



University of Idaho  
Extension



# NATIVE PLANT LANDSCAPING: CURB APPEAL AND LOW WATER USE

JIM EKINS, IRIS MAYES







BUL 1010

# Native Plant Landscaping: Curb Appeal and Low Water Use

## Jim Ekins

Area Water Educator, University of Idaho Extension, Northern District

## Iris Mayes

Small Farms and Horticulture Educator, University of Idaho Extension, Latah County

## Contents

- 1 Introduction
- 2 Five Featured Plants
- 4 Field Test
- 5 Why Use Native Plants?
- 5 Design Samples
- 9 Further Reading
- 11 Appendix: Native Plant Design Checklist

## Introduction

MANY PROPERTY OWNERS DON'T FULLY realize that native plants are economical and effective solutions for use in landscape design. Including them in a design is especially important in our weather-dependent Idaho climates. They are hardy (require less maintenance); require less water, fertilizers, and pesticides (thus reducing harmful runoff); provide healthy habitat for pollinators (shelter and food); reduce air pollution (less use of gas-powered equipment); and enhance the natural beauty of an area. In addition, some of them are fantastic for use along stream banks and ponds—they provide shade and strengthen bank stability.

Whether or not you wish to consult a landscape architect, this guide will help you to design more waterwise residential landscapes using native plants in various contexts: the backyard, along streams and lakes, and home landscape design in general. The design ideas we hope it sparks in you will not only save you water costs but potentially improve aquifer and groundwater levels, thus increasing critical summer flows to surface water bodies. After selecting the native plants that best match your particular needs, you will be able to finish a design that not only improves your property's health but deepens your appreciation of native landscape aesthetics.

Note: To find native plants in your local area, contact your local University of Idaho (UI) Extension office or local nurseries; conduct a Google search for "native plant nursery" that includes your specific geography; or check with UI Pitkin Forest Nursery, which sells seedlings of the native plants highlighted in this publication.



University of Idaho  
Extension

## Five Featured Plants

There are dozens of native shrubs suitable for home landscaping. Detailed information about native plants abounds, a vastness of available information whose lack of focus on home landscape design only makes choosing the proper species more bewildering. In this section, we hope to simplify your decision-making process by providing five examples. We chose these five based on a 2014-15 informal observational drought-tolerance test conducted by the UI Extension Water Outreach Program of five species of common western US native plants (see sidebar, “Field Test”). You, too, can informally experiment with different plants to see for yourself how they perform on your property. So keep your options open. In general, it's best to select native plants based on their

- tendency to be relatively hardy;
- similarity in appearance to ornamental cousins;
- ability to be trimmed;
- relative benefit to native songbird and pollinator species;
- ability to grow in a wide range of shade tolerance and water availability; and
- aesthetic benefits, such as fall color, winter interest, varied height, or berry colors.

We focused on determining the plants' hardiness and usefulness in home landscapes with extremely limited watering. The following profiles of each species we field tested highlight the qualities that favor their selection as native plants for use in an alluring waterwise landscape design (availability, color, size, and seasonality, in addition to low water use).

**Golden currant, *Ribes aureum*.** A shrub that produces edible berries and long-lasting, rich, orange, and yellow fall color. Currant berries are often used in seafood dishes; they are tart and have a high amount of vitamin C. This plant produces yellow flower clusters and tolerates shade (Love 2012). For more information, see the National Resources Conservation Service (NRCS) Plant Guide, [https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg\\_riau.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_riau.pdf).



**Figure 1. A,** Golden currant leaves and flowers. **B,** Golden currant leaves and berries.

**Red osier dogwood, *Cornus sericea*.** This is a very common shrub that produces pretty white flowers and berries. Stems are often a bright red, providing winter interest. Leaves turn a bright red in the fall. This species is shade tolerant; several varieties have been domesticated, including ones with beautifully variegated leaves (Love 2012). For more information, see NRCS Plant Guide, [https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg\\_cose16.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_cose16.pdf).



Figure 2. Red osier dogwood.

**Woods' rose, *Rosa woodsii*.** The small pink flowers are very fragrant and provide good habitat for pollinators and songbirds. They have been planted beneath hanging bird feeders to help fend off small predators (e.g., feral cats). This shrub spreads with underground roots that send up distal suckers. Plant in sun or shade (Love 2012). For more information, see the NRCS Plant Guide, [https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg\\_rowo.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/pg_rowo.pdf).



Figure 3. Woods' rose.

**Douglas (Rose) spirea, *Spiraea douglasii*.**

Similar to its ornamental cousin, this plant grows multiple shoots quickly and can be pruned to fit almost any space. It has large attractive and fragrant pink-red flower clusters to provide good spring and early summer interest. This shrub grows in partial shade to shade and may require some additional watering. For more information, see NRCS Plant Fact Sheet, [https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs\\_spdo.pdf](https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_spdo.pdf).



Figure 4. Douglas spirea.

**Snowberry, *Symphoricarpos* spp. (*S. rotundifolius*, *S. oreophilis*, *S. albus*).** This shrub grows well in sun or shade and in heavy clay soils. It is important habitat for songbirds. For more information, see NRCS plant Fact Sheet, [https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs\\_syal.pdf](https://plants.usda.gov/DocumentLibrary/factsheet/pdf/fs_syal.pdf).

For additional information, see NRCS Plant Guide, [https://plants.usda.gov/DocumentLibrary/plantguide/pdf/cs\\_syal.pdf](https://plants.usda.gov/DocumentLibrary/plantguide/pdf/cs_syal.pdf).

Note: Snowberry is considered to be mildly poisonous to humans and should not be planted near playgrounds or other places where children might congregate. Children should be taught not to eat any wild foods without absolute knowledge that it is safe. *S. oreophilis* prefers shade, though all will grow in partial shade (Love 2012). This is a nice plant to prune as a manicured hedge.

## Field Test

Before planting five each of the five different species, we removed all existing vegetation to give the seedlings a good start. The demonstration plot resided within a partially shaded suburban residential yard.

