

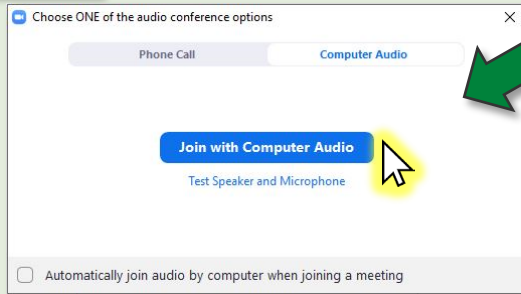
Yard Program Sequence Update

TCP-SWRO Tacoma Smelter Plume project

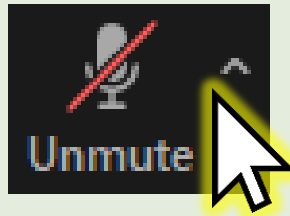
Welcome to our online meeting

We will start our presentation shortly.
No sound? We will unmute soon for sound checks.

Join

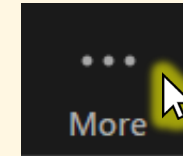
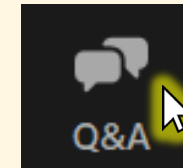


Connect Audio & Join



Tip Try your computer
audio *first*.
You will be muted for the
meeting but we will unmute
you if you have a question and
during a sound check

Participate



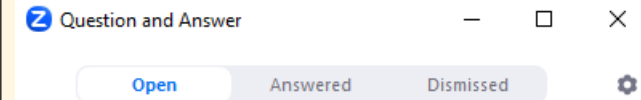
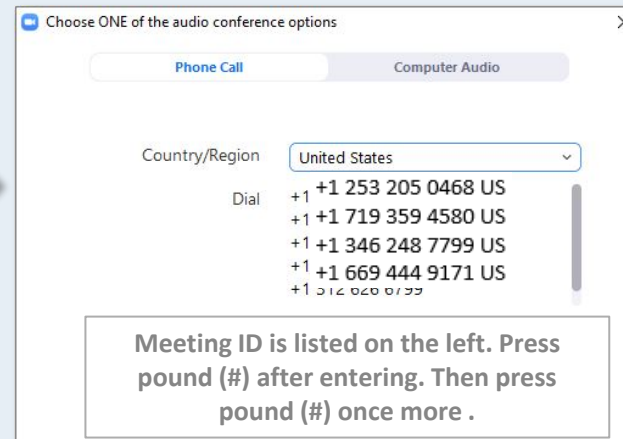
**Question?
Need help?**
Use the Q & A
box to submit a
question to us.

Audio

A Best Option: Use computer for audio

B If selecting "Phone Call"...

- Dial: **253-205-0468**
- Enter Meeting ID **861 8684 0333**, followed by "#"
- Then press "#" if asked for participant ID.



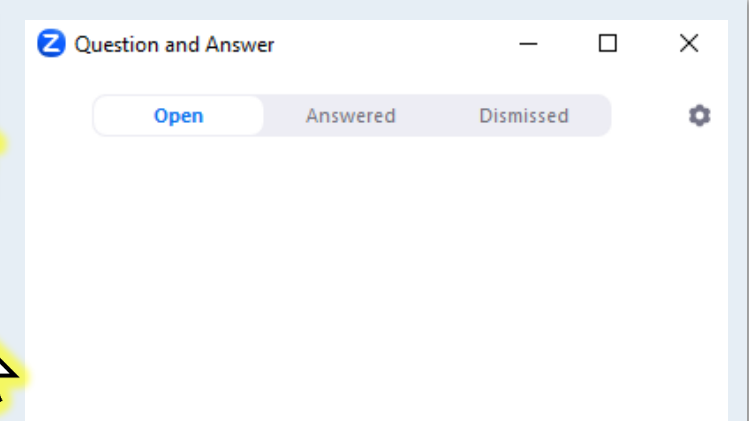
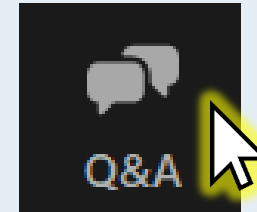
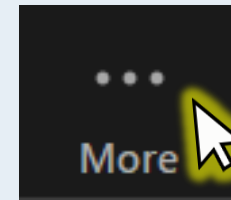
Turn on the Q&A
window from your
bottom toolbar.

Participation in Online Public Meeting



You can ask technical questions via the Q&A function – open from menu bar.

We will answer technical questions via text in the Q&A window, check the “Answered tab” for those.

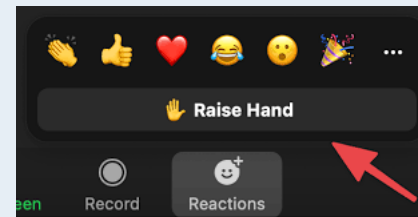


For questions on the program and presentation:

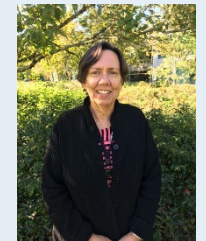
1. Type your question in the Q&A window, or
2. Raise your hand to ask your question live.

The Q&A will follow the presentation and we will:

1. Share and answer your written questions in the Q&A window, or
2. Call on you and unmute you so you can ask your question live



Matt Fuller



Nancy Davis

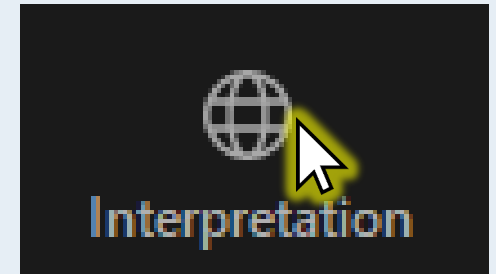
Russian Interpretation

Русская интерпретация



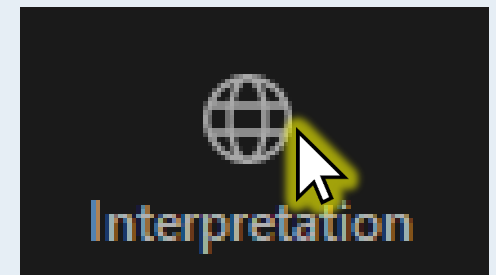
Если вам нужен русский перевод для встречи:

1. Щелкните значок «Интерпретация»
2. Выберите «Русский» в качестве предпочтительного языка
3. Наш переводчик будет делиться диалогом по ходу дела
4. Вы можете отключить звук на английском языке, если хотите



If you would like Russian Interpretation for the meeting:

1. Click on the “Interpretation” icon
2. Choose “Russian” as preferred language
3. Our interpreter will share the dialogue as we go
4. You can opt to “mute” the English, if you want





