

# National Air Toxics Assessment Facility Review

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# Outline

- ▶ NATA Background/Lean Event
- ▶ NATA Schedule and Facility Review
- ▶ Facility Review Process
- ▶ Description of Review Data
- ▶ Summary of Review Steps
- ▶ How to Comment
- ▶ NATA Contacts
- ▶ Q&A

# Background on the National Air Toxics Assessment

- ▶ NATA provides census-tract level modeled ambient and exposure concentrations and risks
  - ▶ Air toxics (~180 HAPs + diesel PM)
  - ▶ The next version will be based on the year 2014 emissions (2014 NEI v2)
  - ▶ Chronic risks from inhalation
  - ▶ Sources of outdoor origin
- ▶ Allows EPA and State/local/tribal agencies to prioritize pollutants, sources and areas of interest for further study
- ▶ Done roughly with every triennial inventory
  - ▶ (1996, 1999, 2002, 2005, 2011, 2014)
- ▶ Previous NATA, based on 2011 emissions, released in December 2015

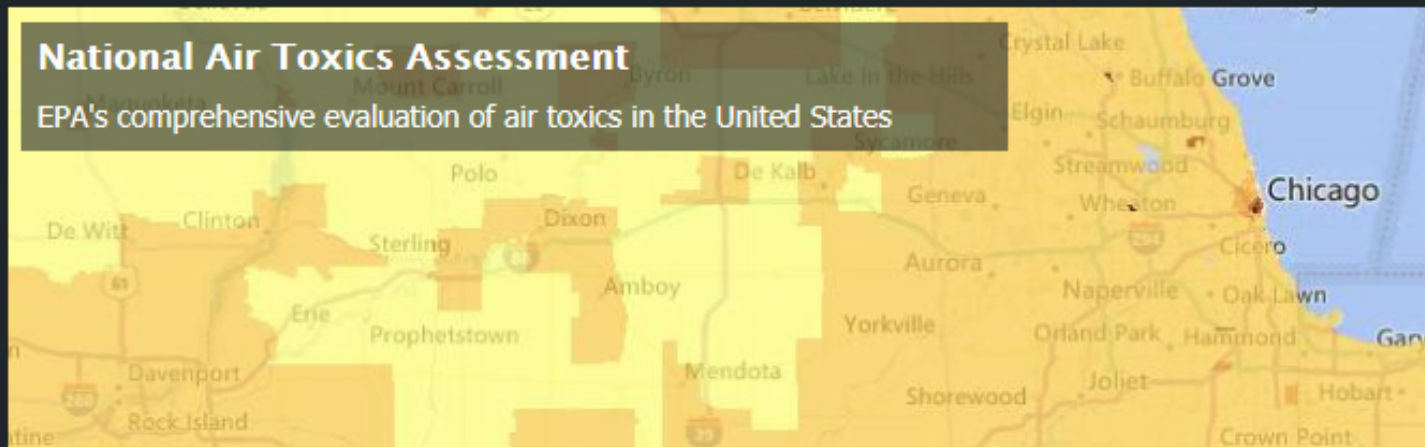
## National Air Toxics Assessment

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### National Air Toxics Assessment

EPA's comprehensive evaluation of air toxics in the United States



On December 17, 2015, EPA released the most recent update to the National Air Toxics Assessment (NATA). NATA contains emissions data from 2011 and uses models to make broad estimates of health risks over geographic areas of the country.

[Learn more](#)

### NATA Overview

- [Limitations](#)
- [Glossary of Terms](#)
- [Frequent Questions](#)

### 2011 NATA Assessment

- [2011 Assessment Results](#)
- [2011 NATA Map](#)
- [2011 Assessment Methods](#)

