

Engaging Community Stakeholders in Toxic Release Inventory Sites Sampling and Geographic Information Systems Mapping with EJ SCREEN, the MyRTK tool and TOXMAP



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Tennessee State University selected to participate in the U.S. EPA Toxic Release Inventory (TRI) University Challenge September 2014 – September 2015

FACULTY, FEATURED, GRANTS, NEWS, SCHOOLS AND COLLEGES

EPA PROGRAM TO ENGAGE TENNESSEE STATE UNIVERSITY STUDENTS IN COMMUNITY-BASED ENVIRONMENTAL HEALTH

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NASHVILLE, Tenn. (TSU News Service) – The U.S. [Environmental Protection Agency](#) has selected Tennessee State University for a program that will actively engage its students in initiatives that protect local residents from toxic air releases.

A release from the agency named TSU and five other institutions nationwide as “academic partners” for the [2014 Toxic Release Inventory University Challenge](#). The Challenge is designed to find innovative ways to increase public awareness of industrial release of toxic chemicals in communities

Tennessee State University

U.S. EPA Toxic Release Inventory (TRI) University Challenge participation extended through September 2016

2014 TRI University Challenge

Every year, thousands of U.S. manufacturing facilities submit reports on their waste management practices of certain toxic chemicals, including the release of those chemicals into the environment. The TRI Program makes these data available to everyone through a variety of online reports, search tools and applications.

Learn more about:

- [Our new 2014-15 Partnerships](#)
- [Our 2013-14 Partnerships](#)
- [Our 2011-12 Pilots](#)
- [How we conducted the 2014 Challenge](#)

In Spring 2014, we [challenged the academic community](#) to find innovative and creative uses of TRI data and related information to promote more informed decision-making and action on the part of communities, manufacturers, and government.

2014 Challenge Results

We received 11 outstanding applications in response to the 2014 Challenge, and we are excited to announce that we will be working with six academic partners for the 2014-2015 school year.

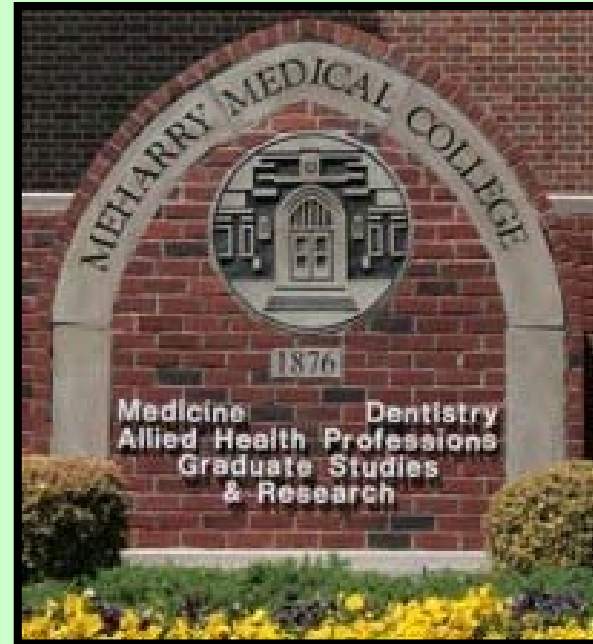
The six project proposals that were selected for the 2014 TRI University Challenge came from faculty and students at the following academic institutions:

- Drew University – Environmental Studies and Sustainability
- Southeastern Louisiana University – Computer Science and Industrial Technology
- SUNY Plattsburgh - Center for Earth and Environmental Science
- Tennessee State University - Geographic Information Sciences Laboratory
- University of California, Los Angeles - Institute of the Environment and Sustainability
- University of South Carolina – Department of Geography

<http://www.epa.gov/toxics-release-inventory-tri-program/2015-2016-tri-university-challenge-academic-partners>

Community Partners

The **Martha O'Bryan Center** at Cayce Homes, **Meharry Medical College**, the **Meharry-Vanderbilt Alliance**, and **Health Impacts of Degraded Environments, Inc.**



Study Area: Cayce Homes and Environs – Nashville, TN



Nashville's largest public housing community with 710 units and over 2,400 residents on 63 acres.

88% of the population is African American with 89% of households are headed by a single parent. 57% of the residents are children under the age of 18

Residents suffer from above average asthma rates, especially children.

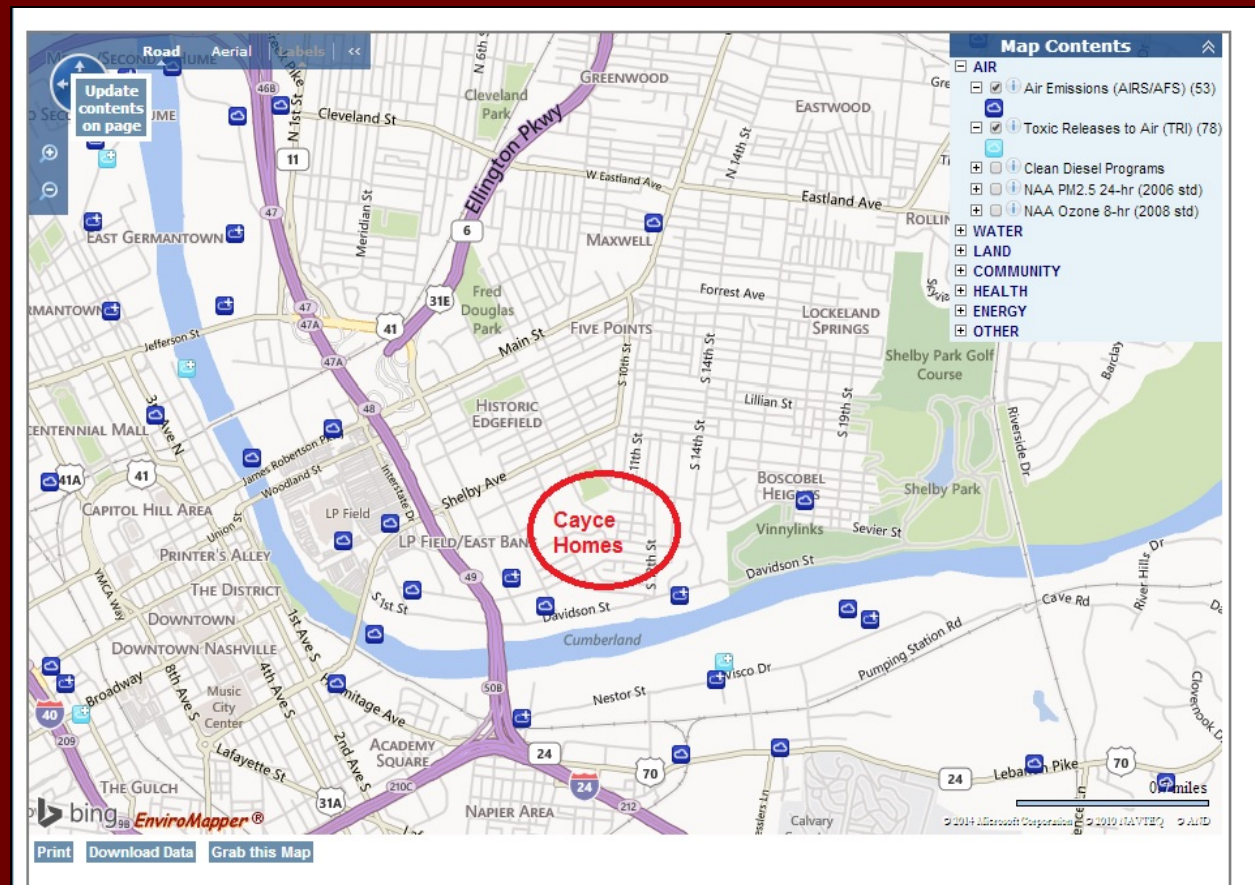


Map of nearby sources of air pollution

- Cayce Homes and Environs – Nashville, TN

Community is impacted by a variety of air pollution sources, including TRI facilities, Interstate highways, and small businesses.

