

LANDSCAPING

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LANDSCAPING

Learning Objectives

- Understand the principles of landscape design
- Understand how to conduct a site analysis
- Understand use areas in a landscape
- Understand the elements of landscape design
- Understand plant selection for a landscape design
- Understand the steps of installing or renovating a landscape
- Understand the maintenance and irrigation of a landscape

Introduction

Horticulture is an art and a science — especially when it comes to landscaping. Imagine the landscape as a canvas with the greenscape (plants) and hardscape (sidewalks, edging, and patios) the colors, shapes, and patterns of a living portrait. Landscape architects even use the term “plant palette” when referring to plant lists. The science that fleshes out these visions demands even more skills — the ability to match the proper plant to the proper environment and to identify and correctly apply the cultural inputs that guarantee the survival of plants in a given landscape.

The benefits of a well-planned, well-designed landscape are twofold. In addition to being more attractive and easier to maintain, designed landscapes can generate economic savings (reduced inputs of water, fertilizer, and pesticides), enhanced real estate values, and personal satisfaction and peace of mind.

To help you create an attractive and functional landscape, we will discuss some basic principles of landscaping including planning and design, plant selection, and installation and maintenance. Although the following principles are primarily for homeowners, you also can apply them to larger properties or landscapes.

Definitions

landscape. An arrangement of outdoor space for a specific purpose or goal. Goals may be as general as increasing the attractiveness of a landscape to more specific things such as reducing the amount of water, maintenance, and chemical inputs into the landscape.

landscape architect. A professional who creates landscape designs.

landscape contractor. Someone who installs and sometimes maintains landscapes. This individual also may be the landscape manager who is responsible for meeting the landscape plan's objectives.

landscape design. A blueprint or drawing of the landscape that the designer creates to fulfill the property owner's goals and objectives for the landscape.

landscape maintenance. The specific activities (weeding, spraying, watering, fertilizing, etc.) needed to meet the goals and objectives of the landscape plan.

landscape management. Coordinating the maintenance procedures to meet the landscape plan's objectives.

landscape plan. Describes how you are going to meet the goals and expectations of the landscape design.

landscaping. Includes all of the concepts from design to maintenance.

Creating a Plan

Plan before you plant. Whether you are developing a landscape plan for a new home or renovating an older landscape, it is important to have a plan before you do anything. In the long run, not having one may create maintenance problems, thus reducing a design's overall quality. The following steps will help you develop a plan for a landscape that is both functional and aesthetically pleasing.

DEFINE YOUR GOALS AND OBJECTIVES

This is the most important step of the landscape process. Establishing clear goals and objectives at the beginning will help you achieve the benefits you hope to receive from your landscape plan.

Decide what type of plan best fits the needs of your household, while working within the economic, social, environmental, and physical constraints that will

affect your final landscape plan. Specific goals and constraints might include the following:

Goals

- Low maintenance, low input (includes reduced watering, pesticide and fertilizer applications, and less mowing).
- More privacy.
- More recreation area.
- More color.
- More wildlife habitat (includes forage and cover for birds and desirable insects).

Constraints

- Environmental conditions (includes climate, soil, and precipitation).
- Physical barriers or obstacles on the landscape.
- Social (includes public ordinances restricting water use or plant selection).
- Economic.
- Physical handicaps.

DO A THOROUGH SITE ANALYSIS

Gather as much information as possible about your site and the area where you live. Make a preliminary map of your property, drawn to scale, that includes the locations of your house, buildings, sidewalks, and driveway. Indicate on the map, or on a separate sheet of paper, the following information:

Macroclimate

This refers to major weather patterns (temperature and precipitation) that affect large areas. In Idaho, cold hardiness is a critical factor for determining plant survival. Idaho covers five United States Department of Agriculture USDA hardiness zones, 2–6 (-50°F to -10°F), with temperatures affected by elevation and latitude (Figure 1). Temperature and precipitation can vary considerably within a hardiness zone. Always consult local or regional weather services or Extension publications for specific weather information for your area.

Microclimates

These are the weather patterns that the landscape in your immediate area affects. When conducting a site analysis, look for potential problem areas such as hot spots, frost pockets, wet spots, or shaded areas. Mark these microclimates on your preliminary map for future reference.

