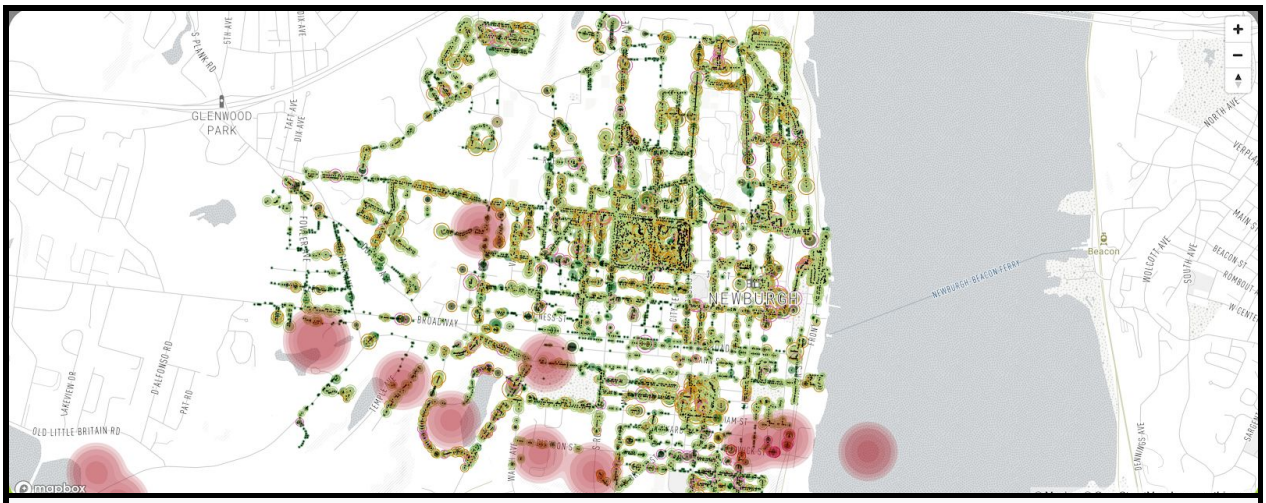
The Newburgh Tree index is a tool to explore the arboreal make-up of the city of Newburgh. It is intended to built upon as more and more data becomes available about the environmental conditions around Newburgh. This way, we aim to achieve a tool frame that could be deployed to any city to investigate the environmental condition.

For this specific project, we used FOIL data provided by the city hall's GIS department to map the trees of Newburgh. Knowing that Newburgh is rife with contamination and home to a Federally subsidized SUPERFUND site by the EPA and multiple brownfield sites, we also collected data about the aforementioned sites from the New York State Department of Environmental Conservation to see how the two overlap and have potentially affected each other. We used Mapbox to incorporate the datasets into an interactive map which we embedded into our website.

The FOIL data at hand provided us with a detailed breakdown of the condition of the trees from what seems like the perspective of an insurance agent. It contained data headers such as the health condition, risk of failure, likelihood of failure and the extent of damage the trees might cause to their surroundings in the event of a collapse. We mapped each single item of this data for the user to interact with and learn more about each tree in their neighborhood. Each tree data point was mapped with a radius proportionate to their diameter at breast height. The ring around the trees were color coded to display its risk of failure and the red loci around the city represents the location of contaminated sites around the city.

We hope that this tool provides an insight into the environmental make-up of the city of Newburgh for the local residents and a fresh perspective to look at this data for Newburgh city officials.



Tree clustering

Exploring the map shows that there is healthy proliferation of trees in and around Downing Park where contamination is minimal.

The impact of contamination

In contrast to this, right by the two contaminated sites 7-11 Johnes Street and 4 Renwick Street that were formerly a natural gas regulator station, propane peaking facility and drycleaning facility, it is evident that the trees in close proximity are in high risk of failing and in poor condition.