

City of Novi



WETLAND & WOODLAND STEWARDSHIP

A resource for the community



What is a wetland?

A wetland is an area of land that is saturated with water for at least part of the year and contains plants and animals that are adapted to live in these wet conditions. Many recognize wetlands when they see cattails, ducks and open water, but there are many different varieties of wetlands.

Wetlands can be found in woodlands, adjacent to lakes and streams, in open areas, along roadsides and even in your backyard. By the same token, every parking lot puddle is **not** a wetland.

During much of the year, some wetlands are not even “wet” and it is for this reason that there is confusion about the term “wetland.” Because wetlands are so varied and unique, they are one of the most diverse and biologically rich ecosystems.

In Michigan, certain wetlands are regulated by the state. This means that certain actions or changes within a wetland are illegal, unless a wetland permit is obtained. Wetlands that are larger than five acres

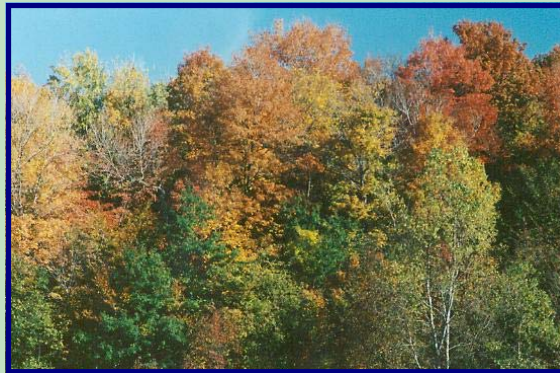


and/or are located within 500 feet of a body of water (lake, pond, river or stream) are regulated by the State of Michigan Department of Environmental Quality (MDEQ) and the City of Novi. Wetlands that are five acres or less and not located within 500 feet of a body of water are not regulated by the MDEQ, but have protection by the City of Novi. See the “Wetlands” section of this booklet for details about activities that can occur in wetlands.

What is a woodland?

A woodland is a vegetative community of trees, shrubs and ground cover. It is defined by the predominant tree species and location in regard to soils, water and temperature. A woodland community includes living and non-living things – animals, plants, soil and climate. Several layers of life harmoniously work together to form the woodland environment.

A tree is a generating system comprised of a canopy, a primary trunk, and a network of roots. In its growing process, a tree takes in water, nutrients, and carbon dioxide to produce



and emit oxygen and water vapor. The dripline defines an area below the outermost branches of a tree to the ground. Feeder roots occur within the top eight- to 12-inches of soil, and extend outward in a roughly circular area four to seven times the area outlined by the dripline. This very important area of the roots is therefore greater than the area of branches on the tree.

See the “Woodlands” section of this booklet for details about regulated woodlands.

Recognizing Novi's Wetlands

There are so many different types of wetlands — scrub-shrub, emergent, open water, forested, etc. — that they are often difficult to recognize. The City of Novi has an Official Regulated Wetlands Map designating areas as wetlands, lakes or rivers. However, with a basic understanding of basic wetland characteristics, you can more easily identify them.

Under normal conditions, wetlands should exhibit at least two of the three following characteristics:

1) Evidence of “wetland hydrology”

— When standing water is not present and obvious, some common indicators of wetland hydrology include:

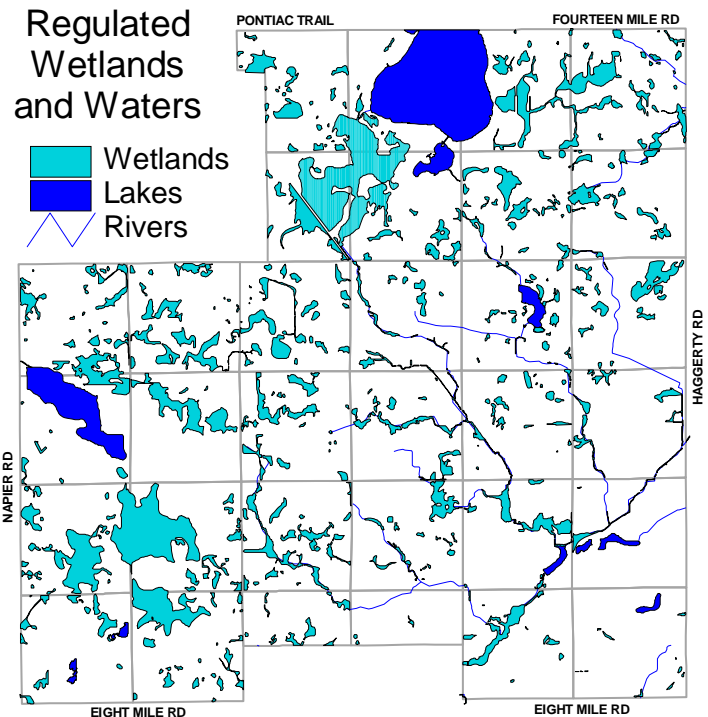
- watermarks at the base of trees
- drift lines of branches and leaves that have been pushed against trees or vegetation by water
- the bases of trees are broader than their middle and seem to be grasping the earth
- dark, water-stained leaves on the ground
- areas of bare soil indicating that standing



