

# Community-Focused Exposure and Risk Screening Tool (C-FERST)

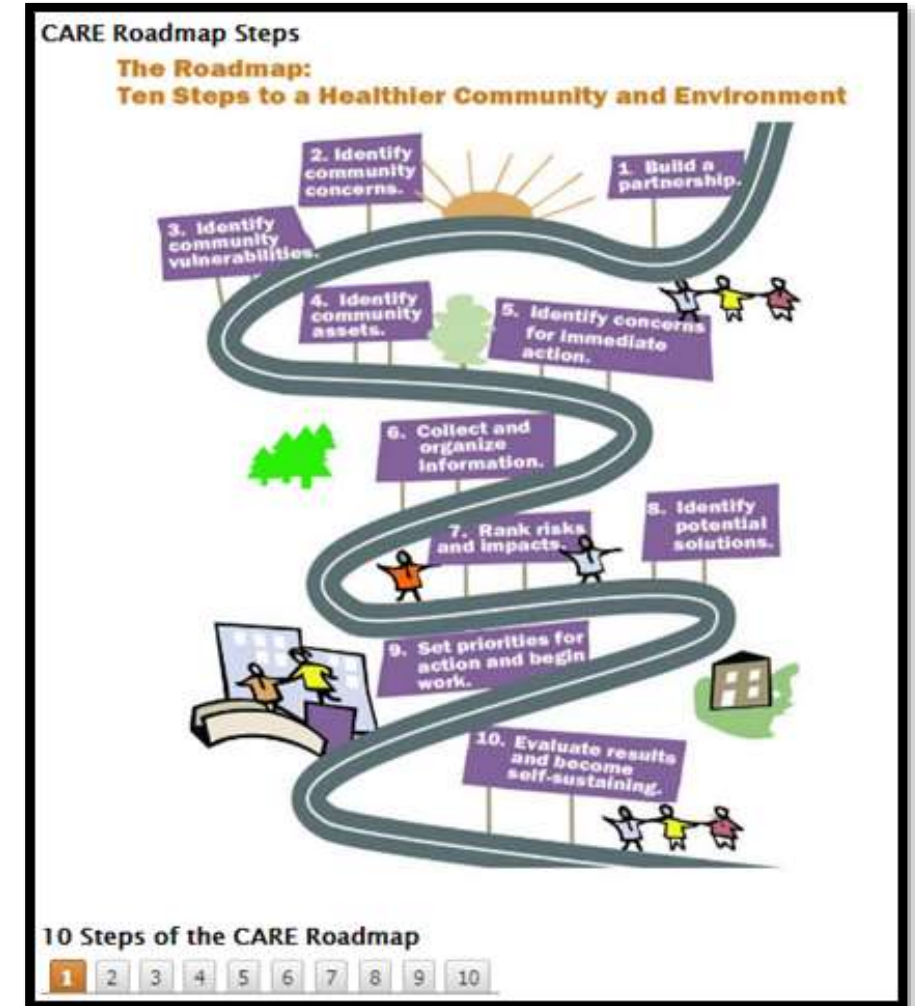


**EPA ORD in partnership with ECOS and ASTHO**

Office of Research and Development

# What is C-FERST?

- A web-based “toolkit” of information
- Community maps show
  - environmental data
  - public health data
  - socioeconomic indicators
- Guide to help community assessments



## Why C-FERST Was Created

- As a response to community needs
- To support communities, especially those with Environmental Justice concerns



# CFERST Can Be Used By

## A Broad Range of Users



Government:  
Local, State, Tribal & Federal



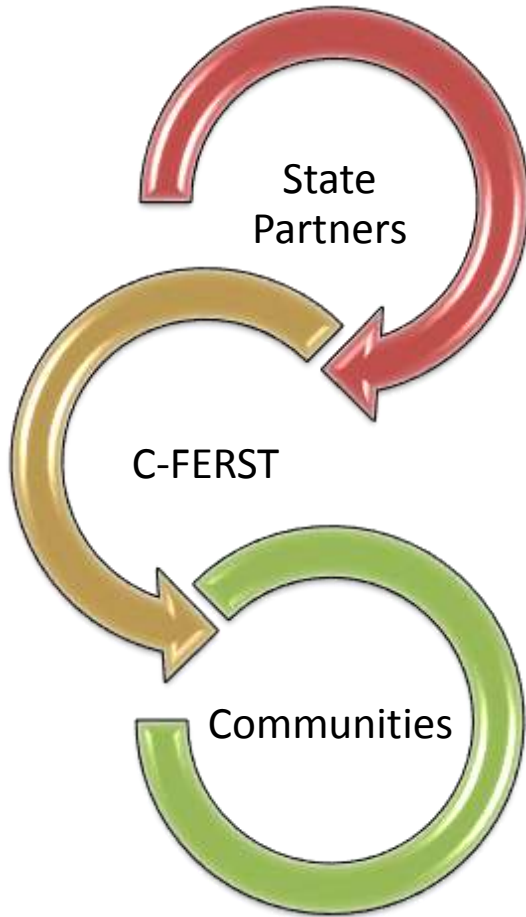
Professionals  
&  
Academics



Public:  
Leaders & Organizations

In Partnership - Learning and Working Together

## C-FERST Collaboration with States



- ☒ ECOS and ASTHO assisted with developing an engagement strategy and communications materials for C-FERST roll-out (Sept 2016)
- ☒ EPA provided C-FERST briefing/training for states following release
- ☐ EPA working with CDC and ASTHO to add health data to C-FERST (ongoing)
- ☐ EPA providing web-based “Train the Trainer” for states (July 26)
- ☐ EPA and state partner plan to initiate new C-FERST pilot (this summer)

