

MAKING A VISIBLE DIFFERENCE

Supporting Communities using EPA Science Tools



★ EPA Region 10

Laura Stewart, MSL – Oak Ridge Institute for Science and Education (ORISE)

New Partners for Smart Growth Conference. February 2016. Portland, OR

SUPPORTING COMMUNITIES USING EPA SCIENCE TOOLS

- Access to information
- Local-scale assessment
- Environmental exposure
- Environmental Justice concerns
- EPA web-based tools



SUPPORTING COMMUNITIES USING EPA SCIENCE TOOLS

Region 10 Pilot Project Tacoma, WA

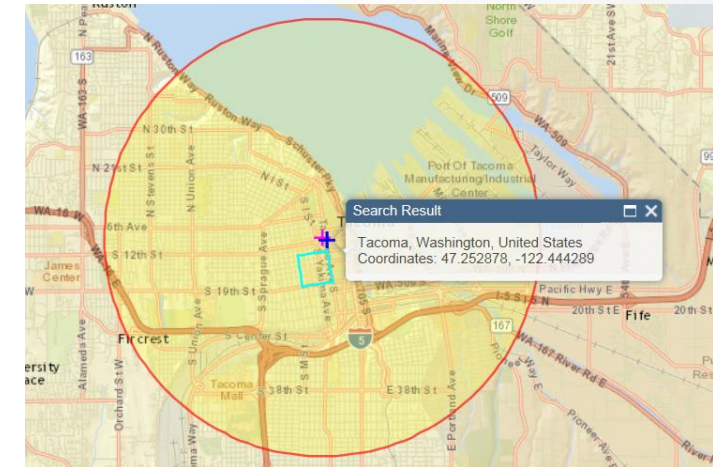
Explore Reports ✕

3 mile Ring Centered at 47.253344, -122.445490, WASHINGTON, EPA Region 10 (Population: 85854)

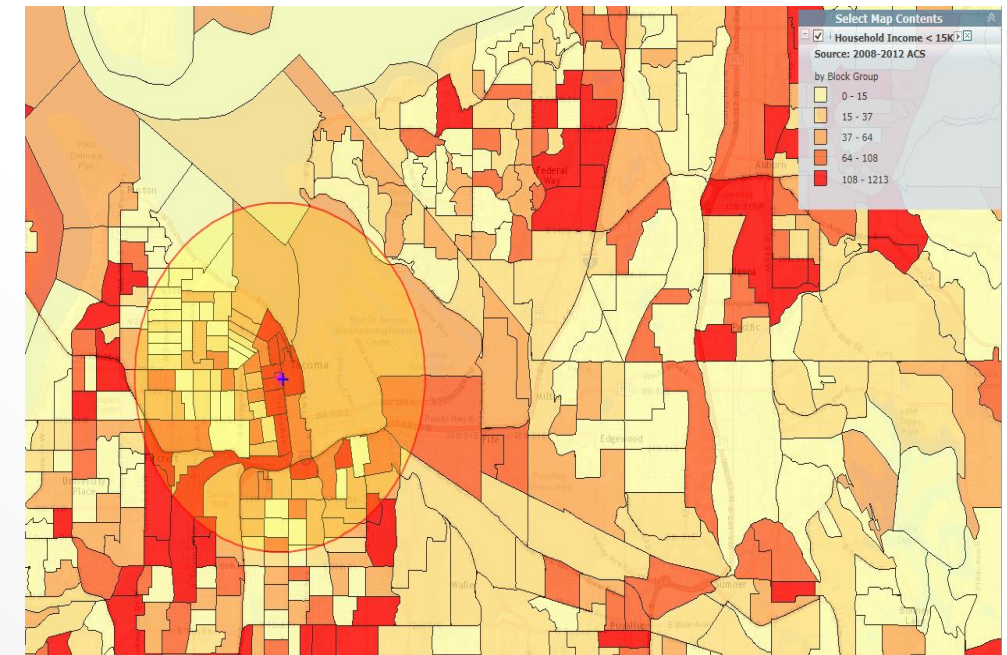
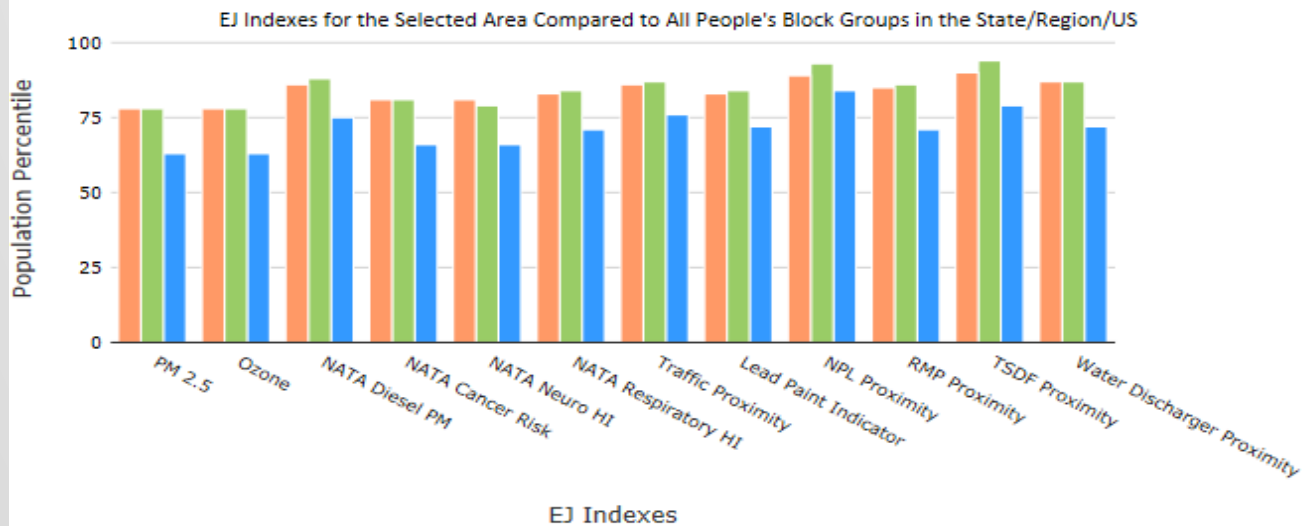
EJ Indexes | Environmental Indicators | Demographic Indicators

[Unselect All]

