

BACKYARD RESTORATION ON THE PALOUSE

*A Guide to Restoring Native
Palouse Prairie in Your Yard*



Palouse Conservation District works through voluntary, incentive-based programs to assist land managers and agricultural operators with the conservation of natural resources throughout the Palouse River Watershed, with a primary focus within district boundaries.

PCD's mission is to foster the voluntary conservation of natural resources by providing the tools, education, technical expertise, and financial assistance to support our local community.

Cover photo: Elisabeth Brackney

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This publication serves as a guide for advancing conservation goals and projects. Strategies may vary based on resource concerns and site location.

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Paintbrush

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What is Palouse Prairie?

*Palouse Prairie remnant with Arrowleaf Balsamroot (Balsamorhiza sagittata) found at Whelan Cemetery
Photo by Ivy Woltering*

The deep, fertile soils of the Palouse that support today's vast agricultural fields were once home to a sprawling prairie of bunchgrass and wildflowers, with small patches of shrubs and trees. Today **less than 1%** of native Palouse Prairie habitat remains, fragmented into tiny pockets where it was historically too steep or rocky to farm [1]. This makes it **one of the most endangered ecosystems** in the United States [2].

The majority of Palouse Prairie remnants are located on private property [1], but some publicly accessible native prairies remain, including the south overlook of Kamiak Butte County Park, Steptoe Butte State Park, and the historic Whelan Cemetery.

Another way to experience a well-preserved remnant is to contact the Palouse Land Trust to schedule a private tour of the Dave Skinner Ecological Preserve near Moscow, Idaho.

Several local organizations and dedicated individuals have worked hard to conserve, restore, and raise awareness for what little is left of this unique ecosystem. The Palouse Prairie Foundation was founded in 2004 to promote preservation and restoration activities, with its website serving as a hub to connect Palouse Prairie enthusiasts with resources and informational opportunities. Direct restoration projects have been implemented by the Latah Soil & Water Conservation District, USDA Natural Resources Conservation Service (NRCS) Latah County Field Office, and The Phoenix Conservancy, while Eastern Washington University is working to restore 120 acres of campus property to its native Palouse habitat. Several private landowners have dedicated countless hours and resources to restoring remnants, receiving some financial assistance from the U.S. Fish and Wildlife Service or USDA, or financing from their own pocket.



Douglas' brodiaea (Triteleia grandiflora)



Historic range of the Palouse Prairie ecoregion

The USDA NRCS Plant Materials Center in Pullman, Washington published a series of technical resources on restoration techniques and strategies to assist land managers in restoring native prairie. Additionally, the Palouse Land Trust collaborates with landowners to help permanently conserve these rare ecosystems for the enjoyment of generations to come.

Think you may already own a Palouse Prairie remnant? Consider preserving it for the next generation by setting restrictions on future development. Contact the Palouse Land Trust for options.

Why Plant Native?

They may be small, but backyard remnants can pack a big punch!

Native species can be planted to restore Palouse Prairie patches in backyards and small acreages. This promotes connectivity between habitat patches for insects, birds, and small mammals that need it.

Native plants are plants that occur naturally and historically within a region. They are the ecological foundation that native wildlife depend upon for survival.

In addition to adding habitat value, native species are specifically adapted to our region and growing conditions. As a result, these native species are hardier, lower-maintenance, and more drought-tolerant than non-native plantings. Their deep root systems serve to reduce erosion and store carbon below ground.



Bumblebee on Palouse thistle (Cirsium brevifolium)

Benefits of Native Plants

- Enhanced biodiversity · Support for pollinators
- Carbon storage · Beauty · Water conservation · Erosion control
- Low maintenance or fertilizer needed

Five Steps to Get Started

-  1 Choose the site
-  2 Prepare the site
-  3 Select species
-  4 Plant & seed
-  5 Be patient!

Blooms on Steptoe Butte





Step 1: Site Selection

Palouse Conservation District staff conduct maintenance on a native plant demonstration garden

CONSIDER YOUR GOALS

Looking to complete a full prairie restoration? Interested in attracting pollinators or other wildlife? Aiming to reduce erosion or simply add a few natives to the landscape? Designing for a natural look or a more manicured look? Answers to these questions will help guide your project. Be careful not to take on too much at one time. Once you have a small area established, consider slowly expanding it outwards in the following years.

