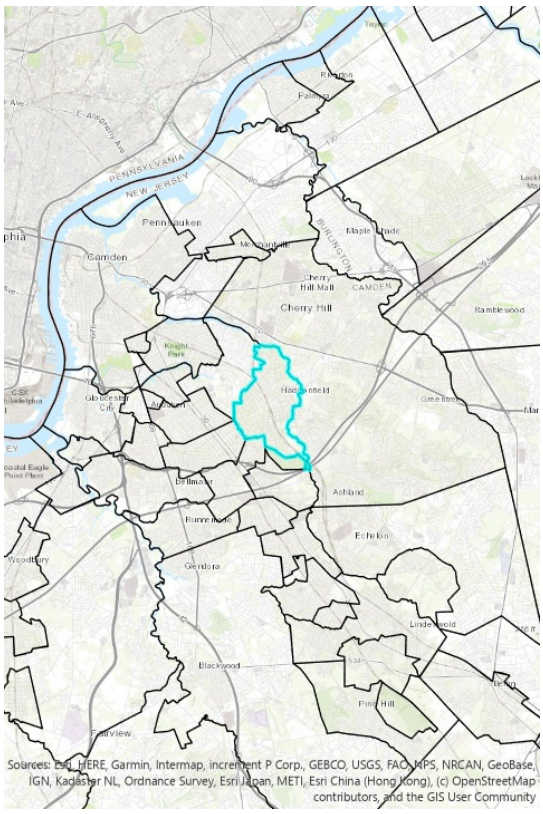
Haddonfield Borough: Forest Snapshot

Introduction / Forest Data

While New Jersey has long been noted as the most densely populated state in the nation, it still has extensive areas of wildland and urban forests. With nearly 2,120,000 acres of upland and wetland forests, over 45% of the state's land area is forested (derived from the 2015 New Jersey Land Use/Land Cover). Forest ecosystems play an important role in providing wildlife habitat, wood products, recreation, carbon sequestration, clean air and water; therefore, information on the current status and trends is essential for assessing the quality and quantity of these resources.

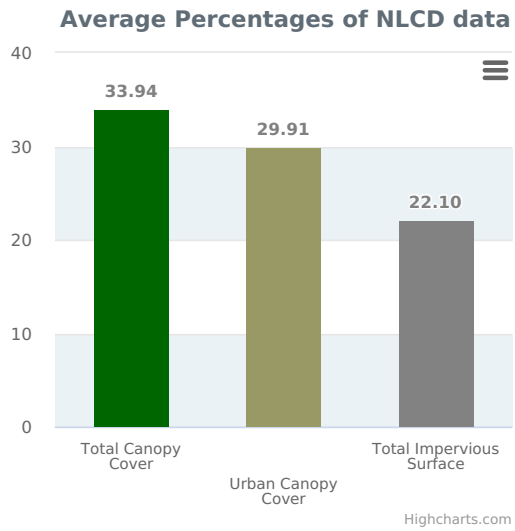


Haddonfield Borough: Forest Snapshot

National Land Cover Database 2016

National Land Cover Database 2016 (NLCD 2016) is the most recent national land cover product created by the Multi-Resolution Land Characteristics (MRLC) Consortium of federal government agencies. The NLCD is a nationwide product derived from Landsat Thematic Mapper satellite imagery. While this information product is comparatively coarse based on 30x30 meter ground pixel sizes, it does provide a reasonable estimate of percent tree canopy cover layer and percent developed imperviousness. Percent tree canopy cover layer represents what percentage of a 30 x 30m pixel is covered by some sort of tree or other woody vegetation. Similarly, the percent imperviousness is the percent of a pixel covered with impervious surfaces such as asphalt, roofing material and/or concrete. More information on the NLCD can be found at the NLCD website. The NLCD digital data was summarized to provide a municipal level estimate of percent tree canopy and impervious surface cover.

Higher amounts of tree cover can help counter urban heat island effects, buffer rainfall and provide wildlife habitat. The amount of impervious surface changes the natural hydrologic cycle by impeding precipitation infiltration to groundwater while increasing the amount of surface runoff. These changes have significant environmental consequences including impacts to ground water recharge, frequency and magnitude of flooding, elevated non-point source pollutant levels and degraded biological activity.