DEPARTMENT OF
ECOLOGY
State of Washington

Yard Program Sequence Update

TCP-SWRO Tacoma Smelter Plume project



Marian Abbett
ECY – Project Manager



Chris Matter
TPCHD - Outreach



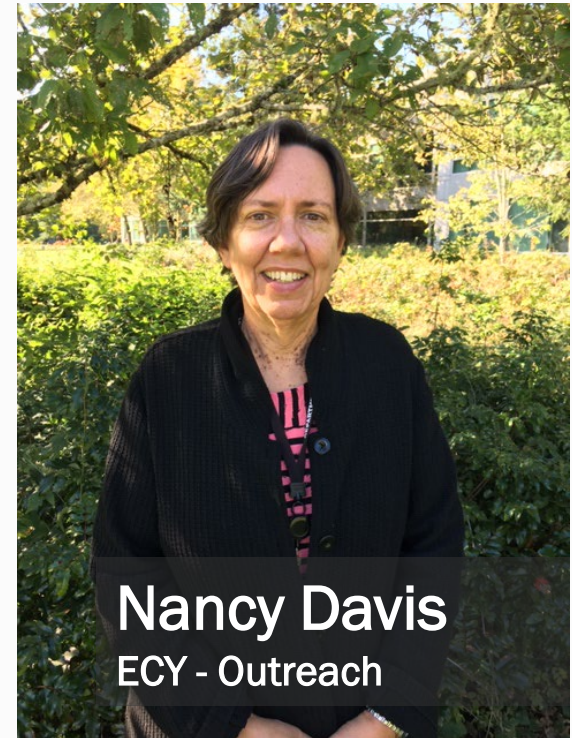
Matt Fuller
ECY - Outreach



Justin Zakoren
ECY – Remediation Manager



Sheila Coughlan
ECY - Outreach



Nancy Davis
ECY - Outreach

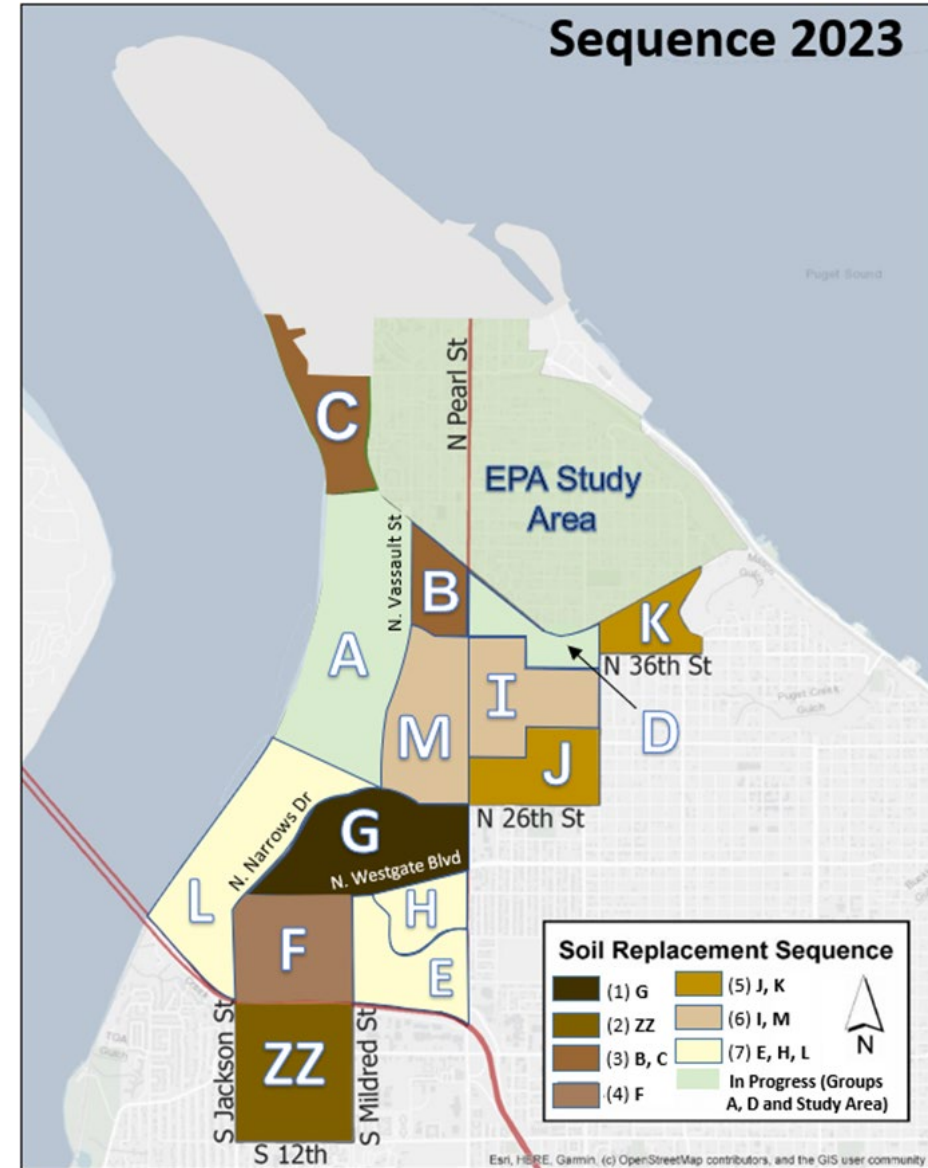


Talking Points

- 1 Overview of Tacoma Smelter Plume project
- 2 Yard Program
- 3 Soil Replacement Sequence
- 4 Environmental Health Equity
- 5 2023 Sequence Update
- 6 Discussion

