



*Conservation
Landscape
Certification
Resource Guide*

Maine Soil and Water Conservation Districts

The Soil and Water Conservation Districts of Knox-Lincoln and Waldo Counties have partnered on developing a certification program for Conservation Landscapes. This free program will help landowners implement conservation practices in a systematic way, with guidance and ideas from our staff and one-on-one help on their property. Complete our checklist to receive your certification.

Why Certify Your Landscape?

Biologist Doug Tallamy, author of *Bringing Nature Home* and *Nature's Best Hope*, proposes a "Homegrown National Park" where we can all help to create the vast landscape of ecosystems needed to keep the water and air clean, keep farms and forests productive, and help birds, insects and wildlife recover from steep declines in recent years.

More than 165 million acres in this country are devoted to neighborhoods, towns, and lands where we live and work. Implementing healthy conservation practices around our homes will create an environment where birds, butterflies and other creatures can shelter, find food, raise young and migrate. For larger



properties, the way farm fields, pastures, edges, landscaped areas and woodlands are managed can make a great difference in supporting a connected, healthy ecosystem that ultimately keeps the land resilient and functional.

How to Begin

Start with our checklist, which can be found on our website or at our offices (see the back cover of this booklet for contact info and a QR code link). Choose the checklist that best suits your property type (or use more than one):

- Residential & Small Mixed Use Properties**
- Woodlands**
- Farmland**
- Parks or Conserved Lands**

To receive Conservation Landscape Certification you must complete the 5 Core Criteria and send us your checklist. One of our staff will visit your site with you to review and assess your conservation measures. If you are not able to complete all 5 Core Criteria right away, you can still submit your checklist to become an Aspiring Conservationist. You can use the optional point system on the checklist to track your progress. A site visit with our staff may help you to overcome challenges and think of new ideas. If you continue to check off additional items beyond the Core Criteria requirements, you can work your way up to Master Conservationist.

This is one of the only comprehensive certifications available, including much more than just wildlife habitat, and ensuring you've covered every aspect of what's needed to truly implement conservation on your property.



Core Criteria 1

Provide Wildlife Habitat

Creating Wildlife Habitat

Habitat is a combination of food, water, shelter, and space arranged to meet the needs of wildlife. Even a small yard can be landscaped to attract birds, butterflies, beneficial insects, and small animals. Trees, shrubs, and other plants provide shelter and food for wildlife.

The plants you use for food and cover will help determine the wildlife species attracted to your backyard. Nesting boxes, feeders, and watering sites can be added to improve the habitat.

Planning Your Wildlife Habitat

Planning is necessary for attractive and productive wildlife habitat. You have both a horizontal area to work with—the size of your lot—as well as a vertical area that stretches from your soil to the treetops. The vertical area is composed of the canopy formed by the tallest tree branches; understory vegetation consisting of smaller trees, shrubs, and vines; the floor which is often dominated by low-growing groundcovers; and the basement where a variety of organisms exist in the soil. Different wildlife species live in each of these zones, so numerous habitats can be provided on a small piece of land.

Trees and shrubs are the backbone of any landscaping design and are important for wildlife shelter. Many tree and shrub species are excellent sources of food for wildlife. Proper selection of plant material can meet both the aesthetic needs of the homeowner and the food and shelter needs of wildlife. Remember that you are part of the habitat!

Criteria for Certification

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See the back cover of this booklet to download your checklist and get started!

Steps to Create Habitat for Wildlife

- Identify all existing plants. Note:
 - Condition of the plants and their locations.
 - How much shade the trees and shrubs provide.
 - Are trees evergreen or deciduous (trees that drop their leaves in the Fall)?
 - Do they provide valuable food sources?
 - Are there trees and shrubs of different sizes?
- Make a sketch of your yard noting all existing plants, buildings, utilities, and pathways. You may even consider removing some plants. In some cases, trees have been planted too close to buildings or have grown much larger than the previous owner envisioned. Some species may be of little wildlife value and may not be particularly attractive. Once you have identified existing plants you want to save, start exploring options for plants that will work well with these species. The existing plants around your yard may be adequate to attract some wildlife, but a few changes can effectively enhance the existing habitat. Diversity in the landscape is necessary. Some plants provide food but very little cover; others provide cover but little food.
- Add trees, shrubs, flowers, and groundcovers to your plan. Not all the planting needs to be done at once. If money or time is limited, consider it a work in progress. Strive to plant mostly native plants for your area. Look at nearby natural areas for ideas and species. Follow the Resource Links QR code on the back of this booklet for other resources and book lists.