No government air monitor is located within two miles of the community.



Potential sources
of air pollution
upwind from
Cayce Place and
environs.



CMC Rebar – TRI Facility



PSC Metals – Permitted Air Facility

March 2015

Meetings with community stakeholders at the Martha O'Bryan Center.
Discussed plans for outdoor air sampling and health assessments



April 2015 – **Ten-second “grab” air samples collected:** Community air quality testing using 6-liter Summa canisters. Stakeholders used global positioning systems (GPS) receivers to map the locations where air samples were collected. Samples were analyzed by Dr. Sing Chong, Middle Tennessee State University.



April 2015 – 10 second air “grab” samples collected April 17, 2015



April 2015 – Ten-second “grab” air samples collected

Sample site latitude/longitude locations were imported into ArcGIS Online.


ArcGIS ▼ Cayce Place Air Sampling - TRI University Challenge - Tennessee State University New Map ▼ Create Presentation ▼ David ▼

Details + Add ▼ | Basemap | Save ▼ Share ▼ Print ▼ Measure ▼ Bookmarks ▼ Find address or place

About + Content + Legend +

Legend

Ten Second Grab Air Samples - 4-17-15



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April 2015 – Ten-second “grab” air samples collected
Sample site latitude/longitude locations were imported into ArcGIS Online. Clicking on sample site produces dialog box with pertinent attribute data.

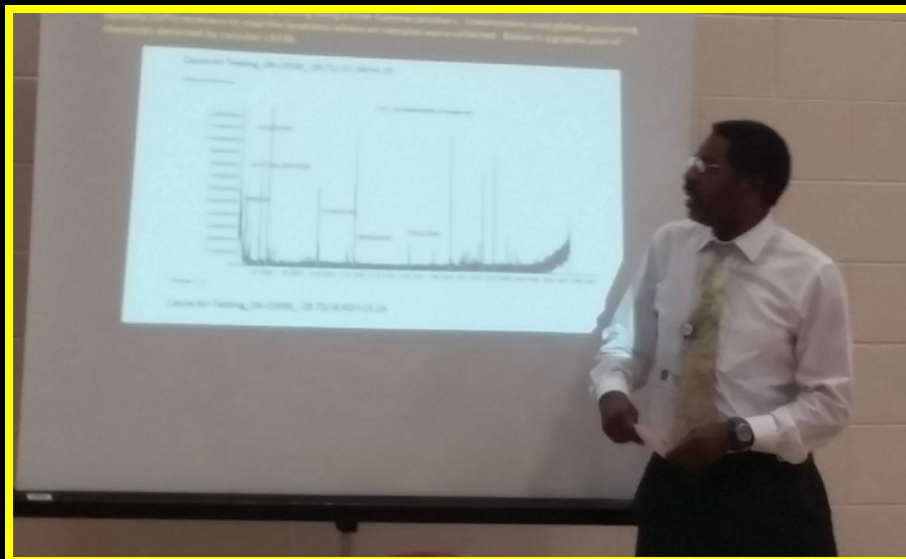
The screenshot displays the ArcGIS Online interface for a map titled "Cayce Place Air Sampling - TRI University Challenge - Tennessee State University". The map shows an aerial view of a campus area with several yellow circular markers indicating air sampling sites. A dialog box is open over one of these markers, displaying the following attributes:

Site	Sonaida
Chemical	Methane, Benzene, Chlorobenzene, Diflouro Benzene
Canister	L5536
ppb	
MRL	
Location	706 S 6th St
Latitude	36.17
Longitude	-86.76
Time	329p
Sats	4
Zoom to	

The interface includes a top navigation bar with options like "New Map", "Create Presentation", and "David". A search bar is located at the top right. On the left, there is a legend titled "Ten Second Grab Air Samples - 4-17-15" which shows a single yellow circle symbol. The bottom of the map features a scale bar (0, 50, 100m) and the Esri logo with "POWERED BY" text.

July 2015

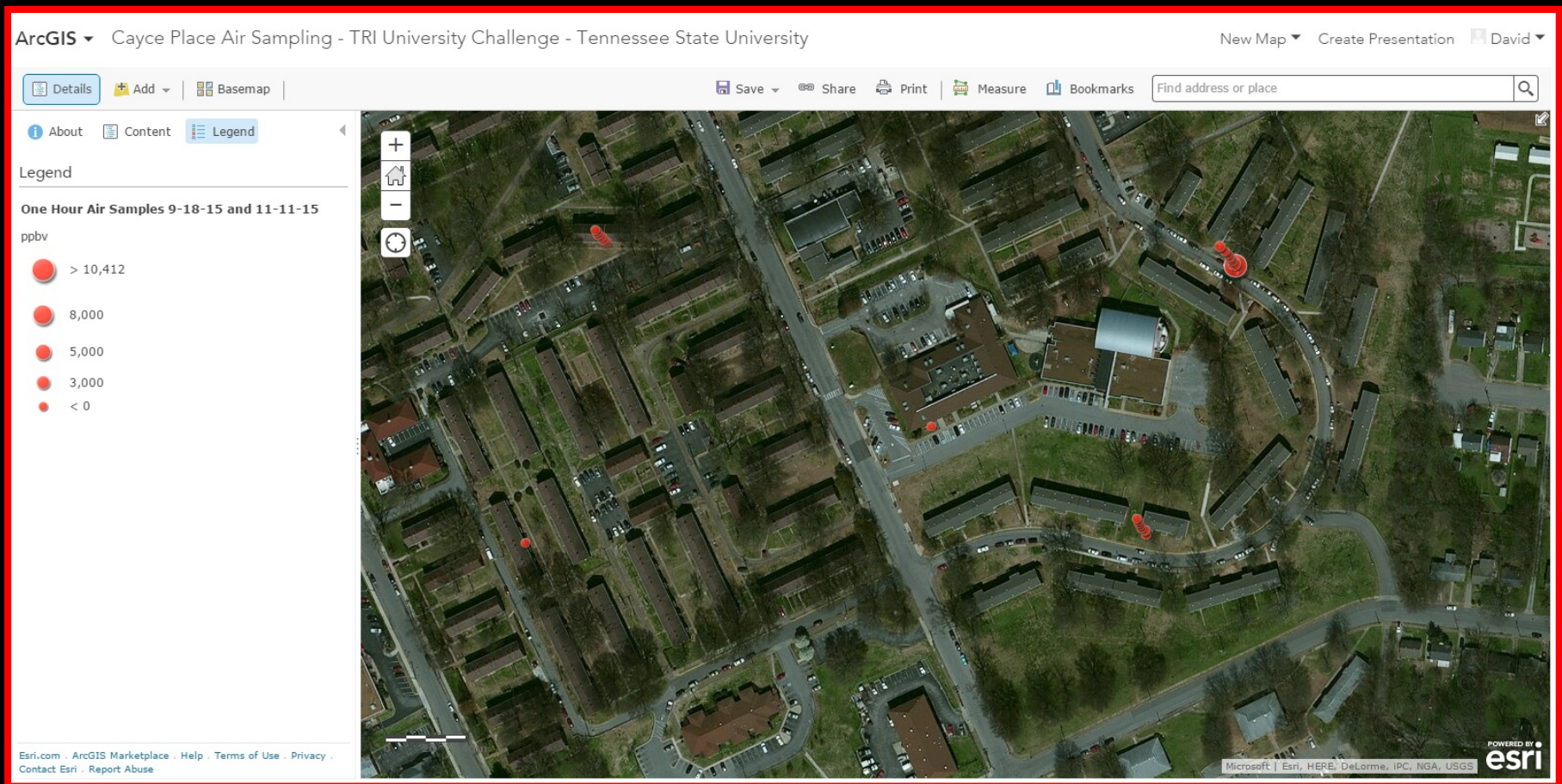
Ten second air “grab” sample results shared with community stakeholders.



