

Appendix: Methuen Open Space & Recreation Plan for the 2020s

Essex Greenbelt Regional Prioritization
Maps of Methuen Resource Lands



Spring 2021

City of Methuen
Mayor Neil Perry



Map Set of Land Conservation Priorities

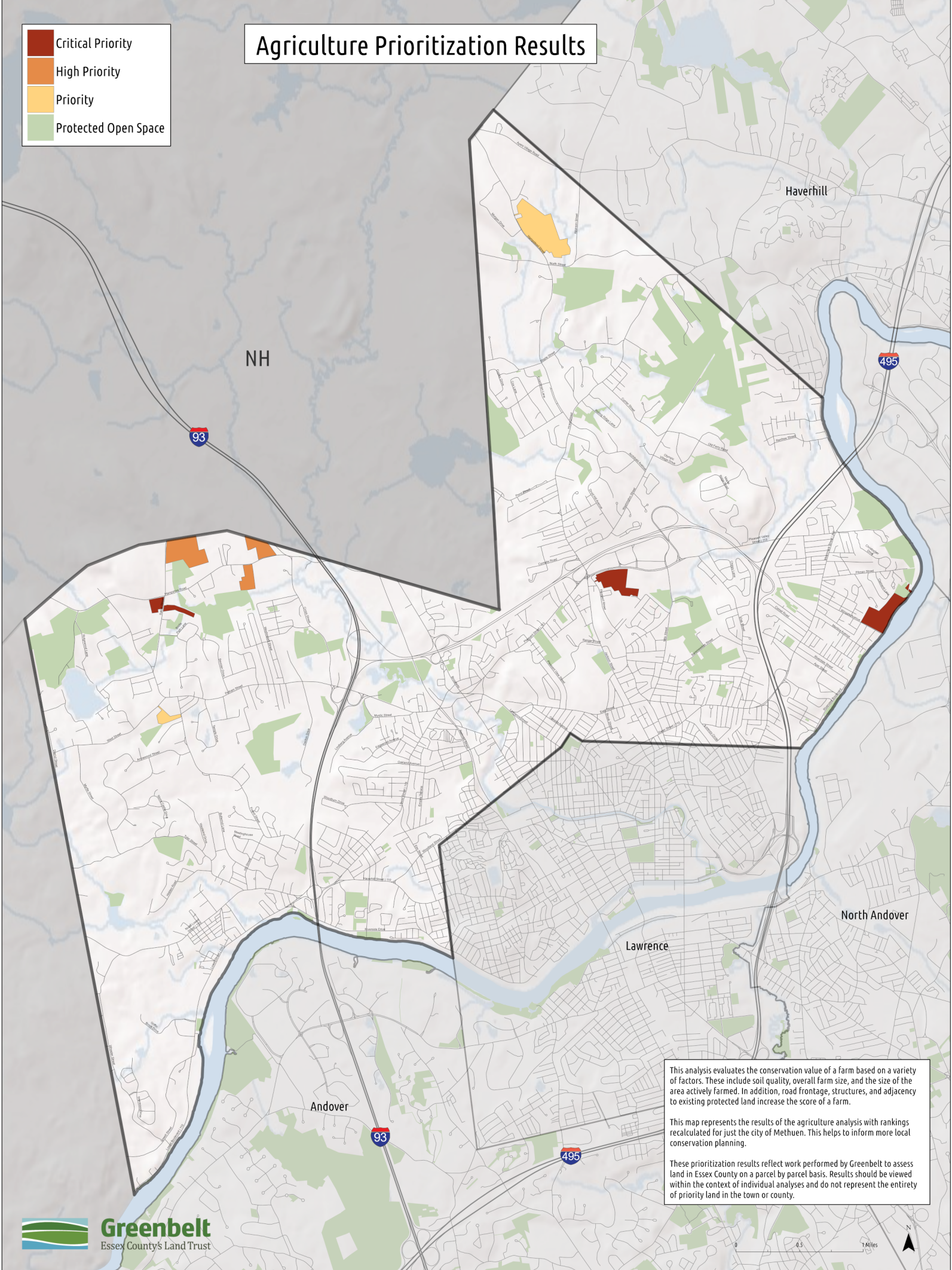
Essex Greenbelt, land trust for Essex County, has set regional priorities for land preservation strategies. The Methuen planning team shared data with Greenbelt which produced the attached maps indicating Methuen areas of conservation interest within a regional context.

