

# SUMMARY OF BEST PRACTICES

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Best management practices used by others were researched to provide a foundation for determining what steps could be taken to improve NPS maintenance and operations. Two studies examined a number of the best management practices used at designed landscapes in Washington, D.C., and at heavily used landscapes in New York City, Chicago, San Francisco, Atlanta, London, Ottawa, and Canberra. The review of best practices has been an ongoing process, and the most applicable practices have been included in the management plan.

## SUSTAINABLE SITES INITIATIVE

The Sustainable Sites Initiative™ is an interdisciplinary partnership led by the American Society of Landscape Architects (ASLA), the Lady Bird Johnson Wildflower Center, and the United States Botanic Garden. The partnership seeks to create and implement clear and rigorous design, construction, operations, and maintenance criteria to supplement existing green building and landscape guidelines, as well as to create a stand-alone tool for site sustainability (ASLA et al. 2008). The main principle is that sustainable land practices enable natural and built systems to work together, protecting and enhancing the ability of landscapes to provide services such as climate regulation, clean air and water, and improved quality of life. The U.S. Green Building Council anticipates incorporat-

ing proposed benchmarks into future versions of the LEED® Green Building Rating System™.

To maintain a landscape for long-term sustainability, the following operation and maintenance guidelines are recommended:

- Develop a landscape maintenance plan that outlines the long-term strategic plan for the site and identifies short-term action plans to achieve sustainable maintenance goals.
- Use vegetation trimmings generated during operations and maintenance as compost and mulch to improve soil health and reduce the need for chemical fertilizers, irrigation, and pesticides.
- Provide space for collecting recyclables (including paper, glass, plastics, and metals) to facilitate recycling and reduce waste generation and waste disposal in landfills.
- Use electricity from renewable sources to reduce a site's carbon footprint and to minimize air pollution and habitat destruction.

## DESIGN FEATURES FOR PUBLIC USE AND MAINTENANCE

Destinations should be convenient and flexible, and they should be well used throughout the day so people are comfortable being there. Best practices for design include creating a sense of place and enhancing landscape appearance through a hierarchy of design for site furniture (benches, trash cans, information stations, light fixtures, and orientation signs), with coordinated logos, color systems, signage, uniforms, and messages. Quality places are pleasant to be in and appeal to all five senses. Quality is the result of design, construction, facility condition, and maintenance. All four are needed components to achieve the desired standards. High-quality and durable materials and details can attract users, contribute to respect and user stewardship, and deter vandalism. Quality, comfort, cleanliness, and feelings of safety make a good first impression.

Certain visitor amenities go together, such as signs, seating areas, cafés, restrooms, and path-

way intersections. Combining activities and uses in one area can help create a comfortable social place for people to relax and meet several needs at once (Project for Public Spaces 2008). Encouraging visitors to linger at visitor service locations can keep trash where it can easily be handled.

Designs need to consider the ease of maintenance and typical uses, as well as incorporate ergonomics that support employee safety. Access and circulation routes should accommodate staff and maintenance vehicles, in addition to pedestrians and other types of use.

Excessive lighting and light pollution should be reduced. Cities as well as national and international associations (the American Medical Association, the International Dark-Sky Association, and environmental organizations) are increasingly concerned about the impact of light pollution and are seeking to reduce excessive lighting and its attendant biological and health concerns. Green and sustainable approaches are often required so that lighting provides safety, and night lighting is appropriate for the type of use and the environment. Less energy consumptive approaches are desirable. Standards are included in both LEED and the Sustainable Sites Initiative™.

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## **CULTURAL RESOURCES**

Maintaining the historic character and identity of places and adaptively reusing historic structures to ensure their preservation are widely used best practices.

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## **NATURAL RESOURCES**

Suitable plants need to be selected to ensure that they will grow and can be easily maintained. Urban water ecology and sustainable management should be promoted.

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## **EVENT MANAGEMENT**

Spaces should be designed to sustainably accommodate demonstrations and events. On-line access for information and permit applications can make the process more efficient for event organizers in terms of scheduling and understanding permit requirements, as well as for

onsite management. The ability to obtain permits from a single source rather than multiple sources reduces confusion.

