

THE DATA WE OWN:



A HOW-TO GUIDE FOR ENVIRONMENTAL DATA SHARING



UNDERSTANDING
RIGHTS, RISKS,
AND REWARDS WHEN
EXCHANGING DATA



INTRODUCTION

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Welcome [to A How-to Guide for Community Environmental Data Sharing!](#) This resource is designed to help organizations like yours navigate the complexities of sharing data responsibly and equitably. Data sharing is a fundamental part of innovation for environmental justice because it enables collaboration, amplifies community voices, and supports evidence-based decision making to address systemic inequities.

[That's where this guide comes in.](#) It prompts considerations around practices like data protection, transparency, and equitable access to ensure justice remains a key piece of environmental efforts.

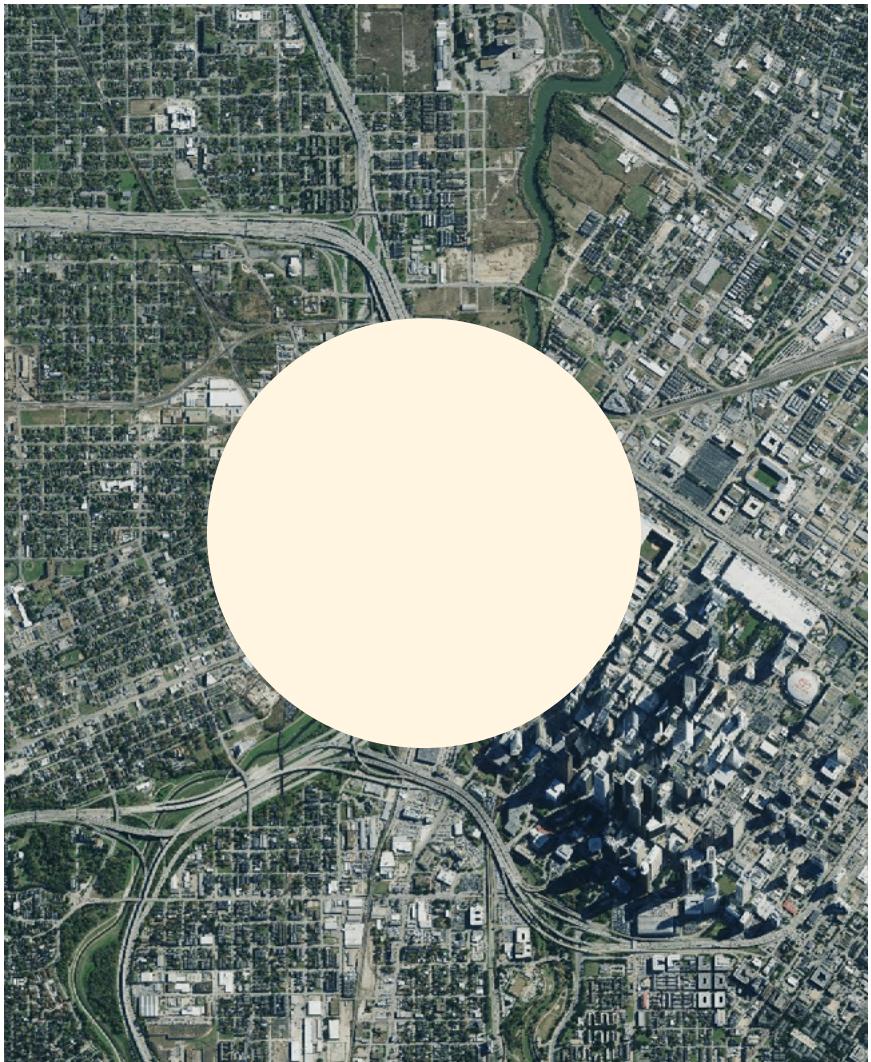
Before we go any further, let's set some expectations:

[This guide is a conversation starter](#) that encourages thoughtful and informed discussions about data ownership, sharing, and protection.

