative"
- Multiple pathways: "aggregate exposure," "potential for long-range transport"

EPA Waste and Emergency Response Programs:
- "as may be necessary to protect human health and the environment"
- "even though the harm may not be realized for years"
- "necessary to protect the public health or welfare or the environment"

- Multiple media: "multiple environmental media"
- External and intrinsic factors, multiple environmental media, and historic burden: "protections of people with very high exposures, subsistence level or unique," "pre-existing community vulnerabilities," "and other related factors," "include 'demographic' factors," "population at risk"
- Multiple chemicals: "impacts of the chemical constituents," "multiple contaminants and multiple pathway," "chemical categories"
- Community participation and engagement: "must hold at least one public meeting," "incorporation of public comments," "public participation in the development, revision, implementation, and enforcement of any regulation, guideline, information, or program," "community acceptance"
- Multiple pathways: "bioaccumulation," "persistence," "potential exposure pathways"
- Non-chemical stressors: "subject to other considerations," "potentially exposed or susceptible subpopulations"
- Multiple sources: "multiple sources," "background exposures"

EPA Environmental Review Programs:
- "cumulative effects"
- "disclosing any disproportionate impacts on communities with environmental justice concerns, including cumulative impacts"

- External and intrinsic factors: "human health, social, and economic effects," "interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed agency action"
- Historic burden, multiple media, pathways, chemicals: "multiple or cumulative exposures"
- Multiple sources: "past, present, and reasonably foreseeable actions"
- Community participation and engagement: "meaningful involvement of communities with environmental justice concerns," "meaningful involvement of communities potentially impacted by agency actions"

Section 5: Organizing in Your Community

In This Section

Every community is unique, yet we can learn a lot from one another's work. You can draw on the practices and tools in this section as you build your own strong community organizations and organize successful campaigns to influence public policies and corporate practices on community impacts.

Organizing Your Community

Do not expect public officials or corporate leaders to address cumulative impacts on their own. Even if some officials support your goals, you need community leadership and organization to overcome the opposition of toxic and polluting industries.

To address cumulative and disproportionate impacts, community organizations across the country have campaigned for laws, regulations, and ordinances using strategies and tactics ranging from educating, to building the base of supporters, to taking direct action.

Key steps to getting the public policies your community needs include:

- Organizing your community and building strong partnerships;
- Finding resources that will help you organize;
- Identifying the decisionmakers on your issues;
- Identifying potential allies and opponents;
- Deciding on a strategy and a plan for action;
- Compiling research, evidence, and resources and drafting a policy proposal;
- Anticipating barriers, challenges, and resistance;
- Implementing the action plan; and
- Maintaining attention to your campaign.

Sometimes, community and environmental justice organizations seek technical and legal support as they campaign for cumulative impacts policies. The nonprofit environmental health network Coming Clean can help you connect to sources of such support.

Large corporations, along with the people and institutions benefitting from hazardous and polluting facilities, have more resources and influence than do individuals or households. That said, communities and their allies can utilize their collective power to win changes by organizing—working together to use their voices, dollars, and votes. Marshall Ganz, a long-time community organizer and teacher of organizing, defines "organizing" as "leadership that enables people to turn the resources they have into the power they need to make the change they want."

Community organizers help bring people together to identify common interests and resources, plan strategies and actions together, and build relationships and collective leadership. The community, its leadership, and its organizing—planning and

acting together over time, again and again—can overcome the money and influence of toxic industries. Individuals can be ignored; *organized communities* cannot. Organizing a community involves:

- Listening to and talking with people and bringing them together (often done by going door to door);
- Engaging in collective analysis, planning, and decisionmaking (usually at community meetings or in small groups);
- Developing collective leadership (such as setting up a structure to share leadership and responsibility and learn leadership skills together);
- Mapping community resources, allies, and opponents; and
- Planning and implementing a campaign—a series of actions designed to win a specific change.

