



Office of Climate Action

Stay Cool ALX

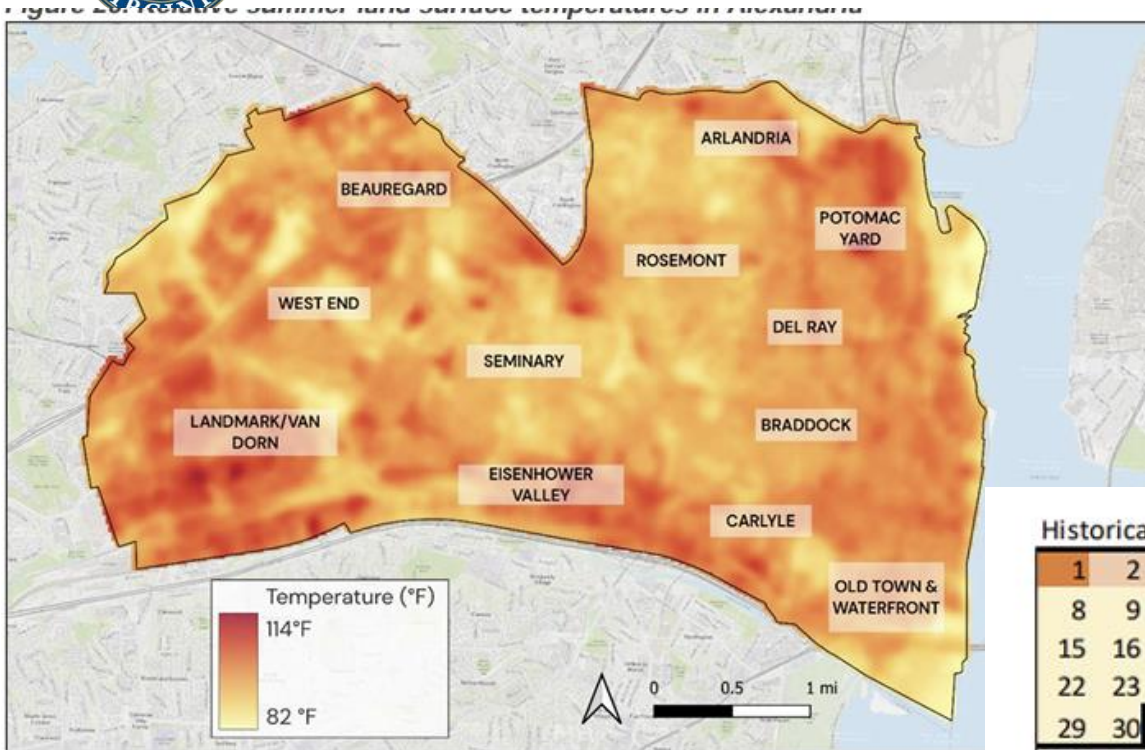
Stay Cool ALX will bring together internal and external partners to strategically address the increasing impacts of heat through targeted, time related actions

Environmental Policy Commission

April 20, 2026



The Problem: It's getting hot



Historical

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
50	51	52	53	54	55	56
57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	

2030s

1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	32	33	34	35
36	37	38	39	40	41	42
43	44	45	46	47	48	49
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57	58	59	60	61	62	63
64	65	66	67	68	69	70
71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	

2050s

1	2	3	4	5	6	7
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71	72	73	74	75	76	77
78	79	80	81	82	83	84
85	86	87	88	89	90	

- above 100°F
- above 95°F
- above 90°F



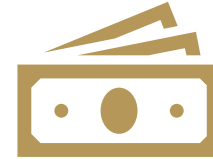
People (and cities) aren't built for this