- Plant a variety of trees first. Select evergreen species for year-round cover and shelter. Select fruit or nut-bearing plants for a food source. Native species are well suited for providing wildlife habitat because they are adapted to the local soil, climate, and wildlife. Additional considerations for choosing and placement include:
 - Eventual size, and whether they are evergreen or deciduous. Deciduous trees on the south side of a house will provide summer shade but will not completely block winter sun.
 - Neighboring properties.
 - Flowering and fruiting habit. Select plants that flower and bear fruit at different times of the year. Some shrubs that produce berries can provide food throughout the year. Trees with nuts and fruit can also provide seasonal foods.
- Fill in with smaller shade-tolerant understory trees and shrubs. Adding these to an existing landscape will enhance the vertical structure that is common in natural landscapes. Many smaller trees and shrubs are colorful in the spring when they flower and provide berries for fall and winter feed.
- Flowering annuals (plants that live one growing season) and perennials (plants that live for more than a year) add color to the yard and can be added at any stage to attract birds and butterflies. If your yard is large, consider using part of it for tall native grasses that provide beauty, as well as a natural source of food and shelter. A native wildflower garden provides the same function. Even on a small lot, native wildflowers, as well as some common garden species, can provide attractive habitat for a variety of birds and butterflies. Avoid straight lines and perfect symmetry. Natural habitat has curves and clumps of vegetation. Wildlife is not particularly attracted to a well-manicured lawn, and is more likely to come out into the open for viewing when the boundary of the yard is designed and maintained as a retreat for animals.

Landscaping for Birds

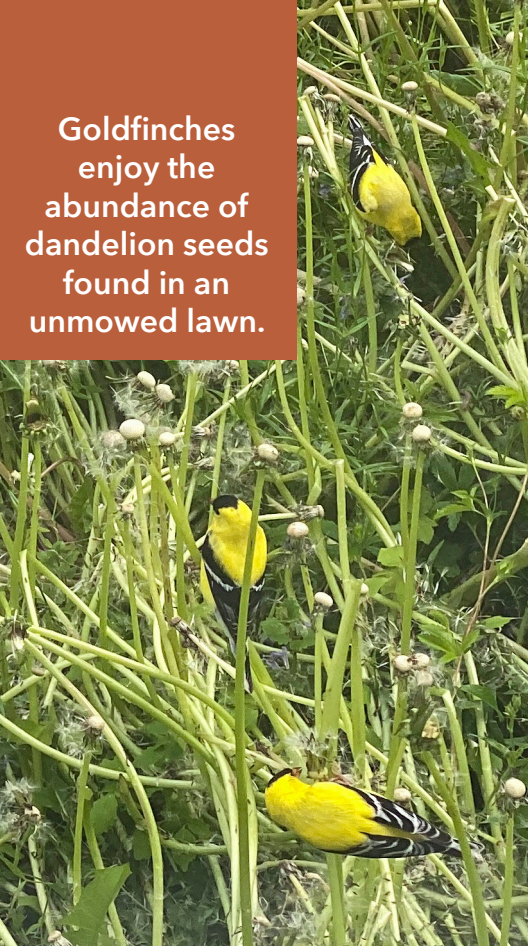
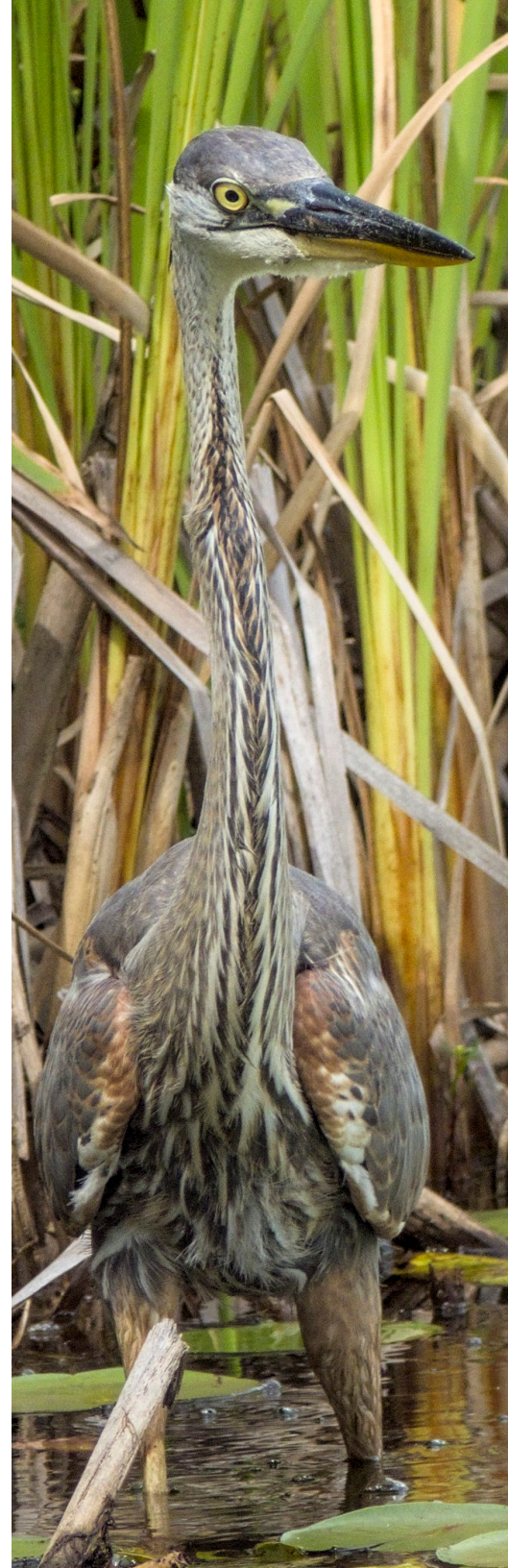
Food and cover are essential for the survival of all species. Loss of suitable nesting sites is a major factor in the decline of some bird species. In the wild, many species nest in cavities of dead trees. With the loss of hedgerows in some parts of the country and the removal of dead trees in towns, natural nesting sites are often limited. Also, some highly competitive, non-native species of birds have taken over some of the existing nesting sites once occupied by native birds.

