Is Your Garden Water-Wise?

Part 1 in a series of articles on water-efficient landscaping by horticulture professor Dave Andrews

Water is one of California’s most precious—and most abused—resources. During a typical summer in Sacramento, outdoor water use will often exceed all other uses for the entire year. The California Landscape Contractor’s Association, along with key water interests, has estimated that the average homeowner overwaters by 100-300%.

We try to do the right thing indoors by choice or by code (installing low-flow faucets, shower heads, and toilets), but what can we do to reduce the water waste outside? Make our gardens and landscapes water-wise! This series of articles will give you some simple techniques and strategies to make that dial on your water meter slow to a crawl while keeping your plants looking great.

Contrary to popular belief, water-wise landscaping does not have to be xeriscaping, natural gardening, or native gardening. Although these options do maximize water conservation, it is possible to have a conventional landscape and be water-efficient by making just a few positive changes.

A water-efficient landscape follows eight fundamental principles to provide a healthy, vibrant landscape while minimizing the water demand of the site:

1. Start with healthy soil.
2. Group plants according to their water needs (known as hydrozoning).

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New Valley Hi-North Laguna Library Earns Gold

John Ellis reports…

Have you noticed CRC’s newest energy-conscious neighbor, the Valley Hi-North Laguna Library? It offers us ideas we can translate into the greening of our own campus, community, and homes.

Our new neighbor earned the U.S. Green Building Council LEED (Leadership in Energy and Environmental Design) gold rating, awarded for its many design ideas to conserve resources, limit energy use, and minimize carbon footprint.

California is the national leader in efficiency with its strict Title 24 energy code. The new library exceeds Title 24 standards by 34% through the innovative use of a natural ventilation tower; day lighting and shading devices; thick thermal mass concrete walls with an insulation sandwich; high efficiency heating and cooling systems; and a reflective white roof.

The landscaping ecosystem features drought tolerant plants and an innovative system to capture rainwater for irrigation.

The Sustainability Committee will arrange a tour and architectural presentation of the new facility in the coming months.
Eight Rules for Achieving a Water-Efficient But Conventional Landscape

3. Use native and/or low water-use plants.
4. Limit turf areas to those needed for practical uses.
5. Use efficient irrigation systems.
7. Mulch, mulch, mulch!
8. Provide regular maintenance to your plants, soil, and irrigation system.

When planning a new landscape, let these water-efficient principles guide your design and construction. I also highly recommend consulting an irrigation professional about your design prior to installation. Poor irrigation design and installation are the leading causes of wasted water.

For an existing landscape, an irrigation system check is the best place to start. Turn on your existing system and identify problems, such as faulty or clogged nozzles, excessive overspray, sprinklers pointing in the wrong direction, and broken sprinkler heads and lines.

Next, check how long your sprinklers are on before runoff occurs. On most of our heavy, clay soils, spray-type sprinklers produce runoff within five to seven minutes. If your sprinklers run longer than eight minutes, consider breaking the water application into two or more shorter cycles, which will allow time for the water to enter the soil and soak in.

Coming next time: how to custom-design an irrigation schedule for your existing system.

Meet our Student Members

Trang Tran: Career Change Benefits CRC Sustainability Efforts

Editor’s Note: In this continuing series, we feature one of our CRC Sustainability Committee student members each month.

Trang Tran graduated from the University of California, Irvine in 2004, with a B.A. in Environmental Analysis and Design. She subsequently worked for four years in Irvine as an urban planner.

As a planner, Trang developed an interest in green development and gained knowledge in LEED (Leadership in Energy and Environmental Design). After being laid off last year, she decided to make a career change and is now here at CRC taking courses that she will need to become a certified sonographer.

“I still have a passion for sustainability,” Trang says, “because I believe that, in order to improve our lives, we must make small changes today, such as recycling, reducing, and reusing our resources for a healthier and cleaner future.” As a result, Trang is excited to be joining force with the Sustainability Committee at CRC to assist in the greening of students, facilities, and the general campus environment.
Solar Power Comes Home
John Rusmore and Cath Hooper report…

Installing a solar photoelectric system at our house was more of a policy issue than an economic one. We have been telling our students for years that we should all be doing our part, so we finally put our money where our mouths have been and made the installation.