The attached maps are:

- Agriculture Prioritization Map
- Drinking Water Resource Prioritization Map
- Habitat Area Prioritization Map
- Inland Flooding Mitigation Prioritization Map (2)
- Natural Resilience Prioritization Map
- Urban Cooling Prioritization Map

- Critical Priority
- High Priority
- Priority
- Protected Open Space

Agriculture Prioritization Results



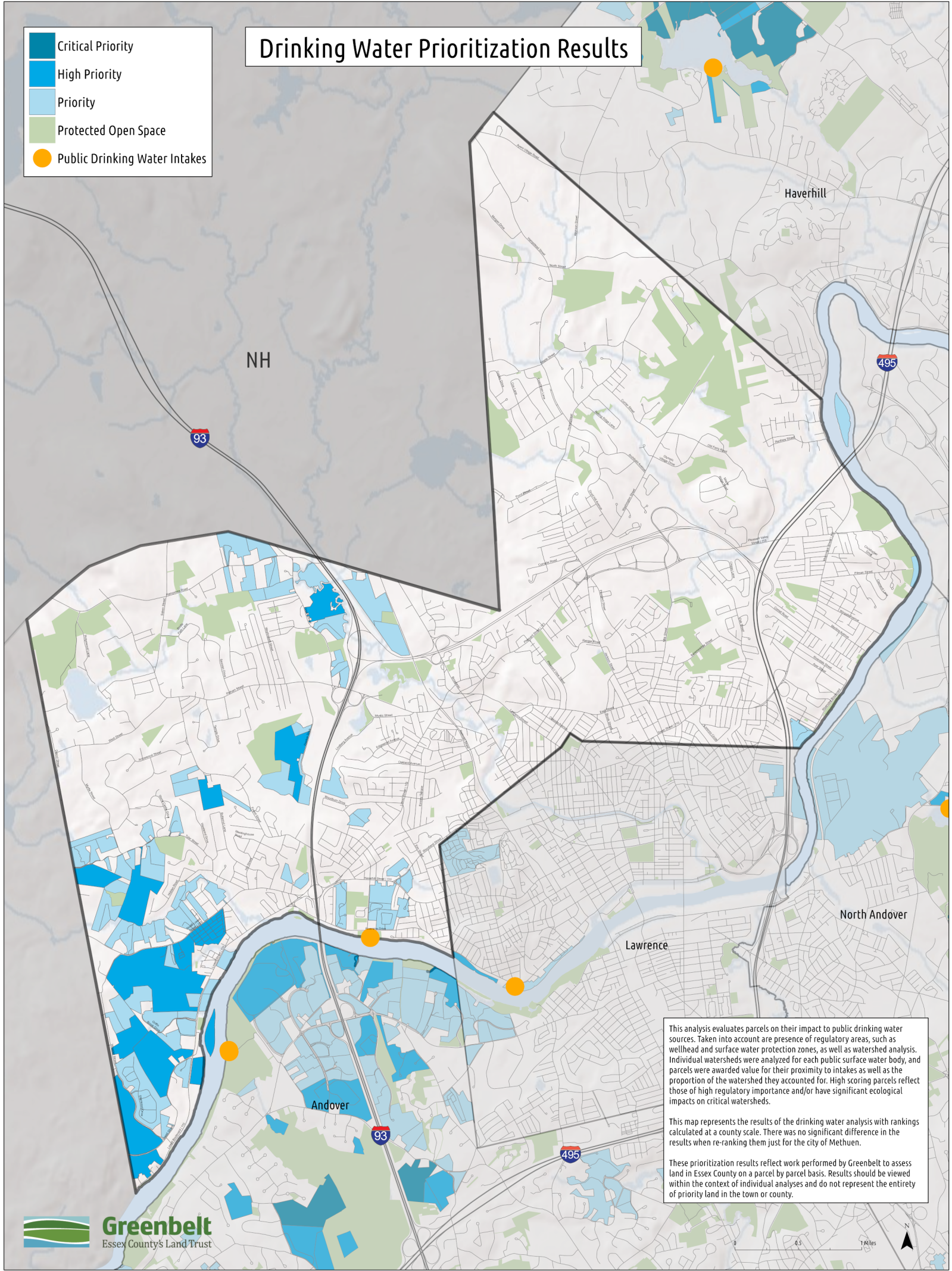
This analysis evaluates the conservation value of a farm based on a variety of factors. These include soil quality, overall farm size, and the size of the area actively farmed. In addition, road frontage, structures, and adjacency to existing protected land increase the score of a farm.