Summer/Fall 2015 – **One-hour air samples collected:** Community air quality testing using 6-liter Summa canisters. Stakeholders used global positioning systems (GPS) receivers to map the locations where air samples were collected. Samples were analyzed by Dr. Sing Chong, Middle Tennessee State University.



September and November 2015 – **One hour air samples collected.**
Sample site latitude/longitude locations were imported into ArcGIS Online.
Chemical concentrations (ppbv) are displayed with proportional circle point symbols.



September and November 2015 – **One hour air samples are collected**
Sample site latitude/longitude locations were imported into ArcGIS Online. Clicking on sample site produces dialog box with pertinent attribute data.

ArcGIS Cayce Place Air Sampling - TRI University Challenge - Tennessee State University

Legend

One Hour Air Samples 9-18-15 and 11-11-15

ppbv

- > 10,412
- 8,000
- 5,000
- 3,000
- < 0

Sample	4
Volunteer	Geraldine Watkins
Canister	L5728
Address	819 S. 8th Court
City	Nashville
State	TN
Zip	37,206
Chemical	1-Butanol 3-methyl
Qual	83.00
ppbv	10,412
Date	Nov 11 2015
Start Time	250p
End Time	350p
Latitude	36.17

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U.S. EPA Environmental Justice Screening and Mapping Tool (EJ SCREEN)

← → ↻ www2.epa.gov/ejscreen

EPA United States Environmental Protection Agency

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EJSCREEN: Environmental Justice Screening and Mapping Tool

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Launch the EJSCREEN Tool

Explore EPA's environmental justice screening and mapping tool



Links

- Environmental Justice at EPA
- Grants and Other Funding Opportunities
- EPA's Environmental Justice in Action Blog
- Sign up to receive updates on EJSCREEN

In order to better meet the Agency's responsibilities related to the protection of public health and the environment, EPA has developed a new environmental justice (EJ) mapping and screening tool called EJSCREEN. It is based on nationally consistent data and an approach that combines environmental and demographic indicators in maps and reports.

What is EJSCREEN?



- [What is EJSCREEN?](#)
 - [How was It Developed?](#)
 - [How Does EPA Use It?](#)
 - [Purposes and Uses](#)

Learn to Use EJSCREEN



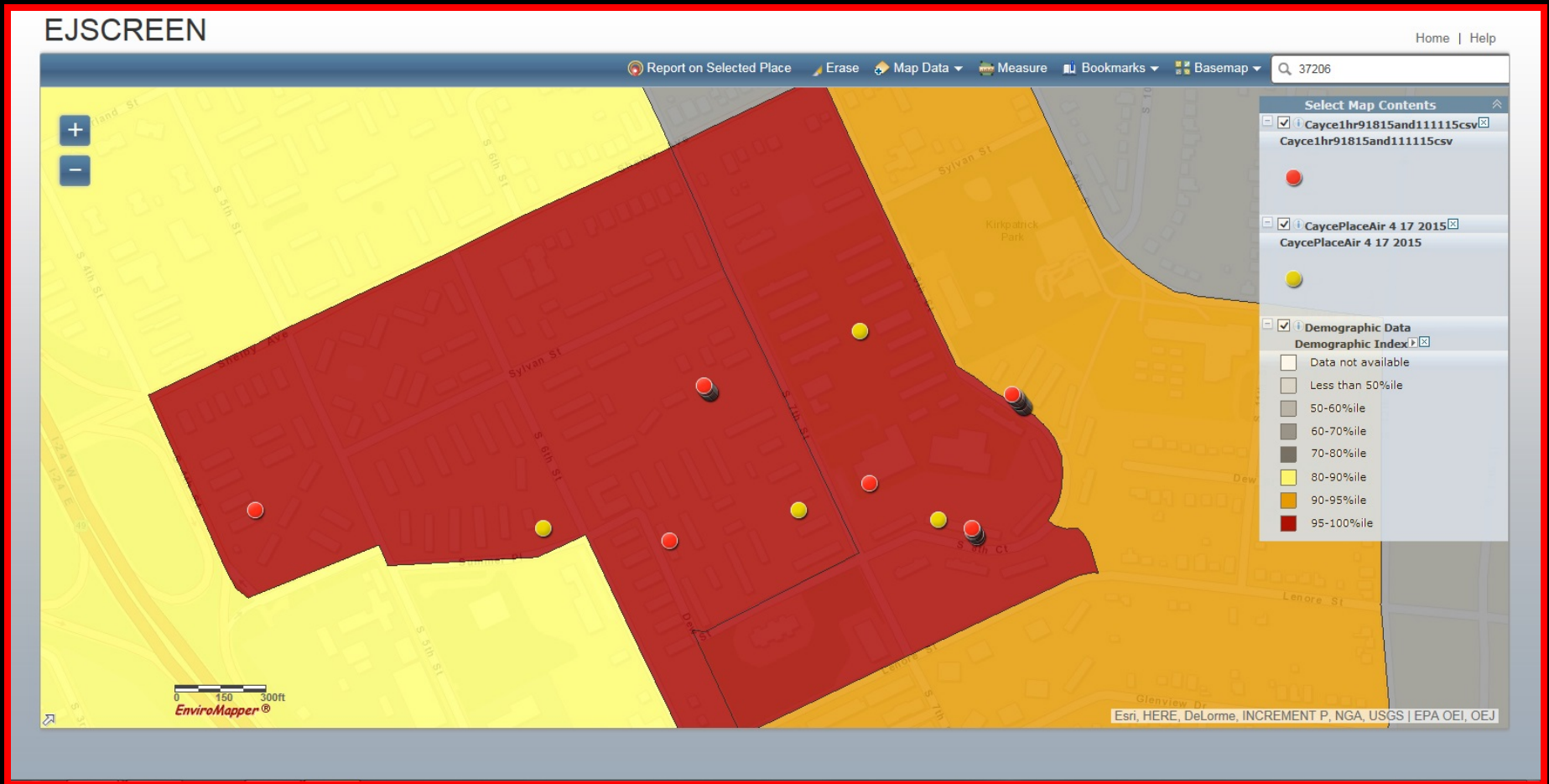
- [Learn to Use EJSCREEN](#)