Planning Strategies

Fighting local polluters can be a lonely, long endeavor, so the first step to improving conditions in your community is to organize and build camaraderie and political strength. These steps will help you amplify your voice, share commitments and responsibilities, and reduce cumulative impacts:

- **Decide your goals.** Do you want a new law? To change a zoning requirement? To get existing policies enforced better? To block a new facility from being permitted? Start by defining the goals, keeping in mind that they may evolve as you build a coalition and make progress.
- **Identify the stakeholders on your issues** and determine the strengths and level of commitment of each. Who is most affected by the challenges your community faces? Which stakeholders do you already have relationships with? Who do elected officials care about and listen to?
- **Build relationships and power**. Reach out to community leaders and members. Direct means include door-to-door canvassing, tabling at farmer's markets and other community events, and speaking at your school and church. Less directly, you can reach out via print, broadcast media, and social media.
- **Craft a collaborative campaign strategy** with your colleagues, based on the ability, capacity, and interest of each member of your new team. To lay some groundwork for the campaign ahead, decide on a decisionmaking structure, bottom lines, communications within the group, and what to call yourselves. Consider what other fundamental decisions will ensure collaboration while deciding what you can actually do.

In developing a collaborative campaign strategy:

BOX 6. ADDITIONAL RESOURCES FOR ORGANZING YOUR COMMUNITY

You can draw on many manuals, toolkits, and training programs as you organize your community and plan effective local and state campaigns to address cumulative impacts:

- "Organizing: People, Power, and Change," an organizer's handbook, is based on the work of Marshall Ganz.
- The Organizing section of the Commons Social Change Library provides resources on community organizing, including several community-organizing manuals.
- The Leading Change Network's Guide to Organizing includes manuals, videos, articles, and other tools about community organizing.

- **Develop an "inside-outside" strategy** and leverage the interaction between the two parts of the strategy. On the one hand, build and maintain relationships with your targets—that is, the people who have the power to get you what you want. This may include agency staff, elected officials, media contacts, and influencers. Maintain a regular flow of communication with these inside targets that bolsters your case: share new science, movement on policy elsewhere, media coverage, and testimonial stories. On the other hand, it's important to keep up the public pressure on these outside targets, using tactics like holding public demonstrations or direct actions and placing media stories showing broad community support for your full vision, and showing that you are part of a larger coalition that won't give up on a shared policy goal.
- **Who has the power** to deliver what you want, and who can help—or hinder—your campaign? Engage in "power mapping" to determine and prioritize your allies, opponents, and targets. This will help you decide how to deploy resources to engage with each of these constituents.

Applying Action Strategies: An Example

Here's an example of the steps for drafting and introducing cumulative impacts legislation. Coming Clean can consult with you while you conduct this exercise.

BOX 7. CRITICAL QUESTIONS WHEN ADVOCATING FOR CUMULATIVE IMPACTS POLICIES AND LAWS

- What public engagement do you want the law or regulation to require?
- What types of project, proposal, or facility do you want to give regulators more power to challenge or deny permits?
- What exemptions would you accept—if any?
- What environmental, social, and public health stressors are important to your group?

What Are Your Targets?

Will you introduce legislation at the city, county, or state level? Consider the political landscape and these factors:

- State-level laws affect more people and apply to more pollution sources.
- Perhaps adjust your tactics if governmental decisionmakers do not support EJ work or more environmental health protections. For example, you might describe what you seek using evidence the opposition cares about. Or you might decide to work at a local level rather than statewide. Enacting city legislation can be a great way to build momentum for and prove the viability of cumulative impacts laws at the state level.
- Determine the state agency that approves permits. Cumulative impacts legislation at any level will affect this agency. Usually this is as simple as googling "who approves air permits in [insert your state]."
- Contact your state permitting authority via email, online, or phone. Sign up to receive notifications whenever a new permit application is pending or a new permit has been approved.

Build Your Case

- Decide how you will define cumulative impacts.
- Decide how you will show that your community (and others in the city or state) experience cumulative impacts.
- Use online EJ mapping tools to build a case that communities in your city or state face cumulative impacts.
- Identify which facilities contribute to cumulative impacts. Especially identify those with problematic permits or repeat violations.
- Identify potential sponsors and possible opponents of your legislation. Research your city or state legislature. Which legislators have a history of championing environmental or progressive legislation? What are some relevant issues that matter to independents and possible opponents in the legislature? Which legislators have financial ties to the petrochemical industry? Databases like Open Secrets can help