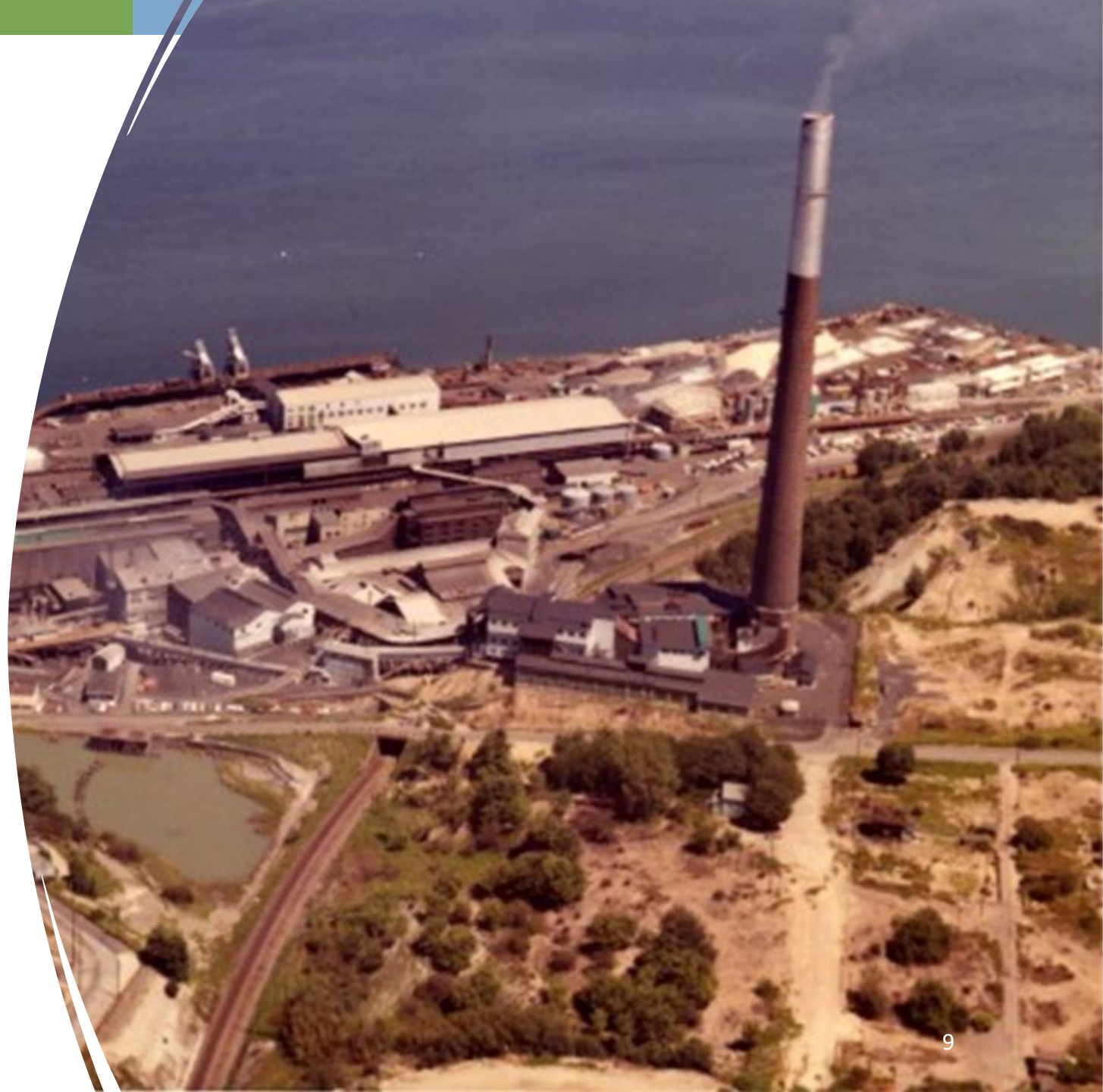
The Upshot

- Update to Yard Program cleanup sequence
- ~300 north Tacoma properties impacted
- Based on sampling data & environmental health data
- Highest contamination + highest disparity = cleanup priority



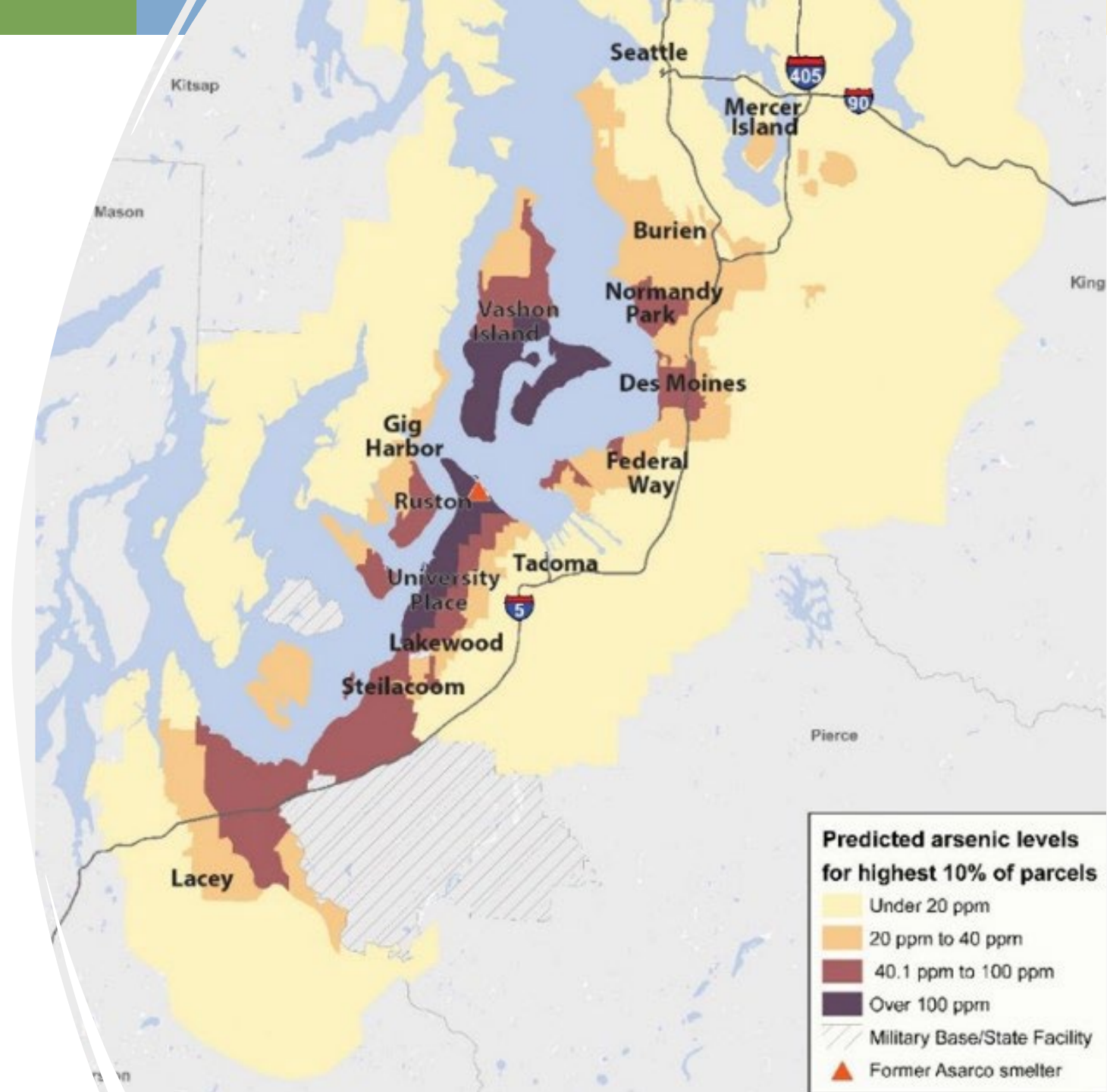
The Smelter

- Ruston/north Tacoma
- Operated from 1890 to 1986
- Stack 571'
- Superfund status, 1983
- EPA cleanup in Study Area
 - 1987 - Present



