LIVING IN THE DUNES
A HOMEOWNER’S GUIDE TO LANDSCAPING IN INDIANA’S DUNE COMMUNITIES
Introduction

“The dunes are to the Midwest what the Grand Canyon is to Arizona and the Yosemite is to California. They constitute a signature of time and eternity. Once lost, the loss would be irrevocable.”
– Carl Sandburg

This guide aims to provide you with the tools to help protect these dunes, the landscape of Indiana’s nearshore communities. As a resident, you have the ability to help protect the dunes at the most local level – your own yard.

The dune landscape represents at least four major successive stages of Lake Michigan shorelines. The landscape includes 15,000 acres of open beaches, grass- and forest-covered dunes, oak savannas, swamps, bogs, marshes, prairies, rivers, and forests. Its intricate biology is globally unique and is one of the only places where examples of every type of natural community in the Chicagoland region can be found. From arctic bearberry to prickly pear cactus and southern dogwoods, the dunes’ biodiversity is extraordinary. Over 1,200 species of vascular plants and 400 species of wildlife can be found here.

Over the next millennia, the dunes will face a variety of challenges. Some of the major challenges include climate change, invasive plants, shoreline erosion, diminished water quality, and encroaching urbanization. If changes happen to our climate, the Indiana Dunes will be one of the first places to reflect these changes. These changes could include a shift in the migration patterns of mobile species, the possible extinction of some species, and change the timing of many natural processes from flower blooming to bird nesting. From a decline in wildlife habitat to suppression of native plants and wildlife, invasive species also have a significant impact on the dunes ecosystem.

In this guide, you will find resources to help you protect this landscape. You’ll be able to identify ten of the most problematic invasive species found in the region and understand which native plants to use instead. Template garden designs will help you landscape your own property and a list of best practices will provide you with other resources related to preserving this ecosystem.

As one of the nation’s premier recreational and scientific jewels, we hope that you use this guide to help preserve the priceless landscape that is the Indiana Dunes.

Acknowledgments

This project would not have been possible without our Advisory Committee, staff, and funding partners. We greatly appreciate those who dedicated their time and knowledge to this project.

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We greatly appreciate all our funders for helping us to create this valuable resource.
North Slope of Dune Woodland
Dune woodlands are found on stabilized dunes protected from intense wind erosion. In general, these areas are dominated by woody species such as oaks, hickories, basswoods, cottonwoods, and jack pines. The orientation of the dune slope affects the types of plants that will grow. North-facing slopes are shaded and more moist than south-facing slopes.

Conditions:
• Most soil conditions
• Shaded
• Tall canopy trees with shade-tolerant understory plants

South Slope of Dune Woodland
Similar to the north-facing slope of the dune woodland, the south slope is generally dominated by tall canopy plants like oaks and hickories. Unlike the north slope, the south-facing slope receives more sunlight and has drier soil conditions. This encourages the growth of spring wildflowers and other sun-loving plants, in addition to woody species like witch hazel, sassafrass, and dogwoods.

Conditions:
• Dry soil conditions
• Sun-loving tall canopy trees with both shade-tolerant and sun-tolerant understory plants

Black Oak Savanna
Savannas are open, sunny areas dominated by grasses and forbs such as little bluestem grass, wild lupine, and rough blazing star. Savannas are sparsely treed, and include black and white oaks in silty soils.

Conditions:
• Sunny, dry conditions
• Dominated by grasses and forbs
• A few oak trees are present, but only provide sparse canopy cover

Beach
This area is where the land meets the waters of Lake Michigan. Few plants or animals live along the beach, due to the constant movements of sand, storm waves, and winter ice and snow.

Conditions:
• Low dune, parallel to the shoreline
• Sparse vegetation with primarily pioneer species (hardy species which are the first to colonize an area and begin ecological succession)
• Periods of drought
• Storm waves
• Alternating periods of sand burial and erosion

Foredune
The first ridge behind the beach where Pioneer species like marram grass and sand reed grass help stabilize the sand with their extensive root systems. A stabilized foredune can also support wildflowers and shrubs like common milkweed, beach pea, bearberry, poison ivy, and wild grape. Cottonwood trees can also be found in this landscape.

