

TRI-NATA Explorer Preview

2007 Environmental Information Symposium
St. Louis MO
November 15, 2007

Ted Palma - OAQPS

Development of TRI-NATA Explorer

- Goal - Put TRI air emissions into risk context
- OEI has developed TRI database
- OAQPS has developed NATA database
- OAQPS had initially developed NATA-explorer tool (unfunded!)
- OEI Staff begun to enhanced the tool

What is NATA?

- **Characterization of air toxics risks across the nation**
 - Modeling assessment performed by the USEPA to characterize chronic cancer and noncancer risk estimates for the 133 HAPs
 - Includes many sources of outdoor origin
 - Inhalation only
- **Tools for State/Local/Tribal Agencies (and EPA) to prioritize pollutants, emission sources and locations of interest**
 - Provides a starting point for local-scale assessments
 - Focuses community efforts
 - Informs monitoring programs
- **Results are available in database on NATA website**

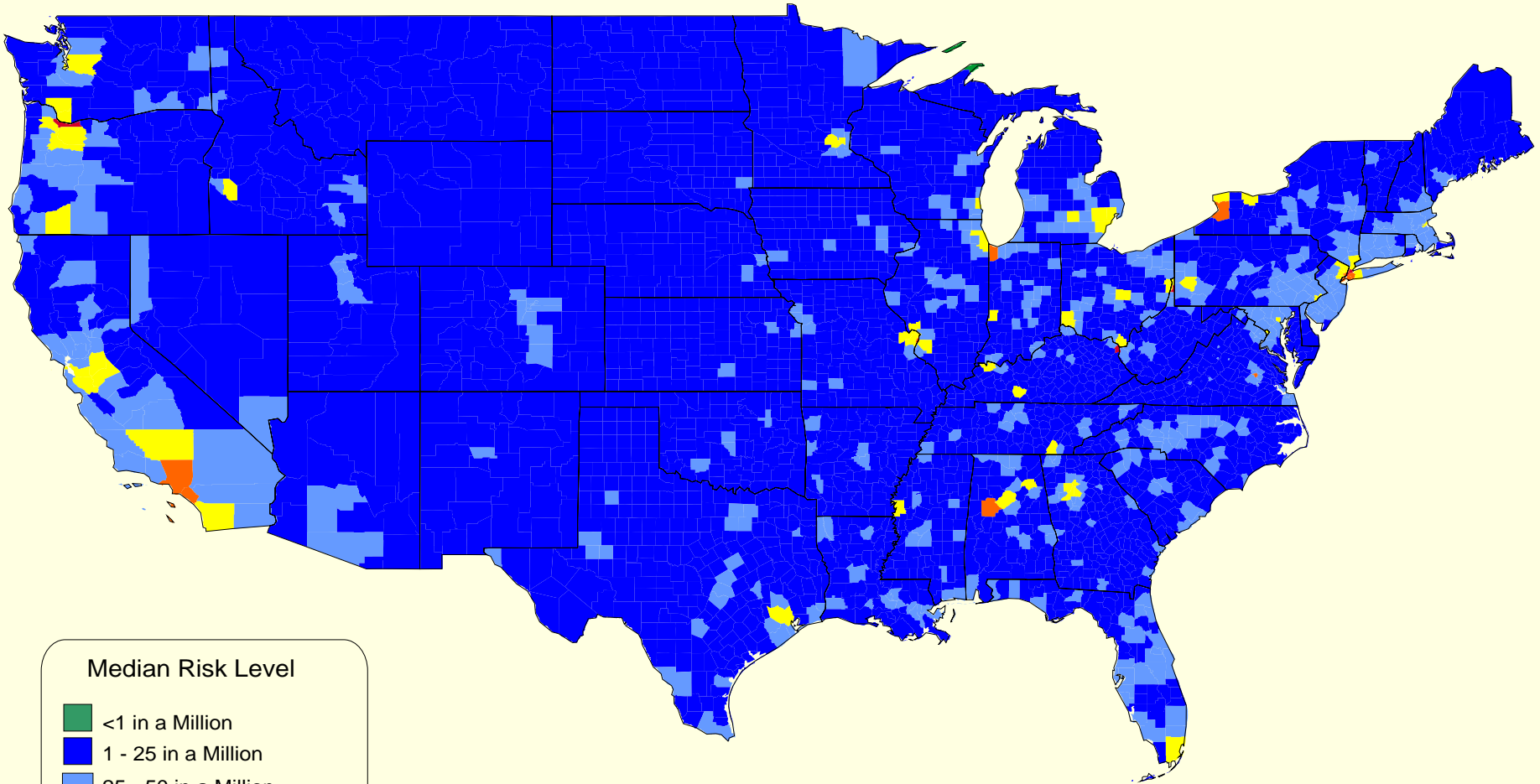
NATA History

- 1996 NATA
 - Based on 1996 NTI
 - Release May 2002
 - 33 HAPs

- 1999 NATA
 - Based on 1999 NEI
 - Released Feb 2006
 - 177 HAPs

- 2002 NATA
 - Will be based on 2002 NEI
 - Expected Release Early 2008

1999 NATA - National Scale Assessment Predicted County Level Cancer Risk – County Medians



Median Risk Level

- <1 in a Million
- 1 - 25 in a Million
- 25 - 50 in a Million
- 50 - 75 in a Million
- 75 - 100 in a Million
- >100 in a Million

Spatially, most of country predicted to have risk between 1 and 25 in a million
Most urban locations greater than 25 in a million
Transportation corridors and some locations greater than 50 in a million
Several counties greater than 100 in a million

