

## Community-Focused Exposure and Risk Screening Tool (C-FERST): Supporting sustainable & healthy communities

### Issue

Advancing sustainable, healthy communities means providing decision makers, public health officials, state environmental managers, and others with the information they need to identify and reduce exposures to harmful chemical contaminants. EPA researchers are developing the Community-Focused Exposure and Risk Screening Tool (C-FERST) to provide just that kind of information.

Community engagement is crucial in identifying and understanding the full range of environmental health issues for specific areas or groups of people. Community members and groups are able to gather local information, and use this information to make their communities healthier. Because of this, communities are playing an increasingly central role in defining environmental problems and gathering information needed to address these problems. Engagement of potentially affected communities is equally important where evidence indicates disproportionate exposures or health disparities are caused by localized contaminants or other environmental conditions.

To support communities with this process, user-friendly tools are needed that provide environmental exposure and health-related information. To ensure these tools are scientifically sound, research is necessary to advance the science to take into account the many factors that may impact human exposure and health risks within a community — including chemical and non-chemical stressors, and other factors contributing to vulnerability and sensitivity in communities and populations.

### What is C-FERST?

EPA is developing the Community-Focused Exposure and Risk Screening Tool ([C-FERST](#)) — an online information access and community mapping tool that communities can use to learn more about environmental, health and socioeconomic issues in their community. The tool includes local maps and

reports, fact sheets, links to other public health decision-making tools, information about promising sustainable community solutions, and structured community guides that can help communities assess environmental conditions in their communities. C-FERST is intended to provide screening-level information to help users learn about community environmental and public health issues, however, it is not intended to quantify risk values or be the sole basis for public health decisions.

C-FERST links to and builds upon other community-focused tools to help identify human exposures and potential risks within a community. The tool helps communities gather information about their environments, and explore potential environmental and public health solutions.

C-FERST is intended to serve the needs of a broad range of users including the general public, environmental professionals, state and local risk assessors, EPA community involvement coordinators and environmental justice coordinators working on local-scale issues. It may be mutually beneficial for community members and groups to work with regional, state or local environmental experts to identify and evaluate local issues, and interpret C-FERST data and results.

### C-FERST development, beta-testing & scientific peer-review

EPA scientists partnered with a variety of community groups in designing, piloting and testing C-FERST, including a number of communities who participated in [EPA's former Community Action for a Renewed Environment \(CARE\)](#) grant program. During testing and refinement of C-FERST, EPA scientists solicited feedback from community members and local officials to improve the tool. C-FERST was scientifically peer reviewed in 2014 and full public release is planned for late 2016.

C-FERST supports EPA's priorities for making a visible difference in communities, and working toward a sustainable future. The tool will be periodically refined and populated with improved and updated information. A number of training resources are included in C-FERST to help users become familiar with the tool, including a "Quick-start" guide, a map user guide, and "use case examples" for each of the major components of C-FERST. With C-FERST, users can:

- **View maps of their community's environment**  
C-FERST maps contain information on pollution sources, estimated concentrations, exposures and risks from pollution, demographics, and other key community characteristics.
- **Compare local, county and state estimates**  
C-FERST's "Community Data Table" provides a summary of environmental conditions for a community, including estimated concentrations, exposures and risks for select pollutants, as well as demographic information. Comparing this with information for other geographic areas, can help community groups identify environmental conditions they may want to examine.
- **Gather information about their environment**  
C-FERST's "Environmental Issue Profiles" contain links & information from various EPA and non-EPA sources for issues and concerns commonly identified by communities. The Environmental Measurement Methods section in C-FERST provides links to key EPA resources related to citizen science air monitoring, and other available measurement methods.

- **Explore potential solutions & community projects**

C-FERST contains hotlinks to exposure & risk reduction options, and projects implemented by other communities. These can be used to explore potential solutions to environmental issues and see what has worked in other communities.

- **Follow walk-through guides for conducting community assessments:**

Community guides in C-FERST can provide information to help community groups systematically conduct an environmental health assessment in their locality. Guides in C-FERST include: EPA's Community Action for a Renewed Environment (CARE) Roadmap; and the National Association of City and County Health Officials Protocol for Assessing Excellence in Environmental Health.

**Find C-FERST Online at:**

<http://go.usa.gov/cttQA>

**References:**

V.G. Zartarian, B.D. Schultz, T.M. Barzyk, M. Smuts, D.M. Hammond, M. Medina-Vera, A.M. Geller (2011). "The EPA's Community-Focused Exposure and Risk Screening Tool (C-FERST) and Its Potential Use for Environmental Justice Efforts." *American Journal of Public Health*. 101 (S1): S286-S294.

V.G. Zartarian, B.D. Schultz (2011). The EPA's human exposure research program for assessing cumulative risk in communities. *Journal of Exposure Science and Environmental Epidemiology*. 20, 351-358.

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