[This guide is not legal advice.](#) Its purpose is to help you think critically and prepare for discussions about data sharing agreements; please consult a lawyer if you're interested in legal advice!

WHO IS THIS GUIDE FOR?

This guide is for organizations that handle data—whether you're a nonprofit, a community-based group, a research institution, or something in between. If you're collecting, creating, or sharing data, this guide can help you understand your role and make better choices.



WHAT YOU'LL FIND IN THIS GUIDE

- A breakdown of what it means to “own” or “share” data,
- Strategies to protect the interests of your community while sharing data,
- Key questions to consider before entering data-sharing agreements, and
- Practical tips for building stronger, more equitable agreements.

WHY DOES DATA SHARING MATTER?

Sharing data responsibly can create real value for organizations, communities, and society at large. It can lead to:

Informed Decisions: Sharing data enables better insights for policy-making, and problem-solving.

→ Example: A community in Kentucky shares water quality data from local stream monitoring with city officials in order to advocate for stricter local ordinances related to sludge ponds created by mining companies.

Collaborative Innovation: Shared data fuels progress in advancing research, improving public services, or driving social change.

→ Example: An environmental justice organization in California partners with a university to share air quality data. The university uses this data to study the links between pollution exposure and asthma rates. Their findings help the organization in their advocacy efforts and the university is able to work with data to which they would not typically have access so as to develop a better understanding of the compounding effects of pollution on communities.

Empowering Communities: Thoughtful sharing can provide communities with access to valuable tools and knowledge, helping them advocate for their own needs.

→ Example: An organization in Bangladesh develops a publicly accessible map that combines community-sourced data on flooding with official government data. Residents use this map to demonstrate disparities and advocate for stricter regulations on infrastructure developers.

UNDERSTANDING DATA OWNERSHIP

HERE ARE SOME KEY ROLES TO UNDERSTAND

Owning data doesn't necessarily mean having physical possession—it's about having the right to control how data is used, shared, and managed.

Owner: You have the authority to control how the data is used or shared because you created or collected it.

→ For example, your organization might collect data on water quality in a frontline community. As the owner of this data, you decide how to share that data with others.

Licensor: You grant others permission to use the data under specific terms that you define.

→ For instance, in this example, you might allow a university researcher studying public health impacts to access and use the water quality data for academic purposes only, while restricting its use for commercial purposes or redistribution.

Holder: You store and manage data on behalf of someone else but may not have decision-making power over it.

→ In this case, your organization might safeguard a community's traditional ecological knowledge on your servers, holding it securely while ensuring it is only shared according to the community's wishes. Communities may seek a Holder when they lack the technical infrastructure, financial resources, or capacity to manage sensitive data on their own.

WHEN IS YOUR ORGANIZATION A DATA OWNER?

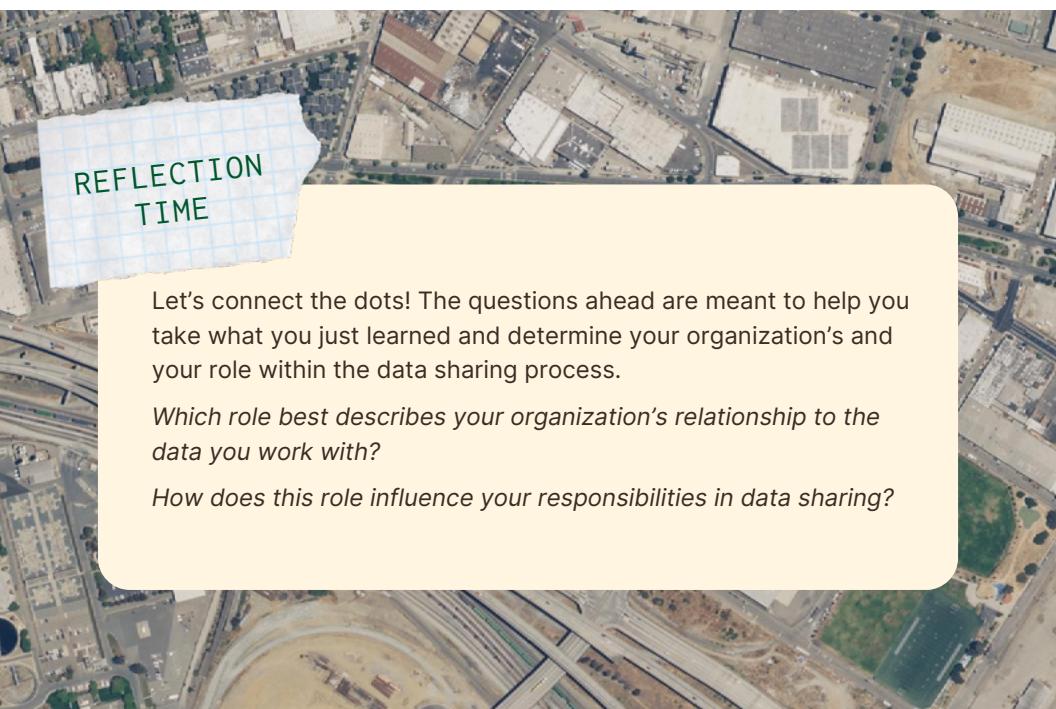
Your organization is likely a data owner if you all are:

Collecting data directly: Examples include conducting surveys, running monitoring programs, or gathering and recording input from community members.

Hiring a third party to collect data: You might work with contractors, consultants, or technology providers who gather data on your behalf.

Collaborating with others: Joint projects with research institutions, government agencies, or funders often involve shared responsibility for data.

Creating new data products: By combining datasets, like census data and your own research, you can create new tools such as maps or reports.



Let's connect the dots! The questions ahead are meant to help you take what you just learned and determine your organization's and your role within the data sharing process.

Which role best describes your organization's relationship to the data you work with?

How does this role influence your responsibilities in data sharing?

PROTECTING COMMUNITY INTERESTS

YOUR ORGANIZATION'S COMMITMENT

Data sharing should align with your organization's values and commitments to the community. This means ensuring data practices are equitable, responsible, and ultimately beneficial for the communities you serve. For example:

- **Ensure Transparency:** Clearly communicate with your partners and community about how the data will be used and shared in order to increase trust.
- **Safeguard Sensitive Data:** Implement measures to protect personal information and prevent misuse.
- **Define Clear Boundaries:** Specify what data can and cannot be used for in agreements with partners.

CLARIFICATION ON DATA HANDLING VS. INTERPRETATION

This guide focuses on best practices for handling and sharing data only. It does not cover the interpretation or analysis of data into conclusions and findings which may involve, for example, the misrepresentation and subsequent sharing of statistical findings.

REFLECTION TIME

What values does your organization prioritize in data sharing?

Who benefits most from your data-sharing practices?

What could happen if the data were misused or fell into the wrong hands?

Remember, responsible sharing strengthens community ties, such as thoughtfully sharing accurate information about environmental initiatives or local pollution concerns to rally support. On the other hand, careless handling, like improperly anonymizing sensitive health information or publicizing community members' addresses, can lead to a loss of trust or worse, harm.