1999 Assessment Home

About the 1999 Assessment

Frequently Asked Questions

1999 Results

Limitations

Air Toxics Reduction

Glossary of Terms

1999 Assessment Results

The State, local, and Tribal preview of this website ended 09/22/05. Our goal is to release the website to the public in November after we have addressed all the preview comments. Please do not cite or quote this information. [Questions?](#)

1999 Emissions: Maps and data tables that present 1999 emissions and emission density information across the United States plus Puerto Rico and the Virgin Islands.

- [Emission Density Maps](#)
- [Data Tables](#)
- [Pie Charts](#)
- [Data Summaries](#)
- [Data Sources](#)
- [Issues with the 1999 Inventory](#)
- [Approach for modeling POM](#)

1999 Modeled Ambient Concentrations: Maps and data tables of EPA's 1999 ambient concentration estimates across the United States plus Puerto Rico and the Virgin Islands using an air dispersion model ([ASPEN model](#)) and 1999 national air toxics emissions as input to the model.

- [Maps](#)
- [Background Concentrations](#)
- [Data Tables](#)
- [Comparison to Monitored Values](#)
- [About the Model](#)

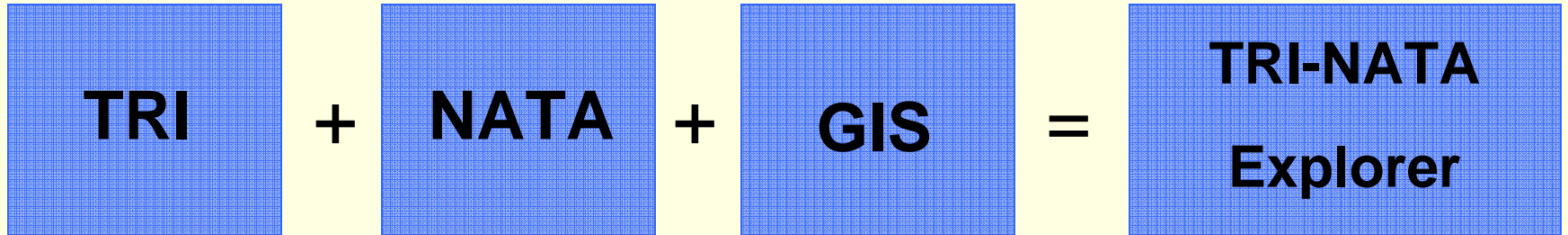
1999 Modeled Human Exposure: Provides information about EPA's 1999 population exposure estimates across the United States plus Puerto Rico and the Virgin Islands using an inhalation exposure model ([HAPEM5](#)) and the estimated ambient concentrations (i.e., ASPEN model results) as input to the model. Exposure modeling is an important step in this assessment because it factors in that people move around from one location to another, outside to inside, etc.