<input checked="" type="checkbox"/> PM 2.5	<input checked="" type="checkbox"/> Ozone	<input checked="" type="checkbox"/> NATA Diesel PM
<input checked="" type="checkbox"/> NATA Cancer Risk	<input checked="" type="checkbox"/> NATA Neuro HI	<input checked="" type="checkbox"/> NATA Respiratory HI
<input checked="" type="checkbox"/> Traffic Proximity	<input checked="" type="checkbox"/> Lead Paint Indicator	<input checked="" type="checkbox"/> NPL Proximity
<input checked="" type="checkbox"/> RMP Proximity	<input checked="" type="checkbox"/> TSD Proximity	<input checked="" type="checkbox"/> Water Discharger Proximity



State Percentile Regional Percentile USA Percentile



EJ Screen
Released 2015

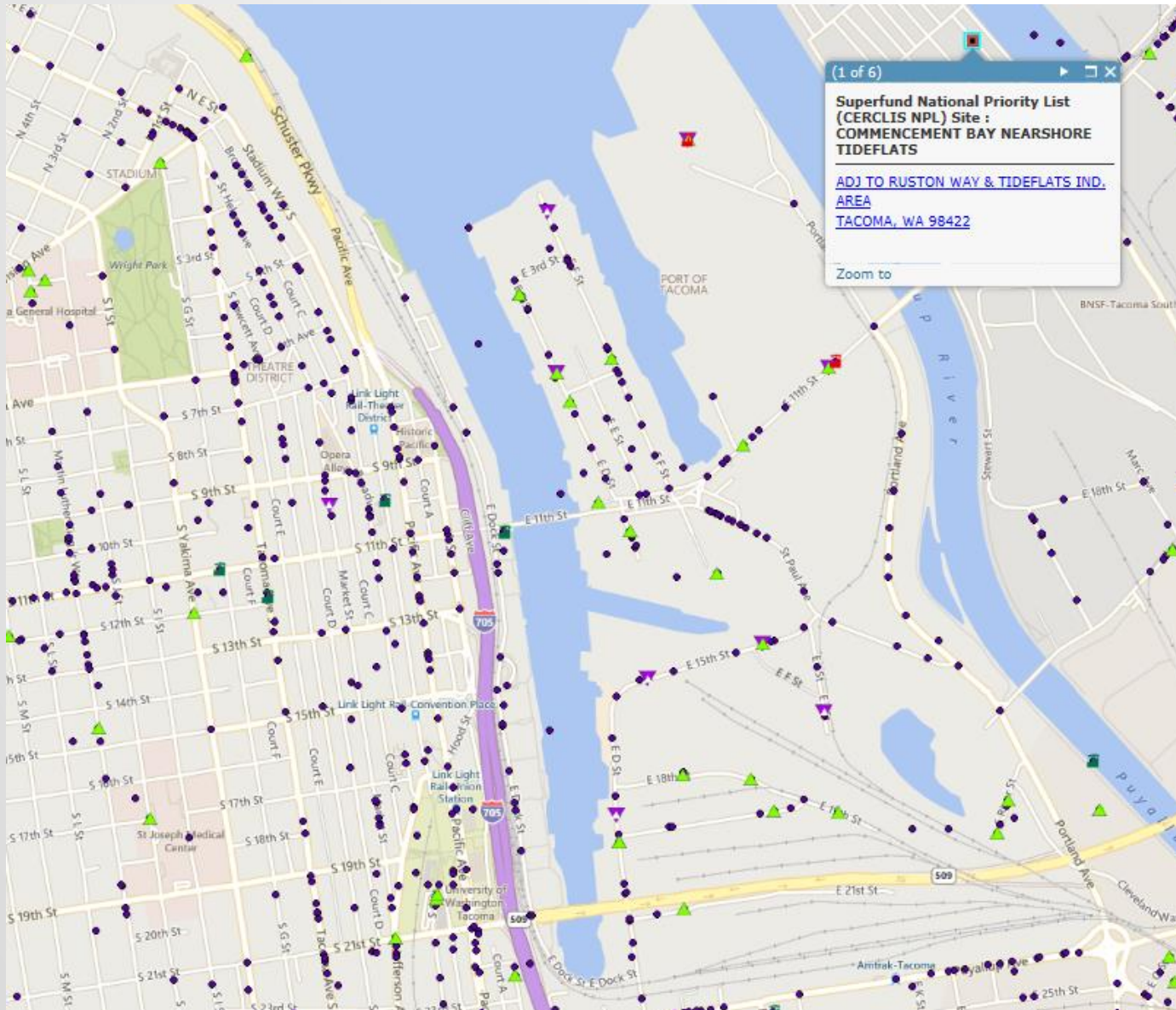
Tabular View

SUPPORTING COMMUNITIES USING EPA SCIENCE TOOLS

Region 10 Pilot Project Tacoma, WA

- Local Health Department
 - Local Nonprofit
- Local Academic Institution
- EPA Science Tools (EJ Screen and C-FERST)

