



RGA Gardening Fact Sheet #12: *Garden Construction*

Gardening enhances our personal and community space. All plants, from trees to flowers, beautify our living area, provide edible food and offer environmental benefits ranging from the oxygen we breathe to creating summer shade to cool our homes. By growing plants, we better appreciate our natural environment and the ecological relationships between soil, water and climate. Gardening helps the young to the young-at-heart understand the responsible use and protection of our natural environment, as well as the impact we have on the “big picture” of environmental stewardship.

With support from the Conexus Credit Union’s (CCU) Community Investment Program, the Regina Garden Associates (RGA) at the Regina Floral Conservatory aim to promote environmental stewardship through a series of gardening fact sheets, teaching appreciation of growing plants and basic gardening practices to the general public. Visit the Regina Floral Conservatory often and continue learning about gardening through our fact sheets.



Garden Construction

Constructing a new garden or improving an existing one is the implementation stage of your garden design. Garden construction combines hardscape improvements with plant materials. One compliments each other and homeowners have many options to select from. The trend in at least new home developments has smaller lots with larger 2-story homes and attached or detached garages. Lawn areas are typically reduced and where present, homeowners may be seeking lower maintenance gardening. As well, homeowners are creating “outdoor rooms” that are an extension of their home interior. What comprises the “outdoor room” is much more than flower gardens. It is a combination of hardscape improvements, like a patio or deck with an outdoor kitchen covered by a pergola and surrounded with suitable trees, shrubs and flowering plants. Beyond the aesthetics of using attractive plant materials, there may be more functional value of using plant materials to create screening for privacy. Similarly hardscaping may apply water conservation in irrigation and drainage.

This Garden Construction Fact Sheet gives practical suggestions under general categories of hardscape improvements. To be most effective, readers are encouraged to review the entire series of Garden Fact Sheets (#1-12). Moving forward, follow your garden design plan and always mark in advance the property’s underground utility lines. Choose a qualified landscape contractor or “do it yourself” with the aid of retailer and supplier’s guides and product install videos.



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Water Use and Water Features

As per your garden design plan, trench in **water lines, taps and underground sprinklers** at the early stages of construction before paver patios, walkways and raised beds are completed.

For shrubs and perennial flowers, use **drip line irrigation** to supply water directly to individual plants. The volume of water and timing of delivery is matched to individual plant needs. Net result is improved survival of plants; reduced water consumption and lower water cost plus; reduced time needed for plant care. Couple this improvement with **mulching** of the planting bed and you will reduce both evaporation loss and weed germination.

Ensure **water drainage** from your home's downspouts drain away from the house foundation. Where space enables, capture this water by directing into planting beds with shrubs and perennial **plants grouped to need higher water use**. You may even want to consider slowing the runoff through depressions where plants form a rain garden.

A **water feature** can serve as focal point in your garden design. Small **ponds, streams and waterfalls** appeal to visual and sound nearby to a patio, deck, bench or walkway. For reduced maintenance, consider a **pondless water feature** like a rock bubbler or other statuary with a recycling water pump and either an above or below grade enclosed water reservoir. Compliment these hardscape improvements with aquatic plants and natural layered plant borders of shrubs, grasses, ferns and/or perennial flowers.



Soil, Planting Beds and Containers

Maintaining your property's final grade elevation is first priority for water drainage; however, flat or gently sloping yards can become more interesting visually with the addition of even a **gentle mound and depression**. It could be covered by a xeriscape landscape, turf grass or planting beds. Where the design calls for planting beds, **amend the soil** up to a depth of 1 foot. This is a critical step that needs to be completed in the early stages of construction. Build a loamy organic soil that is nutrient rich for the establishment and continued growth of trees, shrubs, grasses, ferns and perennial flowers. Apply **compost** on an on-going basis. Ensure your bed design has a minimum of 5 feet width. Consider the mature spread height of trees and shrubs when selecting and installing this plant material. **Raised planting beds** constructed with paving stones or untreated natural wood like cedar or spruce are effective for both vegetable gardening as well as trees, shrubs and perennial flowers and grasses. Annual flowering plants are best in **container pots** that can be grouped on the patio, deck and along a walkway.



Power, Natural Gas and Lighting

Trench in underground **electrical and natural gas lines**; and install **outdoor electrical and natural gas outlets** as per the garden design plan. Do this work in the early stages of garden construction. Electrical power is needed for instance to power a pump for a water feature or for the outdoor kitchen on the deck. Individual **solar lighting** may be used for landscape lights or alternatively a **low voltage transformer with wired LED lighting** can be employed. Beyond lighting of walkways, outdoor lighting can be used to accent trees or features like a waterfall. Consider the night view from looking out a backyard window or from your deck or patio. Then identify an interesting focal point that would benefit from accent lighting. When one thinks of an "**outdoor room**" for entertaining, electrical power and a natural gas outlet are essential to operate a barbecue and stove plus accessories of a refrigerator, patio heater, television and sound systems. At night, your garden at a front entrance or in a rear yard has the potential to show beautifully with effective lighting.

Support Structures

Think vertical for plantings that can be supported by your property's border of a **wall and/or fencing**. Vines and climbing roses are good examples that will provide colour and texture to the boundaries. For a yard's interior areas, you could install a **trellis, arbour or pergola** with an adjoining planting bed. Here you might plant a combination of climbing vines with small trees, shrubs, ornamental grasses and perennial flowers. The effect could be to both create screening as well as shade. A more recent trend for consideration both indoor and outdoor is a **living or green wall** which comprises a vertical growing structure anchored to a wall and with an integrated irrigation system.



Landscape Boulders and Construction Aggregates

Construction **aggregates** like **crushed rock** are certainly what we think of first with **xeriscaping**. Low water use shrubs, ornamental grasses and perennial flowers are installed and supplied with drip-line irrigation water. A heavy duty **landscape fabric** is laid and then aggregates are spread atop. With or without plant material, aggregates can be used to define a **border edge** for walkways, driveways and patios as examples. Aggregates can vary from to larger **river rock** to varying sizes of larger stones up to **boulder** size. This variation allows for placement of individual or grouped boulders around which a planting bed can be created or alternatively the boulders and larger rocks may be the foundation for a waterfall and running water creek feature. Ensure that you move and place larger boulders and rocks at the early stage of landscape construction and thereby allow for equipment access. **Dry creek beds** may be constructed following a depression and here placement of the varying size of aggregate, larger rocks and boulders simulates a natural streambed. The associated plant materials could be a combination of low growing perennial flowers typically associated with rock environments with a background of smaller shrubs, ornamental grasses and colorful compact shrubs.





Depending on your level of interest in gardening, you might consider further installing an **outbuilding for storage** and/or a **greenhouse**, a **cold-frame** for hardening off annual flowering plants and vegetables, a **composting bin** for recycling plant materials and a **potting bench**.