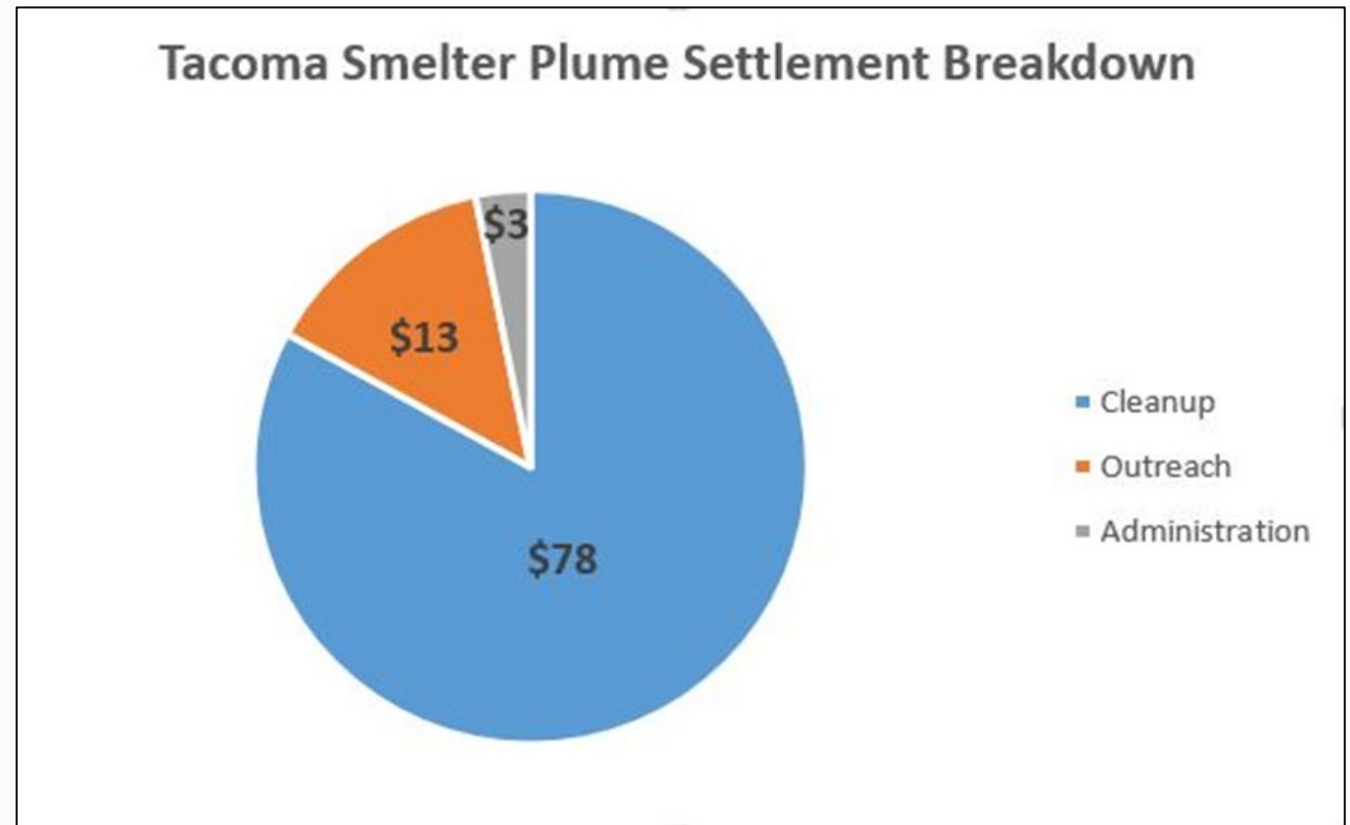
The Plume

- Emissions included arsenic, lead, and other heavy metals
- Pollution was carried by the wind and settled on surface soils
- 1,000 square miles
- Contamination highest near smelter site, decreasing with distance



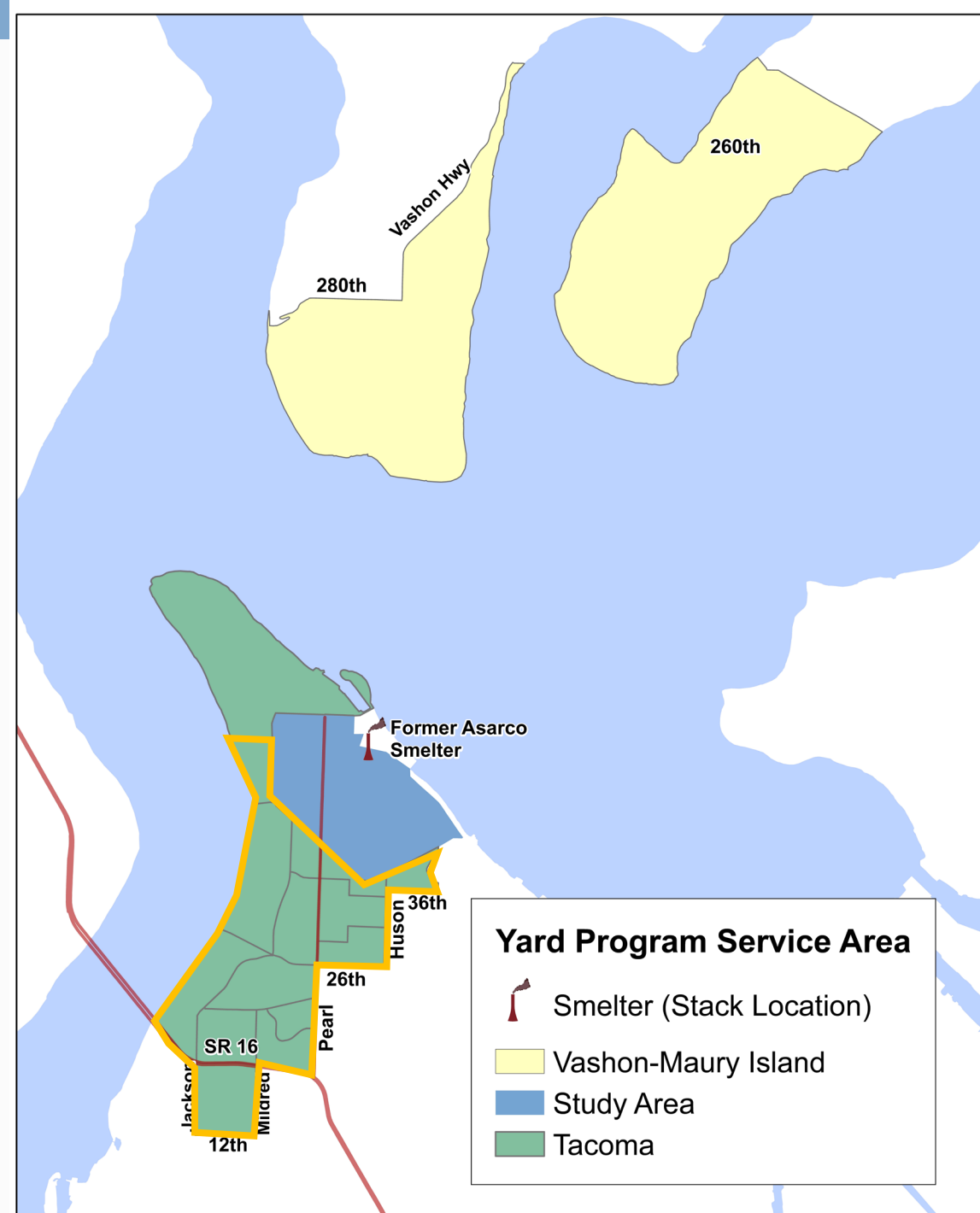
Tacoma Smelter Plume project

- Asarco filed for bankruptcy in 2005
- WA received nearly \$95 million for liability
- Interim Action Plan 2012
- Three main program areas:
 - Cleanup
 - Outreach & Education
 - Technical Assistance



Yard Program

- Final Program Design & Implementation Plan (2013)
- Residential soil sampling and replacement
- Cleanup criteria:
 - Within service area
 - >100 ppm for arsenic
 - >500 ppm for lead
- 423 properties qualify in Tacoma
 - 61 properties have received cleanup
 - 32 EPA Qualified
 - Includes “Out of Program” properties

