

Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.igsb.uiowa.edu/nrgislib/>.

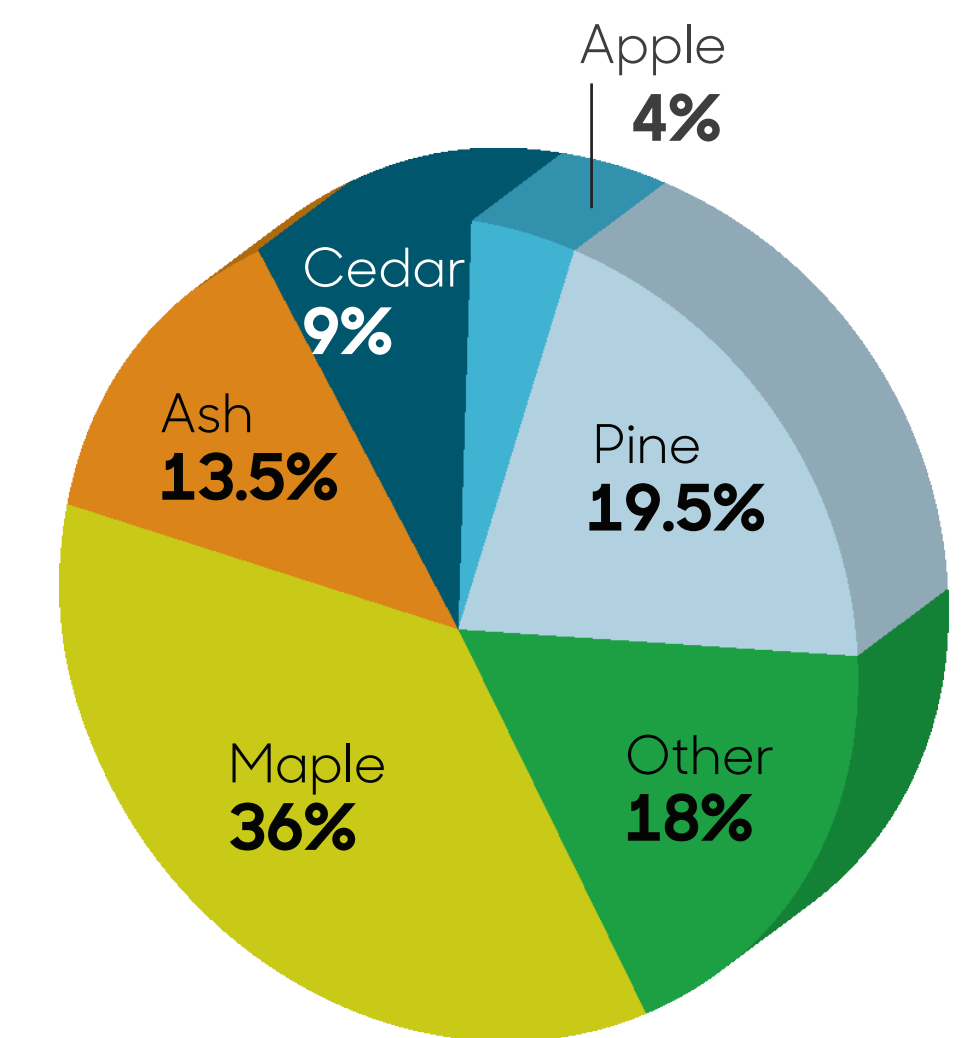
### The Urban Forest

This map depicts city-owned trees that were surveyed by the Iowa Department of Natural Resources (Iowa DNR) in 2013.<sup>1</sup> The trees are divided into three categories: healthy trees, hazard trees, and ash trees.

A yellow triangle indicates a hazard tree. The hazard designation reflects tree condition using the Iowa DNR's priority rating. Hazard trees are "dangerous, dead, or dying, and no amount of maintenance will increase longevity or safety," or are infected by "insects, pathogens, or parasites."

A purple cross indicates an ash tree. They are under imminent threat from the Emerald Ash Borer (EAB), an invasive beetle that disrupts circulation in the tree resulting in the loss of tens of millions of ash trees in North America.<sup>2</sup> EAB was first discovered in Iowa in 2010 and was confirmed in 66 Iowa counties as of 2019.<sup>3</sup>

The graph shows how many of the city's trees are of the same species. There is a strong possibility that 13.5% (ash trees) of Elkader's city-owned trees will die once EAB reaches the area. With proper planning and management, the city can improve its canopy by planting suitable trees to gradually replace hazard and ash trees. Improving species diversity will create a more resilient urban forest.



<sup>1</sup> Iowa Department of Natural Resources Community Tree Inventories, <http://www.iowadnr.gov/Conservation/Forestry/Urban-Forestry/Community-Tree-Inventories>.  
<sup>2</sup> Emerald Ash Borer the Green Menace, USDA Program Aid No. 1769, 2008, [https://www.aphis.usda.gov/publications/plant\\_health/content/printable\\_version/EAB-GreenMenace-reprint\\_June09.pdf](https://www.aphis.usda.gov/publications/plant_health/content/printable_version/EAB-GreenMenace-reprint_June09.pdf).  
<sup>3</sup> "Iowa Tree Pests," Entomology and Plant Science Bureau of the Iowa Department of Agriculture and Land Stewardship (IDALS), accessed August 12, 2019, [http://www.iowatreepests.com/eab\\_locations.html](http://www.iowatreepests.com/eab_locations.html).

### Bioregional Context

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