



RED-TAIL
Land Conservancy

*A Land Trust for
East Central Indiana*



Growing Home Habitat Certification Project

Certification Guide

Red-tail Land Conservancy | fortheland.org

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Why landscape for habitats?

A habitat is where a living thing makes its home. It has the ideal amount of water, food, shelter and space to meet the needs of wildlife. The ideal amount of each feature can change with different types of wildlife. Yards and gardens can be a perfect habitat for butterflies and birds in the same way acres of nature preserves can be for deer and turkeys.



Landscaping for habitats can be aesthetically pleasing. Many plants local to an area, otherwise known as native plants, come in a variety of colors, textures, blossoms, heights and growing seasons. Notably, since native plants are adapted to their local climate, it often takes less maintenance and water to keep them looking attractive.

Wildlife like birds, butterflies, pollinators and small mammals are part of an important life cycle. Places where they can live are increasingly being developed and made uninhabitable. Even green places, like lawns, are often not able to support wildlife because many non-native grasses do not provide enough shelter or nutrition for survival.

Transforming places like yards or gardens into habitat is vitally important to the survival of wildlife. Even small areas which strike a balance between beautiful landscaping and natural features help. **Growing habitat through landscaping gives wildlife a place to call home.**

The following document is a guide to fulfill the criteria of Growing Home Habitat certification. The intent is to provide ideas and resources for new gardeners to work from and experienced gardeners to check their work.

Photo (front page) by Becky Byrum

Photo (second page) by Kyle Johnson

Certification Criteria

- Habitat applying for certification must be in east central Indiana
- Habitat must provide at least 2 food sources for wildlife
- Habitat must provide at least 1 source of water for wildlife
- Habitat must provide at least 1 source of cover for wildlife
- Habitat must provide at least 1 place where wildlife can raise young
- Habitat must have at least 3 different species of native plants
- Applicant for certification must employ at least 2 sustainable gardening practices
- Habitats must be at least 50 square feet
- Landscaping must be free of [invasive species](#) on Indiana's [banned plants list](#)

Important notes

- Sources can be applied to multiple criteria. Example: Milkweed is a food source and host plant for monarch butterflies to raise young.
- Multiple variations of the same source are allowed. Example: Two different species of pollen-producing flowers meet food source requirements. Though recommended, it is not required to have two completely different food sources like a pollen-producing flower and a birdfeeder.
- For habitats to have the most impact, they must be at least 50 square feet in area. Area is calculated by multiplying the number of feet length by the number of feet width. Example: A garden bed that is 10 feet long and 5 feet wide is 50 square feet. A bed that is 25 feet long and 2 feet wide is also 50 square feet.
- If there are multiple habitat beds, they must be close but do not necessarily need to be contiguous. For example: Two smaller habitats divided by a walking path can be added together to calculate the square footage of the habitat. Or, a bed that wraps around a house and is separated by a driveway.

Questions? [Contact](#) one of the Growing Home committee members for mentorship.

Food & Plants

Providing a variety of food sources that attract diverse wildlife creates a robust food web. If a particular plant species does not thrive one year, the wildlife depending on it have other sources of food so they can survive. All samples listed here are [native](#) to Indiana.

Criteria: Habitats must have at least 2 food sources

Seeds

The plant-animal interaction in which seeds are almost exclusively a food source for wildlife is called “granivory.” These seed predators can be mammals, birds and insects.

Example Food Source Species: Seeds

- Oiled Sunflower seeds
 - Attracts: Cardinals, Tufted Titmouse, Mourning doves, Gray catbirds, Evening grosbeaks, Boat-tailed and Common grackles, Bushtits, House finches, Pine siskins, Black-billed magpies and all species of chickadees
- Cracked Corn
 - Attracts: Turkeys, Squirrels, Chipmunks
- Tree seeds (acorns, walnuts, hickory nuts)
 - Attracts: Squirrels, Chipmunks, Gray and Red Fox, Raccoon, E. Cottontail Rabbit, Turkeys, Blue Jays, various woodpeckers, various ducks

Example Food Source Application: Seeds

- Bird feeders
- Suet cages
- Native trees
- Leaving the heads of native flowers like black-eyed susans and coneflowers instead of cutting them off after the petals drop

Pollen

Pollen is the yellow, powdery substance in flowering plants that carries genetic material to other plants for reproduction. Pollination is how pollen is spread, either to other flowers of different plants (cross-pollination) or within the same flower (self-pollination.)

