

Designing for Sustainability

A presentation to the LDA by Garth Conrad, MELA President-Elect

Summarized for the MELA Website by Rinda West, Rinda West Designs

The drive for sustainability in landscaping grows from the success of the LEED certification process in the building industry. Today, 30% of all new construction is done in the LEED context, and it has created a \$10 billion set of ancillary industries.

The UN defines sustainability as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Garth shortens that to “living today without borrowing from tomorrow.” The beneficiaries of our becoming more environmentally friendly today are future generations. The sustainability movement is guided by the Triple Bottom Line: Ecology, Equity, Economy or Planet, People, Profit. The idea is to do business in a way that is fair to workers and consumers, gentle on the planet, and profitable for the business. Examples of practices that are not triple bottom line might be the use of fertilizers mined by child labor in Ecuador or the design of vast, sodded corporate campuses whose upkeep requires borrowing water from a depleting aquifer or specking plants that travel long distances to reach the site, but whose cost doesn't include future landfill use (for the containers) or climate remediation (for carbon burned in their transport)

So: How do we design for sustainability now?

Design to contribute to an appropriate consumption of resources and to contribute to biodiversity

Offer clients design choices that meet their program and contribute to sustainability

1. Site selection:
 - a. Landscape designers should be included with architects and builders in all initial meetings
 - b. Trees on site should be preserved; plants should be chosen to add to biodiversity
 - c. Design to reduce water use by 50%
2. Materials:
 - a. No lumber should be used from endangered or threatened tree species
 - b. Construction should proceed so as to minimize compaction and removal of soils
 - c. Materials and construction methods should be chosen with an eye to their ability to be recycled. Many homeowners stay in their current home for 5-8 years; when the home changes hands, the new owners will have their own landscape plan. The original building materials should be capable of being disassembled (screws instead of nails; dry laid stone rather than wet laid) and reused
 - d. If possible, material on site should be reused or recycled
3. Horticulture
 - a. Invasive plants should not be used
 - b. Whenever possible, use native plants. Native trees and shrubs contribute more to faunal diversity than do perennials
 - c. Minimize the lawn and incorporate more varieties of grass than just bluegrass

- d. Plant production should minimize use of chemical fertilizers and pesticides
 - e. Whenever possible, plant materials should be from local nurseries to minimize environmental costs associated with transportation
 - f. Whenever possible, we should design to preserve and restore native wildlife habitat
 - g. Nurseries should take pots back for reuse or recycling; they should move toward selling plants potted in decomposing plant media
 - h. We should strive to restore the soil food web
 - i. We can encourage clients to grow some of their own food
4. Irrigation & Rainwater management
 - a. We should design, when possible, so that rainwater can be harvested and used on site
 - b. We need to provide clients information on irrigation, promote drip irrigation, and educate clients about the natural desire of grass to look brownish in August
 5. Maintenance
 - a. We need to design for sustainable maintenance, with spaces for compost and rain harvesting
 - b. Designers need to provide clients with maintenance manuals that explain how to feed plants with compost, mow lawns high, water deeply and less frequently, recognize and pull weeds

We need to change the practices of municipalities and educate the public about the value and beauty of a landscape that does not borrow from the future. We need metrics – ecological audits of current practice so that we can measure and study the effectiveness of various approaches.

As designers, we need to pressure nurseries to get certified as ‘sustainable growers’ and to take back their pots.

In summary, if we can do only a few things, here are some we can do now:

- ‘Pledge 6’: Incorporate 6 additional native plant species in our designs
- Shrink the lawn
- Minimize irrigation
- Choose local materials