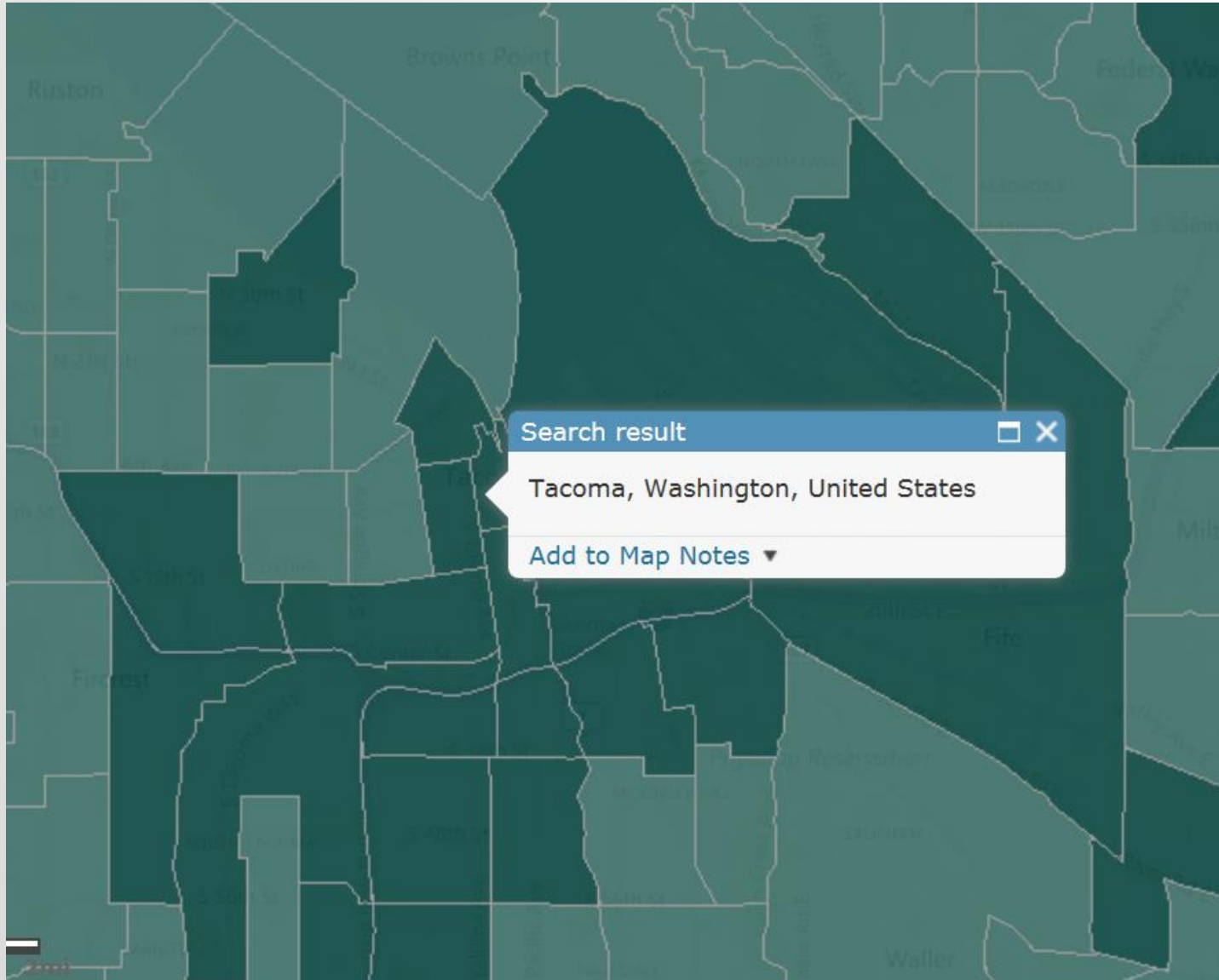
1: Location, Address, Facility Report



National Industry Classification System Codes (NAICS)					
Data Source	NAICS Code	Description	Primary		
RCRAINFO	92411	ADMINISTRATION OF AIR AND WATER RESOURCE AND SOLID WASTE MANAGEMENT PROGRAMS			
Facility Mailing Addresses					
Affiliation Type	Delivery Point	City Name	State	Postal Code	Information System
MAILING ADDRESS	COMMENCEMENT BAY	TACOMA	WA	98402	WA-FSIS
OWNER	1200 6TH AVE ECL 116	SEATTLE	WA	98101	RCRAINFO
REGULATORY CONTACT	1200 6TH AVE STE 113	SEATTLE	WA	98101-3123	RCRAINFO
Contacts					
Affiliation Type	Full Name	Office Phone	Information System	Mailing Address	
REGULATORY CONTACT	US EPA US EPA	(000)000-0000	RCRAINFO	View	
REMEDIAL PROJECT MANAGER (RPM)	KEVIN ROCHLIN	2065532106	SEMS		
REMEDIAL PROJECT MANAGER (RPM)	REBECCA CHU	2065531774	SEMS		

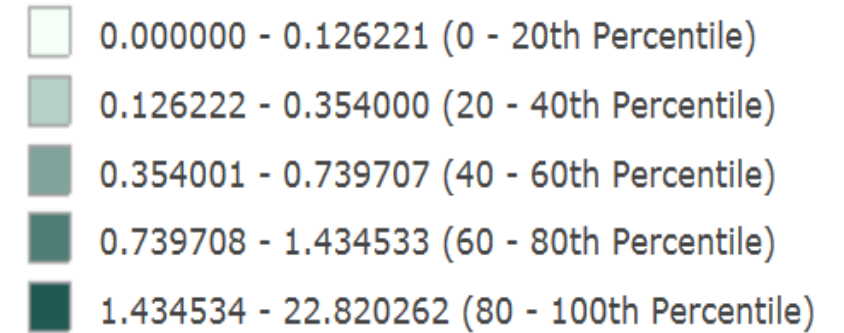
C-FERST
(Under Development)

2: Diesel PM, Concentration, Sources



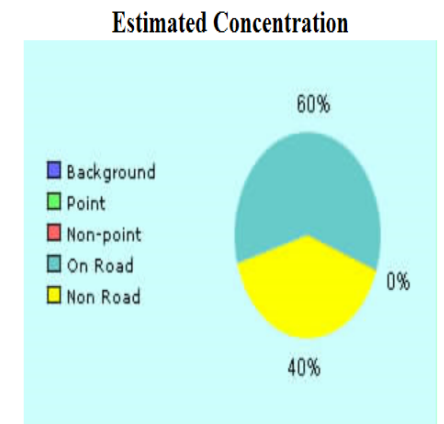
Diesel PM

Estimated Ambient Concentration ($\mu\text{g}/\text{m}^3$)



Quantitative data supplied by the [2005 National Air Toxics Assessment](#) (outdoor sources only):
[NATA Disclaimer](#)

- Estimated Local average concentration = $1.04 \mu\text{g}/\text{m}^3$
 - estimated Background concentration = $0 \mu\text{g}/\text{m}^3$
 - estimated contribution from point sources = $0 \mu\text{g}/\text{m}^3$
 - estimated contribution from non-point sources = $0 \mu\text{g}/\text{m}^3$
 - estimated contribution from on-road mobile sources = $0.7 \mu\text{g}/\text{m}^3$
 - estimated contribution from non-road mobile sources = $0.4 \mu\text{g}/\text{m}^3$



C-FERST
(Under Development)

3: Potential Risk and Exposure

Supplemental Colleges (labels)