Conditions:
• Low dune, parallel to the shoreline
• Sparse vegetation with primarily pioneer species (hardy species which are the first to colonize an area and begin ecological succession)
• Periods of drought
• Storm waves
• Alternating periods of sand burial and erosion

Interdunal Wetland
A landscape typically found in swales between dune ridges dominated by rushes, sedges, shrubs, and other plants like goldenrod, red osier dogwood, and jack pines. These shallow ponds or pools may also form in wind-formed depressions at the base of blowouts, in hollows of dune fields, and in abandoned river channels that once flowed behind foredunes. The interdunal wetland experiences seasonally-fluctuating water tables.

Conditions:
• Alkaline wetlands situated in depressions between dunes
• Seasonally-fluctuating water levels
• Moist soil conditions
• Sedges, rushes, and water-tolerant shrubs

Sources:
Michigan Department of Natural Resources, Michigan State University Extension, Indiana Department of Natural Resources, Lake Michigan Coastal Program.

Your Place in the Indiana Dunes Landscape
Within which landscape does your home fall? The information provided below can help you determine which of the five different dune landscapes your home lies within. Depending on the size of your property you may have more than one landscape present within your yard.
Invasive Species: The Terrible Ten

**Alliaria petiolata**
**Garlic Mustard**
- **Herbaceous, garlic-odored biennial**
- **Ideal conditions:** Rich, moist, shaded areas
  - **Height:** 4’ tall
- **Flowers:** Cream / yellow flowers.
- **Leaves:** Small, oval-shaped leaves without teeth or lobes. Narrow 1/4” dia. leaves kidney-shaped and persist through winter.
- **Fruits:** Narrow seed pods. Round green fruit in leaf axils.

**Berberis thunbergii**
**Japanese Barberry**
- **Thorny shrub with grooved stems**
- **Height:** Up to 4’ tall
- **Flowers:** Spring blooms.
- **Leaves:** Simple, alternate, opposite each other along the stem. Glossy, round, toothed leaves that alternate along the stem.
- **Fruits:** Fleshy coating around seeds. Four-parted angular pink to purple thistle-like flower heads with many tubular flowers and five narrow lobes that alternate opposite each other along the stem.

**Celastrus orbiculatus**
**Oriental Bittersweet**
- **Climbing vine that forms dense infestations**
- **Ideal conditions:** Moist, shaded areas
  - **Height:** Up to 60’ tall
- **Flowers:** Pink or purple thistle-like flower heads with many tubular flowers and five narrow lobes that alternate opposite each other along the stem.
- **Fruits:** Fleshy coating around seeds. Up to 4” long and splits to reveal a red, fleshy coating around seeds.

**Centaurea stoebe ssp. micranthos**
**Spotted Knapweed**
- **Deciduous shrub that forms dense thickets**
- **Ideal conditions:** Dry sand, rocky areas
  - **Height:** Up to 4’ tall
- **Flowers:** Spring blooms.
- **Leaves & Stem:** Smooth, light blue-green oval / triangular-shaped leaves along the stem. Leaves become broader and more linear at the base.
- **Fruits:** Flower spike begins as a green spike that fan out. Bloom persists from mid-summer to fall and split to reveal a red, fleshy coating around seeds.

**Evonymus alatus**
**Burning Bush**
- **Herbaceous perennial**
- **Ideal conditions:** Open to shaded, moist to dry areas
  - **Height:** Up to 4’ tall
- **Flowers:** Late spring blooms.
- **Leaves & Stem:** Smooth, light blue-green oval / triangular-shaped leaves along the stem. Leaves become bright red / crimson at the base.
- **Fruits:** Fruits flowers and fruit dense spike reproduce faster than leaves. Flowers spike height. Down green and becomes blue in summer.

