CropHealth Advising & Research
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To	Date
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	3 pages from Sonja Peters

2011 Sustainable Landscaping for Professionals

The Okanagan Xeriscape Association sponsored the conference, held February 18 in Kelowna. www.okanaganxeriscape.org/index.htm

About 55 people attended, mostly landscape architect, landscape maintenance companies and insulation companies, City and School district employees, University instructors.

Summary – Owen Dell, Santa Barbara, CA (http://owendell.com/index.html)

1) Fossil-Free Landscaping – "Peak oil" is here

- Affects on the horticultural industry will be:
    - reducing availability of goods
    - increased prices for everything
    - possible reduction in consumer spending
    - reduced mobility
    - changes in how we do our work
    - changes in what landscaping is like: how it looks and how it works

2) Fossil Fuel Use in Horticulture

- Transportation / Manufacturing / Water Delivery / Fertilizers / Pesticides / Plastics / Construction / Maintenance / Disposal

3) Other topics

watershed management, pervious paving, water harvesting, bioswales and wetlands, green roofs, fossil-free landscaping, sustainable building materials, restoration and reclamation, foods not lawns, meadows, organic maintenance, IPM.

4) The Triple Bottom Line

- Environment / Society / Economy ---- everything we do should meet all 3

TRENDS IN SUSTAINABLE LANDSCAPE INDUSTRY

1) Watershed Friendly Landscaping

- Examples are: permeable pavement, green roofs, dry streambeds, bioswales, constructed wetlands rain gardens, harvest water from roofs, percolation ponds
- Resources

www.treepeople.org/trees & www.owendell.com/watershed.html & www.portlandonline.com/bes/ & http://bayfriendlycoalition.org/ & www.epa.gov/owow/watershed/wacademy/its.html

a) Green Roofs

- Resources

www.greenroofs.com & www.greenroofs.org & www.earthpledge.org/gr

Planting Green Roofs and Living Walls, Nigel Dunnett & Noel Kingsbury, Timber Press, 2004

b) Bioswale

Definition: vegetated drainage channel which accepts, absorbs and treats runoff water, graywater or effluent water, using natural biological systems and processes.

c) What's a Constructed Wetland?

Definition: a lined waterway planted with vegetation that is capable of purifying water.

- used to detoxify urban, agricultural or industrial runoff / can provide habitat for wildlife
- Resources

www.lowimpactdevelopment.org/raingarden_design/whatisaraingarden.htm & www.raingardennetwork.com/

2) Fossil-free Landscaping

- we need alternatives to: PVC Pipe (HDPE pipe, soil furrows, contouring, bamboo or Paulownia pipe), plastic furnishings, concrete paving, chemical fertilizers, pest management, importing materials, landscape lighting, importing water (harvest water onsite), water-intensive plantings, lawn, ornamental plants (food-bearing crops)….
- use Integrated Pest Management, hand tools, use electric tools, use alternative building and hardscape materials, replacing lawns (meadows, food crops), use organic maintenance
- Resources

www.endofsuburbia.com & www.peakoil.net & www.theoildrum.com & www.peakoil.org

"The Party's Over", Richard Heinberg

a) Food not Lawns

- Grow food locally
- Permaculture system: Permaculture is sustainable land use design. It aims to create stable, productive systems that provide for human needs while harmoniously integrating the land with its inhabitants.

- Resources

www.permacultureactivist.net & www.permaculture.net & www.permaculture.org & www.pathtofreedom.com www.ecohood.info & www.pathtofreedom.com/

b) Restoration and reclamation

- for developers, property owners, and government
- Resources

www.ecologicalrestoration.info
www.ser.org

c) Meadows

- replace lawns / traffic tolerant
- Resources

www.greenleenursery.com
www.losethelawn.com
www.lawnreform.org/
Audubon Society article, www.audubon.org/bird/at_home/pdf/AAHPA-21-32-Lawn.pdf

3) Saving water in the Landscape

- eliminate high water use plants and excess lawn areas
- replace thirsty plants with drought tolerant species
- convert sprinklers to drip
- install a rain sensor to prevent watering during rainy periods
    - reprogram controller regularly to adjust for weather changes
- water less
- group plants according to water need
    - divide the irrigation system into zones
    - separate valves for: High vs. low water use plants
        Sunny vs. shady areas
        Windy vs. sheltered areas
        Heavy vs. light soils
- check irrigation distribution uniformity

a) Drip Irrigation

- use a grid system (12”-18” o.c.)
- pressure compensating emitters on slopes
- in-line vs. pop-in emitters
- always filter & regulate pressure
- design guide

www.toro.com/irrigation/res/lowvolume/literature/dripline_design_guide.pdf

b) Controllers: Water-saving Features

- independent programs / long run times / multiple start times / long calendars (30 days or more) / non-volatile memory / rain shutoff / diagnostic circuitry

c) Smart Controllers

- monitor actual conditions and water accordingly
- goal is to replace water that has been used
- soil sensing vs. ET based
- historical ET vs. Real-time ET