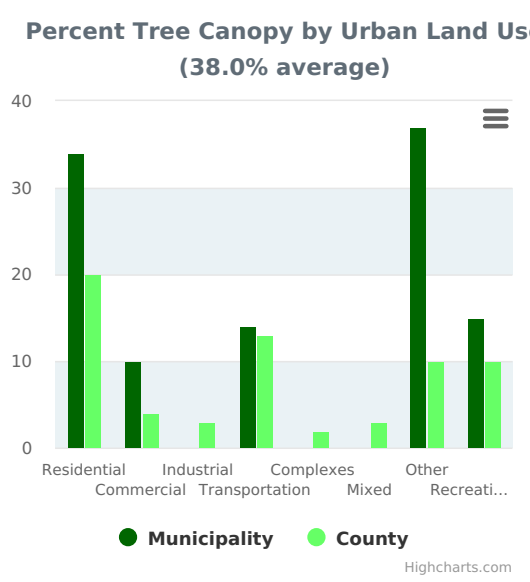
Haddonfield Borough: Forest Snapshot

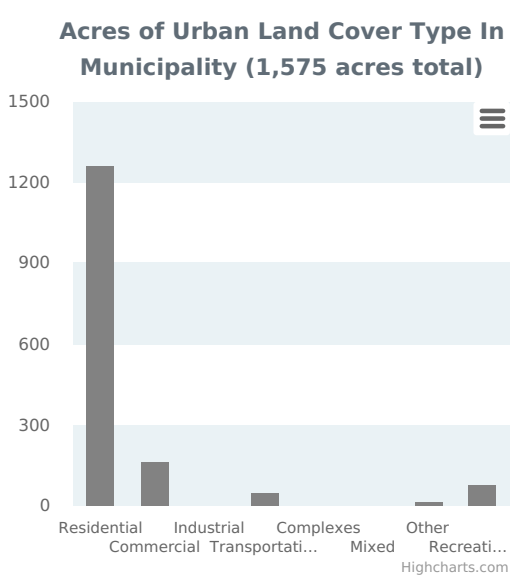
New Jersey Forest Service NLCD Analysis

To help explore the developed landscape, NLCD canopy cover (described above) has been assessed for urban land, using the same pixel percentage basis for this analysis. NJDEP's Land Use 2015 data divides land use into broad categories, like urban land, which are then broken further down into sub-categories, such as Residential and Transportation. Definitions for land category definitions can be found at NJDEP's site.

Knowledge of the distribution and area of such urban lands is needed to determine better land use policy, to project development demand and to implement effective plans for development, among other uses. Applying this knowledge to canopy cover can help understand and assess where gaps in canopy are, and where or how to increase canopy. Canopy percentage and distribution of total acreage for the land cover types can help inform policy and planning for tree planting, maintenance and conservation.

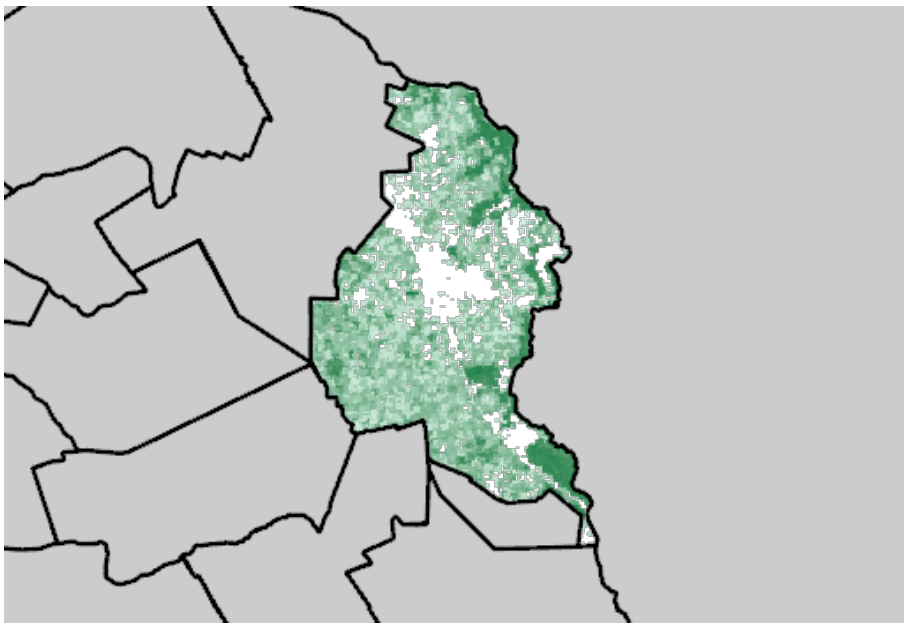
Dark green bars represent the average percent canopy in Haddonfield Borough's urban land use category, such as the average canopy percentage for commercial areas of town. Lighter green bars represent the average in this class for all of Camden county.





