

The clean air solutions checklist for cities

A resource of the City Clean Air Hub

What is this resource and how should I use it?

Use this checklist to get started on an action plan to identify and address air quality challenges in your city, following three essential steps for a successful air quality program – Investigate, Plan and Implement.

To browse all resources included in the City Clean Air Hub database, you can access the full [resource library here](#). If you're not sure where to start, you can use the "[Featured](#)" resource filter to see a shortlist of top recommended resources. Alternatively, check out our Resource Starter Pack at the bottom of the Resources page for a list of widely applicable resources that many cities have found useful in their planning efforts.

As you browse the resources on [City Clean Air Hub](#), use this document as a step-by-step checklist to investigate air pollution sources and impacts in your city, plan solutions to address them and gather resources to support successful implementation. You can store the links and information most relevant to you in the table provided for each step below, along with notes about how you plan to use each resource in developing your action plan.

Three steps to build your city's air quality action plan

Step 1: Investigate the problem

Meaningful air quality action starts with understanding the problem. This section features handpicked resources and tools to help your city assess air quality trends, identify top pollution sources and understand who is most exposed and at risk.

1.1: MAP AIR QUALITY IN YOUR CITY

The resources in this section will help you to understand when, where and what type of air pollution is impacting your community, which will support you in targeting interventions and maximizing health benefits.

- To get started, check out your city's air pollution and health [profile](#) on our website for location-specific stats.
- [Then view the list of resources](#) that we've curated to help cities get more information about local air pollution.



- Use the filters to explore - are there resources specific to your city or state? Are you interested in information about a specific sector, such as transportation? You can also use the search bar to find resources about a specific topic you may be interested in.
- For additional resources, the "Featured" resource filter (starred) and Resource starter pack included at the bottom of the Resources page give you a smaller list of resources that many cities have found useful in their planning efforts.

Use the table below to save and organize the resources most relevant to your city, and to make notes on how you plan to use them.

Resource Name	Resource Category/ Description	Link	Notes

1.2: IDENTIFY AND PRIORITIZE POLLUTION SOURCES

The tools in this section help cities identify where pollution is coming from, how much is released and which sources contribute most to poor air quality. They provide the insights that cities need to make the case for new policies and to focus resources where they will have the greatest impact. Check out our curated list of featured tools below to begin identifying your city's top pollution sources.

- [View the list of resources](#) for identifying and prioritizing pollution sources.
- Use the filters to explore - are there resources specific to your city or state? Are you interested in information about a specific sector, such as transportation? You can also use the search bar to locate resources about any specific topic you may be interested in.



- For additional resources, the "Featured" resource filter (starred) and Resource starter pack included at the bottom of the Resources page give you a starting list of resources that many cities have found useful in their planning efforts.
- Some questions to consider as you review available information about sources in your city:
 - What are the top sources of emissions in your jurisdiction?
 - Where does your city have an opportunity to act on specific sources?
- To get started, consider visiting EDF's [Air Tracker](#) tool, a real-time mapping platform that helps people learn about the air quality in their neighborhoods and track pollution back to the source.

Use the table below to save and organize the resources most relevant to your city, and to make a note of how you plan to use each resource.

Resource Name	Resource Category/ Description	Link	Notes

1.3: LEARN HOW AIR POLLUTION AFFECTS HEALTH IN YOUR CITY

Across the United States, air pollution contributes to more than 15,000 new childhood asthma cases, 50,000 emergency room visits and 100,000 deaths every year. It carries enormous economic costs, too — more than \$1 trillion every year or 5% of GDP. The health and economic effects of pollution vary across cities depending on factors like location, local pollution sources, weather, demographic patterns and state and local policies.

Air pollution's health harms fall harder on some groups than others. Children, seniors and pregnant women are among the most vulnerable, as well as lower-income and black and brown communities. [One study found](#) air pollution-linked childhood asthma cases were 7.5 times higher for U.S. communities of color than



for mostly white communities. Focusing policies on most affected groups is crucial to correcting a legacy of unfair treatment and maximizing health benefits.