During year 1, we provided each plant some additional water during dry periods of the summer. During year 2, the plants received no watering; they had to survive on rainfall and soil moisture alone. All plants survived the first two growing seasons.

Upon inspection during the early spring of the third growing season, all of the plants came out of dormancy, having survived the no-water conditions of the second growing season. Incidentally, that second growing season (2015), included an abnormally hot and dry summer. June ranked the hottest, according to the National Weather Service (average monthly high temperatures 9.1°F above normal; monthly precipitation down by 25%). By October temperatures were unusually high. The summers since 2015 were consistently dry to draughty, as can be typical for many areas of Idaho (<https://www.weather.gov/wrh/climate?wfo=otx>); it was also one of the worst fire seasons in north Idaho. Despite these climatic challenges, by fall 2021 the plants were thriving as a hedgerow in the excessively drained sandy front yard soil where we planted them.

The bottom line: Despite having established for only one growing season and growing in excessively well drained sandy soils amid record-breaking climatological heat and dryness that second season, these five plants proved to be hardy survivors. If we had tended them more carefully, all the plants likely would have grown more robustly and have entered dormancy later in the fall.



Figure 5. Snowberry hedge in a residential neighborhood, winter.

These five plants, however, aren't the only to consider. Many other native shrubs are potentially suitable for waterwise home landscaping. A handful of other plants we highly recommend include the following:

**Kinnikinnick.** A fast-growing and hardy ground cover. It spreads over paved areas (sidewalks), so you may need to trim them to avoid overgrowth, depending on the situation.

**Elderberry.** An extra-large brushy tree for rural lots used to make syrup, wines, and tinctures. It also provides a visual barrier from the street. However, it grows very quickly and can overwhelm a smaller urban yard. *Please note:* plant parts and unripe berries are known to be highly toxic.

**Syringa** (*Philadelphus lewisii*). Idaho's state plant (appears on the state seal). Love et al. (2009) describe syringa as an "outstanding medium to tall (to 15 feet) shrub for mass planting, accent, or specimen. Large white flowers appear in late spring and are very fragrant."

## Why Use Native Plants

They are **environmentally sustainable**, often requiring much less water than similar ornamentals or non natives. Installing them thus saves water and even can prevent soil erosion.

They also support other natural communities: they provide seeds as food for songbirds and blossoms for ground bees, butterflies, and other native insects and they provide habitat for other beneficial organisms (nectar from spirea bushes, on which butterflies feed; watching these delicate insects eat is a fun activity for kids during spring and summer).

Native plants are also **economical**. Reduced water use means that property owners save money. With rising utility costs-particularly in communities in the western United States, where summer droughts and water-use restrictions are becoming the new normal-sustainable landscape design has become more important than ever for homeowners.

Finally, native plants are **aesthetically pleasing**. They provide positive curb appeal, which might influence your neighbors. Social considerations are an important factor in designing the home landscape. While some neighborhoods have homeowner association rules that require a certain percentage of the yard to be turf/lawn,

there is usually still room for some native plants. Most homes will look great with minimal lawn and lots of native plants. Native plants can be pruned to create a more manicured look, without decreasing their positive environmental attributes too much. Thoughtful landscape design will not only make your yard look great, it will also help to make your neighborhood look good. With thoughtful design, you might find that your neighbors incorporate similar elements in their landscaping. The domino effect could help build an aesthetic of environmental value in even the most urban residential lots. If your neighborhood is bound by design restrictions, no worries-simply cultivate and prune the plants. The more manicured look shouldn't sacrifice any environmental benefits and, again, might spark more sustainable design ideas in your neighbors.

Armed with basic knowledge about native plant species and preliminary design ideas, anyone can choose the best native plants to add to their property, improve a yard's understory shrubs, or build a wind buffer or tree-lined driveway, thus enhancing a yard's beauty and health. Use this publication to help you transform your yard piecemeal or all at once. But if you need extra assistance, don't hesitate to consult an Idaho Master Gardener or horticulture expert.

## Design Samples

This publication provides a series of preliminary landscape designs that you can adapt to a variety of landscapes. We, as part of both UI Extension Horticulture and Small Farms and Extension Water Outreach programs, developed these sample landscape designs to spark the imagination of homeowners interested in installing native landscape plants in an urban lot, a large rural or suburban lot, and/or a border planting, such as for a windbreak or other barrier. Riparian areas and streams may be located on an urban lot or a rural lot, therefore we have included some design

ideas for those situations. By selecting several example plants appropriate for use in these different property settings, the sample plans offer generalized landscape design guides. Use them to start thinking about your own spaces and how you might tailor your plantings to suit your particular needs and property concerns.

You might find that photocopying them, cutting out some of the elements shown in each with scissors, and reassembling them onto a piece of paper helps you to formulate or envision your work more clearly. Some of the designs are intended for a more urban or suburban setting (Figures 6A–6D).

The others are for more rural settings (Figures 7A–7F). Or you can consult the Design Checklist (see Appendix) we’ve included to help you get started. No matter how you digest the materials provided, the important thing is that it piques your interest or sparks your imagination, thus helping to guide your decision making. Too, you can always contact your local Extension horticulture or Master Gardener program for more insights, ideas, and assistance. Master Gardeners often provide free consulting hours for homeowners. If you go this route, make sure to bring your own drawings/designs with you to enhance the consultation.

**Residential.** When designing a landscape in a neighborhood setting, it’s always important to gauge how much room exists or will exist between the plants you intend to grow and your property lines and sidewalks. Trees and bushes can impinge on neighboring properties and public walkways. People need room to travel freely; too, neighbors might not prefer overhanging branches. This will affect what tree or bush types/sizes you choose.

Another aspect to consider is how the current vegetation on your property might affect your chosen trees or shrubs. Indeed, kinnikinnick, turfgrass, and other ground cover can outcompete trees and shrubs for water and nutrients.

