REGION 3 SITE ASSESSMENT MAPPER (SAM) 3.00 DEMO – OCTOBER 11,2023

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BACKGROUND

- The Site Assessment Mapper (SAM) GIS App was initially developed as a pilot project to assist in prioritizing sites located in in the Elizabeth River and James River watersheds in the Commonwealth of Virginia.

- The first version included GIS layers such as such as municipal drinking water wells, private wells, surface water intakes, NOAA sediment data for metals, PCBs, and PAHs, and the layer for the national wetland inventory.

- The (SAM) 1.0 version was expanded to include the entire commonwealth of Virginia and with support from SEMD management the app was scaled up to include all of the Region 3 states.

BACKGROUND

- The SAM 2.0 and 3.0 versions were developed in coordination between the Region 3 Site Assessment Team including myself, Lorie Baker, Joe Vitello, Connor O'Loughlin, and Matthew Frank, Senior GIS analyst in R3.
- The 3.0 version includes 89 GIS layers such as US Census data, congressional districts, daycare and school locations, R3 recognized tribes, RCRA generators, sea rise elevations, subsurface geology, FEMA flood areas, NOAA PCB and pesticide sediment data for high priority watersheds, boat ramps, critical habitat, and many more layers useful for Hazard Ranking System (HRS) Model purposes.
- As part of the Region 3 Environment Justice Initiative, the 20 Region 3 EJ communities and EJ indices added to the SAM 3.0.

R3 SITE ASSESSMENT USES FOR SAM 3.0

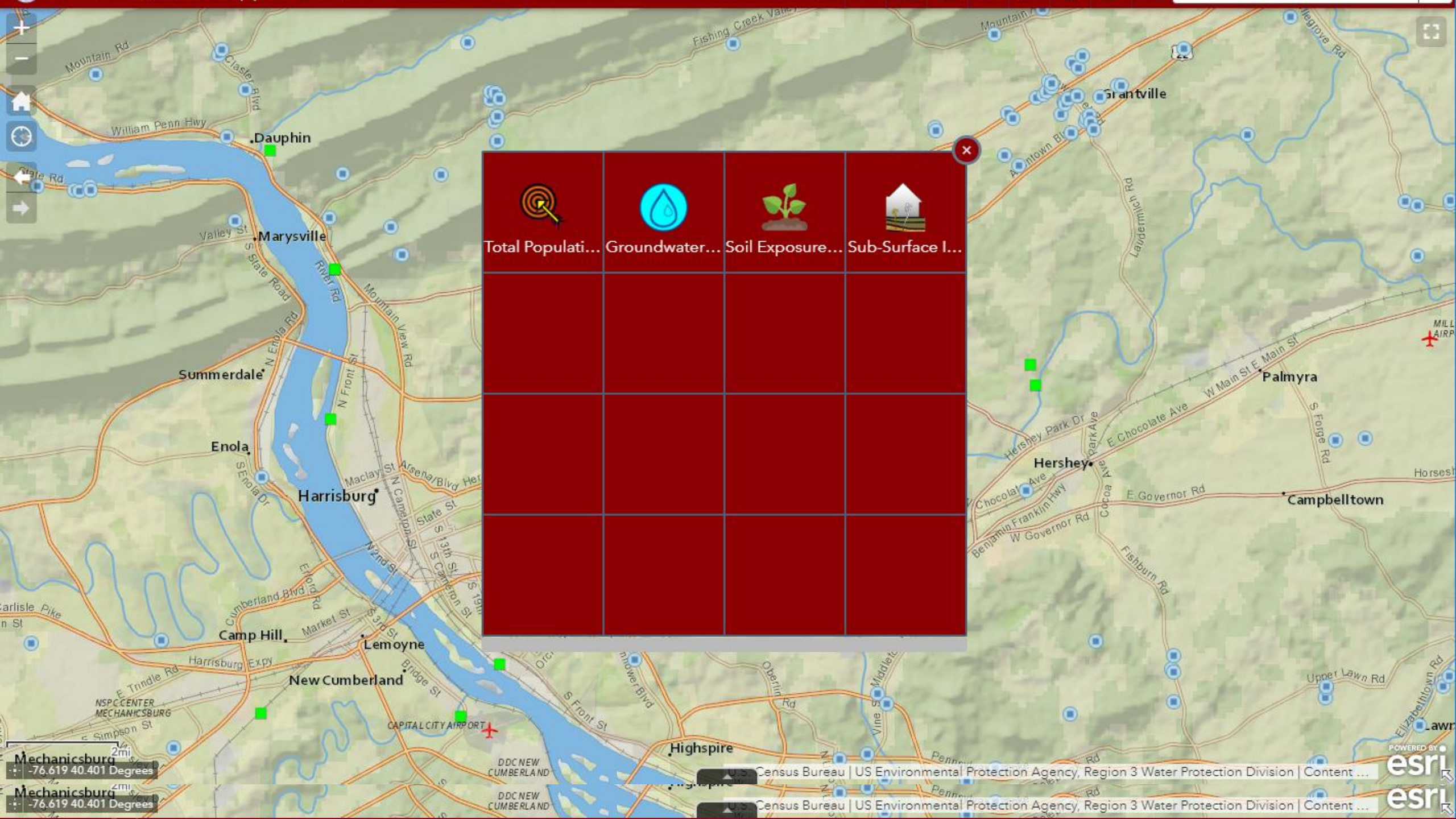
- ✓ The SAM 3.0 is useful for screening and prioritizing sites to ensure that the sites with the highest potential threat to the public and the environment are identified for further assessment early in the process.
- ✓ The application can be used to collect target data for developing in-house Pre-CERLA Screening, abbreviated Preliminary Assessment, and abbreviated Reassessment reports.
- ✓ This allows staff to develop these reports “in-house” which provides a cost savings to the Region and allows more funding to be used to perform sampling activities at our pre-remedial sites.
- ✓ Th SAM 3.0 Can be used to prioritize pre-remedial sites in high priority watersheds which may be impacted with PCBs, PAHs, and metals.