Economically, it is a harder sell, particularly since we were unable to choose the cheaper option – placing the panels on our roof – thanks to too many shade trees. Instead, we had to build two carport-like structures (see photo).

If SMUD’s electric prices stay at today’s rates, our panels will take between 15 and 20 years to pay for themselves, fewer if the prices go up. (If you’re a PG&E customer with higher rates, payback time is less.) In the meantime, we have no electric bills. Nice!

We will also have a write-off on our taxes (30% of the cost), and if we get one of the new generation electric cars, we will have free fuel, too.

As SMUD customers, we are also fortunate to receive a reckoning at the end of the year (PG&E does not offer such a deal, alas). That means we’ll either be writing SMUD a check (but a small one presumably), or SMUD will be sending us one. Since in an average month we use about 230 kilowatt-hours, and right now the panels are producing over 500 kilowatt-hours, we are optimistic we will be the recipients and not SMUD.

CRC Completes Purchase of 437-Tree Forest
Debra Sharkey reports…

Recently CRC purchased 437 trees—but you won’t see them planted around campus. Instead, they came in the form of 5.2 million sheets of paper, a quantity likely to last until sometime next spring. Our “forest” arrived in reams, enough to fill 26 one-ton pallets.¹

According to Conservatree.org, one ton of non-recycled paper uses 24 trees (and 1 ream = 6% of a tree). Our purchase would equal 624 trees worth of non-recycled paper; however, because we buy paper with a minimum recycled-paper content of 30%, our purchase is the equivalent of about 437 trees.

The thought of our campus consuming 437 trees in less than one academic year, along with the associated increase in carbon emissions, is shocking.

Here are a few ideas to help reduce this level of consumption. Reduce the amount of paper you use (put handouts, flyers, and forms online). Encourage students to avoid printing out online material unnecessarily and to submit homework in digital format or on used, but still good-on-one-side (GOOS), paper. If you must make copies, make them double-sided or use GOOS paper for single-sided copies. Finally, make only the number of copies you need.

¹ One pallet = 40 cartons; one carton = 10 reams; one ream = 500 sheets of paper.
http://www.conservatree.org/learn/EnvirolIssues/TreeStats.shtml
CRC recently tossed 1,296 unused copies of the 2008-2009 Catalog and 1,840 of the Spring 2009 Class Schedule into the recycling bin. A more cost-effective and greener practice would be to eliminate print editions of these two documents altogether and to put them online instead. Many students and faculty members admit to preferring the online versions.

According to CRC public information officer Kristie West, the district has been considering moving the class schedule to a web-only format over the past year – mainly for cost-cutting reasons but also for the environmental benefits. Kristie noted that 108 trees would be saved every semester if we eliminated the printed schedule alone.

Both ARC and FLC have decided not to produce hard copies of their schedules for Spring 2010. While CRC will produce a print version of the Spring 2010 Schedule, it may be the last one. Talks are underway now among members of the administration and the Academic Senate about offering subsequent schedules online only.

The Sustainability Committee hopes this policy will be implemented and that CRC will follow the example of Sacramento State, which will publish its last printed catalog this year. CRC would not only save money, but it would also save a huge quantity of trees, reduce atmospheric carbon emissions, and make the editing and updating of online information a snap.

The Sustainability Committee, with the help of a grant from the National Wildlife Federation, purchased and distributed new blue recycling bins to all classrooms on campus in August.

Please remember to put trash in the trash cans and to use the recycling bins for the following ONLY:

- all clean and dry paper, newspaper, and cardboard
- all empty plastic food & beverage containers
- grocery bags (tie in a knot)
- aluminum cans and foil, steel cans, and aerosol cans (non-hazardous)
- all empty glass bottles and jars (any color or shape)
- aseptic containers (small crushable juice, soy, & milk cartons that have ‘aseptic’ printed on the bottom).

