



Bulletin

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THE NEW LANDSCAPE OF SUSTAINABILITY

by Linda J. Novy,
Linda J. Novy and Associates

Overview

The new direction of commercial landscape management reflects current trends toward sustainability, practices which incorporate the triple bottom line – economic, environmental and social equity. Sustainable landscape management focuses on reducing the degradation of natural resources and adjusting the landscape's ecosystem to provide an enjoyable environment for tenants and the community. It is a landscape in which resources are conserved, and fewer and fewer inputs are required over time. Today's property manager is looking for long term value and a "Class A" appearance; sustainably designed and managed grounds provide those objectives. The following guidelines present the primary components of a sustainable landscape system.

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Guidelines

Apply Ecological Design Principles.

Each site's management should take into consideration soil types, drainage patterns, micro climates, existing flora and fauna, and native and local plant communities. In a new design or renovation, by implementing ecological principles, the resulting landscape will function more efficiently and effectively. Biodiversity in plant choices attracts a wide variety of insects, birds and other wildlife, which in turn support productive ecological interactions. Ask your landscape architect for

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plant suggestions that provide these qualities as well as being durable and easy to manage.

Minimize Non-Recyclable Waste. This can be as straightforward as choosing plants that require less trimming or recapturing by-products of the landscape. "Waste equals food" is one of the tenets of "industrial ecology". Some prime examples include grasscycling, chipping trimmings and reusing on site, or leaving desirable leaf debris in place as mulch. In these examples, nutrients are restored to soil, less landfill is created, and some weed suppression is achieved. Many buildings show their "colors" through annual and perennial plant rotations in containers – but what happens to the plastic nursery containers and the plants that are rotated. Are they all going to landfill? Partner with your contractor to ensure that plastic containers are recycled to nurseries, and that plants are recycled to local non-profit organizations, or at least disposed in a "green debris" box. Stretch out your rotations with longer-lasting plant choices to reduce the cycle of "inputs".

Respect and Know Your Soil. Ask your contractor to base the fertilization program for your property around the soil's actual needs. Start with a professional soil test and consider having this performed annually to measure the program's effectiveness. Through proper soil management, soil life creates its own fertility, thereby reducing dependence on fertilizers. A blend of organic fertilizers and synthetic fertilizers (used primarily in winter) is a sound approach, and where irrigation systems have fertilization capability, a "bio stimulant" through the system is ideal. Initially this may cost slightly more than a totally synthetic program, but indirect savings are created through enhanced plant health. In many localities, synthetic fertilizers have become regulated products thus increasing their costs. See www.soilfoodweb.ca/sfapproach.asp for information.

Use Resources Sustainably. Water management is the obvious place to start – begin with a professionally implemented water survey to determine the efficient delivery of water from your system and to identify opportunities for improvement. New time clocks and other technology pay for themselves in short order; weather-based irrigation controllers modify water applications automatically based upon changes in the weather. These improvements will help align your current landscape water budget with seasonal irrigation applications and monitor costs. Saving water saves money and sewer costs. For more information, refer to www.cimis.ca.gov/cimis/welcome.jsp and www.irrigation.org.

Create Wildlife Habitat. Where possible, increase the diversity on your property by inviting wildlife into the landscape. This may seem difficult to accomplish in the

heart of a city, but even street trees provide vital "housing" to wild urban dwellers. California wax myrtle is one of our best-looking small trees/large hedge with its naturally tailored appearance and glossy leaves. It also provides waxy nutlets which are favored by flickers, finches and robins. Challenge your contractor to choose display plants in containers and beds which provide other qualities besides adding color and curb appeal. Perennials and annuals can provide nectar and larval habitat for butterflies, and attract beneficial insects. Some plants which attract beneficial insects include sweet alyssum, an excellent edging plant that attracts aphid-eating hover flies, and clumping ornamental grasses which provide excellent shelter and over-wintering sites for ladybugs and other beneficial insects. This boost in bio-diversity can contribute to a healthier and longer lived plant, thus reducing pest management and rotation costs. There is another opportunity in the financial district that is beneficial to your tenants, too- the "grass roofs movement"! A rooftop garden provides a wide range of opportunities to plant native trees, shrubs and even to recycle perennials from your rotating "front door" containers while reducing global warming. Trees can absorb carbon dioxide through photosynthesis and provide useful shade that can lower surface temperatures and cut back on energy costs. At larger campuses, consider wildlife corridors, riparian habitats, and restoration of the grounds with areas of native plant communities.