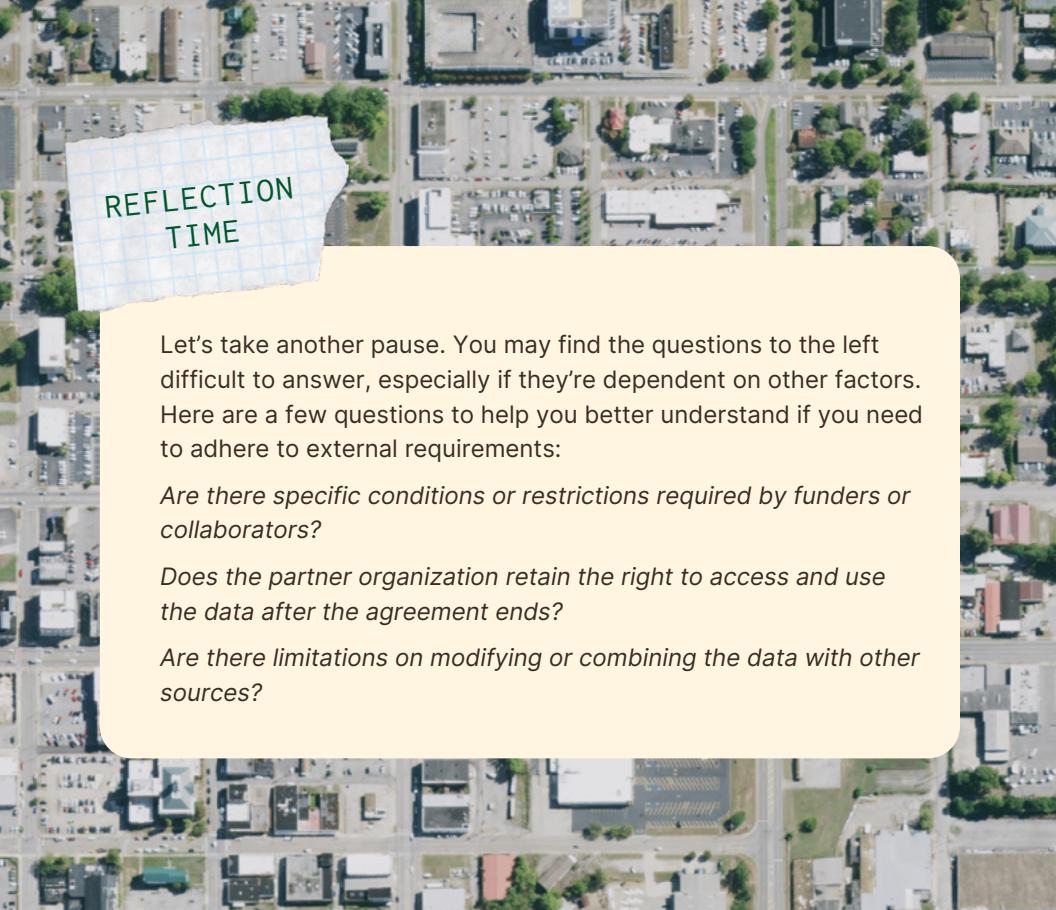
KEY QUESTIONS FOR DATA SHARING AGREEMENTS

One way to ensure that you're sharing data responsibly is through data sharing agreements. Data sharing agreements are formal tools that outline the terms and conditions for how data is shared, used, and protected between parties. They specify roles, responsibilities, and safeguards to address privacy, security, and ethical considerations. By documenting these shared agreements, you will help ensure transparency and accountability while aligning on shared values.

THINGS TO CONSIDER

When entering a data sharing agreement, clarity is crucial. Ask for whatever you need to feel comfortable sharing the data—but more importantly make sure it's all documented in the contract in a manner that both parties can clearly understand. Here are some essential questions to guide your discussions, which will help you complete the table to the right:

- **Who will use the data?** Determine whether it's researchers, government agencies, community organizations, or others.
- **What data can they access?** Specify whether it's anonymized datasets, aggregated information, or sensitive details.
- **How can they use the data?** Outline permissible uses, such as research, policy development, or public dissemination.
- **How can they NOT use the data?** Outline limitations around how the data can be used including commercial or resale purposes.
- **How long can they access the data?** Specify time restrictions around access to the data such as 'at the conclusion of the project' or 'six months from a given date'.



WHO WANTS TO USE YOUR DATA	WHAT DATA CAN THEY ACCESS	HOW CAN THEY USE THE DATA
e.g., A university researcher and their students	e.g., Data without names and other personal details	e.g., Analyze public health issues and publish a paper on their findings, but not publish the underlying data

FIGURE 1

This table breaks down the different considerations and can be used as an exercise with your organization. Add your own answers in the space provided.