## Example: Service First University (Portland, Oregon)

- Partnered with *Perfect Start*, K-8<sup>th</sup> grade school
- Assessment of environmental concerns
  - Children's health within the school area
- Recommendations report





# Concerns



- 38% below poverty level
- 90% in public housing, trailer parks or are homeless
- Students miss school a lot

# Collect Data in C-FERST

## Community Data Table



The default indicators in the table are based on EPA-related issues, stakeholder feedback, and available data. There may be other important issues that are not currently included in this table.

Indicators and Indices	Tract 003602	Multnomah County	Oregon	Data Info/Notes
▼ Environmental Concentration Estimates				
Outdoor Air - Acetaldehyde ( $\mu\text{g}/\text{m}^3$ )	1.8	1.8	1.1	2011 NATA
Outdoor Air - Acrolein ( $\mu\text{g}/\text{m}^3$ )	0.13	0.12	0.03	2011 NATA
Outdoor Air - Arsenic ( $\mu\text{g}/\text{m}^3$ )	0.0001	0.0001	0.0000	2011 NATA
Outdoor Air - Benzene ( $\mu\text{g}/\text{m}^3$ )	1.3	1.4	0.5	2011 NATA
Outdoor Air - Butadiene ( $\mu\text{g}/\text{m}^3$ )	0.18	0.19	0.05	2011 NATA
Outdoor Air - Chromium ( $\mu\text{g}/\text{m}^3$ )	0.0000	0.0001	0.0000	2011 NATA

Outdoor Air - Diesel PM ( $\mu\text{g}/\text{m}^3$ )	1.4	1.6	
Outdoor Air - Formaldehyde ( $\mu\text{g}/\text{m}^3$ )	1.89	1.93	
Outdoor Air - Lead ( $\mu\text{g}/\text{m}^3$ )	0.002	0.001	
Outdoor Air - Naphthalene ( $\mu\text{g}/\text{m}^3$ )	0.12	0.13	
Outdoor Air - PAH ( $\mu\text{g}/\text{m}^3$ )	0.007	0.007	

### Human Exposure Estimates

### Health Risk Estimates

### ▼ Demographic, Social and Economic Indicators

% Minority	40.3	27.8	21.6	2008-2012 ACS
% Below Poverty Level	12.0	17.1	15.5	2008-2012 ACS

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# Narrow Research Focus

C-FERST Home

Questions and Answers

View Your Community

View Maps

Compare Your Community

Community Data Table

Explore and Learn

**Issue Profiles**

Exposure and Risk Reduction Options

Plan Your Project

CARE Roadmap

PACE-EH

C-FERST Users

About C-FERST

User Forum

Resources

Additional Tools

Citizen Science

Environmental Measurements

## C-FERST Environmental Issue Profiles

An Environmental Issue Profile is a report that contains links to information about a specific environmental or health issues. Some profiles also contain maps that show local estimates of concentrations and risks, such as benzene levels in air and the associated estimated risk of cancer in a given area. The information in these profiles can be used to explore and learn more about environmental issues, exposure and risk reduction actions, and what other communities have done to address these. The Issue Profiles do not contain information on every environmental issue. On the right side of the screen below, you can select a category of different lists of Issue Profiles. Some issues are found in multiple lists, and all of them are located in the alphabetical list. **Please view the Questions and Answers for more information about the Issue Profiles.** (These will also be used for Tribal-FERST, which is currently under development.)

Use the tabs to the side to search for issues.

### Health Effects

- More information about the following health effects:
  - [Childhood Asthma](#)
  - [Childhood Lead Poisoning](#)
  - [Lung Cancer](#)

[↑ Top of Page](#)

More Information

- [Environmental Issue Profile Category Descriptions](#)
- [Questions and Answers about Environmental Issue Profiles](#)
- [Example of Generating an Environmental Issue Profile](#)