**Leymus arenarius**
**Bush Honeysuckle**
- **Coarse, clump- and colony-forming grass**
- **Ideal conditions:** Grows in nearly all soil, moisture, and light availability conditions
  - **Height:** Up to 1’ tall
- **Flowers:** Beige in summer. Spring blooms.
- **Leaves:** Dark green to blue-green oblong / pointed to rounded at tip. Large spring blooms.
- **Fruits:** Fleshy coating around seeds. Beige in summer.

**Lonicera ssp.**
**Japanese Honeysuckle**
- **Multi-stemmed shrub; develops leaves earlier in year than native species; forms dense thickets in spring**
- **Ideal conditions:** Grows in nearly all soil, moisture, and light availability conditions
  - **Height:** Up to 2’ tall
- **Flowers:** Spring blooms.
- **Leaves:** Small, four-parted greenish-yellow flowers form in leaf axils where leaves meet the stem. Lime green leaves that taper at the tip. Small, four-parted greenish-yellow flowers form in leaf axils where leaves meet the stem. Lime green leaves that taper at the tip.
- **Fruits:** Fleshy coating around seeds. Up to 2” long.

**Impacts to Natural Resources:**
- Plants significantly impact our natural resources in the following ways:
  - **Declining wildlife habitat**
  - **Decreasing soil stabilization and interrupting forest succession**
  - **Increasing management expense**
  - **Hunting and suppressing native plants and wildlife**
  - **Destroying habitats for rare wildflowers and animals**
  - **Decreasing access to outdoor areas like forest floors and waterways**
  - **Presence in landscaping species or in nursery trade**
  - **Likelihood of the species to spread in Lakeshore habitat / soils**
  - **Ability to alter ecosystem processes**
  - **Presence and abundance in Lakeshore communities**
  - **Aggressiveness in undisturbed communities**
  - **Difficulty to control**

**Why These Ten?**
The following lists ten of the key invasive species dune community residents should look out for, not buy / plant, and remove.

**Early Detection** species are identified by a white outline of the circular photo.

Early Detection is a process by which volunteers keep a lookout for invasive species that are new or minimally known so they can be reported and potentially controlled before becoming problematic. You can report early detection species at EDDmaps.org.

**Source:** Impacts to Natural Resources Invasive Species Council

**Photo credits:**
- Garlic Mustard: Paul McAfee
- Leaves: Scott Namestnik
- Flowers: Ohio State Weed Lab, The Ohio State University
- Japanese Barberry: Other Photos, Scott Namestnik
- Oriental Bittersweet: Photo by T. Miller, USDA Forest Service
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Early Detection is a process by which volunteers keep a lookout for invasive species that are new or minimally known so they can be reported and potentially controlled before becoming problematic. You can report early detection species at EDDmaps.org.
An "invasive" plant is a non-native plant that infests natural areas and causes environmental or economic harm, or harm to human health.

1. Evaluate your site
After invasive plants have been controlled in your yard, you'll need to understand which Indiana Dunes landscape your home lies within. Use the information on pages 2 and 3 to help you determine this. Next, use a map or aerial image of your property to evaluate the existing site conditions. This will help you determine the appropriate plant species and locations to plant them.

2. Determine your plant selection criteria
Your site evaluation will determine which plants to choose and where those selected plants will thrive on your property. You'll want to develop an outline of the criteria from which you'll be selecting your plants, paying close attention to:

   - Sun / shade requirements
   - Soil moisture and type
   - Height and width / spread
   - Seasonality (blooming, winter interest)

3. Determine where to purchase native plants
You can purchase many of the native plants shown in this guide, and more, at local home and garden centers. This guide recommends the following resources for purchasing native plants:

   - Cardno Native Plant Nursery in Walkerton, Indiana ($100 minimum purchase)
   - Chesterton Feed & Garden Center in Chesterton, Indiana
   - Friends of the Dunes' Annual Native Plant Sales in Beverly Shores, Indiana (early April)
   - Naturally Native Nursery in South Bend, Indiana
   - Possibility Place in Monee, Illinois (by appointment only)
   - Spence Restoration Nursery in Munice, Indiana ($150 minimum purchase, wholesale only)
   - Wild Ones Native Plant Sale at Gibson Woods in Hammond, Indiana (early May)

4. Ask Questions
When buying natives, consider asking your nursery the following questions to evaluate their native plant selection. The correct answer that the nursery should provide is noted in parenthesis.