Wildlife is a primary source of cross pollination as they search for sugary nectar. But, many insects eat pollen itself as a food source. These “palynivores” include bees, beetles and butterflies.

Example Food Source Species: Pollen-Rich Flowers

- Common Chokeberry (*Prunus virginiana*)
- Beebalm (*Monarda fistulosa*)
- Purple Coneflower (*Echinacea purpurea*)
- Butterfly Weed (*Asclepias tuberosa*)
- New England Aster (*Symphyotrichum novae-angliae*)
- Ironweed (*Vernonia gigantea ssp. gigantea*)
- Columbine (*Aquilegia canadensis*)
- Shooting Star (*Dodecatheon meadia*)
- Marsh Milkweed (*Asclepias incarnata*) (varieties include: Whorled milkweed, Poke milkweed)
- Salvia (Lilac Sage) (*Salvia verticillata* L.)
- Common Yarrow (*Achillea millefolium* L.)
- Black-eyed Susan (*Rudbeckia hirta*)
- Garden Phlox (*Phlox paniculata*)

A comprehensive list of Indiana natives ideal for landscaping can be found on the Indiana Native Plant Society website. Click [here](#) to view.

Example Food Source Application: Pollen-Rich Flowers

- Native Flower Beds
 - Native flower beds not only provide pollen to our pollinators but living space for numerous insects, birds, and even smaller mammals. More information on native landscaping can be found [here](#) and [here](#).

Nectar

Nectar is the sugary liquid found in flowers. Like pollen, many animals can get most, if not all, nutrient and energy requirements from it. Many of the same animals that eat pollen also eat nectar, but not all. The majority of nectar feeders are insects and birds.

Example Food Source Species: Nectar-Rich Flowers
<ul style="list-style-type: none">• See “Pollen” Section

Example Food Source Application: Nectar
<ul style="list-style-type: none">• Nectar feeders• Native flower beds

Fruit

Fruit is a preferred food for many different birds. As a source of sugar, it is essential for energy for breeding, migration and maintaining heat in cold weather. Fruit can be a good choice to feed birds without debris, such as hulls from seeds.

Example Food Source Species: Fruit
<ul style="list-style-type: none">• Elderberry (<i>Sambucus nigra ssp. Canadensis</i> (<i>Sambucus canadensis</i>)<ul style="list-style-type: none">◦ Attracts: Various birds and insects• Winterberry holly (<i>Ilex verticillata</i>)<ul style="list-style-type: none">◦ Attracts: Various birds and insects• Hawthorn (<i>Crataegus viridis</i>)<ul style="list-style-type: none">◦ Attracts: Various birds and insects• Ninebark (<i>Physocarpus opulifolius</i>)<ul style="list-style-type: none">◦ Attracts: Various birds and insects

Example Food Source Application: Fruit
<ul style="list-style-type: none">• Plant fruit-bearing trees and bushes• Cut fresh fruit into chunks and place them in a mesh bag or suet cage

Water

All living organisms need water to survive. Providing a readily available source of water helps animals whose habitat may be shrinking or transformed into roads or buildings.

Certification criteria: Habitats must have at least 1 source of water

Traditional ponds

Ponds are an invaluable tool for backyard wildlife cultivation. Numerous wildlife, including mammals, reptiles, amphibians, and birds, use ponds for both food and water sources.

One item worth noting is stocked ponds. If fish are kept in the pond, it is best to avoid non-native species (goldfish, koi, asian carp, ect.). It is also important not to overstock the pond as too many fish will prevent certain animals from being able to effectively use the water source (amphibians, reptiles).

Puddling “Waterless” ponds

Growing Home water criteria does not require ponds or other water sources to be filled at all times. Shallow depressions, like those listed in the [Birdbath](#) section, collect water after rainfall or morning dew. These puddles will not last a long time, but they are excellent water sources when filled.

A waterless pond can be any size. It begins with a plastic sheet in a shallow depression filled with compost, sand, and rocks. The rocks will hold condensation and heavy dew but can also be manually watered.