Colleges and Universities



Supplemental Colleges



Private Schools



Public Schools



Demographic Data 2006 - 2010

Percent Minority

0 - 9.454%

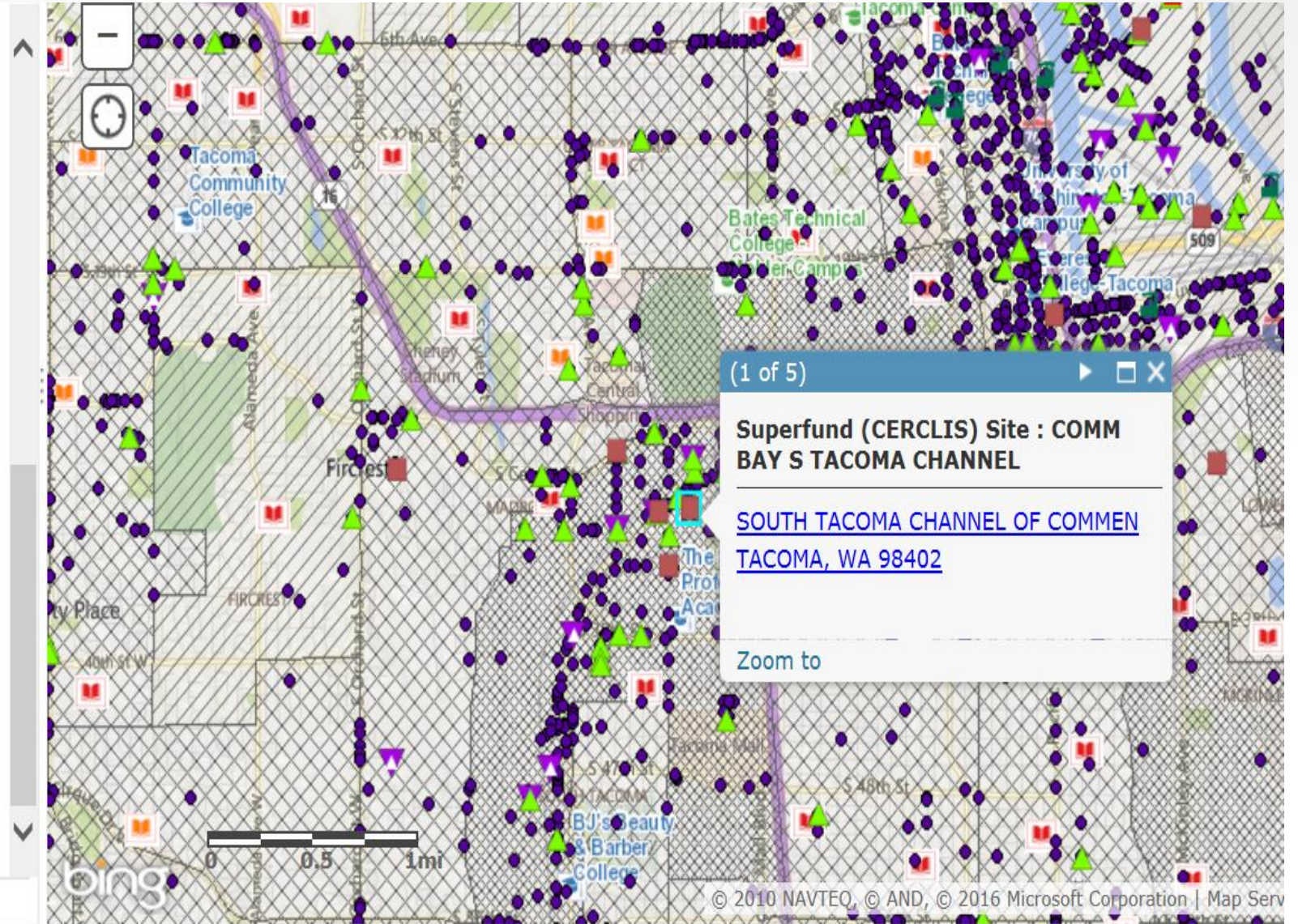
9.455 - 24.970%

24.971 - 57.253%

57.254 - 100%

C-FERST (Under Development)

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Ground Truthing



ACCESSIBILITY



RECREATION

CHILDRENS HEALTH



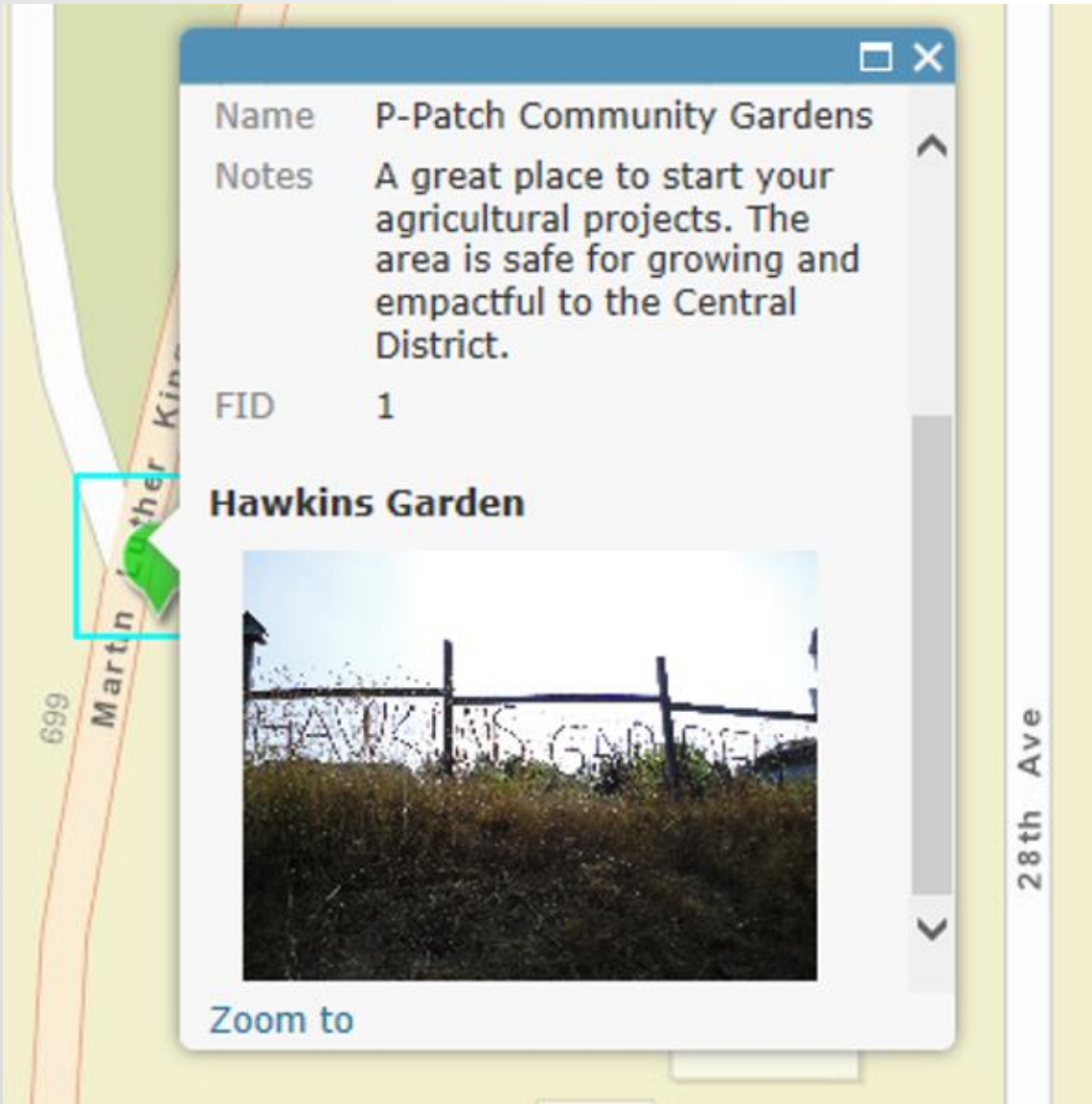
VACANT LOTS!