Launch the Tool

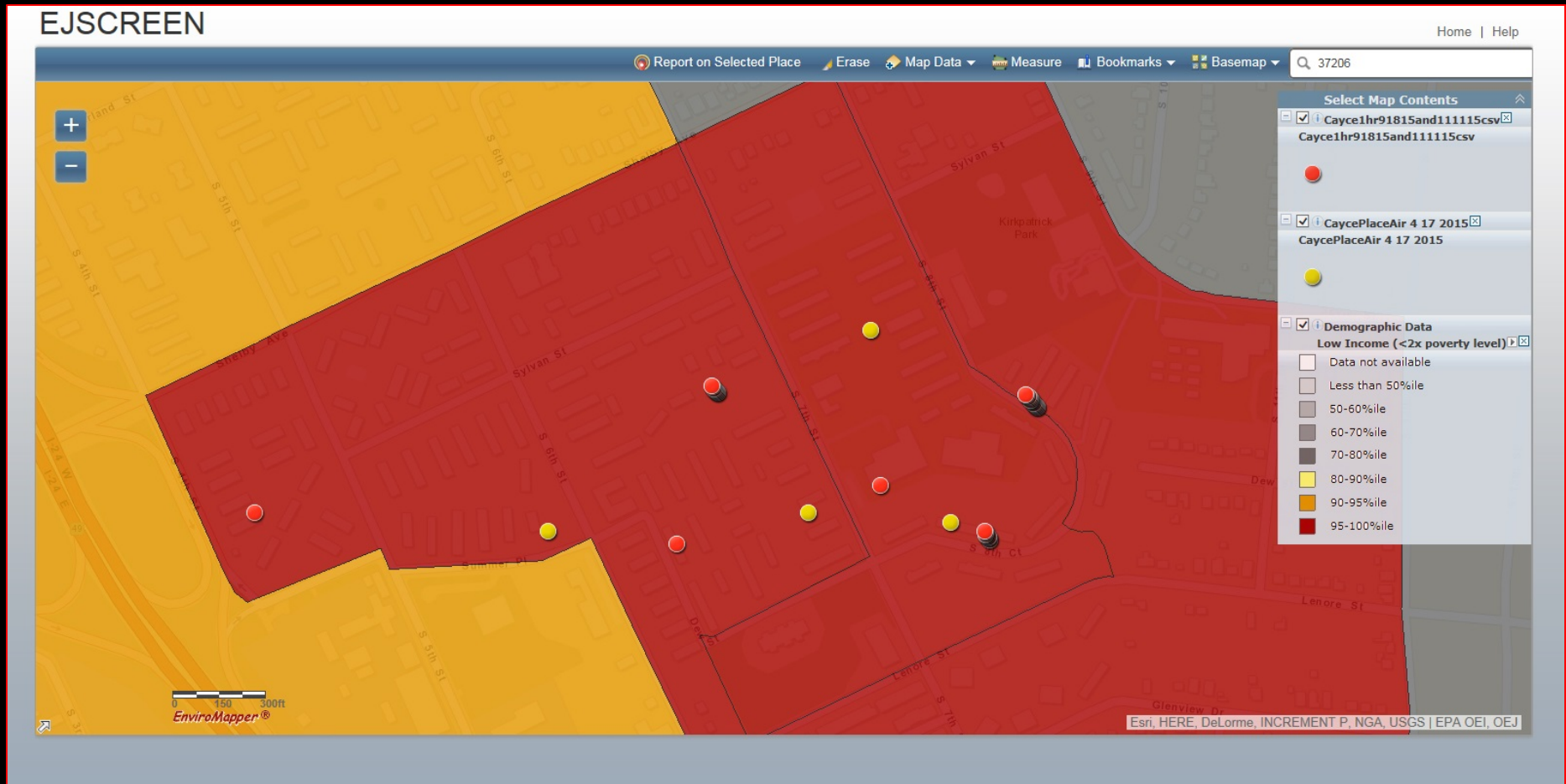


- [Launch the EJSCREEN Tool](#)

February 2016 Ten second and one hour sample sites imported into EJ SCREEN
All stakeholders reside within the highest EJ SCREEN “Demographic Index”

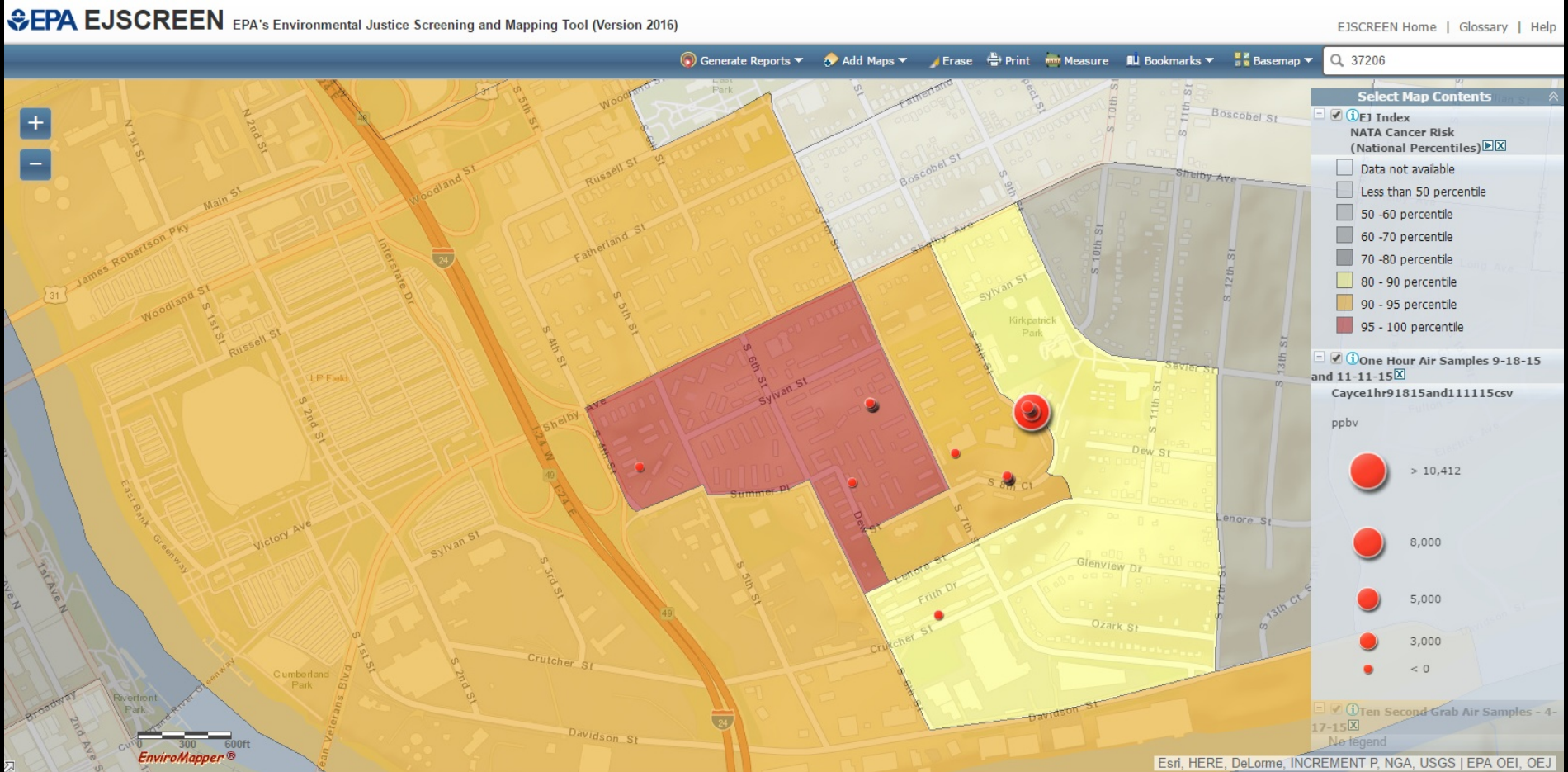


February 2016 Ten second and one hour sample sites imported into EJ SCREEN All stakeholders reside within the highest EJ SCREEN "Poverty Index"



