Habitat Haven Resource Guide

Sagebrush
Steppe Land Trust

Habitat loss and invasive species have a monumental impact on our landscape and can overwhelm our imaginative capacity as to how we as individuals can help. Sagebrush Steppe Land Trust's (SSLT) "Habitat Haven" program encourages individuals to be a part of the solution by planting native plants that benefit pollinators and birds. Native plants can be readily purchased from the community's locally owned nurseries. Southeast Idaho's native plants are essential to our cherished pollinators and birds; *you* can play a vital role in assuring their prosperity.

By transforming your yard, patio, or other space into a "Habitat Haven," we give a bit of refuge back to species venturing into our urban spaces. Imagine seeing and interacting with a rich array of pollinators such as bees, hummingbirds, and maybe even monarch butterflies, right in your own backyard. With your help, our community will become more eclectic with the buzz of life. We are here to provide resources and answer questions as you embark on making your space a "Habitat Haven."

We're excited to offer this program free of charge this year, helping remove barriers to participation thanks to the generosity of a dedicated donor and the support of North Fork Native Plants and Idaho Grimm Growers.

SUPPORTED BY:

NORTH FORK NATIVE PLANTS
custom growing and restoration services

IDAHO GRIMM GROWERS WAREHOUSE CORP. Blackfoot BRAND Est. 1921 Idaho

Habitat Haven

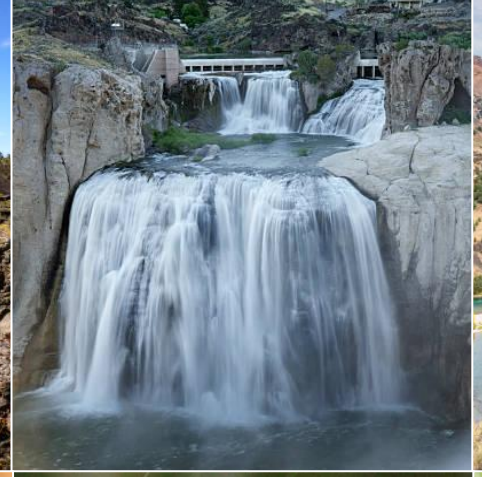
The Portneuf Valley is a richly biodiverse region of Idaho.

Our native plants and wildlife are essential to our personal, social, economic, and environmental well-being.

Backyards and front lawns are essential venues to bridge natural landscape into our city. It's a park you can plant!

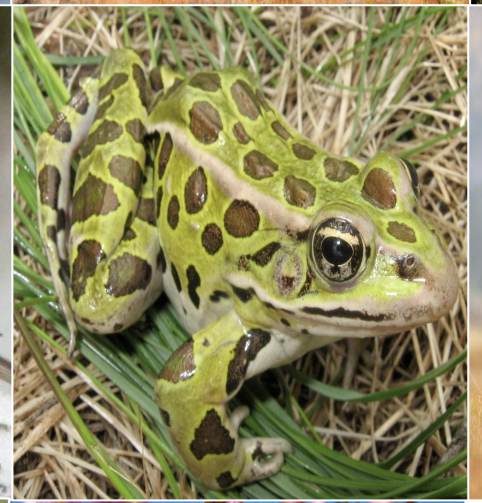
If you have a backyard, front lawn, balcony, or porch, native plant gardening is a fantastic way to enjoy some wilderness-style nature from the comfort of your home while partnering with the community to preserve our wildlife!