Heat illness



Medical bills



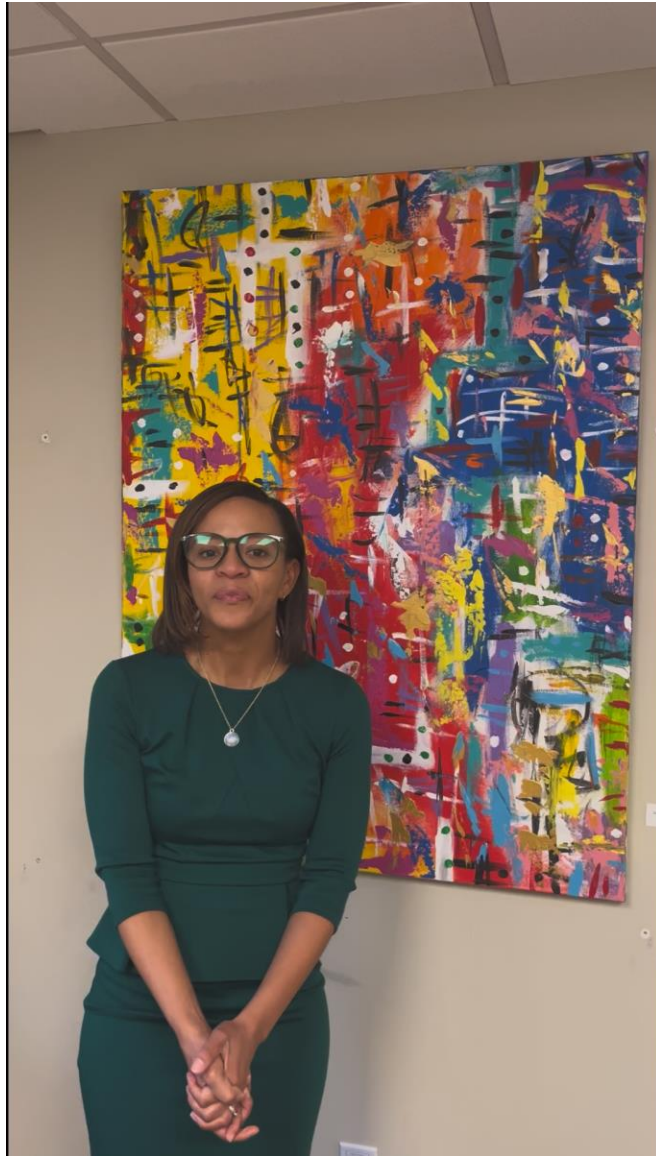
Utility bills

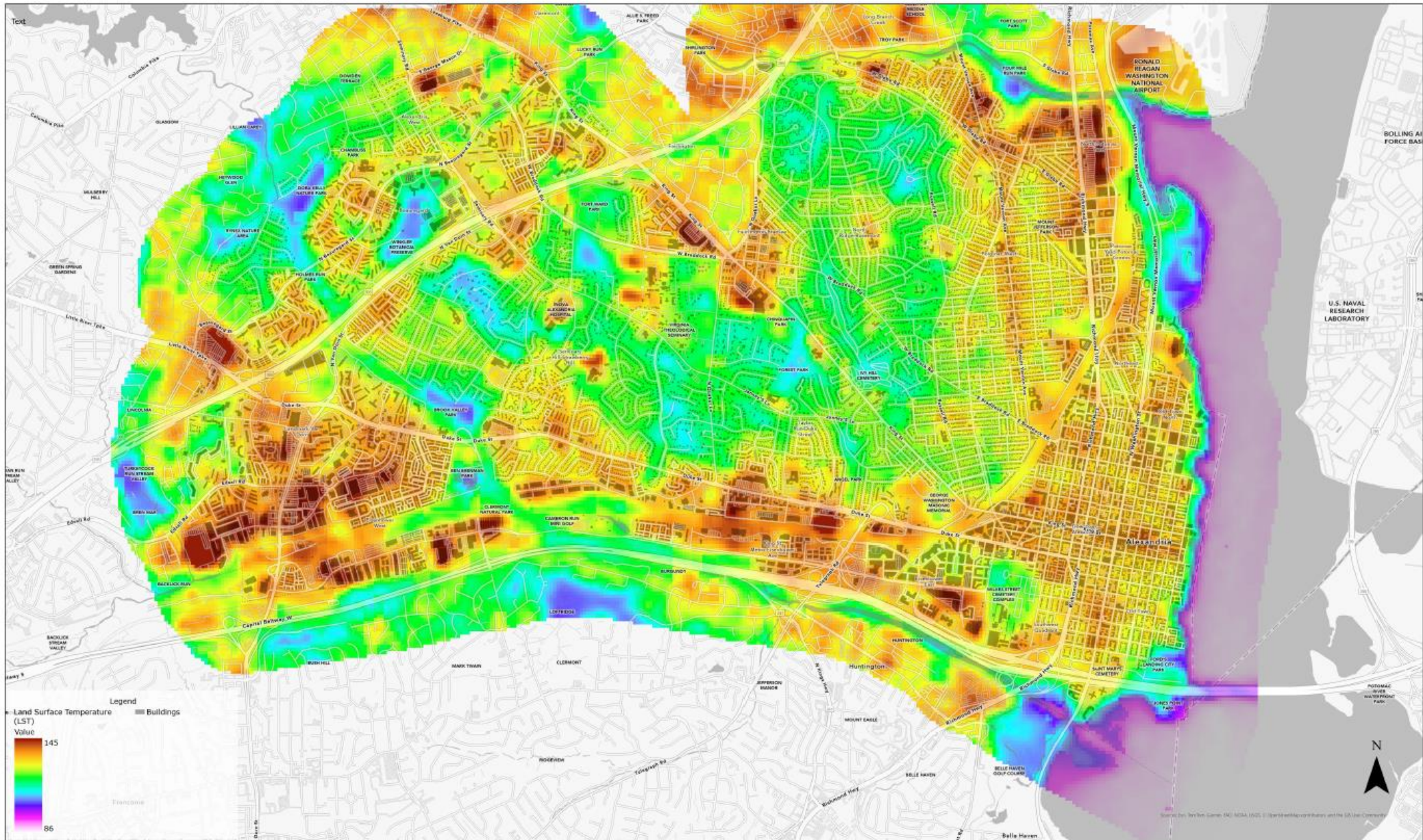


Comfort



Stay Cool ALX brings together experts from the City, community, businesses and others to identify best practices, innovation solutions, and incentives to help mitigate and adapt to the rising heat.





Land Surface Temperature (LST)

Land Surface Temperature (LST), often called skin temperature, is the radiative temperature of the Earth's surface (land, vegetation, or ice) measured by satellites. It represents how hot or cold the ground feels to the touch, distinct from air temperature. LST is crucial for monitoring climate, crop health, and urban heat.

0 0.75 1.5 3 Miles

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors; Landsat 9 Level-2 Surface Temperature, U.S. Geological Survey (USGS), July 16, 2024; Projection: WGS 1984 UTM Zone 18N



Land Use / Land Class (LULC)

Land Use / Land Class (LULC) is a classification of the Earth's surface based on both the physical characteristics of the land (land class, e.g. tree canopy, impervious surfaces, water) and how it is used by humans (land use, e.g. residential, commercial). LULC data is essential for understanding urban development patterns, green infrastructure, and environmental change over time.



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors; Chesapeake Conservancy Land Cover Dataset, 2021 Edition, ScienceBase; Projection: WGS 1984 UTM Zone 18N



Land Use / Land Class and Land Surface Temperature Hot Spot

This map overlays Land Surface Temperature (LST) Hot Spots on Land Use / Land Class (LULC) classifications to identify where the highest surface temperatures occur across different land cover types in Alexandria, VA. Hot Spot areas represent statistically significant clusters of elevated surface temperature derived from Landsat 9 imagery captured on July 16, 2024