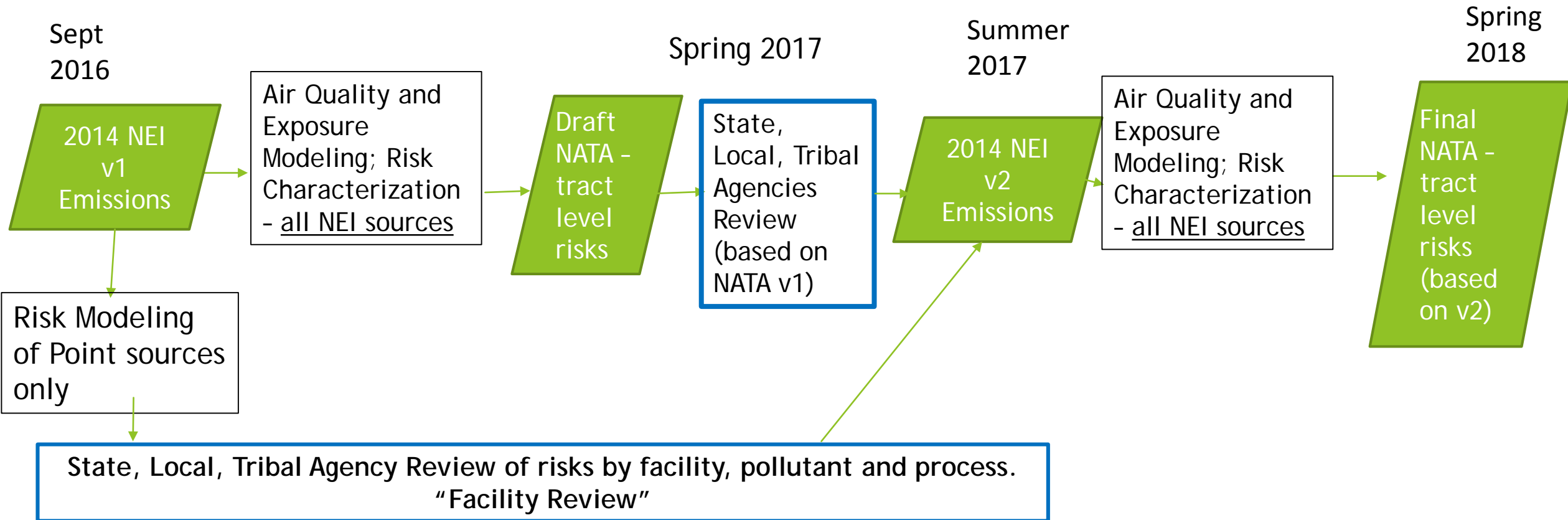
### Quick Links

- [Previous versions of NATA](#)
- [Other environmental screening tools](#)
- [Learn about risk assessment](#)
- [Hazardous Air Pollutants website](#)
- [Urban Air Toxics website](#)

# NATA “Lean” Event

- ▶ After we completed the last NATA, EPA conducted a “Lean” event to improve how we develop NATA
- ▶ Included OAQPS, OTAQ, EPA Regional Office, and State participation
- ▶ Improvements from Lean event:
  - ▶ More timely NATA - learned customers interested in getting NATAs closer to the inventory year
  - ▶ Improved technical aspects - e.g., spatial allocation
  - ▶ More effective and efficient review process
- ▶ Developed schedule/plan
  - ▶ Provide early review of facility risk information
  - ▶ Provide review of “complete” census tract-level risks
  - ▶ Cut nearly 9 months off the overall NATA timeline

# Proposed NATA Schedule



# Design of the NATA “Facility Review” Process

## ▶ Developed review process with S/L/T input

- ▶ 6 meetings of S/L/T Review Committee - design outputs/review process for 2014 NEI v1 facility review
- ▶ WI, NY, MN, SC, GA, Tribes, Puget Sound, EPA Regions 1,2,3,5,7,10

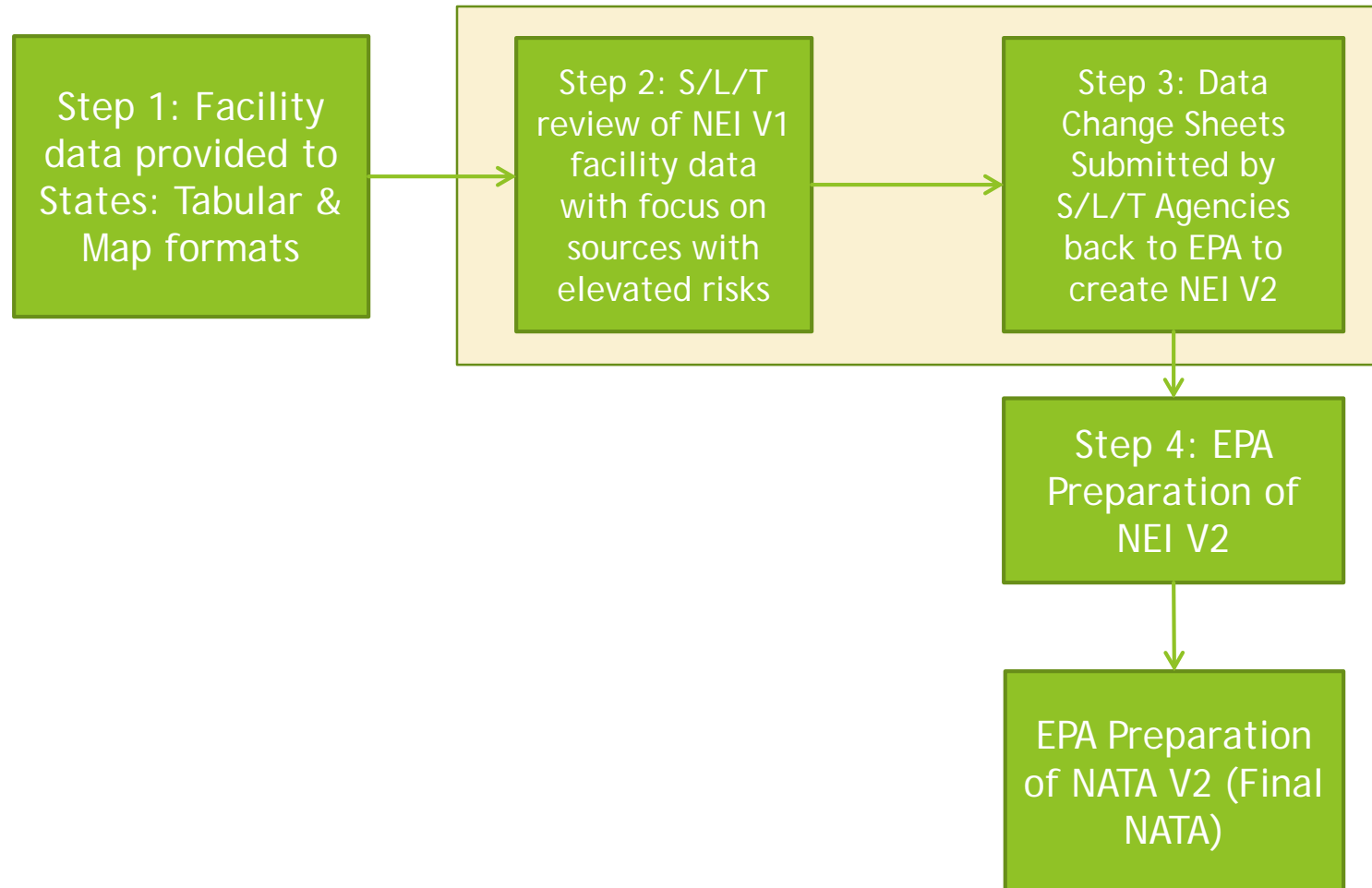
## ▶ Key goals

- ▶ Provide useful & sufficient information, with clear instructions
- ▶ Allow a long time to review facility emissions and risk information
- ▶ Focus inventory revisions - prioritize review on elevated risks which may be due to incorrect emissions or other data (e.g., locations, release parameters)