GET TO KNOW THE SITE

Consider sunlight, topography, soil, moisture, and current vegetation. Try to observe the space at multiple points throughout the day and across the seasons to account for sunlight shift. Keep in mind that most native prairie species prefer full-sun conditions of six or more hours of sunlight per day. Whenever possible, target the area of the property that gets the most sunlight. South facing slopes can be a good place to start as they tend to be more exposed.

Determining site conditions ahead of time will help select the best species to meet your goals.

It takes time to build and nurture an understanding of the landscape. Getting to know your site will help you make more informed decisions throughout your planting process. Be patient and keep in mind that every restoration project is unique.

Key Questions

- Where in the site is the sun always shining? Where is it shady? Partly shady?
- Is it drier in some areas and wetter in others?
- Is the site on a slope? Which direction is it facing?
- Are there lower lying areas? These likely retain more moisture.
- What is growing? Turf grass, trees, invasive or noxious weeds, annuals, perennials?
- How many square feet is the site?



Step 2: Site Preparation

It's important to properly prepare the site before planting. Preparations may include removing a portion of lawn and managing weeds. These can be done with or without the use of synthetic chemicals.

Be sure to identify each potential weed species on the site before trying to control them as different species will require different control methods. For instance, hand pulling will work for some weed species, but for others it will only lead to a larger infestation.



Restoration site in progress

Before diving headfirst into any weed or lawn removal method, mow the area down to the shortest height possible. Try to target weed removal at the beginning of the season when weeds are naturally at their smallest and weakest [5].

While the quickest way to prepare the site for planting will typically be through the careful application of herbicides, alternative methods also exist that can be applied alone or in conjunction with herbicide application. Whatever methods applied, keep in mind that it's unlikely all weeds will be successfully removed. Be prepared to fight particularly persistent weeds for multiple growing seasons.



A remnant prairie patch at Steptoe Butte

Recommended Weed Resources

You can consult your local County Weed Board to determine the best ways to control weeds on your site. The Washington State University Extension publication *Invasive Weeds of Eastern Washington* is a valuable resource for identifying and managing weed species. It can be found and downloaded for free from the online WSU Extension Publications store.

If you're having trouble identifying a weed, check out the Washington State Noxious Weed Control Board's online Weed Search tool at www.nwcb.wa.gov.



Lawn & Weed Removal

Herbicide-Free Methods

MANUAL REMOVAL

Rent a sod cutter or hire a local landscaping company to cut the sod. Once the sod is removed, follow up with another weed control method as weed seeds that were previously too deep to germinate may now be exposed.

Some weed species respond well to hand-pulling, hoeing, or digging. However, some weeds require complete root removal, and manual removal methods could make these infestations more aggressive. Be sure to accurately identify the weed in question before trying to manually remove it.

SHEET MULCHING

Over the course of a few months, use layers of cardboard, newspaper, and bark mulch to smother weeds and lawns. These materials will eventually decompose, but can also be planted into as needed. Cotton and burlap may also be used but will take longer to fully decompose.

SOLARIZATION

Place a plastic sheet over the area to kill both lawn grasses and weeds, including weed seeds waiting to germinate. Many sources recommend using clear plastic over the course of a few weeks at the height of summer, but local experts have found that black plastic left on for one to two full growing seasons may be more effective in our climate. Don't be afraid to experiment and find what works. The plastic is intended to be removed before you begin planting.

WEED MATTING

Plastic landscape fabric or weed matting is available for purchase at local landscaping and hardware stores. Weeds are suppressed in a similar fashion to solarization; however, weed matting is woven to allow for water and air flow and is intended to stay on for multiple years. Plant directly into the fabric by cutting small holes and plan to remove it within a few years of installation.



Herbicide Methods

When applying herbicides either alone or in conjunction with non-chemical methods always keep in mind “*the label is the law*” [5]. **It is important to carefully read and follow the label.**

Look for safety, storage, and restriction information, and be sure to thoroughly read all application instructions. Herbicide applicators may be held liable for any damages caused by the use of the herbicide.

Limit use of herbicides whenever possible to reduce the risk of ecological harm to insects, including pollinators, as well as to slow the onset of herbicide resistance. Carefully target only plants of concern to avoid drift (accidental spraying of surrounding plants).

For more information on which herbicides to choose and how to properly apply them, contact your local County Weed Board or university extension office.

Non-Selective Herbicides
Indiscriminate, targeting any plant they come into contact with.