Haddonfield Borough: Forest Snapshot

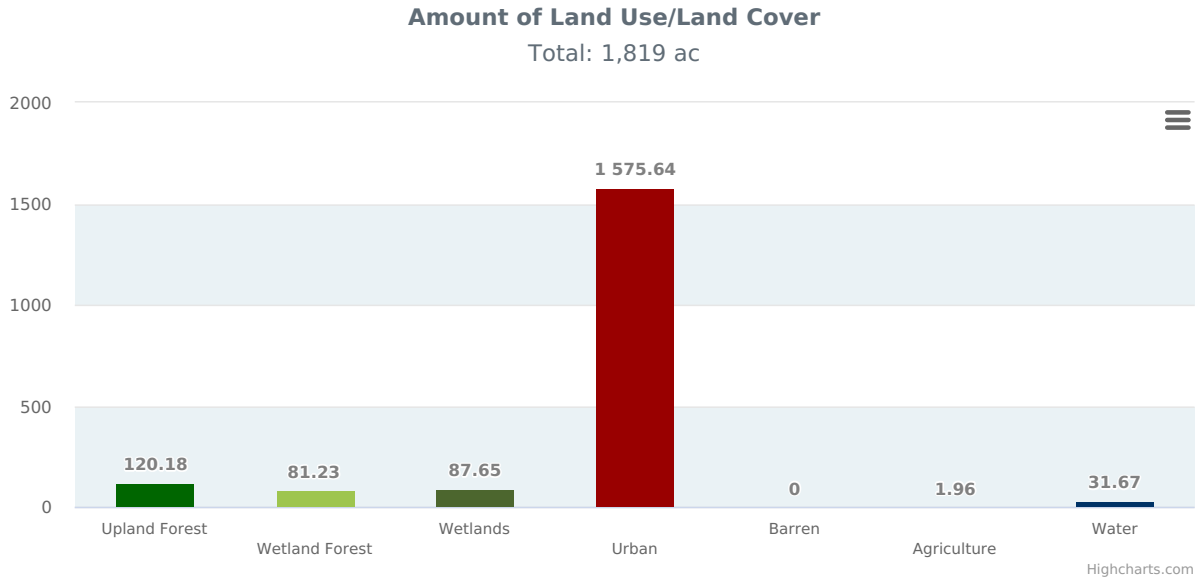
NLCD 2016 Canopy Cover

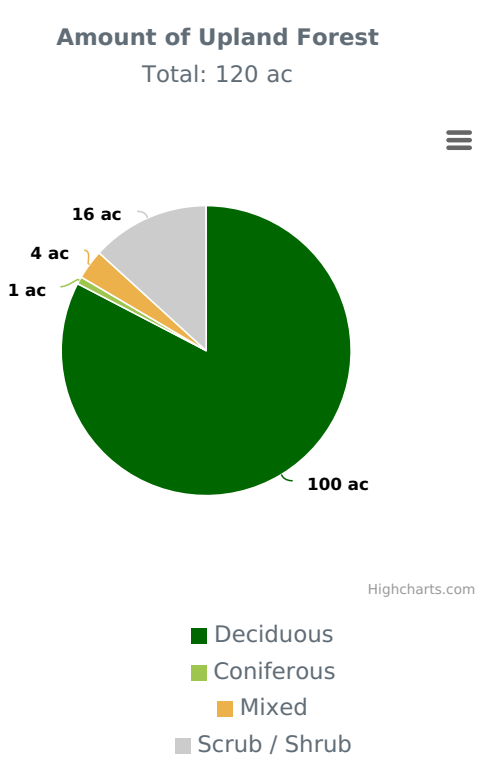


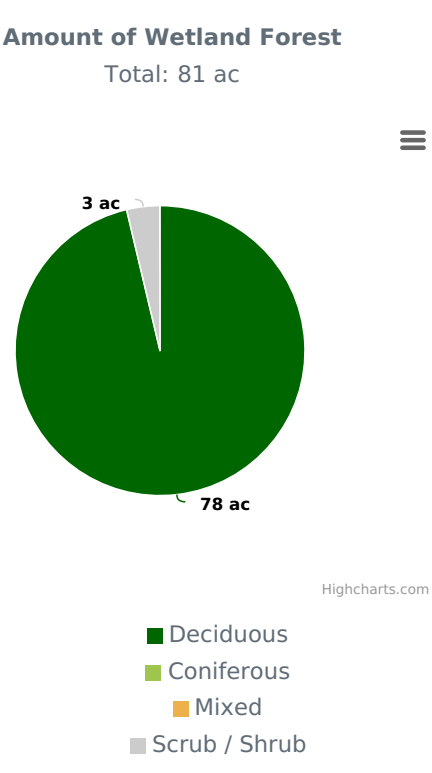
Haddonfield Borough: Forest Snapshot

Land Cover Types

Land use/land cover digital GIS mapped data interpreted from high-precision aerial photography acquired in 2015 provides the most comprehensive mapping of general forest types across the state. At the broadest level of generalization, forest land cover is categorized into upland vs. wetland forest. These broad classes are then further delineated into conifer, mixed or deciduous-dominated forest and scrub/shrub cover types. For more information, please go to the NJDEP 2015 Land Use/Land Cover page.







Haddonfield Borough: Forest Snapshot

County Level Statistics

Introduction

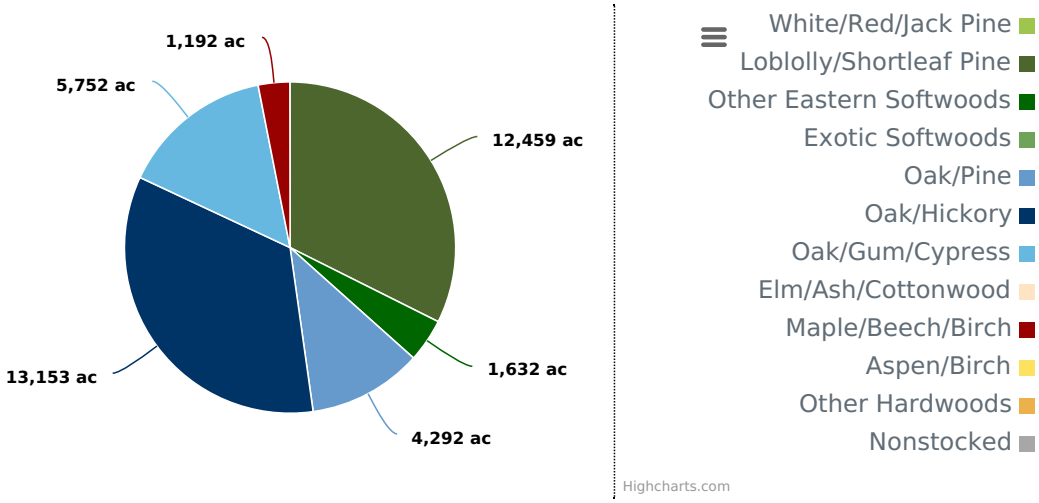
The U.S. Forest Service's Forest Inventory and Analysis (FIA) program defines a tree as any perennial woody plant species with central stems and distinct crowns that can attain a height of 15 feet at maturity. An electronic record of every tree measured in this inventory, as well as a glossary of additional terms, is available online at the USFS Northern Research Station website. The following County level information was compiled by the USFS FIA and reproduced here. To access the original FIA data go to the US Forest Service Forest Inventory & Analysis website.

The following text describing the various forest attributes is taken from Crocker et al., 2017. New Jersey Forests 2013. U.S. Forest Service, Newtown Square, PA; available at the USFS website.

Camden County Forest Composition Summary

Forest composition is constantly evolving. Influenced by the presence or absence of disturbances such as timber management, recreation, wildfire, prescribed burning, extreme weather, and invasive species, the current state of species composition is a reflection of historical and environmental trends within a forest. As a result, the composition of species in a forest is an indicator of forest health, growth, succession, and the need for stand improvement, i.e., management. Knowledge of the distribution of species within a stand allows for the measurement and prediction of change. A complete list of the tree species measured in the most recent inventory can be found in the New Jersey Forests 2013 Appendix 1 .

Amount of Forest Types (acres) Total: 38,479 ac



Camden County Forest Size & Age Classes

Reversion of farmland to forest and successful preservation efforts have helped to maintain a consistent forest land base since the 1970s concurrent with human population growth. As these forests continue to mature, maintaining a diverse range of size and age classes will become increasingly important in terms of overall forest health and sustainability. Forest composition and structure affect the suitability of habitat for each species. Some species depend upon early successional forests or the ecotone (edge) between different forest stages. Yet other species require old-growth forests or interior forests. Many species require multiple structural stages of forests to meet different phases of their life history needs.