## ▶ Note - Facility risks are provided for quality assurance purposes

- ▶ Not a NATA product that will be provided to the public
- ▶ *Facility risk values should not be shared outside of S/L/T.*

# Overview: Facility Review Process





# What Data are being Provided?

- ▶ Three levels of tabular (Excel) files are provided
  - ▶ Facility - risks (View 1)
  - ▶ Facility-pollutant - emissions and risks by facility (View 2)
  - ▶ Sub-facility details - emissions & risks by process and release point (View 3)
- ▶ Map Application
  - ▶ useful to examine locations of facilities and high risk census blocks
  - ▶ data can also be extracted from the Map App in csv files
- ▶ “Change” sheets (2 per state)
  - ▶ Process-level emissions data
  - ▶ Release point parameter data
- ▶ Access all data through SharePoint Site
  - ▶ Download data to your computer; do not make changes on SharePoint
  - ▶ Site accessible to those with NEI SharePoint access
  - ▶ NEI SharePoint link is [https://usepa.sharepoint.com/sites/oar\\_Work/NEI](https://usepa.sharepoint.com/sites/oar_Work/NEI)
  - ▶ Appendix has instructions on how to access NEI SharePoint and set alerts



Home

EIS Gateway

CHIEF Inventory

2014 NATA

NOMAD Workgroup

# Review Data: Facility level (View 1)

- ▶ All facilities nationwide in 2014 NEI v1 that have at least 1 HAP, except airports
- ▶ Cancer, non-cancer (hazard index) at max receptor
  - ▶ For this review, the risk is the highest risk at the centroid of a populated census block (MIR or maximum individual risk). The publicly released version of NATA will only present category (point, nonpoint...) aggregated and total risks (not facility level) at a census tract (not census block) level.
- ▶ 2011 cancer risk and non-cancer respiratory hazard index
  - ▶ This data is being provided to look for any significant changes to facility level risks that may have occurred as a result of inventory changes.
  - ▶ Other changes to the assessment could change the risks results (e.g., met data, model version, health benchmarks) but are not expected to be significant.
- ▶ Can use this file to look at facilities at all risk levels (lows & highs) The “low” risks are provided for S/L/T agencies to check for facilities that were expected to be higher risk.

# Review Data: Facility/pollutant (View 2)

- ▶ All facilities nationwide contained in View 1
- ▶ Pollutant level emissions and risks that contribute to the risks presented in View 1
- ▶ Can use this file to determine risk driver pollutant

Note: Emissions from 3 pollutants were multiplied by a metal speciation factor prior to air quality/risk modeling to account for metal portion of the HAP. Tabular files/map application show emissions reported to the NEI (i.e., before the speciation factor).

Pollutant code	Description	Metal Speciation Factor
7738945	Chromic Acid (VI)	0.4406
1333820	Chromium Trioxide	0.52
1313991	Nickel Oxide	0.7412

## Review Data: Detailed Sub facility (View 3)

- ▶ State files that contain all facilities in View 1 for that state that have an “elevated risk”
  - ▶ Cancer greater than 10-in-1 million  
and/or
  - ▶ HI (respiratory or neurological) greater than 2
- ▶ Process, release point and pollutant level emissions and risks
- ▶ Determine which emission point (process and release point) is driving the risk

# Demo SharePoint and Tabular Data

# Review Data: Map App

- ▶ The 2011 NATA Web App is being improved to include the ability to add a layer or map from the web
  - ▶ We will have a 2014 point source review web map for reviewers to add while in the existing 2011 App
  - ▶ Will need to use username and password to access the 2014 point source map
- ▶ The added point source review web map will have 3 layers
  - ▶ Facility-level data
    - ▶ Facility info, risks and emissions by pollutant
    - ▶ Will be color-coded to visually distinguish risk ranges
  - ▶ Emission-point-level data
    - ▶ Emission point ID data, risks and emissions by pollutant
    - ▶ Symbol color/sizes will help visually distinguish risk ranges
  - ▶ Census block data for the 3 blocks with highest estimated risks from each facility
    - ▶ Block info and risks by pollutant
    - ▶ Blocks will be labelled "1", "2", and "3" for each facility to easily see the three highest impacted blocks - highest block is labelled "1"

# Map App: How it Could Aid the Review

## ▶ Facility-level data

- ▶ Quickly see if there are any facilities in an area with high modeled risks at the census block level
- ▶ Get pie charts to quickly identify pollutant drivers
- ▶ Query the data to find (and export to csv file):
  - ▶ Facilities in a State/County with high (or low) risks
  - ▶ Pollutants that drive risks

