

Woodlands

The City's Woodlands are of two primary types, either planted and volunteer, or naturally regenerating native forest. Whether planted, volunteer naturally regenerating native forest, or a grove of old trees, Woodlands are important to the scenic and biological quality of life of the City.

A. Identification

1. Native forest fragments

Native forest fragments are visible on early low altitude aerial photographs of the City, before the invasion of exotic Woody Plants. These fragments are typified by their unfarmed soils and by the combination of plants constituting an ecosystem association recognizable as dating back to 1824. These fragments can be Floodplain forests (Black and Silver maples, Red ash, hickories), wooded mesic or Wetland forests (red oak and red maple), dry forests on the tops of sand and gravel filled moraines and kames (White oak, Hickories and White ash), to mesic forests on moister upland soils (Sugar maple, Red maple and American beech). A very wide variety of species existed as part of these associations, and can be present in the regenerating fragments.

2. Urban Woodlands

Urban Woodlands are areas which have the density necessary to meet the definition of Woodland used by the City, but which are not native forest fragments. Groves of planted trees, often of pines or spruces are found throughout the City. Volunteer trees may come into an area so densely as to create a Woodland under the definition. Some people may plant and cultivate trees densely enough to qualify. These landscapes do not function as self-sustaining ecosystems, but they can function as valuable wildlife habitat, can provide great scenic resource, do influence the climate, and make life in the City more enjoyable for people.

3. Pioneer Woodlands

Pioneer Woodlands are those which arise on disturbed soils, such as soils which have gone through a period of cultivation in the European monocultural style, or soils which have been overturned, moved, or Graded to the extent that seed (and the related, beneficial soil microflora) for regenerating the ecosystem is destroyed or greatly diminished. Pioneer Woodlands are usually found on abandoned farm fields or waste sites of various sorts. These Woodlands are often dominated by invasive exotic shrubs and are impoverished wildlife sites.

In some cases, native forest fragments are colonizing into fields once farmed adjacent to them. These areas are rich wildlife habitats and should be treated with care, along with the native forest fragments.

B. Protection Priorities

1. Highest concern

Native forest fragments, particularly those that still have a wide diversity of native species at all levels (woody and herbaceous plants) are the most important Sites to protect from Development and from the impact of Development. Many of these Sites have been and are being rapidly invaded

by exotic species (of shrubs, primarily), and need active care as well as protection to sustain them. The highest quality among these fragments should not be built upon. These fragments should be retained as public land and managed as natural areas. Effort should be made to preserve and protect all remaining native forest fragments to the fullest extent possible. Further fragmentation is not desirable.

2. Midlevel concern

Ann Arbor's urban Woodlands are directly derived from people's planting activities, as the City developed. Woods and trees involved in these settings very likely have considerable importance to people who live near them.

3. Lowlevel concern

Generally speaking, pioneer Woodlands that are now developing in the City are often dominated by exotic trees and shrubs, with an occasional large native tree that a farmer retained in his field. New, well designed and well planted built landscapes would be more appealing and more valuable in the long term, than protecting these Woodlands. Vegetation must be removed in order to return it to a more natural and pleasing landform. Landmark Trees and other valuable features may exist on the Site. If so, they would be key concerns in the design of Development for these areas. Rare, endangered species can also exist on disturbed Sites.

C. Protection Measures

1. Native forest fragments excluded from Development should be defended from all intrusions during Development by well-maintained barrier fencing
2. Where native forest fragments are to be built in, but not completely removed, then those areas to be excluded from Development should be clearly fenced during the process. Grading, roads, walkways, utility lines, and all other aspects of soil disturbance should be minimized to the fullest extent that sound design and public safety will allow.
3. Clearing for Buildings should be strictly minimized to the least area needed to work around Buildings. Excavated spoils from Basements and other needed Grading should not be spread on the Site in the native forest fragment area. Very careful handling of trees near the building envelope should be undertaken to the fullest extent possible.
4. Where management of retained native forest fragments is undertaken, these activities should be conducted according to the principles and techniques described in a well-developed management plan. Advice from qualified natural area managers should be sought and included in such plans. A key element of these plans should be the control of Invasive Species, which threaten natural areas throughout the City.
5. The most effective way to save trees is by planning ahead for their protection. Four steps will help accomplish this:

Delineate areas with severe limitations and stay away from them (provide barriers).

