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WaterSmart Innovations 2011 Conference and Expo, Las Vegas, Nevada

NOFA's New 5th Edition Organic Land Care Standards: Water Perspectives

October 5, 2011

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Overview

1. **What is organic land and lawn care?**
2. **Northeast Organic Farming Association (NOFA)**
3. **NOFA *Standards for Organic Land Care* (OLC)**
   - New 5th edition standards (2011)
4. **NOFA's OLC standards compared to water conservation approaches**
5. **Recommendations: Future OLC and conservation standards and practices**
6. **Learn More**

Reasons for Organic Land Care

3-Mar-2006
Pesticides in the nation's streams and ground water
[USGS] report concludes that pesticides are typically present throughout the year in most streams in urban and agricultural areas of the Nation, but are less common in ground water. . . However in many streams, particularly those draining urban and agricultural areas, pesticides were found at concentrations that may affect aquatic life or fish-eating wildlife.

Pesticide Health Risks

- Est. 80 million U.S. households use home and garden pesticides (EPA)
  - 3-10 times more chemicals applied per acre of lawn than crops
- Environmental Working Group, “Body Burden” project
  - Exposure pathways: air, food, water, feet/paws/shoes
- NIH, *In Harms Way* study
  - 80% tested had pesticide residues in blood
  - Increased risk of breast, testicular, other cancers
- Home and garden pesticide use can increase the risk of childhood leukemia by almost seven times.
  - Lowengart, R. et al., *Jr National Cancer Institute*

Canadian Medical Establishment

- "Since ornamental use of pesticides has no countervailing health benefit and has the potential to cause harm, **we call for a ban on the use of pesticides on lawns and gardens."**

  – ***Canadian Cancer Society***

- **"Although we don't have all the scientific data, it's better to err on the side of caution"** and call for an outright pesticide ban because of previously discovered links between pesticides and cancer.

  – ***Quebec College of Family Physicians***

Anti-Lawn Chemical Movement

- **Canada: 100+ cities and towns prohibit lawn chemicals**
  - Upheld by Canadian Supreme Court, Nov05
- **United States**
  - Cleveland Heights, Ohio
  - Madison and Dane County, WI (fertilizers)
  - **Connecticut**, statewide law passed in 2005
    - Day care centers: *pesticides prohibited*
    - Elementary schools: IPM allowed for 3 years, then pesticides fully prohibited
    - Emergency exemptions (e.g., West Nile virus)

Lawn Chemical-Irrigation Cycle

- Correlation between high lawn *water* use and lawn *chemical* use
- Typical SFR high water volume lawns
  - In-ground, automatic irrigation systems
  - Fertilizer and chemical treatments require "watering in"
  - Perfect green lawn, "your lawn on drugs"
- Concord, MA: focus group of top users
  - 75% have in-ground sprinkler systems
  - *All* use fertilizers and pesticides on their properties

"Ten Reasons to Ditch Your Lawn and Garden Chemicals"

–Organic Landscape Alliance, Toronto, Canada

1. Lawn chemicals are **unnecessary.**
2. Chemical pesticides and fertilizers **contaminate surface and groundwater.**
3. Chemical pesticides **threaten the health of children.**
4. Chemical pesticides **threaten the health of outdoor pets.**
5. Chemical pesticides **threaten the health of local wildlife.**
6. Chemical pesticides and fertilizers **reduce the activity of beneficial organisms.**
7. **Local wildlife need safe places to live.**
8. Chemical fertilizers are **a waste of money.**
9. Chemical pesticides have the **potential to cause damage throughout their lifecycles.**
10. Chemicals actually **degrade the over-all long-term health of your lawn and garden.**

Source: Organic Landscape Alliance, Toronto, Canada, http://www.organiclandscape.org/ as cited by NOFA,
http://www.organiclandcare.net/green-room/olc-articles/ten-reasons-ditch-your-lawn-and-garden-chemicals

1. What is Organic Land and Lawn Care?

- **Conventional landscapes: resource-intensive**
  - Large inputs of chemicals, water, energy
    - "Your lawn on drugs"
  - Pollution, health risks to humans and wildlife
  - Difficult and costly to maintain
  - A constant war battling Nature
- **Organic: chemical-free, more water-thrifty**
  - Thrive on natural rainfall and local climate conditions
    - Native and noninvasive turf and plants
  - Build healthy soil systems–moisture retention, plant vitality
  - Support natural drainage, infiltration of stormwater
  - Protect water quality–no synthetic fertilizers and chemicals

Common testimonial

Maintenance and cost savings, too

"The Little League ball field that we manage was irrigated only 3 times during the summer of 2009. By following NOFA's organic land care principles and watering only when needed, we realized not only water savings, but also reduced maintenance time and costs."

