

To

Date

Monday, March 7, 2011

*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](http://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](http://www.treepeople.org/trees) & [www.owendell.com/watershed.html](http://www.owendell.com/watershed.html) & [www.portlandonline.com/bes/](http://www.portlandonline.com/bes/) & <http://bayfriendlycoalition.org/> & [www.epa.gov/owow/watershed/wacademy/its.html](http://www.epa.gov/owow/watershed/wacademy/its.html)

#### **a) Green Roofs**

- Resources

[www.greenroofs.com](http://www.greenroofs.com) & [www.greenroofs.org](http://www.greenroofs.org) & [www.earthpledge.org/gr](http://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](http://www.lowimpactdevelopment.org/raingarden_design/whatisaraingarden.htm) & [www.raingardennetwork.com/](http://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](http://www.endofsuburbia.com) & [www.peakoil.net](http://www.peakoil.net) & [www.theoil drum.com](http://www.theoil drum.com) & [www.peakoil.org](http://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](http://www.permacultureactivist.net) & [www.permaculture.net](http://www.permaculture.net) & [www.permaculture.org](http://www.permaculture.org) & [www.pathtofreedom.com](http://www.pathtofreedom.com)  
[www.ecohood.info](http://www.ecohood.info) & [www.pathtofreedom.com/](http://www.pathtofreedom.com/)

## **b) Restoration and reclamation**

- for developers, property owners, and government
- Resources
  - [www.ecologicalrestoration.info](http://www.ecologicalrestoration.info)
  - [www.ser.org](http://www.ser.org)

## **c) Meadows**

- replace lawns / traffic tolerant
- Resources
  - [www.greenleenursery.com](http://www.greenleenursery.com)
  - [www.losethelawn.com](http://www.losethelawn.com)
  - [www.lawnreform.org/](http://www.lawnreform.org/)
  - Audubon Society article, [www.audubon.org/bird/at\\_home/pdf/AAHPA-21-32-Lawn.pdf](http://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](http://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