> *"We have soil contamination in at least one of our parks, but I suspect more than that. There was dioxin in the sediment in the fish. We have emotional distress from decisionmakers not taking into consideration the experiences that impacted neighborhoods have. So it's like we're beating our heads on the wall trying to tell them things and they're just doing whatever they want to do and not addressing what we're talking about. We have odors that are associated with chemical facilities and wastewater treatment plants, which leaves us unable to fully enjoy our homes and also it leaves us worrying about whether the odor is a chemical that is at an unhealthy level. In our neighborhoods, we're vulnerable to displacement because there's a high percentage of folks who rent. And so because of high rents and due to other gentrification tactics. . . . People are finding it hard to access to black primary care physicians."*
>
> — Eboni Cochran, REACT

TABLE 7. A Hypothetical Example of Campaign Planning

Name (Party Affiliation)	Constituent 1 (D)	Constitute 2 (I)	Constituent 3 (R)
Where do we expect this lawmaker to fall on the spectrum of allies?	Ally	Passive opponent, neutral, or passive ally?	Active opponent
Why do we expect this lawmaker to be an ally or opponent?	Cosponsored bills with environmental organizations and tenants' rights organizations; reelection campaign mentioned the importance of adapting to climate change	Unknown/neutral	Receives campaign donations from owner of XYZ chemical plant; opposed past environmental legislation
What relationships do we have with this lawmaker? **What relationships do others in our network have with this lawmaker?**	We don't work with Bob yet, but other allies have a positive working relationship with Bob	Newly elected so we don't know much and the voting record is short. Doesn't seem to have many relationships with organizations we know	No known relationships
Next steps	Set up meetings with organizations that Bob works with to see if they would support a cumulative impacts bill or would introduce us to Bob, share staff names and contact info, and offer helpful background about working with Bob.	Review Jane's campaign materials and early votes. Set up introductory meeting to seek common ground and get our issues on the table.	Don't contact. Keep tabs on donations from polluters and any other intel that could undermine their influence. Documenting campaign donations from XYZ chemical plant could help our messaging.

you research the campaign contributions of major industry players.

- Identify who has jurisdiction over the steps toward passing your bill. For example, it is always good to offer environmental bills first to the chair of the legislature's environmental committee. A chair who sponsors a bill can swiftly put it on the committee agenda and then move it forward. Even a chair who does not agree to sponsoring the bill may suggest who would be the ideal sponsor. Plus, you will have started to build a relationship with the chair.
- Research all legislators, and rank them on the "spectrum of allies." This enables you to make an informed prediction of your likely allies, opponents, and neutral parties. It also gives you an idea of who might actively or passively support or oppose your campaign. Table 7 is a hypothetical example that could result when a community completes this exercise.

Drafting Model Legislation

Bring a draft of your legislation or a model policy whenever you meet with a potential ally on the city council or state legislature. This will show that you have done your research and are familiar with the legislative process, and that other cities or states have enacted policies on cumulative impacts.

How to Get Started

Drafting legislation is easier than it might sound. There is no such thing as plagiarism when it comes to drafting language for bills. If you see language you think could be adapted to your local context, copy and paste away!

The first step is to look at existing state-level cumulative impacts laws.

Click on the links in the first row in Table 5, p. 16-17, and Table 6, p. 18-19, in Section 4. Read the legislative text of each policy.

BOX 8. EXAMPLES OF MODEL ENVIRONMENTAL JUSTICE BILLS

The Sabin Center for Climate Change Law at Columbia Law School and WE ACT for Environmental Justice have published a series of "Model Environmental Justice Bills." These policies are a good place to start when trying to draft your own local bill.

It can help to print the full text of laws and mark up the hard copy with questions and notes.

Compare different laws. How would defining cumulative impacts work for your city, state, or community? What do you like or not like about each law? Do the laws include any problematic exemptions? Do the laws only apply to some kinds of permits?

Jumpstart your first draft by identifying the bill you like best.

Copy and paste that bill into a new document. If you can, use the bill as introduced because it likely reflects the fewest compromises. Use the final law if the original text is not available.

Make sure your own draft bill includes the correct information (e.g., *your* city/state, city/state legislature, regulatory agencies). Delete references to any legislation in another city or state. Instead, consider referencing relevant city/state laws or executive orders in your city/state. For example, does your city/state have a plan to reduce carbon emissions or prepare for climate change? Does your city/state have an EJ office, task force, or committee? If so, reference those.