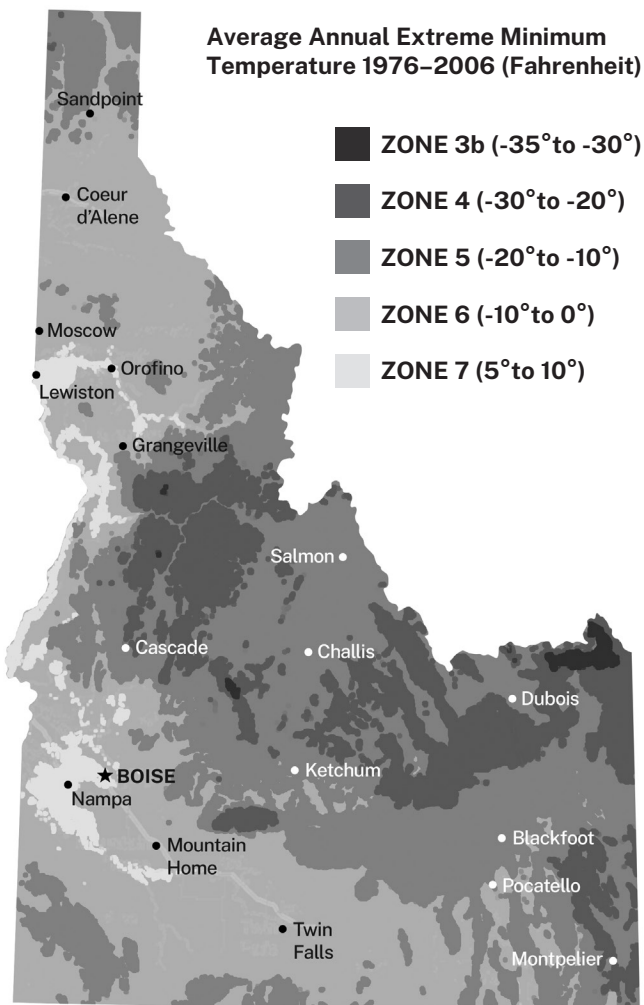


Figure 1. USDA plant hardiness zones for Idaho.

Soils

See chapter 5 for more information about soils. In regard to urban or residential landscapes, consider the following:

- Most urban or residential soils are disturbed soils and probably won't resemble the less disturbed, native soils of the surrounding region.
- Proper soil conditions are as important to plant growth and survival as ideal climate conditions. Drainage, pH, structure, organic matter, and mineral composition are factors to consider in relation to plant growth.
- Because you are working with a small area, it is easier to improve the soil using various soil amendments.

Topography

Besides altering the microclimate, topography can affect drainage and make some areas difficult to plant and maintain.

NOTE

If the soil in your site has a lot of variability, indicate the different areas on your preliminary map and plan accordingly. See the University of Idaho (UI) Extension Bulletin 704, *Soil Sampling*, for information about taking soil samples on your site.

Aspect

Note the exposure of the site relative to the sun. This is more critical in mountainous areas or areas with steep hills. Generally, plants growing on the warmer, south-facing side of a slope will break dormancy faster than plants growing on the north-facing side. This provides a longer growing season, but it also can make plants more susceptible to late frosts and other freezing-related injuries.

Existing Plant Materials and Structures

Show existing plant materials, sidewalks, driveways, patios, and other structures in your preliminary plan.

Access

Besides driveways and sidewalks, plot "traffic" areas around the landscape. Consider ways to improve access to your home or other parts of the landscape.

Easements

Draw these on your map to prevent planting any permanent plant materials in these areas.

Overhead Utility Lines, Sewer Lines, Underground Cables, and Transformers

Note these on your preliminary site plan and plan accordingly. Some basic rules for planting in these areas include the following:

- Plant trees and shrubs away from utilities
- Plant taller or broad-spreading trees away from overhead lines and use shorter, slower growing trees for closer planting if you must plant near overhead utilities
- Don't plant species near utilities that prevent access or cause maintenance problems
- Avoid planting species such as poplars, willows, and cottonwood with dense, fibrous roots near sewer lines or septic systems

NOTE

See the UI Extension CIS 991, *Landscaping and Utilities: Problems, Prevention, and Plant Selection*, for more information.

Views

Indicate your views looking out from your house and those that develop when approaching it. What do you want to see? What don't you want to see? What do you want others to see or not see?

Available Water

Show the location of your water sources. If your property has areas that are difficult to water, you may want to modify your plan to meet the needs of these areas by using drought-tolerant plants or hardscape (nonliving) materials.

Local Ordinances

Consult state and local authorities for specific regulations about planting trees and shrubs along streets, sidewalks, and rights of way.

DEFINE USE AREAS

You can divide use areas into three major categories:

Public Areas

This usually describes the front of your landscape. The primary function of this area is aesthetics (to “welcome” visitors to your home).

NOTE

There are no distinct boundaries on these areas and they will frequently overlap in terms of function and appearance. Within these major use areas, you should designate specific use areas (e.g., recreation, perennial flower beds, vegetable garden, and patio) for the various activities that you are planning for your landscape.

Private Areas

These are the areas used for recreation, family activities, and entertaining.