This map represents the results of the agriculture analysis with rankings recalculated for just the city of Methuen. This helps to inform more local conservation planning.

These prioritization results reflect work performed by Greenbelt to assess land in Essex County on a parcel by parcel basis. Results should be viewed within the context of individual analyses and do not represent the entirety of priority land in the town or county.

Drinking Water Prioritization Results

- Critical Priority
- High Priority
- Priority
- Protected Open Space
- Public Drinking Water Intakes



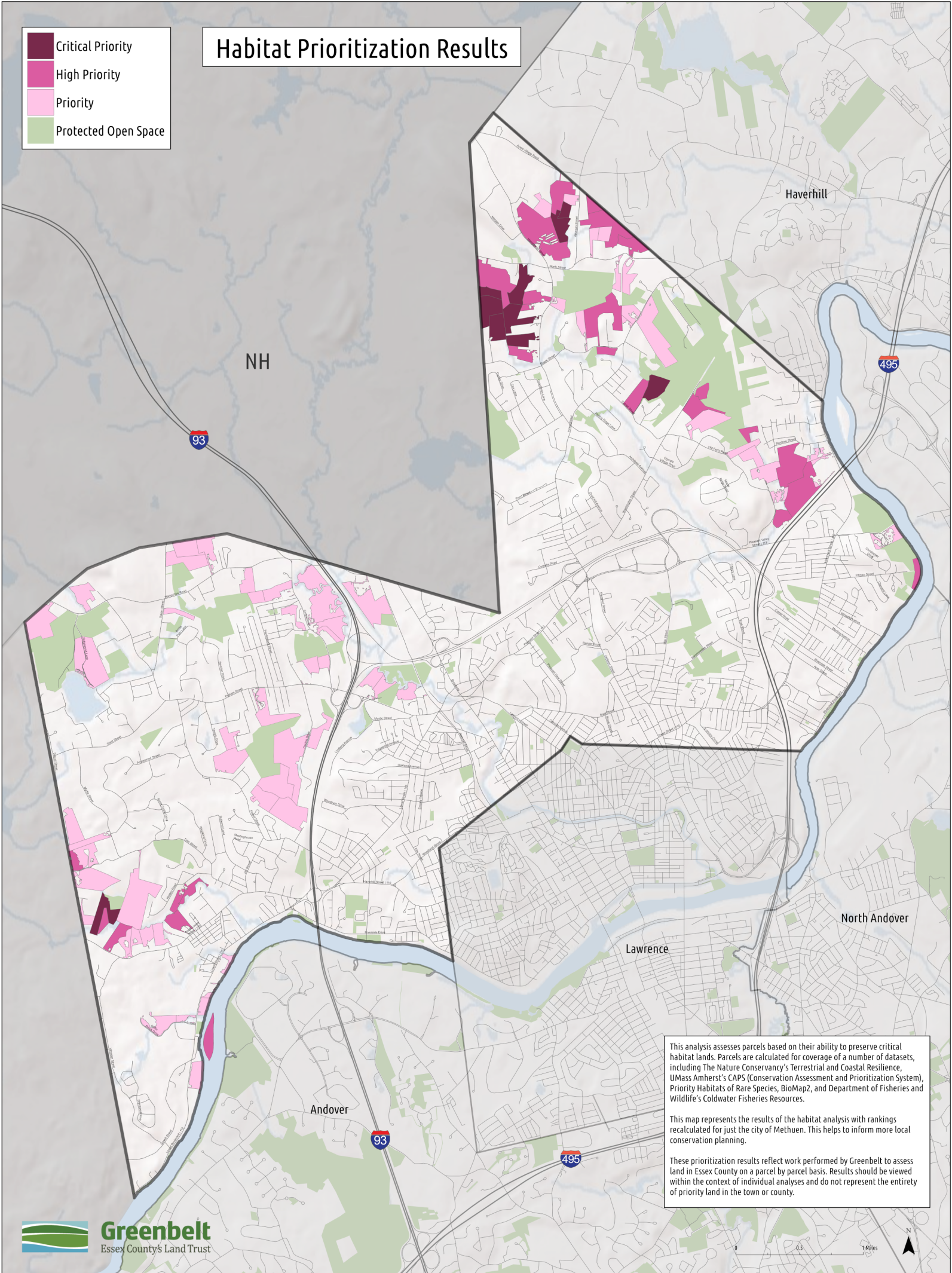
This analysis evaluates parcels on their impact to public drinking water sources. Taken into account are presence of regulatory areas, such as wellhead and surface water protection zones, as well as watershed analysis. Individual watersheds were analyzed for each public surface water body, and parcels were awarded value for their proximity to intakes as well as the proportion of the watershed they accounted for. High scoring parcels reflect those of high regulatory importance and/or have significant ecological impacts on critical watersheds.