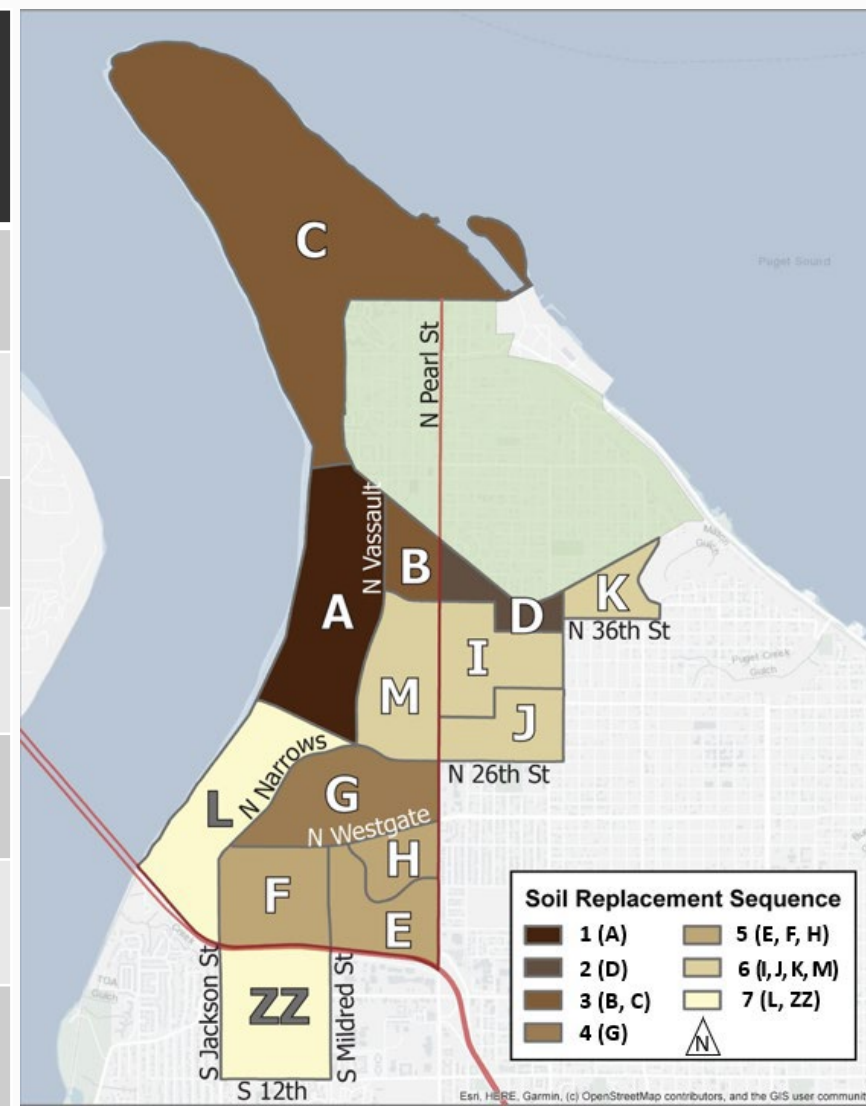


Soil Replacement Sequence

2016 Sequence

- north Tacoma
- Sampling data collected 2012 – 2015
 - ~1,700 properties
- Highest contamination = cleanup priority
- Cleanup offers begin in 2016
- Cleanup begins 2020
 - Groups A & D

Sequence	Group
1	A
2	D
3	B, C
4	G
5	E, F, H
6	I, J, K, M
7	L, ZZ



Update to Sequence

- 2015 – 2019 sampled additional 1,370 properties
- +116 qualifying properties
- Six risk factors:
 - Average arsenic
 - Average lead
 - Maximum arsenic
 - Maximum lead
 - Percentage of qualifying samples
 - Percentage of qualifying properties
- Simple group ranking, 1 – 12
 - Excluding Groups A & D
- Aggregate risk rank for each group

Group	Risk rank priority
B	1
G	2
ZZ	3
K	4
C	5
M	6
F	7
J	8
I	9
L	10
H	11
E	12



Incorporating Stakeholder Feedback

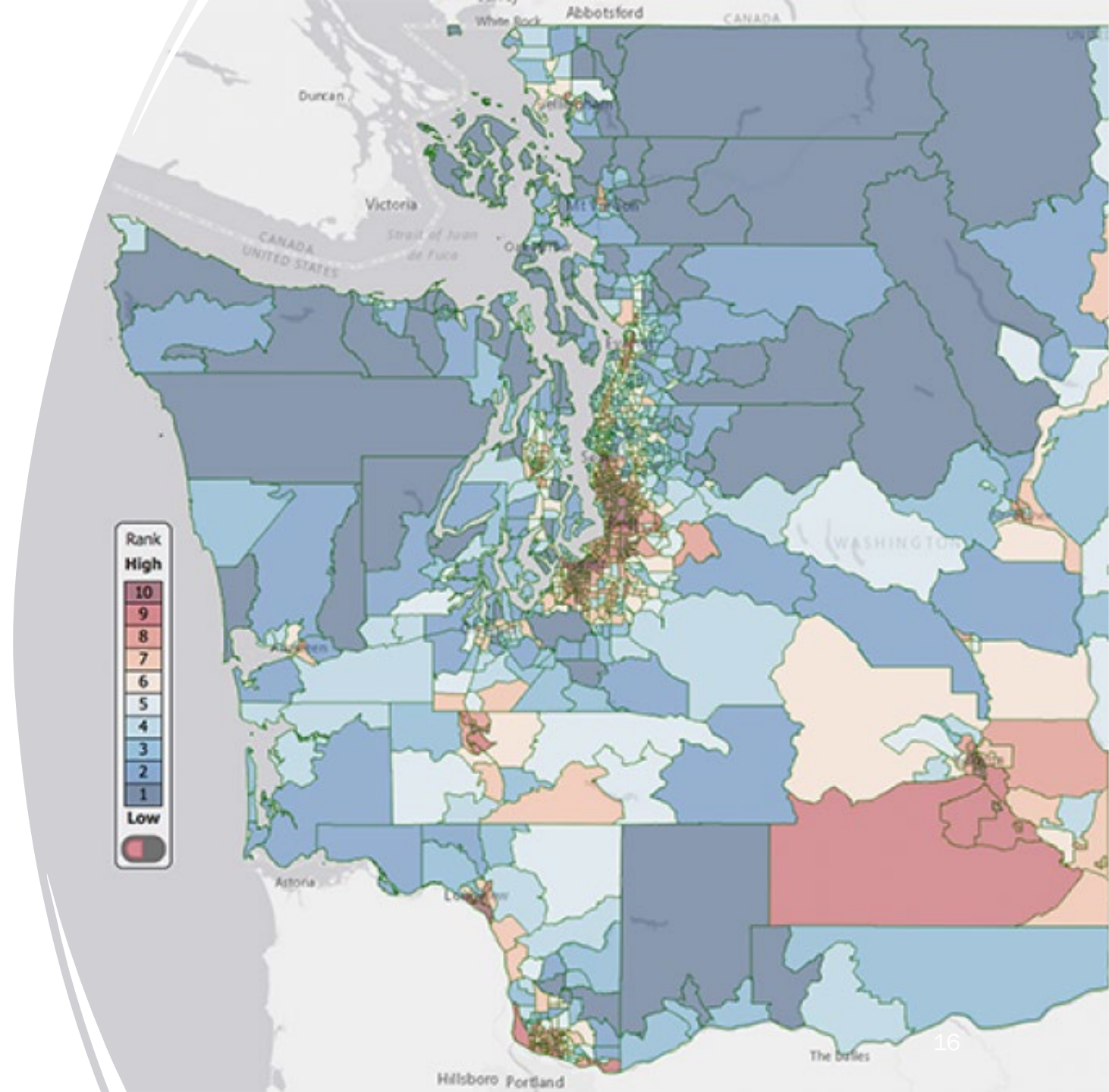
- Questions of equity
- Environmental health disparities



Tacoma - Pierce County
Health Department
Healthy People in Healthy Communities

Healthy Environment for All (HEAL) Act

- Passed in 2021
- Identify and address environmental health disparities
 - environmental reviews
 - funding decisions
 - permitting decisions
- WTN Environmental Health Disparities Map





Washington Environmental Health Disparities

Threat x Vulnerability = Risk



THREAT



VULNERABILITY



RISK

Fossil Fuel Pollution Exposure

- Diesel emissions
- Ozone concentration
- PM2.5 concentration
- Proximity to heavy traffic roadways