water exists at the surface for a relatively long time.

2) A dominance of water-loving vegetation

— Some common tree types to look for in wooded wetlands are silver maple, eastern cottonwood, American elm and green ash. Common plants to look for include sensitive fern, blue vervain, common reed and cattails.



3) Hydric soils — Soils that have been saturated by water for a prolonged period of time during the growing season will exhibit certain color characteristics. Usually found under an organic muck or topsoil layer, hydric soils are a grayish color, sometimes with yellowish-orange spots. It's often necessary to dig a hole 12 to 18 inches deep to determine a hydric soil.



Wetland boundary delineation

Once it has been determined that a wetland exists on a property, it may be necessary to define specific boundaries of the wetland. Defining the “line” between upland and wetland, called wetland delineation is a complicated process and requires substantial technical knowledge of soils, vegetation and hydrology.

Wetland delineations are conducted by City staff or private consultants. The wetland delineator will visit the site and record evidence of wetland plants and hy-

drology, as well as certain soil characteristics.

For more information about wetland

delineation, call Chris Blough, GIS Manager at 248.347.3279.



Values of Wetland Protection

Wetlands provide the following valuable functions and aesthetic benefits to the community.

Wildlife & plant habitat

Over half of Michigan’s wildlife depends upon wetlands for food, shelter, or nesting habitat, including endangered and threatened species like the bald eagle, osprey, loon and sandhill crane. Wetlands support some of the most diverse plant communities.

Aquatic habitat

Nearly all fish species and all amphibians require wetlands, and they are the preferred habitats of muskrat, otter, beaver, mink and raccoon.



Flood & stormwater control

Wetlands hold rainwater and snow melt during wet times, decreasing flooding. They release the water in dry times, thus helping creeks maintain steady flows. In the 1970s, the U.S. Army Corps of Engineers purchased about 8,500 acres of wetlands along the Charles River in Massachusetts after concluding that

preserving natural wetlands was a more cost effective way to control flooding than building more dams on the river.

Water quality protection

Wetland root systems and soils can filter pollutants out of rainwater and snow melt that flows over developed areas and farm fields. Wetland plants remove phosphorus and nitrogen from the water.

Wetlands also absorb bacteria, toxic metals, pesticides, and grease.

Protection from shoreline/ streambank erosion

Wetland plant roots stabilize soil and help prevent soil erosion. Vegetation dampens wave action along lakes and slows the velocity of water in rivers.

Aesthetics and recreation

Wetlands provide recreation such as hiking, birdwatching, nature photography, canoeing, and fishing, and generate revenues and recreation to the local community through these activities. Wetlands enhance the value of neighboring properties.

What can residents do to protect wetlands?

Many of the City of Novi's wetlands exist on private property in residential or commercial areas. The City encourages and can require land owners to take an active role in protecting wetland areas as valued community resources. Although land owners should be aware of activities that are not allowed in locally regulated wetlands and wetland setbacks, the following are management practices that can enhance, restore and protect wetlands:

1) Understand preservation easement

Your neighborhood may have been built around the conservation of a wetland area. If so, that area may be protected with a preservation easement.

- A preservation easement is an agreement that is used to transfer certain rights concerning the use of land to a qualified nonprofit organization, governmental body, or other legal entity without transferring the land title.
- A preservation easement must be recorded with the registrar of deeds in Oakland County and is held with the land in perpetuity.
- Preservation easements are flexible, with use limitations and objectives identified by the property owner. Specific boundaries may be listed in the association's master deed, bylaws or covenants and restrictions.
- Preservation easements ensure that the natural resources you enjoy today will benefit generations to come.