This map represents the results of the drinking water analysis with rankings calculated at a county scale. There was no significant difference in the results when re-ranking them just for the city of Methuen.

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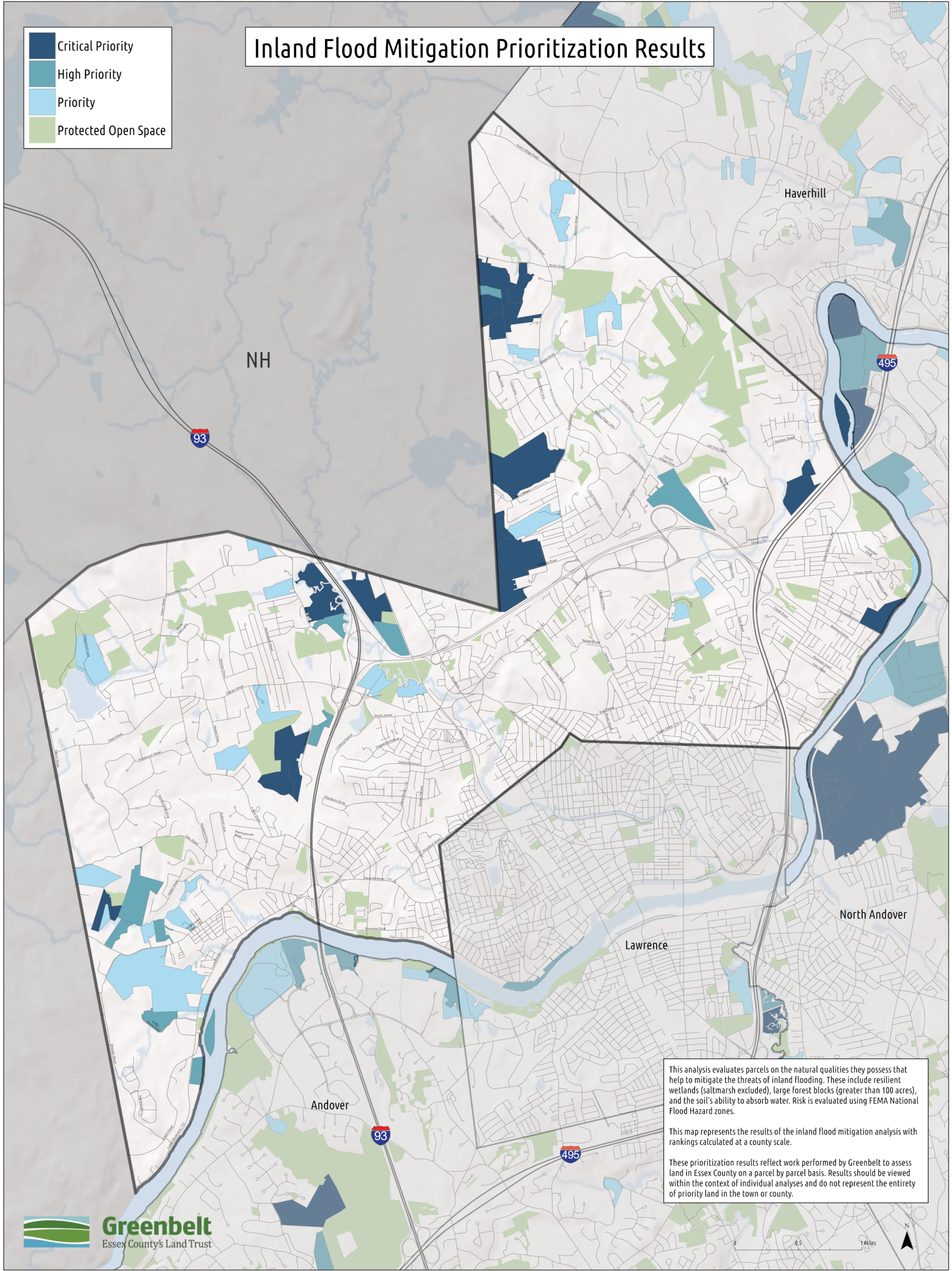
- Critical Priority
- High Priority
- Priority
- Protected Open Space