SAM 3.0 TOOLS & LIVE DEMO: ANACOSTIA RIVER WATERSHED PRIORITY AREA & THE ELIZABETH RIVER PRIORITY AREA

HAZARD RANKING SYSTEM (HRS) MODEL TOOLS

SAM 3.0 contains the following HRS Pathway Tools:

- HRS Buffer tool
- Total population tool
- Groundwater Migration Pathway tool
- Soil Exposure Pathway tool
- Sub-surface Intrusion Tool


Total Populati...
Groundwater...
Soil Exposure...
Sub-Surface I...
Dauphin
Marysville
Summerdale
Enola
Harrisburg
Camp Hill
Lemoyne
New Cumberland
Mechanicsburg
Highspire
Grantville
Palmyra
Hershey
Campbelltown
-76.619 40.401 Degrees
Census Bureau | US Environmental Protection Agency, Region 3 Water Protection Division | Content ...
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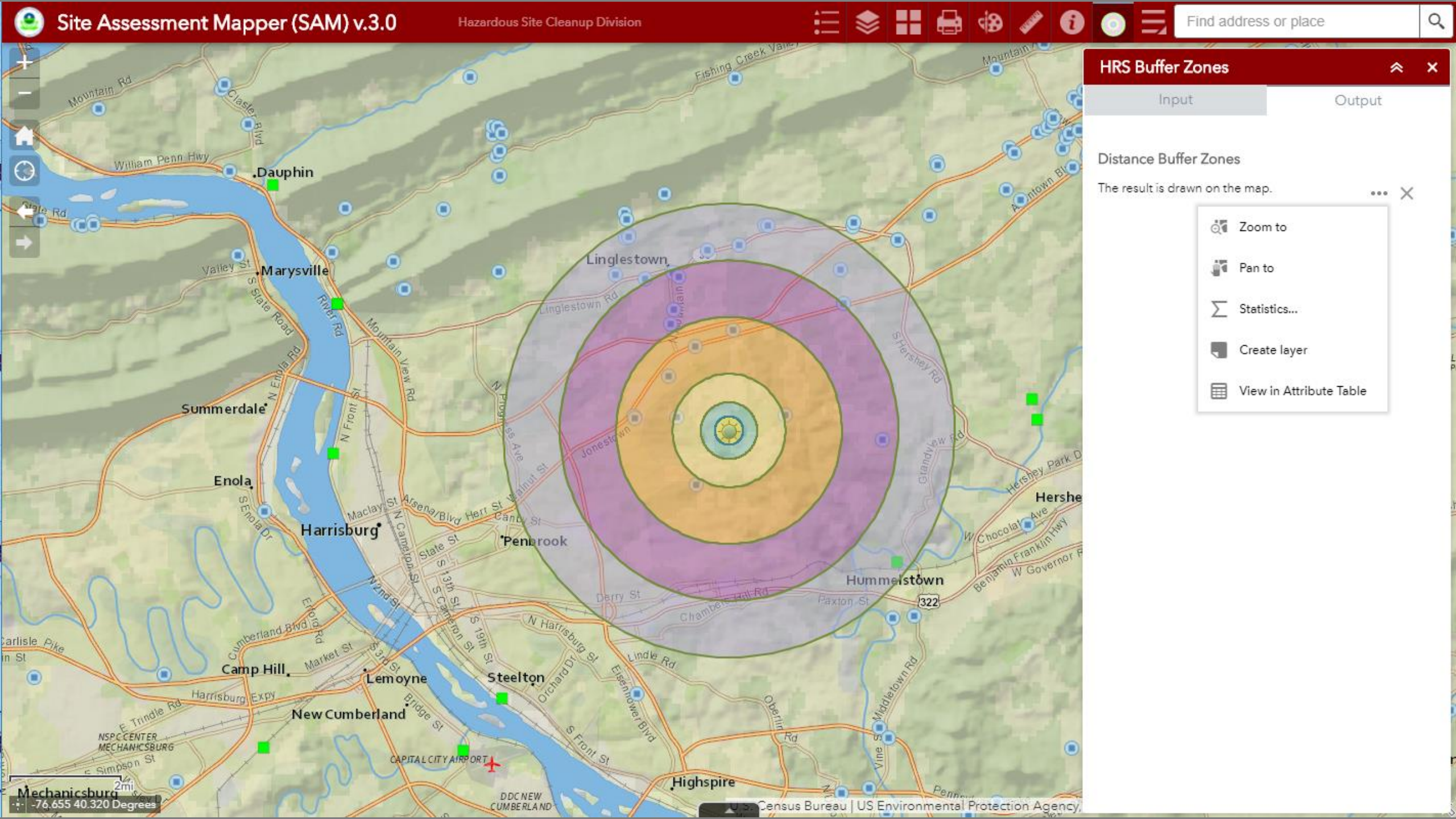
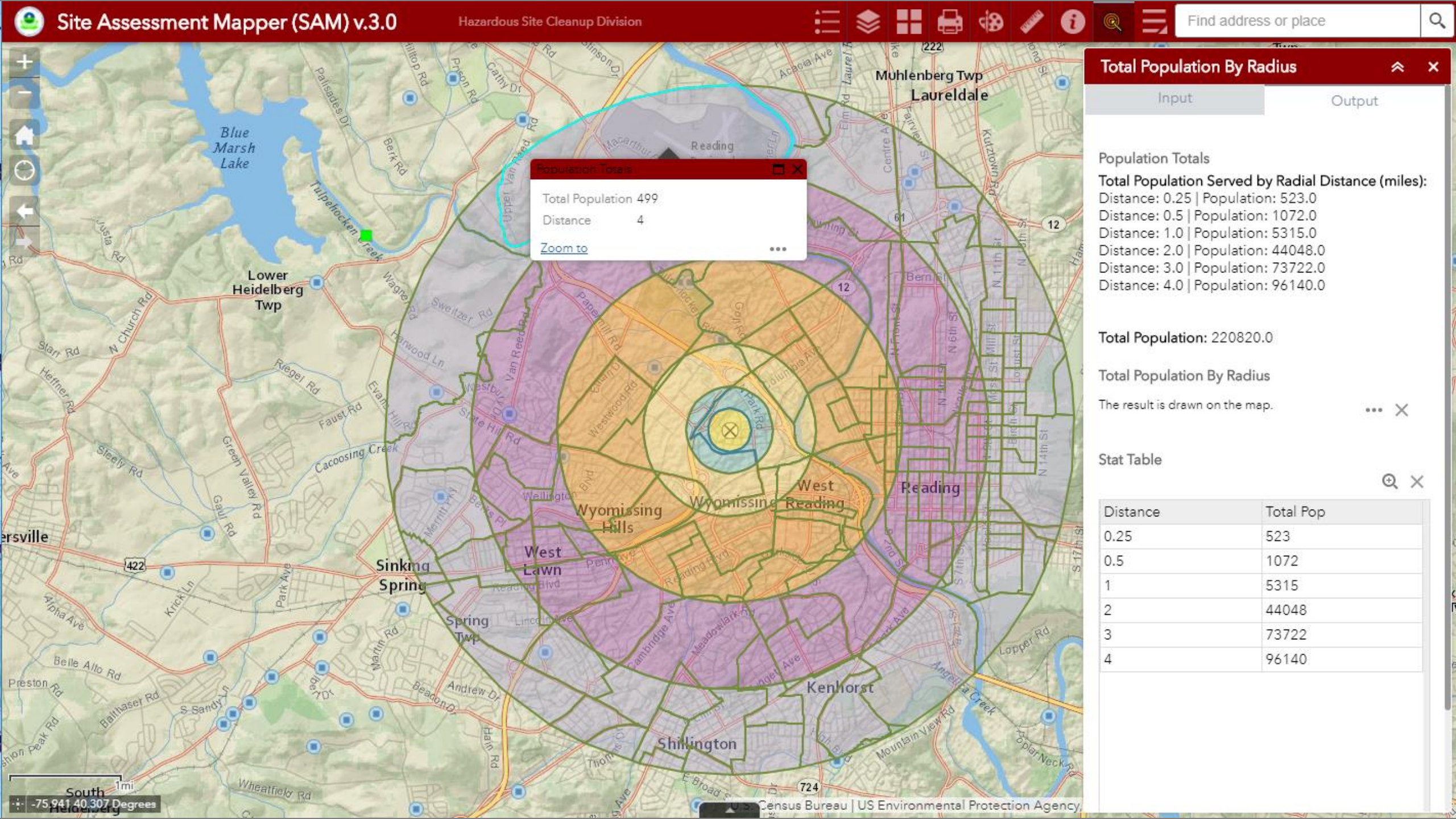
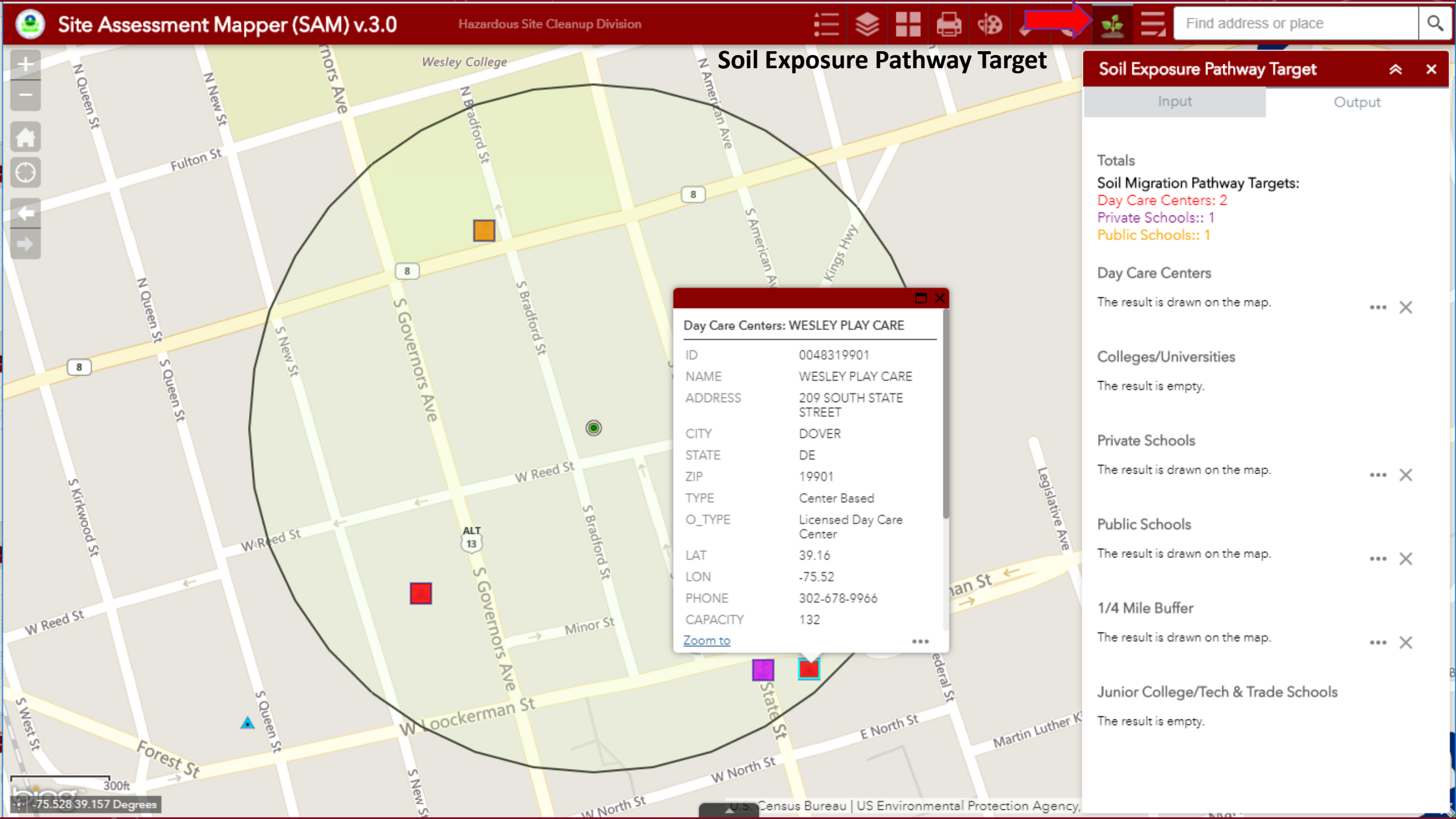
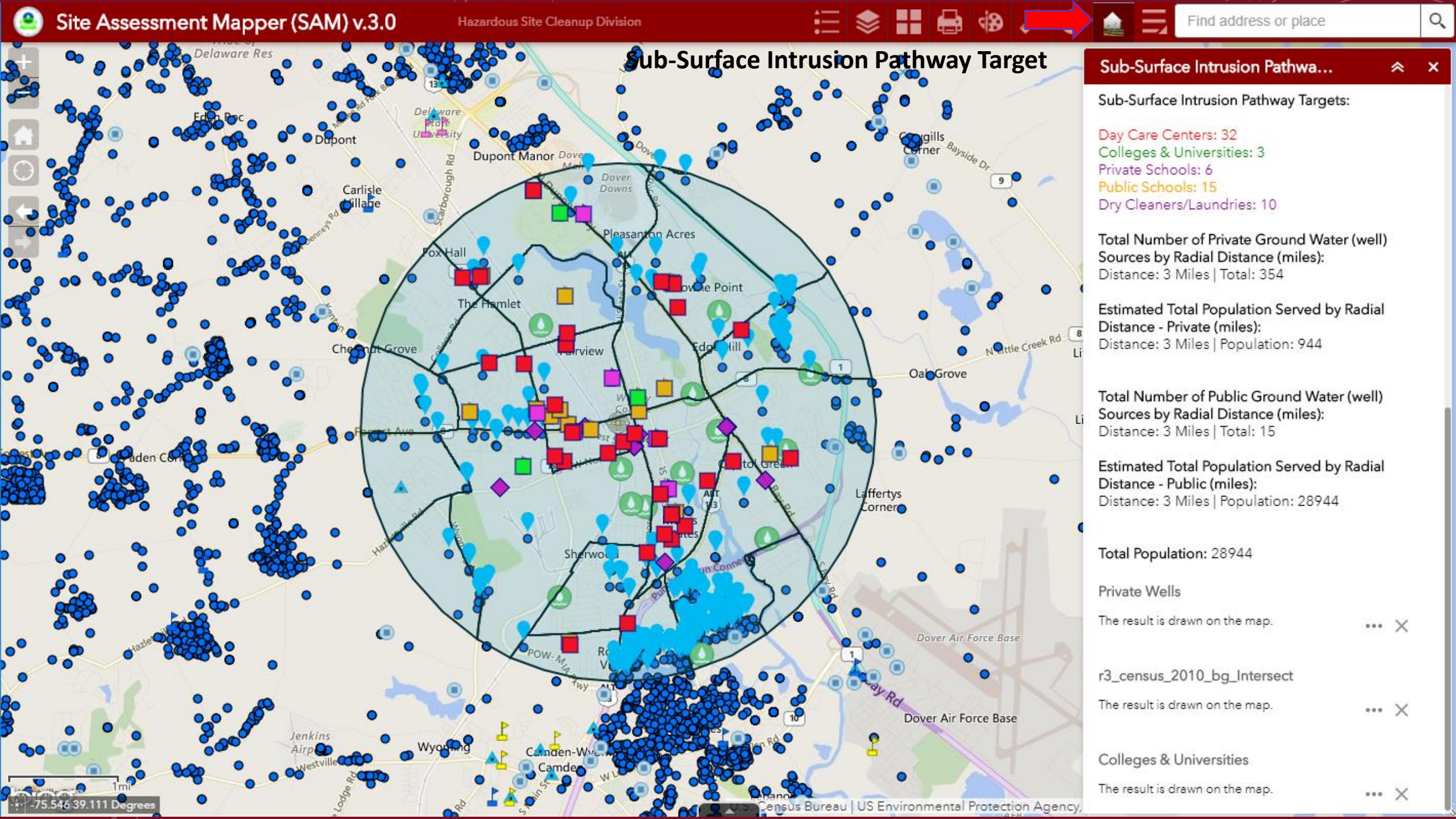