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## **PUBLIC ACCESS**

Walking environments should be safe, comfortable, convenient, efficient, and welcoming. Good pedestrian environments provide seating, human-scale street furniture, and interesting pedestrian amenities that make walking pleasurable. Multiple means of transportation access are available. Street crossings are safe, and various traffic-calming measures are used. Motorists and pedestrians are equitably treated; for example, waits at stoplights are equal for both pedestrians and drivers and vehicles do not have priority in walkable urban areas.

Better public transportation access equates with improved quality of life and better environmental quality. Connections between different modes of transit (subways, buses) should be facilitated. Increased bicycle use and alternative public transportation are important components of sustainable urban areas. Congestion, air quality, and quality of life can be enhanced by reducing private vehicle use and providing more integrated transit services.

Curbside loading / unloading areas should be designated, along with areas where these uses are prohibited, and time limits should be enforced for stopping or idling (3–10 minutes). Long-term parking should be provided in peripheral areas or at centrally located off-street, multimodal parking facilities.

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## **VISITOR EXPERIENCE**

Memorable visitor experiences can be created by considering all aspects of how visitors get to a destination, find out where to go, learn about what they are seeing, and move through the site. In addition, providing quality places that are pleasant to be in can help visitors enjoy the site, knowing that they are in a safe environment and that they can easily take care of personal needs. Onsite staff, settings, and programs should all support memorable visitor experiences.

Providing many diverse types of activities and choices of things to do will appeal to diverse

users and mixed ages. Sufficient convenient and accessible visitor amenities (rest areas, water, food service) should be sized and configured to meet visitation levels on high-volume days.

Multiple types of food service, ranging from mobile carts, refreshment stands, food courts, order-ahead picnic or pickup food, to full-service restaurants, will meet a variety of user needs. The recommended split is 80% fast-food to 20% full-service facilities. Mobile carts are generally around 5% of the 80%.

Quality retail merchandise directly related to the experience should be available at all price ranges.

## **OPERATIONS AND MAINTENANCE**

Building public support and encouraging positive visitor behavior can help achieve higher maintenance standards. Well-maintained and clean areas encourage a higher standard of behavior, along with prominently displayed visitor rules of behavior and visible management and staff presence. Taking time to help users understand regulations, limits, and maintenance goals will help gain their cooperation and support.

Through written standards all staff should understand desired conditions, along with their role in achieving them. All staff members should help achieve standards and set a visible example for the public to follow, such as picking up trash or thanking people for their help in maintaining clean areas. In addition, written standards and guidelines for all staff should be focused on creating memorable visitor experiences.

Best practices for waste management include concentrating trash-generating activities at

specific places, such as food service locations or refreshment stands. Trash and recycling containers should always be located together and have restricted openings so the containers are not misused. They should also have highly visible symbols and messages.

Trash and recyclable pickups should be mechanized to promote efficiency and reduce the potential for staff injuries. Regular maintenance needs to be provided during open hours. Use levels in facilities such as restrooms need to be monitored so that facilities are cleaned in a timely fashion and the desired standard of care is achieved. Trash collection during the evening hours should be frequent enough to keep the trash receptacles tidy every night of the year.

Electronic monitoring can be used to identify maintenance needs (burned out light bulbs) or to set regular maintenance schedules (such as self-cleaning restrooms). A public website can also help identify maintenance and repair needs, as well as respond to public concerns.

## **REFERENCES CITED**

American Society of Landscape Architects, Lady Bird Johnson Wildflower Center / University of Texas at Austin, and the United States Botanic Garden

2008 *Sustainable Sites Initiative Guidelines and Performance Benchmarks — Draft 2008*. Washington, DC. <http://www.sustainablesites.org/report/> (accessed Dec. 4, 2008).

Project for Public Spaces

2008 "Creating Park Signage." [http://www.pps.org/parks\\_plazas\\_square/info/design/Signage](http://www.pps.org/parks_plazas_square/info/design/Signage) (accessed Nov. 26, 2008).