Putting Pen to Paper

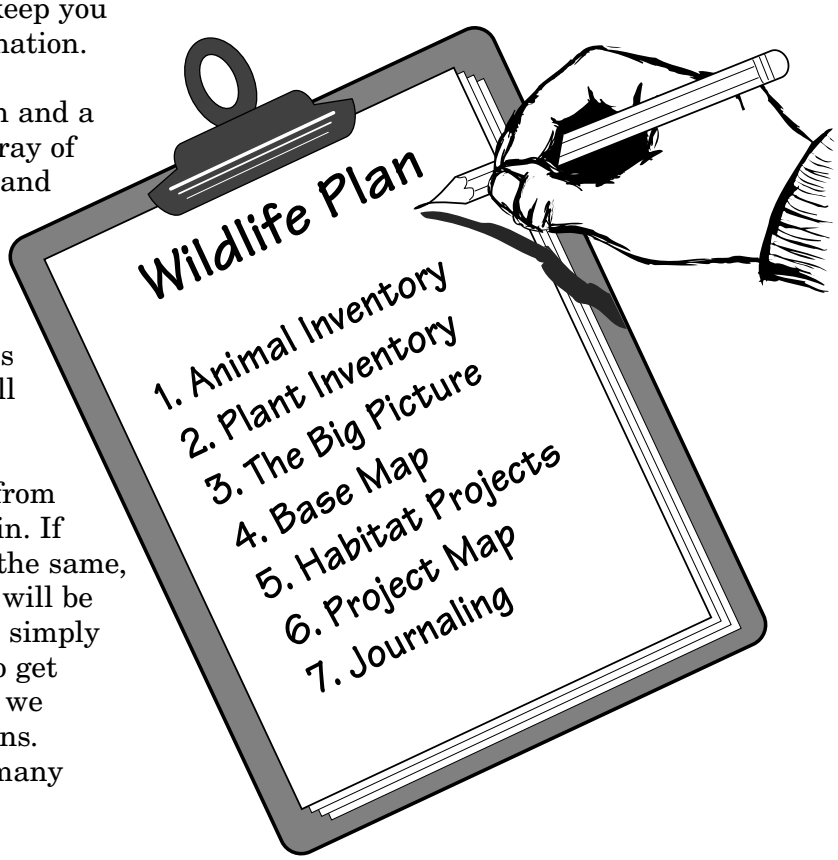
Developing Your Wildlife Management Plan

Let's see, a clump of spruce trees would be good for songbird cover—you love nuthatches and chipping sparrows—and off in the pasture that always floods, you'd like a wetland for ducks, herons and frogs. With other wetlands nearby, you're sure you could attract a few nesting pairs of mallards or teal. And, if you thin out your woods, there'd be more brush for wildlife cover. But where to begin? What should you do first, and how long will it take?

Planning. The *dreaded* word. Truth is, developing a wildlife management plan isn't that complex and can even be fun. Think of your plan as a road map to help keep you directed toward your ultimate destination.

It can be as simple as a quick sketch and a few notes, or as complex as a full array of maps, photos, drawings, references, and detailed outlines of habitat improvement projects—whatever your energy and time permit. *You* decide. This publication, and others in this *Wildlife and Your Land* series will help you develop a plan that will work for you.

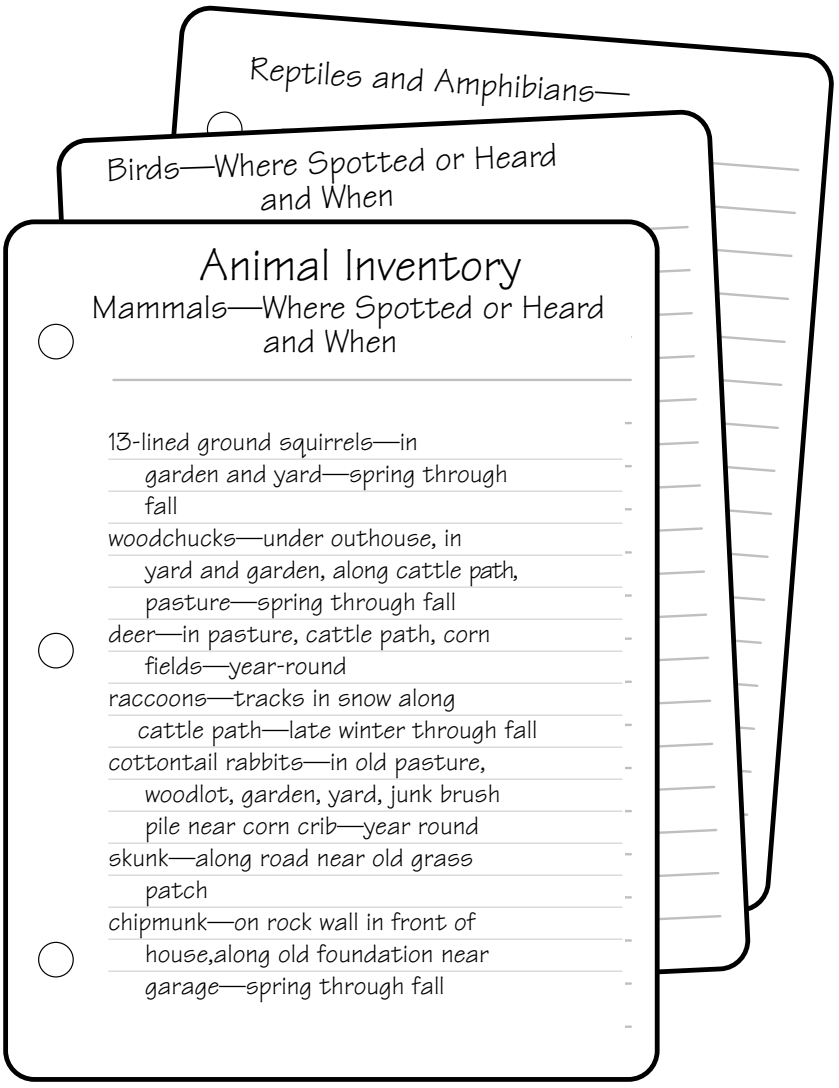
We've even included a sample plan from an actual farm in southern Wisconsin. If you live in the North, the steps are the same, but the types of plants and animals will be different. Consider this sample plan simply as a guide to help you with ideas...to get started. It may seem ambitious, but we wanted to show you a range of options. Remember, wildlife plans can take many forms. What's most important is that you know what you want and you set those thoughts in writing.