   • Is the plant native to this region? (answer: yes)
   • Are these plants treated with neonicotinoids? (answer: no)
   • Does the plant information list the scientific name? (answer: yes)
   • Is the plant a native (nearly native) or cultivar? Is there an additional description behind the name (e.g. Acer rubrum 'Brandywine')? (answer: no)

5. Plant
This is the part where all your hard work finally comes to fruition. Once you've designed your landscape and purchased your plants, you're ready to plant your native landscape. Keep the following considerations in mind as you plant your landscape:

   • Utilities: Before digging, mark all utilities and avoid planting in those areas.
   • Planting seasons: Spring and fall are the best times to plant. During these seasons, plants establish quickly because soil is cooler and moister.
   • Layout of your plants: Arrange your plants per spacing requirements while they are still in their containers. The sizes of the initial plants you install are small, but they grow! Pay close attention to the layout recommendations for each plant to avoid overcrowding.
   • Top Soil and Mulching: To install your plant, insert it into the ground so that potting soil is level or just below the top of the container and fill in with topsoil. The exact amount will vary based on the type of plant, so check the plant tag for direction or check with your local nursery.
   • Watering: Always water newly planted plants immediately after planting.
Use Natives Instead: The Top 20

A native plant is one that occurs naturally in a particular region, ecosystem, or habitat without direct or indirect human intervention. Indiana Native Plant and Wildflower Society (INPAWS) defines a native plant species as one that has occurred naturally in the area since European settlement.

Benefits:
Native plants are adapted to the climate and soil in which they live and also provide food and habitats necessary for a healthy wildlife population. Other benefits include:
- Providing seeds, nectar, and fruits for wildlife
- Providing habitats and cover for wildlife
- Serving as larval host plants for butterfly caterpillars
- Requiring less fertilizer, fewer pesticides, and less water
- Storing carbon dioxide effectively

For more information visit: savedunes.org/dunes-residential-guide

Photo credits:
- Marram Grass: Mariann Frazee, Scott Namestnik
- Leaves: Tony Troche
- Flowers: Scott Namestnik
- Fruits: Scott Namestnik

- Wild Columbine: Mariann Frazee
- Leaves: Scott Namestnik
- Flowers: Christopher Davidson
- Fruits: Scott Namestnik

- Swamp Milkweed: Mariann Frazee, Scott Namestnik
- Leaves: Jerry Atkinson
- Flowers: Paul McAfee
- Fruits: Scott Namestnik
- Fruits 2: Paul McAfee

- Coreopsis lanceolata: Mariann Frazee
- Leaves: Scott Namestnik
- Flowers: Bob Barbor
- Fruits: Paul McAfee

- Sand Coreopsis: Mariann Frazee, Scott Namestnik
- Leaves: Tony Troche
- Flowers: Bob Barbor
- Fruits: Scott Namestnik

- Asclepias tuberosa: Mariann Frazee, Scott Namestnik
- Flowers: Bob Barbor
- Fruits: Scott Namestnik

- Rattlesnake Master: Mariann Frazee
- Leaves: Tony Troche
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- Coreopsis tinctoria: Mariann Frazee
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- Euryngium yucciforme: Mariann Frazee
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Use Natives Instead: The Top 20, continued...

According to the Indiana Wildlife Federation, native Indiana plants are best suited for the soil and weather conditions in our area. As a result, native plants require less fertilizer, fewer pesticides, and less water. Native plants are necessary for healthy wildlife populations and help prevent the spread of invasive exotic species.