- [Data Tables](#)
- [About the Exposure Model \(HAPEM\)](#)
- [Health Effects Criteria](#)

1999 Estimated Risk: Provides information about the 1999 estimates of public health risks due to inhalation of air toxics, including both cancer and noncancer health effects. The estimates rely on current EPA risk assessment and risk characterization guidelines and the estimated population exposures (HAPEM5 model results).

- [Summary of Results](#)
- [Data Tables](#)
- [Bar Charts](#)
- [What about Diesel PM?](#)
- [1999 U.S. Risk Maps](#)
- [Interactive State Maps](#)
- [Background on Risk Characterization](#)
- [Health Effects Criteria](#)

**The whole is greater than
the sum of the parts.**



Getting the Right Information

- How can TRI-NATA Explorer better provide information community audiences are interested in?
- How can we make the risk information presented by TRI-NATA Explorer more understandable and useful?
- How can we help people better understand the uncertainty associated with the information provided by TRI-NATA Explorer?
- How can TRI-NATA Explorer be made easier to use?

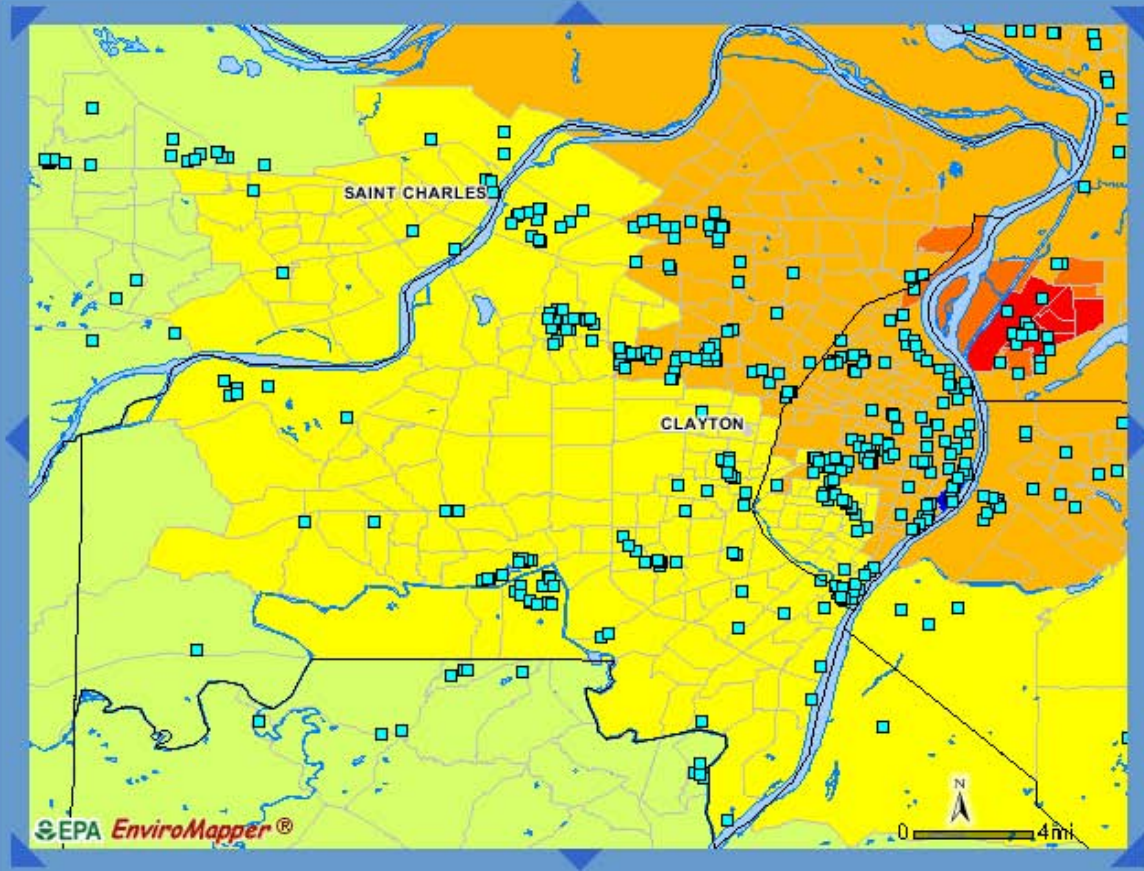
NATA Explorer: Cancer Risk Estimates (Inhalation) [per million]