2) Provide habitat for breeding birds

- Maintain large trees and woody debris in and around wetlands for wood ducks.
- Create and install nest boxes and platforms providing safe bird habitat.
- Keep pets away from breeding areas to encourage use.

3) Use fertilizers and pesticides wisely

Reducing the impact of pollutants near

wetlands has a great impact on the quality of water. Lawn and garden maintenance activities, such as fertilizing and using pesticides, creates wetland stress and drastically reduces water quality in local streams and lakes. If you must use these products:

- Create a 25-foot no-mow and chemical-free zone in areas around water resources. (This buffer is a required minimum, a larger one is more preferable)
- Use organic pesticide formulas.
- Consult the City of Novi's Fertilizer Ordinance (Ord. 02-119.10) to understand when and how to apply fertilizer in accordance with local regulations (found at cityofnovi.org).
- If adding nutrients is a necessity, choose a low or zero phosphorus fertilizer or organic compost to enrich soils.

4) Work with your Homeowner Association

If you live in an area affiliated with a homeowners' or lake association, involve these groups in efforts to educate residents about wetlands and involve them in stewardship projects.

- Invite City staff to speak on the functions, benefits and management of wetlands.
- Organize a wetland planting day.
- Include articles in the association newsletter that address the use of fertilizers and other chemicals harmful to wetlands.

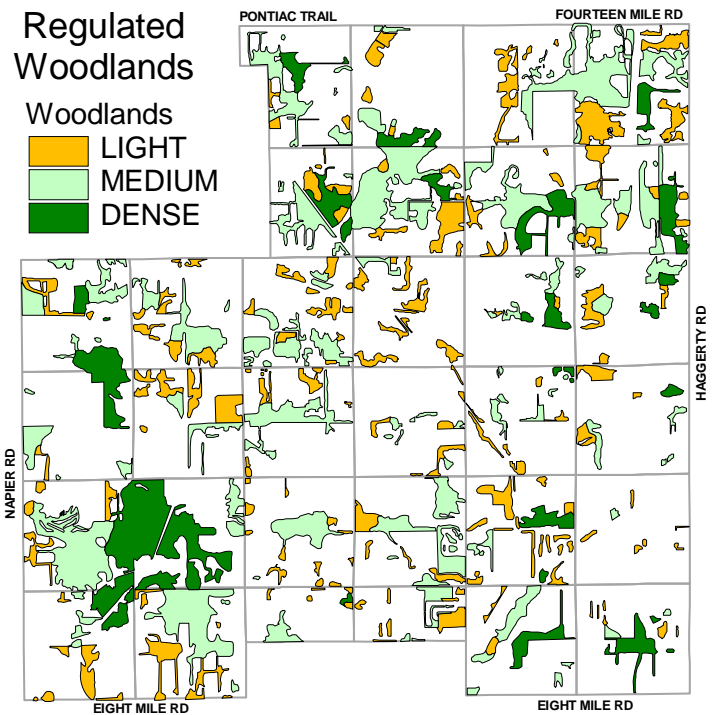
Protecting Novi's Woodlands

The City of Novi has an Official Regulated Woodlands Map designating places as light, medium, and dense cover woodland areas.

All vegetation within these areas, as well as *any* tree larger than 36" diameter at breast height (DBH) is regulated and under the protection of the City of Novi Woodland Ordinance. DBH is the diameter of a tree at four-and-a-half feet off the ground. Both of these documents can be found on the City's website at cityofnovi.org.

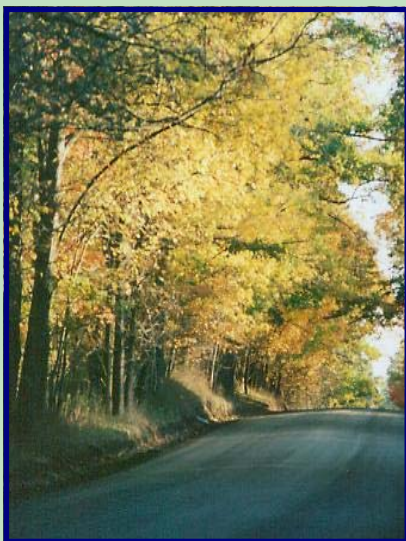
If there is ambiguity as to whether a particular area is regulated, determination is made by a City official. Indeed, the map is a guide for the field checks.