–Professional lawn and turf manager, Westchester County, NY

2. Northeast Organic Farming Association (NOFA)

New England's fast-growing local farm and organic food movement is also spawning consumer demand for organic lawns and landscapes.

Photo (right) by Amy Vickers.

3. NOFA Standards for Organic Land Care

- First established in 2001 to present a vision of **how organic agricultural principles can be applied to the landscaping profession**.
- **Standards updated every 3 years**
- **Accreditation program** for landscape professionals and workers
- **Educate the public**
  - Community workshops
  - Listing of NOFA-accredited OLC professionals, businesses

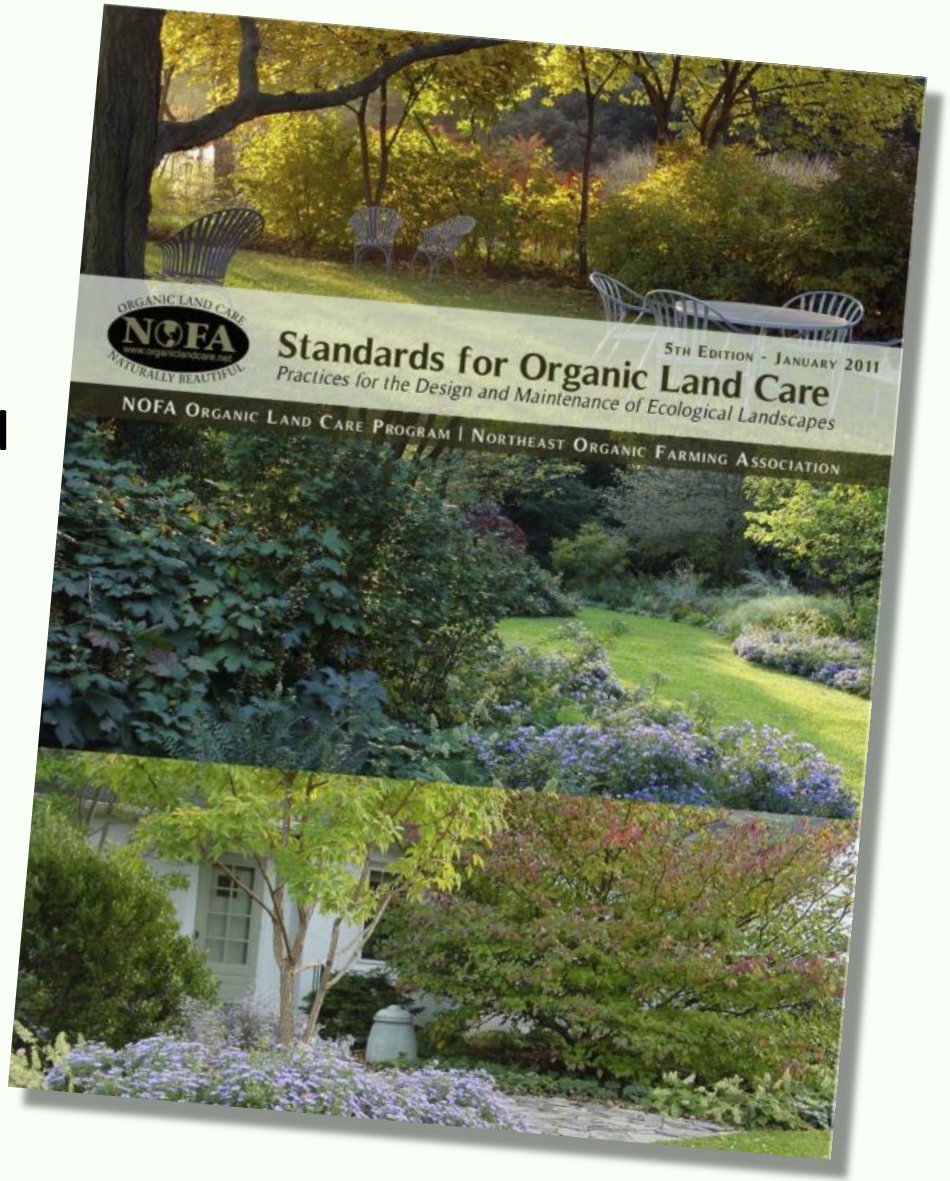
NOFA Standards for Organic Land Care, 5th Edition, January 2011