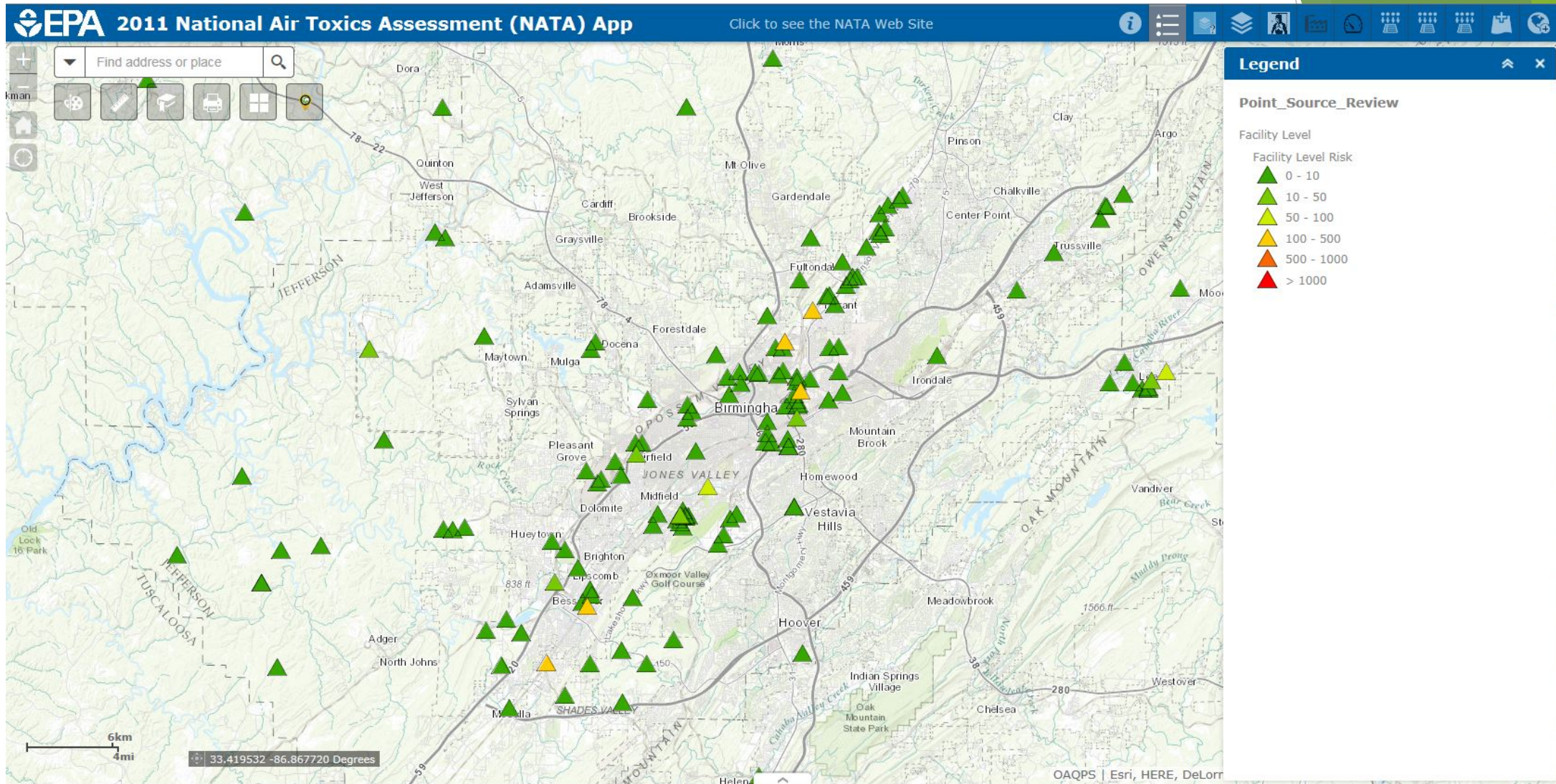
## ▶ Emission-point-level data

- ▶ Quickly see which emission points drive the facility risks
- ▶ Use app coordinate widget to copy new coordinates for mis-located emission points

## ▶ Census block data

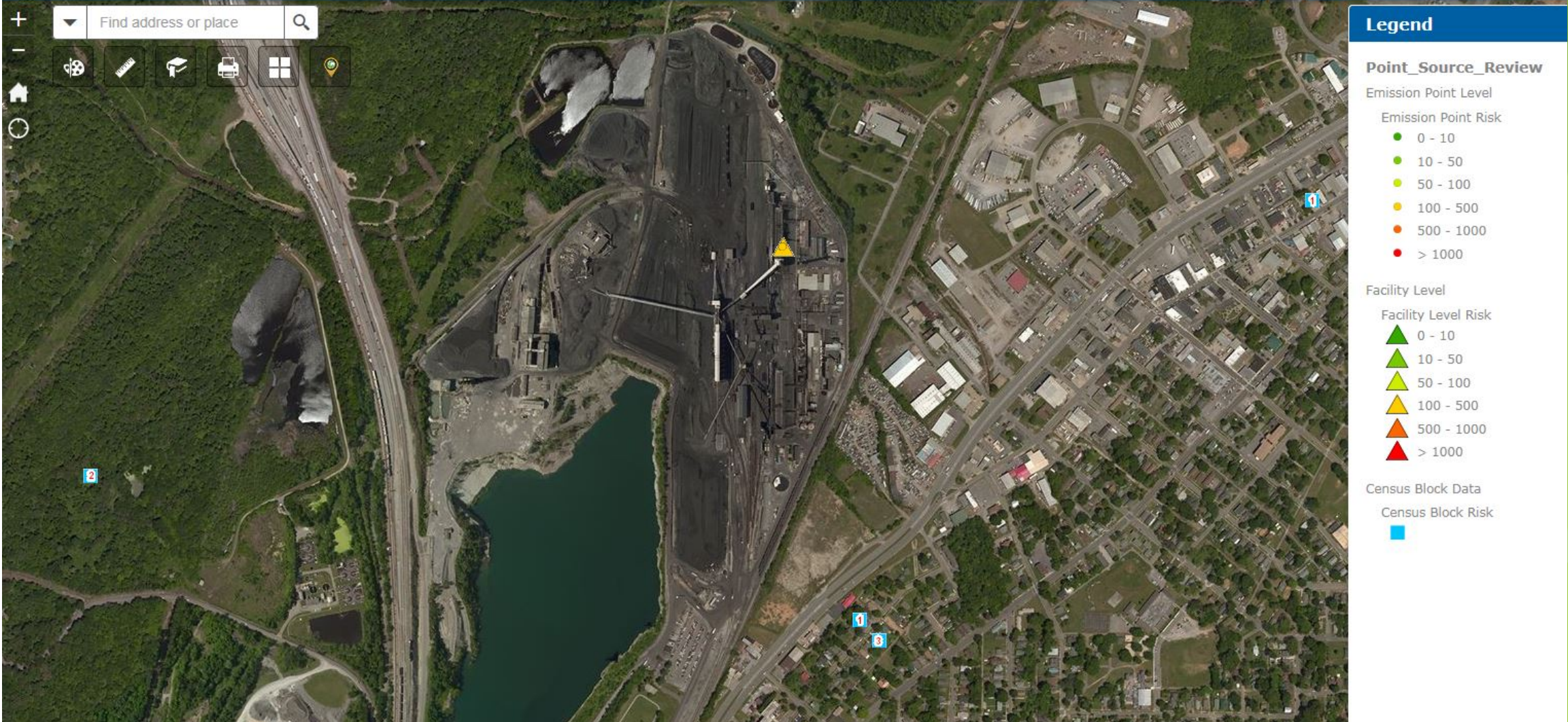
- ▶ Visually see where the impacted blocks are and whether the MIR block ("1") is on facility property
  - ▶ If on property, look at the other blocks that accurately represent residential locations to see if risks are also elevated