Having rocks or beads gives pollinators and birds places to land while they sip water.

Misting

Having a fine mist from a misting station or sprinkler will attract small pollinators and birds, like butterflies and hummingbirds.

Birdbaths

Bird baths are not only for birds, but can provide a source of water to other animals, like insects. Birdbaths do not necessarily need to be filled at all times. They do need to have the ability to capture and hold water after rainfall.

Example Water Source Application: Traditional Birdbath Alternatives
<ul style="list-style-type: none">• Shallow saucers - clay pots, galvanized trash can lids, saucer sleds• Clay pots upside down with a shallow dish filled with pebbles or glass beads.• Wet rocks• Rock beds with a shallow depression

Native plants

Certain plants can create small pools of water.

Example Water Source Species: Native Plants
<ul style="list-style-type: none">• Common Boneset (<i>Eupatorium perfoliatum</i>)<ul style="list-style-type: none">○ Utilized by: Insects• Green Dragon (<i>Arisaema dracontium</i>)<ul style="list-style-type: none">○ Utilized by: Insects• Jack-in-the-pulpit (<i>Arisaema triphyllum</i>)

Cover

Few wildlife can live in full sun at all times. Most require some sort of cover, either to provide cooling shade, visibility protection from predators, or a place to stay warm in winter.

Certification criteria: Habitats must have at least 1 source of cover

Insect hotel

An insect hotel is any structure that provides small pockets of space for insects to nest in. Examples include solitary bees and beetles. Some insects use them exclusively throughout most of the year, while others use cavities as temporary resting or nesting sites. Examples of insect hotels include:

Example Cover Source Application: Insect Hotel
<ul style="list-style-type: none">• Built structure. This is one of many variations: https://gardentherapy.ca/build-a-bug-hotel/• Clay pot with holes punctured in the side filled loosely with soil• A log with holes drilled into it

Dormant/dead plants

Leaving plants from the previous year instead of clearing them provides an easy source of cover.

Mulch/leaf litter

Dense mats of leaf litter or chemical free mulch can not only provide cover for animals, but be essential to their life cycle. It benefits insects of all varieties, detritivores (decomposers), small rodents (voles, mice).

Bat house

Bat houses are a good way of supporting an essential part of the ecosystem. More information can be found at:

- <https://dnr.wisconsin.gov/topic/WildlifeHabitat/BatHouse.html>
- <https://extension.unh.edu/blog/i%E2%80%99d-buy-and-install-bat-house-my-backyard-what-should-i-look-and-where-should-i-place-it>

Raising Young

Keeping a habitat healthy for a long period of time means multiple generations of beneficial wildlife species should be encouraged. Even migratory animals will return to the same location annually if it meets the requirements to safely raise young.

Certification criteria: Habitats must have at least 1 place to raise young

Birdhouse

Birdhouses can be made of just about anything. There are certain design elements that can make bird houses more attractive to birds.

Example Raising Young Source Application: Birdhouse Design Elements

- Ventilation & drainage holes
- Roof overhang
- Natural building materials
- Exterior colors that blend with surroundings
- Avoid perches
- Seasonal cleaning
- Appropriately sized entrance hole

Host plants

There are certain species of insects that exclusively use a single species of plant to lay eggs and rear young. Click [here](#) for a list of host plants for butterflies and moths in Indiana.

Example Raising Young Source Application: Host Plants

- Common Milkweed (*Asclepias syriaca*)
 - Host plant to: Monarch butterflies
- Black Willow tree (*Salix nigra*)
 - Host plant to: Viceroy and Red-Spotted Purple butterflies
- Wild Geranium (*Geranium maculatum*)
 - Host plant to: Leafmining moth and White-marked Tussock moth
- Silky Dogwood (*Cornus amomum*)
 - Host plant to: Spring Azure butterfly

Conservation & Sustainability

Building a habitat where wildlife can thrive requires more than thinking about wildlife specifically. Healthy ecosystems have many different components, all of which need to be considered. Creating a healthy habitat in one area does not mean another area should be negatively impacted.

Certification criteria: Applicants must employ at least 2 sustainable gardening practices

Water conservation

Using water efficiently is better for the environment and saves money by reducing water wasted through evaporation.