Land Stewardship

Your wildlife plan may stand alone or be a component of a total land stewardship plan that could include other goals such as timber harvesting, agriculture, erosion control, aesthetic improvements, hunting, bird watching, or native plant community restoration. Whatever your goals, you can use this publication and others in the *Wildlife and Your Land* series as a resource for wildlife management practices.

1. Compile an Animal Inventory



Knowing what animals currently call your place "home," or at least visit it on occasion, will help you develop a plan. If you're already very familiar with your property, take time now to jot down as many kinds of animals (include mammals, birds, reptiles, amphibians, fish if appropriate, and interesting insects, spiders, and other invertebrates) as you can recall. Note where you've seen them on your property, as well as the time of year and day. If you don't know the specific name of an animal, don't worry... simply describe it, or for those with an artistic flair, sketch it.

If you're not that familiar with your property, take a walking tour of it soon. In a notebook, record any critters you see. Look, listen, and even sniff for clues that animals have been there: a small chipmunk-sized burrow or a large woodchuck den in the side of a hill; hoof or paw prints in the snow or mud; brambles whose branches have been neatly nipped by rabbits or deer, or the faint smell of skunk musk. You may be surprised at all the wildlife that exist on your property, even if you never see them in the flesh. Become a wildlife sleuth and see how many of the following animal signs you can find on your property. Add others to your animal inventory as you find them.

- ✔ young trees with bark rubbed off by autumn buck antlers
- ✔ furry pellets regurgitated by a great horned owl
- ✔ a large stick nest built high in an oak tree by a red-tailed hawk
- ✔ a woodpecker hole in a dead tree
- ✔ spider webs
- ✔ an ant mound and insect cocoons
- ✔ tunnels through a field of grass made by small rodents
- ✔ hickory nuts nibbled by deer mice

✔ black walnuts cracked by gray squirrels
✔ pine cone "cobs" left behind by red squirrels
✔ porcupine droppings at the base of a tree
✔ a clay nest under the barn eaves made by barn swallows
✔ last year's bird nests
✔ feathers scattered around, leftover from a predator's meal
✔ the call of sandhill cranes or loons in the distance
✔ the trill of courting toads

Since not every animal will be visible on any given walking tour, be sure to periodically walk your property during different seasons and times of day. Keep notes on what you observe, and when. The more you walk your land, the better you'll get to know it and its inhabitants.

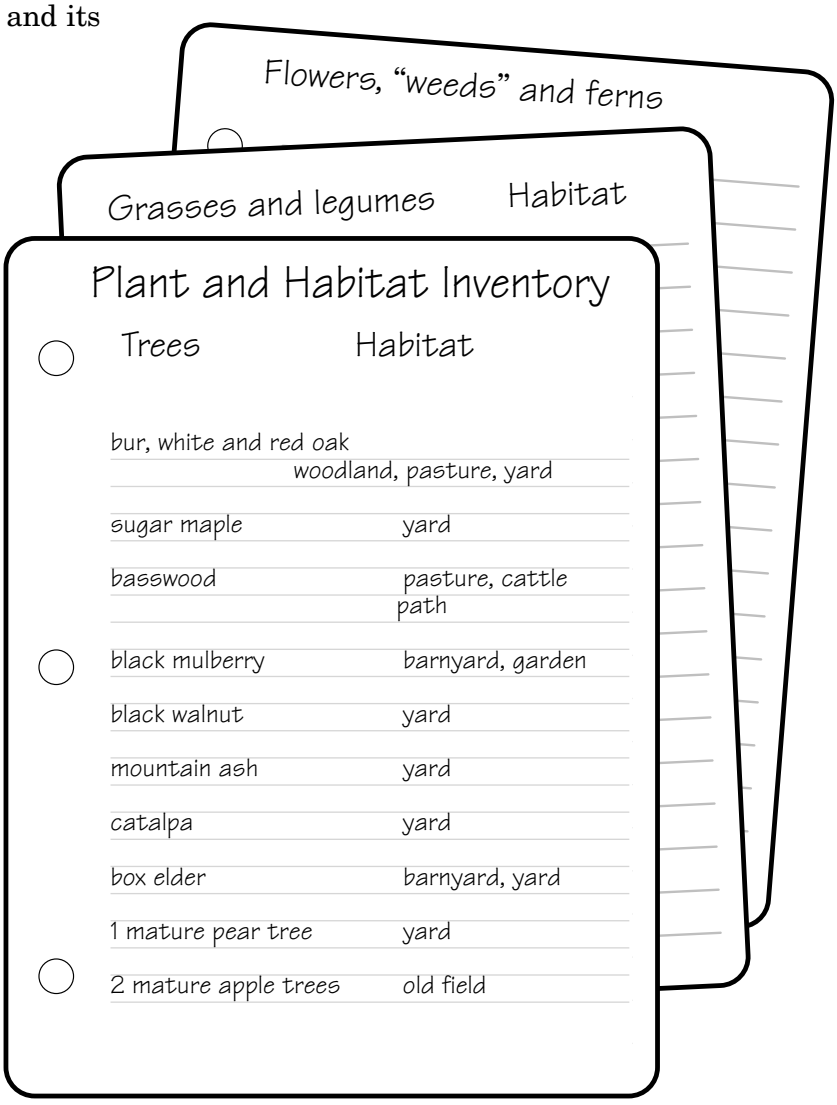
2. Create a Plant Inventory

Though you may find animals more exciting to seek and identify than plants, remember that *wildlife* management is really *habitat* management. What *grows* on the land determines what wildlife will thrive there. So, during some of your walking tours, concentrate on developing a list of the existing plants you find along the way.