You might really like some things about New Jersey's cumulative impacts bill, and other things you really like about New York's. Copy the language that you like in each and combine them.

Share your draft with your allies.

The model legislation you start with is just a starting point. Your allies are likely to think of ways to improve the language. In addition, sharing the draft is great practice for making your case later to policymakers. Plus, you will go into meetings with policymakers with community support.

Any future sponsor of the bill will want to make revisions and talk through the full language with you. You might have to compromise, so include that scenario in discussions with allies about bill language. However, do not "negotiate against yourself" beforehand by adding exemptions, weakening the bill, or anticipating what legislators might want. Come to your first meeting with decisionmakers with the bill that you and your allies think is strongest and best for your community.

Building Decisionmaker Support

Start setting up meetings.

Having unified your community around a policy vehicle, meet with potential allies in the city or state legislature. Remember: these are *your* elected representatives; their job is to represent *you*.

You have options at this point. You could set up meetings with individual elected officials, or you could organize a panel, listening session, breakfast briefing, or "toxics tour." At a "meet and greet" event, you could invite everyone on the city council (or everyone on the city council who is neutral or an ally) to hear a community presentation on how you are experiencing cumulative impacts.

End every meeting with a clear ask and a concrete next step.

For example, close the meeting with a statement like this:

> *"Thank you so much for your time today. We would like you to support our model cumulative impacts bill and are interested in working with you to introduce this to the city/state legislature [or be a co-sponsor if you have secured a strategic lead sponsor]. Please read our model bill and give us feedback. What further information would you like before making a decision? When would you be available for a follow-up meeting with us?"*

Building the Case: Communications and Storytelling Tips

Part of organizing for a new or improved policy is making sure people know why the policy is needed. Weaving together background information about the issue with people's stories and experiences accomplishes this, and there are many ways and places to do this.

Letters to the Editor and Op-Eds

Placing opinion editorials (op-eds) in your local newspaper and sending letters to the editor are great ways to influence and educate a wider audience. By drafting concise, to-the-point commentary about cumulative impacts in your community, you use the power of the press to change minds and influence elected officials or other opinion leaders.

BOX 9. COMMUNICATION SAMPLES

- Letter to the editor: A letter to the *New Haven Register* marking Earth Day related to environmental justice and the need for cumulative impacts law in Connecticut.
- Op-ed #1: A staff member of a community coalition advocated for cumulative impacts legislation related to air pollution in Washington State.
- Op-ed #2: Leaders of two Detroit organizations signed this op-ed in *The Hill*, a national publication.

Elected officials care a lot about what appears about them in the media, and they closely monitor the opinion pages of their local papers. That makes letters to the editor and op-eds very influential for keeping them informed and accountable.

The websites of most news outlets have specific guidelines regarding the types of submission they accept, how many words you can use, and how to submit your piece. There are no guarantees your submission will be published, but you boost the odds when you follow the directions.

- Letters to the editor are brief—around 250 words—and to the point. It helps if your letter refers to a recently published article, column, or event in the publication you write to. Letters should offer an action or outcome. Include a call to action.
- Op-eds are longer, usually 400 to 600 words. They offer information to back up and justify your opinion. As with letters to the editor, include a call to action. Stick to the word count or the editor will likely reject it.
- Read other published letters to the editor and op-eds to get inspired and see what works.
- Pay attention to your local newspaper coverage and submit your piece within a week of when a relevant event or previous coverage occurred. Determine your angle on that event or coverage.
- Use your opening sentence to pull in readers and keep them reading.
- Use your own words and voice and include your contact information.
- Combine compelling statistics with a resonant story. Personal details (e.g., as a nurse, as a parent, as a firefighter) make your opinion more relevant to readers. Refer to the target(s) of your advocacy (e.g., the mayor, the Air Resources Board) and their work.
- It helps to have a letter or op-ed signed or co-signed by an influential community member (e.g., a faith leader, medical professional, businessperson).
- Include a call to action. Give readers something to do after reading the piece.
- If your letter or op-ed is published, share the published version with each target's office and tag targets on social media.
- If your letter or op-ed does not get published, you can polish it and send it to another newspaper. Newspapers need to fill their opinion pages every day and are always looking for compelling, well-written editorial content. Keep a list of publications and keep trying.
- In their Science Advocacy Toolkit, UCS offers a "how-to" on writing a letter to the editor. Coming Clean can help you find resources and examples of letters to the editor and op-eds. Coming Clean can also review a draft of your piece, help you submit it, and help you finetune your call to action.