Bird species are extremely variable in their habits. Some like deeply wooded areas; others prefer open fields and meadows. Many species are year-round residents, while others such as the cedar waxwing appear only for a few days a year during migration. Other species such as sparrows, blue jays, cardinals, robins, juncos, and chickadees are highly adaptable and found in many environments.

Many people are not aware of the value of dead, dying, and hollow trees, as well as logs on the ground, for birds and other wildlife. Dead trees provide homes to more than 400 species of birds, mammals, and amphibians. Fish, plants, and fungi also benefit from dead and dying trees. Consider leaving standing dead and dying trees in your yard unless they pose a human safety or property hazard and use old logs and stumps in gardens and landscaping.

Plant Species for Birds & Wildlife

See our plant lists and recommended books for plants that provide wildlife habitat value, along with additional resources by following the Resource Links QR code on the back of this booklet. Remember that most native plants support native insects which are now in decline.



Goldfinches enjoy the abundance of dandelion seeds found in an unmowed lawn.



A heron (left) and a titmouse blend in with their habitats.



Core Criteria 2:

Practice Soil & Water Conservation

Soil & Water Conservation Districts (SWCDs) promote conservation of these two critical resources. Nationwide, we seek to support best management practices for landowners via education, outreach, and technical assistance. Districts know that successful landscapes, whether existing or newly planted, designed or wild, will only survive—and thrive—if plants are growing in adequate soil and receiving regular water whether it is for horticultural or agricultural purposes. We also know humans create large amounts of built landscape—roads, driveways, buildings, parking lots, etc. It is critical to address stormwater runoff to avoid erosion and potential contamination of nearby waterways. Each property can be considered a piece in the fabric of the larger landscape—all connected. Therefore, each

landowner's soil and water conservation efforts on the landscape contribute to a cumulative collective impact, conserving our land and water for generations to come.