Selective Herbicides
Target only specific types of plants without harming others. For example, broadleaf herbicides are not effective against grasses.

Identify the targeted weed before choosing an herbicide.

Common Weeds & Control Options



Common Tansy
Tanacetum vulgare

Target young seedlings. Hand pull or dig when soil is moist. Revegetate area promptly. Mow to reduce seed.



Houndstongue
Cynoglossum officinale

Hand-pull, cut below root crown. Mow if flowering to eliminate seed production. Revegetate area promptly.



Prickly Lettuce
Lactuca serriola

Resistant to some herbicides. Hand-pull/dig when soil is moist. Mow to prevent seed production.



English Ivy
Hedera helix

Mow/cut & dig up from roots. Best pulled when dormant. Don't leave cut vines to re-root. Sheet mulch area after clearing.



Knapweeds
Centaurea stoebe, *C. diffusa*, & *Rhaponticum repens*

Hand-pull, dig, or hoe. Mow over multiple seasons. Wear gloves when handling. Revegetate area promptly.



Rush Skeletonweed
Chondrilla juncea

Increase competition in area. Mow before flowering to prevent seed set. Hand-pull for 6-10 years; remove roots.



Thistles (Bull, Musk, Scotch)
Cirsium vulgare, *Carduus nutans*, & *Onopordum acanthium*

Hand-pull when soil is moist. Mow/cut before flowering; remove all leaves. Bag cut flowers.



Field Bindweed
Convolvulus arvensis

Never pull! Bag stems if cut. Heavily sheet mulch & solarize. Keep it continually stressed.



Oxeye Daisy
Leucanthemum vulgare

Increase competition in area. Mow repeatedly before seed set. Hand-pull and be sure to remove root fragments.



Salsify
Tragopogon dubius

Hand-pull, hoe, or rototill. Bag & remove from site. May set seed even after cut/pulled.



Thistle, Canada
Cirsium arvense

Keep it continually stressed. Increase competition in area. Install weed fabric & sheet mulch. Mow repeatedly.

Unless identification of a thistle can be confirmed, consult an expert. There are some uncommon beneficial native thistles that should be protected.

Weeds, cont.



White Bryony
Bryonia alba

Sever 3-4" below root crown in autumn. Pull vines away from other plants. Grows back quickly from root.



Plantain
Plantago major

Hand-pull, dig, hoe, or rototill.



Medusahead
Taeniatherum caput-medusae

Hand-pull, dig, hoe, rototill, or mow before seed production; difficult to remove after seed production.



Cheatgrass
Bromus tectorum

Hand-pull prior to seed set. Resistant to some herbicides.



Bulbous Bluegrass
Poa bulbosa

Hand-pull, dig, hoe, or rototill. Revegetate area promptly to create competition.



Ventenata
Ventenata dubia

Hand-pull when soil is moist. Mow before seed heading to prevent tangling in equipment.



Careful application of herbicides can be used to manage weeds



Hand pulling is a non-chemical method recommended for some, but not all, weed species



INVASIVE ANNUAL GRASSES



Step 3: Species Selection

When choosing which native species to plant, pay attention to each species' preferred site conditions. Most native prairie species prefer dry sites with full sun; however, there are some that do well under shade or in wetter areas. Consider individual conservation goals for the property. Some species are better than others at attracting wildlife, hosting pollinators, stabilizing soil, or providing windbreaks.

Full-sun loving species will do well on exposed, south facing slopes. Flat areas with exposure to 6+ hours of sunlight are also good choices. When choosing plants, keep in mind that north facing slopes tend to be shadier and hold more moisture than south facing slopes.

Species that tolerate wetter conditions are great options for low-lying areas and beneath gutter downspouts. Some of these species include Cow Parsnip (*Heracleum lanatum*), Ballhead Waterleaf (*Hydrophyllum capitatum*), Common Camas (*Camassia quamash*), and Western Iris (*Iris missouriensis*).



Lupine (*Lupinus spp.*)



Yarrow (*Achillea millefolium*)



Western mountain aster (*Symphotrichum spathulatum*)

Try to familiarize yourself with native species during all stages of growth before planting them in highly visible areas. Some plants may appear very beautiful at one stage but lack aesthetic attributes throughout the life cycle.