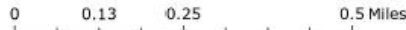
0 0.5 1 2 Miles

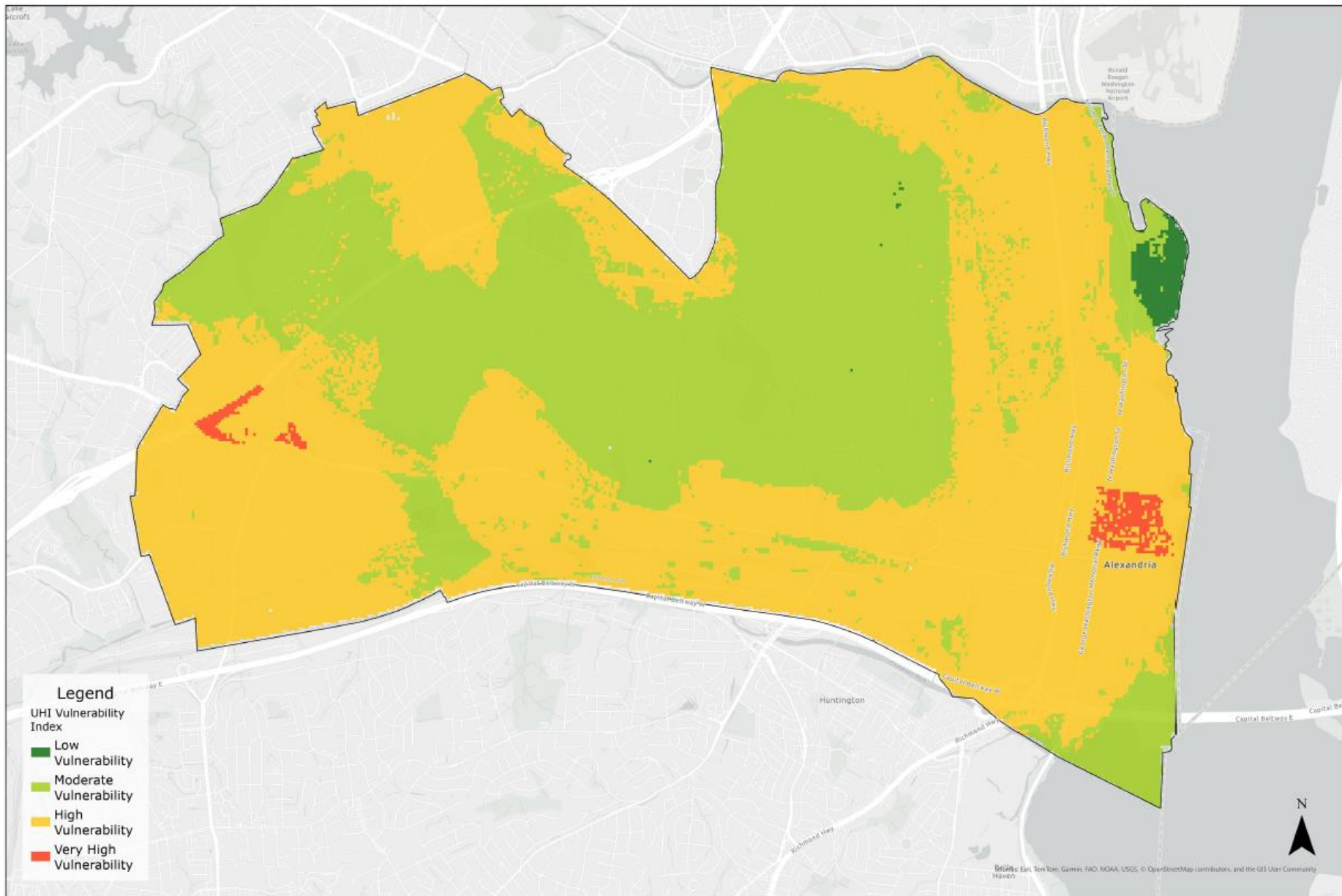
Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors; Landsat 9 Level-2 Surface Temperature, U.S. Geological Survey (USGS), July 16, 2024; Chesapeake Conservancy Land Cover Dataset, 2021 Edition, ScienceBase; Projection: WGS 1984 UTM Zone 18N



Surface Albedo - Potomac Yards

Sources: USGS Landsat 9 Collection, Sentinel-2 Level 2A, Projection: WGS 1984 Web Mercator (auxiliary sphere)

