

1-1-2005

# Water-Wise Landscaping - A Guide for Water Management Planning

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## Recommended Citation

Sagers, Larry A., "Water-Wise Landscaping - A Guide for Water Management Planning" (2005). *All Archived Publications*. Paper 1530. [http://digitalcommons.usu.edu/extension\\_histall/1530](http://digitalcommons.usu.edu/extension_histall/1530)

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# 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.



## Landscaping Now...

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



# Drawing 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



## Plot plan cont.

- 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?



# Wildlife

- 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?





# Gardening

- If gardening is a priority, consider the aesthetic incorporation of a garden into the landscape.
- Do you want a vegetable, cutting or formal gardens?



## Gardening Cont.

- 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.



# Maintenance Cont.

- Is snow removal necessary?
- If so, where can snow be piled without damaging plants?



## General Use Considerations

- 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.



## Considerations Cont.

- 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




## Synthesis cont.

- 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.



## Synthesis cont.

- 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

Symmetrical balance uses identical distribution of items on each side of an area. It is more formal than asymmetrical balance.



# 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

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.