NUISANCE




Ground Truthing



A map interface showing a location marked with a green star. A popup window displays the following information:

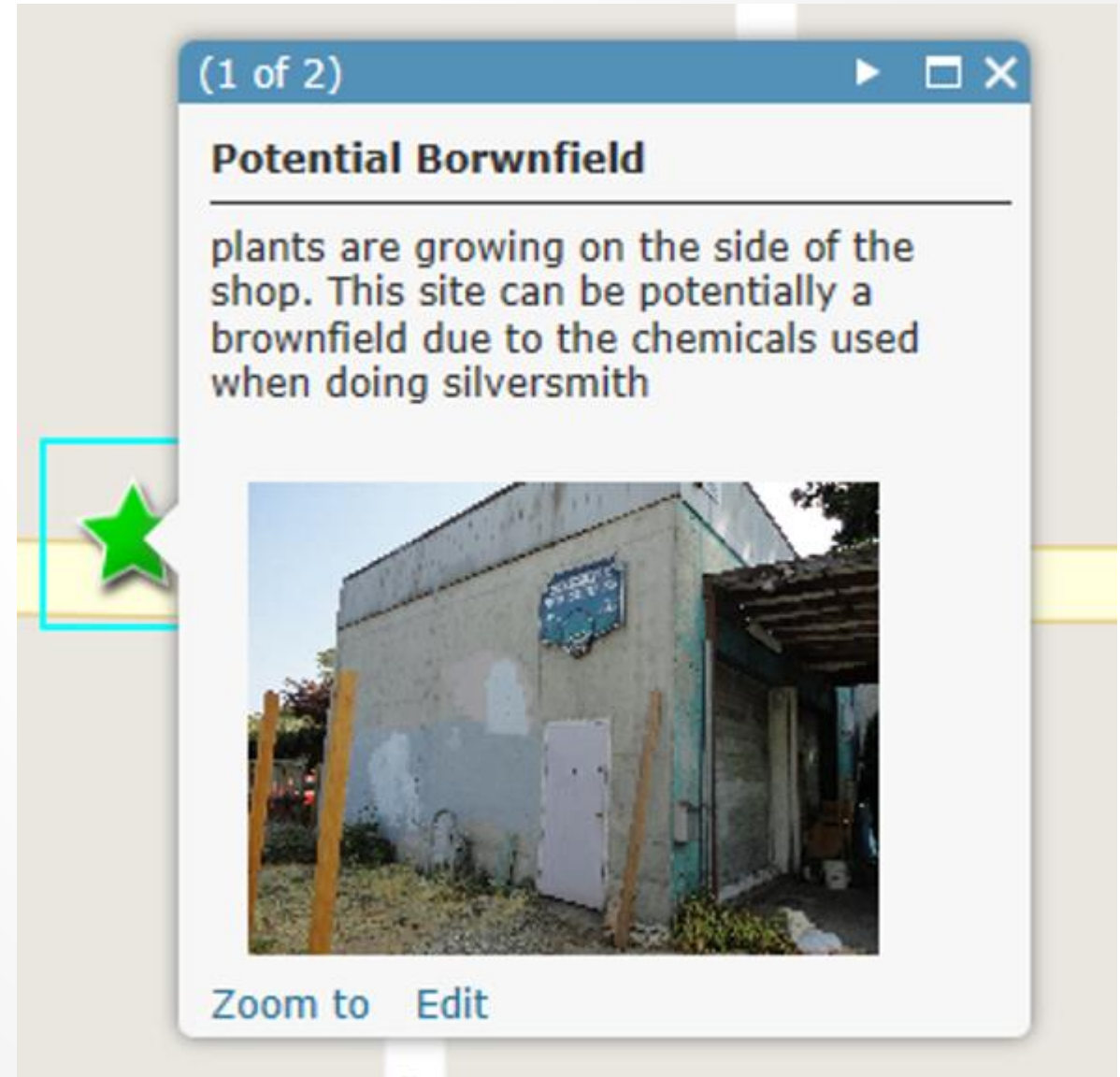
Name	P-Patch Community Gardens
Notes	A great place to start your agricultural projects. The area is safe for growing and empactful to the Central District.
FID	1

Hawkins Garden



Zoom to


699 Martin Luther King
28th Ave



(1 of 2)

Potential Borwnfield

plants are growing on the side of the shop. This site can be potentially a brownfield due to the chemicals used when doing silversmith



Zoom to Edit

MODEL:

- **First Look:** EJ Screen
- **Local Partnership**
(health department, nonprofit, school)
- **Closer Look – C-FERST**
 - **Ground Truthing**
 - **Decision Making**

Lessons Learned :

- **Local Knowledge**
- **Access to agency tools**
 - **Citizen Science**
 - **Targeted Solutions**

