

Best Sustainable Landscaping Practices

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2018

Use of Fertilizers and Compost

- Limit the use of fertilizers. Use organic and slow-release fertilizers if necessary. Apply sparingly and at the correct time, according to directions.
- Consider leaving grass clippings on site after mowing, as they quickly decompose and provide valuable nutrients to the site.
- Develop or require a site maintenance plan that incorporates composting and/or recycling 100% of vegetation trimmings and appropriate compostable organics on site, where feasible. Use compost for landscaping activities. Composting organic matter on site supports nutrient cycling, improves soil health, and reduces transportation and disposal costs and materials going to landfills.

Plant Selection and Planting Practices

- Preserve existing native vegetation. Integrate existing plants, especially mature trees, into the site design as much as possible.
- Choose pollinator-friendly plant species that support the forage, reproduction, shelter and/or hibernation of pollinators specific to your ecoregion.
- Use native or climate appropriate plants to decrease or completely offset both water requirements (Xeriscape) and maintenance (i.e., fertilizer, pruning, mowing, and landscaping labor) costs.
 - Select native plants that thrive under conditions present at the site (soil, water, sunlight, space, etc.).
 - Choose plants that require minimal resources, including drought tolerant plants.
 - Avoid invasive plants.
- Allow space for proper growth.
- Use alternatives to turf, such as woodland, meadow, or other natural plantings.
- Plant perennials (or longer-lived plants) vs. annuals (or shorter-lived plants)..
- Limit or eliminate plants that shed seeds and fruit.
- Group together plants with similar water needs to reduce water use and protect plants from both under- and overwatering.

- Use vegetation to minimize building heating and cooling requirements. For example, landscaping should block or filter summer sun and permit winter sun to reach most occupied areas.
- Use vegetation to reduce heat island effects.
- Plant sites densely, in layers to improve water retention and cooling ability.

Water Efficiency and Conservation

- Enforce a “water only as needed” policy.
- Reduce, with aim to eliminate, the use of potable water, natural surface water, and groundwater withdrawals for landscape irrigation and water features.
- Manage stormwater on site. Capture water runoff and recharge groundwater by utilizing rain gardens, green roofs, and rain barrels. Use recycled or reclaimed water instead of potable water for irrigation.
- Reduce the amount of irrigated areas.
- Optimize irrigation schedules and controls to deliver water to the landscape only as needed based on weather conditions.
 - Water early in the day.
- Design rainwater/stormwater features to provide a landscape amenity.
- Use gravity for water movement and recirculation whenever possible.
- Maintain water features to conserve water and other resources.
- Use mulch to retain as much water as possible.
- Raise lawn mower blades, as mowing too close to the ground will promote thirsty new growth. Consider seasonal performance-based mowing (e.g., spring 3”, summer 4-5”, fall 4”)
- Conduct water audits to identify additional opportunities for water efficient landscape practices.
- Look for landscape irrigation professionals certified through a WaterSense labeled certification program.

Soil Management and Conservation

- Develop or require a soil management plan.
- Prevent/mitigate soil erosion by maximizing surface cover and minimizing slopes in site design. If slopes cannot be avoided, stabilize slopes with natural plantings, mulch around plants, and drought-tolerant species.
- Amend topsoil on site by using organic compost materials selected from sustainable and renewable sources.
- Salvage on-site soil.
- Aerate soil to improve infiltration of water.
- Preserve areas with permeable soils to the extent possible, for use in storm water infiltration and ground water recharge.
- Address soil deficiencies.
 - Perform and use Soil and Plant Tissue Analyses to determine soil deficiencies and nutrient use.
 - Conserve existing healthy soil by mapping soils, testing for disturbed and reference soils, and limiting landscaping work to avoid disturbing soils as much as possible.
 - Conserve healthy soil during landscaping by mapping soils on site, perform tests of disturbed soils and reference soils, conserve the healthiest soils in topsoil salvage areas, and limit work to appropriate sites for building construction.

Pest Management

- Prevent, detect, control, and manage invasive plants. Develop or require a comprehensive plant management plan or integrated vegetation management (IVM) plan that addresses early detection, removal, prevention, and long-term management.
- Do not plant right next to buildings and avoid the use of vines that climb building walls.
- Consider plants that do not have low branches, which could provide shelter for rodents, and keep tree branches close to the building trimmed.
- Design grounds so that water does not pool for any period of time.

- Place outdoor lighting away from the building, but focus light on the building if lighting is necessary (insects are attracted to sources of light, not where the light is directed).
- Avoid use of ground covers, such as bark and wood chips, as these types of coverings encourage insects to breed and rodents to burrow. If necessary, consider decorative gravel instead.
- In planters and planting areas, require installation of heavy gauge galvanized screening below the soil surface in order to discourage rodent burrowing.
- When chemicals are necessary, use biodegradable and less or non-toxic chemicals, and avoid chemicals toxic to pollinators. Consider mandating a "no neonicotinoids policy" when safer substitutes exist.

Minimize Impacts to the Natural Habitat

- Use a decision-making hierarchy of preservation, conservation, and regeneration.
- Consider the land, climate, and site history before developing a landscaping design.
 - Strive to re-establish and maintain the integral and essential relationship between regenerative systems (natural processes) and human activity.
 - Inventory the site's current ecological resources to determine the potential for restoration.
 - Protect existing natural areas to the greatest extent possible (woodlands and wetlands, stream corridors, and meadows).
 - Avoid development of areas containing habitat for threatened or endangered plant and animal species.
 - Maximize and mimic the benefits of ecosystem services by preserving existing environmental features, conserving resources in a sustainable manner, and regenerating lost or damaged ecosystem services.
- Implement recommendations in the guidance document, *Supporting the Health of Honey Bees and Other Pollinators*, to incorporate pollinator-friendly practices.
- Provide regenerative systems so that future generations may have a sustainable environment supported by regenerative systems and resources.
- Use prescribed burns to establish and maintain natural landscaping.

- Attempt to create additional wildlife habitat to partially compensate f

Additional Considerations

- Use materials, plants, and soils that are grown or produced locally in order to reduce energy use for transportation and increase demand for local goods.
- Use vegetation to promote community/employee morale and well-being activities. Consider rooftop gardens, community gardens, and vertical gardens in order to promote educational programs, food access, and gardening activities for morale and community engagement.
- Implement outreach efforts to educate staff and visitors on design concepts, including the importance of pollinators to both natural and agricultural resources.
- Plan for ongoing sustainable landscape improvements.
- Use sustainably harvested, certified wood. Avoid wood species listed as threatened or endangered.
- Use landscape design to reduce light pollution on site. "Light trespass" from landscaping on Federal sites should be minimized to reduce sky-glow, increase nighttime visibility, minimize negative effects on nocturnal animals, and improve human health and functioning.
- Consider principles and strategies developed from the Crime Prevention Through Environmental Design (CPTED).
- Limit the use of power tools when possible. Use electric tools rather than gas tools and 4-cycle engines rather than 2-cycle engines.