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Introduction

Congratulations on taking the first step and installing a brand new landscape! The information contained in this booklet gives you some background on landscapes, practical information to help you care for your plants and customized, detailed descriptions of the plant life in your garden.

Installing a new landscape or maintaining an existing one requires considerable knowledge. Once the landscape installation is finished plants and soil have to be maintained to ensure continued health and vigor. Flower beds, shrubs and lawns all have to be irrigated, fertilized and maintained to keep them growing and looking their best. Constructing a garden is a long-term investment and making the right choices is critical to the success of the project. “The well designed garden lays the foundation for a dream that can be enjoyed throughout a lifetime.” (*Gardenwise Directory 2006*). It also reduces the amount of maintenance required to a minimum. A garden designed according to its location and installed well eliminates a huge amount of labor and cost for the owner.

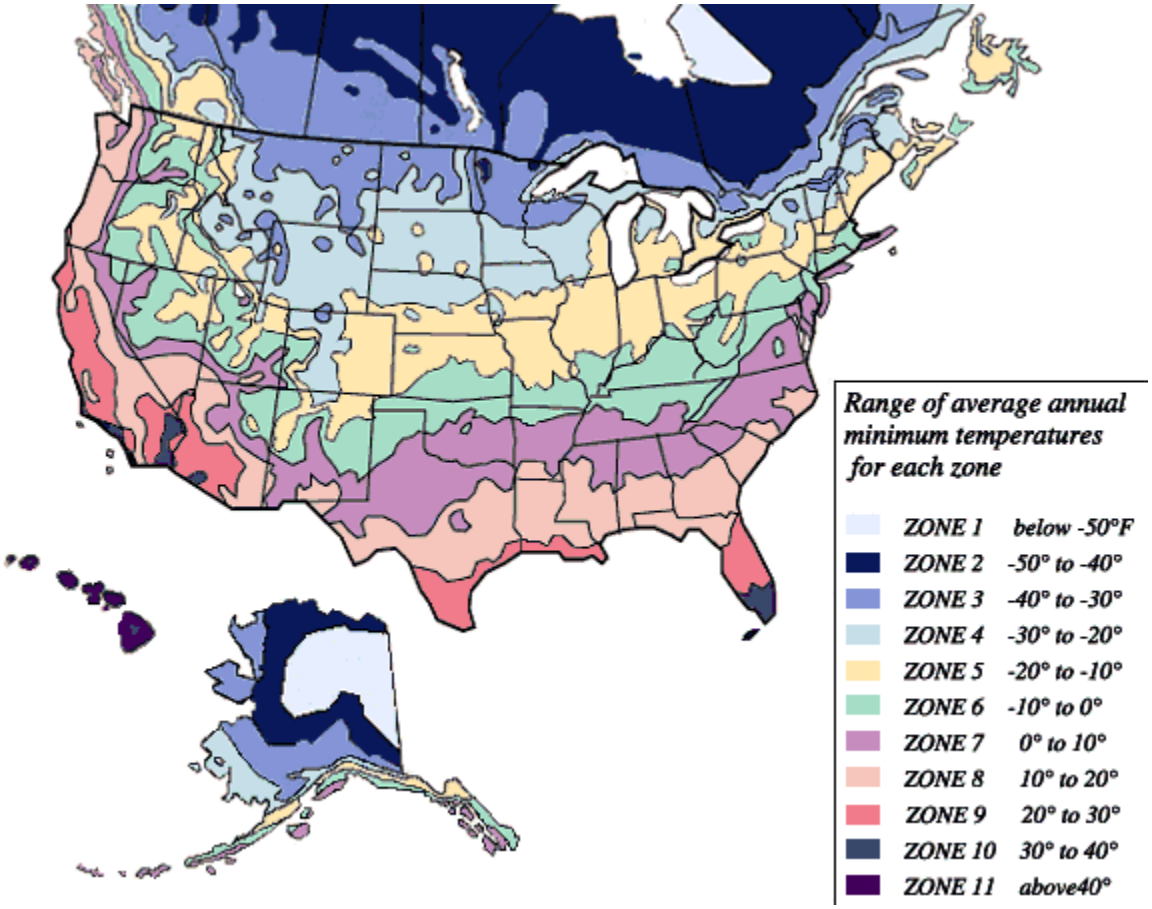
USDA Hardiness Zones

Based on weather records throughout North America, temperature zones have been created and mapped (see below). The United States Department of Agriculture (USDA) hardiness zone map is generally considered the standard measure of plant hardiness throughout North America. The Canadian government's agriculture department has issued a similar map for Canada. The USDA map divides North America into eleven hardiness zones. Zone 1 is the coldest and 11 the warmest comprising a tropical area found only in Hawaii and southernmost Florida. Generally, the colder zones are found at higher latitudes and higher elevations.

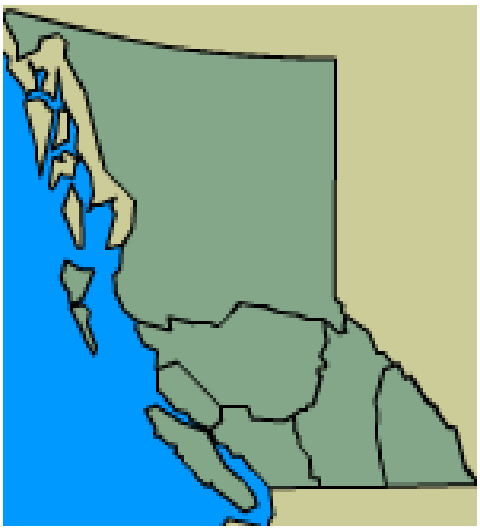
If you live outside North America, you can roughly translate the USDA hardiness zones by finding out how low the temperatures reach in your area and using the chart below to find your corresponding zone.

The Problem with Plant Hardiness Zones