As the climate continues to change, our area is expected to get hotter and drier. It may make sense to choose species that are well-adapted to these conditions. Alternatively, it may make sense to choose a broad range of species with variable climate tolerances, which may boost biodiversity and the chances that something will be able to adapt to the site in a changing future. Again, don't be afraid to experiment to see what works.

Planting a diverse mix of species will also encourage resilience to herbivory and stress. The more species planted, the greater likelihood of survival.



Prairie smoke (*Geum triflorum*)



Blanketflower (*Gaillardia aristata*)



Arrowleaf Balsamroot (*Balsamorhiza sagittata*)



Whelan Cemetery in June

Recommended Species

Forbs

Arrowleaf Balsamroot



Balsamorhiza sagittata

Blanketflower



Gaillardia aristata

Common Camas



Camassia quamash

Lewis Blue Flax



Linum lewisii

Missouri Goldenrod



Solidago missouriensis

Nettleleaf Giant Hyssop



Agastache urticifolia

Prairie Smoke



Geum triflorum

Scarlet Paintbrush



Castilleja miniata

Showy Milkweed



Asclepias speciosa

Silky Lupine



Lupinus sericeus

Slender Cinquefoil



Potentilla gracilis

Taper-leaved Penstemon



Penstemon attenuatus

Western Iris (Missouri Iris)



Iris missouriensis

Western Mountain Aster



Symphyotrichum spathulatum

Western Yarrow



Achillea millefolium

Wyeth Buckwheat



Eriogonum heracleoides

Trees

Black Hawthorn



Crataegus douglasii

Douglas Fir



Pseudotsuga menziesii

Ponderosa Pine



Pinus ponderosa





Quaking Aspen



Populus tremuloides




Shrubs

Blue Elderberry







Sambucus nigra subsp. cerulea

Oregon Grape







Mahonia aquifolium, Mahonia repens

Douglas Spirea






Spiraea douglasii

Golden Currant







Ribes aureum

Snowberry








Symphoricarpos albus

Western Serviceberry



Amelanchier alnifolia

Woods' Rose, Nootka Rose



Rosa woodsii, Rosa nutkana

Grasses

Bluebunch Wheatgrass



Pseudoroegneria spicata

Idaho Fescue



Festuca idahoensis

Prairie Junegrass





Koeleria macrantha


Sandberg's Bluegrass





Poa secunda


- 


Full Sun
6+ hours/day
- 

Full Sun to Partial Shade
- 

Moisture-Tolerant to Moisture-Loving
- 

Attracts Pollinators
- 

Larval Host Plant
Where butterflies lay eggs
- 

Wildlife Habitat
Provides nesting material & cover
- 

Edible Plant
Edible berries, roots, and/or leaves

This is not an exhaustive list. Don't hesitate to experiment with different species to find what works for you and your site!

Seeds or Plugs?

Only source plants and seeds labeled for **Eastern Washington, Northern Idaho, or the Columbia Basin**. These plants and seeds will be locally adapted to this region. An online search for “wildflower seeds” or “native seeds” will likely show items that are not native to this specific ecoregion, and may contain species that are invasive to this area. Even a plant that is native to North America or the United States is not necessarily native here and may still outcompete local Palouse natives.