Example Sustainability Practice: Soil & Water Conservation

- Water by hand
- Compost
- Use mulch (check to be sure the mulch is not from an invasive plant)
- Reduce mono-culture grass lawn and impermeable surfaces (pavement)
- Use a soaker hose
- Rain barrel
- Build a rain garden
 - A rain garden is a depressed area that collects water from downspouts or impermeable surfaces that is designed to stop water long enough to soak into the ground rather than enter the sewer system. They can often be planted with deep-rooted native flowers and grasses. Click [here](#) for more information.

Control Predators

Predation by domestic cats is the number-one direct, human-caused threat to birds in the United States and Canada. Parasites can spread disease to mammals, birds, insects and plants.

Example Sustainability Practice: Predator Control

- Keep cats indoors
- Clean out birdhouses seasonally (to reduce mites & other parasites)
- Provide clean water in bird baths regularly (to reduce mites, mosquitos & parasites)
- Remove perches from bird feeders (to make it harder for predators to enter nests)

Eliminate invasive species

See [Native & Invasive Plants](#) section.

Organic gardening

Chemical fertilizers can leach into the soil and groundwater and make some plants that were previously edible to wildlife toxic.

Example Sustainability Practices: Organic
<ul style="list-style-type: none">• Eliminate/reduce chemical pesticides• Use locally created compost

Native & Invasive Plants

It is very important to consider native, non-native, and invasive plant species when planning a habitat. Native plants are valuable to an ecosystem and wildlife. Non-native and especially invasive species provide little to no value for wildlife and sometimes even cause harm.

Certification criteria: Habitat must have at least 3 different species of native plants; Landscaping must be free of [invasive species](#) on Indiana's [banned plants list](#)

Native Plants

Species that are native means they have been adapting and evolving in the ecosystem for over hundreds or thousands of years. Generally, only plants that were prior to European settlement are considered native, about 200 years ago. Native plants should be planted whenever possible. Click [heMore than 1,000 organizations appliedre](#) to learn more.

Non-Native or Exotic Plants

This category of plants is reserved for species that are not native, but do not necessarily meet the criteria to be labeled invasive. While not nearly as damaging as invasive species, non-natives have not evolved and adapted with our native wildlife. Non-native species should be planted sparingly as they are not as good as natives in providing ecosystem services.

Invasive Plants

Invasive species are non-native to a particular ecosystem and cause economic, environmental or human harm. They can quickly take hold of a new area, it is best to completely eliminate them. Click [here](#) to learn more.

Indiana's Terrestrial Plant Rule ([312 IAC 18-3-25](#)) designates species of plants as invasive pests. This rule makes it illegal to sell, gift, barter, exchange, distribute, transport, or introduce these plants in the State of Indiana. Click [here](#) to see the full list of banned plants.

Unexpected Visitors

Some plants have target audiences of wildlife, such as attracting certain species of butterflies or birds. Native plants are especially effective because they co-evolved with regional wildlife over hundreds or thousands of years.

However, the food, water, and cover that plants provide can also attract some unexpected wildlife. Though not the target audience, these visitors are not necessarily bad. New discoveries can be used as a learning experience.

Examples of Unexpected Wildlife Visitors
<ul style="list-style-type: none">• Milkweed attracts insects other than the targeted Monarch butterfly. Milkweed bug, milkweed beetles, ladybugs, and aphids also benefit from this plant. Most are not competitors or predators to native insects.• Cup Plants collect water and have nectar-rich flowers. They can attract stem-cutting beetles and cutworms that may cut all of the flowers. These insects are food for birds, but can become an issue and require selective physical removal.• New plants in a yard or garden may initially attract more beetles and caterpillars than expected. It may take time before the intended pollinators are visible among the new biodiversity.

Mentorship & Site Visits

If you are unsure how to get started or have questions about how to fulfill Growing Home criteria in the space you have available, the [Growing Home Committee](mailto:info@fortheland.org) is available for you to ask questions. Mentorship is offered by email, phone, and site visits (limited availability).

If you have questions after reviewing this guide, mentorship via email is the next step. Simply contact Red-tail Land Conservancy at info@fortheland.org. You will be connected with a knowledgeable Growing Home Committee Member. They can help start your thought process about how a habitat would work in your space, including ideas on how to meet specific criteria or general questions.