### Types of Native Plants:

Wildflowers are typically the first plants to come to mind when someone mentions “native plant.” In reality, there is actually a large range of plant types that make up the native plant palette, including:

- Trees
- Shrubs
- Forbs (annuals and perennials)
- Grasses
- Mosses and Liverworts
- Ferns
- Funghi

#### Eurybia macrophylla

- **Common Name:** Big-Leaved Aster
- **Type:** Herbaceous perennial
- **Ideal conditions:** Tolerate moist to dry soils in shade or partial shade
  - **Height:** up to 7’ tall

#### Geranium maculatum

- **Common Name:** Wild Geranium
- **Type:** Herbaceous perennial
- **Ideal conditions:** Thrives in moist to dry soils in shade or partial shade
  - **Height:** up to 2’ tall

#### Hamamelis virginiana

- **Common Name:** Witch Hazel
- **Type:** Multi-branched shrub or small tree with smooth gray-brown bark
- **Ideal conditions:** Dry to moist open to partially shaded areas
  - **Height:** up to 25’ tall

#### Juniperus communis

- **Common Name:** Common Juniper
- **Type:** Evergreen spreading shrub or small tree
- **Ideal conditions:** Tolerate dry to moist open to partially shaded areas
  - **Height:** up to 10’ tall

#### Liatris aspera

- **Common Name:** Rough Blazing Star
- **Type:** Herbaceous unbranched, short-lived perennial
- **Ideal conditions:** Saturated open to shaded conditions
  - **Can tolerate moist soils**
  - **Height:** up to 5’ tall

#### Lobelia siphilitica

- **Common Name:** Great Blue Lobelia
- **Type:** Herbaceous unbranched perennial
- **Ideal conditions:** Tolerate moist to dry open to partially shaded areas
  - **Height:** up to 4’ tall

#### Monarda fistulosa

- **Common Name:** Wild Bergamot
- **Type:** Branched herbaceous perennial
- **Ideal conditions:** Moist to dry sunny areas
  - **Height:** up to 5’ tall

### Seasonal Change:

- **Leaves:** Narrow to 1 ½” long that becomes dark brown and unattract to the base of the plant.
- **Fruits:** Berry-like cone to ¼” diameter that begins green and mature to blue with a waxy coating.
- **Flowers:** Late summer blooms, with flowering sequence from top of inflorescence to bottom.

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† Source: Types of Native Plants, Indiana Native Plant and Wildflower Society

Photo credits:

- Big-Leaved Aster: John Seiler, Scott Namestnik
- Wild Geranium: Jenny Allison, Paul McAfee, Scott Namestnik
- Witch Hazel: John Seiler, Paul McAfee
- Wild Bergamot: Scott Namestnik, Chris Cant, Jeffrey Belth
Use Natives Instead: The Top 20, continued...

Native plants are not only important for wildlife, biodiversity, and sustainability, but they are part of what makes the Indiana Dune landscape the “Indiana Dunes.” As Lady Bird Johnson said, “Native plants give us a sense of where we are in the great land of ours.”

Nyssa sylvatica
Black Gum

- Tree with pyramidal shaped crown and nearly horizontal branches
- Ideal conditions: Sandy soil at the intersection of upland and wetland areas
- Height: up to 80’ tall

Pinus strobus
White Pine

- Conical tree with whorled and horizontal branching
- Ideal conditions: Most to dry soil and loam in open or partially shaded conditions
- Height: up to 120’ tall

Quercus alba
White Oak

- Tree with rounded crown (when grown in the open)
- Ideal conditions: Most to dry soils in open or partially shaded conditions
- Height: up to 100’ tall

Schizachyrium scoparium
Little Bluestem Grass

- Clump forming grass
- Ideal conditions: Most to dry soils in open or partially shaded conditions
- Height: up to 4’ tall

Solidago speciosa
Showy Goldenrod

- Herbaceous unbranched perennial
- Ideal conditions: Dry to moist soils in open or partially shaded conditions
- Height: up to 4’ tall

Tradescantia ohiensis
Common Spiderwort

- Herbaceous, sometimes branched, perennial
- Ideal conditions: Dry to moist soils in open or partially shaded conditions
- Height: up to 4’ tall