Design the Site to minimize Grading/soil disturbance in the vicinity of retained trees.

Provide for adequate and effective storm water management.

Design landscape installations to complement and honor retained trees.

6. In addition to protective fencing at the Critical Root Zone, a number of other construction techniques can help save trees. These include placing utilities under pavement instead of under trees; tunneling utilities under trees instead of trenching; using granular material when placing minimum amounts of Fill over roots; excavating by hand; and keeping heavy equipment and vehicle traffic away from the Critical Root Zone. Grading changes should not either increase or decrease moisture conditions in the Critical Root Zone.
7. Any protected Woodland that is determined by PSA Administrator to be dead, dying or severely damaged due to on-site construction activities within three years after issuance of a certificate of occupancy or final permit approval for development authorized by an approved site plan, PUD site plan, or plat shall be replaced by the property owner in the amount specified in the requirements for mitigation of Woodlands. If the site plan, PUD site plan, or plat has been compiled with, replacement shall be at the lesser rate. If the site plan, PUD site plan or plat has not been complied with, replacement shall be at the greater rate.

D. Mitigation

1. A replacement tree or a combination of trees of a species native to Michigan shall be provided to equal a minimum of 50% of the original DBH for each Woodland tree eight inches or larger that is removed. Replacement trees shall be non-sterile varieties. The minimum size of deciduous replacement tree shall be one inch caliper. The minimum size of an evergreen replacement tree shall be five feet in height. If more than 20 replacement trees are required, a mixture of three or more species must be used.
2. A replacement tree or a combination of trees of a species native to Michigan shall be provided to equal a minimum of 200% of the original DBH for each Woodland tree eight inches or larger that is removed without the approval required by this chapter.
3. Mitigation shall be provided on the same Site as the removed Woodland trees to the maximum extent feasible as space and long-term tree health allow. Where mitigation cannot be accomplished on the Site, all or part of the mitigation may be provided on public land within the City if approved as part of the site plan or plat.
4. Disturbed areas to be reestablished shall be planted with species native to Michigan and characteristic of the plant communities of the area before disturbance.

E. Guidelines for Best Mitigation Practices

1. When native forest fragments must be taken in whole or in part, they should be mitigated by the installation of replacement trees or by the creation of an area planted with a comparable plant association (trees, understory trees, shrubs, herbaceous plants – not including exotics) on the Site or elsewhere in the City.
2. Where a valuable native forest fragment must be partly destroyed by Development, the balance of the fragment should be actively managed

as a natural area, to sustain it into the future. This includes the important task of controlling invasive exotics.

3. Urban Woodlands may also have considerable value to City residents. Development in them should be handled as sensitively as possible. Tree replacements for trees taken from such a Woodland should be replaced on the Site in a manner that complements the character of Woodland. Landscape design of the Site should also complement the character of the Woodland, and should be sensitive to screening and otherwise providing affected neighbors with pleasant views into the Site.
4. Care should be taken during the Development process to conserve topsoils which must be disturbed on site, and to install plant materials into optimum conditions. Compacted soils placed by heavy machines are not suitable for successful establishment of many types of plants. Retained topsoils can be used in new planting zones to great benefit.
5. Alternative mitigation plans which could be negotiated could include management or restoration of comparable Natural Features on the Site or on public lands elsewhere in the City, or donation of trees to the City to be planted on public land, donation of time and materials to assist the City in managing valuable natural areas on public land. Valuable Wetlands on the Site or elsewhere could be enhanced, storm water retention capacity could be increased, and Floodplain capacity and function could be improved – each beyond that already required by code.