Other Toxic Exposures

- Lead risk from housing
- Proximity to hazardous waste treatment, storage, and disposal facilities
- Proximity to Superfund sites
- Proximity to risk management plan facilities
- Wastewater discharge
- Toxic releases from facilities

Socioeconomic Factors

- Limited English
- No high school diploma
- People of color
- Population living in poverty
- Transportation expense
- Unaffordable housing
- Unemployment

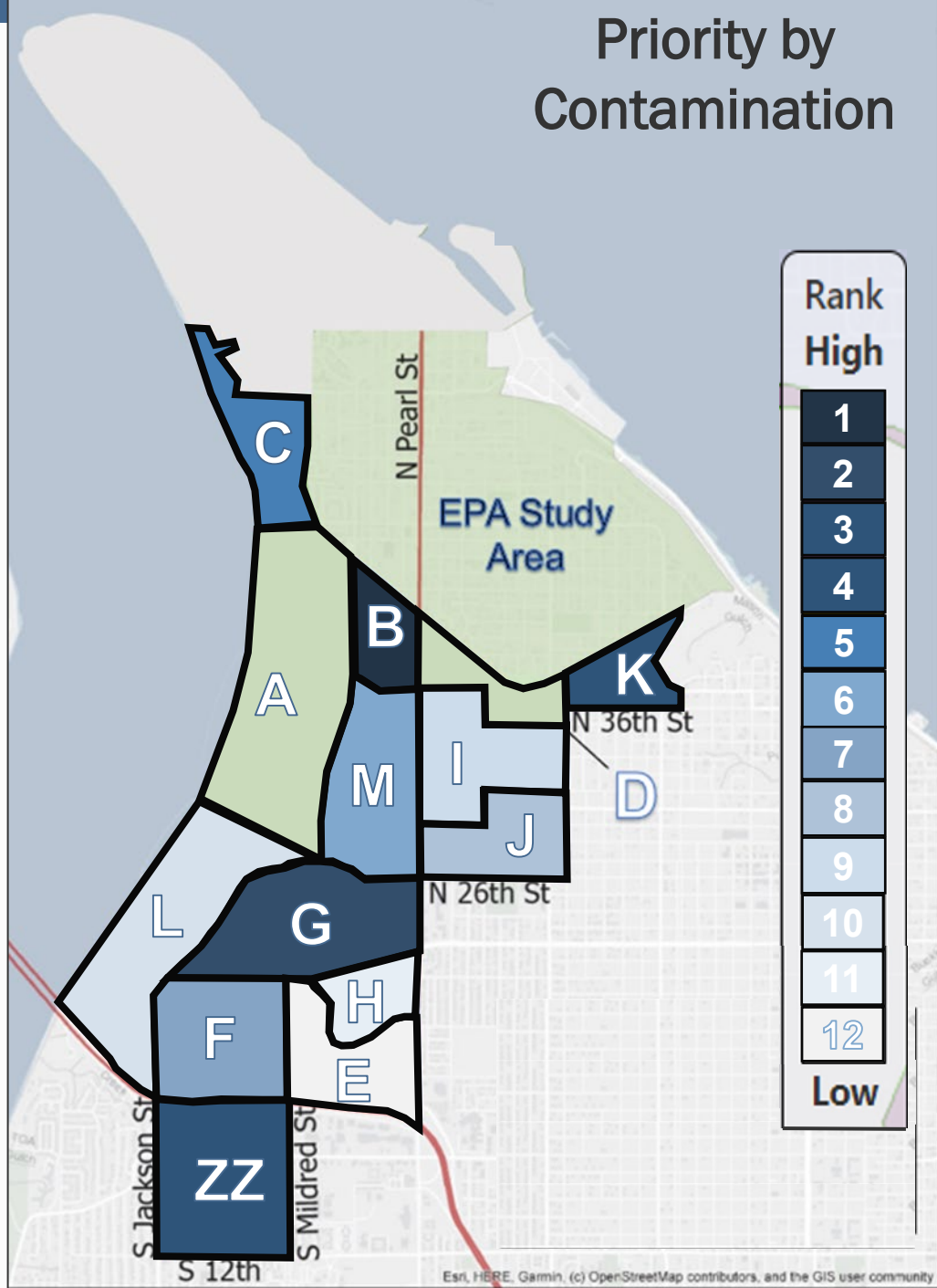
Sensitive Populations

- Populations with high death rates from cardiovascular disease
- Populations with high percentages of low birth weight

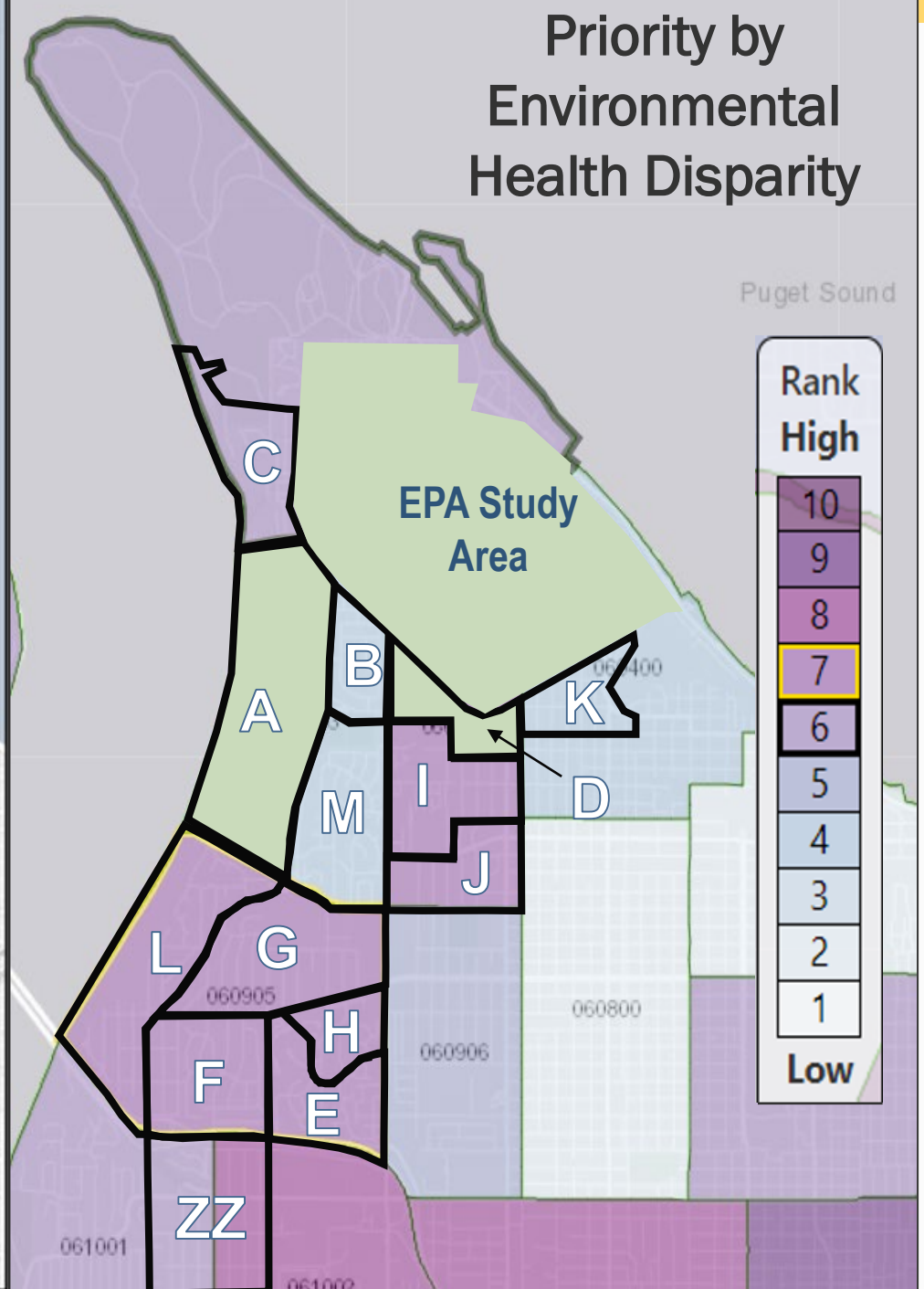
Environmental Health Disparities

Communities experiencing a disproportionate share of environmental health burdens that will need more assistance to reach equitable outcomes