Habitat Prioritization Results



Inland Flood Mitigation Prioritization Results

- Critical Priority
- High Priority
- Priority
- Protected Open Space



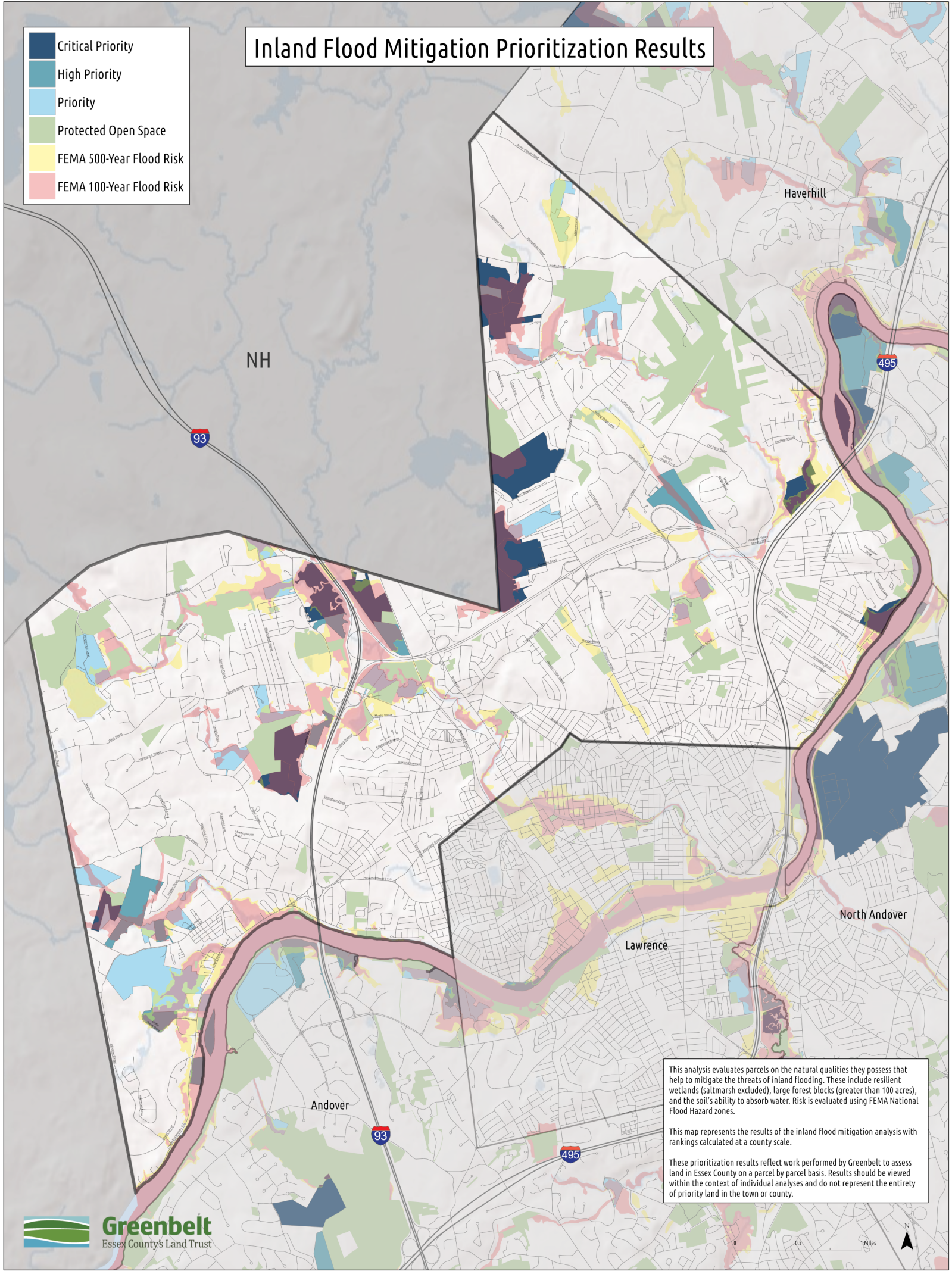
This analysis evaluates parcels on the natural qualities they possess that help to mitigate the threats of inland flooding. These include resilient wetlands (saltmarsh excluded), large forest blocks (greater than 100 acres), and the soil's ability to absorb water. Risk is evaluated using FEMA National Flood Hazard zones.