Contact Us | Online Help Search: **GO**

EPA Home > NATA Home > NATA Explorer > Mapping result



- NATA Explorer
- NATA Site Map
- NATA Home
- ATW Home
- Big Map
- Small Map



Add/Change NATA Data

Environmental Justice Geographical Assess

Map Features Legend

Redraw Map Change Color

- Cancer Risk--Total: All Sectors**
- 0 - 0.05
 - 0.05 - 1
 - 1 - 1.5
 - 1.5 - 5
 - 5 - 10
 - 10 - 50
 - 50 - 100
 - 100 - 500
 - 500 - 1000
 - 1000 - 180860
- Toxic releases**
- Cities
 - County Seat
 - State Capital
 - Washington DC
 - Water bodies
 - Streams
 - Counties

Get Map

Zoom In Zoom Out Identify Select a base-map feature KML

Recenter Measure Digitize Locator Map

Identify NATA Data Select a NATA dataset

Change transparency Change background



NATA Explorer: Cancer Risk Estimates (Inhalation) [per million]

Contact Us | Online Help Search:

EPA Home > NATA Home > NATA Explorer > Mapping result

NATA Explorer

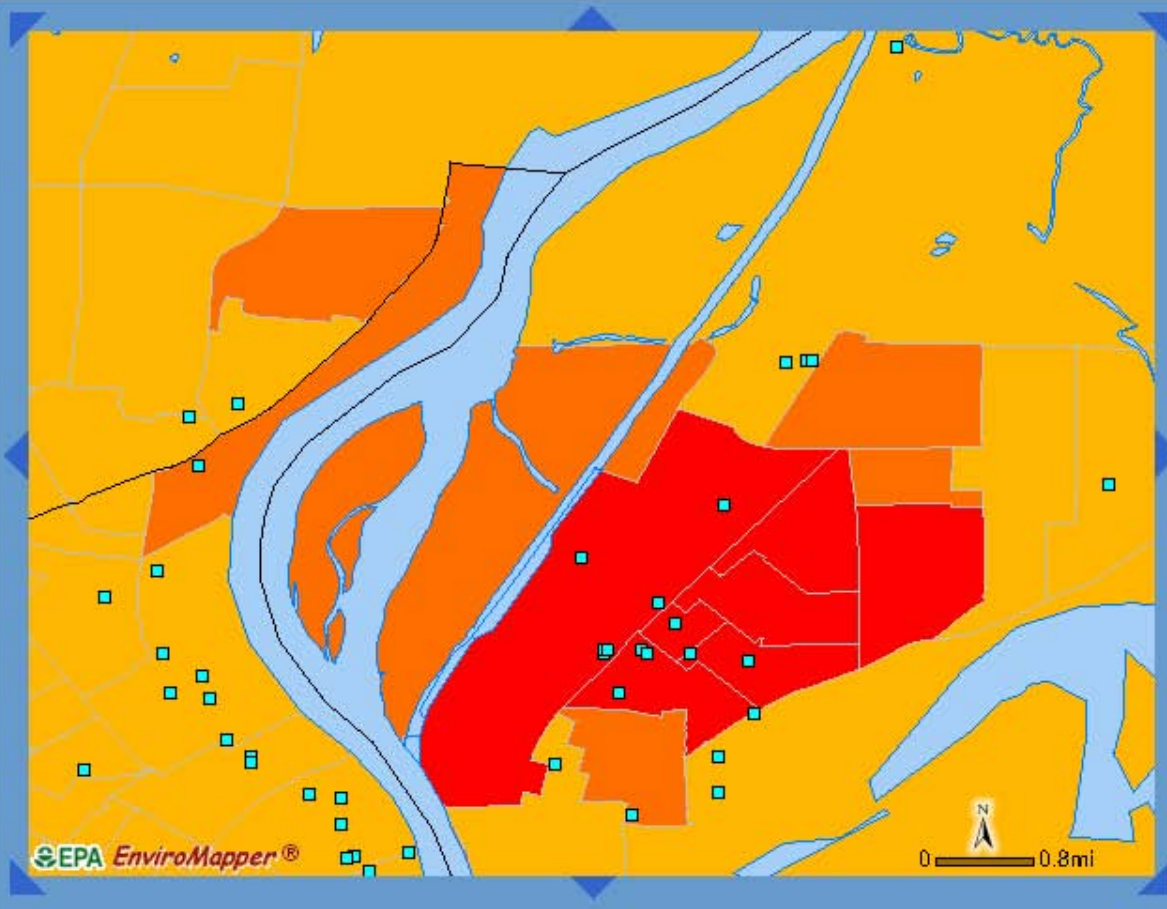
NATA Site Map

NATA Home

ATW Home

Big Map

Small Map



Add/Change NATA Data

Environmental Justice Geographical Assess

Map Features Legend

Redraw Map

Change Color

Cancer Risk--Total: All Sectors

- 0 - 0.05
- 0.05 - 1
- 1 - 1.5
- 1.5 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 500
- 500 - 1000
- 1000 - 180860

