PRINCIPLES OF SUSTAINABLE LANDSCAPES

By: Jessica Bloom,
CPH, Certified Arborist, Author,
Owner/Designer of NW Bloom EcoLogical Landscapes
Look deep into nature, and then you will understand everything better.

(Albert Einstein)
Who am I?

- Human (*Homo sapien*) being
- Connector
- Perspective Changer
- Context giver
- Opinionated & independent business owner
- Efficient resource manager
- Creator of sacred spaces
- Defender of humans, insects, weeds & all things in this natural world
- Permaculture ninja activist
- Travelling teacher
- Single mother of radical children (dubstep dancing machines = our future)
- Lifelong student
How can we imitate natural ecosystems?
Function: to fill some niche?
Our customer defines this ultimately. We can then use our knowledge to make the landscape sustainable.
**sustainable**: adj. of, relating to, or being a method of harvesting or using a resource so that the resource is not depleted or permanently damaged

**ecological**: adj. relating to the environment and the way that plants, animals, and humans live together and affect each other

**permaculture**: Noun: The development of agricultural ecosystems intended to be sustainable and self-sufficient

*Meeting human needs through ecological and regenerative design*
More vocab to think about:

- Ecological Services
- Inputs vs. Outputs (yields)
- Regenerative Design
- Carrying capacity
- Resiliency
- Biophilia
Design + Construction + Maintenance

- Protect and Conserve Soils
- Conserve Water
- Protect Water and Air Quality
- Save Energy
- Use Sustainable Methods and Materials
- Protect and Create Wildlife Habitat
- Sustain Healthy Plants
- Protect Human Health
Spectrum of Sustainable Gardeners & Customers

Buys compost instead of fertilizers

Learning new techniques and making changes

Homesteaders Living off the grid

Meet people where ever they are at
Benefits of creating sustainable landscapes

- Good (and SAFE) for everyone!
- Creates habitat (birds, insects, humans, etc)
- Water & resource conservation
- Less maintenance (?)
- More cost effective long term
- No Chemical dependency
- Diversity – color – texture
- Food security!

What is your customers “hook”? 
1. Design – plan, plan ahead!
2. Install properly
3. Establish & Maintain correctly
Know the Soils!

NCDA Agronomic Division
4300 Reedy Creek Road
Raleigh, NC 27607-6465
(919) 789-1234

Soil Test Report

3/12/04
SERVING N.C. CITIZENS FOR OVER 50 YEARS

Agronomist Comments:

Field Information
Sample No.  Last Crop  Mo  Yr  Y/A  Crop or Year  Lime  N

(1.0 lbs Nitrogen or EQUIV PER 1000 SQ FT)
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What the client doesn’t see
Compost on site to build soil & manage ‘waste’
Choose the Right Plant for the Right Place

- Exposure
- Mature size
- Water needs
- Soil needs
- Pest/Disease resistance
- Hardiness
- Wildlife habitat
- Invasiveness
- EcoLogical Function
Ecological Functions of plants:

**Soil Building:**
- Nitrogen fixers
- Mulch/Biomass producers
- Dynamic (nutrient) accumulators
- Soil loosening – spike roots

**Fauna Support:**
- Nutritional or medicinal value
- Shelter – habitat
- Insectaries - attracting beneficial insects
- Pest Repellants – secretion of compounds
Planning for succession

Secondary Succession

Pioneer Species

Intermediate Species

Climax Community

Fire

Annual plants

Grasses and perennials

Grasses, shrubs, pines, young oak and hickory

Mature oak and hickory forest

0 years

1-2 years

3-4 years

5-150 years

150+ years

What phase(s) are your landscapes in?
Managing Water
We must all be hydrologically literate
Are “Low Maintenance” landscapes a myth?

- Good design
- Right plant, right place
- Limiting exposed soil
- Groundcovers
- Expect establishment period to be high maintenance
- Temporary watering system ~ weaning landscape as needed
Landscape Management Philosophies

- Organic
- IPM – Integrated Pest Management
- Ecological/Sustainable
- Conventional
Common problems in the landscape:

Things to always keep in mind:
- Cultural conditions – site and weather
- Nutrient Deficiencies
- Susceptibility in species/varieties

Is it just bad design?
Poor construction?
What about **mindset**?

How many of our landscape “problems” are just a perception of what is normal?
Mulches: they are not all created equal

What if we matched the mulch to the phase of succession?
Organically Maintained LAWNS

- Mowing/Edging
- Irrigation
- Organic Fertilization
- Aeration
- Topdressing
- Overseeding
- Thatching
- Weeding

= (High Maintenance)
What is a “perfect” lawn?
Animals: the good the bad & the ugly
A fertilization program
~
Who needs synthetics?
Teach tolerance and natural cycles: Seasonal problems vs disease?
What are weeds....?
My plants are “out of control!”
Government funded programs pay for increased environmental stewardship.
How functional is this landscape?
Bayer CropScience Fights Europe’s Pesticide Ban: Petition Blasts ‘Bee-Killing’ Chemical Giant

By Christopher Zara

on September 09 2013 8:31 PM

As bee populations dwindle for a second year, a new class of pesticides has been approved for use in the United States. The US Environmental Protection Agency (EPA) announced Tuesday that four neonicotinoids will be registered for use in a new toxicant called Brinta. The name of the new chemical is not yet known.

“Where are we in this? And who do we work for?”

“If you really think the environment is less important than the economy, try holding your breath while you count your money.”

—Dr. Guy McPherson
As an industry, are we...

- Ecologically literate?
- Ready to lead, instead of letting chemical companies persuade our customers?
- Ready for the next generation of consumer?
Questions? Or Follow Me!

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Practical Permaculture Design
N.W. Bloom EcoLogical Landscapes
Chicken Gardens