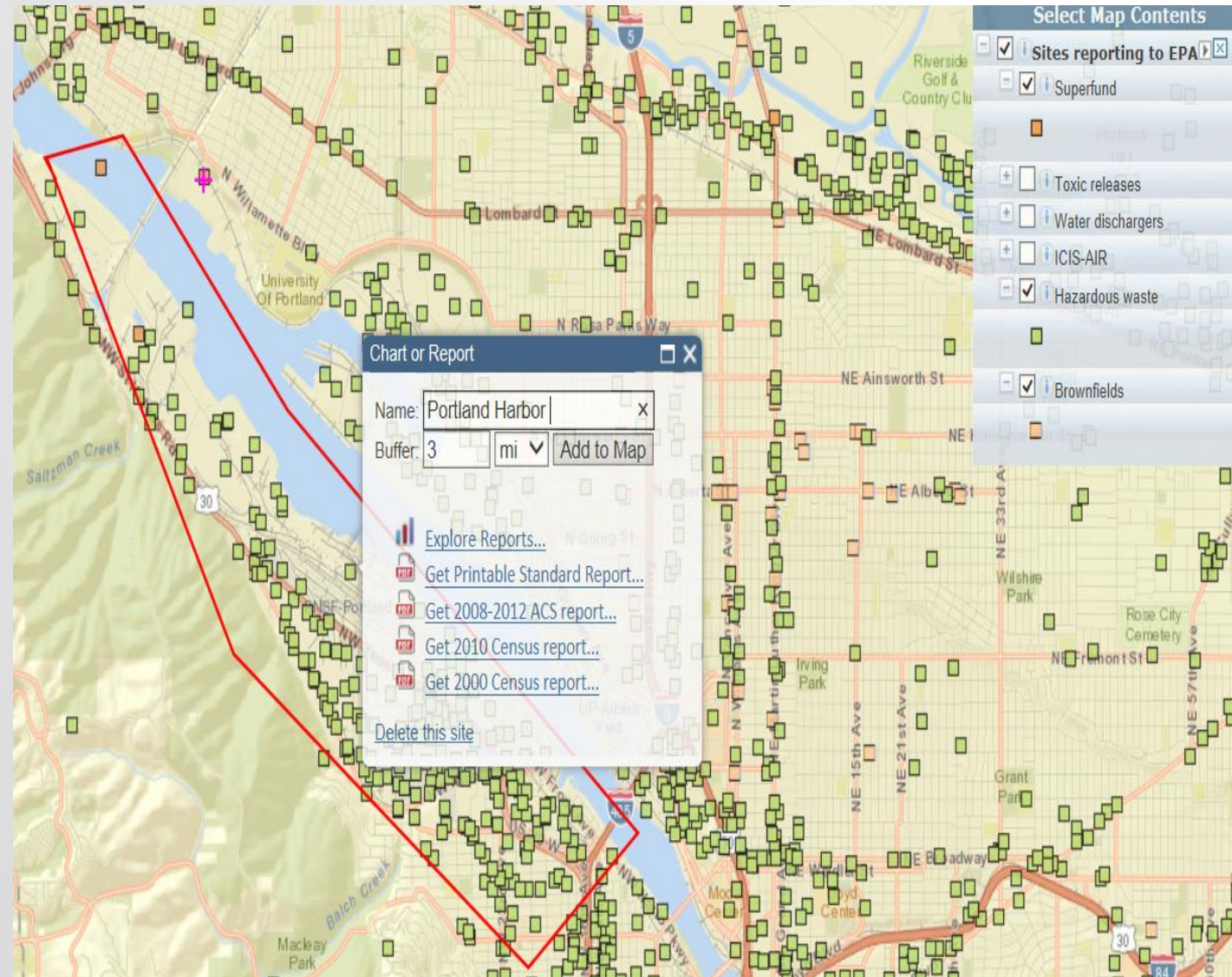
SUPPORTING COMMUNITIES USING EPA SCIENCE TOOLS

Region 10 Location 2: Portland, OR

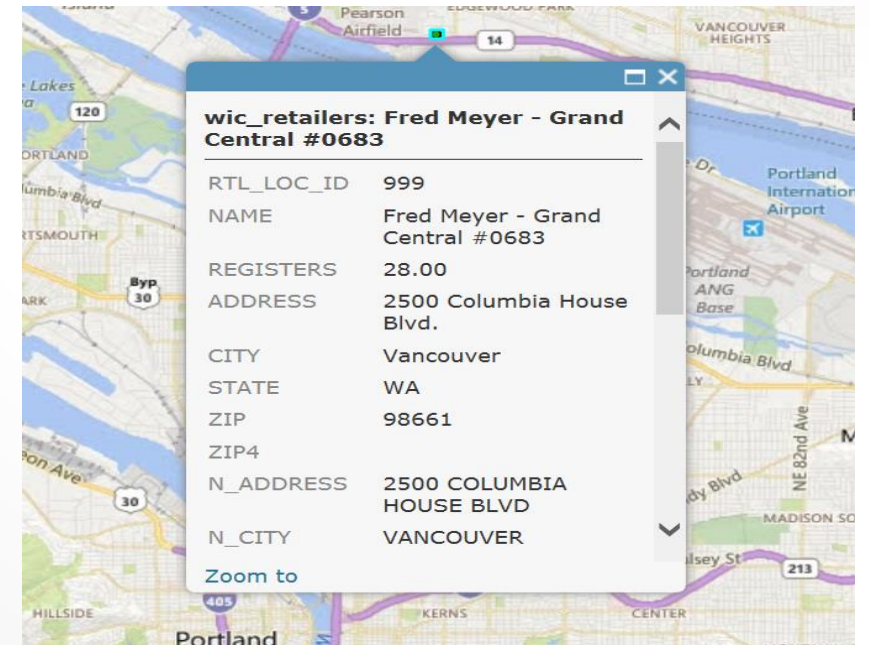


ADVOCACY WITH THE HOUSELESS

(PORTLAND HARBOR)