Faculty – please take a moment of class time to ensure your students understand where to place discarded items.
Reader Reviews

CRC Poetry Reading: Inspired by Nature

On Thursday, September 17, the Hawks Nest Bookstore was full of supernovas, neurons, hematite, humming bees, and backwaters. The first presenters in the CRC Literary Series, Maya Khosla and Bob Stanley (Sacramento’s current Poet Laureate), performed as part of “A Confluence of Poets,” a poets’ reading tour of capital-area colleges.

Khosla’s and Stanley’s poetry focused on nature in a broad sense – from human nature to Monarch butterflies and fireflies.

Stanley started with a poem by another poet about fireflies and then read his own about fire and the heat of Sacramento. Khosla then described a fire seeming to come from within the pines in a Bishop pine forest. She described the fire as “a roaring a cappella” that can make a hill a pulsing flower.

Khosla’s fascination with the elements and her work as an environmental consultant fuel this fire. Ultimately, in the poem, the fire transforms into sparks and ash, which she describes as a gray fox.

Stanley then offered four haiku dedicated to the delicious Satsuma tangerine. His lines dripped with the sweetness of the fruit.

Khosla then delivered peaches and apricots in a piece in which the speaker is reaching “for the top branches where sweet meats are bunched together.” In another poem, Khosla paints a picture of Monarch butterflies and their migration. In describing the Monarchs, she explains the word orange “doesn’t do their orange justice.”

In the same way, the words lovely, educational, and inspiring do not do Khosla’s and Stanley’s reading justice.

The CRC Literary Series continues on December 2 in the Hawks Nest Bookstore with poet Louis B. Jones.

--Heather Hutcheson, English

Movie Review: The Cove

The Cove is an amazing documentary that captures the cruelty of dolphin killings in Japan.

Activist Richard O’Barry once captured and trained dolphins for the popular 60’s TV-series Flipper; however, he has spent the past 38 years fighting against dolphin captivity.

The Cove has won many awards, so if you have not seen it yet, take time to watch it with a friend. You’re sure to end up wanting to help the Dolphin Society.

--Trang Tran, student

Editors’ Note: We welcome green-related reviews (films, books, restaurants, etc.) from the campus community.
News In Brief…

This Way to Sustainability V Conference to be held in Chico

November 5 – 8 marks the 5th annual “This Way to Sustainability” conference sponsored by CSU, Chico and Butte Community College. General admission costs $25, but students are free. If interested in carpooling, contact Debra Sharkey. For more information, go to http://www.csuchico.edu/sustainablefuture/conference/

AASHE Membership Renewed

Thanks to President Debbie Travis, CRC has renewed its AASHE membership (Association for the Advancement of Sustainability in Higher Education), which gives faculty and staff access to weekly email updates and other member-only materials at http://www.aashe.org/

Half Way There on NWF Grant

In the eight months since receiving the National Wildlife Federation Campus Ecology Fellowship grant, student Heather Downing has been working with CRC faculty, staff, and administrators to collect information on campus workings, the greenhouse gas inventory, and budget and transportation patterns.

Still to come: place more recycle bins in classrooms; gather fuel usage information; create a transportation survey to record student commute habits; enter acquired data into the GHG spreadsheet; and attend a sustainability conference or two to garner more ideas.

Green Scene Awards:

Kudos to…

- Prof. Cynthia Torres and her staff for choosing real plates and silverware (over disposables) at the Convocation lunch in August.
- Profs. John Ellis and Ryan Connally for their Convocation presentation on CRC’s new green programs.
- the Professional Development Committee for reducing the amount of paper used to advertise PD activities this semester.
- student Lizz Gaylord and Prof. Debra Sharkey for their help with the NWF grant research.
- the 57 graduating students who took the Graduation Pledge of Social and Environmental Responsibility and the 63 staff members who took the Sustainability Pledge prior to graduation ceremonies last May.
- CRC President Deborah Travis for adding her name to the pledge list and for renewing CRC’s membership in AASHE.
- the SME Division for ordering AusPens for a trial by SME faculty.