ECOSYSTEM DIVERSITY
Essential for a healthy planet

SPECIES DIVERSITY
Essential for healthy ecosystems






GENETIC DIVERSITY
Essential for healthy species




Threatened species

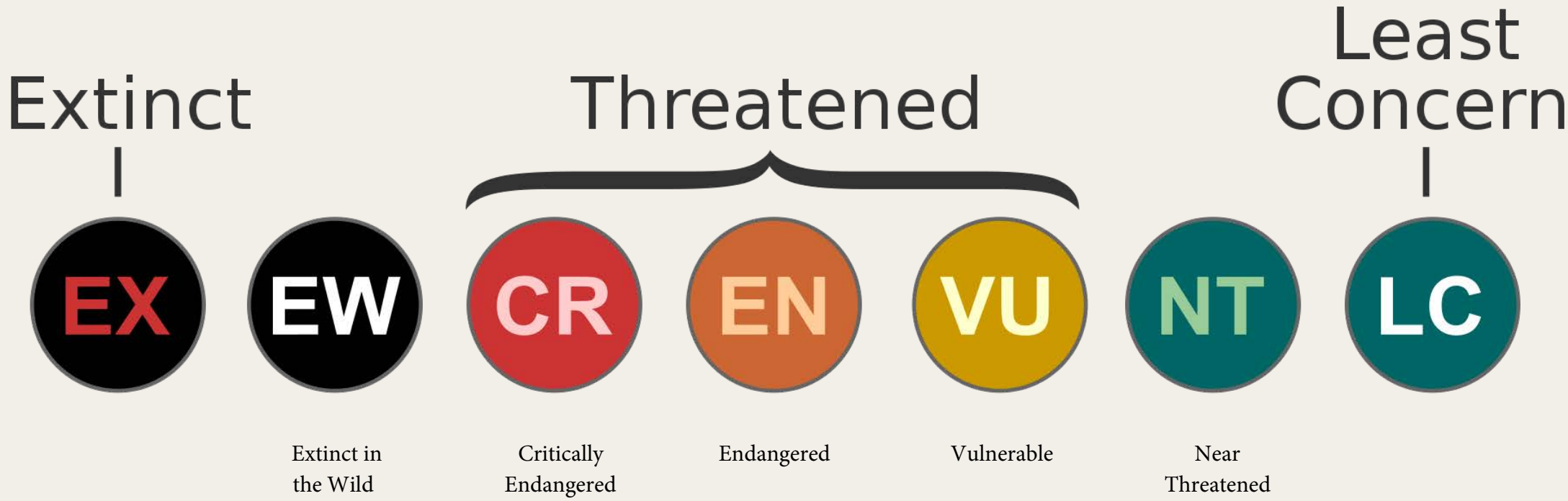
Biodiversity is the variety of life found in the world or a specific region. It reduces when species become extinct. Plant and animal species at risk for extinction are known as ‘threatened’.

Threatened species are identified by their conservation status. This is determined worldwide under Federal legislation [*Endangered Species Act 1973 (ESA)]* and In-State via the NatureServe network of Natural Heritage Programs and Conservation Data Centers’ rankings.

The following are some of the many factors used to determine conservation status:

- number of known occurrences
- habitat quality and range
- estimated number of individuals
- increasing or decreasing trends in populations and habitat
- threats to the populations and habitat

Federal and State statuses use different categories and parameters; however, both indicate how likely a species is to go extinct.



IDAHO'S BIODIVERSITY

Idaho is home to an estimated 10,000 different plant and animal species. These range from grasses to trees and the smallest of insects to the largest of grizzly bears.

Idaho's State Wildlife Action Plan identified nearly 270 birds, mammals, reptiles, invertebrates, and plants that require attention, and declines in biodiversity have been captured.[1]

Create a Habitat Haven to help threatened species and increase biodiversity!

- Plant local, native plants
- Plant a wide variety of native flowers, grasses, shrubs, and trees
- Establish feeders, ponds, and bug hotels for native animals to live in
- Reduce use of pesticides and chemicals in yards and gardens

Ute Ladies'-Tresses, threatened plant species. Photo credit: USFWS/B. Hotze

[1] https://www.idahoconservation.org/our-work/wildlife-program/)

We need pollinators; pollinators need gardens

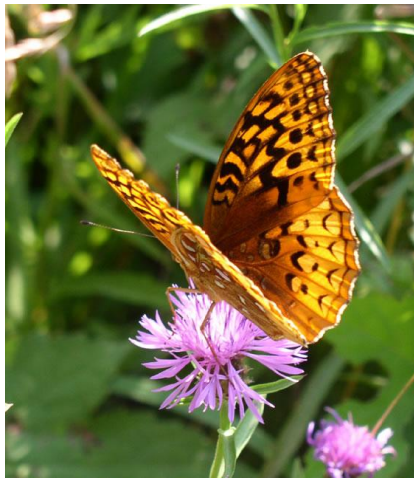
Pollinators

When we think of pollination, the first animals to typically pop into our heads are bees. Though bees are the most common, pollinators also include birds, wasps, butterflies, flies, beetles, bats, hummingbirds, and any animal that can move pollen from one flower to another, allowing it to reproduce.

