



Water Wise Landscape Design



Supplemental Reference / Reading

CMG GardenNotes

- #410, *References and Study Questions: Water Wise Landscape Design*
- #411, *Water Wise Landscape Design: Design Steps*
- #412, *Water Wise Landscape Design: Selecting Turf Options*
- #412, *Principles of Landscape Design: Design Principles*
- #413, *Worksheet: Water Wise Landscape Design*
- #414, *Homework: Water Wise Landscape Design*

Books

- *Basic Elements of Landscape Architecture Design*. Norman K Booth. ISBN: 0881334782
- *Landscaping Makes Cents: Smart Investments That Increase Your Property Value*. Frederick C Campbell and Richard L Dube. ISBN: 0882669486
- *Landscaping Your Home*. William R. Nelson. ISBN: 0875639607
- *Residential Landscape Architecture: Design Process for the Private Residence*. Norman K Booth and James E Hiss. ISBN: 0131140647
- *Xeriscape Handbook*. Gayle Weinstein. Fulcrum Publishing. 1999. ISBN 1-55591-346-6
- *Xeriscape Plant Guide*. Denver Water, Fulcrum Publishing. 1996. ISBN 1-55591-253-2

Web

- *Value Landscaping for Financial and Environmental Sustainability* – Add your yard’s inputs and the software calculates the cost to install and maintain the landscape. Developed by Utah State University Extension and the Central Utah Water Conservancy District – VLE.CUWCD.COM

Curriculum developed by David Whiting, Department of Horticulture & LA (retired), Colorado State University, and Jeffry de Jong, Horticulturist, Victoria, BC, Canada.. Artwork by David Whiting; used by permission.

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Learning Objectives

Working through design as a process, the student will be able to craft a water wise landscape design. At the end of this class, the student will be able to:

1. Outline the six steps in the landscape design process. Explain how the process is important to potential water savings.
2. Discuss opportunities and limitations as it relates to site analysis.
3. Explain how a garden theme defines the landscape around family values, needs and wants.
4. Describe hydrozoning and its role in potential water savings and plant selection.
5. Match lawn options with design needs and use.
6. Describe the use of rectilinear, curvilinear and angular design styles.
7. Describe how to refine a preliminary design for efficient irrigation efficiency.
8. Describe the interplay of *line, color, texture* and *form* with *scale, balance, simplicity, variety, emphasis* and *sequence* to create *unity* in the design.
9. Explain hints to mix and match plants creating pizzazz.

Review Questions

1. List the seven principles of water wise gardening. Explain the take home message of each.
2. Describe the steps in the landscape design process.
3. Describe site analysis considerations in the following areas:
 - Soil tilth
 - Grading and drainage
 - Microclimate
 - Existing vegetation
 - Extension Landscape
 - Potential for irrigation
4. Explain “opportunity or restraint” as it relates to site analysis.
5. Describe considerations in family analysis. How does potential irrigation figure into family analysis?
6. Discuss the purpose of the landscape story line (theme). What does the story line and theme bring to the design process?
7. Describe the purpose of the hydrozone bubble drawings.
8. Describe how hydrozones fit into the design process. For existing landscapes, explain why we go back to the hydrozone bubble drawings step to evolve a more water efficient landscape.
9. Describe the concept of “practical turf areas”. What factors should be considered in matching a turf type for a specific site?
10. In Colorado where multi-year drought routinely occurs, how could community expectation about the lawn care change during a water shortage?
11. Discuss the following points about Kentucky bluegrass.
 - KBG makes a great low input lawn option.
 - KBG water use and growth slows as the soil begins to dry down.
 - KBG irrigation demand varies significantly between cultivars.
 - KBG goes dormant under summer water stress.
12. Discuss the following points about turf-type tall fescue lawns.
 - Tall fescue may or may not be deeper rooted.
 - Tall fescue cannot sow growth as soils dry down.
 - Tall fescue cannot go dormant under water stress.
 - Tall fescue makes a great lower input lawn option
13. Discuss the following points about turf-type Buffalo grass.
 - Summer green will be dependent on rain and irrigation.
 - Buffalo grass will be dormant fall through spring, reducing seasonal water demand

14. Describe the “feeling” of rectilinear, curvilinear and angular design. What determines which style would be appropriate?
15. Describe how to refine the preliminary design for efficient sprinkler irrigation. List criteria for efficient sprinkler layout.
16. In developing the plant potential lists for each hydrozone, explain the following concepts about water wise gardening.
 - Hydrozoning and xeriscaping is not a Phoenix style rock landscape.
 - Hydrozoning is not just purchasing and planting xeric plants around the landscape with other plants.
 - Even xeric plants require routine irrigation during establishment.
 - Hydrozoning is not against irrigated “people space” concepts.
17. Define the following design terms:
 - Balance
 - Color
 - Emphasis
 - Form
 - Line
 - Scale
 - Sequence
 - Simplicity
 - Texture
 - Unity
 - Variety
18. Describe how the following *forms* affect eye movement and emotional feelings.
 - Weeping
 - Horizontal or spreading
 - Rounded
 - Pyramidal
19. Describe how to balance *simplicity* with *variety*. Describe how to use *simplicity* to bring *unity* to the design.
20. How does distance impact texture? In a distant corner, how should textures sequence? In a kidney-shaped planting bed how should texture sequence? In a texture sequence, how should leaf size change and the proportion of plant numbers changes?
21. How do various colors speak to you?
22. Explain differences in warm and cool colors.
23. Describe how to sequence warm colors and cool colors.
24. In mixing colors in a bed, what is the design trick to a natural “life” to the bed?
25. Describe how to mix and match plants.