The added stress can kill trees. In this case, you’ll have to decide whether to keep the base of trees and shrubs clear of other vegetation or choose native plants that compete more favorably.

Regardless, if you have existing trees, or are considering planting large trees, hire a certified arborist to assess the trees and help develop a plan for them. Trees planted too close to a structure can result in root- and branch-related structural damage. But the right types of trees planted in appropriate places can alter your microclimate by shading the house and property in the summer and blocking cold winds in the winter.

Figure 6A shows a typical residential landscape (urban lot) prior to redesign. It contains a few basic elements, mostly turfgrass with a few shrubs and trees. The lush palette of the reimagined landscape in Figures 6B–6D presents just some of the colorful possibilities that native plants offer when designing

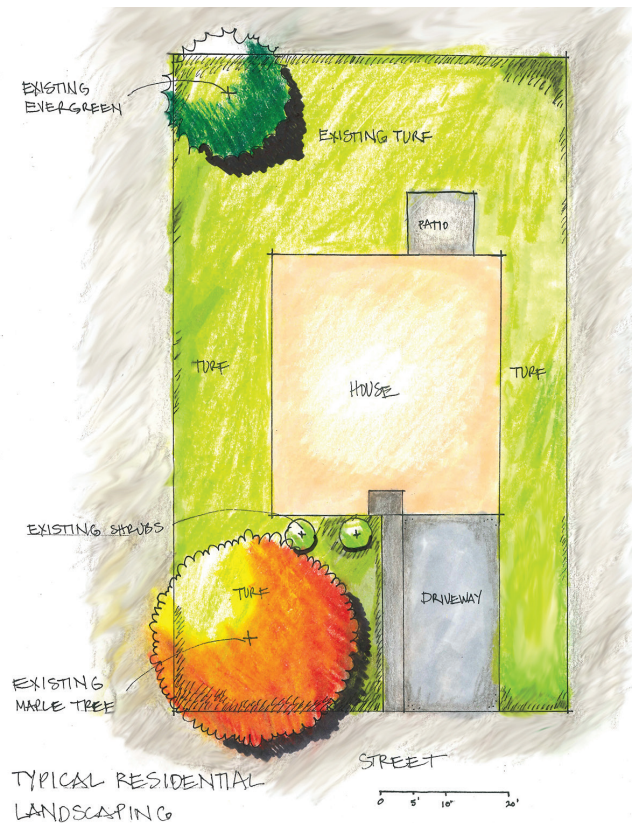


Figure 6A. Typical residential landscaping, before.

a waterwise landscape: aesthetically pleasing pathways, a thriving garden, lush shady nooks that lock in moisture—basically, a bountiful variety of self-sustaining plants that birds and pollinators will inhabit.

Plants in these designs are paired to provide visual contrast and interest in each season. Red osier dogwood has bright red branches in winter. Evergreens also provide a rich green color in the stark, fairly colorless winter season. Flowering plants, such as woods’ rose, provide blooms throughout the spring and summer season for visual beauty as well as pollinator habitat amid the green leaf background of deciduous shrubs and trees. Maple trees and other deciduous shrubs can provide bright red, orange, and yellow colors in the fall. Some type of watering regime will be needed to help these plants get established during the first 1–3 years (with less water each subsequent year). If you don’t want to install an irrigation system, drill a small hole in the bottom of one or more buckets to use as a temporary drip irrigator.



