



# Getting Started

The first step in deciding what to do with open space is to know what is already there. Getting to know your property is the first prerequisite to intelligent tinkering. Understanding soils, topography, vegetation, surface water and past disturbances is the basis for subsequent decisions regarding stewardship of open space.

Start with maps. Soils maps, topographic (contour) maps and aerial photos are available from contacts listed at the end of this section. Even a simple sketch map can document existing conditions. Besides soils and topography you will want to map vegetation units, wetlands, surface water bodies, potential problem areas (erosion sites and non-native plant invasions) and special plant or animal sites.

*If the land mechanism as a whole is good then every part is good, whether we understand it or not. . . . To keep every cog and wheel is the first precaution of intelligent tinkering.*

*Aldo Leopold  
The Round River*

## Soil

Soil conditions largely dictate the kinds of plants capable of growing on a site. Knowledge of soil fertility, structural make-up and drainage helps in setting goals for a desired future vegetation condition. All soils are made up of minerals (sand, silt and clay) and organic matter (humus). Minerals provide nutrients for plants and anchorage for roots. Organic matter formed from partly decomposed plant and animal material helps to retain water in the soil and gradually releases nutrients to be used again by new plants.

Sandy soils tend to be low in organic matter and plant nutrients and dryout rapidly. Clay soils are rich in nutrients but tend to hold water and are poorly drained, possibly to the point of being saturated. Water saturated soils lack oxygen, which is necessary for root growth. Soils high in sand or clay represent the extremes in suitable conditions for plant growth. Silt is intermediate in fertility and water holding capacity. Soils high in organic matter (e.g. muck) indicate a wet environment where oxygen is unavailable for complete breakdown of plant and animal material. Most soils are mixes of sand, silt, clay and organic matter so their properties are somewhere in between pure sand, clay or organic matter. Plant communities sort themselves out based on soil conditions.



Topographic features such as hills, valleys, depressions or level areas affect plant habitat by modifying exposure to sunlight (south and southwest exposures tend to be hotter and drier than north and northeast exposures); soil moisture conditions (drier on hilltops and soggy in lowlands); and susceptibility to erosion (steep versus level). United States Geological Survey Quadrangle Maps (10 foot contour interval) are useful sources of topographic information. More detailed maps may be available from your county planning department or regional planning commission. The soils bulletin referenced in the side bar on the inside page also gives slope information in its description of each soil type.

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### Identify Your Major Plant Community

Most natural ecological communities in our region have suffered disturbance by logging, grazing, plowing or drainage. Consequently, many native plants have been eliminated or suppressed by weedy, non-native species. To identify the native community on your site, use the largest and oldest remnant trees or the most dominant native herbaceous plants.

First decide if “A” or “AA” best describe your site. If “A” is best, then decide if “B” or “BB” are true. Continue through the key until a community and chapter is identified.

- A.** Mature trees present. More than 1 per acre.
- B.** Scattered oak trees. Overhead canopy of oaks is less than 50% (assume there are only large mature oaks and disregard all brush and saplings when estimating percent tree canopy.) There may be occasional prairie grasses and wildflowers present. . . Oak Savanna or Oak Opening. (See Prairie Chapter)
- BB.** Trees form closed stands (woods). Overhead canopy is over 50% closed.
- C.** Sugar maple or beech make up majority of large trees. Canopy is usually more than 90%. . . Sugar maple/beech Forest (See Woodland Chapter)
- CC.** Oaks are dominant trees. Bur, black, or white oaks on drier sites and red oak (or basswood ) on moister soils. . . Oak Forest (See Woodland Chapter)
- CCC.** Black willow, cottonwood, silver maple, American elm or ash dominate. Soil is seasonally wet. . . Hardwood Swamp (See Wetland Chapter)
- AA.** Mature trees absent. Woody plants if present are bushes or shrubs.
- D.** Community dominated by shrubby willows and red osier dogwood. Seasonally wet soils. . . Shrub Swamp (See Wetland Chapter)
- DD.** Community dominated by herbaceous (non-woody) plants.
- E.** Over half of the ground cover is made up of sedge plants (sedges have triangular stems). . . Sedge Meadow (See Wetland Chapter)
- EE.** Over half of the groundcover is grasses (grasses have round stems). Many former prairies have been invaded by brush or trees. Sun-loving prairie plants may be seen in small openings . . . Prairie (See Prairie Chapter)

### Vegetation

Plants sort themselves out in response to local differences in soil, moisture, and available sunlight. Each plant has a preferred habitat where it does best. Groups of plants overlap in their habitat preference, forming ecological communities. Part of the “getting started” process is determining which ecological communities are present or could be restored. On the left is a key to natural plant communities in Southeast Wisconsin.

Studying existing vegetation may reveal that your site contains natural ecological community that only needs protection. A more likely scenario is that the community has varying degrees of invasive, non-native plants. Non-native plants tend to crowd out existing native vegetation and therefore require control. Many acres of open space are likely to be completely dominated by non-native plants. Abandoned farmland, for instance, may be covered with domesticated grasses and weeds and give no hint of the original natural community. Examining surrounding areas may give clues to the former natural condition of your site and help establish goals for the future.

It is well to keep in mind that nature is never static. Current vegetation will change with time; shrubs may replace grasses, trees may replace shrubs and one kind of tree will replace another kind. This process is call succession. Each stage of succession has its own set of plants, birds, mammals, amphibians, reptiles and insects. Promoting different stages of succession will enhance wildlife diversity.