Service Areas

These areas are reserved for the vegetable garden, composting, pet and livestock areas, storage shed, woodpiles, and other utilitarian purposes. They can include areas that are difficult to maintain, have limited access to water, or have poor soil.

DEFINE PLANTING AREAS

Plot planting zones based on water needs or the plants' maintenance requirements and to meet the landscape plan's objectives.

Hydrozone or group plants with similar water needs in the same areas. For example, consider planting willows, dogwoods, or birches that usually thrive under moister conditions near annual flower beds (high water users). To conserve water, do not mix plants that have low water requirements with plants that have high water requirements.

Reduce maintenance activities by grouping plants with similar maintenance requirements together.

- Perennials generally require less frequent maintenance than annuals. In Idaho, most of the maintenance of perennials occurs in the spring and fall.
- Plant trees or shrubs with messy leaves, fruits, or seeds away from flower beds especially if these plants reproduce easily from seed. It is easier to rake this material up or remove the new seedlings from a lawn than from your planting beds.
- Group shrubs with similar flowering periods together so it's easier to remember which plants you need to prune in early summer and which ones in the fall or early spring. Grouping also will help you focus maintenance activities on specific areas of your landscape.

Design planting areas to meet the objectives of your landscape plan. If your objective is privacy, design planting areas to maximize privacy. However, if you are concerned about security, you may want to leave large areas of open space with reduced opportunities for concealment. Perhaps you would like to encourage more wildlife on your landscape? Then plan for more areas that provide both food and shelter. Plan and plot your objectives before starting to plant.

PRINCIPLES OF DESIGN

The house is the focal point of a design. The landscape should complement, not clash, with the house. The landscape is an extension of the living space. Just like the appearance and arrangement of your house affects your personal living space, so does the appearance and arrangement of your landscape. It affects you aesthetically based upon your inward and outward views and from a functional perspective.

Balance

You can achieve balance on the landscape in two ways:

1. **Symmetrically.** Place equal numbers of plants, plants of equal size, or structures or planting beds of equal size opposite each other on the landscape. For example, plant two shrubs of the same size and species on opposite sides of an entryway or plant two flower beds of equal size, dimension, and species composition on opposite sides of a sidewalk.
2. **Asymmetrically.** Balance plants and structures in terms of volume of space occupied on the landscape. One example might be to plant a large red oak on one side of the yard to counterbalance a mass planting of ornamental shrubs on the opposite side. Also, you could counterbalance a deck with a perennial bed.

Movement

You can create a sense of vertical and horizontal movement on the landscape. For example:

- Tall, columnar trees or shrubs draw your eyes upward, whereas a low, flat bed of colorful annuals pulls your eyes downward.
- Lines, especially curved lines of walkways or planting beds, create a sense of motion that encourages you to move visually and physically through the landscape.

Harmony

The proper use of space, color, texture, and plant materials on the landscape creates harmony.

Use plants and structures that are in scale with the house.

Enhance the overall landscape design with plants and plantings that complement each other.

ELEMENTS OF DESIGN

Space

Use space effectively by considering the following principles:

- Select a mixture of plants that provide an effective transition from the vertical plane (air) to the horizontal plane (earth) to create a better sense of harmony and balance.
- Plant trees that provide filtered shade (e.g., honey locusts) rather than trees that provide heavy shade (e.g., maples) for a more subtle influence on vertical space.

- Select different species of plants based upon their form and structure as well as their color or flowering habits.
- Use curved lines to create a more natural, informal appearance. Straight lines are less natural and more formal.

Color

Color affects the landscape design in various ways.

- It gives the landscape movement, accent, shade, and depth. For example, bright colors such as reds and yellows are good for accent, variety, and for attracting attention to specific areas. Use blues and dark colors to create shade and depth.
- Color affects mood. Reds are exciting colors that generate energy; pinks and greens are soothing colors; and light blues create a cool feeling.

NOTE

A color wheel will help you make effective color choices. They are available at crafts, art, paint, or office supply stores.

Texture

Texture is the “visual feel” of the landscape or of landscape plants. Some plants have a coarse texture because of their foliage, branching patterns, or bark. For example, a horse chestnut tree with its large, serrated, compound leaves will have a coarser texture than a weeping willow.

Plant Arrangement

The individual attributes of the plantings and overall effectiveness of the landscape plan is affected by plant arrangement.

Specimen plants draw attention to themselves because of their color, shape, or size. Plant them by themselves or enhance beds with mass plantings. Large shade trees (oaks, maples, and conifers) or small trees and shrubs (ornamental crabapples, hawthorns, burning bushes, and viburnums) make effective specimen plants.

Mass plantings enhance the appearance of plants that may not be as attractive or effective individually. Annuals, perennials, small shrubs, and ground covers are generally more effective as mass

plantings. Also, on more naturalized landscapes, it is best to plant shrubs in odd numbered clusters for a more natural appearance.