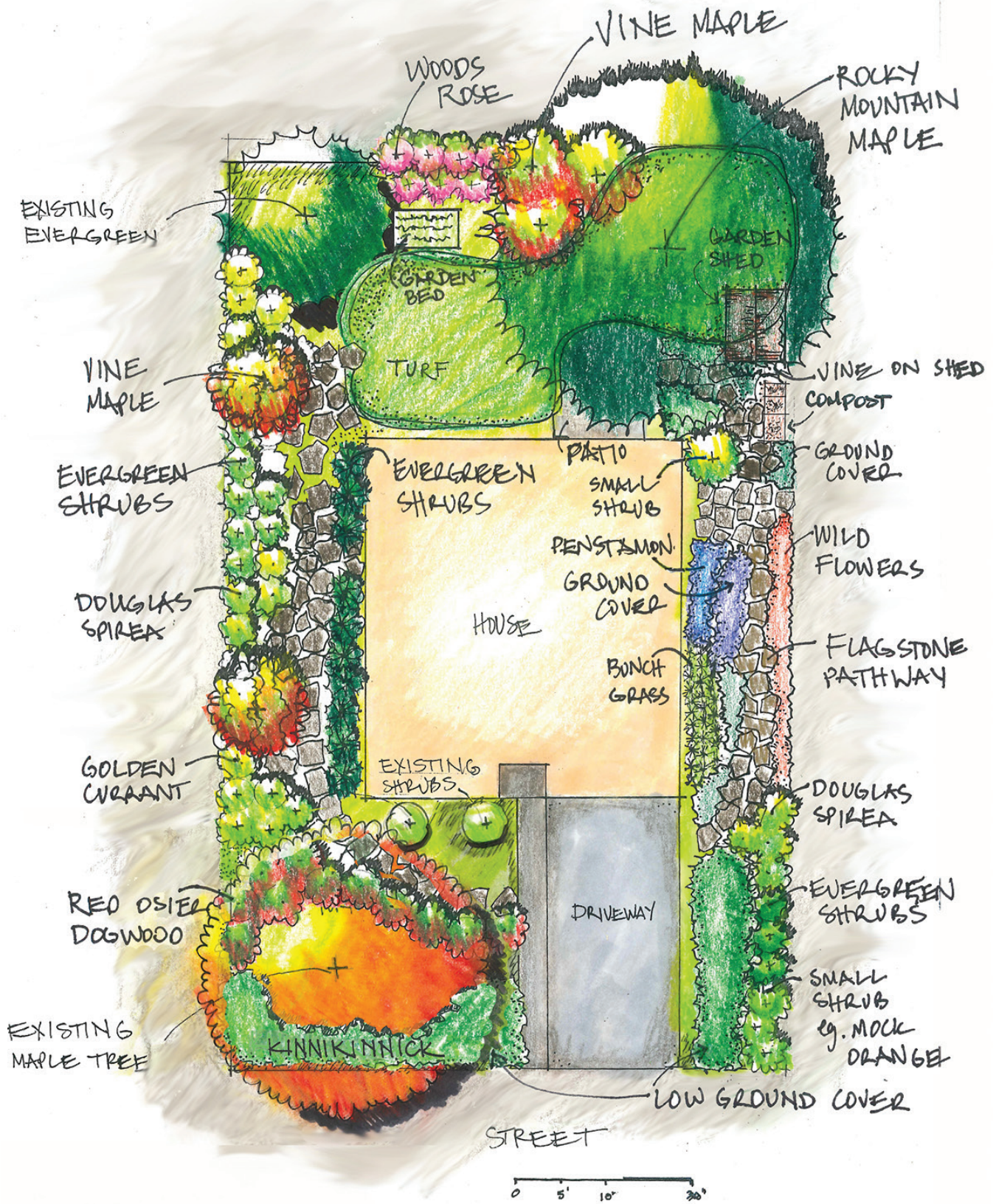


Figure 6B. Typical residential landscape design, using native plants. This design converts most of the turfgrass area to native and thus low-water plantings.



Figure 6C. Front-street view of the residential lot design, showing the heights of various plants, relative to the house.



Figure 6D. Planometric front view of residential lot design to help further visualize the redesigned sample residential landscape.

**Rural/Suburban property.** Smart design for rural spaces should always focus on creating “defensible space,” which refers to the concept of protecting a home and other structures from wildfire. Combustible materials in close proximity to the house or other structures increases the fire hazard. Wildfire’s spread can be slowed or halted by reducing, modifying, and/or clearing potential fuel sources around your home. The efforts of firefighters improve if you create additional space around a house. Thus when creating a smart design for a rural property, plan the plantings to create a defensible space for a home and any surrounding structures or design elements. *Fire-Resistant Plants for Home Landscapes* (PNW 590) (<https://catalog.extension.oregonstate.edu/pnw590>) will help you to prepare as you start on your design.

Figure 7A illustrates how to incorporate extant design elements into a larger suburban or rural property design. For example, streams that run through a property often provide opportunities to integrate adaptive and protective native plantings in a redesign—in this imagined scene, a vegetative riparian zone, one that bisects a windbreak from a prairie or meadow area. Some of the conservation districts in Idaho and the United States Department of Agriculture’s Natural Resources Conservation Service offer financial assistance to help protect native natural resources.

Figure 7B provides a closer view of a dense border planting to situate along rural property lines to create a windbreak and increase privacy. These types of plantings also help to mitigate dust and pesticide drift. Figure 7C elaborates further, showing what a rural property border planting might look like from ground level.

Figure 7D focuses on the possibilities of developing a riparian buffer, 30 slope-ft from either side of the stream’s edges. Plants and trees in Figure 7D for riparian areas are those that tolerate and can utilize extra water. It’s best to plant shrubs and trees that are water loving to some extent. See CIS 1228 for more information about native plants that thrive in riparian areas (<https://drive.google.com/file/d/1auGDBt2UC3W9SgfydDRh99Hletn2Upjs/view>). Figure 7E conceptualizes the massing of natural plant forms that could abound either side of a footpath in a prairie restoration. The clustering of various plant types imitates the natural patterns of prairie plant growth and provides gently pleasing batches of color. Scattering locally sourced wildflower seed protects the buffer’s natural integrity by keeping invasive species at bay. The landscape design thus supports environmental resilience and greater survival rates.