As you walk along, also try to identify the types of habitats these plants create. Remember that habitats overlap…a forest blends with a wetland, a field with a woodlot and a grassland with a brushy field. Nature, like most things in life, rarely presents a perfect example. If you can't identify a habitat type, simply ask yourself, "Is this place mostly woods, grassland, wetland or mostly cultivated field or lawn?"

It's a start, and you can always ask for help from a DNR wildlife manager, forester, nursery professional or Natural Resources Conservation Service agent.

If you look at designing and implementing your wildlife management plan as a *hobby*, your knowledge about plants, animals, and habitat types will surely grow. A youngster sitting at a piano for the first time cannot be expected to perform like a master. So don't worry. You'll learn. You'll learn by doing, by asking others, and by reading. Don't panic if you don't know the names of the plants on your property.... Describe them…. Draw them…. Take a deep breath and take it one step at a time. You can do it!



3. Put it all in Context

Like the cascading domino effect, *what you do on your piece of real estate affects the landscape around you*. Likewise, the landscape around you determines what you can realistically expect to do on your property. Everything is connected. The plants on your parcel can act as seed sources for your neighbor's land, and vice versa. Animals found using your site don't know the meaning of "property boundary," or "international borders." Critters come and go as they please…they may walk very short distances or fly over extremely long stretches from South America to Upper Canada. And, if you own land along a stream, what you do on your land will affect water quality and aquatic plant and animal life downstream.

Before you make management decisions about what animals you wish to attract, it helps to understand what plants and animals you can reasonably expect to flourish on your property. One way to do this is to understand what grew in your region prior to settlement. The "Early Vegetation of Wisconsin" map shows this graphically.

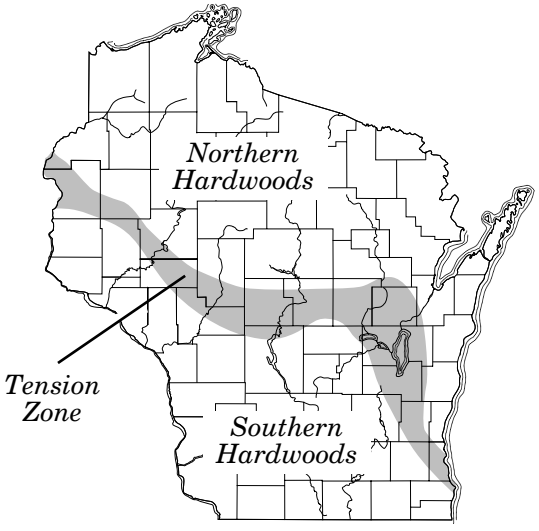
For example, if you live in northern Wisconsin, and your land is surrounded by county or national forests composed of mature hardwoods and evergreens, you may choose to conduct a clear-cut in order to rejuvenate aspen and other sun-loving trees, shrubs and brambles. This will attract ruffed grouse, white-tailed deer, black bear, ruby-throated hummingbirds and red-backed voles. Otherwise, you could decide to maintain the hardwoods you have for the benefit of ovenbirds, wood thrushes, porcupines, fishers, goshawks, flying squirrels and ring-necked snakes.

If, on the other hand, you live on a farm in the southern part of the state, chances are your area once supported native tallgrass prairie or prairie dotted with oak trees, called an oak savanna. If you can afford to take a field out of production, you may opt to turn it into a grassland composed of native grasses and wildflowers. Several years after establishment, you may reasonably expect to find eastern bluebirds, 13-lined ground squirrels, woodchucks, ring-necked pheasants, meadowlarks, grasshopper and savanna sparrows and possibly even a badger or short-eared owl.

Of course, there are always exceptions. Those exceptions usually depend on soil type and geologic features. For instance, though tamarack bogs are typical of northern wetlands, they can be found in the low mucky areas

The Tension Zone

If you've ever driven south through Eau Claire, Portage or Outagamie Counties, you can actually see the vegetation change from evergreens and northern hardwoods to oak/hickory—you are driving in the "tension zone." The tension zone is a narrow band of land that separates the southern limit of the northern forest and the northern limit of the southern forest and prairies. Many animals and plants reach the limit of their range in this zone. Climate is the primary reason for the changes, though soils and other factors also play a role. Look for these changes the next time you're in the "tension zone."



Maps adapted by permission from Curtis (1959).

ringing the glacial hills known as drumlins in Jefferson and Dane counties. Special grasslands called "barrens" can be found in northwestern and central Wisconsin where sandy soil and periodic wild fires have pushed back the tide of forests.

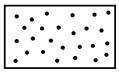
As a final example, if your property was once drained of a wetland for farming purposes, restoration may be as simple as breaking a drainage tile, plugging a ditch, or building a small earthen dike. After the water returns, plants characteristic of your area will appear —maybe cattail, bulrush or arrowhead… maybe sedges, speckled alder, willow or wild iris. The wildlife will follow—perhaps yellow-headed blackbirds, northern harriers, blue-winged teal, great blue herons, muskrats, mink, raccoons, American toads, leopard frogs, spring peepers and green darner dragonflies.