Photo credits:
Black Gum
Main (circle): Chicago Botanic Garden
Bark: Scott Namstnik
Leaves: Paul Mulf最重要的
White Pine
Main (circle): Scott Namstnik
Bark: Paul Mulf最重要的
Leaves: Paul Mulf最重要的
Oak
Main (circle): Scott Namstnik
Leaves: Scott Namstnik
White Oak
Main (circle): Scott Namstnik
Leaves: Paul Mulf最重要的
Leaves: Scott Namstnik
Little Bluestem Grass
Main (circle): John A. Knouse
Leaves: Jeffrey Belth
Showy Goldenrod
Main (circle): Scott Namstnik
Leaves: Jeffrey Belth
Common Spiderwort
Main (circle): Chicago Botanic Garden

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Leaves 2: Jeffrey Belth
Fruit: Scott Namstnik
Bark: Paul Mulf最重要的
Seasonal: Berean Hunter
Leaves: Scott Namstnik
Bark: Scott Namstnik
Main (circle): Chicago Botanic Garden

Seasonal Change:
Leaves become reddish, purplish, brown in the fall and some usually persist through winter.

Seasonal Change:
Bark becomes lighter in color at the base, white and smooth;

Seasonal Change:
Foliage becomes coppery-brown in fall and last to winter.

Seasonal Change:
Soft pale green leaves become reddish, purplish or brown in the fall and some usually persist through winter.

Seasonal Change:
Inflorescences form white spike-like clusters at the base of the plant in summer.

Seasonal Change:
Clusters of numerous white spike-like flowers, 1½” wide, grow in a whorled pattern at the base of the plant.

Seasonal Change:
Dense flower clusters along the stems in August.

Seasonal Change:
3-petalled blue-violet flowers to 1½” wide, open for only one day, but blooming period lasts several months.

The INPAWS-recommended reading guide provides nearly a dozen books and other guides to landscaping with native plants. To learn more visit: inpaws.org/landscaping/580-2
Template Garden Designs

As you use these garden designs to help you arrange your native plantings, make sure to review each native plant's ideal conditions, height, and bloom season to help you choose the best plant for your landscape.

Understanding the Guide:
This guide aims to help you, as a homeowner, understand how to arrange native plants to provide a functional, aesthetically-pleasing landscape design. The following diagrams provide an easy-to-use kit-of-parts for five different typical residential planting types. Each diagram has a plant list specific to one of the five dune landscapes described on pages 2 and 3, including:

A. Buffer, Foredune
B. Garden, Interdunal Wetland
C. Tree Grove, North Slope Dune Woodland
D. Foundation Planting, Oak Savanna
E. Corner Planting, South Slope Dune Woodland

C: Tree Grove
Example plant list for North Slope Dune Woodland
1: White Oak, Quercus alba (canopy)
2: White Pine, Pinus strobus
3: Black Gum, Nyssa sylvatica
4: Witch Hazel, Hamamelis virginiana
5: Bottlebrush Grass, Elymus hystrix
6: Big-leaved Aster, Eurybia macrophylla

D: Foundation Planting
Example plant list for Oak Savanna
1: Wild Bergamot, Monarda fistulosa
2: White Pine, Pinus strobus
3: Little Bluestem Grass, Schizachyrium scoparium
4: Butterfly Weed, Asclepias tuberosa
5: Wild Columbine, Aquilegia canadensis
6: Sand Coreopsis, Coreopsis tinctoria
7: Rough Bristlegrass, Bouteloua aspera
8: Common Spiderwort, Tradescantia × exitans

B: Garden
Example plant list for Interdunal Wetland
1: Swamp Milkweed, Asclepias incarnata
2: Bistort, Persicaria bistorta
3: Great Blue Lobelia, Lobelia siphilitica

A: Buffer
Example plant list for Foredune
1: Common Juniper, Juniperus communis
2: Marram Grass, Ammophila breviligulata
3: Little Bluestem Grass, Schizachyrium scoparium
4: Butterfly Weed, Asclepias tuberosa
5: Shovey Goldenrod, Solidago speciosa

E: Corner Planting
Example plant list for South Slope Dune Woodland
1: White Oak, Quercus alba (canopy)
2: White Pine, Pinus strobus
3: Witch Hazel, Hamamelis virginiana
4: Big-leaved Aster, Eurybia macrophylla
5: Wild Columbine, Aquilegia canadensis
6: Wild Geranium, Geranium maculatum
How Do I Maintain My Native Landscape?