- [Use our tool](#) to generate a city-specific report on local harms of air pollution in your city, including childhood asthma cases, emergency room visits and early deaths.
- View [additional resources](#) at the bottom of the page to help you understand how air pollution affects health, and what type of health effects to look out for in your city.
- Use the filters to explore - are there resources specific to your city or state? Are you interested in information about specific types of health impacts or specific populations within your city? You can also use the search bar to locate resources about any specific topic you may be interested in.
- Some questions to guide you as you explore these resources:
 - What is the health and economic burden of air pollution in your city?
 - Are any specific sources (e.g. transportation, industrial sources, etc.) driving these impacts?
 - How do these impacts vary geographically, over time, or by population?

Use the table below to note the resources most relevant to understanding health impacts in your city.

Resource Name	Resource Category/ Description	Link	Notes

1.4: FIND OUT WHO IS MOST AT RISK

In every city, some individuals and neighborhoods face greater health risks from air pollution than others due to differences in exposure and susceptibility, often created or worsened by legacies of unfair treatment. This section provides resources to help identify which neighborhoods in your city are most exposed to high levels of air pollution and who in your city is most at risk of the negative health impacts. This information can help



your city or town design targeted actions that reduce disparities, support sensitive populations and get the most health and economic benefits out of clean air policies.

- [View our list of recommended resources](#) for finding out who is most at risk.
- Use the filters to explore - are there resources specific to your city or state? Are you interested in information about specific environmental justice or equity concerns or specific neighborhoods within your city? You can also use the search bar to locate resources about any specific topic you may be interested in.
- Some questions to guide you as you explore these resources:
 - What groups are most vulnerable to health effects of air pollution in your city? For example, children, the elderly and pregnant women are particularly susceptible to health impacts from air pollution exposure. People with certain medical conditions can also be at risk.
 - What neighborhoods are most impacted by air pollution? People living in neighborhoods with high air pollution exposure are more at risk from air pollution-related health impacts, particularly if they are dealing with multiple health stressors at once.
 - Consider using EDF's [Climate Vulnerability Index](#) tool to identify neighborhoods within your city that are particularly vulnerable to the cumulative impacts of air pollution and other sources of inequity – such as underlying health, socioeconomic, environmental, and infrastructure challenges.
 - Tools like [EJScreen](#) can also provide a helpful snapshot of environmental justice factors and burdens – including air pollution – that many communities face, and how these vary geographically.

Use the table below to save and organize the resources most relevant to your city.

Resource Name	Resource Category/ Description	Link	Notes



STEP 2: Plan solutions to your city's air quality challenges

Once you have a solid understanding of your city's air pollution, sources, health challenges, and inequities, the next step is to identify evidence-based solutions and put them into action. The City Clean Air Hub offers case studies and resources that highlight best practices for anticipating common challenges and engaging stakeholders — especially most affected groups.

Cities use a wide range of time-tested clean air policy solutions even as they continue to invent new ones. There are two main solution types: those that aim to cut pollution at the source and those that focus on reducing people's exposure to pollution. By using both of these solution types together, cities can deliver immediate health benefits while making progress toward long-term air quality goals.

2.1: LEARN FROM OTHER CITIES

Cities can learn a great deal from what has worked elsewhere. Peer-to-peer learning can help your city or town understand which solutions worked, where and why, so you can evaluate whether those approaches could work in your own community. Take some time to review case studies of effective recent solutions in cities across the U.S. that may align with some of the challenges facing your city, or with policy solutions you may be considering for implementation.

- In the [Case Studies](#) section of the City Clean Air Hub website, take a look at success stories including an asthma alert program in [Houston](#), [Denver's Love My Air](#) program, and a clean air ordinance in [Cleveland](#).
- To find even more examples of experiences from other cities, you can access additional case study resources [here](#).
- Use the filters to explore: are there resources specific to your city or state? Are you interested in information about specific types of policy approaches or programs? You can also use the search bar to locate resources about any specific topic you may be interested in.
- Some questions to guide you as you explore these resources:
 - What has worked in other cities?
 - What are accepted best practices?
 - What are some mistakes to avoid?
 - What are key barriers to success?