Soil

Soil is an entire ecosystem beneath our feet! It is comprised of minerals (45%), water (25%), air (25%), and organic matter (5%). The texture of the mineral content and organic matter create different soil textures: sand, silt, loam and clay. Combining these elements with variations in minerals, climate, topography, biological factors, and time and you will get one of the 20,000 types of soil identified here in the United States! Each of these support different plants and animals. Our soils provide foundations for our buildings, farms, gardens, and infrastructure. Every time we disturb it, soil particles and anything attached to it, especially pollutants, can run off into our water resources. As a result, it is important to prevent erosion and keep our soils intact by not disturbing them with excessive tilling or digging.

Water

Water is critical for life. Here in Maine, we are fortunate to have an abundance of both salt and fresh water for drinking, recreation, fisheries, agriculture and more. Whether you live on top of a mountain or on the shore, you live in a watershed. About 50% of all rainfall ends up as runoff traveling across surfaces to the nearest stream, river, or lake, and eventually to the ocean. That means what you do on your property can help—or hurt—the watershed you live in. Thus, every measure you take to infiltrate, divert or use rainfall will reduce potential pollution in your communities' waterways.

Water in Maine:

6,000

lakes and
ponds

30,000

miles of rivers
& streams

3,478

miles of tidal
shoreline

Average annual rainfall: 42 inches

Equivalent to 73,500,000 acre-feet
or 24 trillion gallons

About **50%**
(about 12
trillion gallons)
runs off the
land in streams
and rivers

30-40%
(7-10 trillion
gallons)
evaporates
or is transpired
through
vegetation

10-20%
(about 2-5
trillion gallons)
infiltrates to
recharge
groundwater

50% of people get their drinking water from public water systems and 50% have wells.

Our fisheries support our economy:

Wild brook

trout

\$300 million

Lobster

\$1.5 billion

Aquaculture

\$137 million

How to help protect our soil and water resources:

- Get your soil tested! Contact your local SWCD to get a test kit. Let the experts guide you with appropriate amendments, if needed.
- Compost veggie/fruit waste, leaves and grass clippings to reuse in garden beds
- Spread erosion control mulch on slopes where plants cannot grow successfully
- Install rain barrels off gutters to use rainwater in garden beds or potted plants
- If structures lack gutters, install a drip edge to help infiltrate the runoff
- Maintain gravel roads and driveways
- Install open bottom culverts or bridges in place of standard circular culverts
- If you have significant land use concerns or need a specialized plan, contact a licensed site evaluator: <https://www.maine.gov/>
- Find helpful links to additional resources by following the Resource Links QR code on the back of this booklet.

Core Criteria 3:

Control Invasive Species

Invasive plants and insects pose serious risks to the biodiversity and functionality of our ecosystems as well as to the productivity of forests and agricultural lands. Many landowners have invasive plants on their land or nearby and want to understand how to control them or prevent infestation.

What are invasive plants?

In Maine a plant is considered invasive if it:

1. Is not native to Maine
2. Has spread (or has the potential to spread) into minimally managed plant communities (habitats)
3. Causes economic or environmental harm by developing self-sustaining populations that are dominant or disruptive to native species

Invasive plants are a direct threat to what we value about Maine's natural and working landscapes. The aggressive growth of invasive plants increases costs for agriculture, can affect forest regeneration, threatens our recreational experiences, and reduces the value of habitats for mammals, birds and pollinators. Species like Japanese barberry and multiflora rose (right) can form thorny, impenetrable thickets in forests and agricultural fields.

Invasive species are the second-greatest threat to global biodiversity after loss of habitat. Invading plants out-compete native species by hogging sunlight, water, nutrients, and space. They change animal habitat by eliminating native foods, altering cover, and destroying nesting opportunities. Some invaders are so aggressive they leave no room for our natives.



Multiflora rose can form thorny, impenetrable thickets in forests and agricultural fields.

Controlling Invasive Plants

There are two basic approaches to address invasive plants: mechanical and chemical.

