

Xeriscaping Spreadsheet:
A tool for sustainable groundskeeping at the University of Colorado at Boulder
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Statement of the Issue

The Blueprint for a Green Campus (Version 2005, <http://ecenter.colorado.edu/blueprint06/>) lays out the areas that need to be focused on to make the campus more sustainable and environmentally friendly. One of the goals of the Blueprint in relation to water conservation is to reduce grassy areas that consume a lot of water through irrigation. In accordance with the goals of the campus and the Blueprint, Steve Hecht, Interim Director, Housing Administration, Department of Housing and Dining Services, and Dave Willower Director, Housing Administration, Department of Housing and Dining Services, requested a spreadsheet detailing the different kinds of plants that could be used to xeriscape the grounds of the University's housing areas. Xeric plants consume very little water past what the natural environment provides. The spreadsheet is designed as an updatable master list that can be referred to when converting current grass areas to xeric landscaping. The reduction in water will not only save CU money, but also benefit the environment by reducing water demand. In addition, the campus grounds can potentially play a role as an educational tool for students, faculty, staff, and visitors in the CU community by demonstrating that attractive university landscaping is possible with low water use.

Introduction

Xeriscaping is a term used in landscaping and groundskeeping to refer to a technique in which plants are used for the landscaping that will require very little watering beyond what the natural environment gives. Mostly put into practice in arid or even desert regions to mitigate the use of water for irrigation purposes, xeriscaping is a great way to have aesthetically pleasing grounds around a campus while putting precious water resources towards better and more crucial needs, such as human consumption. A lot of the plants used in xeriscaping are from the area's natural surrounding habitats, or from another arid region's habitats when it has been determined that those plants are compatible with the local habitat. This project is designed to create a spreadsheet of possible xeriscape plants for the University of Colorado at Boulder campus for the Department of Housing – Grounds. The finished spreadsheet is designed to make recommendations about what plants to use if one would like to plant a xeriscaped landscape around campus, and also what plants to use for certain specific need areas. For example, if there is an area that needs to be covered with a grass or ground cover that will receive foot traffic, one can look on the spreadsheet under turf grasses and groundcovers to see if there is a xeriscape plant that fits all of the areas needs and characteristics. The spreadsheet is in Microsoft™ Excel, an electronic format, which allows for additions, subtractions, changes and notes to be made over the course of its use.

Method

The method with which this project was approached was to first make the spreadsheet to include the categories of information that were requested by the Department of Housing - Grounds. Categories such as scientific and common names,

sunlight requirements, water requirements, height and breadth, and color were all included in the spreadsheet. The primary criterion was low water requirements. With this criterion in mind, and with the assistance of Elizabeth Moore and Hilary Sueoka, we researched as many plants as we could find to see if they fit the description of a xeric plant. If the plant was established as xeric, it then made it into the spreadsheet. For each plant, all categories of the spreadsheet were researched. Research sources included web sites as well as books (see references). In addition to the other categories listed, a category was added for other general comments about the plants. The final category that was added was a hyperlink to a photo of the plant from a website on the internet. These websites were chosen primarily for the quality of the picture of the plant, however some websites have additional useful information about the plant. (See Appendix A for instructions on creating a photo link in Microsoft™ Excel) Plants are grouped into the conventional groupings used in nurseries. These groups are: trees and shrubs, perennials and vines, grasses and groundcovers, annuals, and shade plants.

The total number of species in the final copy of the spreadsheet is 123. 43 trees and shrubs, 29 perennials and vines, 23 groundcovers and grasses, 10 annuals, and 18 shade plants. The spreadsheet contains a master copy with all of the plant types on it, as well as separate spreadsheets where the different plant types are broken up for easy printout or to look exclusively at one type or another.

Conclusion

This spreadsheet is a resource that can be modified and expanded for future use. The fact that it is on Microsoft™ Excel allows it to remain dynamic for years to come. The spreadsheet doesn't have to remain the same for different users; it can be added to or subtracted from to customize for different grounds departments. New information and updated comments can be added to a plant's entry in the spreadsheet. In addition, records about the purchase and placement of each plant can be kept. For example, if someone would like to purchase a tree for an area the spreadsheet could be kept updated with any current location of that tree on campus and the best price that has been found in the past, along with the vendor from whom it was purchased.

The Xeriscape Spreadsheet has been developed for the benefit of the grounds staff, and hopefully it can be a tool of use for the University of Colorado for years to come.

References

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Feucht, J.R., and J.E. Klett. "Xeriscaping: Garden Flowers." <http://www.ext.colostate.edu/pubs/garden/07231.html>. Colorado State University website. Updated Monday, August 23, 2004.

Pratt, Mindy, et al. Range Plants of Utah. <http://extension.usu.edu/rangeplants/index.htm>. Utah State University Website. Copyright 2002. Last Updated: March 2004.

University of Colorado Environmental Center. Blueprint for a Green Campus. <http://ecenter.colorado.edu/blueprint06/>. Copyright 2005.

Appendix

How to create a photo link in Microsoft™ Excel:

1. Highlight the cell or cells that need to contain the link.
2. Go up to the menu bar at the top of the page and find the “Insert” menu and find in that menu the selection for “Hyperlink.”
3. After selecting “Hyperlink,” a window will come up with your Hyperlink options:
 - a. The box where you type the text you want to display is at the top of the window. This is the actual blue word(s) in the cell(s) that a user will click on to get to the web page.
 - b. The box at the bottom of the window is where you type the web address for the web site that you would like to come up when the link is clicked.
 - c. NOTE: anyone attempting to view web pages through the links must have a working internet on the computer they are using to view the spreadsheet.
4. Select “OK” in the Hyperlink window and the text should appear underlined and in blue in the cell(s) you have highlighted.
5. If you click on these cells you will be taken to the corresponding web page.