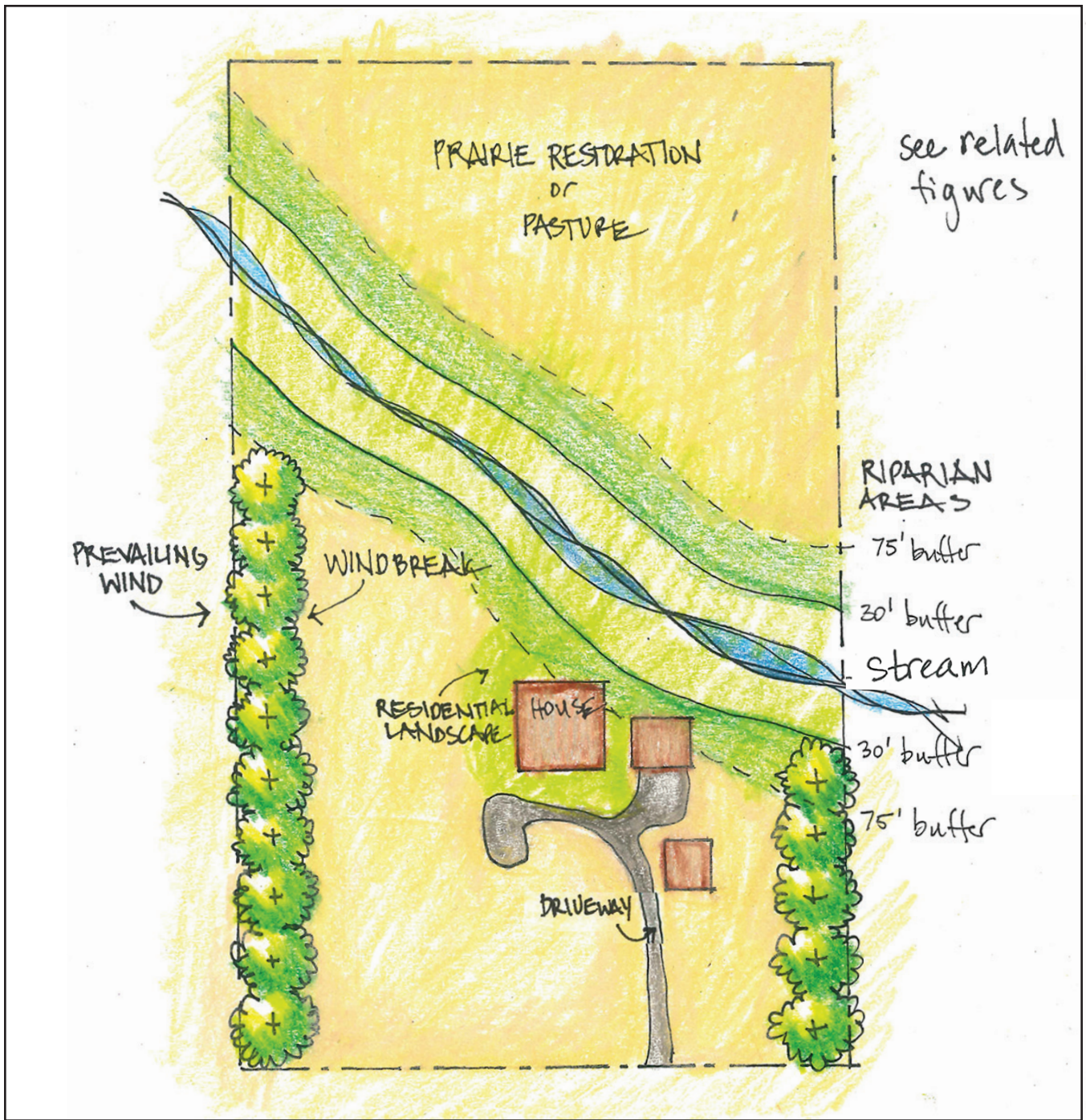


Figure 7A. Suburban or rural lot (top view).

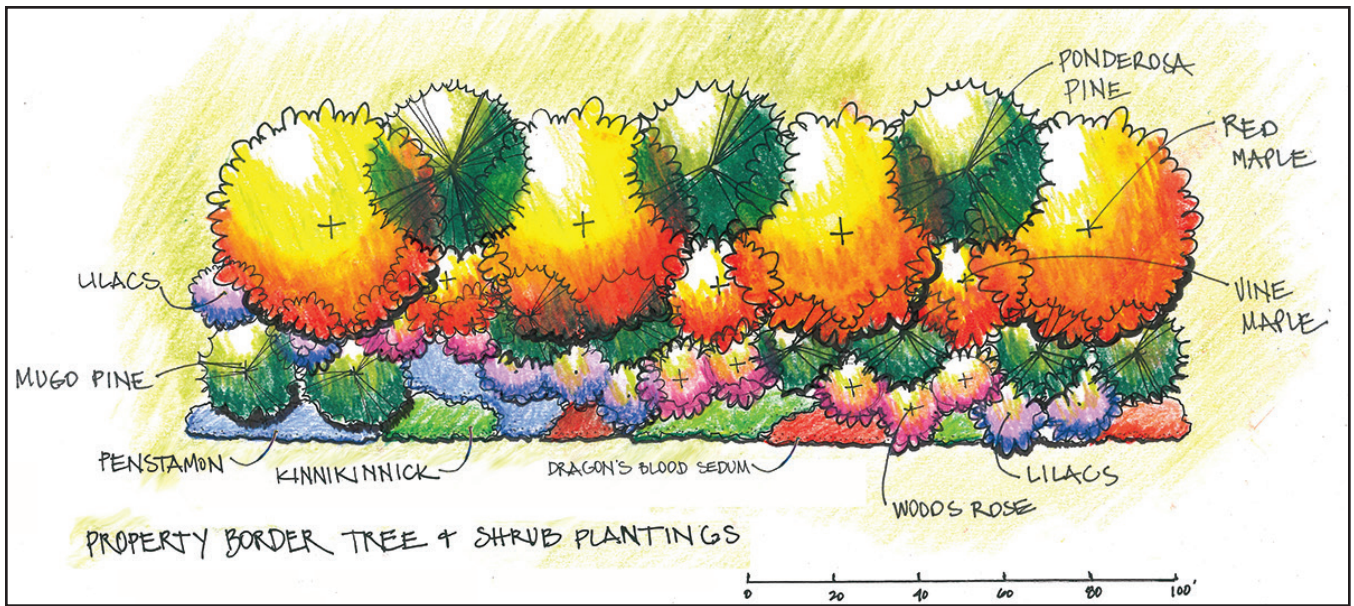


Figure 7B. Property border tree and shrub planting (top view).