Letters to Elected Officials

Decisionmakers need to hear from supporters of policies that protect environmental health. Written letters can give elected officials ideas for new policies, or they can provide evidence and stories to sway them into supporting an existing policy. The American Civil Liberties Union and the Union of Concerned Scientists provide tips for writing letters to elected officials.

"Sign On" Letters

A letter about your issue can have more power or more influence when many organizations or individuals sign it. All the signatories agree with the letter's content and are willing to associate their names or their organizations with it. UCS offers guidance on writing a letter that others can sign onto.

Amplify Your Voice!

You can augment the various strategies for building support in a number of ways:

- Provide anything you publish to elected officials via email or social media or during meetings with them. You can find officials' contact information on their websites.

Share your published letters and op-eds with Coming Clean to amplify on their social media platforms

- Email published letters and op-eds to people in your community and to fellow advocates. Ask them to spread the word. Your message could be as simple as:

"I've been published in @[Publication Name] urging _____ to support the local CI initiative. Check it out! [Insert Link]. Please share it to help spread the word!"

- Promote published letters and op-eds on your personal social media accounts. Urge others to "like," comment, and, most important, amplify your published letters and op-eds by sharing them further.

Social Media

Posting on social media like X/Twitter, Facebook, Instagram, and TikTok can be a great way to quickly get word out about a legislative hearing, a new law, a new study, or an organization's meeting time and place. UCS offers this advice on how to plan for a social media post.

Some social media posts include a link to a video on a topic. For example, this Politico post is about the Biden administration's 2023 executive order 14096, "Revitalizing Our Nation's Commitment to Environmental Justice for All." The post mentions cumulative impacts eight times.

Policymakers post frequently on social media platforms. If you agree with the policy a policymaker proposes, amplify the message by liking, commenting, and "sharing" it with your followers.

Tag Coming Clean, by adding @stoptoxics to your post, whenever cumulative impacts legislation is moving near you. Its network can help get the word out via social media. Here are two examples:

- Cumulative impacts legislation has just been [introduced/moved out of committee/passed/signed] in [state/city/county]. This [law/bill] will help reduce pollution in overburdened communities. We need policies like this in all 50 states! @stoptoxics
- Thank you [tag legislative co-sponsor/s] for [introducing/endorsing] the [insert name of policy]. This [law/bill] will give [our city/state] the power to deny permits for new polluting facilities that will add to health burdens in [EJ communities]. @stoptoxics

Public Comments and Public Testimony

It is important for decisionmakers to hear from the people affected by their decisions. You can testify at a public hearing in person, virtually, or in writing. UCS offers these tips for testifying.

Many agencies use the terms "public testimony" and "public comment" interchangeably, but they can be different. In *public testimony*, you are sworn in before you testify, and what you say will *always* be a part of the record and considered by decisionmakers. *Public comments* generally, *but not always,* become a part of the public record. With comments, make sure that what you say or write will be a part of the public record and that decisionmakers will consider it by asking the question in advance when signing up to speak, in your testimony intro, or by follow-up emails or calls.

Typically, when you testify in person, you address the chair and then the committee, introduce yourself, and generally tell the committee who you are and whether you oppose or support the law. Then you provide your story. Remember that your story and your community's lived experience are important (see Box 10, p. 26, The Power of Storytelling). Observations of odors, sights, and sounds and presentations of community-measured data are subject-matter expertise.

Public hearings have tight timelines; you will be cut off if your testimony runs over the allotted time. Practice and time yourself beforehand. This testimony in support of the Minnesota cumulative impact law fit within 1.5 minutes. This written testimony in support of the New Jersey cumulative impacts law was submitted to news outlets before a vote.

When speaking or writing in favor of cumulative impacts laws or rules, think about:

- What public participation you want the laws or rules to require;
- What pollution sources the laws or rules should include;
- What exemptions you will consider;
- What data and information you want included in cumulative impact assessments; and
- Details on how you want decisions made.