Keep in mind that we're not suggesting you *must* recreate early plant types, or that you even *can* recreate those types. Our Wisconsin landscape has changed so radically since settlement, and is controlled by so many private citizens, that we, as a citizenry, cannot expect landowners to turn back the hands of time to presettlement conditions. However, the property owner who knows what the land can feasibly support, and takes this information into consideration during planning, will be the one who creates a very successful wildlife management plan.

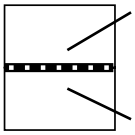
To learn more about your region, check with your local librarian, DNR wildlife, forestry, parks, or endangered resources management staff, or a naturalist from a nearby nature center.

Where you live in Wisconsin affects what will grow there.

Early Vegetation of Wisconsin ca. 1840



Boreal Forest: spruce, balsam fir, tamarack, white cedar, paper birch, aspen



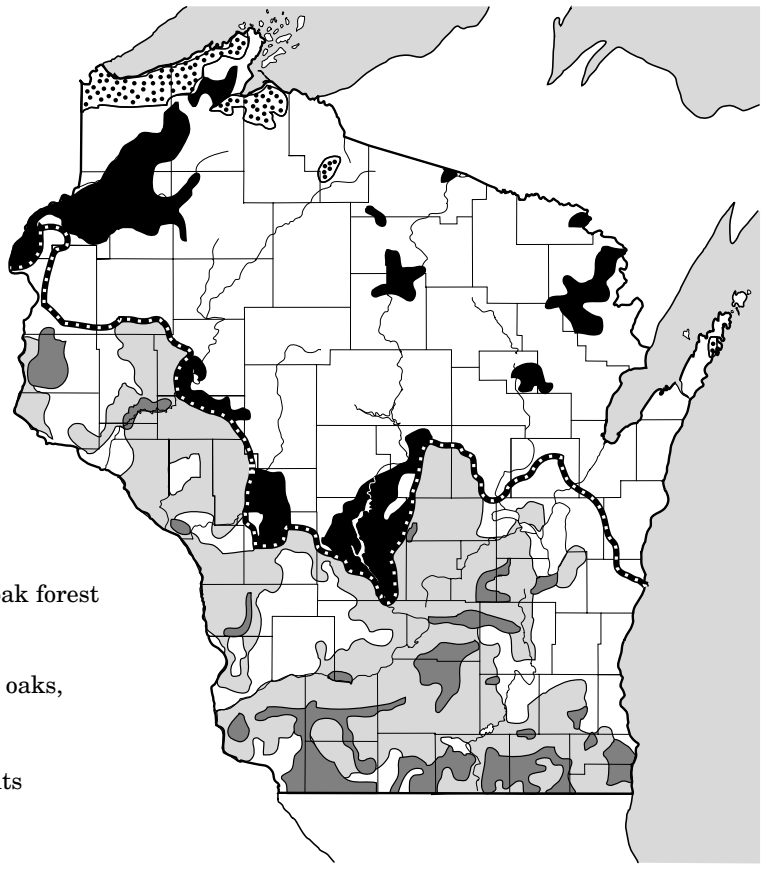
Northern Hardwood Forest: hemlock, sugar maple, yellow birch, white and red pine

Southern Hardwood Forest: sugar maple, basswood, red oak, white oak and black oak, beech (beech grows only along counties bordering Lake Michigan and Green Bay).

Pine Barrens: jack pine, scrub oak forest and grasses

Oak Savanna: bur, white, black oaks, grasses

Prairie: grasses and woody plants



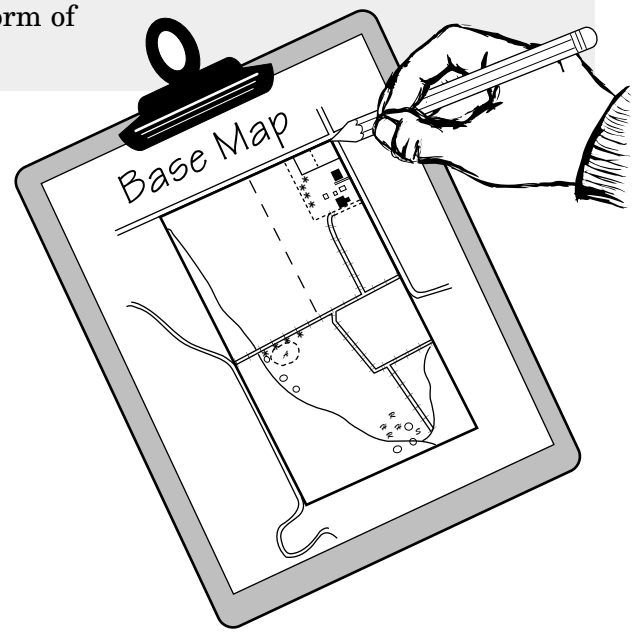
Proceed with Care

When managing for wildlife within the context of the surrounding landscape, avoid destroying, degrading or seriously altering habitats that are already valuable for rare plants or animals in order to attract common ones. You can learn about rare habitats by consulting resource professionals with the DNR, university, or a local arboretum, or by reading a variety of reference books. Always consider the impact your management projects may have on the animals and plants in the surrounding vicinity and remember that *no management* is also a viable form of land management.

4. Create a Base Map

Now that you have an idea of what plants and animals you have on your property and what you can reasonably expect to have on your property within the context of the surrounding landscape, you're ready to develop a base map. This activity can be as simple as sketching in rough outlines of major habitat components while walking your land, or as elaborate as you want, including the smallest of details from air photos, topographic maps and soil maps. Obtain air photos from the Department of Transportation, topographic maps from the Wisconsin Geological Survey and soil maps from your county's Natural Resources Conservation Service office. See **Getting the Help You Need** in this *Wildlife and Your Land* series for addresses and phone numbers. The more information you obtain, the easier it will be to make habitat decisions.