The average minimum temperature is not the only factor in figuring out whether a plant will survive in your garden. Soil types, daytime temperatures, day length, wind, humidity and heat also play roles. For example, although Austin, Texas, and Portland, Oregon, are both in zone 8, the local climates are dramatically different. Even within a city, a street or a spot protected by a warm wall in your garden, there may be microclimates that affect how plants grow. The zones are a good starting point, but you still need to take into account other factors in determining what will and won't work in a garden.



Zoning Whistler



The Pemberton - Vancouver area ("Sea to sky" corridor) presents its own challenges and spans a variety of zones. For planting purposes Whistler is generally considered to be in zone 4. However, many zone 5 plants can do well here if their specific location in the garden is carefully considered. Micro-climates and protecting plants or other features can alter the zone up a little.

Another factor to consider is the wet winter conditions in Whistler. Many zone 2 plants, for example, have been cultivated for very cold, dry prairie climates and despite their hardiness will not survive when used in wet conditions. Trees and shrubs can break under heavy snow loads even when hardy enough for colder zones. Perennials, however, are usually more protected under the snow, making them hardy to a lower zone than that commonly published.

Based on our extensive experience in the area, *Heike Designs* and its contractors can offer specific, expert advice on these issues, and are always careful to place plants accordingly.

Life Cycle of Plants

Annuals

An annual is a plant that performs its entire life cycle – from seed to flower – within a single growing season. As the flowers wilt, those that were pollinated begin to form seeds. Once the seeds are dispersed, the annual plant dies, its genetic material now invested in the seeds. Most seeds go through a period of dormancy and sprout the following spring if conditions are right. Others may survive for years until they have adequate moisture, light and soil to germinate. Annuals usually bloom all summer and require watering and fertilizing for their short but intense life cycle.

Annual: Osteospermum 'Buttermilk'

Biennials

Biennials are plants that require two years to complete their life cycle. First season growth results in a small rosette of leaves near the soil surface. During the second season, stem elongation, flowering and seed formation occur, followed by the entire plants death, leaving the seeds to carry on the next generation.

