Water-Wise Landscaping

A Guide for Water Management Planning
This presentation is primarily for residents of northern Utah with an interest in landscaping to conserve water.

Specifically: plant hardiness zones 4 and 5.
The basic concepts of landscape design apply anywhere, but the plants and the cultural practices are refined for water conservation in this region.
Landscaping Then...

• The landscaping approach across the country has been to clear the land and start over, rather than to make use of existing indigenous plants.
A concept is now emerging that integrates reverence for nature, recognition of the aesthetic value of the local landscape and fulfills contemporary human desires.
Water-wise landscaping fulfills these needs by focusing on planning for the user and for the environment.
Envision a beautiful place where there is native vegetation: grasses, sagebrush, oaks, and junipers or spruce, pine and grasses.

With this vision in mind, place your house in the picture without disturbing the site.

The view from the inside of your home is a natural garden.
Water-wise landscaping includes...

- Planning a yard for your lifestyle
- Grouping plants together with similar water requirements
- Watering just to meet plant needs
- Using non-water consuming areas such as decks and patios
Benefits

• Up to 50% of landscape irrigation water can be saved
• Slows the rate of environmental degradation
• Saves billions of tax dollars used of creating water impoundments
• Protects natural scenery and wildlife
Additional Benefits

• Reduction in water bill
• Little or no lawn mowing
• Less fertilizing and maintenance
What about the costs?

• The costs of converting to a water conserving landscape equalize over time.
• The day is fast approaching when there will not be either enough water or enough **affordable** water.
Getting Started

• Determine your USDA hardiness zone
• Consider microclimates within the yard
• Develop a plot plan
• Measure the length and width of the property between the property corners
• Measure from the property lines to the house corners sighting along the sides of the house
Plot plan cont.

• Locate, measure and draw other structures, utility lines, driveways, garbage storage areas, existing gardens, existing trees, easements and setbacks

• Approximate the location of adjacent houses or anything that would influence your views or solar access
• Consult the city or county planning department about ordinances that apply to landscaping, i.e.; setback limitations and height restrictions.

• Determine the grade of the property. If you have steep, erosive slopes you may wish to hire a landscape architect to assist you with a plan to stabilize them.
Plot plan cont.

- Make a clean bold copy of your plot plan that can be easily read through tracing paper
- Orient the lot so that north is at the top of the page
Site Inventory

- The objective is to note site assets and constraints for planning
- Trace your plot plan on an 8 ½” by 11” sheet of paper
- Draw existing conditions on the copy
Existing Conditions

- Existing vegetation
- Arrows showing the direction of prevailing winds
- A symbol indicating noise sources
- Drainage direction
- Location of different soils
Existing Conditions cont.

- Areas of good/poor views
- Sunny areas and areas of dense shade
- Wetlands, rock outcrops or other unique aspects of the site
Soils

• Soil texture and structure effect soil drainage and plant survival
• Soil may be clay, sand or loam
Sandy Soil

• Coarse texture with little structure
• Drain and dry out rapidly
Clay Soils

• Finely textured with developed structure
• Drain slowly, thus hold water longer
• Alkaline clay soils limit plant selection
Shallow Soils

- Soils with an impervious hardpan layer
- Are suited for shallow rooted plants, such as perennials, annuals, or ground cover
- Depth may be improved by building raised planting beds
General Soil Information

• The USDA Soil Conservation Service has mapped the soils in this region

• Published surveys are available from local offices and usually at the local library
Mapping Your Soil

• Take soil samples from several different sections of your yard
• Dig a handful of soil within 12 inches of the surface
• Add a few drops of water to it and roll the soil into a ball
• Squeeze the ball between your index finger and your thumb
Mapping Soils cont.

• Soil that crumbles, feels coarse and leaves your hands rather clean, is likely a sandy soil

• Soil that feels sticky
Landscape Ideas

• Look for landscapes you see and enjoy
• Books about art, landscape and environment
• Walk in the foothills and mountains and notice which plants are growing together
• Maintain what exists for a year to learn about the property
Three Important Planning Considerations

• Landscape Use
• Circulation
• Environmental Aspects
Landscape Use

• Consideration must be given to the arrangement of activity areas and the compatibility of adjacent uses
  - A secluded patio would not be advisable next to a volleyball court
  - Aesthetic barriers should be considered to diminish annoyances such as street noise or an unpleasant view
Circulation

- Wide paths or large connecting spaces enable use by many people simultaneously.
- Narrow winding paths help seclude areas.
Environmental Aspects

• Assets include views, rock outcroppings, areas with sunlight or shade or existing vegetation
• Odd shaped lots, poor drainage or steep slopes may limit or exclude some landscape uses
• Microclimates must not be overlooked
Four Basic Planning Steps

1) Program Development
2) Conceptual Planning
3) Synthesis
4) Design
Step 1-
Program Development

• Used to identify your priorities for the landscape and to establish goals for accomplishment

• Should integrate the use of interior spaces in the home and exterior spaces of the landscape
Step 2 – Conceptual Planning

• Delineates spaces in the landscape for program activities and goals

• The resulting plan drawing will include a hierarchy of spaces, from large dominant spaces to smaller spaces sized for their intended use
Planning for Private/Secluded Areas