Types of Mechanical Removal

- Physical (hand digging or machines)
- Cultural (interplanting with natives—“suppressing invasive spread”)
- Biological (use of insects, bacteria, or other means to reduce/eliminate invasive)

Types of Chemical Removal

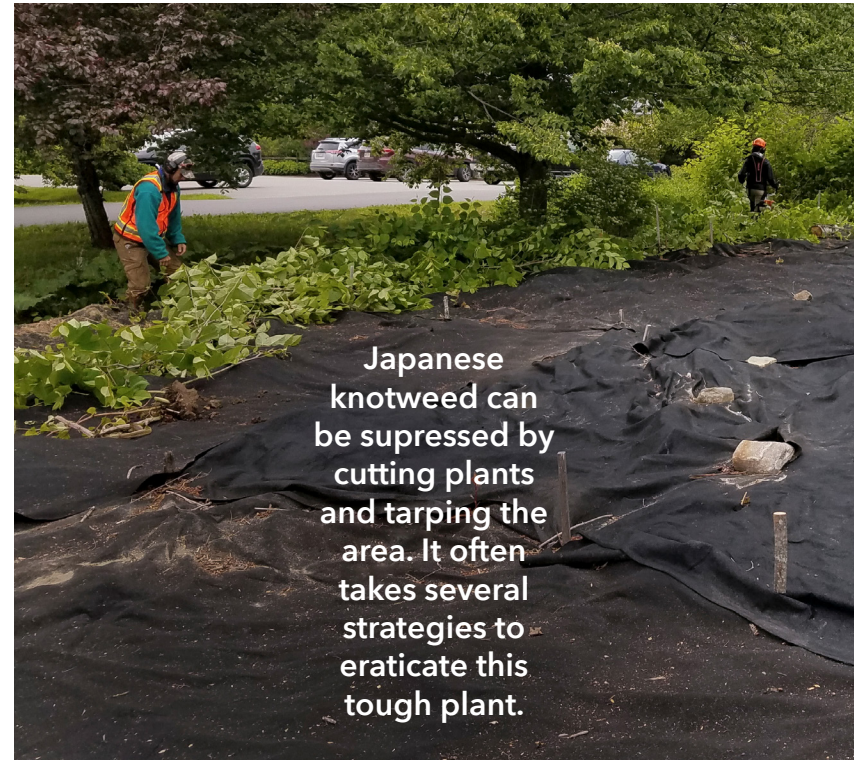
- Foliar—spraying leaves with herbicide
- Basal Bark—spraying bark around the base of the plant
- Cut-stump—Mechanical removal of above ground portion of plant, then treating the fresh cut stump with concentrated herbicide. Chemicals are absorbed systemically.

Suggestions:

- Identify any/all invasive plants you find on your property.
- Look for insect and disease pests such as Hemlock Woolly Adelgid (exclusive to Hemlock), Asian Long-Horned Beetle, Beech Leaf Disease and others. Contact Maine Forest Service if any are found.
- Pull any early detection species as soon as possible to prevent further spread. See list of widespread vs. early detection plants by using the Resource Links QR code on the back cover.
- Use iMapInvasives app to mark your plants. This will create

a map(s) and management tracking tool for you. It is a free service managed by the State of Maine for tracking spread of invasive species.

- Create a plan to manage species identified. If more than one plant/pest is identified, and especially if they are numerous, it can seem overwhelming. Prioritize your efforts. Remember they didn’t establish overnight. It will take time to reclaim and restore your landscape.
- It is highly recommended to consult an invasives management specialist. If using herbicide yourself, follow all label and safety instructions.
- Find helpful links to additional resources by following the Resource Links QR code on the back of this booklet.



Japanese knotweed can be suppressed by cutting plants and tarping the area. It often takes several strategies to eradicate this tough plant.

Core Criteria 4:

Plan & Plant for Ecosystem Support

If you nurture native plants already on your land and add a variety of new natives of different sizes, you can't go wrong. Adding plants that are not native to our counties but that grow in southern Maine, elsewhere in New England, or other mid-Atlantic states can both add diverse food and shelter for wildlife and potentially make your landscape resilient for the future as climate conditions change. If you have a residential lawn, consider adding or keeping plants there other than traditional grass turf. You'll find it is much more interesting and beautiful, and can be great habitat. If you don't have other vertical layers such as shrubs and trees, you can begin to plant them. Layering is also more attractive than one level of vegetation.

