

# CHESAPEAKE EJ SCREEN

Chesapeake Bay Program - Diversity Workgroup

John Wolf

November 21, 2019

# BACKGROUND

- FY 16 GIT Funded Project
- National EJ Screen Tool (EPA) customized to Bay Watershed
- Goal was to relate demographics and environmental conditions to selected Watershed Agreement outcomes
- Designed as a pilot for expansion, with initial focus on subset of Outcomes
- One of first efforts to explicitly incorporate Cross-GIT interest into an Outcome decision support tool/framework

# APPROACH

- Collaboration among Diversity Staffer and Coordinators/Staffers of...
  - Climate Resiliency Workgroup
  - Public Access Planning Team
  - Toxic Contaminants Workgroup
- Identified use cases/sample management questions
- Built on services and code of National EJ Screen tool
- GIT Funding used to hire contractor with expertise in geospatial web development

# Focus Workgroup Data

## Climate Resiliency

Check the additional layers to add to the map

- ☐ Sea Level Rise (1ft.)
- ☐ Sea Level Rise (2ft.)
- ☐ Sea Level Rise (3ft.)
- ☐ Sea Level Rise (4ft.)
- ☐ Sea Level Rise (5ft.)
- ☐ Sea Level Rise (6ft.)
- ☐ Flood Frequency
- ☐ Coastal Vulnerability Index
- ☐ Global Urban Heat Island (2013)

## Public Access

Check the additional layers to add to the map

- ☐ Potential Public Access Sites
- ☐ Existing Public Access Sites
- ☐ Public Access Sites with EJScreen Data
- ☐ 2010 Census Race Demographics
- ☐ Public Access Sites with Race Demographics

## Toxic Contaminants

Check the additional layers to add to the map

- ☐ Polluted Waterways - Heavy Metals
- ☐ Fish Tissue Sample Data
- ☐ Fish Consumption Advisories
- ☐ PCBs
- ☐ Envirofacts Facility Locations
- ☐ National-Scale Air Toxic Assessment
- ☐ Chemical Contaminants
- ☐ Combined Sewer Overflow (CSO) Communities
- ☐ Significant Industrial Facilities
- ☐ Impaired Waters - EPA
- ☐ Surface runoff from agricultural land (mm) (EPA EnviroAtlas)
- ☐ Surface sediment erosion from agricultural lands (tons) (EPA EnviroAtlas)

# SAMPLE MANAGEMENT QUESTIONS

- What is the proximity of *minority populations* to *impaired waterways*?

# SAMPLE MANAGEMENT QUESTIONS

- What is the proximity of *minority populations* to *impaired waterways*?

National EJ Screen

```
graph TD; A[National EJ Screen] --> B[minority populations]; C[Chesapeake Bay Data] --> D[impaired waterways];
```