### Surface Water

Surface water bodies are important for the variety of life they contain and are an essential resource for wildlife. Lakes, rivers, and ponds also have important economic, recreational and aesthetic value. The quality of surface water is affected by conditions and activities on upland areas. Sediment, organic matter, fertilizer, and chemicals carried by runoff can negatively affect water quality. Permanent plant cover on slopes, wetlands and shorelines slows down and filters runoff and therefore should be maintained as a critical part of the future condition of open space.

All surface water bodies should be mapped. Besides the obvious ponds, lakes and streams, surface water is found in ditches, springs and temporary ponds. The latter is particularly important for biodiversity, as shallow ponds are critical habitat for frogs, salamanders and aquatic insects.

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### Assessing Disturbance

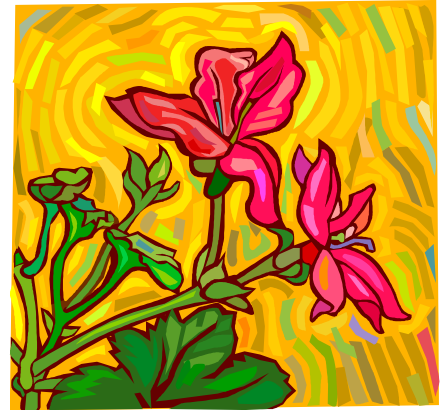
One of the most common and serious problems in protecting, enhancing or restoring natural areas on open space lands is the degree to which past disturbance has degraded the “naturalness” of the site. Plowing, draining, grazing, logging and the introduction of invasive non-native plants and animals have altered natural landscapes throughout southeast Wisconsin. A goal for open space protection is to provide recreational, aesthetic and ecological values to the land by reversing the effects of past disturbance.

The first step is to inventory the signs and extent of disturbance. Things to look for and map are: agriculture fields, pastures, ditches, stumps (logging), erosion and the presence and abundance of non-native species (especially buckthorn, honeysuckle, garlic mustard, reed canary grass and purple loosestrife). A decision on how far to go in reversing the effect of disturbance will depend upon the time and money you have available to complete the project. A woodland may only need to have non-native species brought under control and its “naturalness” will be restored. Agricultural fields will require starting from scratch to eliminate non-native plants and a complete conversion to a more natural and diverse community by planting thousands of trees or seeding acres of grassland plants. Pastures and logged areas may have native species already present and only require the removal of non-natives and the planting of a few new trees, shrubs and wildflowers. Drained wetlands may require plugging ditches to bring back natural water levels before planting of appropriate native species

### Land Stewardship Options

Once the current landscape conditions are known, the next step is deciding the best stewardship path to pursue. The table on the next page presents a list of land stewardship options. Choices range from preserving the site in its existing condition to converting it to a totally different landscape. For more details on each option turn to the individual descriptions presented in the following sections of this guide. If any enhancement, restoration, or conversion of an existing landscape is contemplated, the use of professional help is encouraged. Such professionals may include biologists, naturalists, landscape architects, wetland and prairie specialists, foresters, and wildlife managers.

Final land stewardship decisions are up to you as the landowner because some factors that will influence your planning are not entirely rooted in science or habitat management. For instance, what financial resources are available, now and in the future? Is it necessary to draw an income from the property in the form of timber production, livestock pasturing, or crop production? How much time can you put into a project? What equipment is available? How will neighbors feel about management choices? What are your recreational and aesthetic desires? What happens when you die? Can long term protection be guaranteed? These are weighty questions. Take time answering them with the sobering realization that the quality of open space in southeastern Wisconsin rests in important measure on your eventual decisions.



#### Learn About Soils

The best way to learn about soils on a particular site is to contact your local Natural Resource Conservation Service (NRCS). Every county has its own Soil Survey Bulletin which provides maps and detailed information on soil types, slope, fertility, water holding capacity, depth to water table and natural plant communities typically found on each soil. The bulletin is available at NRCS offices and local libraries.



Much of the open space in Southeast Wisconsin is idle or abandoned farmland.

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**Land Stewardship Options** (Adapted from: *Rural Cluster Development Guide*, Southeast Wisconsin Rural Planning Commission., Planning Guide No. 7.)

Existing Landscape Feature	Preserve as is	Restore	Convert to Woodland	Convert to Prairie or Meadow	Convert to Lawn
Lakes, rivers, streams, shorelands	X	X	X	X	
Wetlands	X	X			
Drained Wetlands	X	X	X	X	
Woodlands and hedgerows	X	X			
Prairies	X	X			
Meadows	X	X	X	X	X
Pastures	X	X	X	X	X
Farm fields	X	X	X	X	X
Rugged terrain and steep slopes	X	X	X	X	

**Contacts:**

**University of Wisconsin Cooperative Extension Service (UWEX)** Educators who can answer questions about open space management and direct you to other resources. To find the location of the office in your county visit:

<http://www.uwex.edu/ces/cty/>

**County Land Conservation Departments** Provide information and manage programs that help rural landowners manage their natural resources.

<http://www.wlca.org/Pages/LCDWeb.html>

**Publications and other sources of information:**

Country Acres: A Guide to Buying and Managing Rural Property, 1999, Lowell Klesig and Mike Kroenke, UW-Extension Publication G3309, 52pp

Getting the Help You Need: Publications, People and Dollars for Wildlife From the Wildlife and Your Land Series, Wisconsin DNR Publication WM-219-96

Putting Pen to Paper: Developing Your Wildlife Management Plan From the Wildlife and Your Land Series, Wisconsin DNR Publication WM-217 16pp

Wisconsin's Natural Communities: How to Recognize Them, Where to Find Them, 2002, Randy Hoffman, University of Wisconsin Press, Madison 375pp

**Options for Open Space**

A resource guide for private and public land owners and managers.

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