Practice Integrated Pest Management. There are countless opportunities to reduce and even eliminate the use of toxic pesticides in the landscape. Weed barrier fabric, flamers (devices which use a propane flame to burn immature weeds), and thick mulching are a few examples of weed management. Insect pests can be managed through a program of monitoring, identifying and treating the pest with the least toxic product – and many new products are available, including beneficial insects and bio-controls. Creating a landscape rich in bio-diversity and appropriate planting is the first line of defense, along with keeping your urban landscape clean through frequent summer hose-downs. The City of San Francisco's Department of the Environment provides salient resources, as does the Bio-Integral Resource Center (BIRC, a non-profit corporation that researches and educates in integrated pest management 510-24-2567). Some newer products on the market include compost tea used successfully as a pest management treatment by the City of San Francisco, and mycorrhizal drenches which boost plant health cost-effectively.

Protect Air and Water. These two important resources can best be protected through a sustainable landscape management program. Air quality is enhanced with

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less use of fossil fuels and emissions, and this is accomplished through landscape designs which require less use of power equipment. For example, there are meadow-type grasses and low-maintenance ground covers that are excellent substitutes for lawns and fussy ground covers, and proper pruning of hedges and a tolerance for a more natural but tailored appearance reduces trimming frequency. Consider Spare the Air Days and work with your contractor to switch tasks on those days to ones performed manually. For some hydraulic and other equipment, environmentally friendly fuels can be substituted. Water is best protected through the reduction of fertilizers and pesticides entering the storm water system, and by implementing the Best Management Practices promoted by the Clean Water Act of 1972 and its 2003 Phase 2 regulations. New design techniques, such as bio swales, and products that contain and filter sediment, are important tools in managing your property's landscape. Check out www.cabmphandbooks.com.

Communicate Through Specifications. As a property manager, what tools can help you directly communicate with your landscape manager? A well-written set of maintenance specifications is critical to the success of the property manager's relationship with the landscape manager and the landscape's health and appearance. Don't forget to include a recycling clause and spell out your goals for this important area. Ask your landscape contractor to develop a long-term strategy to reduce the inputs and negative outputs of your landscape—this "win, win, win" approach will enhance your relationship with your contractor and create economic benefits for you, while the landscape thrives. Working with your contractor, conduct an ecological footprint analysis of your landscape to determine which tasks may not be necessary or are excessive. Target high maintenance plants that should be removed and replaced, and determine other factors which will enhance sustainability in the landscape. Savings are possible. Consider a few statistics from one commercial site tracked from 1997 to 2001: a 39% reduction in insecticides, a 61% decrease in fertilizer, and a 2% decrease in water use (site was used as a recharge sink for manufacturer's recycled water; typically greater water savings are achieved with an effective water management program and good technology). There was also a 19% reduction in turf, areas that were non-functioning areas and "C" areas. By converting these 134,122 sq. feet of turf to mulched areas and areas of low maintenance plants, approximately 50% of on-going labor maintenance costs were saved. Some specification guidelines and practical tips can be found at www.aiatopten.org.

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Check Out Global Positioning Systems and Their Related Geographic Information Systems. By investing in this technology you can map and document property inventories. When combined with a personal or enterprise database, these systems can provide the current status of a wide variety of property components. See www.dendronlmc.com for information on GPS for your properties.

Summary

A sustainably managed landscape contributes to your property's LEED certification as well. The U.S. Green Building Council (www.usgbc.org) recently published their certification guidelines for existing buildings. Now property managers have check lists for new construction and existing properties that closely reflect the sustainable landscape guidelines in this article. The end result of sustainable grounds management is a resource-efficient landscape that reflects and conserves its local resource base and provides long term value to the property manager.



Linda J. Novy

Linda J. Novy is the founder and former President and CEO of Gardeners' Guild, Inc., now a 100% employee-owned firm serving land