Standards

- Site Analysis, Design, And Management
- Inland Wetlands And Watercourses
- **Water Use And Water Quality**
- Energy Use And Climate Change
- Soil Health
- Fertilizers And Soil Amendments
- Lawns And Lawn Alternatives
- Native, Exotic, And Invasive Plants
- Planting
- Pruning
- Weeds
- Mulches
- Pests And Disease Management
- Wildlife Management
- Disposal Guidelines For Plant Residues And Other Landscaping Materials

OLC Basic Principles, 5th Edition (2011):

1. **Principle of health**
   - Sustain and **enhance** that of humans–and soil, water, air, plant, and animal; **wellness**
2. **Principle of ecology**
   - Work with **natural cycles and whole systems approach**
3. **Principle of care**
   - **Precautionary** management of the land ("Do no harm")
4. **Principle of fairness**
   - Equity, respect, justice and stewardship of the **"shared world"** among people and living things



NOFA OLC Standards 5th Edition (2011)

WATER: Fundamental Care Principles

(form the basis for Preferred, Allowed, and Prohibited Practices)

- **Conservation of both water supply and water quality** should be factored into all landscape site design, construction and management practices.
- **All sources of water,** including but not limited to municipal water, private ground or surface water, rainwater, and graywater, are all valuable and should be conserved in both supply and quality.
- **"Do no harm"** that would alter or disturb natural onsite water flows, ponds, groundwater and other natural water features.
- **Know and respect your watershed.**

NOFA OLC Standards 5th Edition (2011)

WATER: Preferred Practices

- "Right plant, right place, right time"
- **Time planting with rainfall**
- **Rainfall-only irrigation post turf/plant establishment**
- **Allow lawns to go through natural dormancy cycle**
- Use only **proven** water conservation practices and technologies
- Pervious surfaces
- Direct runoff to pervious surfaces, lawn and plants
- Restore, maintain natural buffers along water courses
- Prevent stormwater contamination

NOFA OLC Standards 5th Edition (2011)

WATER: Allowed Practices

- **Temporary hose irrigation**
- **Manual watering during dry periods, as allowed**
- **Limited automatic irrigation systems**
  - **Includes some WaterSense® New Home standards**
- **Minimize petroleum- and chemical-based plastics**
- **Rainwater harvesting–only as needed, not to excess**
- Limit impervious surfaces
- Graywater and reclaimed water: check local laws

NOFA OLC Standards 5th Edition (2011)

WATER: Prohibited Practices

- Irrigation practices that waste water (runoff, etc)
- **Broken and leaking irrigation systems**
- **Automatic irrigation system controllers that are not adjusted at least seasonally**
- **Adding synthetic chemicals to water**
- **Synthetic turf, plants, or mulches (e.g., recycled tires)**
- Draining or filling wetlands
- Misuse of water that cause flooding, erosion and other problems
- Use of graywater or reclaimed water not to code, laws

4. Comparisons: OLC vs. Conservation Approaches

Organic Land Care

- **VALUES** Conservation of water *quantity* and *quality*
- **PREFERRED** Organics–soil, nutrition, pest control
- **ALLOWED** – Irrigation *as needed*, but not on a regular basis (e.g., lawns); minimization of plastics
- **PROHIBITED** – Run-off; excessive rainwater storage; synthetic turf, plants, and plastic mulch

Water Conservation

- **Volume focus**; makes weak/no link between lawn care practices and water quality, esp. human and animal health
- **Organics not specified**
- **Hazards from lawn and landscape chemicals** subtle or silent; natural approaches may be "encouraged"
- **Irrigation and timer focus; irrigation-free option is ignored**
  - Turf and plant water "needs," not "wants"
- **Ornamental features** not discouraged, some time restrictions
- **Plastics and material hazards** not on radar screen