Pollinators are the world's most important animals. Not only are they fundamental to the survival of natural ecosystems through the pollination of wild plants, but they also pollinate many of our crops. This pollination gives us increased crop yield, quality, and stability, making pollinators critical for food production, human livelihood, and the persistence of human-made ecosystems.

Unfortunately, many factors have been leading to pollinator declines

- Habitat loss
- Nutritional deficiency
- Parasites
- Pathogens
- Pesticide exposure
- Beekeeping practices



Habitat loss is the biggest contributor, as buildings replace and separate natural ecosystems. But luckily, it's combatable! The two things all pollinators require are flowers that produce pollen and nectar for them to eat and planted areas to nest and lay eggs. Through a native garden, we can create pollinator hubs in our yards, filled with diverse, blooming plant communities. This way, we can keep the essential relationship between us, the pollinated, and the pollinators strong and lasting[2].

QUICK FACT: Idaho is home to over **400 species of pollinators**, including native bees, birds, bats, and insects. **Many of our state's leading crop plants rely on pollination[1]**.

[1] https://agri.idaho.gov/main/wp-content/uploads/2018/06/Idaho-Pollinator-Protection-Plan-1-17.pdf

Rebuilding Biodiversity

Aside from pollinators, birds, mammals, frogs, and other wildlife can use your garden for refuge, to eat the tiny critters that live in it, or as a permanent home. So not only will you be restoring native plants, but those plants will be feeding, protecting, and growing animal populations. We tend to go to national parks or wilderness areas to relax and enjoy the pristine nature and hope to spot animals along the way. While birds, pollinators, and other small creatures are at home in small garden spaces, urban areas are potentially dangerous for big game and other larger mammals. Garden selections should not encourage these visitors, for their safety as well as ours

"Just like how a diverse and **colorful diet makes us healthy**, a wide **variety of wildlife makes the planet healthy**"

The presence of small mammals in our gardens not only nourishes our spirits but is also a sign of a healthy, functioning ecosystem. Biodiversity feeds nature and ensures balance. When working correctly, nature gives us the benefits of clean air and water, healthy soils, nutrient cycling, temperature regulation, storm protection, and even helps stop disease outbreaks.

Having a garden that can provide for all kinds of wildlife such as birds, rabbits, frogs, and other small animals means you have a successful habitat haven. You have made a fully functioning ecosystem! Also, it means you may see a visiting hawk, owl, fox, or all three! Small mammals alongside toads, frogs, and snakes, not only devour pest insect populations, but provide food for larger predators.

On top of native plants, here are some easy supplemental ways to maximize biodiversity in your garden:

- Bird houses
- Bat houses
- Insect and butterfly hotels
- Wood and stone heaps
- Ponds and bird baths

QUICK FACT: "If Americans were to **replace only half their lawns** with native plants, we could **build a 20-million-acre network of habitat!"**[1]

[1] https://www.nps.gov/articles/000/gardening-for-wildlife-with-native-plants.htm

"The relationships between all living **plants and animals create the web of life**, which can be seen as a safety net that helps **ensure the survival and welfare of all living things** on this planet, including humans."[1]

Why native plants?

From the soil to the sun, mammals, birds, reptiles, and amphibians depend on nature's complex relationships for survival.