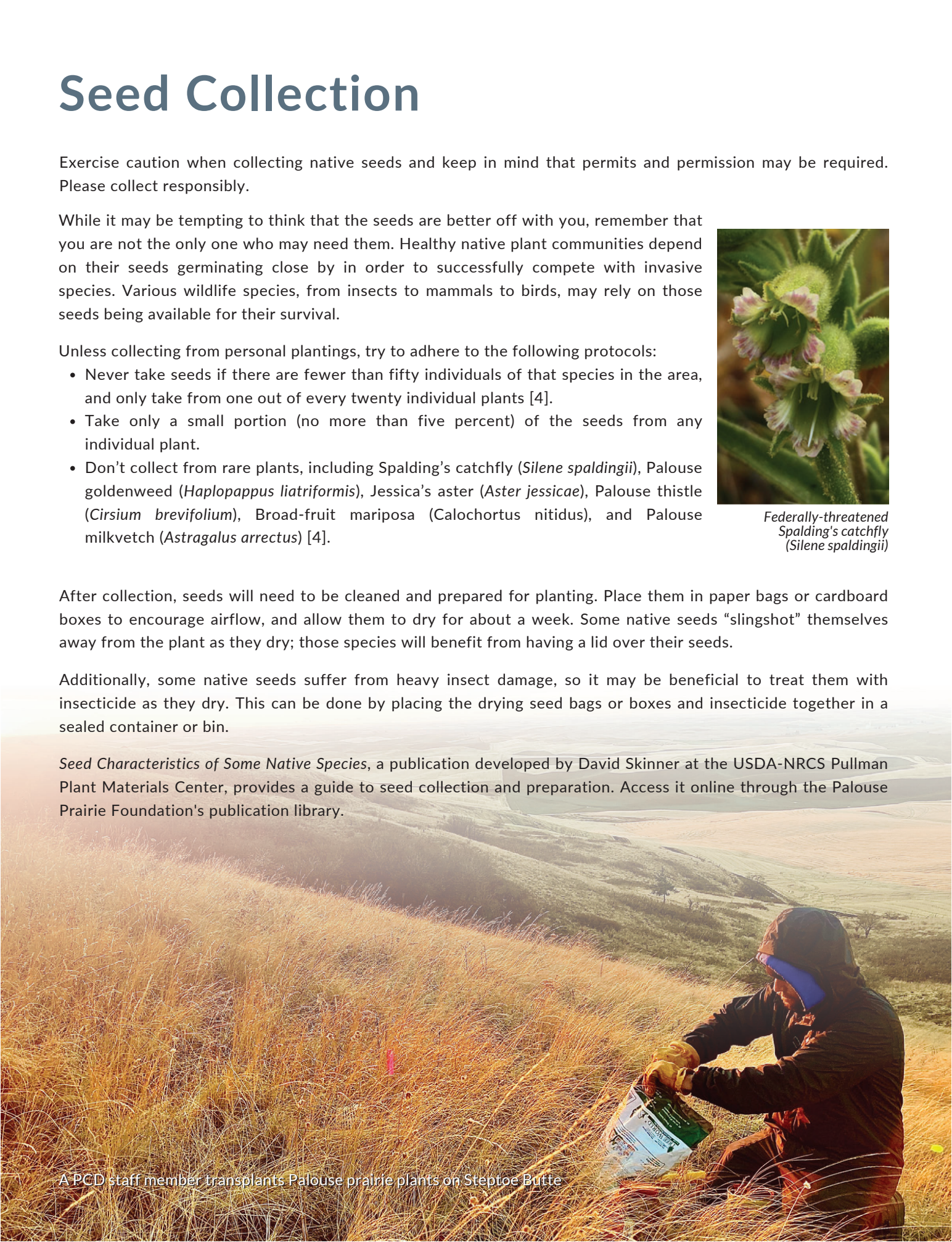
Plugs & Containerized Plants		Seeds	
Benefits	Drawbacks	Benefits	Drawbacks
Weed suppression <i>Less time with exposed ground</i>	More expensive	Cheaper	Slower establishment <i>3+ years depending on species</i>
Quicker establishment <i>Results in current season</i>	Limited by nursery stock	Easier / quicker initial labor	Cannot use sheet mulch method
Manicured / intentional aesthetic	Some species don't transplant well	Natural aesthetic	Less control over placement
More control over placement	Labor may be more tiresome	Grass seeds don't need stratification	Forb seeds need stratification

Select taller containers when buying container stock or plugs, as the root systems will be healthier and the added length will help the plant's roots grow deeper than those of surrounding weeds. Thinner and taller plugs are typically more economical, and they can better accommodate native roots than traditional one-gallon or four- to six-inch pots.

Can't decide between seeds and plugs? Why not try both? Seeds can be propagated to transplant at a later date.

SEED AND PLANT SOURCES *At publication*

- Clearwater Seed - Spokane, WA
- Grassland Northwest LLC - Clarkston, WA
- John Crock Learning Nursery, Palouse-Clearwater Environmental Institute - Moscow, ID
- White Pine Chapter Native Plant Sale, Idaho Native Plant Society - Moscow, ID
- Palouse Conservation District Plant Sale - Pullman, WA
- Plants of the Wild - Tekoa, WA
- Rose Creek Seed - Pullman, WA
- Westland Seed Inc. - Ronan, MT



A PCD staff member transplants Palouse prairie plants on Steptoe Butte

Seed Collection

Exercise caution when collecting native seeds and keep in mind that permits and permission may be required. Please collect responsibly.