BOX 10. THE POWER OF STORYTELLING

Real stories from people living with cumulative impacts are very powerful. Moreover, you can amplify such stories to bring attention to the importance of cumulative impacts policies.

Always gather stories in an ethical manner and with respect. People tell their stories to those who they trust, and it takes time to earn trust. Partnering with trusted messengers can help you gather stories and elevate them through local and social media.

Sometimes people tell their stories and submit them as public comments. Community organizations have been effective in gathering comments by hosting events and filling out comments together with attendees, then submitting all the comments together.

Teaching about Cumulative Impacts

While engaging in your campaign, you will find a need for education materials around cumulative impacts, using these for communities and in other educational settings. Here are several resources:

- This lesson plan from the Chicago Botanical Gardens uses mapping exercises.
- Visualizations and tools from Los Jardines Institute explain cumulative impacts concepts and systems.
- A lesson plan for Washington State includes a cumulative impact scoring method from Just Health Action.
- These flash cards provide components or elements that a cumulative impact assessment can include.
- A presentation led by Dr. Ana Baptista, Associate Professor of Environmental Policy and Sustainability Management at the New School, described the connections between cumulative impacts and environmental justice.
- A presentation by Dr. Nicky Sheats, director of the Center for the Urban Environment at Kean University, covered the laws related to cumulative impacts.

Maintaining a Drum Beat

Only advocacy on the part of the public produces sweeping changes in the United States. Civil rights, women's rights, workers' rights, and same-sex marriage are all examples of the power of the people to institute change. In almost every case, advocacy has dragged leaders, often kicking and screaming, to make these improvements, and a lot of opposition to changing the system persists. Making change is hard work and can require years of resources and attention. Narrowing your focus can help you and your allies maintain resources for the long haul. And incorporating the consideration of cumulative impacts into your existing campaigns will strengthen them!

When advocating for cumulative impacts policies, it is important to bring scientists, health care providers, lawyers, economists, and others with expertise and ways of knowing into supportive roles. It is also important to direct information to decisionmakers—to those who develop laws (legislators, city council) and those who implement them (e.g., regulators, compliance and enforcement staff). Sometimes, you will need to determine to whom to direct information and advocacy or when to do power mapping.

Barriers, Challenges, and Solutions

Despite recommendations on how to do organizing well, you will encounter barriers. Table 8, p. 29, will help you and your organizations push for better and safer community engagement from agencies, as well as to respond to negative and delaying language as soon as you hear it.

BOX 11. ILLUSTRATING CUMULATIVE IMPACTS

To protect fenceline communities requires changes in enviromental regulations, and this requires system change. After all, the impacts of environmental pollution connect to other aspects of public health. For example, consider a young person who has asthma, is exposed to air pollution, and lacks access to adequate and culturally competent health care. All this is important.

To change a system, we need to imagine the connections among the parts of the system. Diagram those connections and estimate things that flow through the system and where they might accumulate.

Washington University researchers help communities develop system models as an aid to solving problems and making decisions. Their system model visually displays the connections among early childhood chemical exposures, adverse experiences in childhood, discrimination, and neurological functioning.

> *"The idea of where you're going to spend your time and energy is critical to your quality of life. And so people need to know that whatever they're embracing around this climate and environmental strategy has to help their life, not just in the future, but right now."*
>
> — Jerome Shabazz, Overbrook Institute