1. Weed Control:
During the first few years, control weeds by hand pulling or spot spraying with a glyphosate herbicide such as Roundup™. As the plants become more established, they are able to crowd out weeds, reducing the need for additional weed control.

2. Fertilization:
Fertilization is not necessary with most native landscapes; however, adding one to two-inches of compost each fall helps maintain the fertility and organic matter needed by native plants.

3. Mulching:
Mulching prevents the loss of soil moisture, controls soil temperature, and suppresses weeds. Once shrubs and grasses are established, mulching isn’t necessary; however, many people prefer to mulch around large woody plants such as trees and large shrubs.

What else can I do?

Do You Have a Spectacular Native Landscape?

Shirley Heinze Land Trust works to protect and restore natural areas within Northwest Indiana. Each year, Friends of Shirley Heinze offers the “Bringing Nature Home Native Landscaping Award,” recognizing outstanding examples of native landscapes. To find out more information visit: heinzetrust.org/bringing-nature-home

What to plant instead:

Monarch Butterfly Impact
Female Monarchs lay their eggs on milkweed plants (Asclepias) to ensure the best chance of survival for their larvae. However, an invasive species known as Black Swallow-wort (Cynanchum louisea), threatens the survival of Monarch caterpillars. Even though Black Swallow-wort is a member of the Milkweed family, when caterpillars eat these plants they cannot survive. Monarch females have been known to prefer laying their eggs on the plants, even when it’s growing in the same field as common milkweed. Swallow-wort plants are not only toxic to Monarch butterfly larvae, but also to livestock and deer.

What can I do?

Green Roof
A roof partially- or completely-covered with plants. A green roof system includes soil, plants, waterproofing, and a drainage system.

Benefits:
• Reduces impact to storm sewer piping and structures
• Recycles rainwater
• Reduces stormwater runoff

Composting
The process of placing yard waste, organic waste, and some paper products into a bin to decompose.

Benefits:
• Reduces waste hauled to landfills
• Provides a natural fertilizer to plants

Rain Barrel / Cistern
Containers used to collect and store rain water from impervious surfaces for reuse in irrigating plants.

Benefits:
• Recycles rainwater
• Reduces impact to storm sewer piping and structures

Bioswale / Vegetated Swales
Shallow trenches or road shoulders planted with native plants and used to slow the speed of surface stormwater runoff.

Benefits:
• Allows stormwater to infiltrate back into the soil
• Filters silt, pollutants, and debris
• Recharges ground water
• Reduces impact to storm sewer piping and structures
• Provides locations for wildlife habitats

Rain Garden
Landscaped areas planted with native perennial plants that slow stormwater runoff from surrounding impervious surfaces such as roofs, sidewalks, and parking lots.

Benefits:
• Allows stormwater to infiltrate back into the soil
• Filters silt, pollutants, and debris
• Reduces the rate of runoff
• Recharges ground water
• Provides habitat for birds and wildlife

Permeable Paving
Paving that allows stormwater to penetrate through surface and stone base materials and eventually infiltrate the soil below. Types of permeable paving include reinforced gravel and grass paving, permeable concrete, permeable asphalt, and modular unit pavers.

Benefits:
• Reduces impact to storm sewer piping and structures
• Recharges ground water
• Reduces urban heat island effects

Photo Credit: ©Teune at the English language Wikipedia

What to plant instead:

Milkweed, Native plants also help restore Monarch Butterfly habitats. To learn more visit: monarchwatch.org

Photo Credit: ©Teune at the English language Wikipedia

Photo Credit: Marshall D’Arcy

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