While it may be tempting to think that the seeds are better off with you, remember that you are not the only one who may need them. Healthy native plant communities depend on their seeds germinating close by in order to successfully compete with invasive species. Various wildlife species, from insects to mammals to birds, may rely on those seeds being available for their survival.

Unless collecting from personal plantings, try to adhere to the following protocols:

- Never take seeds if there are fewer than fifty individuals of that species in the area, and only take from one out of every twenty individual plants [4].
- Take only a small portion (no more than five percent) of the seeds from any individual plant.
- Don't collect from rare plants, including Spalding's catchfly (*Silene spaldingii*), Palouse goldenweed (*Haplopappus liatrifolius*), Jessica's aster (*Aster jessicae*), Palouse thistle (*Cirsium brevifolium*), Broad-fruit mariposa (*Calochortus nitidus*), and Palouse milkvetch (*Astragalus arrectus*) [4].



Federally-threatened
Spalding's catchfly
(*Silene spaldingii*)

After collection, seeds will need to be cleaned and prepared for planting. Place them in paper bags or cardboard boxes to encourage airflow, and allow them to dry for about a week. Some native seeds “slingshot” themselves away from the plant as they dry; those species will benefit from having a lid over their seeds.

Additionally, some native seeds suffer from heavy insect damage, so it may be beneficial to treat them with insecticide as they dry. This can be done by placing the drying seed bags or boxes and insecticide together in a sealed container or bin.

Seed Characteristics of Some Native Species, a publication developed by David Skinner at the USDA-NRCS Pullman Plant Materials Center, provides a guide to seed collection and preparation. Access it online through the Palouse Prairie Foundation's publication library.

Step 4: Planting & Seeding

Timing is the most important consideration when planting and seeding native species. This is to ensure that plants have enough moisture to germinate and get established.

Spring	Seed Grasses April 1 - May 10 Plant Plugs April 15 - May 15	Keep seeds and plugs moist during the first few weeks, reducing water once established. Non-grass seeds require stratification before seeding.
Fall (early season)	Seed Before Mid-September Plant Plugs Before Mid-September	Keep seeds and plugs moist. Ensure enough time to establish before frost. Can be risky for seedlings. Plugs need at least 30 days of growth before frost.
Fall (dormant - late season)	Seed October 20 - November 10 After soil temperature decreases to 40°F	Ensures seeds will not germinate until spring, reducing the risk of frost killing young seedlings. No need to stratify before seeding.
Winter	Seed When 2+ months of 40°F soil remain Plant Plugs When ground is not frozen	Ensure that snowfall is expected to protect seeds from predators and wind. No need to stratify before seeding. Plugs will remain dormant.
Summer	Avoid this time of year	Planting and seeding is still possible, but will require manual seed stratification and significantly more water.



Dig Hole Measure Depth Remove Pot Fill & Mulch Water In

Plugs/Containers: Dig a hole wide and deep enough that there are no air pockets once filled in. The new soil should reach the soil level of the plug without mounding. The final surface should be flat or slightly concave to allow for moisture accumulation. Water the plant in deeply to further remove any air pockets.

Seeds: Create a seed bed with variations in the surface to provide micro-sites, and cover with a light dusting of soil to ensure good seed-to-soil contact. The seed should be no more than a quarter inch below the surface.

Seeding & Planting Tips

SEED PREP

Unlike native grasses, many native wildflower species require a cool, moist stratification period to stimulate germination. This can be done naturally by seeding in late fall or early winter for spring germination. It can also be done manually in the fridge. On average, native seeds require cool, moist stratification for sixty days.

There are a few ways to accomplish manual stratification, and they're all easily searchable online. Methods include wrapping seeds in moist paper towels or mixing them with moist soil before placing them in the fridge. By stratifying seeds manually, you have more options for when to sow the seeds and you can start them in pots before planting if desired.

Inoculate lupine seeds with rhizobia bacteria to help them get established. These bacteria form a symbiotic relationship with the plant to fix nitrogen.

SEEDING

Seed heavily when broadcast seeding as some seeds will be lost to erosion and predation. Aim for one hundred seeds per square foot, similar to seeding a new lawn. Cover seeds with a weed-free straw mulch to protect them from being eaten or blown away.

PLANTING

Trees and shrubs can be acquired as dormant 'bare roots'. These require careful planting to eliminate any air pockets and ensure roots are correctly oriented downward. Bare roots should be planted promptly before they break dormancy.