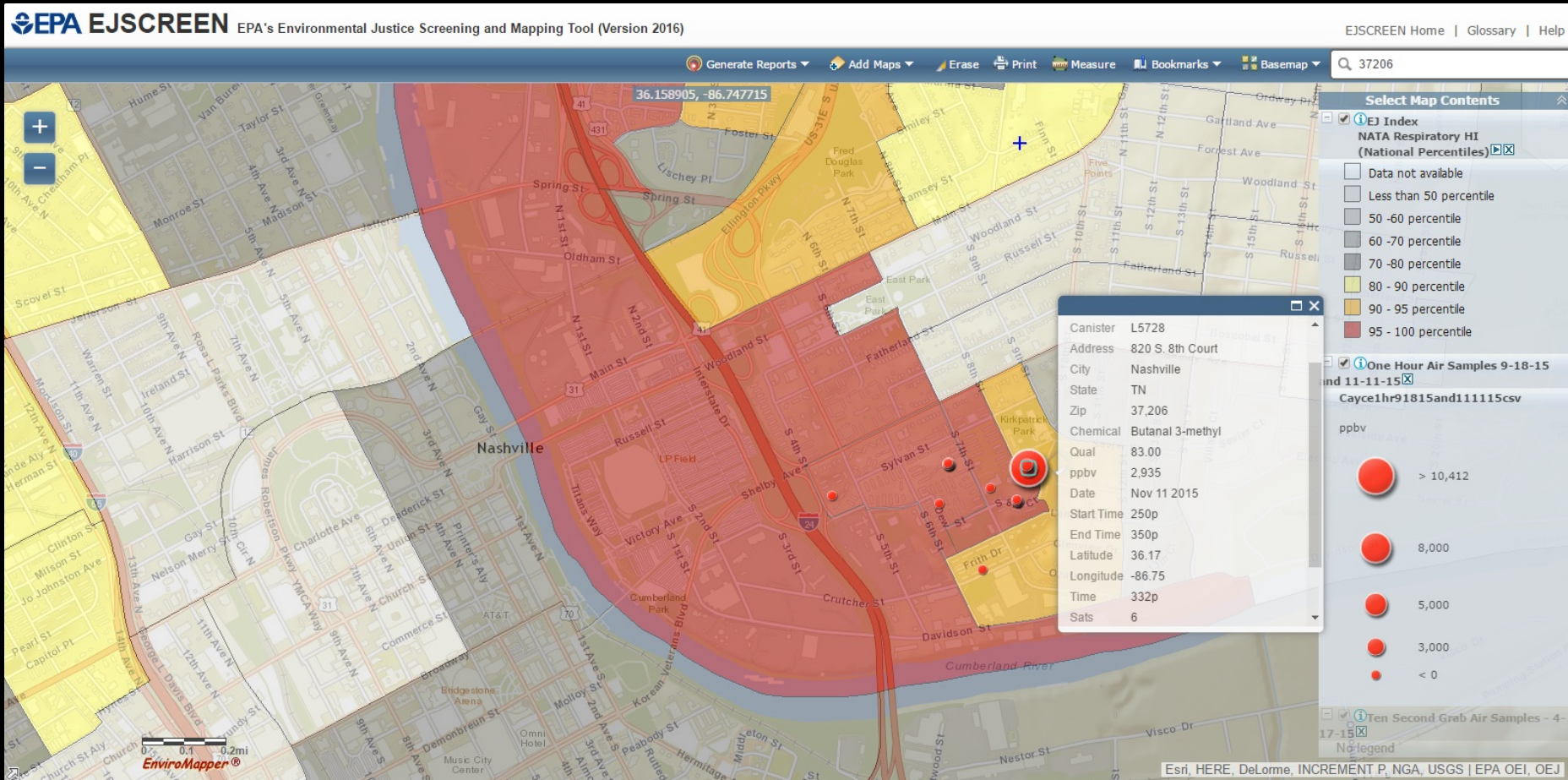
February 2016 Ten second and one hour sample sites imported into EJ SCREEN

EJ SCREEN display of Cayce Homes community and Cancer Risk and Respiratory Hazard per National Air Toxics Assessment (NATA) data



February 2016 Ten second and one hour sample sites imported into EJ SCREEN

EJ SCREEN display of Cayce Homes community and Cancer Risk and Respiratory Hazard per National Air Toxics Assessment (NATA) data



April 2016 – Ten-Second and One-Hour Air Sampling Results Reported to Cayce Homes Residents

CHEMICALS DISCOVERED IN THE AIR AT CAYCE HOMES AS OF APRIL 2016

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Tennessee State University
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615-516-8364

Cyclohexene
Cyclohexanone
Nonanal
Heptanal
3-Hexanone, 2-methyl-
Formic acid, hexyl ester
Octanal
Butanal
Heptanal
cis-1-Butyl-2-methylcyclopropane
1-Butanol, 3-methyl-
Butanal, 3-methyl-
3-Pentanone, 2,4-dimethyl-
Butanal, 3-methyl-
1-Hexanol, 2-ethyl-
Sulfurous acid, butyl decyl ester
4-Octanone
3-Heptanone
Cyclopropane, propyl-
4-Heptanone

NEXT STEPS

- 1.) We are investigating the health effects associated with the chemicals and will share what we find as soon as possible.
- 2.) You may investigate the health effects associated with the chemicals on your own at <https://toxtown.nlm.nih.gov/>
- 3.) We are currently investigating the potential sources from which the chemicals we found are being released.
- 4.) You may conduct your own investigation for the chemical release sources at <https://www.epa.gov/toxics-release-inventory-tri-program/my-right-know-application>
- 5.) We found the chemical “Dithiapentane” at the playground. It is released from the ground up tires covering the ground there. It can irritate children’s eyes and noses, especially when the weather gets warmer. Parents wanting more information are encouraged to contact us.
- 6.) The map showing the locations and results of the air samples collected in and near Cayce Homes thus far may be viewed at <http://arcg.is/1XvdiAT>
- 7.) We will be collecting more air samples through the summer and through the end of the year. There will be opportunities for parents and youth to be involved. Please contact us, if you are interested.
- 8.) We would like to sincerely thank everyone who has volunteered in the air sampling thus far. We have a small token of thanks to share with you. We will be in touch soon.

Community-Based Participatory Research (Citizen Science) – Summer-Fall 2016

(MVA grant extension/supplement)

- Continued investigation of potential sources of detected air contaminants using various online environmental research tools such as EJ SCREEN, TOXMAP, and My Right to Know (MyRTK)
- A “stakeholders’ guidebook” and companion web site for CBPR air sampling and mapping is under development.
- Clean Air Act (CAA) “Criteria” Pollutant sampling and mapping - with youth participants
- Potential impacts upon community health posed by air pollution will continue to be shared with stakeholders

My Right-To-Know Application

U.S. Environmental Protection Agency

Toxics Release Inventory (TRI) Program

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You are here: EPA Home » Toxics Release Inventory (TRI) Program » My Right-To-Know Application

My Right-To-Know Application

[español](#)

Do you want to know what industrial facilities are releasing toxic chemicals near your home, office, school, or other area?