A yellow warbler is looking for insects to feed on. Those bugs can be found on top of plants, eating its sweet leaves freshly produced from the sunlight. The plant tries to avoid being eaten by releasing poisonous, foul-tasting chemicals. However, the bugs have evolved over millennia to eat away and survive these efforts. Over time, leaves fall off, and fungi and bacteria in the ground that have evolved to break down those decaying leaves return the nutrients to the soil as fertilizer for the plant to grow. Nature is made up of intertwining threads, that together create a resilient, healthy, and balanced planet for us all. When a species disappears or is replaced with a non-native species, it's like the thread is cut, leaving holes and weakening the system.

Yellow Warbler eating an insect

Monarch Caterpillar eating Milkweed

An example of this is the monarch butterfly. The monarch is a native species to Idaho and has a long-established relationship with the milkweed plant. Monarchs exclusively lay their eggs on milkweed species because monarch caterpillars have evolved the ability to digest the poisonous milkweed leave, where other insects haven't.

Although other introduced, non-native plants, like lilies or tulips, bring blooming flowers with nectar, which adult monarch butterflies can eventually feed on, their caterpillars cannot. Monarchs have taken thousands of years to evolve this ability to eat milkweed; therefore, introducing a non-native flower and expecting them to eat it is as likely to happen as our pets suddenly evolving the ability to talk.

Adaptation in nature takes time, and unfortunately, introduced plant species typically contribute little to the food web, with most exotic plants we see around town providing as much nutrition as concrete.

[1] https://www.greenpeace.org/usa/5-reasons-we-need-wildlife-in-order-to-survive/

Which native plants should I grow?

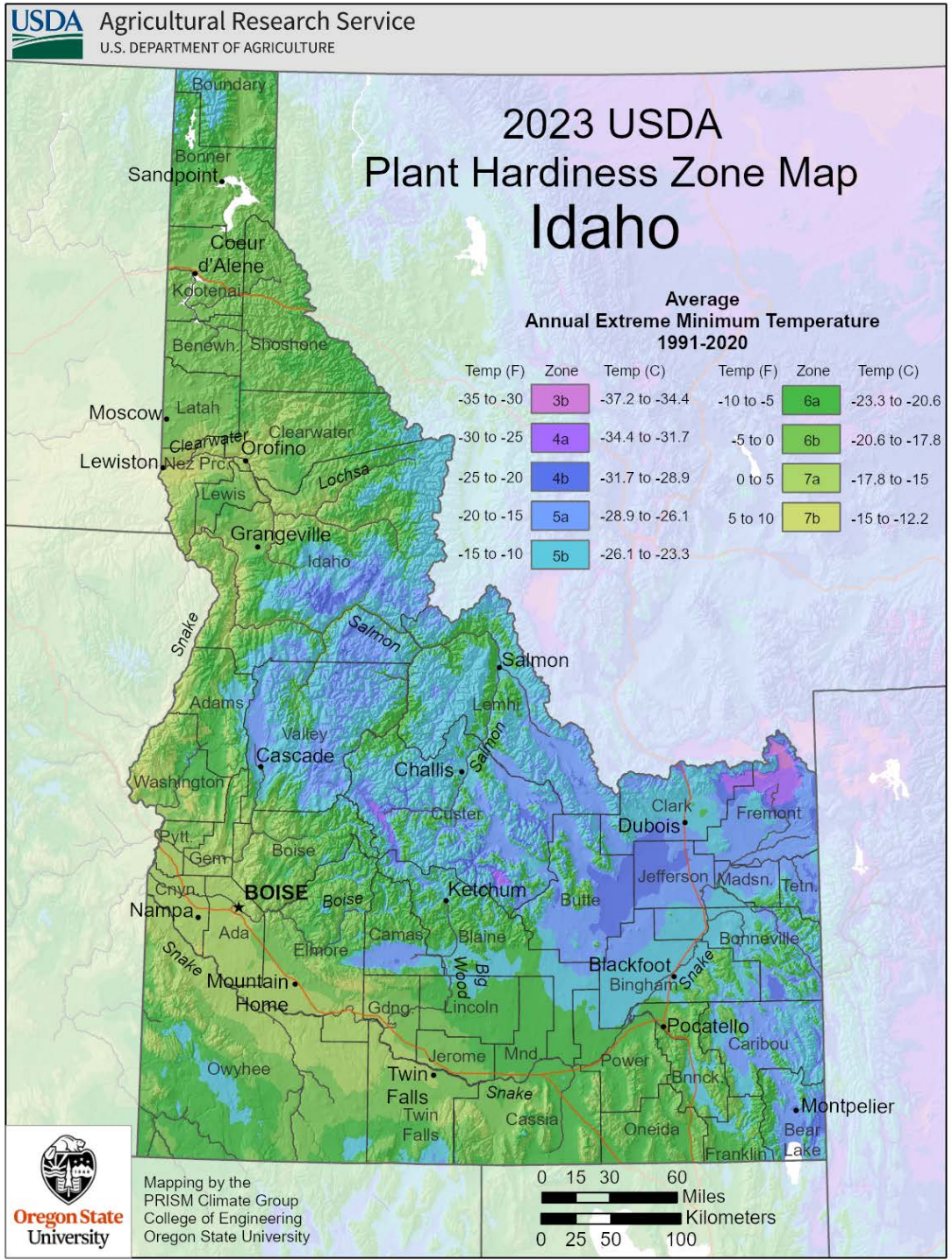
Native plants are those that occur naturally in a location. Native vegetation grows in groups of local native plants, which vary depending on local environmental conditions.