Plant species in clumps of three to seven plants. Planting in small groups of like species creates an intentional aesthetic and may attract more pollinators, such as our native ground- and cavity-nesting solitary bees. For a manicured look, use plugs and plant further apart. Follow up with a heavy layer of mulch. For a natural look, use more seeds and plant plugs closer together. In general, planting closer together limits available space for weeds.

Exposed ground is easily colonized by weeds, so add mulch when possible. Lightly mulch around the base of plugs with a weed-free bark mulch to retain soil moisture and suppress weeds. One caveat of mulch application is that many native bees are ground nesters. Consider leaving small patches of bare ground untouched for native bee habitat.

FERTILIZER

Don't feed the weeds! Fertilizer is unnecessary for native plants and will likely only cause more weed problems. Local plants are adapted to the Palouse's natural soil and nutrient levels.

Did you know?

Old advice said to establish native grasses before flowers to allow for broadleaf herbicide application during the first few seasons. However, this method may make it difficult for flowers to establish as they compete with the older, more robust grasses.

The most current advice from local experts? **Plant your native grasses and flowers at the same time.**



Grass widow
(Olsynium douglasii)

Step 5: Establishment & Maintenance

Although native plants are well adapted to local growing conditions, they still require some maintenance, especially while establishing roots. Palouse Prairie natives take a few years to establish - don't lose hope if you are not seeing the results you were hoping for during the first few years after installation.



Blanketflower (Gaillardia aristata) during year one of planting

Watering is crucial during establishment - don't let the seed bed or planting area completely dry out in the first few weeks. Later on, watering may only be necessary during drought periods, if at all.

Monitor plant health, including signs of insect damage and other excessive herbivory. If rodent herbivory is an issue, increase the rate of grass seeding and consider adding raptor perch poles to the site. Watch out for plants outgrowing weed matting or tree tubes.



Wyeth buckwheat (Eriogonum heracleoides) during year one of planting



A native plant garden established at the PCD office, year three

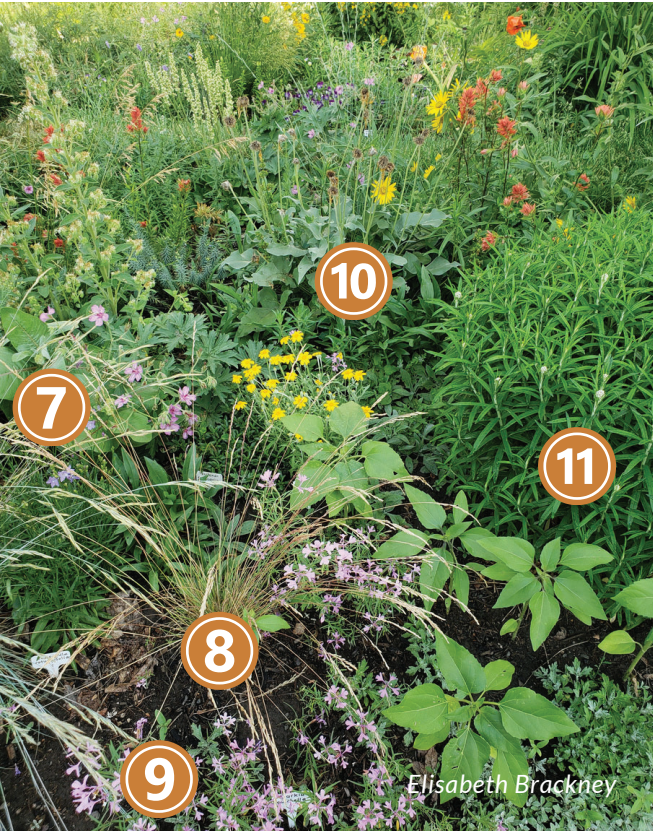


Missouri goldenrod (Solidago missouriensis) during year one of planting

Continue regular weed maintenance at the site. Seed any newly exposed bare ground early to discourage invasive species from establishing. To support native cavity nesting bees, consider leaving dead stems standing at the end of the season or dedicate a space to gather dead stems.

First year they sleep, second year they creep, third year they leap!