New homeowners are encouraged to contact the City Forester to determine if trees on their lot are under the protection of the City's Woodland Ordinance. The Forester can also explain the procedure for obtaining a Woodlands Permit. One tree of less than 8" DBH may be removed by the homeowner where a valid



Certificate of Occupancy has been issued and three trees may be transplanted within a designated woodlands within a year.

Protecting a tree outside of a Regulated Woodland



Specimen and historic trees can be protected if they include one or more of the following unique characteristics:

- A DBH of 36 inches or greater
- Predominant within a distinct scenic or aesthetically valued setting
- Of unusual size, age or type
- Gained prominence due to unusual form or botanical characteristics
- Associated with a notable person
- Associated with the history or development of the nation, the state, or city
- Associated with art, literature, law, music, science or cultural life
- Associated with early forestry or conservation
- Associated with American Indian history, legend, or lore.

The Planning Commission grants specimen or historical tree designation upon application from any community member.

Why does the City have Regulated Woodlands?

Adopted in 1986, the primary purpose of the Woodlands Protection Ordinance Chapter 37 is to preserve and protect the natural features of Novi.

Novi was one of the first communities in Oakland County to acknowledge that the spread of development and increasing demands upon natural resources can have the effect of encroaching upon or spoiling many of the trees and other forms of vegetation. These natural resources are desired to be preserved and maintained in an undisturbed and natural condition because they constitute important physical, aesthetic, recreational and economic assets to the existing and future residents of the City.



You can benefit from saving and maintaining woodlands

Woodlands increase property value by:

- Screening undesirable views
- Buffering noise and wind
- Conserving energy by shading in summer and preserving heat in winter
- Providing pleasing aesthetics, as well as recreational opportunities, for hiking, bird watching, plant identifying, and nature photography
- Stabilizing the soil from erosion and filtering heavy storm water from flooding (i.e. wet basements)

Woodlands enhance quality of life by:

- Moderating temperatures by shading the earth
- Absorbing the human and industrial by-product carbon dioxide, and replenishing the earth with oxygen
- Providing a habitat for rare and unique flora and fauna

Can residents remove trees or vegetation in Regulated Woodlands?

Generally speaking, residents cannot remove trees or vegetation in Regulated Woodland areas unless a Woodlands Permit has been obtained. However, there are exceptions that do not require a Woodlands Permit. The exceptions include:

- Removal within a 12-month period of a single tree with a DBH measured at 4 ½ feet above the existing grade of less than 8 inches on a property where a valid certificate of occupancy has been issued.
- The removal or trimming of dead, diseased or damaged trees or other woody vegetation, provided that the damage resulted from a non-human cause as determined by the City representative. (Diseased trees must be determined by Michigan State Cooperative Extension Service Plant or equivalent laboratory).

Removing trees from a Regulated Woodland without a Permit

Violating any provisions in the Woodlands Ordinance is potentially a misdemeanor and punishable by a civil penalty equal to the total value of those trees illegally removed or damaged, as computed from the International Society of Arboriculture shade tree value formula. Replacement of illegally removed trees may be required as restoration in lieu of money. This replacement will be computed on an inch-for-inch ratio based on the total diameter measured at DBH in inches of the illegally removed trees. If, because of destruction of the removed trees, exact inch-for-inch measurements



cannot be obtained, the City may use other means to estimate the tree loss.

Enforcement of these regulations must be done in accordance with State and Federal Laws.

Handling a regulated tree that falls in your yard

The tree can be removed from the yard without obtaining a woodlands permit and cut pieces can be disposed of within the regulated area (scattered not piled). *Absolutely no heavy machinery can enter a regulated area at any time*, unless it is in regards to an ash or elm tree that should be chipped and discarded back into the woodlands.

Woodlands and Wetlands in the Development Process

Because of its desirability and location, Novi is one of the fastest growing communities in southeast Michigan. The City of Novi has had woodland and wetland protections for a decade, prior to other City's recognition of their importance. The result is hundreds of acres of green and open space surrounding high quality residential and commercial development. For each new project received, when the private property owner seeks to develop their property, the project is reviewed for woodlands and wetlands protection, as well as proper stormwater control and many other regulations.

City of Novi

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For more information or to view Woodland and Wetland Ordinances, visit the City's website at cityofnovi.org

All photos in this booklet were taken in the City of Novi.