Site Assessment Mapper (SAM) v.3.0
Hazardous Site Cleanup Division
Find address or place
HRS Buffer Zones
Input
Output
Distance Buffer Zones
The result is drawn on the map.
Zoom to
Pan to
Statistics...
Create layer
View in Attribute Table
Dauphin
Marysville
Linglestown
Summerdale
Enola
Harrisburg
Penbrook
Hummelstown
Camp Hill
Lemoyne
Steelton
New Cumberland
Highspire
Mechanicsburg
CAPITAL CITY AIRPORT
NSPC CENTER MECHANICSBURG
DDC NEW CUMBERLAND
-76.655 40.320 Degrees
U.S. Census Bureau | US Environmental Protection Agency


Site Assessment Mapper (SAM) v.3.0
Hazardous Site Cleanup Division
Find address or place
Total Population By Radius
Input
Output
Population Totals
Total Population Served by Radial Distance (miles):
Distance: 0.25 | Population: 523.0
Distance: 0.5 | Population: 1072.0
Distance: 1.0 | Population: 5315.0
Distance: 2.0 | Population: 44048.0
Distance: 3.0 | Population: 73722.0
Distance: 4.0 | Population: 96140.0
Total Population: 220820.0
Total Population By Radius
The result is drawn on the map.
Stat Table
Distance | Total Pop
0.25 | 523
0.5 | 1072
1 | 5315
2 | 44048
3 | 73722
4 | 96140
Population Totals
Total Population 499
Distance 4
Zoom to
Blue Marsh Lake
Tulpehocken Creek
Lower Heidelberg Twp
Muhlenberg Twp
Laureldale
Reading
Wyomissing Hills
Wyomissing
West Reading
West Lawn
Sinking Spring
Spring Twp
Kenhorst
Shillington
Cacoosing Creek
-75.941 40.307 Degrees
Census Bureau | US Environmental Protection Agency