On this base map, label the major habitat types and land features. Include such things as woods, grasslands, wetlands, streams, lakes or ponds, shelterbelts, hills, drainage ditches, buildings, fencerows, cattle paths, logging roads, cultivated fields, roadways and the like. Also, highlight those features of special importance to wildlife: ground dens, dead trees, living trees with large cavities, bird feeders, nest boxes, mature nut trees, major travel lanes, and more. The sample base map at the back of this publication should give you some ideas. But for now, put your map aside; you'll be coming back to it shortly.



5. Choose Habitat Projects

Now you're just about ready to begin selecting some wildlife habitat projects. To repeat, the projects you choose will depend upon a number of factors:

- ✔ what plants and animals already exist on your property;
- ✔ what plants are suited to your soil types and geographic region;
- ✔ what animals you can reasonably expect to attract following habitat modifications;
- ✔ how much time, money, physical strength, interest and patience you're willing to devote to the various projects;
- ✔ what other land management goals you have for your property such as timber or firewood production, livestock pasturing, crop production, hunting, wildlife viewing or other forms of recreation.

Managing for wildlife may mean you will need to consider modifying some of your other goals. For example, if you want to attract more gray squirrels, wild turkeys or woodpeckers to the woodlot you are about to include in a timber sale, you may want to keep those valuable black walnut trees, the mature oaks which produce abundant acorn crops, that straight black cherry tree with a cavity in it, or that large bur oak which could serve as a turkey roost. If you want to attract more pheasants, meadowlarks and bobolinks to your working farm, you may need to delay your hay mowing or put some of your active land into a federal or state land set-aside program. Trade-offs aren't necessarily bad...they help you achieve the overall goals of land stewardship.

So, now, write down *all* your land stewardship goals. The more specific you can be about what you want to do, *and when*, the greater your chances for success. For some ideas, check out the Wildlife Plan at the back of this document.

Knowing your goals, as well as knowing what's logical to expect from your land, you can now choose your habitat projects. Ask your local DNR wildlife manager for additional publications in the *Wildlife and Your Land* series appropriate for your land and area. The series covers a variety of topics from how to build a brush pile, to how to conduct a timber harvest with wildlife benefits in mind, to how to build a house that's simply for the birds! You'll also learn the importance of snag and den trees to wildlife, how to establish a grassland or native prairie, and how to restore wetlands. And, you'll learn about "edge" habitat and the pros and cons of this double-edged sword. There's even more.

Review these publications and any others you may find in your library or bookstore, and choose projects that will help you meet your goals. In your notebook, write brief descriptions of what you want to accomplish and set some dates for yourself to help keep your attention focused on the task. For some ideas about how to create this step of the plan, please review the sample plan we've provided.

Patience, please….

Your wildlife management plan may take years to implement. To give yourself a sense of accomplishment along the way, intersperse relatively simple and short-term habitat projects with more complex, long-term ones. For example, plan some activities that will produce gratifying results quickly, like building a brush pile, laying out a bluebird trail, installing some bird feeders or constructing a few nest boxes. Don't neglect the larger, more challenging, projects, however. Establishing a grassland, planting a shelterbelt for wildlife, or restoring a wetland can result in big wildlife benefits and even increase your property value if done correctly. They simply take more resources and much more time. Remember, habitat changes usually occur

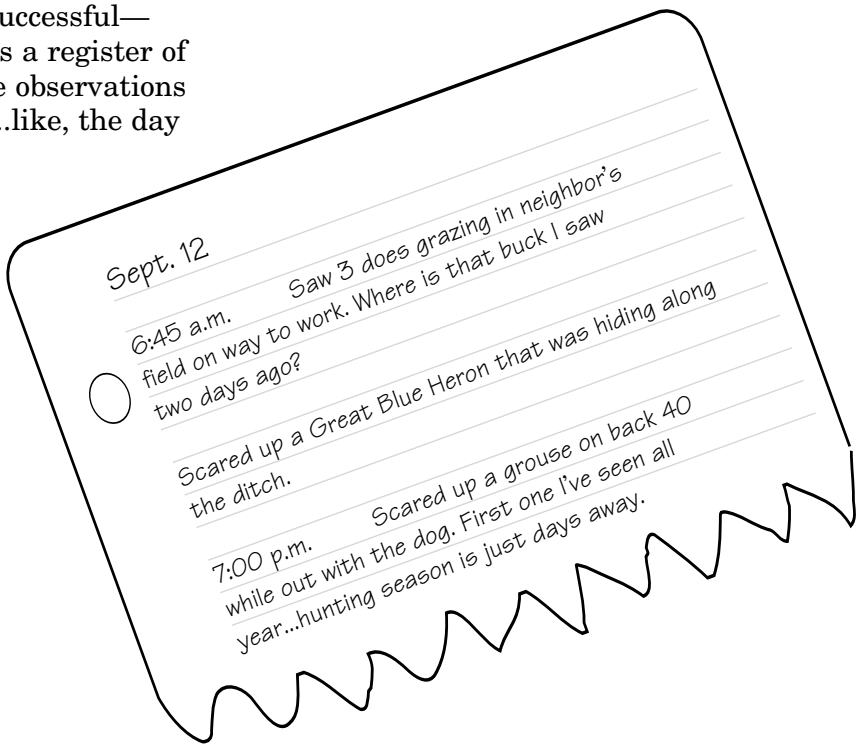
s … l … o … w … l … y. . .

6. Create a Project Map

Now you take out your base map again, photocopy it, and sketch in the location of your projects. Maybe you want to restore a small wetland, or install some wood duck nest boxes along the creek, or clearcut a section of forest to create more edge on your property, or restore a grassland in that old pasture that's filling in with weeds and brush. By keeping your base map unaltered, you will have a comparison point for later dates. This will help you see where you've been and let you know where you are...kind of like that road map we talked about earlier.