TABLE 8. Barriers, Challenges, and Solutions

Barriers and Challenges	Solutions and Source of More Information
Public hearings are not held in community gathering spaces. Rather, they take place in government buildings where heavy security makes people feel unsafe or in industry settings that disadvantage community members.	Hold public meetings and be a good host. Be welcoming and provide water, food, and childcare. Choose your locales to serve community members, not government or industry.
Editorial boards on your local newspaper may be overly sympathetic to local business interests. Here is an example.	Use the information and links in this Guide to write a letter to the editor, op-ed, or editorial and submit it to several outlets. If you need support, consult the experts and organizations in cumulative impacts policy in Table 1, p. 4.
False narrative #1: Cumulative impacts is not science, it is politics.	Science supports the hows and whys of cumulative impacts.
False narrative #2: Working on cumulative impacts is too hard or too complicated. "Analysis paralysis" can occur when you study and study without taking any action to reduce pollution.	Regulatory agencies use *existing* methods to assess and make decisions based on cumulative impacts. These examples come from New Jersey, Chicago, and Minnesota).
False narrative #3: Cumulative impacts work is too expensive.	This view is unethical: it would sacrifice a community, placing a higher monetary value on profiting certain polluters while asking every other sector of the economy to bear those costs. It also does not factor in the cost of often-irreversible damage to natural resources, such as the loss of a source of drinking water.
False narrative #4: This is crucial: often, opponents of environmental protections use the full burden of proof of causation and exposure as a barrier to avoid or delay action—for example, with arguments like "it is in the soil so there will be no exposure."	We must not delay or avoid action, and the burden of proof of exposure and causation is a false and dangerous benchmark that perpetuates harm. In fact, early scientists who studied causality wrote about the importance of preventative action.
Loopholes in right to know laws and some requirements around confidential business information prohibit basing environmental protection on complete mixtures or providing communities with the information they need and deserve. (See plank #8 of the Louisville Charter for Safer Chemicals)	Learn more about confidential business information and urge agencies to require polluters to provide information in plain language. For instance, pesticide information should be provided to workers in multiple languages and include health impacts.
Your community faces both disinformation (intentionally providing inaccurate or irrelevant information) and misinformation (mistaken or inaccurate information).	This UCS video provides advice on how to spot and counter disinformation and how to deal with misinformation. The UCS Disinformation Playbook details common disinformation tactics.
It can take a long time to win.	This work is a marathon and not a sprint. But remember that a little over a million people complete marathons every year, and these long runs are achievable for all types of people. So, celebrate the sprints in between and take care of each other in your organization and community.
Policy work can drain the resources of EJ and community groups: time to attend meetings, write comments, generate support, build power, and learn and discern the potential outcomes of alternative legal language or proposals settings.	Be selective about how you devote your time and energy. Advocate for compensation for community members to make it easier for all to engage in the campaign—for example, by providing transportation and childcare to enable fuller participation in meetings and other campaign activities.
Instead of pollution-reduction activities, decisionmakers spend their communication resources minimizing the risk of a polluting activity or emphasizing other sources of pollution as more problematic.	Communities need to ask the right questions. This Guide is intended to help you prepare to do that well.
Environmental protection is siloed into different agencies, departments, and programs. Some call this "complexity by design." An example is a pesticide ban that covers one use but not another, or when one agency regulates chemicals in food, another regulates them in drinking water, and another regulates them differently if they are pesticides.	Because people are exposed to multiple chemicals from multiple sources, it is nearly impossible to link one outcome to one chemical. This is part of the reasoning behind cumulative impacts work: reach decisions based on bringing together *all* the information about community impacts. Communities should keep calling for coordination across offices at environmental regulatory agencies, coordinated and connected data, and the inclusion of lived experience in cumulative impact assessments.

The Community Guide to Cumulative Impacts

Using Science and Organizing to Advance Public Health Policy

Trailblazing grassroots community advocates from across the United States joined with the Union of Concerned Scientists and Coming Clean to co-develop *The Community Guide to Cumulative Impacts: Organizing, Science, and Environmental Policy*. Harmful chemicals are typically regulated one at a time. Yet in the real world we are all exposed to multiple harmful chemicals, from the products we use, to pollution sources in our neighborhoods, to legacy pollution in our communities and us. These exposures combine with stressors on health that are often driven by systemic racism and unjust public policies: barriers to healthy food, existing health conditions, and poor access to healthcare. These cumulative impacts add up to harm people, especially in Environmental Justice communities. The Guide will help you take action in your community by providing an overview of strategies, tools, and state and local policies that give regulators more power to deny permits.

https://comingcleaninc.org/reports/community-guide-to-cumulative-impacts
www.ucsusa.org/resources/community-guide-cumulative-impacts
es.ucsusa.org/recursos/guia-comunitaria-sobre-los-impactos-acumulativos

coming clean

Coming Clean is a nonprofit collaborative of environmental health and justice organizations and experts, working to transform the chemical industry so it is no longer a source of harm.

ONLINE

Union of Concerned Scientists

The Union of Concerned Scientists puts rigorous, independent science into action, developing solutions and advocating for a healthy, safe, and just future.

ONLINE

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