View of many facilities across a county scale indicates several facilities with risks between 100 and 500 in a million. Can click on symbols to get a popup with HAP drivers and emissions





Closer view of one of the facilities. All emission point circles coincide with the triangle that represents the facility - that is, all emission points have the same coordinates. High risk census blocks are all offsite.





Although not shown, there is actually a census block within 30m of a source here, but not shown because it is not a valid receptor. The facility risk here is based on the highest "polar" receptor and not the next highest census block, and the facility risk (the triangle) does not match the block risk ("1")

**Legend**

**Point\_Source\_Review**

- Emission Point Level
- Emission Point Risk
- 0 - 10
  - 10 - 50
  - 50 - 100
  - 100 - 500
  - 500 - 1000
  - > 1000

**Facility Level**

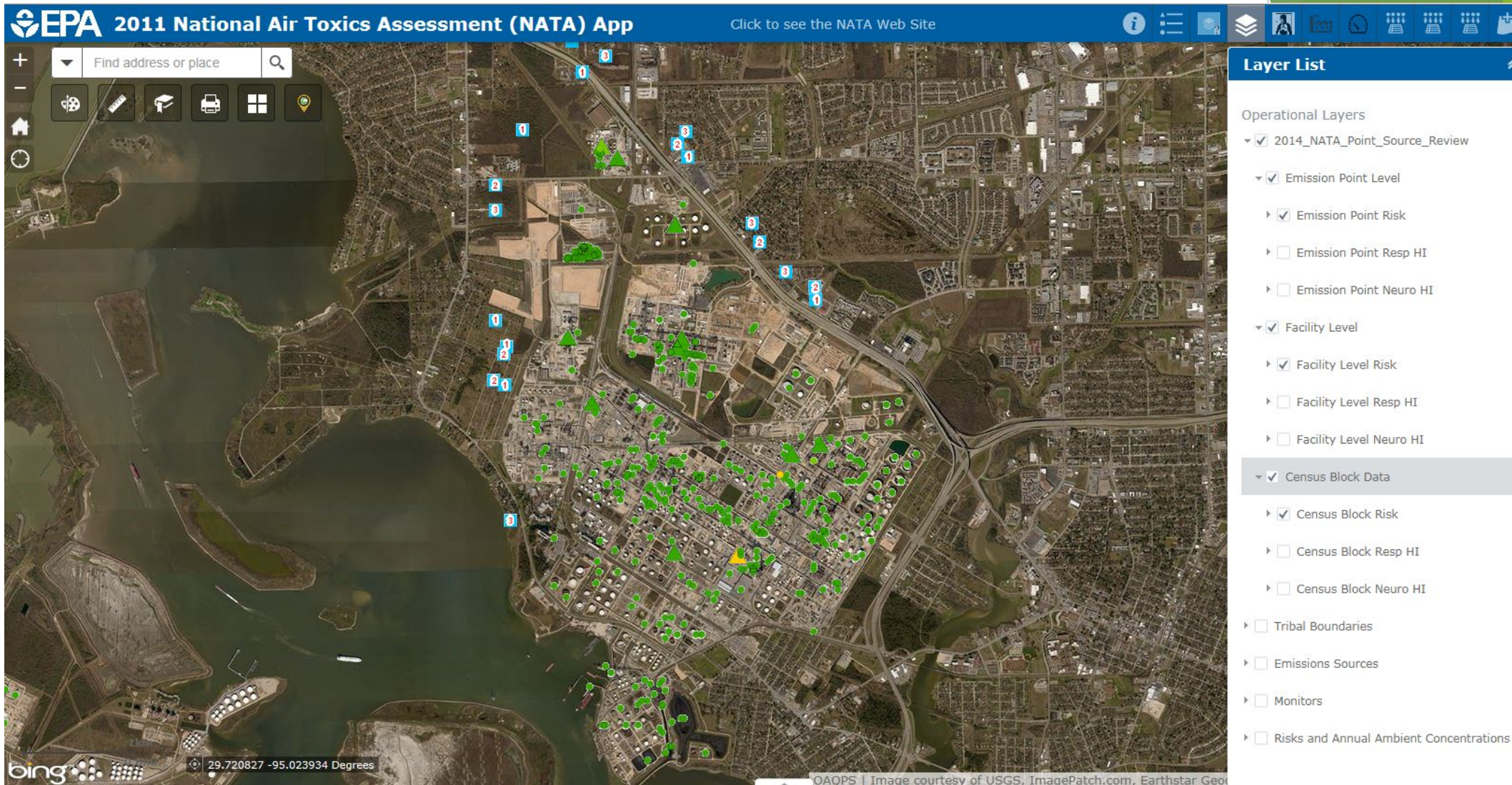
- Facility Level Risk
- ▲ 0 - 10
  - ▲ 10 - 50
  - ▲ 50 - 100
  - ▲ 100 - 500
  - ▲ 500 - 1000
  - ▲ > 1000