7. "Journal" into the Future

As time goes on, be sure to update your plan periodically and add observations to your journal. It's fun to keep track of your progress. Your journal serves as a chronicle of your successful—and not so successful—management efforts as well as a register of your more memorable wildlife observations and landscape developments...like, the day the first pair of bluebirds set up household in your new nest box, or the first winter you noticed a fox trail along your shelterbelt. These are things you'll want to remember and will enjoy recalling.



Getting the Help you Need

If after reading this overview of how to develop a wildlife management plan you feel a little overwhelmed, don't get discouraged. Free help is just a phone call away. Simply call your nearest DNR office, where wildlife managers, foresters, fish managers and park naturalists are there to assist you. See **Getting the Help You Need** in this *Wildlife and Your Land* series for a complete list of DNR phone numbers and other references.

Birds

mallards—flying overhead in pasture, possibly

Wildlife Plan for Heartland Farm
An 80 acre farm in Jefferson County, Wisconsin

Property Description

According to the Soil Survey of Jefferson County, the homestead is located on the top of a gently sloping glacial hill called a drumlin. Overall, the soil located on the hill is well drained with a clayey subsoil underlain by gravelly sandy loam. At the base of the hill, the soils are poorly drained, rich in organic material and more than 51 inches thick.

This property is currently a hobby farm with 59 tillable acres being farmed under contract by a neighboring farmer. He rotates small grains, hay and corn. The pasture shows signs of over-grazing including plenty of prickly ash and deep, weed infested gullies. The farm is surrounded by farmland and uplands of oak, hickory and maple. The Jefferson
wetland, is l
nearby. Ph
deer, rabbi
and owls a

Plant and Habitat Inventory

Animal Inventory
Mammals
Where Spotted or Heard and When

13-lined ground squirrels—in garden and yard—spring through fall

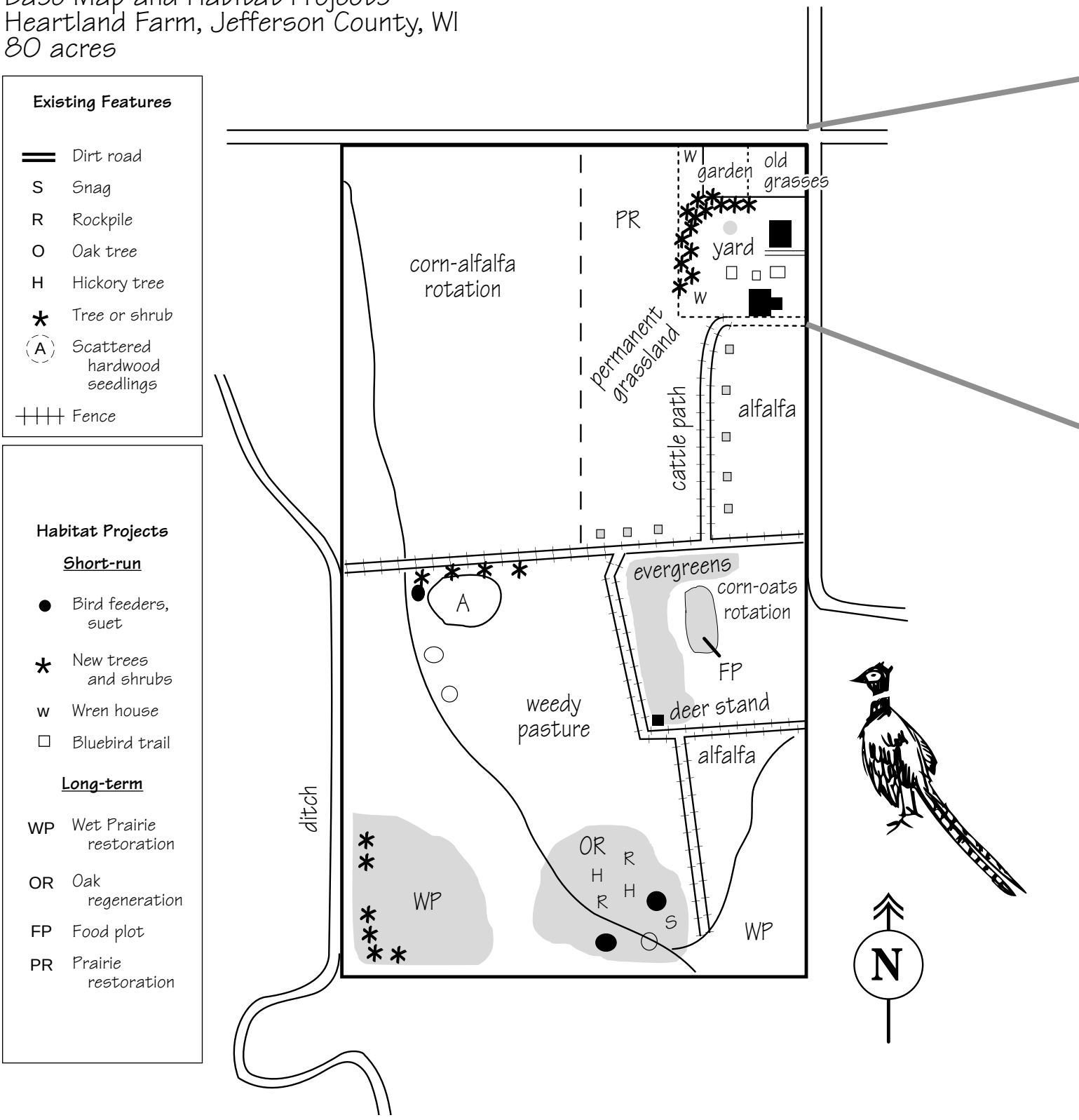
woodchucks—under outhouse, in yard and garden, along cattle path, pasture—spring through fall