Site Assessment Mapper (SAM) v.3.0
Hazardous Site Cleanup Division
Find address or place
Soil Exposure Pathway Target
Soil Exposure Pathway Target
Input
Output
Totals
Soil Migration Pathway Targets:
Day Care Centers: 2
Private Schools:: 1
Public Schools:: 1
Day Care Centers
The result is drawn on the map.
Colleges/Universities
The result is empty.
Private Schools
The result is drawn on the map.
Public Schools
The result is drawn on the map.
1/4 Mile Buffer
The result is drawn on the map.
Junior College/Tech & Trade Schools
The result is empty.
Day Care Centers: WESLEY PLAY CARE
ID 0048319901
NAME WESLEY PLAY CARE
ADDRESS 209 SOUTH STATE STREET
CITY DOVER
STATE DE
ZIP 19901
TYPE Center Based
O_TYPE Licensed Day Care Center
LAT 39.16
LON -75.52
PHONE 302-678-9966
CAPACITY 132
Zoom to
Wesley College
N Queen St
N New St
Fulton St
N Bradford St
S Governors Ave
S Bradford St
S New St
S Queen St
S Kirkwood St
W Reed St
W Loockerman St
Minor St
Forest St
S West St
S State St
E North St
W North St
Martin Luther K
Legislative Ave
Kings Hwy
S American Ave
ALT 13
8
300ft
-75.528 39.157 Degrees
U.S. Census Bureau | US Environmental Protection Agency,