Priority by Contamination



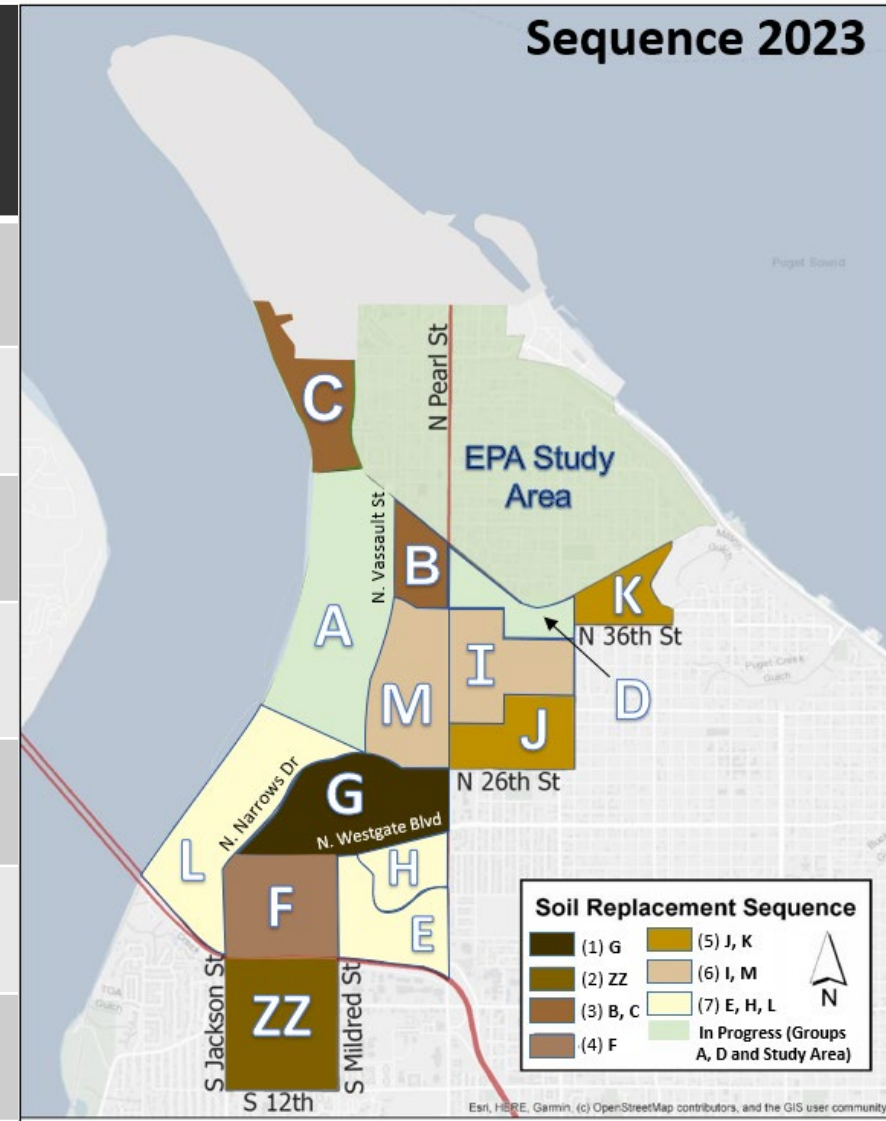
Priority by Environmental Health Disparity



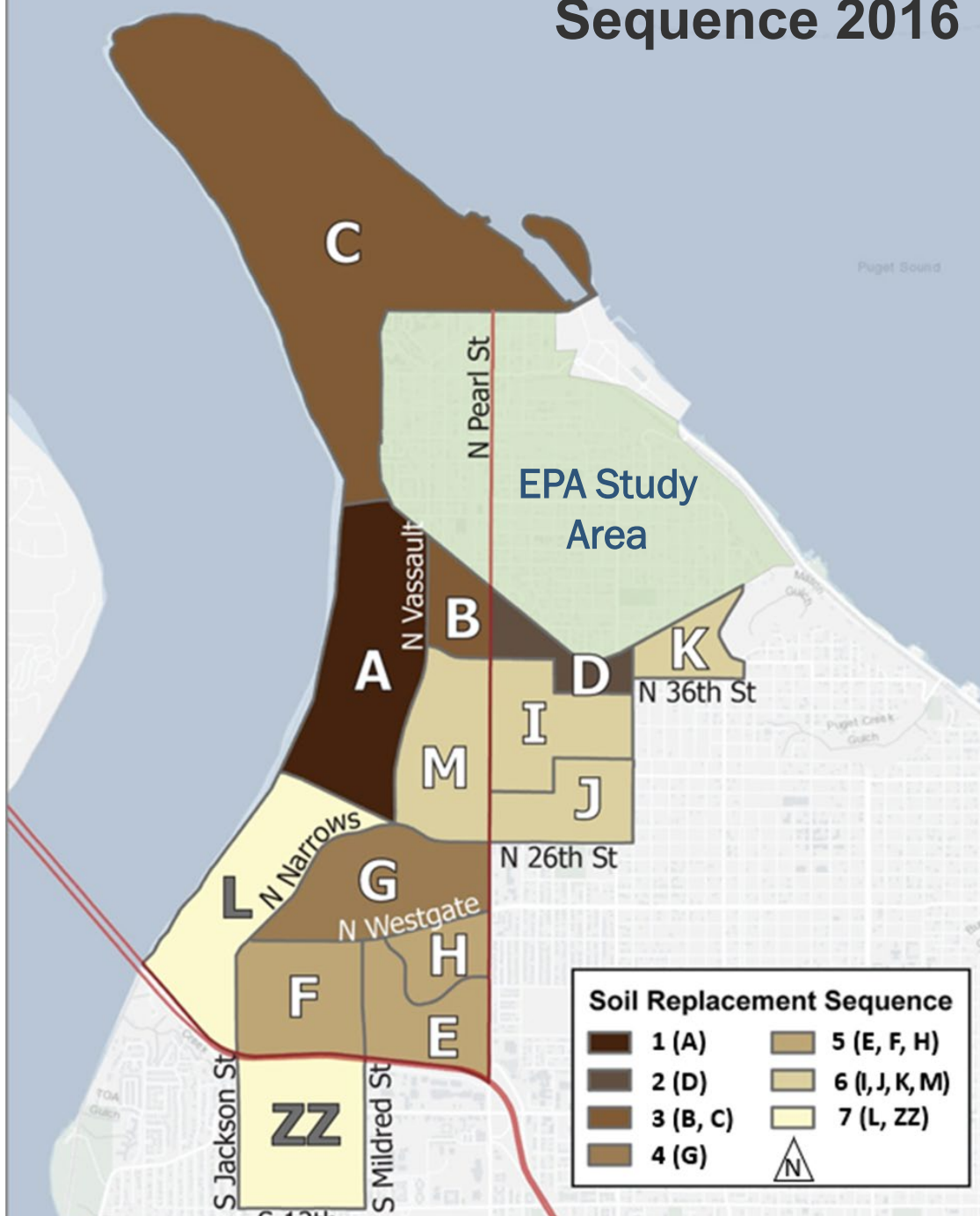
2023 Sequence Update

- Based on sampling data and environmental health disparity rankings (~1:1)
- Highest contamination + highest disparity = cleanup priority