deer—in pasture, cattle path, corn fields—year-round

raccoons—tracks in snow along cattle path—late winter through fall

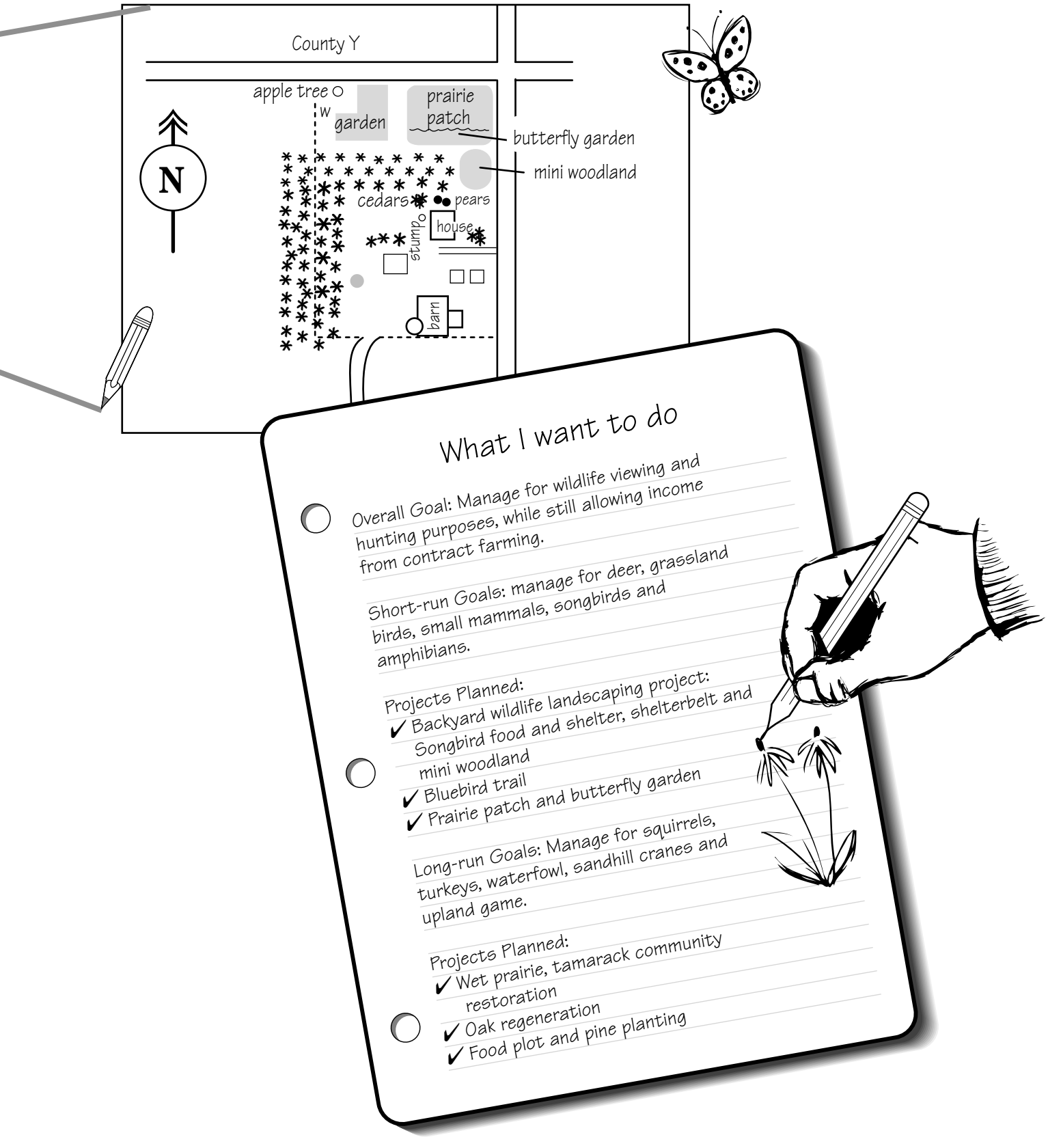
opossum— saw tracks in snow along cattle path, inside barn—late winter through fall

Base Map and Habitat Projects
Heartland Farm, Jefferson County, WI
80 acres



The project map was created from an enlarged soils map available from the Jefferson County Natural Resources Conservation Service.

Backyard Landscaping Project
Heartland Farm



The Plan

Project 1: Backyard wildlife landscaping

Wildlife Goal: To attract a variety of wildlife year-round.

Description of Site: House sits near peak of a glacial hill, or drumlin. Yard is gently sloping to moderately sloping. Soil is well drained to moderately well drained. Much clay in soil. Soil is good for tree and shrub planting. Total area of yard, including the house is 5 acres. The yard contains a variety of common trees and shrubs typical of old farmsteads. There are also fruit trees and grapes—a bonus for wildlife.

_____

Part 1: Songbird food and shelter

Wildlife Goal: To immediately attract local and winter resident songbirds.

Time frame: Weekend projects throughout the year, begin immediately, complete by year end.

1) Install small bird feeder near east kitchen window.
2) Hang one tubular thistle seed bird feeder, sunflower seed bird feeder and one suet cage from pear tree on north side of house.
3) Hang one house wren nest box in lilac near old outhouse.
4) Install one large hopper-style bird feeder on west side of house, outside of living room windows. Put nuts, bread and corn on old box elder stump. Hang one tubular sunflower seed bird feeder and one suet "bell" from red cedar on northwest side of house.
5) Purchase bird bath and bird bath heater for winter water source.
6) Remove old purple martin house. Build and erect new one. Keep sparrows and starlings from moving in.
7) Purchase a house sparrow trap and remove these pests.