Pollutants

Environmental Media

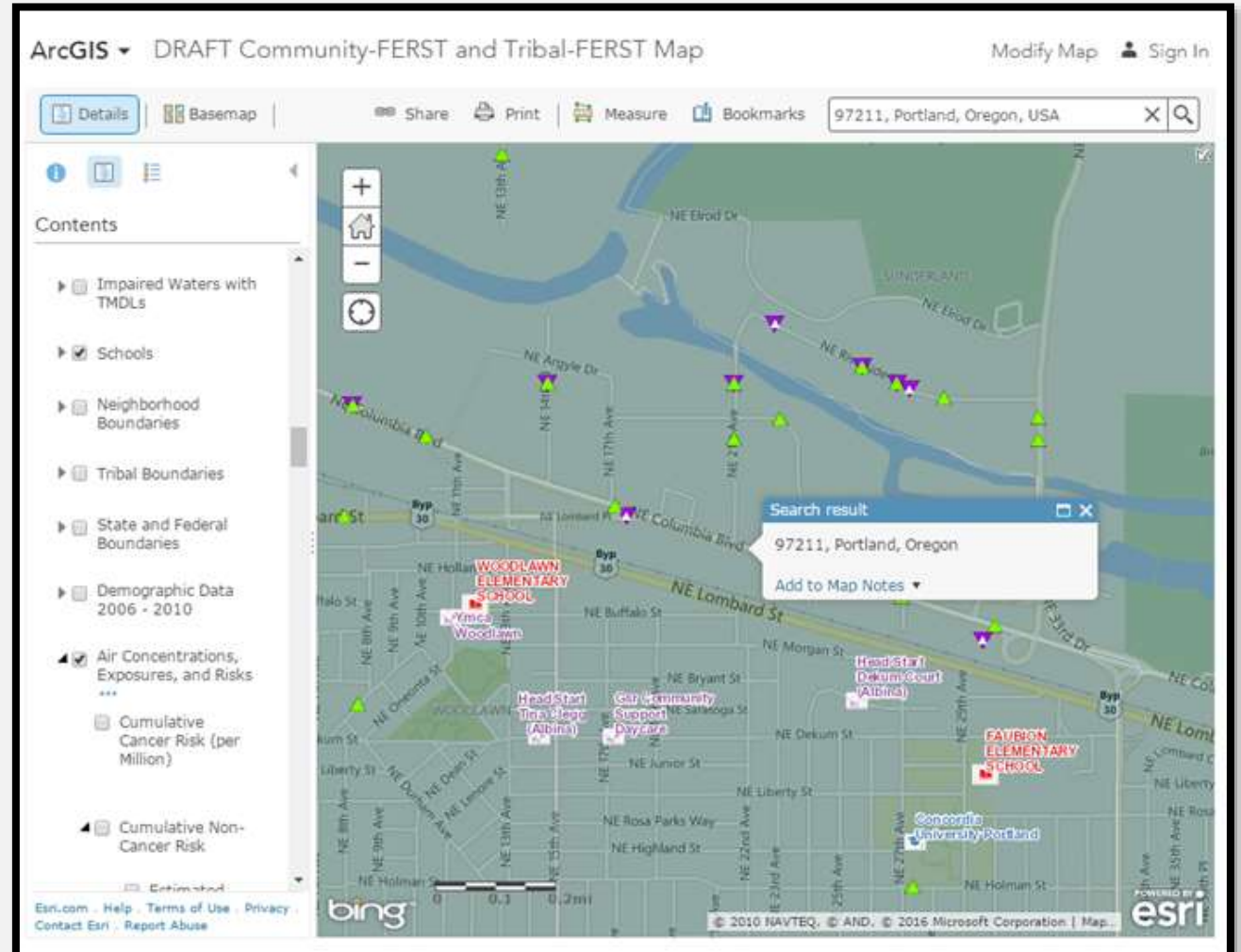
**Health Effects**

Other Community Issues

Alphabetical List

# Create Maps to Visualize Environmental Concerns

- Visual aids *show* the environmental concerns
- Produced maps that show:
  - Air Concentrations, Exposures and Risks
  - Schools
  - Demographic Data
  - EPA Registered Facilities



# How Other Communities Responded to Childhood Asthma

## Strategies Implemented By Other Communities

- [Colorado: Groundwork Denver / Healthy Air for Northeast Denver](#) - Fact Sheet and Final Report
- [Connecticut: New Haven City Government](#) - Summary and New Haven's Green map
- [Indiana: Gary CARE Partnership Project](#) - Final Report
- [Arizona: Community Assist of Southern Arizona and the Sonora Environmental Research Institute](#) - Final Report
- [Michigan: Muskegon County Environmental Coordinating Council](#) - Final Report
- [Missouri: Grace Hill Settlement House, St. Louis](#) - Fact Sheet and Final Report
- [Montana: Montana Indian Country CARE Project](#) - Final Report
- [New York: Center of Environmental Information](#) - Fact Sheet and Final Report
- [Michigan: West Michigan Environmental Action Education Foundation](#) - Summary
- [Michigan: Healthy Homes-Healthy Business Project](#) - Summary
- [Spotlight on Tulalip Tribes of Washington's Innovative Tribal Program for Healthy Homes Working Group](#)
- [AsthmaCommunityNetwork.org: Find a Tribal Asthma Program](#)
- [AsthmaCommunityNetwork.org: Find a Program](#)
- [Bois Forte Indoor Air Quality Program](#)
- [U.S. EPA and Imperial Valley Communities Tackle Childhood Asthma](#)

## Summary: Benefits

- Shared results of study with community
- Assessed environmental concerns in community
- Highlighted EJ concerns to be considered in school expansion: Children's exposure to Diesel PM on school bus route.



# Contact Information

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