General Suggestions

- Provide wildlife food such as berry and nut producing plants, winter feeders, and seed and nectar producing perennials.
- Add trees with high wildlife value that also support our native insects such as oaks, willows, birches, cherries and other fruit trees.
- Have areas with different vegetation communities or plant guilds including: meadows, diverse lawn, wetlands, wet meadows and rain gardens, ponds, shrub areas, flower gardens, woods, edge plantings, hedges or tree groves.
- Make sure you have plants of all heights so there are some at ground level, low shrubs, tall shrubs, small trees and tall trees. A variety of forms such as deciduous, evergreen, herbaceous, vines, grass-like and aquatic plants is ideal.
- Create or support diverse plant groups for each type of area on your property, such as sun or shade, dry or wet, forested or open areas.
- Find helpful links to additional resources by following the Resource Links QR code on the back of this booklet.



Lawn

Change up the grass lawn!

- Replace turf grass with low-mow, no-water grasses, or spreading cover plantings (such as low fescue grasses and sedges), or even flower or vegetable gardens.
- Mow less! A “low mow” regimen of mowing every two weeks can greatly enhance resilience and diversity.
- Create a meadowscape area with beautiful native flowers and grasses
- Create a wet area garden or wet meadow in constantly moist or muddy areas.
- Allow your lawn to create its own blend of wildflowers and grass, or add other plants, such as bluets (right), clover or violets. Dandelions are great for bees early in the season!



Create a healthy, vigorous lawn with less chemicals: A lawn with healthy soil and no pesticides will support soil dwellers that feed birds and their offspring, and is better for children and pets.

- Manage turf without weed killers, instead do the following to suppress weeds:
 - Leave clippings (mow with a mulching mower)
 - Mow high: Let grass grow taller to outcompete weeds, with the blade set at 3 inches high or more.
- Fertilize young lawns with a nitrogen (10-0-0) fertilizer. Older lawns just need clippings or perhaps a top dressing of compost.
- Add perennial ryegrass or fine fescue seeds over lawn for a boost.

- Use a rain gauge to know how much to water. Lawns need just a little more than 1 inch of water per week...or let your lawn go dormant during summer drought.
- Hand pull or spot treat weeds.
- Do a soil test to find out what your yard or garden needs.
- Beneficial organisms can be added to fight pests, including nematodes, fungi, or bacteria.
- Add or keep moss, lichen, and acid loving plants if your soil is suited to that.
- Remove invasive plants (See Core Criteria 3)!
- To choose native plants that provide food for birds, wildlife and beneficial insects, see the plant lists by following the Resource Links QR code on the back of this booklet.
- Let a lawn, pasture or field grow into a meadow. Mow once a year in late fall to encourage a variety of plants to grow and to protect wildlife, and create areas to add native plants by seeding or planting. See *The Meadow Project*, our recommended book *Urban and Suburban Meadows*, and the *Meadowscaping Guide* on our website for more information.

Woodland areas

- Enhance woodland areas by planting new species of trees and shrubs. See our Resource Links for ideas.
- Learn which natural communities of plants are present on your property, or perhaps near it if you have a small residential yard. Add plants that often are found in that natural community, and preserve the diversity of plants you already have. See the book *Natural Landscapes of Maine* by Susan Gawler and Andrew Cutko to identify natural communities in your area.



Emerald Ash Borer, which kills ash trees, can be transported in firewood.



The Browntail Moth caterpillar has long hairs that cause an irritating rash.

Core Criteria 5:

Implement Organic & Integrated Pest Management Practices

What is Integrated Pest Management?

Integrated Pest Management (IPM) is a way to control pests and diseases by combining several strategies such as early pest detection and removal, sanitation, biological, chemical, and mechanical control or removal. It is a way to reduce the use of chemicals to control disease and pests. You may decide to forego the use of chemicals altogether to manage your land organically. The Maine Organic Farmers and Gardeners Association can help with ideas for organic management of land, and can certify farmland as Organic. Your local Cooperative Extension service can also help you plan for fully organic management.

Key Components

- Pest Detection: Look for pests frequently. Learn to recognize the pests in your area and the type of damage they cause. If you see signs of disease, consult the Maine Forest Service or the University of Maine Cooperative Extension (or similar

agencies in your state) to identify the pest or disease and receive guidance on treatment. If caught early, the use of chemical controls can be reduced or avoided.