Use the table below to save and organize the resources most relevant to you, and to make a note of how you plan to use each resource.

Resource Name	Resource Category/ Description	Link	Notes

2.2: ENGAGE STAKEHOLDERS

Creating clean air solutions that benefit communities in your city requires integrating the perspectives and experiences of affected residents, businesses and organizations from the beginning. Ongoing community input — particularly from those disproportionately impacted by air quality — is also essential to identify blind spots or considerations that data can miss. This section provides resources and stakeholder engagement tools to help city and municipal leaders engage meaningfully with affected communities to co-design and implement effective policies.

- [View relevant resources.](#)
- Use the filters to explore - are there resources specific to your city or state? Are you interested in information about how to engage particular stakeholder types within your city, or how to manage common challenges? You can also use the search bar to locate resources about any specific topic you may be interested in.
- Some questions to guide you as you dive into resources in this section:
 - Which stakeholders are most impacted by air pollution in my city, or would be most impacted by efforts to address sources or protect people from exposure?
 - How should cities approach stakeholder outreach in an inclusive way, including techniques to reach those with economic or language barriers?
 - What are best practices for integrating stakeholder input in program design and evaluation at all stages?

Use the table below to save and organize the resources most relevant to you, and to make a note of how you plan to use each resource.

Resource Name	Resource Category/ Description	Link	Notes

2.3: IDENTIFY EVIDENCE-BASED SOLUTIONS

Your city’s policy pathway to cleaner air will depend on its unique mix of pollution sources and community impacts. There are two main types of solutions that cities are often best positioned to implement: those that **protect residents from exposure** to air pollution and those that **reduce air pollution** by targeting sources. Find curated resources for each of these approaches below.

As you consider these solutions, ensure that you are taking steps to **prioritize those most at risk**: target interventions in highest-risk areas — such as near schools, homes or freight corridors, and for susceptible populations such as children, pregnant women and the elderly — to bring relief where it’s most needed.

Cities often start with one or two priority actions and build from there, pairing immediate protections with longer-term strategies to improve air quality over time.

- [Click here](#) to learn more about policies and programs that protect residents from air pollution and help safeguard community health, such as during events like wildfires, periods of extreme heat and high ozone episodes. This section also includes information on strategies to target susceptible groups – such as people living near major pollution sources, children, older adults, pregnant women and people with certain medical conditions.
- [Click here](#) to learn more about actions that cities can take to reduce air pollution from local sources. Cities can tailor strategies to their own pollution sources, geography and community needs using tools like ordinances, permits, building codes, land-use planning and transportation policies.
- As you explore these resources, consider the following questions:

- Where can I develop strategies to provide air quality education or other resources to vulnerable communities to safeguard health from the impacts of air pollution exposure?
- Which air pollution sources in my community can be most feasibly addressed through local policies?
- What major pollution sources are outside of my jurisdiction and would require collaboration with other governmental bodies (e.g. state or federal government bodies) to address?
- What strategies have worked well in other cities to address local sources like transportation, buildings and industry?
- What are the main barriers to success, and how have other cities addressed them?

Use the table below to save and organize the resources most relevant to you, and to make a note of how you plan to use each resource.

Resource Name	Resource Category/ Description	Link	Notes

STEP 3: Implement policies and programs

Once your city identifies its priority clean air solutions, the next step is implementation. But before launching into it, it's vital to take time to assess potential community-level impacts, consider long-term funding options and set up an evaluation plan to measure results and guide future improvements.

This section provides resources to help cities finance, implement and evaluate their clean air policies in the real world. Each of these stages plays a critical role in strengthening your programs, demonstrating their benefits to community stakeholders and keeping funding sustainable.

3.1: ANALYZE EXPECTED IMPACTS

Evaluating both projected and actual policy impacts is critical not only to knowing whether your solutions are working, but to documenting their impacts for constituents and stakeholders. It includes considering the effects of proposed solutions on air quality — especially for specific vulnerable populations — and how those solutions improve health outcomes.

