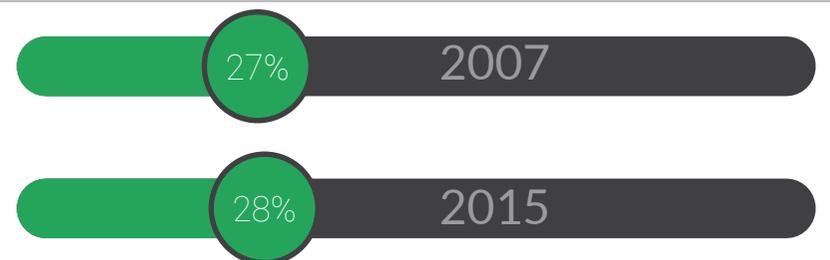


Tree Canopy Change in the City of Baltimore

2007 2015

Baltimore bucks the trend

Studies throughout the United States have repeatedly shown that communities are losing tree canopy due to a wide range of threats. Over the 2007 to 2015 time period the City of Baltimore experienced an approximate 1% increase in tree canopy.

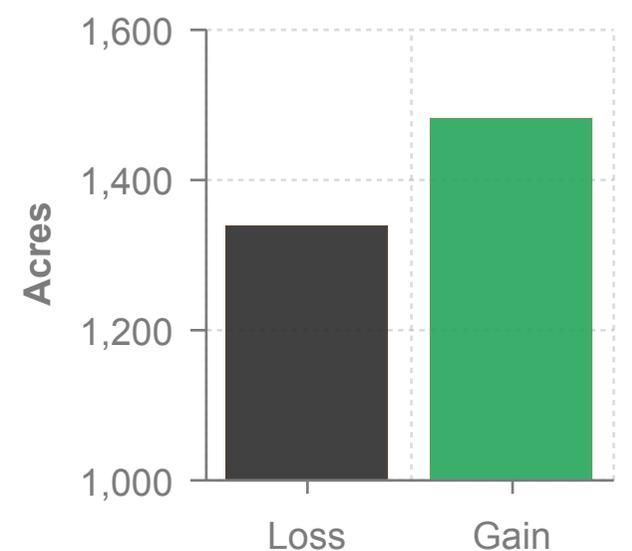


1% increase

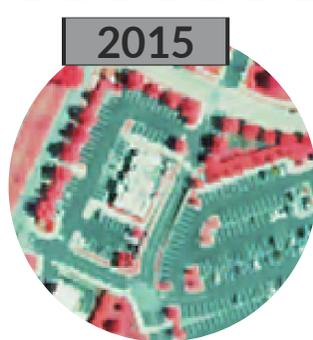
The tree canopy change detection was carried out using high-resolution aerial imagery and 3D airborne LiDAR data. Change was mapped at the individual tree canopy level for every single tree in the city, overcoming the limitations of other studies that used coarser resolution data or sample-based approaches.

A mix of loss and gains

The actual story of tree canopy change in Baltimore is more nuanced than simply stating that tree canopy increased. Over the 2007-2015 time period, areas throughout Baltimore experienced both substantial gains and losses. Locally, these changes can lead to positive (e.g., reduced peak summer temperatures) and negative (e.g., loss of wildlife habitat) effects. Tree canopy loss, whether due to human activities, such as construction, or natural events, such as a severe storm, can be instantaneous and dramatic. Tree canopy increases resulting from new plantings, natural regeneration, and growth, are slow processes that take time and commitment. Maintaining Baltimore's tree canopy in the future will require investments in efforts that preserve existing tree canopy in addition to tree plantings.



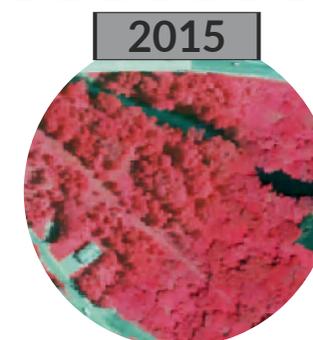
The overall change in tree canopy masks the fact that there was over 1,000 acres of both gain and loss in the 2007-2015 time period.



2007 2015
Near the intersection of Loch Raven Blvd and E. Northern Pkwy, newly planted trees, which were not contributing any measurable tree canopy in 2007 had robust canopies 2015.



2007 2015
An area of substantial forest loss to the south of Baltimore Harbor near Masonville. This type of extensive forest loss harms numerous ecosystem services and will take decades to replace.



2007 2015
There is almost no place within the city that does not show signs of loss and gain. This area near Maisel Street Park shows evidence of both, stemming from a variety of factors.