- Sanitation: Keep planting areas free of weeds, removing diseased growth and cleaning intensive growing areas of dead plant matter. Maintain ideal moisture, fertility, and light levels.
- Biological Controls: Using good bugs against bad bugs. Depending on the pest present, specific biological control insects can be added to the environment. Always follow expert guidance in your area for the use of biological control insects.
- Natural biological control: Conserve or create plantings that support beneficial native insects that will prey on pest species. Shrub and pollinator belts can be added to edges including crop fields to greatly reduce the presence of pests. See our recommended books from the Xerces Society for excellent information on how to create beneficial insect habitat. And grow pest resistant plants! (See Criteria 4 resources as well.)
- All of the above allows the use of chemical pesticides as a last resort, or in very small amounts only to supplement the above measures. When using pesticides, always follow all label and safety instructions.



Optional Criteria 6:

Other Conservation Practices

There are many other things you can do to help wildlife on your landscape, such as avoiding lighting areas at night, which confuse nighttime insects and migrating birds, and keeping pets indoors or under control so they do not kill wildlife. Reducing sound can also be important as birds and other species communicate with sound. It is also possible to conserve energy through thoughtful planting, building construction and siting.

If you are harvesting wood, our Forested Lands Checklist dedicates Criteria 6 to harvest practices that support healthy ecosystems. There are many vital practices that can make a tremendous difference in your woodland ecosystem as well as adding recreational value to your landscape.

Optional Criteria 7:

Steward or Create Woodland Areas

For forested lands where you are actively harvesting, this criteria is required. For mixed-use properties, these practices are optional but important. The Maine Forest Service (or similar agency in your state) has information on many valuable practices you can implement. Our recommended guides for Criteria 7, Focus Species Forestry and Biodiversity in the Forests of Maine provide many excellent ideas for woodland management.

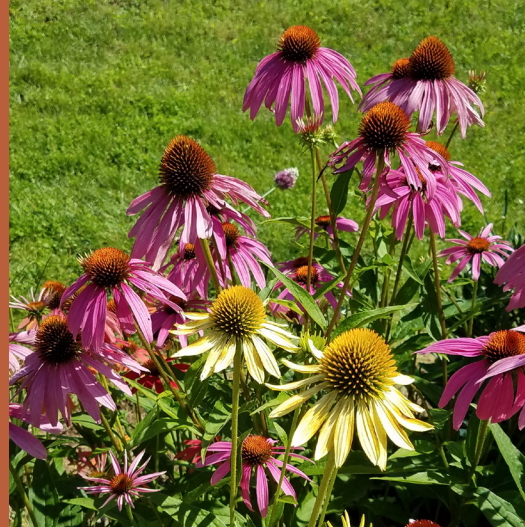


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What's Next?

Submit your checklist by uploading it to your local SWCD website or by mailing it to your SWCD office (see back cover for the “more information” QR code and mailing addresses). District staff will then visit your property to review the checklist items with you. The first visit is complimentary with additional visits at the standard rate. These reviews are not pass or fail, but rather are a chance to measure your progress and get more ideas. You will be an Aspiring Conservationist as soon as you submit your checklist, even if it is not complete.

Residents who complete the Conservation Landscape Certification:

- Receive a certificate and document that can support other conservation work, such as working with NRCS or state agencies.
- Can post our sign indicating your property is certified, which is a great way to start conversations with others about your efforts. (Signs are free while supplies last thanks to a grant from the Davis Conservation Foundation. Donations for signs are accepted.)
- Will be recognized in our Annual Report and at our Annual Awards Banquet.

But it's likely your most immediate reward will be the chance to watch birds and wildlife inhabiting your land, feeding, and raising young, and seeing beautiful changes in the landscape.

For more information, and to **download your checklist**, scan the QR code to the right with your smart phone, or visit:
www.knox-lincoln.org/conservation-landscape-certification



For a printed copy of the checklist, visit our offices:



KNOX-LINCOLN
SOIL & WATER
CONSERVATION
DISTRICT



Waldo County
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For the list of helpful **Resource Links** cited throughout this guide, scan the QR code to the right with your smart phone, or visit:
www.waldocountysoilandwater.org



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GreenWays

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Consulting Group

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