BUILDING BETTER DATA AGREEMENTS

BASIC PROVISIONS TO INCLUDE

A data-sharing agreement should include clear terms that protect all parties involved. Key elements include:

- **Who Is Covered:** Identify who can access or contribute to the data, such as specific individuals, departments, or organizations.
- **Usage Rules:** Define how the data can be used, shared, or disclosed. Include any restrictions, such as embargoes or limitations on public access.
- **Safeguards:** Require measures to prevent unauthorized access or misuse, including data encryption or anonymization.
- **Reporting Breaches:** Partners must report any unauthorized use or security breaches immediately.
- **End-of-Agreement Requirements:** Specify what happens when the agreement ends, such as deleting data, archiving it in a repository, or returning it to the owner.

GOING THE EXTRA MILE

- Provide **community access** to the data, ensuring transparency and equity.
- **License** data products to make them open or public, with clear attribution.
- Schedule **regular check-ins** to discuss data use and address emerging issues.
- Require **notification of changes**, such as a new primary contact person.

CLOSING

Responsible data sharing is a powerful tool for advancing environmental justice and empowering communities. By prioritizing transparency, protecting sensitive information, and fostering collaborative partnerships, organizations can support communities in transforming data into meaningful action while ensuring they maintain agency over their work and the data that shapes their lives. However, the process of data sharing is just that: a process. You will iterate through this often and will always learn something new. This guide is here to help you navigate that journey—encouraging thoughtful conversations, critical reflection, and intentional practices that align with your organization’s values. In doing so, you will not only strengthen trust but also support informed decision-making and lasting positive change.

FURTHER RESOURCES

The following resources are available to explore other writing about data sharing.

[Data Sharing Agreements ↗](#) from USGS

[Four questions to guide decision-making for data sharing and integration ↗](#) from Amy Hawn Nelson and Sharon Zanti

[Sample data sharing agreements ↗](#) from Camden Coalition

[Information-Sharing Agreements ↗](#) from Stepping Up

IMAGE KEY

SATELLITE IMAGES VIA [CALTOPO.COM ↗](#)

FRONT COVER

Benicia, California — The Benicia Community Air Monitoring Program [monitors local air quality in real-time ↗](#) and provides education on health as related to air quality.

PAGE 2

Pittsburgh, Pennsylvania — Allegheny county residents, the County Health Department, and Carnegie Mellon’s CREATE Lab created [Smell PGH ↗](#), an app that crowdsources smell reports to better track how odors from pollutants affect the region.

PAGE 4

Houston, Texas — Bayou City Waterkeeper uses data on sewer overflows, demographics, and income to [map the connections ↗](#) between the city’s sewage overflows and who is affected regularly.

PAGE 7

Oakland, California — The [West Oakland Environmental Indicators Project ↗](#) set up the West Oakland Air Quality monitoring network as a community-owned network of air quality sensors that supports advocacy for stronger environmental policies by telling a detailed story of the neighborhood’s exposure to air pollution.

PAGE 9

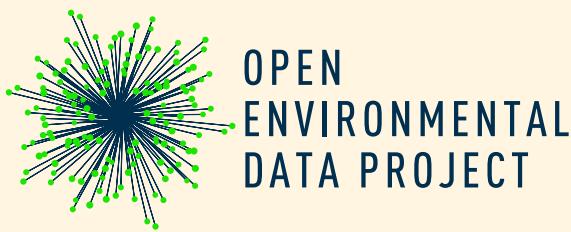
Palmer Township, Pennsylvania — The government in Palmer Township partnered with Thriving Earth Exchange to collect [community-sourced data ↗](#) and ancillary datasets to develop a comprehensive flood mitigation plan.

PAGE 11

West Anniston, Alabama — The West Anniston Foundation is working with Thriving Earth Exchange to conduct an [environmental risk assessment ↗](#) to understand the extent of local and legacy PCB contamination.

PAGE 13

Utqiāġvik, Alaska — Community members worked with academic partners to [research the impacts ↗](#) of climate change on permafrost temperatures and the impacts of the changing environment on the design and future planning of community buildings.



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Open Environmental Data Project, please scan the codes below
or email us at info@openenvironmentaldata.org.



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