Creating an Environmentally Responsible Landscape

Your landscape is one part of a large system involved with watersheds. Watersheds are large areas that drain into common lakes, rivers or oceans. Nature knows no property lines. A rainstorm or excessive irrigation can wash pesticides and fertilizers from your landscape and pollute your neighbor’s lawn and local waterways.

Creating a Friendly Landscape

Creating and using a well-planned design is the first step towards an environmentally friendly landscape. Develop and follow a logical planning process. Don’t visit a nursery and only pick out plants that seen attractive. Instead, follow the steps outlined below:

- **Decide Why You Want to Landscape:** A responsible gardener will design a landscape that enhances the environment by reducing harmful runoff and providing a habitat for wildlife. Use these principles in all your decisions. Also consider food production, climate control and resale value.

- **Determine How You Will Use Your Property:** Consider play areas for children, entertaining areas, vegetable gardens or framing existing views. Also consider that amount of time you are willing to spend working in your landscape.

- **Analyze Your Existing Site And Consider Your Limitations:** Research your native soil type and have a soil test done to obtain the soil pH. Examine the features of the property such as native plants, natural drainage patterns and natural features. Consider which natural features to incorporate into your design and which feature will limit you design. Some factors to consider are plant temperature tolerance, flooding or saturated soils, shade, dry areas, possible salt spray.

- **Develop a Land Use Plan:** Using a ruler and graph paper, sketch where plant beds and plants will go as well as turf areas. Note the natural water flows in order to eliminate runoff.

- **Incorporate a Landscape Plan:** Gather information on plants adapted to your site with regards to amount of sun light required, soil types, pest resistance, mature plant height and management requirements.

- **Incorporate an Irrigation System:** Not all sites benefit from an inground irrigation system. Landscapes designed for drought resistance plants can be easily hand-watered when needed. If an inground system is used, design it efficiently. In designing the irrigation system, be sure to use separate zones for ornamental beds and for turf. Also separate more drought resistant plantings from areas needing more water.

- **Obtaining Plants:** Once your design is finished, it is time to acquire your plant material. Purchase quality, healthy, disease- and insect-free plants. Protect your plants from extreme weather and wind as you transport them home. Characteristics that reduce maintenance and pollution are:
  - drought resistance
  - pest resistance
  - adapted natives
  - non-invasive
  - slow growing
  - wind resistance
  - adapted to low fertilization
• **Establishment:** Position plants in the landscape as you have designed it and readjust plant spacing as needed. At planting, dig holes twice as wide as the root balls and amend the soil as needed. Remember that plant survival requires adequate drainage. Gently remove the plants from containers and lightly break up the root system. Place the plants in the holes no deeper than their depth in the container. Be sure to eliminate air pockets in the backfill at planting. Create a soil ring to hold moisture and mulch with 2-3 inches of mulch. Deep watering will allow your plants to establish a deep, healthy root system.

• **Landscape Maintenance:** Maintenance includes watering, fertilizing, mowing, mulching, pruning, composting and pest control. Prune as needed to maintain healthy growth, fertilize according to soil test reports, maintain a 2-3 inch layer of mulch over the root system, and use the least toxic pest control.

**Analyzing Site Conditions**

**Soil:**
- sand
- loam
- clay
- alkaline pH
- acid pH
- compacted
- well-drained
- poorly-drained

**Light:**
- full sun
- partial sun
- shade

**Temperature:**
- exposed to freezing
- exposed to extreme heat

**Structural Limitations:**
- power lines
- underground utilities
- septic tanks
- roof overhangs
- paved surfaces

**Environmental Limitations:**
- exposure to salt spray or salty well water
- exposure to strong winds
- exposure to seasonal extreme wet or dry periods

**Attracting Wildlife**

Food should be provided in the form of plants that bear seeds, berries, fruit, foliage or flowers that you are willing to have eaten by birds or butterfly larvae. Berries, fruits, nuts and acorns are treats for wildlife. Red tubular-shaped flowers attract hummingbirds.

- **Water** - sources in your landscape can be a birdbath, stream, pond, creek or other body of fresh water. Be sure to clean baths regularly to avoid mosquitoes, as well as bacterial and algal growth.
- **Birds** - are attracted to landscapes that are planted with small tree canopies, smaller under story trees, shrubs and grasses that provide food and shelter.
- **Pesticides** - used in the landscape will reduce the insect population that is a food source to much of our native wildlife. Some chemicals may also poison birds as they feed on pesticide treated insects.
- **Caterpillars** - are the larval stage of butterflies and moths. If caterpillars are feeding on a plant, send a sample to your local county Extension office for identification and control.
- **Butterflies** - different species are attracted to different flowering nectar plants such as wildflowers, shrubs and vines.
- **Snags** - or dead trees can be left in place if they do not threaten a structure. Birds will use snags for housing, perching and as a food source.

**Note:** Pets that are allowed to harass wildlife will negate any efforts you put into attracting wildlife.

**Maintaining Your Landscape**

**Composting:** Adding compost to your soil on a regular basis will improve soil structure, texture and aeration, help loosen compacted soils, promotes soil fertility and stimulates root growth. It will also create a favorable environment for beneficial microorganisms. Home built compost bins can be used for disposing of leaves, grass clippings and
vegetable kitchen scraps. Compost can also be bought commercially from landfills and garden centers. For more information on how to build and maintain a compost pile, see HGIC 1600, Composting.

**Fertilizing:** Adding compost regularly to your landscape beds should provide enough nutrients to maintain growth. If an additional supply of nutrients is required by soil test reports, use a fertilizer containing at least 50% slow release nitrogen. Use a balanced fertilizer such as 16-4-8 at a rate of 2 tbs. per foot height of plant growth. Turfgrasses should be fertilized according to grass and soil type and soil test results.

**Irrigation:** Watering your landscape should only be done to supplement rainfall. Plants will thrive better on the dry side. When irrigation is needed, remember the rule of thumb of "deep and infrequent". This means a watering deeply after the plants have thoroughly dried. One inch of water per week should be enough to supplement most plants. Be sure to water early in the morning and design your irrigation system so that ornamental beds and turf are separated to different irrigation zones. Use micro- or drip irrigation systems on shrubs & trees where feasible.

**Mowing, Pruning & Raking:** Selecting plants with desirable mature heights will eliminate the need for constant pruning. Follow recommended plant management practices that will keep growth slow and steady so that light yearly pruning is all that will be needed. Recycle the grass. Mow to remove one-third of the grass height, and return the clippings back into the turf. Use leaves that have fallen from trees and shrubs as mulch in beds.

**Mulching:** Applying a 2-3 inch thick layer of mulch over plants root systems will reduce moisture loss, moderate soil temperatures, reduce weed growth and add to the beauty of your landscape. Mulches can also be used to replace turfgrass or areas that are difficult to mow and naturally shaded. Keep all mulches at least 2 inches from the trunks of plants.

**Pest Management:** It is unreasonable to strive for an insect, disease and weed-free landscape. An environmentally friendly landscape will work with nature to provide for natural pest controls using beneficial insects. Use the Integrated Pest Management (IPM) method of gardening. Carefully monitor plants for insect or disease problems and use cultural control first. Use chemical controls only as a last resort and if required, use the least toxic products first.

**Preventing Site Runoff:** Direct downspouts toward low areas or swales in the landscape to collect rainfall and allow it to filter through the soil. Shape the site to prohibit water flowing from your site into storm drains. Naturalized areas or berms can be used to create natural collectors where excess water can percolate into the soil. Use porous materials for walkways and drives and reduce the amount of nonporous material on site.

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