Toxic releases

Cities

- County Seat
- State Capital
- Washington DC

Water bodies

Streams

Counties

Zoom in to area of concern

Zoom In Zoom Out

Identify Select a base-map feature

Recenter Measure Digitize Locator Map

KML

Identify NATA Data Select a NATA dataset

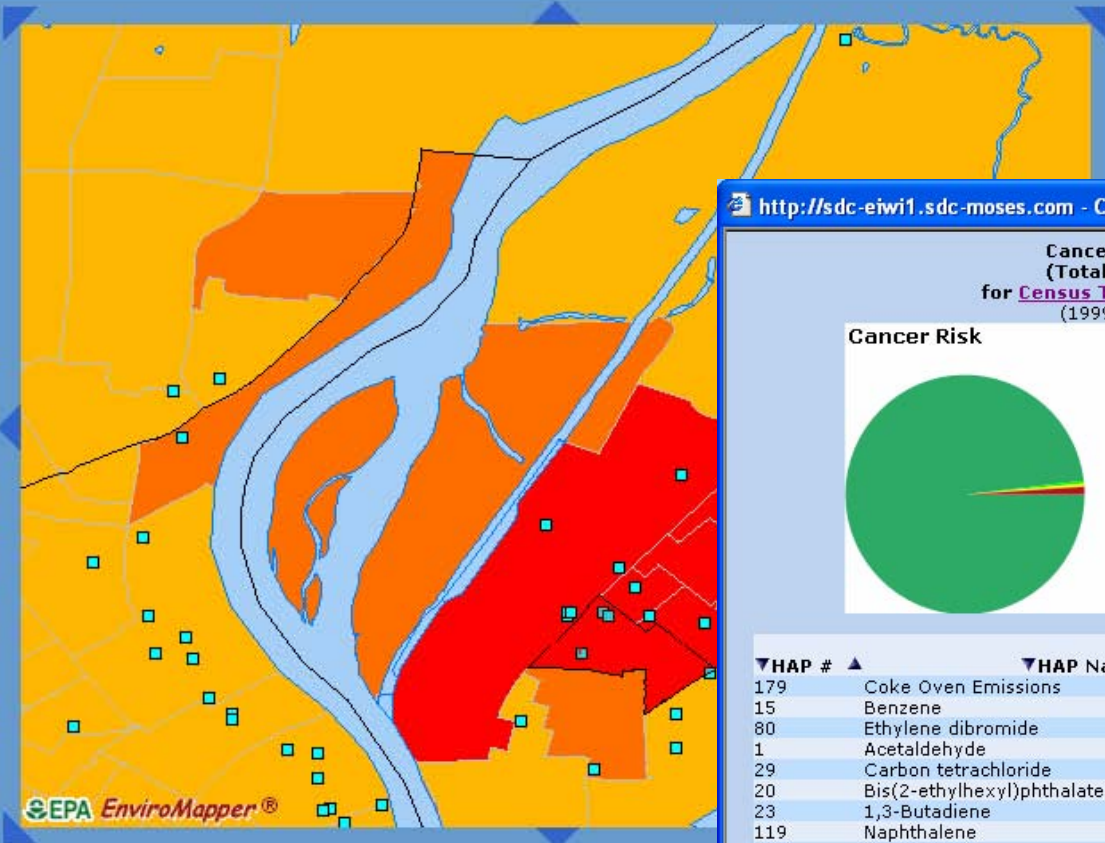
Change transparency Change background

NATA Explorer: Cancer Risk Estimates (Inhalation) [per million]

Contact Us | Online Help Search: GO
 EPA Home > NATA Home > NATA Explorer > Mapping result

Query NATA Data

- NATA Explorer
- NATA Site Map
- NATA Home
- ATW Home
- Big Map
- Small Map



<http://sdc-eiwi1.sdc-moses.com> - Cancer Risk Report by Tract - Microso...

Cancer Risk Report
 (Total: All Sectors)
 for **Census Tract: 01125010500**
 (1999 NATA Data)

Cancer Risk

Color	Category	Value
Green	Major	1542.524
Light Green	Area/Other	5.891
Yellow	Onroad	6.062
Orange	Nonroad	1.507
Red	Background	16.063

Total Risk Per Million: 1,572.046

HAP #	HAP Name	Total Risk Per Million	Percentage
179	Coke Oven Emissions	1,572.046	97.9
15	Benzene	0.7	0.04
80	Ethylene dibromide	0.2	0.01
1	Acetaldehyde	0.2	0.01
29	Carbon tetrachloride	0.2	0.01
20	Bis(2-ethylhexyl)phthalate	0.1	0.005
23	1,3-Butadiene	0.1	0.005
119	Naphthalene	0.1	0.005
149	1,1,2,2-Tetrachloroethane	0.1	0.005
174	Arsenic compounds (inorganic, may include arsine)	0.1	0.005
187_POM1	POM Group 1: Unspecified	0	0
187_POM2	POM Group 2: no URE data	0	0