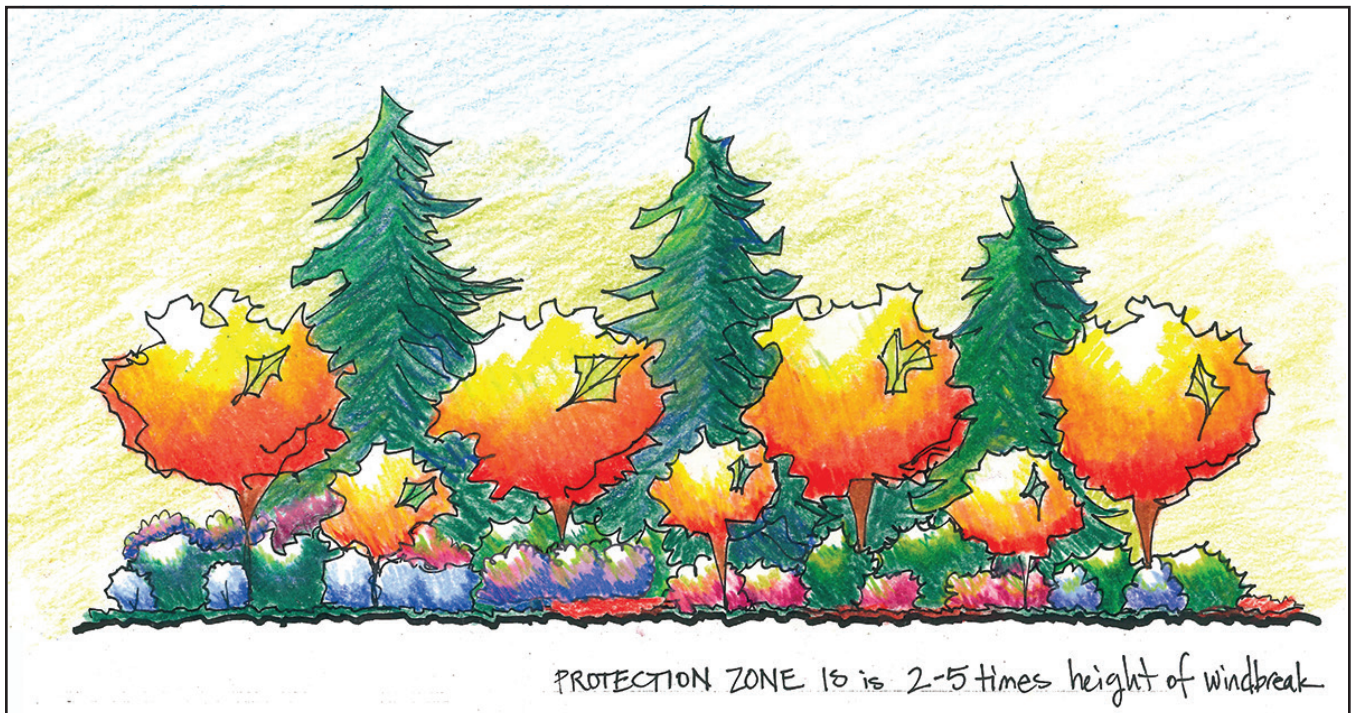


Figure 7C. Rural property border tree and shrub windbreak planting, front view.

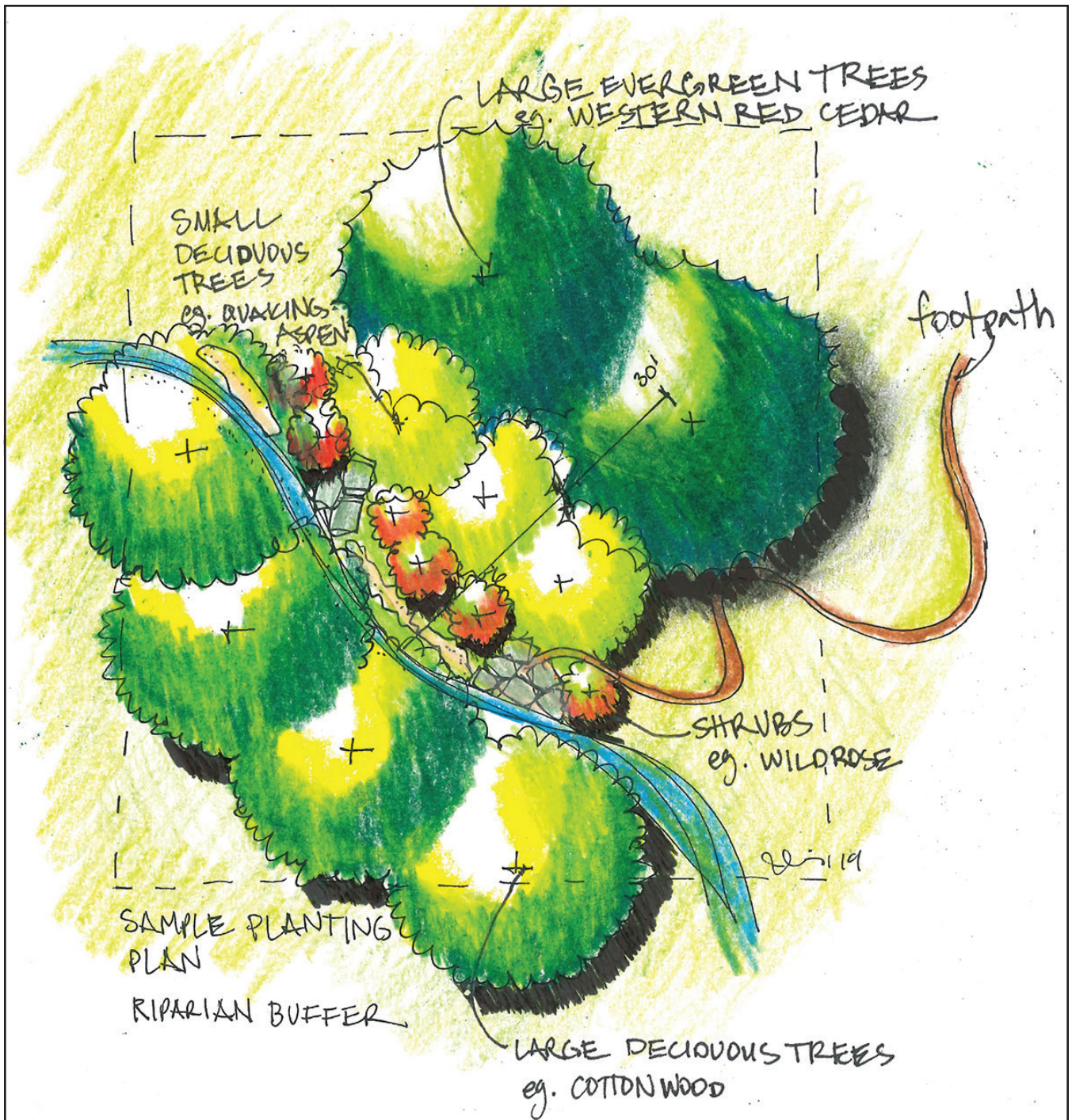


Figure 7D. Sample riparian buffer planting plan (top view).