Chesapeake Bay Data

▼ ☒ Minority Population

□ Data Not Available

□ Less than 50%ile

□ 50-60%ile

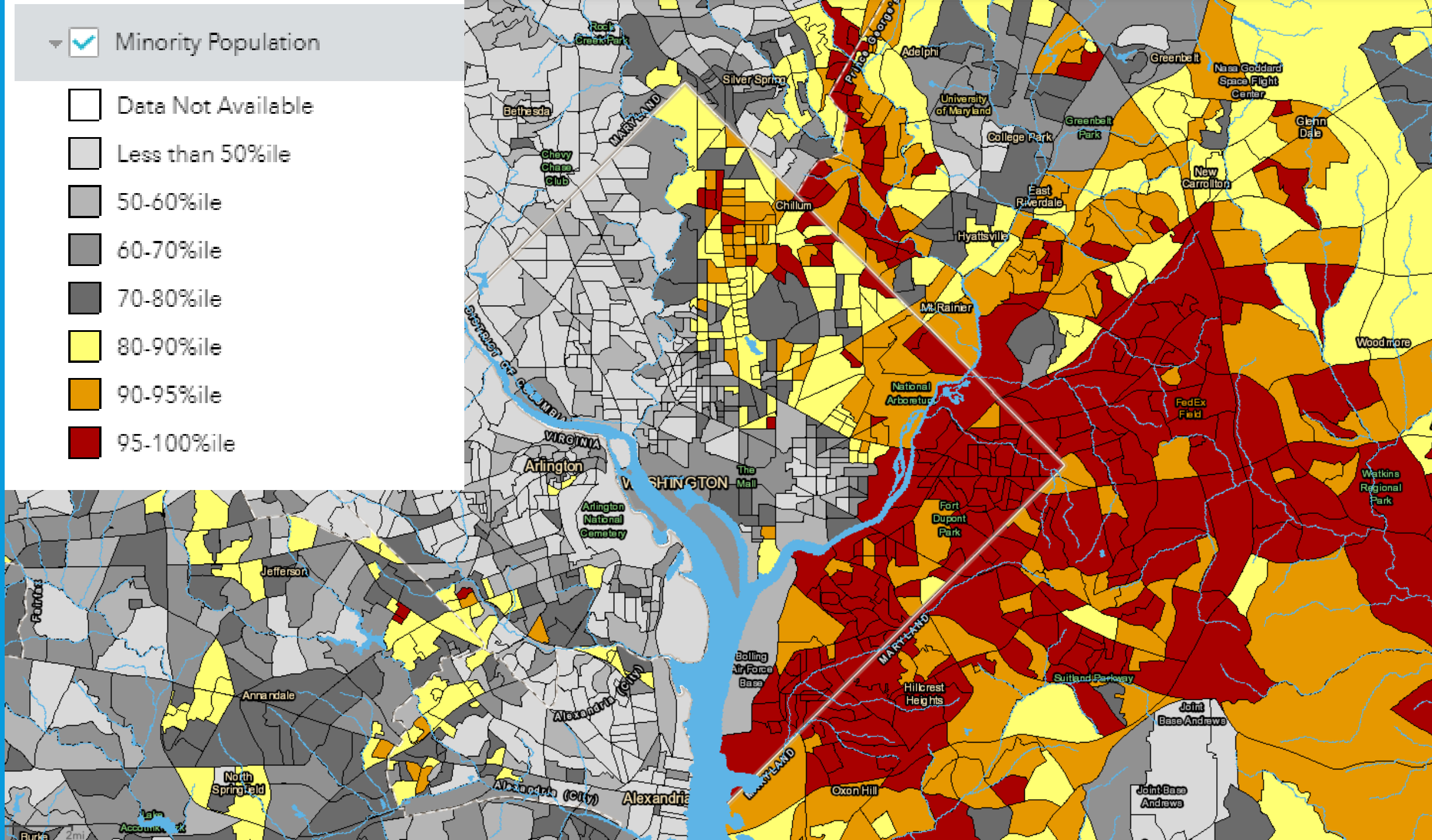
□ 60-70%ile

□ 70-80%ile

□ 80-90%ile

□ 90-95%ile

□ 95-100%ile





▼ ☒ Minority Population

☐ Data Not Available

☐ Less than 50%ile

☐ 50-60%ile

☐ 60-70%ile

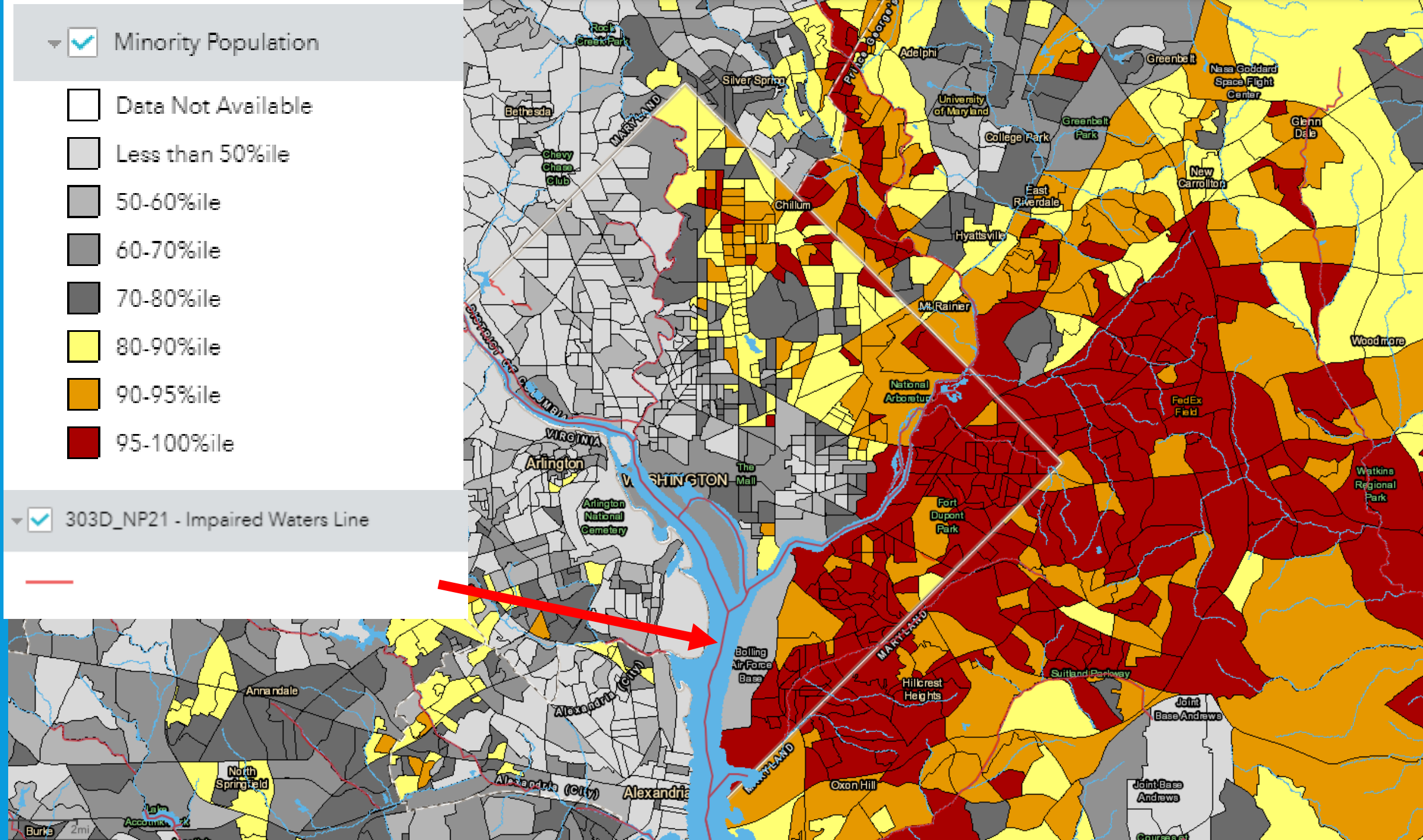
☐ 70-80%ile

☐ 80-90%ile

☐ 90-95%ile

☐ 95-100%ile

▼ ☒ 303D\_NP21 - Impaired Waters Line





# SAMPLE MANAGEMENT QUESTIONS

- What is the threat of *sea level rise or storm surge* to *low income populations*?

# SAMPLE MANAGEMENT QUESTIONS

- What is the threat of *sea level rise or storm surge* to *low income populations*?

Chesapeake Bay Data

```
graph TD; A[Chesapeake Bay Data] --> C[What is the threat of sea level rise or storm surge to low income populations?]; B[National EJ Screen] --> C;
```