187_POM3	POM Group 3: 5.0E-2	0	0
187_POM4	POM Group 4: 5.0E-3	0	0
187_POM5	POM Group 5: 5.0E-4	0	0
187_POM6	POM Group 6: 5.0E-5	0	0
187_POM7	POM Group 7: 5.0E-6	0	0

Zoom In Zoom Out
 Recenter Measure Digitize Locator Map
 Identify NATA Data

ATW Home

Big Map

Small Map



Blockgroup

- 0 - \$15,000
- \$15,000 - \$25,000
- \$25,000 - \$50,000
- \$50,000 - \$75,000
- > \$75,000

Cancer Risk--Total: All Sectors

- 0 - 0.05
- 0.05 - 1
- 1 - 1.5
- 1.5 - 5
- 5 - 10
- 10 - 50
- 50 - 100
- 100 - 500
- 500 - 1000
- 1000 - 180860

Toxic releases

Cities

Streets

- Major roads
- Local streets

Water bodies

Streams

Counties

Redraw Map ↻

Zoom In Zoom Out

Identify Toxic releases

Recenter Measure Digitize Locator Map

Identify NATA Data Select a NATA dataset

Change transparency Change background

View by State Select a State first ZIP Code Go

Redraw Map ↻

NATIONAL STEEL CORPORATION GRANITE CITY

Query TRI
Data

[Frequently Asked Questions](#)
[Glossary of Terms](#) | [Site Map](#)



Toxics Release Inventory (TRI)

[Recent Additions](#) | [Contact Us](#) | [Print Version](#) EF Search: **GO**

[EPA Home](#) > [Envirofacts](#) > [TRI](#) > Envirofacts Report



Envirofacts Report

**Generate
Envirofacts
Report**

Query executed on NOV-07-2007
Results are based on data extracted on SEP-29-2007

Click on "View Facility Information" to view EPA Facility information for the facility.