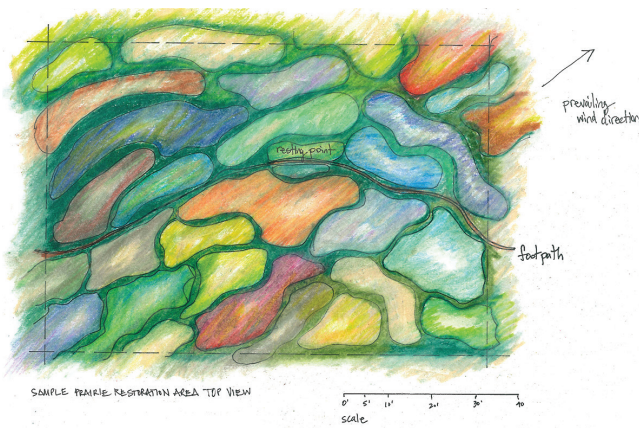


Figure 7E. Prairie or steppe ecosystem restoration (top view).

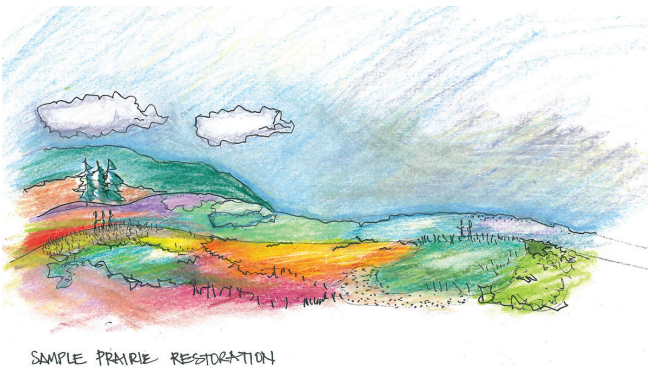


Figure 7F. A planometric view of a prairie or steppe ecosystem restoration.

**Parting thoughts.** Regardless of your design’s fine details, or its setting, always prepare the soil prior to seeding by removing all weeds and applying light tillage. Also, plan for bloom succession—plants blossoming from early spring to late fall. Hydroseeding wildflower seeds is another option, if local hydroseeding companies exist or the required rental equipment is available. Your property is your canvas and thus the options are alluring, as can be the final appearance of your designed landscape, no matter if it lies in a residential, rural/suburban, or restorative setting (Figure 7F).

## Further Reading

- American Society of Landscape Architects. 2022. “Residential Design: 5 Reasons Native Plants Help You Save Money and the Planet.” <https://www.asla.org/nativeplantssavemoney.aspx>.
- Bentrup, G. 2008. *Conservation Buffers: Design Guidelines for Buffers, Corridors, and Greenways*. General Technical Report SRS-109. Asheville, NC: Department of Agriculture, Forest Service, Southern Research Station. 110 p. [https://www.fs.usda.gov/nac/buffers/docs/conservation\\_buffers.pdf](https://www.fs.usda.gov/nac/buffers/docs/conservation_buffers.pdf), accessed 24 April 2019.
- City of Spokane (Washington). 2018. *SpokaneScape: Your Guide to Water-Wise Landscaping for the Inland Northwest*. 22 p. <https://static.spokanecity.org/documents/publicworks/water/slow-the-flow/spokanescape-guidebook-may-2018.pdf>, accessed 24 April 2019.
- Detweiler, A. J., and S. Fitzgerald. 2006. *Fire-Resistant Plants for Home Landscapes: Selecting Plants That May Reduce Your Risk from Wildfire* (PNW 590). Corvallis: Oregon State University. 46 p. <https://catalog.extension.oregonstate.edu/sites/catalog/files/project/pdf/pnw590.pdf>.
- Ekins, J.P. 2018. *Protecting Streams and Lakes in Idaho: A Landowner’s Guide* (CIS 1228). Moscow, ID: University of Idaho Extension. View <https://drive.google.com/file/d/1auGDBt2UC3W9SgfydDRh99Hletn2Upjs/view>
- Elkington, J. 1997. “The Triple Bottom Line: Sustainability’s Accountants,” 49–66 in *Environmental Management: Readings and Cases* by M. V. Russo. 2nd ed. Thousand Oaks, CA: Sage.
- Finnerty, T. L., S. M. Vore, J. A. Mcgee, and J. D. Baughman. 1994. *Landscaping and Utilities: Problems, Prevention, and Plant Selection* (CIS 991). University of Idaho Extension. 8 p. [https://drive.google.com/file/d/1F-pn4K8fXDb6cFPsUw4arNpl\\_NjjmW/view](https://drive.google.com/file/d/1F-pn4K8fXDb6cFPsUw4arNpl_NjjmW/view)
- Harrison, T., and R. Winfree. 2015. Ecology of Organisms in Urban Environments: Urban Drivers of Plant-Pollinator Interactions. *Functional Ecology*, 29: 879–88. doi: 10.1111/1365-2435.12486.
- Holl, K. D. 1998. Effects of Above- and Below-Ground Competition of Shrubs and Grass on *Calophyllum brasiliense* (Camb.) Seedling Growth in Abandoned Tropical Pasture. *Forest Ecology and Management* 109(1–3): 187–95. [https://doi.org/10.1016/S0378-1127\(98\)00248-5](https://doi.org/10.1016/S0378-1127(98)00248-5).
- Latah Soil and Water Conservation District. 2008. *The Palouse Prairie: A Treasure on Your Land*. 2 p.
- Love, S., K. Noble, J. Robbins, B. Wilson, and T. McCammon. 2009. *Landscaping with Native Plants* (BUL 862). University of Idaho Extension. 24 p. [https://drive.google.com/file/d/1CnBnd\\_hgsbPHoND5SCK3-ZvviW3WtCA4/view](https://drive.google.com/file/d/1CnBnd_hgsbPHoND5SCK3-ZvviW3WtCA4/view)