For any location or address, myRTK geographically displays nearby facilities that report to the Toxics Release Inventory (TRI) Program, as well as facilities with EPA air, water or hazardous waste program permits. myRTK is a simple tool designed for mobile devices in English and Spanish.

myRTK can help answer questions such as:

- What toxic chemicals does the facility release to air, water and land?
- What health effects are associated with the chemicals released?
- How does the facility manage toxic chemical waste?
- What is the facility's history of compliance with U.S. environmental laws?

Within the search results map, click on a pushpin and then the name of a facility to find summary-level TRI information, including:

ON SITE RELEASES TOTALS

Source	Pounds Released
Air	14877.0
Water	11712.0
Land	2011.0

ON SITE RELEASES BY CHEMICAL

Chemical	Pounds Released	Health Effects	
		Cancer	Other
CERTAIN GLYCOL ETHERS	23910.0	✓	✓
2,4-DICHLOROPHENOL	20950.0	✓	✓
BENZENE	422.0	✓	✓
METHANOL	341.0	✓	✓
CHLOROBENZENE	312.0	✓	✓
FORMALDEHYDE	290.0	✓	✓
CHLOROETHANE	132.0	✓	✓
ETHYLENE GLYCOL	62.0	✓	✓
2-METHOXYETHANOL	45.0	✓	✓
2-ETHOXYETHANOL	5.0	✓	✓

POLLUTION PREVENTION

Pollution Prevention Activities: C

COMPLIANCE

Facility has permits/records for:

Category	Compliance
Air	✓
Water	✓
Land	✓

3 Year Compliance Status (quarterly): (Apr10 → Mar13)

Quarter	Compliance
Q1 2010	Compliance
Q2 2010	Compliance
Q3 2010	Compliance
Q4 2010	Compliance
Q1 2011	Compliance
Q2 2011	Compliance
Q3 2011	Compliance
Q4 2011	Compliance
Q1 2012	Compliance
Q2 2012	Compliance
Q3 2012	Compliance
Q4 2012	Compliance
Q1 2013	Compliance

Sample myRTK facility report showing chemical release, pollution prevention, and compliance information.

<http://www.epa.gov/toxics-release-inventory-tri-program/my-right-know-application>

TOXMAP

National Institutes of Health

U.S. Department of Health & Human Services www.hhs.gov

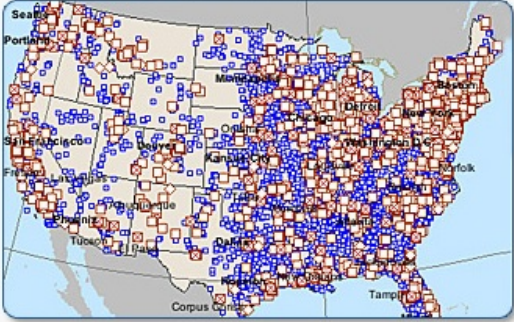
NIH U.S. National Library of Medicine **TOXMAP** Environmental Health Maps

Home | About | News | FAQ | Glossary [▶ NLM Environmental Health Portal](#)

Two Ways to Explore Toxic Chemicals in Your Community


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TOXMAP classic



TOXMAP classic provides an Advanced Search as well as the ability to save search results and to build custom regions to focus your search. It does not require Flash and is accessible to users with disabilities. No new features are planned.

TOXMAP beta



The **beta** version of TOXMAP is in active development. It has an improved map appearance and interactive capabilities as well as improved U.S. Census layers, availability by Census tract, and additional and updated datasets.

News

- TOXMAP beta now includes TRI 2012 data
- New TOXMAP web site
- See all TOXMAP news

More Information

- What is TOXMAP?
- Which TOXMAP should I use?
- What is the Toxics Release Inventory (TRI)?
- What is the "Superfund" Program?
- Does TOXMAP show all sources of toxic chemicals?
- What data sources does TOXMAP use?
- Learn to use TOXMAP

Note: Both versions of TOXMAP open in new windows - please disable pop-up blockers.

TOXMAP belongs to a group of TOXNET databases related to toxicology, hazardous chemicals, environmental health, and toxic releases.

<http://toxmap.nlm.nih.gov/toxmap/>

Additional Resources

TRI Tools Tutorial

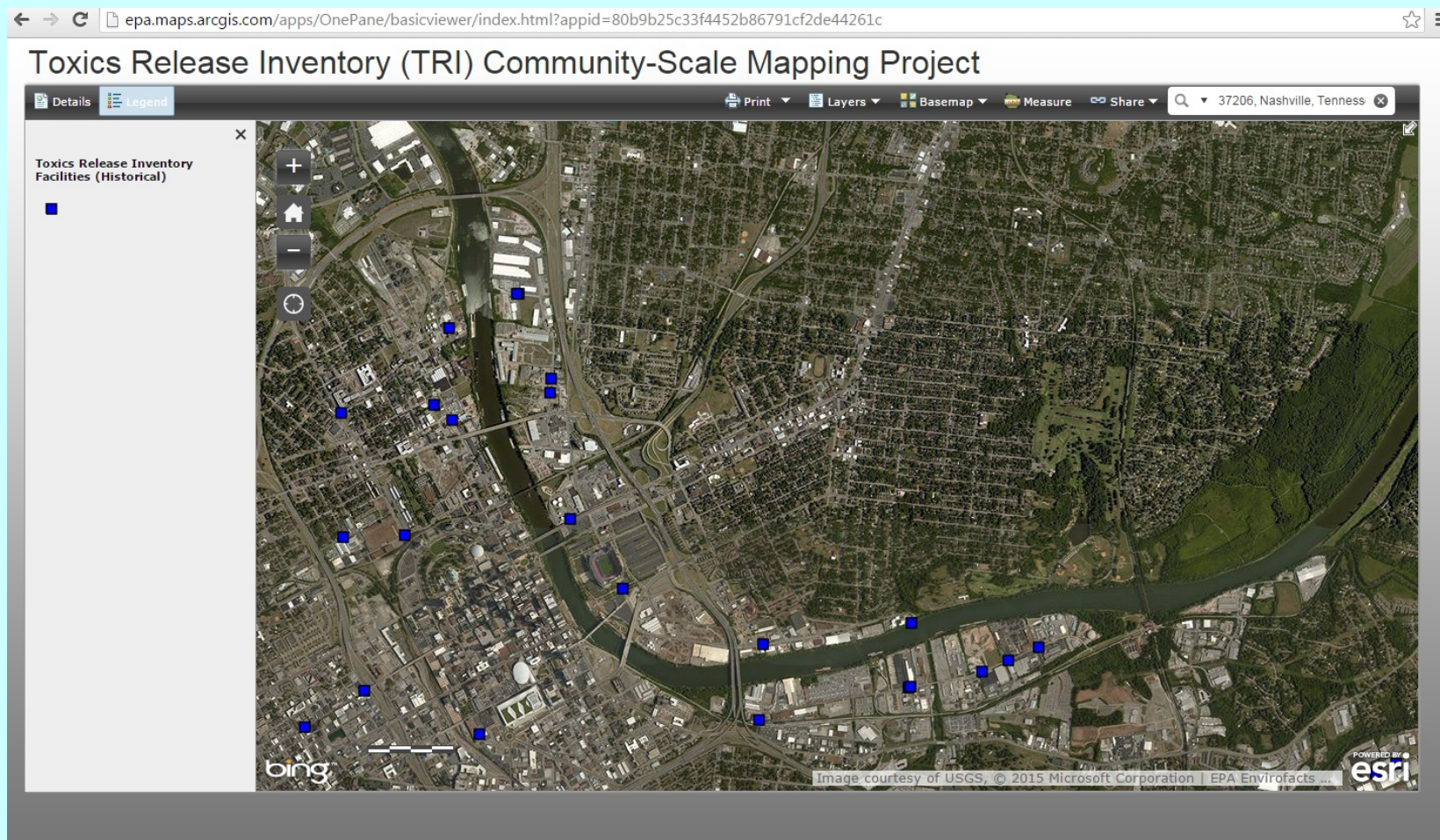
<http://www.epa.gov/toxics-release-inventory-tri-program/guides-and-tutorials-tri-tools>