Part 2: Expand red cedar/pine windbreaks around the house into a five row shelterbelt for wildlife

Wildlife Goal: To provide nest and winter shelter as well as a natural source of food for local birds and mammals.

Time frame: Plant trees, shrubs and vines beginning next spring and continue adding to the shelterbelt over the next 3-5 years.

1) Order white spruce, white cedar and wildlife shrub packet from DNR nursery and plant when they arrive in spring. Add to the existing red cedar windbreak along west boundary of lawn and the pine windbreak on northwest boundary of lawn.
2) In January and February, check garden catalogs and local nurseries and order additional varieties of wildlife trees and shrubs such as mountain ash, American highbush cranberry, American persimmon, paw paw, serviceberry, Sargent crab, zumi crab, cornelian cherry dogwood, pyracantha and cotoneaster. Plant along outside perimeter of shelterbelt the spring following completion of step 1.
3) Plant specimens of wild grape, Virginia creeper and bittersweet from other sites on property to the shelterbelt the spring following completion of step 2.

Part 3: Establish mini-naturalized "woodland"

Wildlife Goal: To attract resident and migratory songbirds, chipmunks and toads and other small creatures that need shady environments.

Time frame: About 3 years

1) Stop mowing this summer in the northeastern corner of yard around maple and oaks.
2) Remove and transplant grape arbors to garden the spring following step 1.
3) Cut down black mulberry and box elder saplings and treat ends with brush killer in spring following step 1.
4) Transplant sugar maple, white oak, shagbark hickory and black walnut seedlings from elsewhere on the property to the new mini-woodland, begin this fall and continue next spring.
5) Purchase and plant native woodland ferns and flowers this spring and over the next two years.
6) Remove diseased mountain ash in 3 years but leave log on the ground to encourage growth of fungi and invertebrates such as centipedes and millipedes. Also may attract salamanders and toads.
7) Build a small rock wall to encourage chipmunks as time permits.

Project 2: Bluebird trail

Wildlife Goal: To attract bluebirds

Time frame: Begin building bird houses this summer and continue throughout the winter months; install next spring.

1) Obtain bluebird house plans from DNR. Build at least 10 boxes during winter weekends.
2) Install boxes on existing fence posts along cattle path and along fence row. Purchase posts for sites that do not have posts.

Project 3: 1-acre prairie patch restoration and butterfly garden

Wildlife Goal: To attract meadowlarks, bobolinks, goldfinches, pheasants, butterflies, bees for pollination of fruit trees and shrubs in adjacent garden.

Time Frame: 3-5 years, beginning this spring

After prairie patch is established, undertake a prairie restoration project on 10-acre field west of the homestead. Will have to accept a loss of income from the farmer who leases the land.

Description: This plot is a former corn and alfalfa field that has grown "wild" over the last three summers. A variety of non-native, cool-season grasses are interspersed with butter and eggs, milkweed, asters, burdock, curly dock, goldenrod and bull thistle. The site is being invaded by box elder and sugar maple seedlings. County has been erecting snow-fencing on this plot for some time.

1) Call county highway department this fall and ask them to stop putting up snowfencing since their crew may trample plants.
2) Visit library/bookstore/DNR and obtain information about native prairie restoration techniques and butterfly gardening. READ!
3) Select a list of flowers and native grasses that would be appropriate and colorful. Ask DNR Bureau of Endangered Resources staff for nurseries and seed outlets. Check with local nurseries and survey garden catalogs.
4) Design southern half of plot adjacent to lawn as a formal butterfly garden: select mostly native wildflowers, but include some horticultural varieties. Plant the remainder of the plot with native grasses, wildflowers and legumes so that it blends naturally with the butterfly garden.

5) Begin ground preparation next fall.
6) Treat with herbicide the spring following completion of step 5.
7) Plant seeds and transplant seedlings the spring following the completion of step 5.
8) Control weeds on an annual basis by hand-cutting or prescribed burning (ask for advice from DNR first!) Check local fire ordinances annually.

Project 4: Wet prairie, tamarack community restoration

Wildlife goal: To restore native plants and cover types and to attract nesting pairs of sandhill cranes.

Time frame: 5-10 years — begin project in five years

Description: The low, mucky area in the southwest corner of the property was likely once a tamarack swamp, similar to the Jefferson Marsh Wildlife Area located about two miles to the west of this property. This land was formerly grazed, and in dry years even cultivated. Now it is overgrown with reed canary grass, bull thistle, nettles, goldenrod, milkweed, mullein, and prickly ash. During very wet springs, this parcel is partially covered in standing water.

1) Control weeds using spot applications of herbicide during spring and fall one year before planting.
2) Rototill and broadcast wet prairie seeds purchased from nursery in spring.
3) Order 500 tamarack from DNR nursery one year after grass planting.
4) When seedlings arrive, transplant immediately in garden and maintain for several years until they are big enough to transplant into wet area. (Based on previous experience with planting pines, the grasses shade out and kill the trees, so will need to grow them in garden until tall enough to escape competition with grasses.) Plant tamaracks throughout next 3-7 years into the wet area. Call DNR or county forester for advice on how to control weeds.

Project 5: Oak regeneration

This is a long- term goal that I would like to start by inviting the DNR or County Forester out to my property for a consultation.

Project 6: Food plot

Will talk to the farmer contracting with us to see if he would leave about a one-half acre of corn standing for pheasants, turkeys, deer, raccoons and other wildlife. At the same time, we will consider planting pine and other evergreens next to the plot. Some loss of income would result.

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WISCONSIN DEPT. OF NATURAL RESOURCES

WILDLIFE RESTORATION

Federal Aid Project
funded by your purchase of hunting equipment

Natural Resources Foundation Of Wisconsin, Inc.

PUBL-WM-217