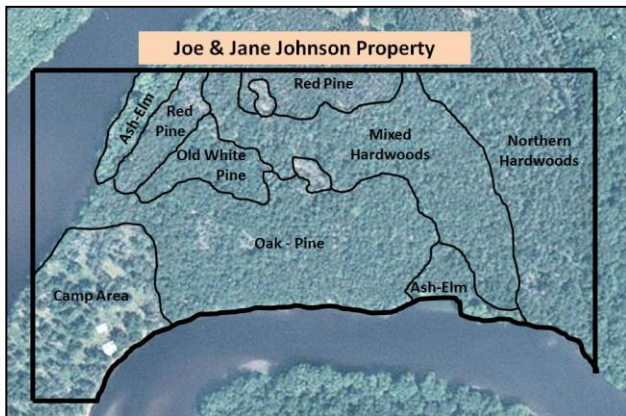




## WHAT IS A FOREST TYPE?

Number 1, May 2013



People like to classify all sorts of things into categories that make sense to them. Sport fans talk about leagues and tournaments; car enthusiasts discuss sedans, SUVs, and pickups; music lovers discriminate between genres. Foresters talk about forest types, such as northern hardwoods, swamp conifers, oak-hickory, aspen, and others.

A forest type is a distinct association of tree species distributed across wide geographical range. The particular associated species are fairly predictable for a given area.

A forest type is usually associated with the dominant tree species characteristic for that type, although other species often occur in lesser amounts. The aspen type will be dominated by quaking aspen and/or bigtooth aspen, but will include other species such as red maple, white pine, balsam fir, and others. The northern hardwood type will be dominated by sugar maple but will also include other species such as red maple, hemlock, basswood, yellow birch, and beech.

A forest stand is a specific geographical unit that has boundaries on the ground. It is the most basic unit of a forest management plan. Stands are often numbered in a management plan for easy reference but they are also given forest type descriptions. These descriptions often include a letter code for the forest type and a number code to indicate average tree size and stand density. Stands are usually portrayed in a management plan in a type map format and described in detail in the plan.

Foresters and forest ecologists use different methods to categorize forest systems based on a number of weighted factors, such as stand composition, understory flora, soil types, landforms, etc. Various classification systems have been developed by the USDA Forest Service, the Society of American Foresters, state natural resource agencies, corporate forest owners, and many other groups. Therefore, any given stand may have different labels depending upon the classification system used. For example, a stand with a few mature oaks with an understory of sapling white pine would be called an "oak" stand by those who favor the mature trees or a "white pine" stand by those who favor

the regeneration. Both would be correct labels. Classification can sometimes be tricky.

### Michigan Forest Types

The USDA Forest Service identifies over 50 forest types in Michigan based on their classification system. Only 23 of those forest types occupy more than one percent of the total forest area. Some of the forest types can be lumped into a similar group. For example, there are ten oak forest types that might be lumped into a single oak category.

Most forest owners, perhaps, are looking for a more straightforward way to recognize forest type variation in their woodlands, and then to manage those woodlands in an appropriate manner.

Forest owners are encouraged to work with a forestry consultant to perform a woodland inventory and develop a forest management plan. The forester will identify forest types that make sense for the owner's planned use of the property. A forest

**Table 1. Forest Type Bulletins in the Series**

Michigan Forest Types	Percent by Area	Percent by Volume	#Tree Species
Northern Hardwoods	25	31	51
Aspen	13	10	44
Mixed Upland Hardwoods	13	11	59
Oak-Hickory	12	13	57
Swamp Hardwoods	12	10	55
Cedar	7	8	22
Swamp Conifer	5	3	24
Red Pine	4	6	30
Mesic Conifers	3	4	34
Jack Pine	3	2	20
Minor Types (not in bulletins)	3	2	47
Hybrid Poplar & Hybrid Willow	--	--	--
All Forest	100	100	97

Source: USDA Forest Service Forest Inventory & Analysis, 2009

**Table 2. Related Bulletins in the Series**

Silvicultural Systems	<i>Silviculture is the science of growing trees for particular purposes and involves regeneration, tending, improvement, and harvest.</i>
Forest Health	<i>Focused mostly on issues affecting trees but also talks about forests as systems.</i>
Forest Ownership	<i>Ownership determines management goals. Michigan has different categories of both public and private ownership.</i>
Forest Products & Prices	<i>These cut products are what logging contractors manufacture from standing trees. The price paid for the trees is most relevant to the forest owner.</i>
Management Plans	<i>This is a fundamental first step in managing a forest and getting the most out of ownership.</i>
Common Pitfalls	<i>Managing a forest involves specialized knowledge not common among most owners. Here are a few tips to avoid.</i>
Tree Planting	<i>A popular activity among forest owners. Success depends upon site preparation and post-planting monitoring, as much as it does the actual planting of trees.</i>