Example Photos



- 1. Little sunflower
Helianthella uniflora
- 2. Oregon sunshine
Eriophyllum lanatum
- 3. Wyeth buckwheat
Eriogonum heracleoides
- 4. Fireweed
Epilobium angustifolium
- 5. Harsh paintbrush
Castilleja hispida
- 6. Alumroot
Heuchera cylindrica
- 7. Sticky purple geranium
Geranium viscosissimum
- 8. Sandberg bluegrass
Poa secunda
- 9. Deerhorn clarkia
Clarkia pulchella
- 10. Arrowleaf balsamroot
Balsamorhiza sagittata
- 11. Pearly everlasting
Anaphalis margaritacea



Resources

PUBLICLY ACCESSIBLE PRAIRIE LOCATIONS

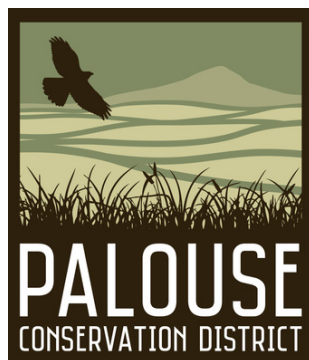
Dave Skinner Ecological Preserve, Palouse Land Trust
Eastern Washington University Prairie Restoration Project
Kamiak Butte County Park, Managed Whitman County Parks
Kramer Prairie Ecological Reserve, Washington State University
Magpie Forest Ecological Reserve, Washington State University
Rose Creek Nature Preserve, Palouse-Clearwater Environmental Institute
Steptoe Butte State Park
Whelan Cemetery, Palouse Prairie Foundation

TECHNICAL ASSISTANCE

Idaho Native Plant Society, White Pine Chapter whitepineinps.org
Latah Soil and Water Conservation District latahswcd.org
Local landscaping companies
Palouse-Clearwater Environmental Institute pcei.org
Palouse Land Trust palouselandtrust.org
Palouse Prairie Foundation palouseprairie.org
Pine Creek Conservation District pinecreekcd.org
Rock Lake Conservation District rocklakecd.org
Spokane County Noxious Weed Control Board spokanecounty.org/1095/Noxious-Weed-Control
The Phoenix Conservancy phoenixconservancy.org
United States Dept. of Agriculture-Natural Resources Conservation Service nrcs.usda.gov
University of Idaho Extension, Latah County uidaho.edu/extension/county/latah
Washington Native Plant Society wnps.org
Washington State Noxious Weed Control Board nwcb.wa.gov
Washington State University Extension, Whitman County extension.wsu.edu/whitman
Whitman Conservation District whitmancd.org
Whitman County Noxious Weed Control Board whitmancounty.org/329/Weed-Control

REFERENCES

- [1] Looney, Chris, and Sanford D. Eigenbrode. 2012. "Characteristics and Distribution of Palouse Prairie Remnants: Implications for Conservation Planning." *Natural Areas Journal* 32 (1): 75-85. doi:<https://doi.org/10.3375/043.032.0109>.
- [2] Noss, Reed F., and J. Michael Scott. 1995. *Endangered Ecosystems of the United States: A Preliminary Assessment of Loss and Degradation*. Vol. Biological Report 28. Washington, D.C.: U.S. Department of the Interior, National Biological Service.
- [3] Sanchez-de Leon, Y., and J. Johnson-Maynard. 2013. "Ecosystem Carbon Storage and Cycling in Restored and Native Grasslands of the Palouse Region." *Soil Science Society of America Journal* 77: 929-940.
- [4] Skinner, David M, Bertie J. Weddell, and Mark Stannard. n.d. "Palouse Prairie Restoration." Pullman, Washington: USDA NRCS Plant Materials Center. <https://www.nrcs.usda.gov/sites/default/files/2022-09/Palouse%20Prairie%20Restoration.pdf>.
- [5] Washington State Noxious Weed Control Board. n.d. *Full Circle: Control Noxious Weeds, Grow Healthy Plant Communities, Support Bees and Other Pollinators*. WA State Noxious Weed Control Board. https://www.nwcb.wa.gov/pdfs/Full_Circle_booklet.pdf.
- [6] Weddell, Bertie J. 2023. "Climate-Friendly Gardening with Native Plants of the Palouse." *Douglasia* 47 (1): 2-4. https://www.wnps.org/content/documents/editorialcomm/douglasia/Douglasia_2023_47_01_spring_web.pdf.
- [7] Weddell, Bertie J., and D. M. Skinner. 2007. "Rare Plants and Invasive Species in Palouse Meadow-Steppe." *Douglasia* 31 (1): 20-22.



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