There are opportunities for a Growing Home Committee Member to visit your space to help you develop a general plan on creating habitat. **These visits are not a landscape planning service.** A limited number of time slots to meet with a committee member in your personal outdoor space are posted on Red-tail's Growing Home website in early spring for visits scheduled in May-June. Email info@fortheland.org if you would like to be added to a waitlist.

Growing Home Habitat Certification 2023 Committee

- **Jocelyn Bonesteel**, Nursery Plant and Grounds Manager, Wasson Nursery
- **Erica Forstater**, Environmental Education Program Coordinator and Rinard Orchid Greenhouse Assistant
- **John Huber**, Master Gardener, Master Naturalist, Educator (ret.)
- **Sheryl Myers**, Red-tail Board Member, Master Naturalist, Biology/Environmental Science Educator (ret.)
- **Julie Smiley**, Red-tail Board Member, Indiana Master Naturalist, Chemistry/Environmental Science Educator
- **Helen Steussy**, Henry County Removes Invasive Plant Species (HC-RIPS) Coordinator

Other Learning Resources

This brief guide is intended to give ideas. There are many other ways to meet the criteria not listed here.

Vocabulary

When making a habitat plan and selecting native plants, there may be terms or ideas that are unfamiliar. Learning vocabulary is helpful when planning out a beautiful new habitat.

Term	Definition
Drift planting	A mass grouping of the same plant that provides a greater concentration of flowering. This has a greater visual impact and makes weeding easier.
Perennial	Perennials are plants that regrow each year. They can live for three or more growing seasons, but typically have a shorter blooming period than annuals.
Annual	Annuals live for only one growing season and typically have a longer blooming period than a perennial.
Biennial	Biennials are plants that grow for two seasons, but do not bloom until the second year. They will drop seeds the first year and bloom the next year with a new generation.

Reading material

Check for these books at a public library near you.

- *Bringing Nature Home: How you can sustain wildlife with native plants* by Doug Tallamy
- *Grow Native: Bringing natural beauty to your garden* by Lynn M. Steiner
- *Planting Native to Attract Birds to Your Yard* by Sharon Sorenson
- *National Wildlife Federation(R): Attracting Birds, Butterflies, and Other Backyard Wildlife, Expanded Second Edition (Creative Homeowner) 17 Projects & Step-by-Step Instructions to Give Back to Nature* by David Mizejewski
- *Butterfly Gardening with Native Plants: How to Attract and Identify Butterflies* by Christopher Kline

Other Knowledgeable Organizations

- [Indiana Native Plant Society](#)
- [Master Gardeners](#)
- [Purdue Extension](#)
- [Rinard Orchid Greenhouse & Christy Woods](#)
- Indiana State Park Naturalists
- [Wasson Nursery](#)

How to Apply

Owners of backyard habitats must submit an application for their habitat to be certified as healthy. The application can be found by visiting the Growing Home page on Red-tail's website www.ForTheLand.org/GrowingHome.

First, owners must give their contact information, including the location of the habitat. This will allow Red-tail ways to reach out if there are questions about the application.

There are seven required questions. Each asks for a simple list of how each criterion was met. This information is what the Growing Home Committee uses for review and certification.

There are three supplemental questions for more information about the habitat.

At least 3 photos showing the habitat must be submitted. They can be uploaded via the form on the website. Or, they can be emailed to Kelley V. Phillips at Kelley@ForTheLand.org.

That's it! Most Growing Home Habitat applicants complete the form in less than 20 minutes.

Please direct questions to Kelley V. Phillips using the email above.

About Red-tail Land Conservancy

Red-tail Land Conservancy is a 501(c)3 nonprofit that's mission is to preserve, protect, and restore natural areas and farm land in east central Indiana while increasing awareness of our natural heritage. By preserving and restoring vital forests, prairies, and wetlands, Red-tail Land Conservancy plans for a future where the natural beauty and unique habitats of east central Indiana will exist for generations to come.

Red-tail Land Conservancy started Growing Home Habitat Certification in 2021 as part of their Strategic Conservation Plan.

Learn more at www.ForTheLand.org

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