Biennial: Digitalis Purpurea

Perennials

Perennial plants persist for many growing seasons. Generally the top portion dies back each winter and re-grows the following spring from the same root system. By the time the above ground parts have died off, the buds of next year's stem, flowers and leaves have already formed on the roots. Many perennial plants keep their leaves year round and offer attractive borders and groundcover. Some grasses in particular are useful in this way, with different species having different growing/dormancy seasons. Mixing these grasses in a landscape ensures year-round interest.

Perennial Warm Season Grass: Sorghastrum Nutans 'Sioux Blue'

Warm Season Grasses	Cool Season Grasses
Grow when temperatures begin to warm up in the spring.	Begin growth in late winter or early spring.
Flower and set seed in summer and fall.	Flower from winter to early summer.
Become dormant with onset of winter.	Become dormant or slow growing in winter.
Most turn a different color in the fall, providing color to the garden before going dormant.	Resume active growth in winter.
Winter silhouettes attractive through dormancy.	May continue growing all winter in milder climates.
Need to be cut back in late winter or early spring before new growth begins	Many are evergreen and require trimming or the raking out of old foliage rather than cutting back.

Annual/Perennial

A plant can behave as an annual or a perennial depending on local climatic and geographic growing conditions. In the southern portion of the United States, these plants tend to grow much quicker than in the north due to the warmer weather and extended growing season. For example, a Black-Eyed Susan would behave as an annual if grown in Louisiana, whereas, if grown here in BC, the same plant would behave as a perennial.

Deciduous Trees and Shrubs

Deciduous trees and shrubs are perennials with leaves that die off in the fall, woody stems (trunks) that persist all year long, and a lifespan of many years. Like other flowering perennials, trees maintain just enough metabolism to stay alive in the cold. The energy to grow new leaves and flowers is stored in the roots as well as in the buds, which formed on the twigs the previous summer. When the weather is warm enough, with periods of sunlight sufficiently long, the cycle will begin again.

Evergreens

Plants with leaves that do not die off in the fall are Evergreens. Evergreens, however, also follow a cycle of increased and diminished growth. The outward signs are less obvious but are observable.

Bulbs

The term “bulb” is used by most people to refer to plants that have underground, fleshy storage structures. Only some of the plants commonly called bulbs actually are bulbs. The definition of a bulb is any plant that stores its complete life cycle in an underground storage structure.

Crocosmia ‘Bicolor’

The primary function of these underground storage structures is to store nutrient reserves to ensure the plants' survival.

Bulbs or bulb-like plants are usually perennials. They have a period of growth and flowering. This is followed by a period of dormancy where they die back to ground level at the end of each growing season. For spring bulbs, the end of the growing season is in late spring or early summer. Spring bulbs start to grow again in the fall and flower the following growing season.

Spring flowering bulbs such as Crocuses, Daffodils and Tulips give color to the garden early, before any other flowers come up. Other common bulbs are Irises and Crocosmia.

Great care must be taken not to over water bulbs as they are prone to rot with excessive moisture. They can be set up for a higher success rate by planting in well drained soil. Add sand to further boost the results.

Plant Care

Watering

Plant survival is directly related to the care they receive. One of the most basic concepts is adequate moisture. Without it, plants cannot survive. Water requirements for newly installed plants are fairly simple; the roots should never become waterlogged or completely dry. Different plants have different moisture requirements and it is important that you become familiar with the needs of your various plants. The crucial part of supplying adequate moisture is to compliment natural rainfall on an ongoing basis by following these guidelines:

1. **Soil Sampling**
   Dig down a couple of inches just outside the root mass of the plant, and water only if the soil feels dry to the touch. Feeling the soil for moisture content is the best method for gauging dryness. Sampling can tell you accurately if the soil is too dry or wet, or adequately moist.

2. **Coral the Water**
   Well all newly installed plants by creating a circular berm of soil, 3-4" high around each plant. This allows for easy measurement and placement of the water at the root zone. This is especially important when planting on a slope. Build a small flat area above the plant to allow the water to reach the roots and prevent it from simply running down the slope.