Site Assessment Mapper (SAM) v.3.0
Hazardous Site Cleanup Division
Find address or place
Sub-Surface Intrusion Pathway Target
Sub-Surface Intrusion Pathwa...
Sub-Surface Intrusion Pathway Targets:
Day Care Centers: 32
Colleges & Universities: 3
Private Schools: 6
Public Schools: 15
Dry Cleaners/Laundries: 10
Total Number of Private Ground Water (well) Sources by Radial Distance (miles):
Distance: 3 Miles | Total: 354
Estimated Total Population Served by Radial Distance - Private (miles):
Distance: 3 Miles | Population: 944
Total Number of Public Ground Water (well) Sources by Radial Distance (miles):
Distance: 3 Miles | Total: 15
Estimated Total Population Served by Radial Distance - Public (miles):
Distance: 3 Miles | Population: 28944
Total Population: 28944
Private Wells
The result is drawn on the map.
r3_census_2010_bg_Intersect
The result is drawn on the map.
Colleges & Universities
The result is drawn on the map.
Dupont
Dupont Manor
Carlisle Village
Pleasanton Acres
Fox Hall
The Hamlet
Fairview
Oak Grove
Laffertys Corner
Dover Air Force Base
Wyoming
Jenkins Airport
Camden
1mi
-75.546 39.111 Degrees
U.S. Census Bureau | US Environmental Protection Agency,

QUESTIONS???