PLANT SELECTION

Select plants that meet your design objectives. These might include the following:

- Functional.
- Aesthetically pleasing.
- Cold hardy. Check if the plant is adapted to the minimum temperature zone for your area.
- Low maintenance. Select species that require a minimum amount of pruning, watering, and raking. Cut the frequency of maintenance time for woody plants by reducing the variety of early and late-flowering species.
- Low input. Select plants that require less water and chemical inputs.
- Nonpoisonous and safe. This is especially important in areas that children will use. Try to reduce the number of plants that may have poisonous fruits, flowers, or foliage or that have thorns or spines that can cause injuries.

NOTE

Contact your local Extension educator or the Poison Control Center if you have any questions.

- Appropriate selections for planting near utilities.
- Economical. What we want is not always what we can afford. Your budget will determine your choice and size of the plant materials that you can purchase.
- Native or nonnative species. Some people recommend planting native (indigenous) species over nonnative (nonindigenous) species because, theoretically, they are better adapted to an area. This is not necessarily true since most residential landscapes are disturbed sites and unnatural environments that probably will have more inputs (irrigation, fertilizing, and pest control) than the preexisting natural environment. Native plants are not always more drought tolerant than nonnative species either.

- Nonnoxious. Noxious weeds are a serious problem in agricultural areas. If you plan to purchase or introduce plants from out of state, contact your local Extension educator for information or the County Weed Control supervisor about noxious weeds in Idaho.

NOTE

The bottom line is to choose the best plant that is adapted to the area you are going to plant it in and that meets your desires for your landscape.

OTHER CONSIDERATIONS WHEN BUYING PLANTS

Some other important things to consider when you are **buying** plants:

- To ensure greater adaptability to your area, purchase plants that local seed sources have produced. This is especially important for woody and herbaceous perennials.
- Before purchasing plants via mail order, check local nurseries. You may save money and you will be able to inspect the plants for pests and diseases. Also, you are more certain of getting a live plant.

Installation and Renovation

Follow these steps when installing a new landscape or renovating an older one. The sequence depends upon your needs and abilities.

- Primary hardscape. Install sidewalks, driveways, walls, terraces, decks, patios, and ponds. These will define your use areas and will prevent future damage to your landscape if done at the beginning.
- Install planting beds. Amend soils, if necessary, and install weed barriers, if desired.
- Plant or move trees and shrubs. Plant and transplant shrubs early in the spring or late fall when plants are dormant and the soil is workable. Do not transplant large trees and shrubs when they are actively growing.
- Install an automatic irrigation system.
- Plant lawn or ground covers. Add soil amendments if you have poor soils — especially soils low in organic matter — or plant some type of an annual cover crop to improve the soil before planting.

Maintenance and Irrigation

MAINTENANCE

Review the maintenance requirements of your landscape plan before actually installing the landscape. This will save you a lot of frustration and expense in the long run. Refer to other *Master Gardener Handbook* chapters for more information about the following maintenance activities:

- Proper pruning. Timing and technique is important.
- Staking and wrapping trees or shrubs.
- Mulching. Includes organic, inert, and synthetic mulches. Organic mulches should not be deeper than 2–4 inches. Incorporate fine mulches such as sawdust into the soil. Plastic, nonporous mulches are not recommended for landscape use.
- Pest control. Includes disease, insect, and weed control.
- Proper turf management. Mow grass to proper heights. Leave trimmings as a mulch to improve soil and water retention, fertilizing, and top-dressing. Proper watering is also important to maintain a healthy lawn and to avoid waste, runoff, and water pollution. (See chapter 15 for more information and publications about establishing and maintaining a lawn.)

WATER MANAGEMENT

Match the irrigation program to the plants' moisture requirements, the time of the year, and soil types. Important components of a good water management program include:

- Proper timing and duration of watering. Deep and infrequent waterings are better than shallow frequent waterings. Deeply water evergreen trees and shrubs before the ground freezes in the winter.
- Match sprinklers and irrigation scheduling to plants and planting areas. Trees and shrubs require less frequent watering than turf and herbaceous ornamentals.
- Monitor and maintain the irrigation system frequently to prevent runoff, waste, and pollution.

Further Reading

BOOKS

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BOOKLETS AND PAMPHLETS

University of Idaho Extension

- BUL 644 *How to Prune Coniferous Evergreen Trees*
- BUL 915 *Soil Testing to Guide Fertilizer Management*
- CIS 991 *Landscaping and Utilities: Problems, Prevention, and Plant Selection*
- CIS 1054 *Low Input Landscaping*
- PNW 496 *Propagation of Plants by Grafting and Budding*