3. **Keep Track of the Water Volume**
   Plant species have varying water requirements. Before watering, check the soil moisture and the moisture requirements of your plants.

4. **Evaluate Frequency**
   Newly installed plants need regular watering, usually twice a day, more if the weather is extremely hot or dry. Watering is more effective if carried out over a longer period of time than if you water frequently with small amounts, as the moisture is allowed to penetrate deep into the soil and is therefore accessible to the plant as required. Water on the surface is more prone to loss by evaporation. Regular watering should continue throughout the plants' first season. Continuing into the late fall until the ground is fully frozen will increase chances of surviving the winter.

5. **Mulch**
   Maintaining a layer of mulch at a depth of 3 inches greatly reduces water lost to evaporation. Mulch should be tapered to and *not touching* the plant base.

6. **Site Considerations**
   Each site is different, with varying soil type, sun and wind exposure, and topography. You must adjust your watering routine to compensate for these factors as well as the weather. Be careful not to *over* water.

Automatic Irrigation Systems

An automatic irrigation system is the most efficient way to water your plants. Below are listed some of the benefits.

Convenience – No need to remember to water, deal with hoses or make time in your busy schedule for watering.

Greener, healthier lawns and gardens – Watering by hand simply cannot match the performance of an automatic irrigation system. A professionally designed and installed sprinkler system will give you a lush, vibrant and healthy garden.

More efficient and effective watering – An automatic system is the best way to prevent under or over watering. Hand watering can result in using up to 50% more water than your garden actually needs. By watering more precisely at the right times, you can eliminate this wastage and help conserve water. Programmed to water at the best times, a sprinkler system delivers gentle, precise, even watering for a more consistent, thorough soaking, virtually eliminating run-off and wasted water.

Great return on investment – Studies suggest installing an automatic sprinkler system can increase the resale value of your home significantly.

More leisure time – An automatic system frees up more time to enjoy your leisure time and appreciate the garden. All the while your plants are enjoying the right amount of water delivered at the right times.

Landscape Maintenance

Spring Clean-Up

A landscape always needs sprucing up after a long winter. Below are some of the processes involved.

1. **Rake, clean, power-broom all lawn areas.**

2. **Lime, aerate, de-thatch, top-dress, overseed all lawn areas.**
   Lime will help your grass put down strong roots and make it a vibrant green. Aeration improves soil drainage and encourages worms, microfauna and microflora which require oxygen. De-thatching is also important to promote oxygen flow. Lawn thatch is a layer of dead organic tissue that deprives the lawn from much needed oxygen. Top dressing a lawn simply means adding organic material to the surface of the turf. This material is usually a mixture of good-quality soil, sand and a source of humus. The purpose of top dressing is to fill in all the minor low areas that have developed during the season, and to build up an ideal soil layer over the years. A thick healthy lawn is the best defense against weeds, disease, drought and insect damage. Over-seeding can quickly repair a lawn that is thin and patchy from winter damage.

3. **Clean, cultivate and weed all garden beds.**
   Loosening the soil throughout the beds will allow oxygen to reach the roots of established plants and make the soil easier to work with when planting new ones. It will also allow water to penetrate more easily.

4. **Prune shrubs and trees from winter damage.**

5. **Remove all debris and litter.**

Weekly Maintenance

Some processes must be ongoing throughout the season to ensure the landscape reaches its full potential. Weekly maintenance ensures that you get the very best out of your garden and prevents large renovation costs that can be incurred if it is neglected for too long. Heike Designs offers continuous visits to ensure that your garden develops according to the design and vision.

1. **Mow and trim lawn.**

2. **Clean up, weed and cultivate all garden beds.**

3. **Prune shrubs and trees when required to ensure healthy growth.**

4. **Adjust plant material, if necessary, to ensure design intent continues to be fulfilled.**

5. **Remove debris and litter.**

6. **Fertilize with slow release fertilizer.**