**Table 3. Forestry Contacts**

Organization	Contact Points	Brief Description
Consulting Foresters	Various directories and referral services. Michigan Association of Consulting Foresters, Conservation Districts, MSU Extension, Michigan Forest Association, others.	These professional foresters can be hired by forest owners and work only for forest owners. They provide the widest range of services. Consultants are available in every Michigan county.
Conservation Districts	County-based.	Often a good first point of contact. Provide different sets of land management services, sometimes including forestry.
Michigan Forest Association	<a href="http://www.michiganforests.com">http://www.michiganforests.com</a>	Membership of forest owners interested in good forest management. Newsletters. Magazine. Field days.
Michigan Society of American Foresters	<a href="http://michigansaf.org">http://michigansaf.org</a>	Mostly a professional organization for foresters. Writes "Forest Management Guidelines for Michigan". National organization has the "Certified Forester" program.
MSU Extension	<a href="http://msue.anr.msu.edu/">http://msue.anr.msu.edu/</a>	A handful of extension foresters. Consulting forester directory. Ties to the Land program. Michigan Forests Forever resource. UP Tree Identification website. Various bulletins and publications.
USDA Natural Resources Conservation Service	<a href="http://www.mi.nrcs.usda.gov/">http://www.mi.nrcs.usda.gov/</a>	Administers cost-share programs such as CSP, EQIP, and WHIP. More agriculture oriented than forestry.
Michigan DNR	<a href="http://www.michigan.gov/dnr">http://www.michigan.gov/dnr</a>	Administers forest property tax programs, Forest Stewardship Program, Forest Legacy Program, others. Main focus is on managing state-owned parks and forestlands.
Tree Farm Program	<a href="http://www.treefarmssystem.org/">http://www.treefarmssystem.org/</a>	Part of the American Forest Foundation, specific program where forest owners can enroll eligible land. Tree Farm "Groups" can provide forest certification services. Field days.
Land Conservancies	Various access points by conservancy.	Some conservancies have forestry expertise; most can assist forest owners with long-term protection of natural resource assets. Land eligibility is often limited.
Universities	MSU: <a href="http://www.for.msu.edu/">http://www.for.msu.edu/</a> MTU: <a href="http://www.mtu.edu/forest/">http://www.mtu.edu/forest/</a>	Michigan has two undergraduate forestry schools, one at Michigan State and a second at Michigan Tech. Each has limited sets of services to forest owners.
USDA Forest Service	Websites, local offices.	Main focus is national forest management. Few programs directly useful to private forest owners. Three national forests in Michigan: Ottawa, Hiawatha, and Huron-Manistee.

management plan will include a map of different forest stands, each with a forest type label. The forester will recommend a set of management practices for each stand. These recommendations will identify ways to achieve the goals of the forest owner. MSU Extension Bulletin E-3188 addresses working with consulting foresters.

#### The Forest Type Fact Sheets

This Forest Type series will focus on ten forest types that commonly occur in Michigan forests. They were condensed from USDA Forest Service inventory data.<sup>1</sup> In addition, a bulletin on hybrid poplar and hybrid willow was added. Individual fact sheets describe the composition, distribution, and ecology of each forest type; and then highlight issues about management, forest health, and wildlife habitat. The series also includes fact sheets about several forest management topics that will be of interest to forest owners.

The tree species composition of each forest type will vary considerably across the geography of Michigan. Any particular forest stand will have substantially fewer tree species than what is indicated in Table 1. A mixed upland hardwood stand in Gogebic County will look different from one in Monroe County. However, a northern hardwood stand will always have a sugar maple

component, but the stands in southern Michigan will usually have more associated tree species than stands in the Upper Peninsula.

Forest types change over time, not only in size, age, and structure but also in composition. A mixed hardwood stand with a strong white pine understory will probably become a white pine stand in the future. Forest change can be slowed or accelerated through forest management.

#### A Note About Information Resources

A wealth of forest and forestry information is available through the Internet. A variety of organizations provide programs and services to forest owners. Additionally, a great deal can be learned from the experience of family, friends, and neighbors.

The *kind* of information that forest owners may wish to access is exceptionally diverse. There are over 400,000 family forest owners in Michigan with an incredible variety of interests. And, forests themselves often come with a complex set of conditions and opportunities. Some forest owner queries will be easily answered. Other queries will take more effort.

Table 3 directs forest owners to *some* of the resources readily available. The brief description is not a complete listing of programs and services.

<sup>1</sup> Forest types based on data reported by the USDA Forest Service, Forest Inventory and Analysis Unit [<http://www.fia.fs.fed.us/tools-data>].