**Census Block Data**

- Census Block Risk
- 

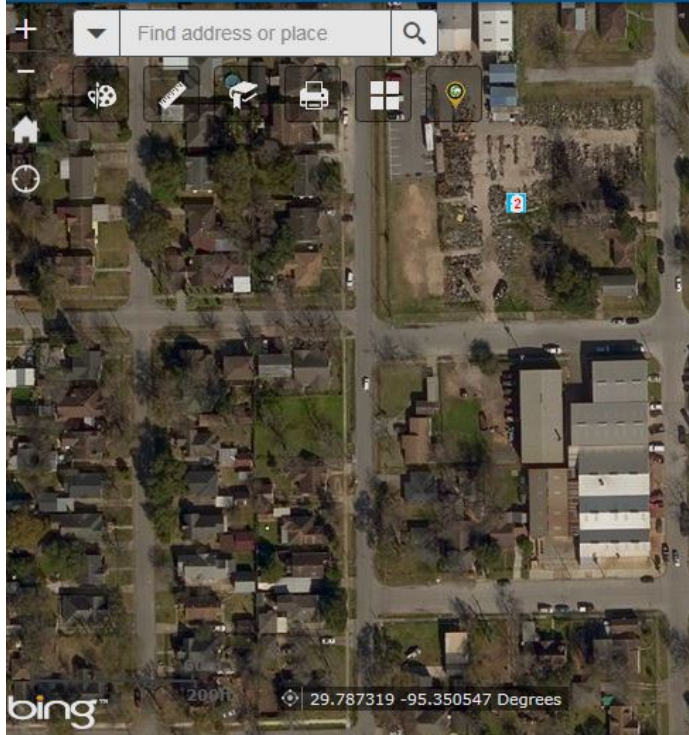
Facility with elevated risks, census blocks with highest modeled risk





Close view of multiple facilities and individual emission points. Layer list shows all the layers included in the 2014 point review map. Map indicates that emission points seem correctly located, and no census blocks seem to be on plant property





Filter

+ Add a filter expression + Add an expression set

Get features in the layer that match All of the following expressions

State/Tribe (String) is Texas  
 Value  Field  Unique

COUNTY (String) is Tarrant  
 Value  Field  Unique

Facility Risk (Number) is at least 100  
 Value  Field  Unique

OK Cancel

- Layer List
- Operational Layers
- 2014\_NATA\_Point\_Source\_Rev
  - Emission Point Level
    - Emission Point Risk
    - Emission Point Resp HI
    - Emission Point Neuro HI
  - Facility Level
    - Facility Level Risk
    - Facility Level Resp HI
    - Facility Level Neuro HI
  - Census Block Data
    - Census Block Risk

Options Filter by Map Extent Zoom to Clear Selection Refresh

OBJECTID	State/Tribe	FIPS	COUNTY	EIS Facility ID	State Facility ID	Facility Name	ADDRESS	CITY	ZIPCODE	SITELAT	SITELON	NAICS	NAICSDESC	Facility Type Code	Facility Code
38798	Texas	48201	Harris	3739611		Southwestern Plating Co Inc	1312 Halpern	Houston	77009	29.78777	-95.35444	332813	Electroplating, Plating, Polishing, Anodizing, and Coloring		

1 features 0 selected

Example of a query of facility risks, based on State, County and risk level. The query results can be sorted, zoomed to, and viewed closer for details. Query data can also be exported to a csv file

# Getting comments to EPA: Change Sheets

- ▶ Two change sheets per state provided:
  - ▶ Process Emissions change sheet
  - ▶ Release point parameter change sheet
- ▶ Download change sheets to your computer
- ▶ Provide revisions in highlighted fields and include rationale
- ▶ Email entire file back to us, [NATA@epa.gov](mailto:NATA@epa.gov) and cc EPA Regional NATA Contact
- ▶ All changes **Due May 1, 2017**
  - ▶ Earlier submittals are encouraged
  - ▶ OK to submit data in smaller chunks

# Change Sheets: Process Emissions

- ▶ Make changes only in yellow highlighted columns
- ▶ Where needed, revise process level emissions
- ▶ Add rationale
  - ▶ If it is state/local/tribal data and they have been updated then indicate why estimate was revised “changed emission factor” or “changed activity” or “updated test data”
  - ▶ If it is EPA data (i.e., from the TRI or HAP augmentation), explain basis for the change

# Change Sheets: Release Point Parameters

- ▶ Make changes only in yellow highlighted columns
- ▶ Note the following fields:
  - ▶ Coordinates Protected
    - ▶ Means it was looked at and we “protected it”; however, if it is incorrect, you can still determine it is not correct and provide a new value.
  - ▶ Coordinate Derivation - could either be based on the particular release point “RELEASE POINT” or the facility site lat/lon “SITE”
  - ▶ Stack parameter marked as “out of range”
    - ▶ We compared the parameters to a range list used by the SMOKE emissions program and found that they are out of range