5. Recommendations: Future OLC and Conservation Standards & Practices

Organic Land Care

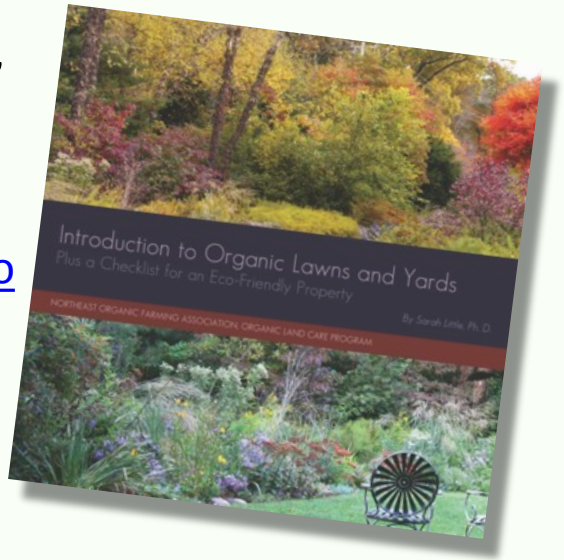
- **More rigorous testing standards, test revisions**
- **Field verify** NOFA Accredited Organic Land Care Professionals
- **Retest every 3 years (after Standards update)**
- **Strict limits on ornamental water features, snowmakers, etc.**
- **Limit commercial influences**

Water Conservation

- **Link land care practices to water quality**, safe drinking water and health
- **Promote organics–soil, seeds, turf, plants**
- **Focus more on restoration**
- **Irrigation-free as the recommended option**
- **Strict limits on ornamental water features, snowmakers, etc.**
- **Educate the public about hazards from product materials**, e.g., plastics and endocrine disruptors

6. Learn More

- **NOFA Organic Land Care Program**
  - http://www.organiclandcare.net/
- ***NOFA Organic Land Care Standards, 5th ed., 2011***
  - http://www.organiclandcare.net/accreditation/standards
- ***NEW– Introduction to Organic Lawns and Yards,*** *plus a* ***Checklist for an Eco-Friendly Property***
  - http://www.organiclandcare.net/sites/default/files/upload/2011_nofa_booklet_online_final.pdf



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NOFA OLC Accreditation Requirements

- **Take** the NOFA OLC 5-day Accreditation Course in organic landscaping
- **Pass** the Accreditation Exam
- **Pledge** to provide organic land care according to the NOFA Standards for Organic Land Care
- **Maintain** continuing education by attending a minimum of 4 credit-hours of organic landscaping education annually.
- **Pay** an annual fee ($100) to support the work of the OLC program

5-day Organic Land Care (OLC) Course

Day 1
Principles and Procedures - Site Analysis, Design and Maintenance - Rain Gardens/Stormwater Infiltration - Soil Health, Soil Foodweb

Day 2
Fertilizer and Soil Amendments - Composting - Lawns - Lawn Alternatives

Day 3
Planting and Plant Care - Wetlands - Pest Management - Turf Insects, Perennials, Trees and Shrubs

Day 4
Pest Management - Ticks and Lyme Disease - Wildlife Management - Disease Control - Water Management - Mulches

Day 5
Invasive Plants/Control - Client Relations - Review - Accreditation Examination

Site-adapted plantings and dry-laid stone allow rainfall to recharge local ground water – R Darke

1-day Organic Lawn & Turf Course

- How to grow organic lawns and turf that looks good and survives stress
- Why the demand for organic lawn and turf care is increasing
- Transitioning from conventional to organic management
- How to use this knowledge to profit in a rapidly expanding market
- Ways to educate and communicate with clients about organic land management methods
- Practical info from professionals