<u>Facility Name:</u>	U.S. STEEL GRANITE CITY WORKS	<u>Mailing Name:</u>	U.S. STEEL GRANITE CITY WORKS
<u>Address:</u>	1951 STATE ST GRANITE CITY IL 62040	<u>Mailing Address:</u>	1951 STATE ST GRANITE CITY IL 62040
<u>County:</u>	MADISON	<u>Region:</u>	5
<u>Facility Information:</u>	View Facility Information	<u>TRI ID:</u>	62040GRNTC20THS
		<u>FRS ID</u>	110017423171
<u>TRI Preferred Latitude:</u>	38.697222	<u>TRI Preferred Longitude:</u>	90.141667
<u>Public Contact:</u>	D. JOHN ARMSTRONG	<u>Phone:</u>	4124336792
<u>Parent Company:</u>	UNITED STATES STEEL CORP	<u>Parent DUNS:</u>	029990699
		<u>DUNS Number:</u>	141233937

SIC Codes for 2005

<u>SIC CODE</u>	<u>SIC DESCRIPTION</u>
3312	STEEL WORKS, BLAST FURNACES (INCLUDING COKE OVENS), AND ROLLING MILLS

The above information comes from 2005, which is the latest reporting year on file for this facility. The earliest reporting year on file for this facility is 1987.

Directly Import Data into Google Earth

The screenshot displays the Google Earth desktop application. The main map area shows a satellite view of Granite City, Missouri, with a semi-transparent red overlay representing imported data. The overlay consists of a grid of small red squares and lines, primarily concentrated in the central and northern parts of the city. The text 'GRANITE CITY' is visible on the map. A compass rose is located in the upper right corner of the map area, and a scale bar at the bottom right indicates 0.15 miles.

The interface includes a menu bar at the top with 'File', 'Edit', 'View', 'Tools', and 'Add Help'. Below the menu is a toolbar with icons for navigation and data management. On the left side, there are several panels:

- Search Panel:** Contains 'Fly To', 'Find Businesses', and 'Directions' tabs. A search box is present with the text 'Fly to e.g., 94043' and a magnifying glass icon.
- Places Panel:** Features an 'Add Content' button and a tree view. The tree shows a folder named 'EnviroMapper' containing:
 - TRACT info (with a note: '(Double click to zoom to the area)')
 - EnviroMapper Overlay
 - EnviroMapper Overlay
 - NATA Map Legend
- Layers Panel:** Shows a 'View: Core' dropdown and a list of layers:
 - Primary Database
 - Terrain
 - Geographic Web
 - Featured Content
 - Global Awareness
 - roads

At the bottom of the window, the status bar displays the following information: 'Pointer 38°41'57.81" N 90°09'25.51" W Streaming ||||| 100% Eye alt 7513 ft'. The Google logo is visible in the bottom right corner of the map area.