Program evaluations both pre- and post-implementation should look beyond direct impacts to quantify co-benefits like greenhouse gas reductions or economic returns as well as any potential negative impacts that may need to be mitigated. The resources below provide guidance on how to evaluate the full range of impacts for both planned policies and those already underway.

- [View implementation resources.](#)
- Use the filters to explore. Are there resources specific to your city or state? Would a specific resource type – such as a model policy or modeling tool - be especially helpful? You can also use the search bar to locate resources about any specific topic you may be interested in.
- As you review these resources and begin to analyze projected impacts of your planned policy or program, consider the following questions:
 - What tools will help me estimate how solutions could affect vulnerable groups?
 - Which solutions could reduce health harms and what tools can estimate these benefits?
 - What are potential co-benefits of the policy – (e.g. greenhouse gas reductions, economic benefits), and what tools or techniques can I use to evaluate these?
 - What are potential negative impacts of this policy, and how will I plan to mitigate them?

Use the table below to save and organize the resources most relevant to your city.

Resource Name	Resource Category/ Description	Link	Notes

3.2: FUND PROGRAMS

Funding is one of the biggest barriers to getting even the highest-impact clean air solutions implemented. Although air pollution reduction policies can often show impressive results within just a few years, most can take longer to reach full impact. That’s why cities need sustainable strategies to secure and maintain financial support throughout the rollout and long-term operation of their programs. This section outlines resources that can help cities get to know their clean air funding options, including public and private sources.

- [View funding-related resources](#)
- Use the filters to explore - are there resources specific to your city or state? Is a specific type of funding mechanism especially attractive or feasible for your city? Would a specific resource type – such as a case study, model policy, or report – be especially helpful? You can also use the search bar to locate resources about any specific topic you may be interested in.
- As you review these resources and begin to identify potential funding strategies for your planned policy or program, consider the following questions:
 - How much do different policy interventions cost, and how much of a funding gap needs to be covered to pay for them?
 - What state or federal funding sources exist?
 - What actions can my city take to raise money for this program or policy, and what strategies have other cities used for similar initiatives?

Use the table below to save and organize the resources most relevant to you, and to make a note of how you plan to use each resource.

Resource Name	Resource Category/ Description	Link	Notes

3.3: EVALUATE PROGRAMS

When planning and running an air quality program, cities need a clear way to gauge success and flag potential issues. A strong evaluation plan builds accountability, helps strengthen the case for future funding and creates opportunities to learn and improve while mitigating any negative impacts.

This section will help your city find tools to assess whether your programs are meeting clean air goals, such as reducing emissions, and to measure effects on air quality, public health and equity. You will also find guidance for designing a program evaluation using logic models.

- [View implementation-related resources](#)
- Creating a logic model is a great starting point to help identify the right metrics and indicators to measure program effectiveness, such as emissions reductions or improvements in air quality and health. Take a few minutes to review [our guidance](#) on designing a program evaluation logic model, and to consider how you might apply this to your city’s policy or program.
- Use the filters to explore program evaluation resources - would a specific resource type – such as a training, case study or report – be especially helpful? You can also use the search bar to locate resources about any specific topic you may be interested in.
- As you develop a program evaluation plan for your city and explore related resources, consider:
 - What does progress mean for my city, and how can I measure it?
 - Which metrics and indicators will I use to track progress?
 - How can I set up monitoring and evaluation systems and data visualization tools to ensure rigorous program evaluation that provides feedback on program effectiveness over time?

Use the table below to save and organize the resources most relevant for your city.

Resource Name	Resource Category/ Description	Link	Notes



About City Clean Air Hub

The City Clean Air Hub is a resource developed as part of the [Community Data Health Initiative \(CDHI\)](#). Content for the Hub was developed in partnership by [Environmental Defense Fund](#) and [BenMAP Analytics](#).

For more information about City Clean Air Hub and the CDHI partners, [click here](#).

Contact

For questions about this checklist or more information, you can contact us [here](#).