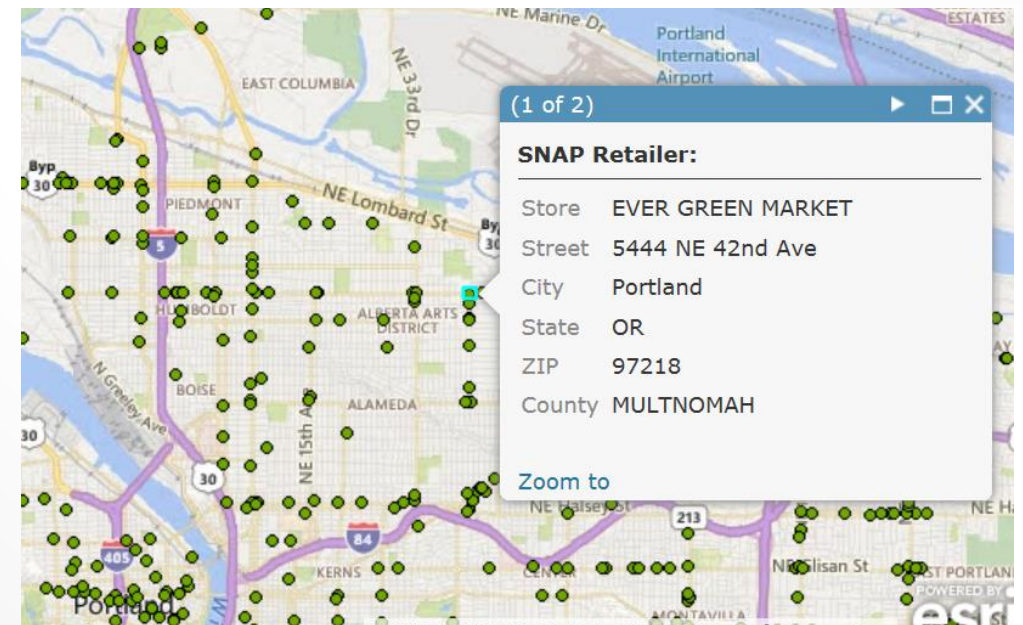
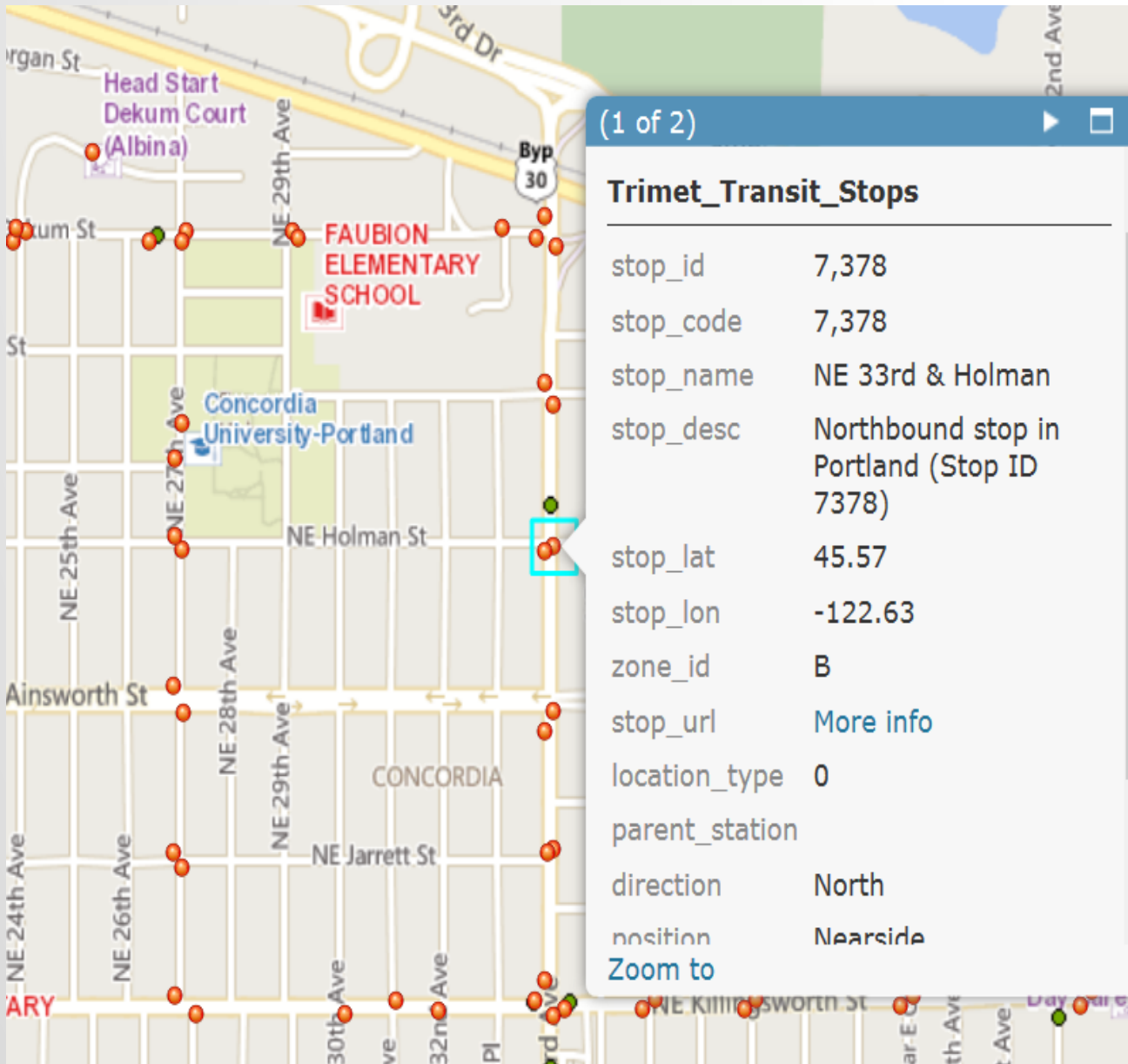
EJ Screen Released 2015



C-FERST (Under Development)

CHILDREN'S HEALTH AND WELLBEING

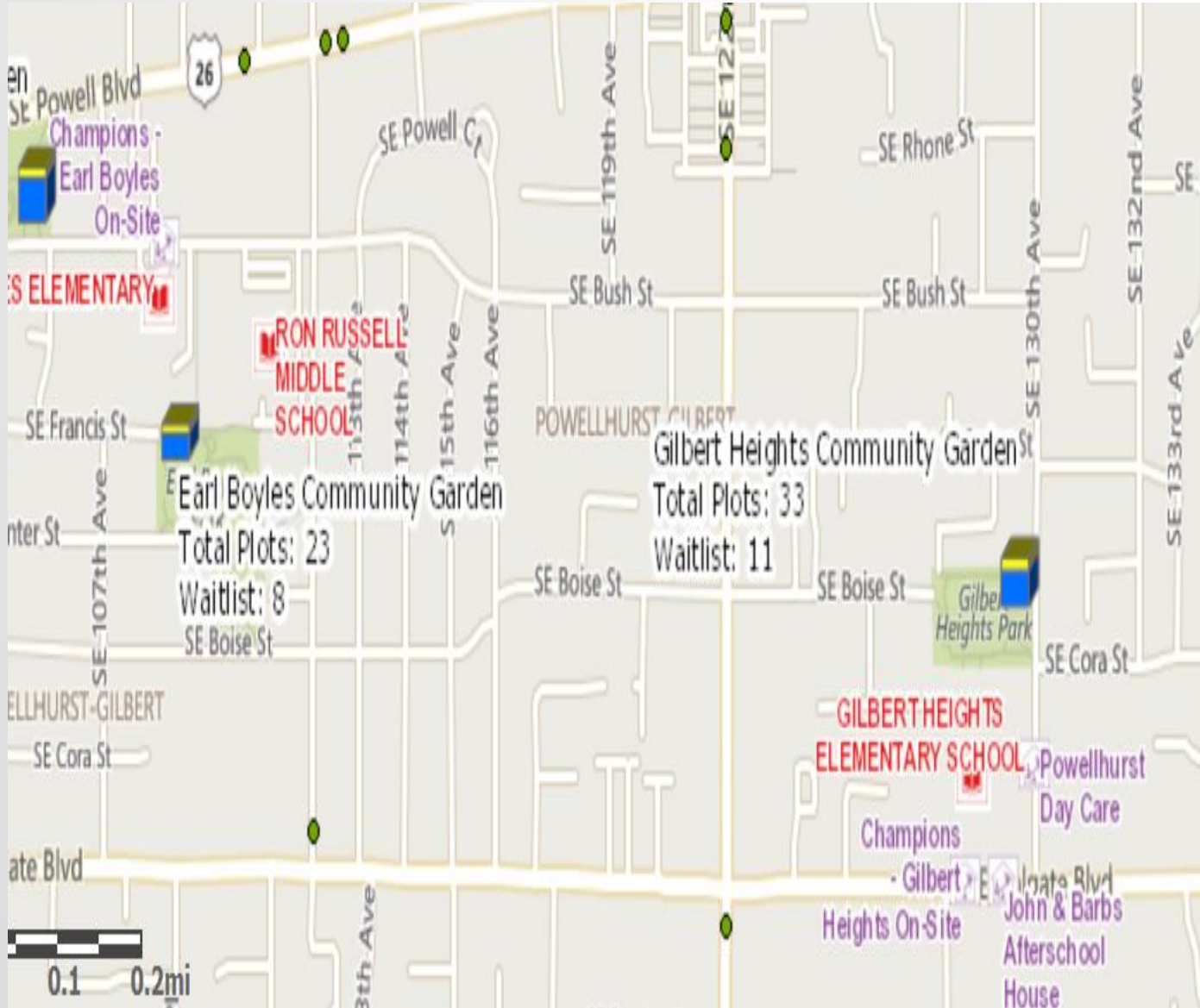
(CONCORDIA UNIVERSITY - N/NE PORTLAND)