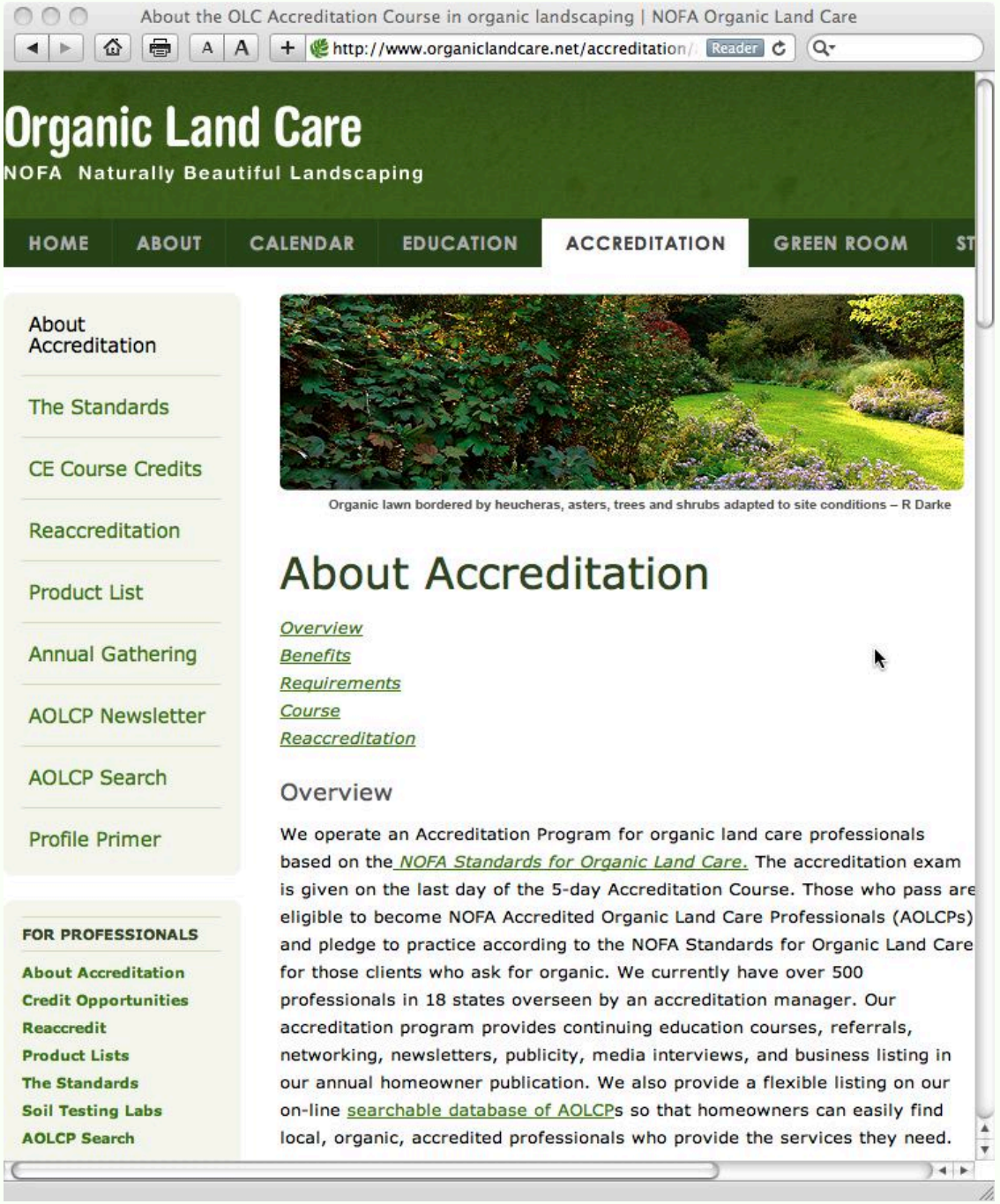
COURSE SCHEDULE

8:00-8:30	Registration, coffee
8:30-8:45	Why go Organic
8:45-9:00	What is Organic Lawn and Turf Mgmt
9:00-10:15	Soil Compaction and Aeration
10:15-10:30	Break
10:30-11:30	Insects, Weeds, Disease
11:30-12:15	Turfgrass Nutrition
12:15-1:15	Lunch (provided)
1:15-2:15	Soil Amendments and Compost
2:15-3:15	Compost tea
3:15-3:30	Break
3:30-4:15	Cultural Practices
4:15-4:30	Q & A

This course provides 6 Credits for NOFA Accredited Organic Land Care Professionals

Source: NOFA, http://www.organiclandcare.net/education/lawnandturf

NOFA OLC Accreditation Program



6. Learn More (cont.)

- **Oregon Tilth Accredited Organic Land Care Program, Standards** (similar to NOFA)
  - http://tilth.org/education-research/organic-land-care-accreditation

- **Canada**
  - **Organic Landscape Association**
    - http://www.organiclandscape.org/
  - **Society for Organic Urban Land Care, Standards** (2007 edition)
    - http://www.organiclandcare.org/standard.html

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