TOXMAP User Guides

<http://toxmap.nlm.nih.gov/toxmap/faq/2009/08/where-can-i-learn-how-to-use-toxmap.html>



US EPA TRI Community Scale Mapping Project



<http://www2.epa.gov/toxics-release-inventory-tri-program/tri-community-scale-mapping-project>

U.S. EPA TRI Data and Tools

The screenshot shows the EPA website's page for TRI Data and Tools. At the top, there is the EPA logo and navigation links in Spanish, Chinese, Vietnamese, and Korean. Below that is a search bar and a main navigation menu with categories like 'Learn the Issues', 'Science & Technology', 'Laws & Regulations', and 'About EPA'. The page title is 'Toxics Release Inventory (TRI) Program' and the sub-page title is 'TRI Data and Tools'. A sidebar on the left contains a list of links: TRI Home, Learn About TRI, TRI Information for You, TRI Data and Tools (highlighted), Reporting for Facilities, TRI Chemicals, Laws and Rulemakings, Get Involved in TRI, TRI Contacts, and Site Map. The main content area features a breadcrumb trail: 'You are here: EPA Home » Toxics Release Inventory (TRI) Program » TRI Data and Tools'. The heading 'TRI Data and Tools' is followed by a paragraph explaining that TRI data is available through reports, query tools, and downloadable files. A list of three items follows: 1) 'The TRI Data Analysis Tools brochure (PDF)', available in English and Spanish; 2) 'The Guides and Tutorials web page' for learning how to use TRI tools; 3) 'Factors to Consider When Using TRI Data (PDF)', available in English and Spanish. To the right of this list is a small graphic titled 'Factors to Consider When Using Toxics Release Inventory Data'. Below the list is a section titled 'Access and Analysis Tools' which contains three tool boxes. The first box, 'Envirofacts', includes a list of search options: TRI Explorer, TRI Pollution Prevention (P2) Search, TRI Search, TRI Form R Search, TRI Form R & A Download, TRI EZ Search, and TRI Customized Search. The second box, 'TRI.NET', shows a map of the United States and describes a downloadable application for building customized queries. The third box, 'TRI Explorer', shows another map and lists four report types: State Fact Sheet, Release, Waste Transfer, and Waste Quantity.

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Toxics Release Inventory (TRI) Program

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TRI Data and Tools

You are here: EPA Home » Toxics Release Inventory (TRI) Program » TRI Data and Tools

TRI data are available through a variety of reports, query tools and downloadable files, which are summarized below. For more detailed descriptions, please see:

- The [TRI Data Analysis Tools brochure \(PDF\)](#), available in English and Spanish.
- The [Guides and Tutorials web page](#) can help you learn how to use some of the TRI tools.
- [Factors to Consider When Using TRI Data \(PDF\)](#), available in English and Spanish can help you understand and use TRI data.

Access and Analysis Tools

Envirofacts
Find facilities that report to TRI, review submitted TRI reporting forms, create customized TRI reports and download TRI data.

- [TRI Explorer](#)
- [TRI Pollution Prevention \(P2\) Search](#)
- [TRI Search](#)
- [TRI Form R Search](#)
- [TRI Form R & A Download](#)
- [TRI EZ Search](#)
- [TRI Customized Search](#)

TRI.NET
Use this downloadable application to build customized TRI data queries and map your results or overlay other data layers.

TRI Explorer
Users can generate four types of reports:

- [State Fact Sheet](#)
- [Release](#)
- [Waste Transfer](#)
- [Waste Quantity](#)

<http://www.epa.gov/toxics-release-inventory-tri-program/tri-data-and-tools>

U.S. EPA TRI for Communities

www2.epa.gov/toxics-release-inventory-tri-program/tri-for-communities

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TRI Resources

TRI Data and Tools

Reporting for Facilities

TRI Chemicals

Laws and Rulemakings

Get Involved in TRI


TRI Contacts

Site Map

You are here: EPA Home » Toxics Release Inventory (TRI) Program » TRI for Communities

TRI for Communities

The Toxics Release Inventory (TRI) is a starting point for communities to learn about toxic chemicals that industrial facilities are using and releasing into the environment, and whether those facilities are doing anything to prevent pollution.



On this page:


- [Find Information about Your Community](#)
- [Get the TRI Basics](#)
- [Factors to Consider When Using TRI Data](#)
- [Dig Deeper](#)
- [TRI Community Engagement Pilot Projects](#)
- [Additional Resources for Communities](#)

Find Information About Your Community

Envirofacts

See a TRI snapshot for a:

- ZIP Code
- City, State
- County, State



<https://www.epa.gov/toxics-release-inventory-tri-program/tri-for-communities>

US EPA Envirofacts Site

The screenshot shows the EPA Envirofacts website. At the top, the EPA logo and navigation links are visible. The main content area features a navigation bar with tabs for Home, Multisystem Search, Topic Searches, System Data Searches, About the Data, Data Downloads, Widgets, Services, Mobile, and Other Datasets. Below this is a large banner with the title "Envirofacts" and the tagline "Your one-stop source for Environmental Information". The banner includes a search box with a placeholder text "Enter a location such as address, zip, city, county, waterbody, park name, etc." and an "Advanced" button. To the right of the search box are several topic search buttons: Air, Waste, Facility, Land, Toxics, Compliance, Water, Radiation, and Other. Below the banner, there are sections for "Envirofacts System Data Searches" and "Multisystem Search" with various search options like AFS, FRS, IGMS, RadNet, and TRI.

← → ↻ www.epa.gov/enviro/ ☆

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SEARCH

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The preliminary 2014 TRI dataset is now available. The dataset is approximately 92% complete, and will be updated again in early August in response to data quality analyses and revisions submitted by facilities. For more information, visit www2.epa.gov/toxics-release-inventory-tri-program/2014-tri-preliminary-dataset

The Envirofacts database is now RESTful service-enabled. See the services tab below for documentation and examples, or visit: <http://www.epa.gov/enviro/facts/services.html>

Home Multisystem Search Topic Searches System Data Searches About the Data Data Downloads Widgets Services Mobile Other Datasets

How to Use Envirofacts News and Information Data Update Envirofacts Model

Envirofacts
Your one-stop source for Environmental Information

Get the EnviroFACTS!
Retrieve information from multiple sources of Envirofacts' System Data for your area of interest.

Enter a location such as address, zip, city, county, waterbody, park name, etc.