C-FERST (Under Development)

COMMUNITY LIVABILITY STUDY

SE PORTLAND

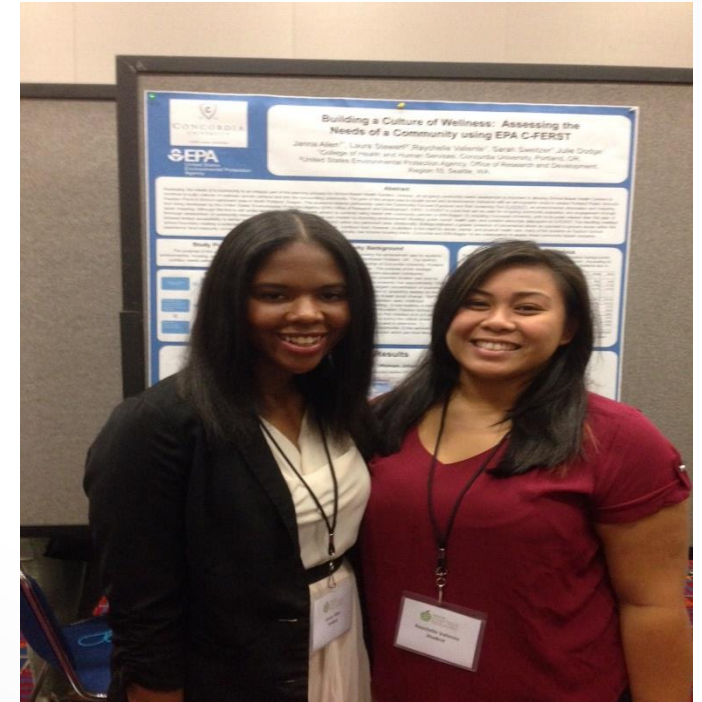
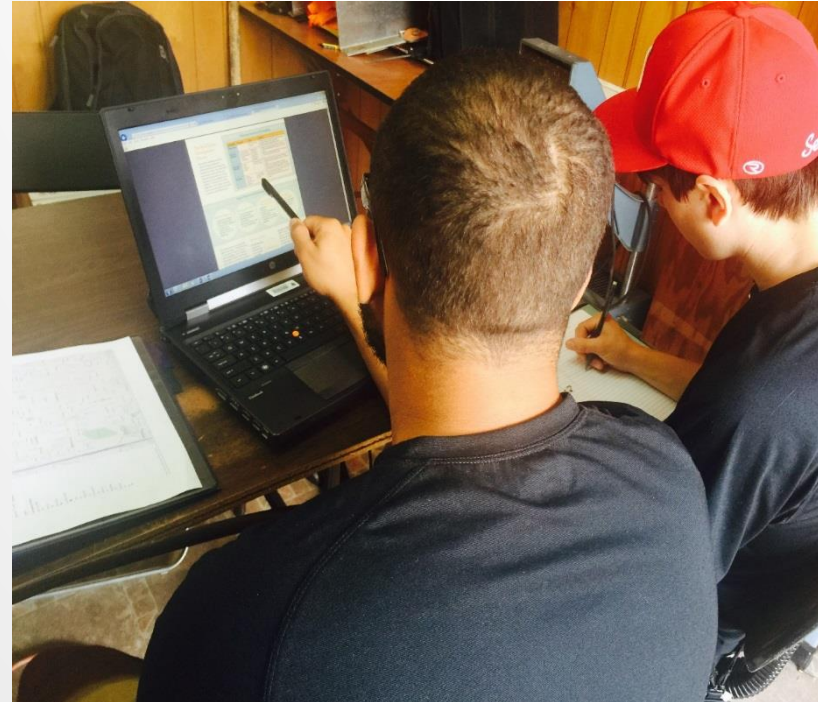


C-FERST (Under Development)



Lessons Learned :

- Environmental language gaps
 - STEM/GIS training needs
- Community sharing network
 - Citizen Science liaison



ACCESS EPA SCIENCE TOOLS:

Google: **EJ Screen**

Request Access to C-FERST: **CFERSTMail@epa.gov**



ACKNOWLEDGEMENT

Nonprofit Partners:

Groundwork Portland - Greenteam
Right 2 Survive - (Ibrahim and Ptery)
Solutions HCE

State and Local Gov. Partners:

Tacoma Pierce County Health Department
Oregon Health Authority Environmental
Public Health Tracking Unit Staff
Multnomah County Staff
Oregon Department of Environmental
Quality (DEQ) Staff

Academic Partners:

Concordia University - Students and Faculty
Portland Community College - Students and
Faculty
Evergreen State College Tacoma Campus -
Students and Faculty
Antioch University – M.A UEE Students and Faculty
U.S. Environmental Protection Agency (EPA):
'C-FERST TEAM' *Sheryl Stohs, Bruce Duncan, Jim
Quackenboss, Bruce Mintz, Chelsea Berg
Shannon O'Shea
Valerie Zartarian
EPA Region 10 Staff - Seattle
EPA Region 10 Staff - Portland Operations Office
EPA MVD Leads/ EJ Coordinators*

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