- Marzluff, J. M., J. H. DeLap, M. D. Oleyar, K. A. Whittaker, and B. Gardner. 2016. Breeding Dispersal by Birds in a Dynamic Urban Ecosystem. *PLoS ONE* 11(12): e0167829. <https://doi.org/10.1371/journal.pone.0167829>.
- Mayes, I., A. Agenbroad, J. Werlin, and S. Graff. 2019. *Sustainable Small-Acreage Farming in Idaho: Finding and Evaluating Land* (BUL 932). University of Idaho Extension. 11 p. <https://drive.google.com/file/d/1fOWVXoaPXAATb-piFqhTUNMpBzL919TA/view>
- Pérez-Harguindeguy, N., S. Díaz, E. Garnier, S. Lavorel, H. Poorter, P. Jaureguiberry, M. S. Bret-Harte, W. K. Cornwell, J. M. Craine, D. E. Gurvich, C. Urcelay, E. J. Veneklaas, P. B. Reich, L. Poorter, I. J. Wright, P. Ray, L. Enrico, J. G. Pausas, A. C. de Vos, N. Buchmann, G. Funes, F. Quétier, J. G. Hodgson, K. Thompson, H. D. Morgan, H. ter Steege, M. G. A. van der Heijden, L. Sack, B. Blonder, P. Poschlod, M. V. Vaieretti, G. Conti, A. C. Staver, S. Aquino, and J. H. C. Cornelissen. 2013. New Handbook for Standardised Measurement of Plant Functional Traits Worldwide. *Australian Journal of Botany* 61(3): 167–234. <https://doi.org/10.1071/BT12225>.
- Schalau, J. 2018. *Backyard Gardener: Designing a Windbreak*. Prescott, AZ: University of Arizona Cooperative Extension. <https://cals.arizona.edu/yavapai/anr/hort/byg/archive/windbreaks2018.html>.
- Short-Season, High-Altitude Gardening Series. 2021. University of Idaho Extension Publications and Resources. [http://www.extension.uidaho.edu/resources2.aspx?title=Gardens and Landscapes&category1=Gardening&category2 =Short-Season, High-Altitude Gardening](http://www.extension.uidaho.edu/resources2.aspx?title=Gardens%20and%20Landscapes&category1=Gardening&category2=Short-Season,High-Altitude%20Gardening).

### Photo Credits

Photos courtesy of Jim Ekins and drawings courtesy of Iris Mayes.



# NATIVE PLANT DESIGN CHECKLIST

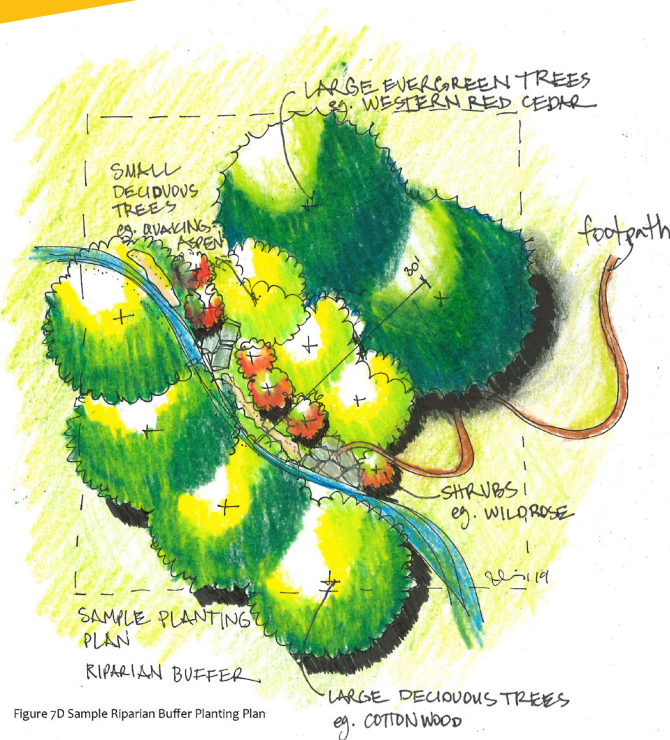


Figure 7D Sample Riparian Buffer Planting Plan

Use this checklist to help you plan and prioritize your native plant landscaping process (to identify your design goals, site type, etc.). Then you can more easily decide what alterations are necessary. Through this process you can become mindful of which areas of your property hold more moisture and which tend to dry out so you can discover which plants make for a better match. Ask yourself the following questions:

- Which plants do better in wet and dry areas?
- Which thrive in or tolerate shady areas or low-lying ground cover?
- Which will prosper as tall and/or wide-spreading plants?

A little imagination and planning will help you realize the viewscape in your design as well as benefit your chosen plants as they grow and mature.

1. Identify your goals for the yard or landscape. Locate or identify potential hazards and other property characteristics:

- Hidden infrastructure (in Idaho, call Dig Line before digging, 811 or 1-800-342-1585)
- Sunny and shady areas; consider seasonal solar exposure
- Wet and dry areas
- Soil type(s) (Consider a soil test)
- Areas for redesign and planting
- Other considerations: sources and availability of plants; outline a project budget

2. Conduct a more targeted site evaluation by assessing/apprehending the following elements (see also Mayes et al. [2019], p. 10–11, <https://www.extension.uidaho.edu/publishing/pdf/BUL/BUL932.pdf>, for more detailed guidance):

- Property shape, boundary lines, and necessary setbacks
- Slope steepness and direction
- Wind
- Municipal or homeowner association requirements
- Overhead wires
- Existing hazards (e.g., big overhead branches)
- Fire safe zone and considerations
- Adequate distance from structures, structure locations within property boundary
- Available water sources (native plants need water to get established)
- Existing vegetation to keep
- Existing vegetation to remove

3. Plan out pathways and access:

- Identify the entry points
- Identify how to route foot traffic

4. Anticipate the size and shape of various plants over time:

- Envision whether or not a plant's growth will fulfill/meet your design goals