



## 6 COMMUNITY SCIENCE GUIDE

### PURPOSE

You may be a concerned community member and wanting to start a community science project. This manual shares a series of steps to follow. You may also be a community member wanting to join an existing community science project. This manual is designed to help you find an existing community science program or create your own. For those who are currently engaged in a community science project, this guide provides recommendations and ideas for how to continue engaging in this important work.

### WHAT IS COMMUNITY SCIENCE?

Community science is any grassroots effort where ordinary community members, sometimes in collaboration with professional scientists, organizations, and government agencies, collect, generate, and distribute information either for educational purposes or to address community-centered environmental issues. This is simply science by non-scientists.

Some community science is initiated by institutional scientists giving community members the opportunity to observe. Community science projects are also increasingly launched by government agencies. However, community science can also be conducted by independent individual committed volunteers.

### CASE STUDIES AND APPLICATIONS

TUCKASEGEE RIVER,  
NORTH CAROLINA /  
MANDI CARRINGER

It may be challenging to visualize how to start a community science project of your own. This guide includes case studies of situations where communities or individuals used community science to promote environmental justice.

The EPA, community organizations, and local and state governments support many types of community

science projects. Examples from Arizona, North Carolina, and Maryland demonstrate how every situation is different and a wide range of opportunities exist for applying community science.

The examples in the Guide exemplify successful research and collaborations with government agencies focused primarily on water quality.

# STEPS TO CREATE YOUR COMMUNITY SCIENCE PROJECT

## 1. IDENTIFY THE GOAL OF YOUR PROJECT

The Environmental Protection Agency (EPA) identified three main uses for community science projects:

- **Increasing Public Understanding**
- **Scientific Studies and Research**
- **Legal and Policy Action**

## 2. DESIGN A PROJECT APPROACH

A project approach consists of two steps:

- **Identify of a site of interest to you**
- **Determine which pollutants you will examine.**

This guide provides a number of resources and databases that can be used to determine what pollutants are emitted in nearby facilities.

## 3. IDENTIFY USES FOR COLLECTED DATA AND QUALITY STANDARD

The use of community science data is subject to various legal standards regarding its credibility and reliability.

There are no legally imposed quality standards when you are collecting data for yourself. This data can be used for educational purposes, to bolster public awareness, or to inform legislatures.

If the data collected from the community science project is used to either provide information to a regulatory agency or used as evidence in a court case, the information will be subject to legally imposed quality standards.

This guide helps explain the difference, and how to ensure your data meets the right quality standards.

## 4. INFORMATION COLLECTION

Collecting data may seem as simple as walking over to the pollutant source and gathering samples, however, there are laws that may limit your ability to gather data.

If your project site is open to the public, there are no legal barriers in collecting samples of air, water, soil quality, or

taking photographs. However, if the pollutant source is not on public land, you should consider what your legal rights are to enter the property and take samples.

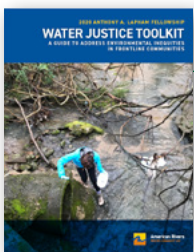
This guide provides guidance on limitations such as property rights, ownership, and privacy.

## 5. ENGAGE WITH PARTNERS AND DEVELOP A MODEL

In order to address environmental hazards that have disproportionately burdened communities of color and low-income populations, a community-based participatory research (CBPR) model exists to establish a coordinated

community effort that includes community organizations, individual leaders, universities, and government.

This guide explains CBPR as a model for research with communities of color and low-income populations.



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