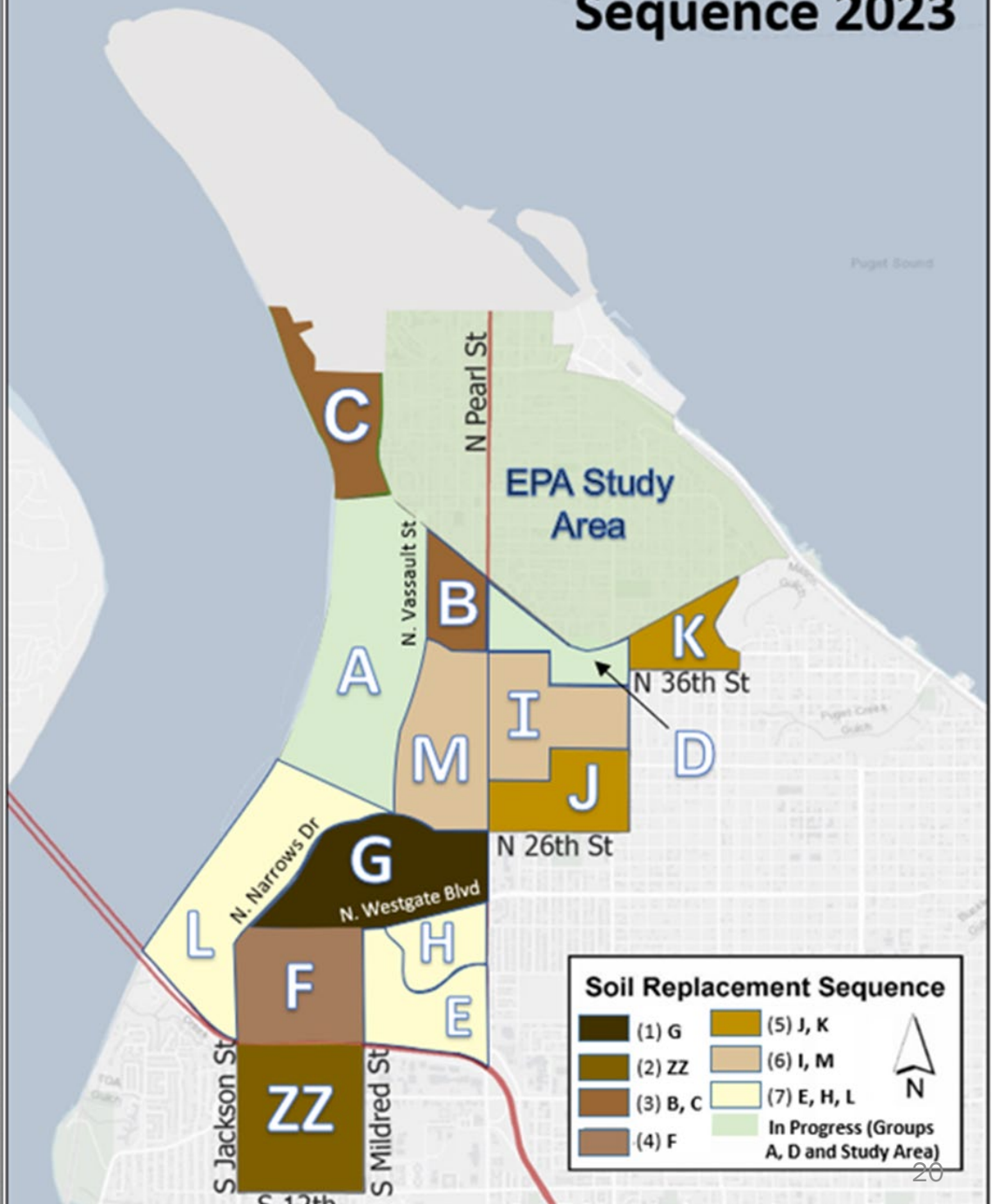
Sequence	Group
1	G
2	ZZ
3	B, C
4	F
5	K, J
6	I, M
7	L, H, E



Sequence 2016



Sequence 2023





The Takeaways

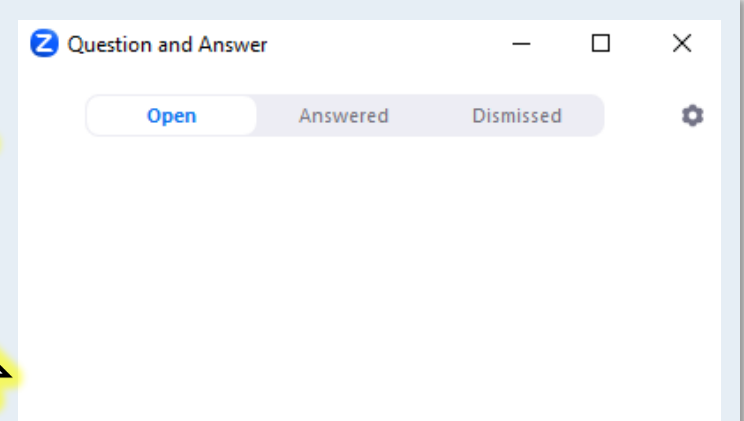
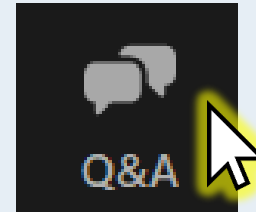
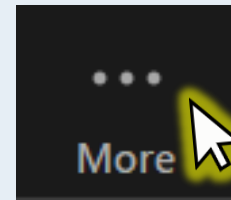
- Using sampling data & environmental health data
- Prioritizes contamination cleanup & environmental health equity

Let us know your questions!



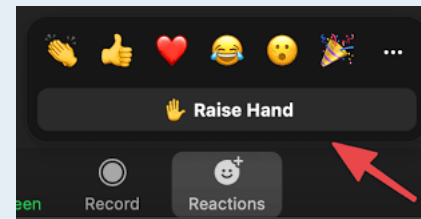
You can ask technical questions via the Q&A function – open from menu bar.

We will answer technical questions via text in the Q&A window, check the “Answered tab” for those.



For questions on the program and presentation:

1. Type your question in the Q&A window, or
2. Raise your hand to ask your question live.

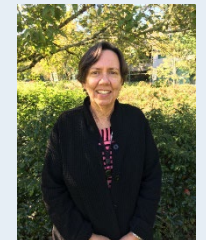


The Q&A will follow the presentation and we will:

1. Share and answer your written questions in the Q&A window, or
2. Call on you and unmute you so you can ask your question live



Matt Fuller



Nancy Davis