When building a native garden, it is helpful to know which native plants grew on your property in the past, as it can guide you in selecting the most suitable local native plants for your yard.

The Environmental Protection Agency (EPA) classifies areas of similar geology, physical geography, vegetation, climate, soils, land use, wildlife distributions, and hydrology as ‘ecoregions’ within the U.S.

This map shows the ecoregions of Idaho. Pocatello belongs to the Snake River Plain ecoregion. This region is known for a semi-arid climate with strong heat, snow, and rainy seasons. It has plains, canals, rivers, low hills, silty and sandy valleys, and scattered lava fields. Originally, shrubs, primarily sagebrush, covered this area.

When you plant the right native plant in the right area, not only do you build an effective habitat, but you also save money, water, effort, maintenance, and time.



How can my plants survive the winter?

Gardeners and growers can also understand which perennial plants will thrive year-round at certain locations using the USDA Plant Hardiness Zone Map. Knowing how cold it gets in your area can give you a better idea of what to plant, and if your plants can survive those cold temperatures.

Zone numbers are often listed in perennial plant catalogs - when purchasing plants from plant suppliers and nurseries, select plants from the appropriate zone to ensure a stable and healthy garden. When selecting plants outside of your zone, you may see plant damage and poor growth in your garden.

This map provides a general guideline you can follow and use to contribute to the success of your Habitat Haven. Plant hardiness zone maps cannot replace your own detailed knowledge of your garden learned through hands-on experience.

For more information, visit https://planthardiness.ars.usda.gov/.

Grow these native plants to make a habitat haven

The Snake River Plain is home to over 2000 plants. They come in a variety of colors, textures, and sizes. Varying from trees and flowers to grasses and shrubs, there are more than enough choices for you to make the garden of your dreams.

Not all species will be listed. To see more options please visit https://www.highcountrygardens.com/ or your local nursery.