- Do you enjoy sitting/reading/sunbathing in the yard?
- Do you desire an outdoor hideaway that is separate and secluded from the house?
- Would you like a hot tub under the stars?
- Do you need quiet and active areas that can be used simultaneously?
Active Areas

• Is basketball, badminton, horseshoes, swings, etc. important to you?
• Should a child’s play area be visible to a certain room in the house?
• Is attracting birds and other wildlife an objective?
• Perimeter areas can be planned to attract wildlife to your property
• Adjacent land uses should be planned carefully so the wildlife is not frightened away and to protect gardens from feeding damage
Entertaining

• Do you entertain outdoors creating the need for sitting areas, storage for chairs, barbecue pit/cooker, paths to connect areas or privacy/public space?
• Is night lighting important?
• Do you want an east facing outdoor breakfast nook, or an evening shaded deck?
Water Features

• Are you looking for a focus element in your landscape, such as a fountain, birdbath, or lily pond?
• Is the water feature to be functional such as a swimming pool or hot tub?
• If gardening is a priority, consider the aesthetic incorporation of a garden into the landscape.

• Do you want a vegetable, cutting or formal gardens?
• Is a native plants garden of interest?
• Do you need an area for tool storage?
• Will there be a compost pile?
Maintenance

• Determine the amount of time you are willing to devote to landscape maintenance.
• Do you enjoy high maintenance tasks such as frequent mowing, fertilizing, watering and pruning?
• If low maintenance is a priority, consider using vegetative ground covers, hard surfaces, low water use plants and mulch.
• Is snow removal necessary?
• If so, where can snow be piled without damaging plants?
• Everyday uses of the landscape are important considerations. Try to facilitate these uses in an aesthetic manner
Considerations

• Is a garage or carport needed?
• Do you use a clothesline?
• For parking, do you need a turn around, wide driveway, parking space?
• Will you have a dog run or a fenced yard?
• Consider storage for garbage cans, recycling boxes, or fireplace wood.
- Will additions be made to the house resulting in the need for temporary landscaping?
- Do deliveries to the house need to be accommodated?
Plot the Concept Plan

- On a clean plot plan of the yard and house, draw areas for the uses you identified in the Program Development Process.
- Use loose free lines, erase and juggle locations until the uses fit the way you want them. You now have a concept plan.
Step 3- Synthesis

• Illustrates how the conceptual plan fits within the limitations and assets of the site.

• Combines the drawings you have developed at this point including the:
  - Site Inventory
  - Site Analysis
  - Conceptual Plan
• Trace the concept plan and the site analysis on one sheet of paper.

• Check for incompatible uses such as a garden planned where a healthy tree exists or a sunlit patio planned near a storage shed.
• Tall plants can help screen garages and natural wood fencing can be used to hide garbage containers.
• The small details in a landscape often give a finished quality look.
Step 4- Design

The objective of landscape design is to aesthetically define space to satisfy your program requirements in an environmentally responsible manner. The design should be tailored to fit your property.
Design Principles

• Balance
• Emphasis
• Unity/Variety
• Continuity
Balance

• Symmetrical
• Asymmetrical
Symmetrical balance uses identical distribution of items on each side of an area. It is more formal than asymmetrical balance.
Asymmetrical balance is achieved by creating the same feeling of weight, or mass, on each side of a yard, but with random distribution of elements.
Seasonal Color Balance

• A process of determining when colors appear on plants in flower blooms or leaves, what the colors will be, and where to position them to achieve color balance throughout the year.
Emphasis

• A focus created in the landscape that draws attention and evokes curiosity, making the landscape interesting.
Unity and Variety

• A design is held together by unity and variety.
• Unity is accomplished through repetition, such as group plantings of like plant materials.
Items for Repetition

- Color
- Leaf texture
- Plants of a certain size or shape
- Spaces of a certain size
- An arrangement of plants
- Paving materials
- Architectural details
Unifying Elements

• Forms of planting areas and hard surfaces
• Color
• Size
• Texture
• Architecture
Variety

• Diversity of materials
• Trees, Shrubs and Paving Materials
• Color (too many colors will create a busy, cluttered look)
Continuity

Is the thread that is woven throughout the landscape. It includes the repetition of plants, colors, textures and shapes, but it also emphasizes their use throughout.
Water zoning is a design process that divides the landscape into areas that will receive a suggested frequency of irrigation. Plants with similar water requirements are then matched with the appropriate water zone.
Zones range from 0 to 4

- 0- Needs No Watering
- 1- Monthly Irrigation
- 2- Irrigation every two weeks
- 3- Weekly Irrigation
- 4- Irrigation twice per week
A water conserving landscape often has a greater diversity of plants than a traditional landscape.
Interior Climate Control

- Use foundation plantings as insulators
- Use trees or shrubs as windbreaks
Design Materials

• Hard surfaces such as concrete, wood, brick or stone
• Soft surfaces such as sand, pea gravel, and wood mulch
• Selected for their durability, aesthetic qualities, cost, ease of installation, porosity for drainage and maintenance qualities
Plant Selection

Information gathered from the site inventory, knowledge about plant growth, and use of your design intent will help you make successful plant selections for your site.