This map represents the results of the inland flood mitigation analysis with rankings calculated at a county scale.

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Inland Flood Mitigation Prioritization Results

- Critical Priority
- High Priority
- Priority
- Protected Open Space
- FEMA 500-Year Flood Risk
- FEMA 100-Year Flood Risk

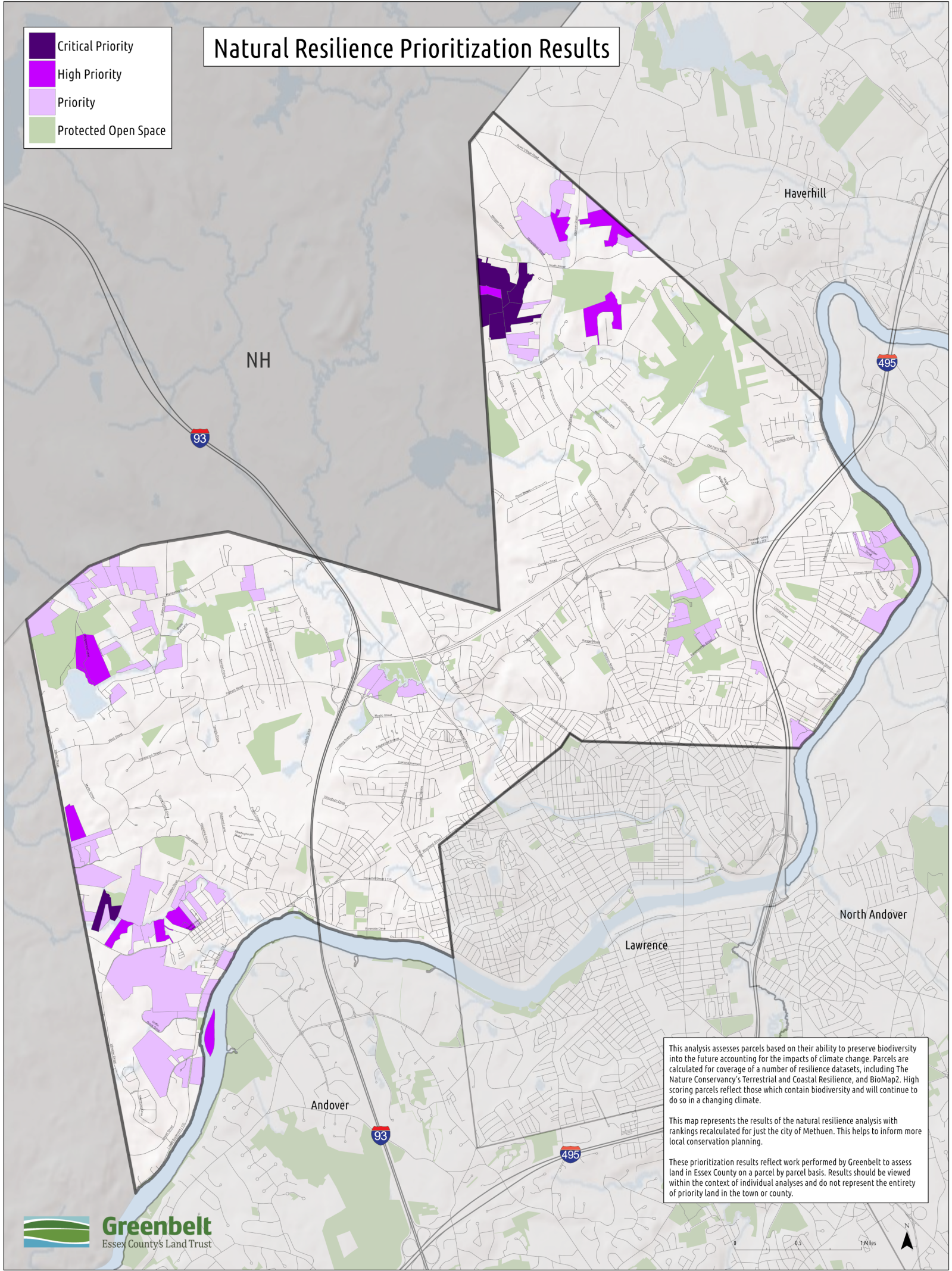
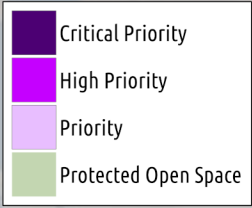


This analysis evaluates parcels on the natural qualities they possess that help to mitigate the threats of inland flooding. These include resilient wetlands (saltmarsh excluded), large forest blocks (greater than 100 acres), and the soil's ability to absorb water. Risk is evaluated using FEMA National Flood Hazard zones.

This map represents the results of the inland flood mitigation analysis with rankings calculated at a county scale.

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Natural Resilience Prioritization Results