# Final Review: Check List

- ▶ Check list contains only the facilities with the highest elevated risks, in this case cancer risks > 100-in-1 million risk or noncancer HI > 5
  - ▶ At a minimum, we want to be assured that these facilities have been reviewed

State Reviewed Data? (Y/N)	Change Submitted by State? (Y/N)	Person completing check list	Affiliation of person completing check list	Comment
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- ▶ Fill it out in SharePoint
- ▶ S/L/T's are encouraged, where resources permit, to examine the emissions/risks for all facilities in their state with an "elevated risk" (cancer risks > 10-in-1 million and noncancer risks > 2)



# Basic Review Steps

- ▶ Step 1: Understand the point source emissions/risk data that provided
  - ▶ Examine the data provided- tabular/map
  - ▶ Review Instructions/guidance
  - ▶ Know who to contact with questions (see contacts - end of presentation)
  
- Step 2: S/L/T review/quality assurance of HAP Emissions and other data
  - Starting with highest risk facility, review EPA information and compare with your S/L/T inventory
  - Consider using 80% rule - limit your review to only the top 80% of risk drivers from the facility - this is often only one or two HAP and one or two processes
  - Consider contacting facility if you need further information and be specific about the HAP and process you seek clarification about
  - Decide on whether changes are needed to emissions, geographic coordinates or release point parameters
  - Coordinate at state level between risk and inventory staff

# Basic Review Steps (cont)

- ▶ Step 3: Prepare and submit changes to NEI V1 using EPA-provided change sheets for process emissions and release point data
  - ▶ Coordinate at state level between risk and inventory staff
  - ▶ Process-level emissions data - use change sheets provided to change HAP emission amounts
  - ▶ Release point data- use change sheets provided to change emission point locations, heights, velocities, etc.
  - ▶ Email any updated change sheets to:
    - ▶ [NATA@epa.gov](mailto:NATA@epa.gov) and
    - ▶ EPA Regional Office NATA contact (see list at end of presentation)
- ▶ Step 4: Fill out tracking sheet on Sharepoint to indicate you have completed review of facilities with elevated risks (greater than 100-in-1 million or hazard index of 5)
  - ▶ Note: even if you do not submit a change sheet for a facility, please indicate that you have reviewed all the elevated risks facilities in your geographic area.

# Facility Review Webinar: Summary

- ▶ *Facility and sub facility risks are for internal S/L/T use only and should not be shared outside your agency*
  - ▶ Emissions/source parameters can be shared as needed
- ▶ Data, map, additional resources on SharePoint
- ▶ Send marked up “change” sheets to [NATA@epa.gov](mailto:NATA@epa.gov) and cc: NATA Regional Office lead
- ▶ Fill in Check list on SharePoint
- ▶ Due date - May 1, 2017 (point source changes)
  - ▶ Ok to send in pieces
  - ▶ Encouraged to send earlier!

# NATA Contacts

- ▶ EPA Regional Office NATA leads:
  - ▶ Region 1: Susan Lancey 617-918-1656, MaryBeth Smuts 617-918-1512
  - ▶ Region 2: Carol Bellizzi 212-637-3712, Raymond Forde 212-637-3716
  - ▶ Region 3: Jessica Fry 215-814-2122, CarolAnn Gross-Davis, 215-814-5738 Alice Chow, 215 814-2144
  - ▶ Region 4: Egide Louis 404-562-9240
  - ▶ Region 5: Suzanne King 312-886-6054 , Margaret Sieffert 312-353-1151
  - ▶ Region 6: Craig Lutz 214-665-2190 Ruben Casso 214-665-6763
  - ▶ Region 7: Steven Brown 913-551-7718, Stephanie Doolan 913-551-7719
  - ▶ Region 8: Kyle Olson 303-312-6002
  - ▶ Region 9: Ken Davidson 415-972-3633
  - ▶ Region 10: Madonna Narvaez 206-553-2117, Julie Wroble 206-553-1079
- ▶ OAQPS NATA Team Leads:
  - ▶ Emissions: Madeleine Strum 919 541 2383
  - ▶ Risks: Ted Palma 919 541 5470
  - ▶ Map Application: Mark Morris 919 541 5416
- ▶ State/Local/Tribal Representative:
  - ▶ Jeff Myers, Wisconsin Department of Natural Resources, 608 266 2879

Questions/Comments ???

Thank You !