National EJ Screen



Low Income

9

Data Not Available



Less than 50%ile



50-60%ile

60-70%ile



70-80%ile



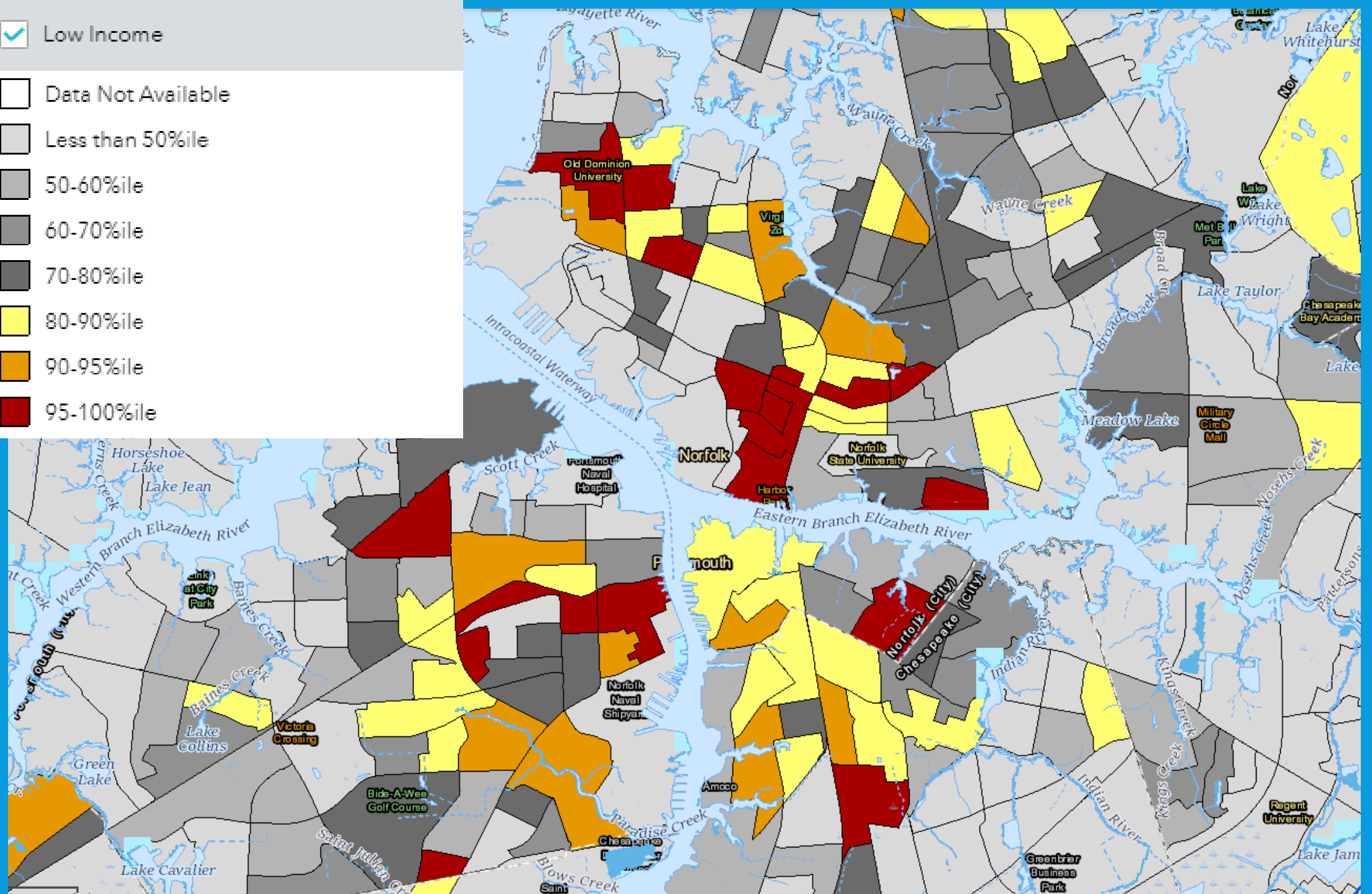
80-90%ile



90-95%ile



95-100%ile





# SAMPLE MANAGEMENT QUESTIONS

- What is the proximity of *public water access sites* to *linguistically isolated populations*?
- Where are new sites being developed relative to these populations?



# SAMPLE MANAGEMENT QUESTIONS

Chesapeake Bay Data

- What is the proximity of *public water access sites* to *linguistically isolated populations*?

National EJ Screen

- Where are new sites being developed relative to these populations?