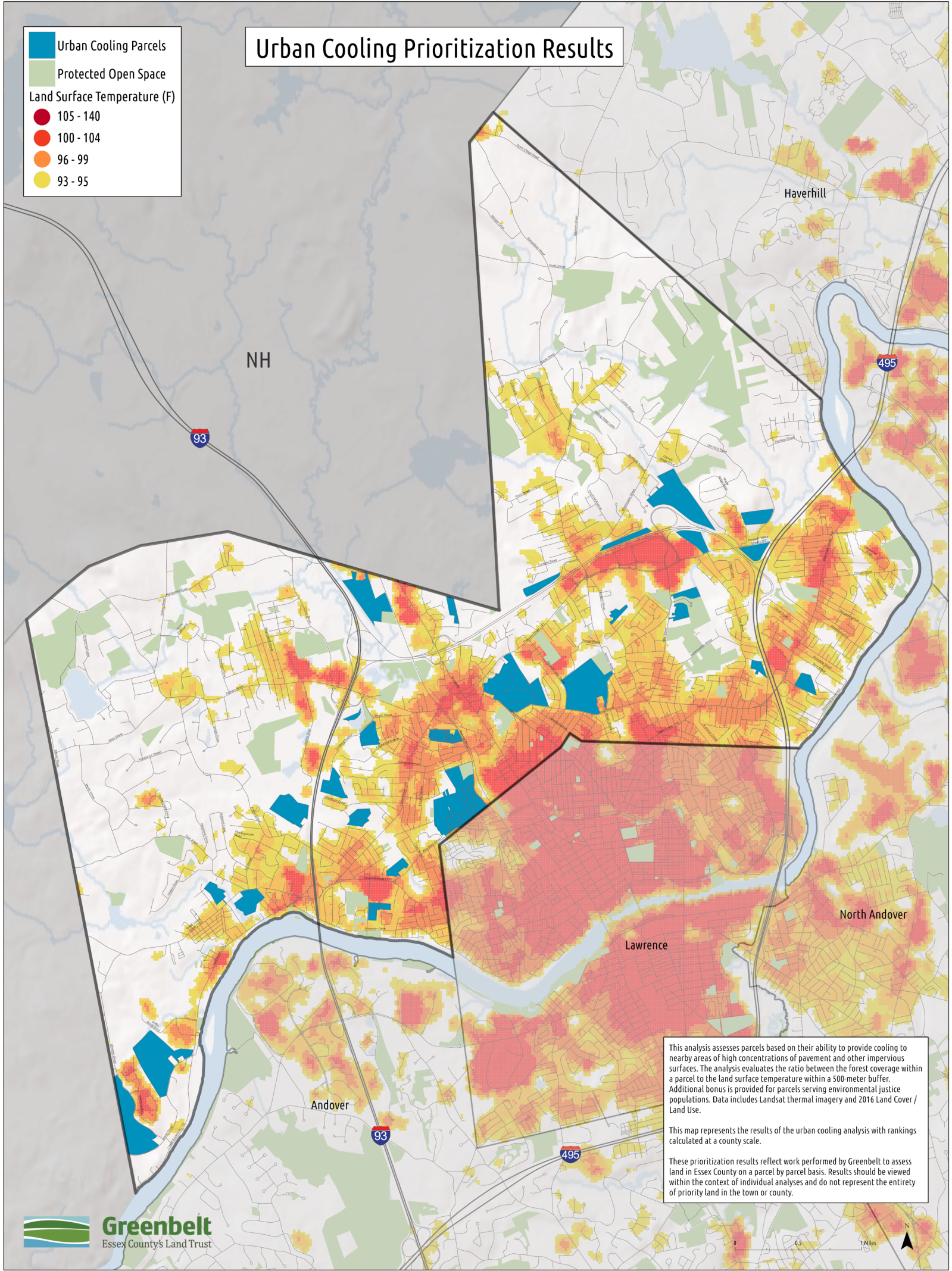
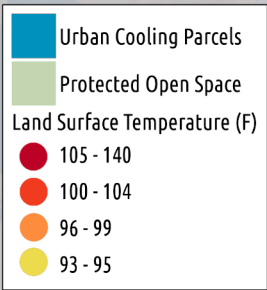


This analysis assesses parcels based on their ability to preserve biodiversity into the future accounting for the impacts of climate change. Parcels are calculated for coverage of a number of resilience datasets, including The Nature Conservancy's Terrestrial and Coastal Resilience, and BioMap2. High scoring parcels reflect those which contain biodiversity and will continue to do so in a changing climate.

This map represents the results of the natural resilience analysis with rankings recalculated for just the city of Methuen. This helps to inform more local conservation planning.

These prioritization results reflect work performed by Greenbelt to assess land in Essex County on a parcel by parcel basis. Results should be viewed within the context of individual analyses and do not represent the entirety of priority land in the town or county.

Urban Cooling Prioritization Results



This analysis assesses parcels based on their ability to provide cooling to nearby areas of high concentrations of pavement and other impervious surfaces. The analysis evaluates the ratio between the forest coverage within a parcel to the land surface temperature within a 500-meter buffer. Additional bonus is provided for parcels serving environmental justice populations. Data includes Landsat thermal imagery and 2016 Land Cover / Land Use.

This map represents the results of the urban cooling analysis with rankings calculated at a county scale.

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