Native Plant Garden

GROUNDCOVER


Sonoma Coast Yarrow
Achillea millifolium

BEE FRIENDLY
SUN AND SHADE
DEER RESISTANT
LOW WATER
RABBIT RESISTANT
ATTRACTS BUTTERFLIES
EASY TO GROW


Prairie Sagebrush
Artemisia frigida

LOW MAINTENANCE
FULL SUN
DEER RESISTANT
LOW WATER
RABBIT RESISTANT
FRAGRANT


Snowy Evening Primrose
Oenothera speciosa

DEER RESISTANT
LOW WATER
EASY TO GROW
FRAGRANT
FULL SUN

EVERGREENS

- ATTRACTS HUMMINGBIRDS
- FULL SUN
- DEER RESISTANT
- LOW WATER
- RABBIT RESISTANT
- FRAGRANT

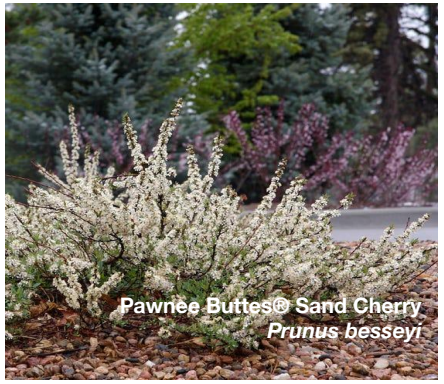
- ATTRACTS HUMMINGBIRDS
- LOW MAINTENANCE
- ATTRACTS BIRDS
- FULL SUN
- RABBIT RESISTANT
- LOW WATER
- BEE FRIENDLY
- EASY TO GROW

- ATTRACTS BUTTERFLIES
- EASY TO GROW
- DEER RESISTANT
- SUN AND SHADE
- RABBIT RESISTANT
- LOW WATER
- BEE FRIENDLY

SHRUBS AND GRASSES

- ATTRACTS BIRDS
- FULL SUN
- DEER RESISTANT
- LOW WATER
- LOW MAINTENANCE
- EASY TO GROW

- ATTRACTS BIRDS
- LOW WATER
- ATTRACTS BUTTERFLIES
- BEE FRIENDLY
- FULL SUN



- ATTRACTS BIRDS
- LOW MAINTENANCE
- ATTRACTS BUTTERFLIES
- FRAGRANT
- BEE FRIENDLY
- FULL SUN
- EASY TO GROW
- ZERIC

HERBS AND WILDFLOWERS

- ATTRACTS BUTTERFLIES
- ATTRACTS HUMMINGBIRDS
- DEER RESISTANT
- RABBIT RESISTANT
- BEE FRIENDLY
- EASY TO GROW
- FRAGRANT
- SUN AND SHADE
- LOW WATER

- ATTRACTS BUTTERFLIES
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Learn more about native plants included in this year's kit

Woods Rose (*Rosa woodsii*)

An attractive shrub primarily pollinated by bees, and acts as a food source to a variety of wildlife. Will spread by suckers and rhizomes, and regenerates quickly.

Source / learn more: NRCS / USDA plant guide

Chokecherry (*Prunus virginiana*)

Grown as a large shrub but can also be trained to be a small tree. Flowers boom in the spring and develop into small, dark red to black fruit. Chokecherries are often made into preserve, syrups, and jellies. Can be prone to suckers. These grow best in full sun but tolerate partial shade. Drought and frost tolerant.

Source / learn more: Utah State University Yard and Garden Extension

Rubber Rabbitbrush (*Ericameria nauseosa*)

A tough native shrub that supports butterflies and birds. Extremely drought-tolrant, full sun. Vibrant display of yellow flowers in fall.

Source / learn more: Native Plants for the Intermountain West

Want to know more?

Visit the Xerces Society website for state specific lists of pollinator-friendly native plants.

xerces.org/pollinator-conservation/pollinator-friendly-plant-lists

Free Seed Resources:

- LiveMonarch.com
- monarchwatch.org
- https://altnps.org/seed-packs
- https://www.buzzaboutbees.net/free-wildflower-seeds.html

Website Resources

- **Idaho Fish and Game Catalog-** View the native plant and animal species in your area and their conservation status.
- **NatureServe Explorer-** Source for information on rare and endangered species and ecosystems in the Americas.
- **Idaho Native Plant Society-** Collects and shares information regarding native plants.
- **Idaho Master Gardener-** Learn to grow and care for plants and landscapes in a scientifically sustainable way. Lear skills such as conflict resolution, resource utilization, communication, leadership, goal setting, critical thinking and problem-solving, marketing, healthy lifestyle choices, stress and disease management.

Our Local Partners:

North Fork Native Plants
Grimm Growers
The Pocatello Greenhouse
Westwood Growers

FOR MORE INFORMATION

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Sagebrush
Steppe Land Trust
For Generations To Come