For Conference Purposes Only

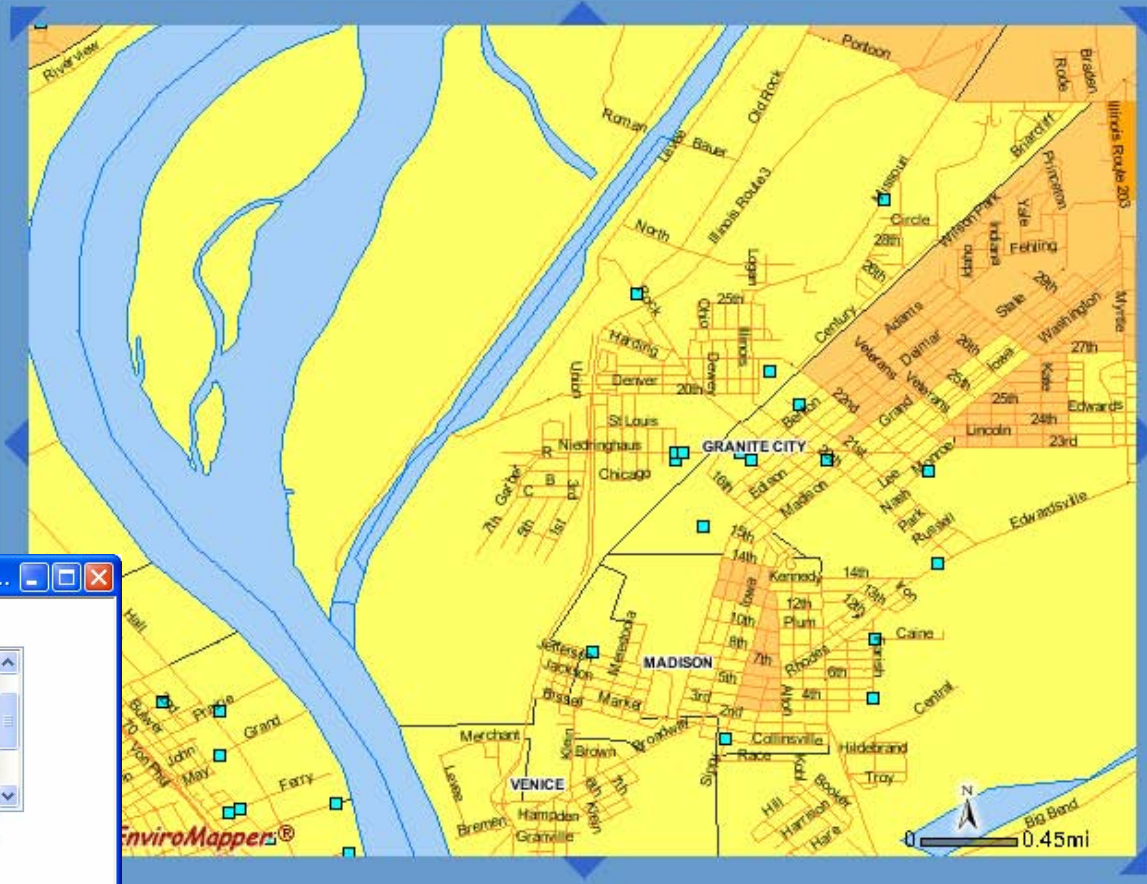


NATA Explorer

Contact Us | Online Help Search: **GO**
 EPA Home > NATA Home > NATA Explorer > Mapping result

Generate Demographic Information of Area

- NATA Explorer
- NATA Site Map
- NATA Home
- ATW Home
- Big Map
- Small Map



Add/Change NATA Data
 Environmental Justice Geographical Assess

Map Features Legend

- Redraw Map
- Per Capita Income by Blockgroup**
- 0 - \$15,000
 - \$15,000 - \$25,000
 - \$25,000 - \$50,000
 - \$50,000 - \$75,000
 - > \$75,000
- Toxic releases**
- Cities
 - Streets
 - Major roads
 - Local streets
 - Water bodies
 - Streams
 - Counties

http://sdc-eiwi1.sdc-m...

Select Demographics:

- Per Capita Income
- Percent Minority
- Percent Below Poverty
- % Education <12th grade
- % High School Diploma
- % Bachelor degree or up
- % people <18 Years

Add to Map Close

Zoom Out Identify Select a base-map feature

Recenter Measure Digitize Locator Map

Change transparency Change background

View by State Select a State first ZIP Code Go

Redraw Map

TRI-NATA Explorer Tentative Schedule

- Internal EPA Focus Group Review – September 2007
- Initial Software Enhancements- Fall 2007
- External Focus Group Review – February 2008
- Final Enhancements – Spring 2008
- Update with 2002 NATA – Spring 2008
- Public Release – Fall 2008

TRI-NATA Explorer Development Team

- Ted Palma – OAQPS
- Kim Balassiano – OEI
- Art Koines - OEI
- Dave Wolf – OEI
- Mike Petruska - OEI