# Appendix 1- How to Access NATA SharePoint Review

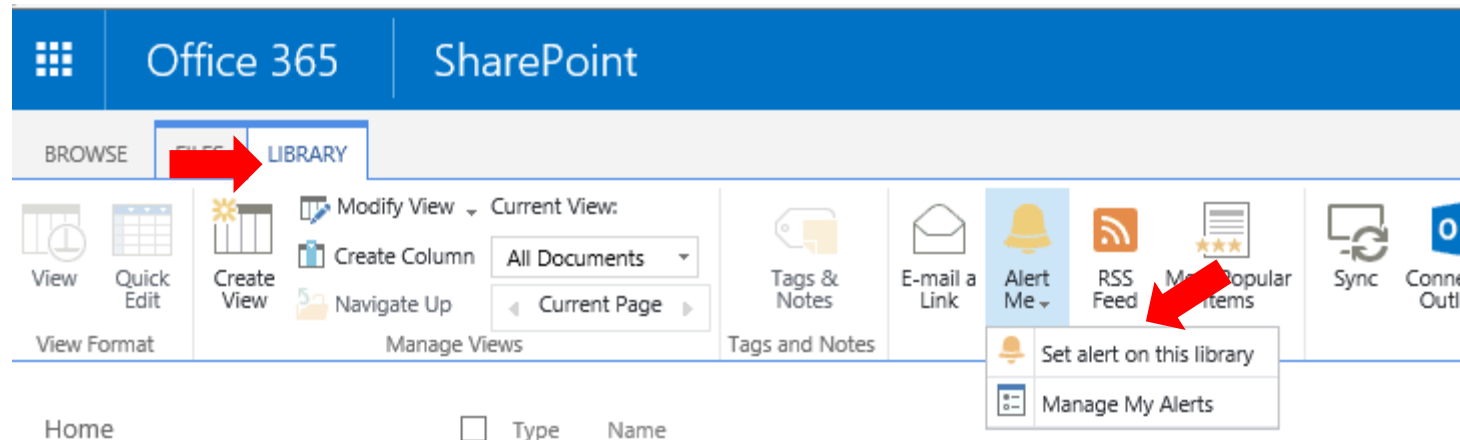
- ▶ If you already have access to the NEI SharePoint Site ([https://usepa.sharepoint.com/sites/oar\\_Work/NEI](https://usepa.sharepoint.com/sites/oar_Work/NEI)), click link on left hand side "2014 NATA Review"
- ▶ Or, to directly go to the 2014 NATA facility review:  
[https://usepa.sharepoint.com/sites/oar\\_Work/NATAREVIEW/2014Facility/\\_layouts/15/start.aspx#/SitePages/Home.aspx](https://usepa.sharepoint.com/sites/oar_Work/NATAREVIEW/2014Facility/_layouts/15/start.aspx#/SitePages/Home.aspx)
- ▶ If you have a Microsoft account, and do not have access to the NEI SharePoint site, then email Madeleine Strum (strum.madeleine@epa.gov) the account name and she will add you as a member to the site. Once you get the email, click link that takes you to the NEI SharePoint site, and then click link on left hand side "2014 NATA Review"
- ▶ If you do not have a Microsoft account
  - ▶ Set up Microsoft account: <http://www.microsoft.com/en-us/account/default.aspx>. Any email can be used to set up the account. Note: Microsoft will send you an email and you must click the link in that email to access the account
  - ▶ Email Madeleine Strum (strum.madeleine@epa.gov) providing the name of the email you used to set up the account
    - ▶ Subject: Microsoft Account
    - ▶ Body: the email you used for the Microsoft Account (e.g., [first.last@yahoo.com](mailto:first.last@yahoo.com))
  - ▶ You will receive an email from Madeleine Strum, letting you know that you have been added, and providing a link to the NEI SharePoint site. Click the link "National Emissions Inventory" Once there click TAB "2014 NATA Review".
    - ▶ If the first link does not work once you enter your login information, then try again using the link at the top of the invite that reads "view this e-mail in your browser" Then click the link available in that view
- ▶ If you have a work-shared SharePoint account, you may want to try the following steps:
  - 1) Sign out of your work SharePoint account from your browser (in SharePoint click your picture in the upper right and choose "Sign out")
  - 2) In your browser, cut/paste the NEI Sharepoint Site URL: [https://usepa.sharepoint.com/sites/oar\\_Work/NEI](https://usepa.sharepoint.com/sites/oar_Work/NEI)
  - 3) Do NOT enter your email here. Instead, click on the link "Sign in with a Microsoft account" at the bottom.
  - 4) Once you go to this login page, then you can enter your login information and it should take you to the NEI page.
  - 5) Some people have had luck clicking on the link in the error screen or 'denied' page that says "Click here to sign in with a different account to this site" (a Microsoft account) and then using the SAME account to log in - then it works.

# Appendix - 2 Instructions for creating an “alert” in a SharePoint library (1 of 4)

Purpose: If you create an “alert” SharePoint will send you an email when a document in that library has been updated

We recommend you to do this for the “Data” and “Documentation” libraries on the SharePoint Facility Review site

- Navigate to the library where you are setting an alert. Go to the **Library** tab in the menu and select **Alert Me**. Choose **Set alert on this list** from the sub menu.



# Appendix - 2 Instructions for creating an "alert" in a SharePoint library (2 of 4)

- **Modify** the name of the alert if desired (it defaults to the name of the list). The **Send Alerts To** section should default to the name of the person currently signed into SharePoint.

Documents - New Alert

Alert Title

Enter the title for this alert. This is included in the subject of the notification sent for this alert.

Documents

OK

Cancel

Send Alerts To

You can enter user names or e-mail addresses. Separate them with semicolons.

Users:

Consultant PA x |






# Appendix - 2 Instructions for creating an “alert” in a SharePoint library (3 of 4)

•The **default delivery method** will be E-mail and does not need to be changed. In order to be notified when items are changed, select “**All changes**” for the **Change Type**. And in the **Send Alerts for These Changes** section, choose “**Anything changes.**”

## Change Type

Specify the type of changes that you want to be alerted to.


Only send me alerts when:

- All changes 
- New items are added
- Existing items are modified
- Items are deleted

## Send Alerts for These Changes

Specify whether to filter alerts based on specific criteria. You may also restrict your alerts to only include items that show in a particular view.

Send me an alert when:

- Anything changes 
- Someone else changes a document
- Someone else changes a document created by me
- Someone else changes a document last modified by me

# Appendix - 2 Instructions for creating an "alert" in a SharePoint library (4 of 4)

- The final selection is when to send alerts. The default setting is **Send notification immediately**. Depending on how often you want the notifications, you could also choose to get a summary daily, or even once a week. Click OK when finished.

## When to Send Alerts


Specify how frequently you want to be alerted. (mobile alert is only available for immediately send)

- Send notification immediately
- Send a daily summary
- Send a weekly summary

Time:

Wednesday ▼ 5:00 AM ▼

It is up to you on frequency



OK

Cancel