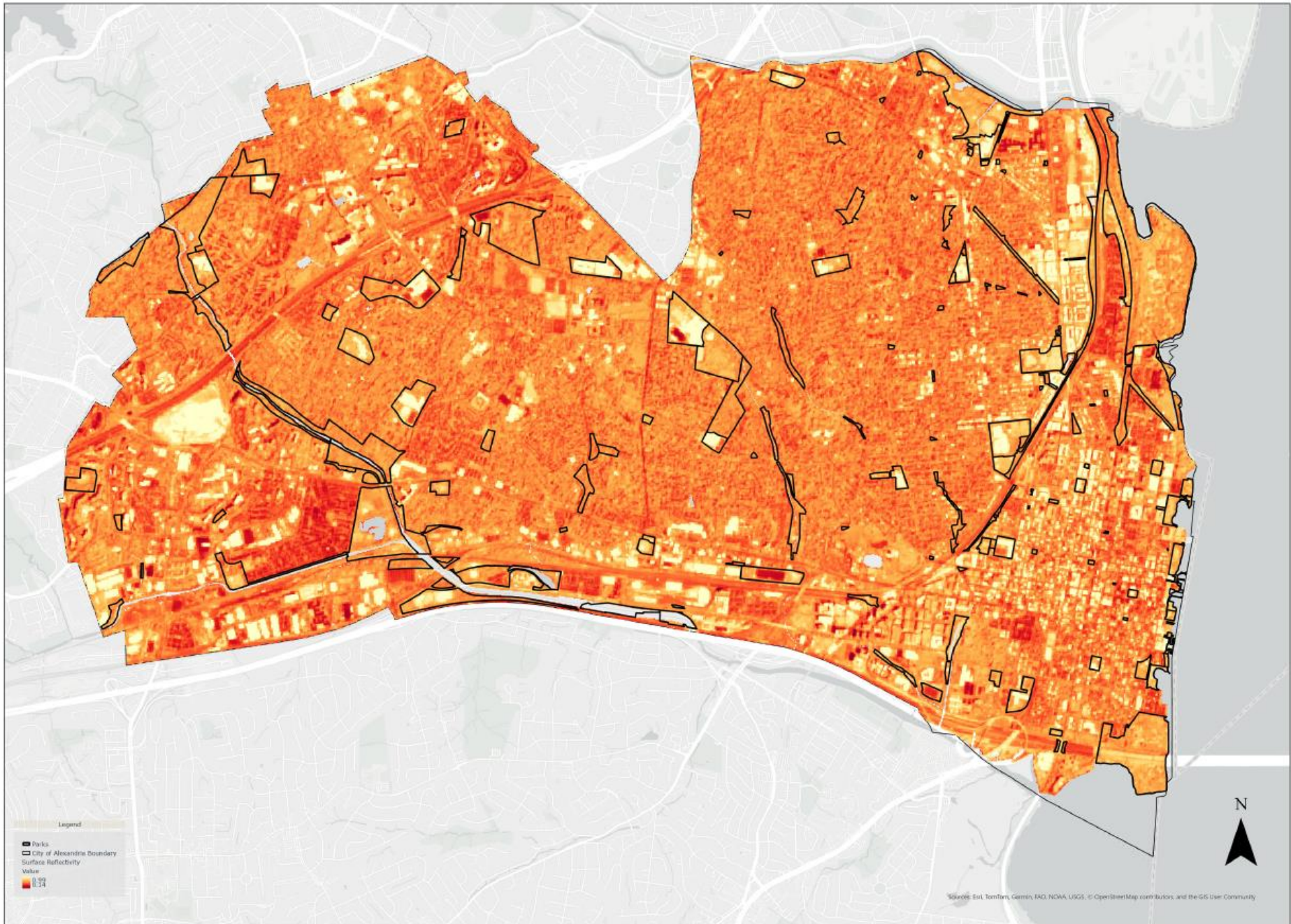




Urban Heat Island Vulnerability Index

The Urban Heat Island (UHI) Vulnerability Index was calculated using a weighted overlay of nine environmental and social indicators: land surface temperature (25%), impervious surface (15%), canopy density (10%), albedo (10%), health burden, elderly population, poverty, lack of air conditioning, and outdoor workers (40%) All inputs were reclassified to a 1-5 vulnerability scale prior to overlay.

0 0.5 1 2 Miles
Sources: Landsat 9 Collection 2, Sentinel-2 Level-2A, July 2024
Projection: WGS 1984 Web Mercator (auxiliary sphere)



Light Absorption and Reflection in Parks



Next Steps for Stay Cool ALX

May – June:

- Immediate Actions Working Group
 - Amplify existing programs
 - e.g., Senior Cool Care, Weatherization, LIHEAP
 - Identify limited new interventions
 - e.g., heat exhaustion training, Eco-City Business water distribution

- Implement new interventions

Community engagement on heat experience

September - ongoing:

- Identify near- and long-term interventions
 - City Working Group
 - increased shading, pocket parks, new pavement treatments
 - Community Actions Working Group
 - Reflective/green roof incentives, water stations, etc