▼ ☒ Linguistically Isolated

☐ Data Not Available

☐ Less than 50%ile

☐ 50-60%ile

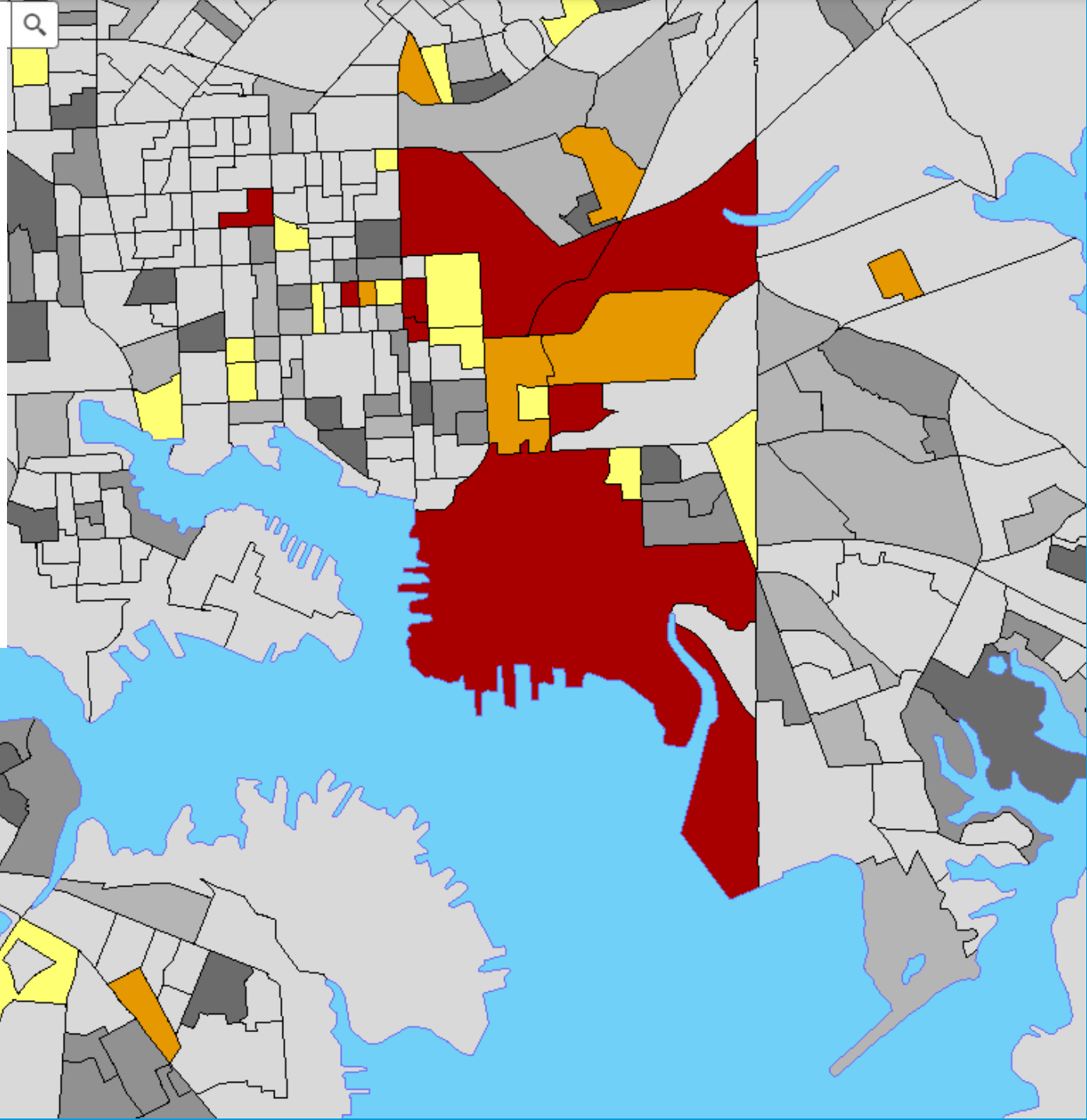
☐ 60-70%ile

☐ 70-80%ile

☐ 80-90%ile

☐ 90-95%ile

☐ 95-100%ile



▼ ☒ Linguistically Isolated

☐ Data Not Available

☐ Less than 50%ile

☐ 50-60%ile

☐ 60-70%ile

☐ 70-80%ile

☐ 80-90%ile

☐ 90-95%ile

☐ 95-100%ile

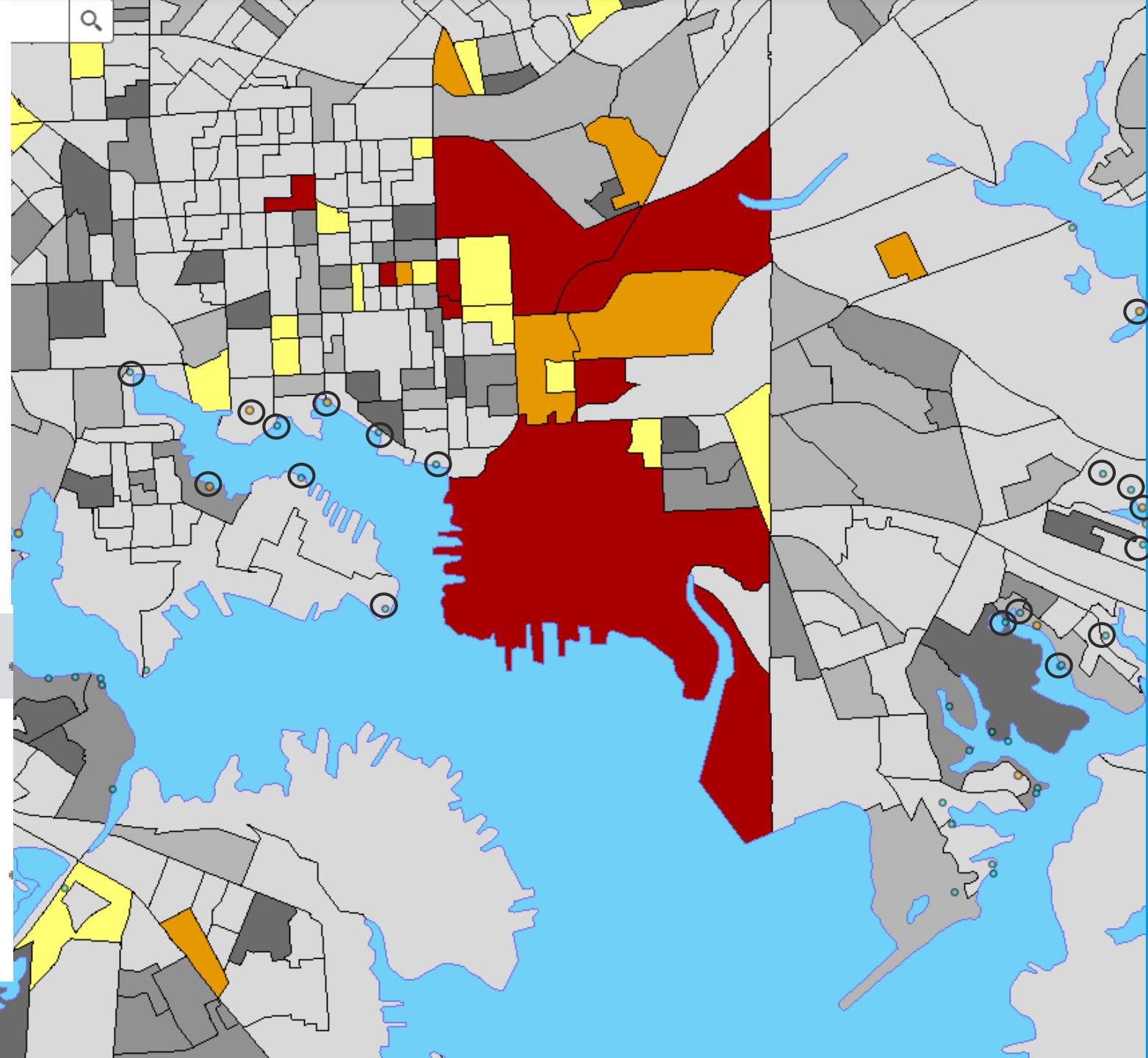
▼ ☒ PublicAccessReport - Potential Public Access Sites

☐ Category 1 Sites

☐ Category 2 Sites

☐ Category 3 Sites

▼ ☒ PublicAccessReport - Existing Public Access Sites



# LESSONS LEARNED

- Tool contains a lot of useful information
- Pilot demonstrated the pros and cons of leveraging a national tool and building on top of it
- Difficult to navigate
- Low hanging fruit improvements were made by contractor prior to end of contract

# OUTLOOK/LESSONS LEARNED

- Other improvements would likely require CBP to house significant parts of EPA national tool and invest additional resources into customization and maintenance
- During the course of the project, other Cross-GIT initiatives have emerged and are being pursued
  - *Cross-GIT Mapping Project*
  - *Ecosystem Services Mapping*
  - *Chesapeake Conservancy Collaboration*



# LINKS

- Chesapeake EJ Screen Story Map Tutorial - <https://gis.chesapeakebay.net/cbpejscreen/tutorial>
- Chesapeake EJ Screen – <https://gis.chesapeakebay.net/cbpejscreen/>
- National EJ Screen - <https://www.epa.gov/ejscreen>