Advanced

Topic Searches

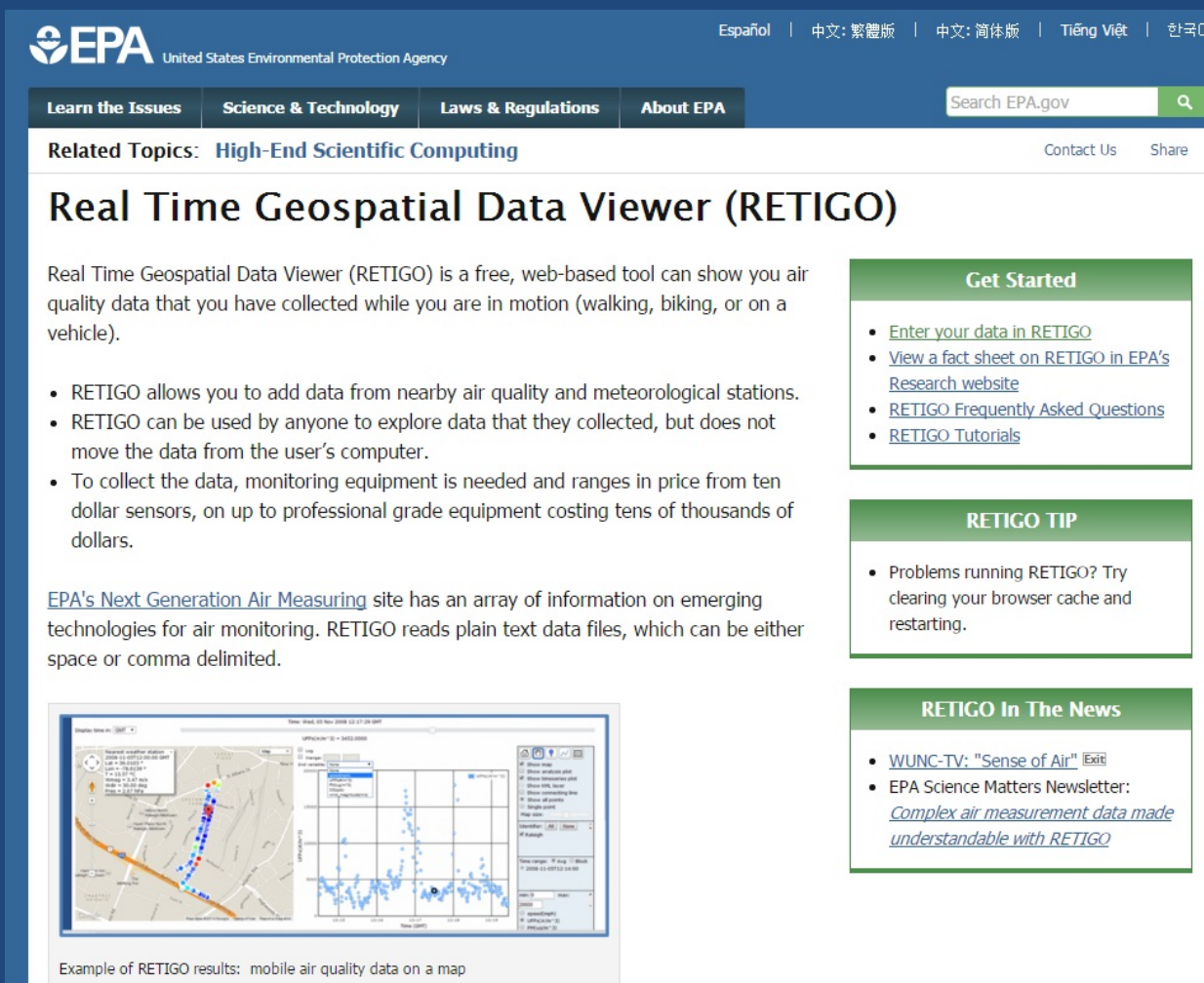
- Air
- Waste
- Facility
- Land
- Toxics
- Compliance
- Water
- Radiation
- Other

Envirofacts System Data Searches Multisystem Search

AFS RR FRS FZ Search IGMS Locational Information RadNet Customized Search TRI TRI Explorer

<http://www.epa.gov/enviro/>

Real Time GeOspatial Viewer (RETIGO) – U.S. EPA



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Real Time Geospatial Data Viewer (RETIGO)

Real Time Geospatial Data Viewer (RETIGO) is a free, web-based tool can show you air quality data that you have collected while you are in motion (walking, biking, or on a vehicle).

- RETIGO allows you to add data from nearby air quality and meteorological stations.
- RETIGO can be used by anyone to explore data that they collected, but does not move the data from the user's computer.
- To collect the data, monitoring equipment is needed and ranges in price from ten dollar sensors, on up to professional grade equipment costing tens of thousands of dollars.

[EPA's Next Generation Air Measuring](#) site has an array of information on emerging technologies for air monitoring. RETIGO reads plain text data files, which can be either space or comma delimited.

Get Started


- [Enter your data in RETIGO](#)
- [View a fact sheet on RETIGO in EPA's Research website](#)
- [RETIGO Frequently Asked Questions](#)
- [RETIGO Tutorials](#)

RETIGO TIP

- Problems running RETIGO? Try clearing your browser cache and restarting.

RETIGO In The News

- [WUNC-TV: "Sense of Air"](#) [Exit](#)
- EPA Science Matters Newsletter: [Complex air measurement data made understandable with RETIGO](#)



Example of RETIGO results: mobile air quality data on a map

<http://www.epa.gov/hesc/real-time-geospatial-data-viewer-retigo>

Community-Focused Exposure and Risk Screening Tool

(C-FERST) – U.S. EPA

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Exposure Research

Human Exposure and Atmospheric Sciences

Human Exposure and Atmospheric Science Staff

Research Topics:

- Air
- Chemical Safety
- Climate Research
- Ecosystems
- Health
- Sustainability

You are here: [EPA Home](#) » [Exposure Research](#) » [Human Exposure and Atmospheric Sciences](#) » [Micro-Trac](#)

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


Issue

Communities and individuals are faced with exposure to many environmental stressors. They want to understand their health risks and how to prevent them, but face many obstacles. Accessing, integrating, and interpreting available data for risk ranking, prioritization, and decision-making is a challenge.

Background

In response to this challenge, EPA is conducting research to enhance community-based cumulative risk assessments and developing tools to communicate that research to the public.¹ One of these tools is C-FERST², the Community-Focused Exposure and Risk Screening Tool.

C-FERST is being developed as a community mapping, information access, and assessment tool designed to help assess risk and assist in decision making with communities. EPA scientists are partnering with EPA community programs and other federal agencies to design and test C-FERST. This research responds to requests from EPA regional offices and communities as well as recommendations from the National Academy of Sciences³, National Academy of Public Administration⁴, and other Agency peer reviews. C-FERST is being developed under EPA's Sustainable and Healthy Communities research program, and has been nominated for the White House Open Government Initiative.



More about C-FERST

- C-FERST Fact Sheet (PDF, 53.26 KB)
- C-FERST AJPB Publication
- C-FERST Related Publications (PDF, 69 KB)
- General Overview Presentation (PDF, 519 KB)
- Case Studies Presentation (with screenshots) (PDF, 2.55 MB)
- Call for Collaborative Science Presentation (PDF, 418 KB)
- FAQ About C-FERST (PDF, 133.83 KB)
- Pilot Test C-FERST

Related Links

- Tribal-FERST
- EnviroAtlas
- Eco-Health Relationship Browser
- Exposure Model for Individuals (EMI)
- EPA Exposure Research

<https://www.epa.gov/healthresearch/community-focused-exposure-and-risk-screening-tool-c-ferst>

QUESTIONS?



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