Site Management Policy

Scope

Transwestern is committed to preserving ecological integrity and encouraging environmentally sensitive site management practices that provide a clean, well-maintained, and safe building exterior while supporting high-performance building operations and integration into the surrounding landscape.

A site management policy has been implemented for each of Transwestern's managed buildings participating in the LEED O+M: Existing Buildings certification process that addresses the following: use of low emissions maintenance equipment, snow and ice removal, cleaning of building exterior, pavement, and other impervious surfaces, erosion and sedimentation control (for ongoing operations and for construction activity), organic waste management, invasive and exotic plant species management, fertilizer use and soil testing, irrigation management, and storage of materials and equipment.

Performance Metric

Each property is required to document the on-going implementation by using the criteria specified in Sustainable Sites Credit 5- Site Management.

Goals

The goal of implementing this site management policy is to ensure that environmentally-preferable building exterior and site management practices are encouraged and natural components are effectively maintained. Outlined below are the goals for the site and documentation of their achievement is detailed in Sustainable Sites Credit 5- Site Management:

- Full implementation of the site management policy, including the tracking of all performance goals in the associated credit.
- Reduce emissions from maintenance equipment by limiting turf area to 25% or less of the vegetated site area, or using all manual or electric- powered equipment, or maintaining a 50% reduction in hydrocarbon and nitrogen oxide emissions, and a 75% reduction in carbon monoxide emissions from baseline conditions.
- During snow and ice removal, use no calcium chloride or sodium chloride deicers 100% of the time and/or establish reduced treatment areas equal to 50% of applicable paving area by square footage.
- Based on volume, use at least 80% cleaning products that meet the requirements of IEQc7- Green Cleaning- Products and Materials for the cleaning of the building exterior, pavement, and other impervious surfaces. Retain service slips from exterior maintenance contractors to confirm actual outcomes.
- Prevent erosion and sedimentation control for ongoing operations and construction activity 100% of the time. Document actual outcomes using the SSc5 – Activity Log monthly for ongoing operations and during construction activity.
    - Restore any eroded landscape.
- Divert 100% of organic waste from landfills via low-impact means.
- Manage invasive and exotic plant species through monitoring and eradication. Ensure that no more than 25% of the existing landscape, by square footage, is inhabited by invasive and exotic plant species at any given time unless otherwise specified in the building-specific Site Improvement Plan. Retain service slips from the landscaper to confirm actual outcomes.
- Perform soil testing at least once every other year to establish soil type (classification and texture).

- Use no ammonia-based fertilizers, biosolid- based fertilizers (for continuous application), synthetic quick-release fertilizers, or “weed and feed” formulations.
    - Prevent over-application of nutrients.
- Do not perform blanket applications of herbicides and control turf weeds by spot spraying only.
- Monitor irrigation systems manually or with automated systems at least every two weeks during the operating season for appropriate water usage, system times, leaks, or breaks. Document actual outcomes using the SSc5 – Activity Log after each inspection.
- Store materials and equipment to prevent air and site contamination.

Procedures and Strategies

Quality Assurance/ Quality Control
The SSc5- Site Management activity logs will be reviewed in accordance with Transwestern’s Quality Assurance/ Quality Control process and evaluated to ensure that the building is meeting the site management policy criteria.

Reduce Maintenance Equipment Emissions
Reducing emissions of maintenance equipment should be accomplished in at least one of three ways. Limiting turf area to 25% or less of the vegetated site area can reduce dependence on powered equipment such as mowers, edgers, trimmers, and blowers. Convert lawn to restored habitats, native or adapted plants, mulches, aggregates, or no-mow grasses. The second option is to use 100% low- or zero emissions maintenance equipment, tracked by hours used, such as manual or electric-powered. The final option is to demonstrate and maintain a 75% reduction in carbon monoxide emissions from baseline conditions using the USGBC emissions reduction calculator.

Replace gasoline-powered equipment with electric, manual, or propane-powered equipment. For any gasoline-powered equipment with useful life remaining, implement a phase out plan. Maintain and repair equipment according to manufacturers’ recommendations and track the dates and details of each occurrence in the activity log.

Snow and Ice Removal
Use 100% environmentally preferred deicers, tracked by weight in pounds, such as salt-free potassium acetate, potassium chloride, magnesium chloride, or calcium magnesium acetate. Do not use calcium chloride or sodium chloride deicers. Deicer blends that contain calcium chloride or sodium chloride are considered non-compliant.

If some calcium chloride or sodium chloride products are used, demonstrate compliance by reducing the area treated with these non-compliant deicers to 50% of the total deiced area, by square footage, by discontinuing deicer applications in low-traffic areas or converting some areas to environmentally preferred deicer. Track the percentage reduction in area treated from the baseline application area by square footage. When using an area reduction method, identify high-traffic areas such as outdoor plazas that may forgo treatment or require less deicer as the high traffic helps melt snow and ice. Develop drawings to identify untreated areas to users. Before storms begin, pretreat pavement with granular or liquid deicers and cone or mark off any untreated areas.

Always plow or power sweep snow before applying deicer. If ice is present, apply only enough deicer to eliminate the ice, not the entire depth of snow, prior to plowing. Use vehicles with electronic spreader controls for precise quantities and locations of deicer applications and limit any idle time of snow removal vehicles. Use pre-wetted salt rather than dry salt when possible. Keep records of deicer use and its effect for each snow event to optimize future deicer applications. Save leftover deicers for the next season using safe storage techniques that eliminate spills and contamination. Track the dates and details of each occurrence in the activity log.

Cleaning Products

When cleaning the building exterior, pavements, and other impervious surfaces, ensure that 80% of cleaning products, based on volume, meet the following requirements (IEQ Credit 7):

- Cleaning products must meet one or more of the following standards or a local equivalent for projects outside the U.S.:
  - Green Seal GS -37, for general-purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.
  - UL EcoLogo 2792, for cleaning and degreasing compounds.
  - UL EcoLogo 2759, for hard-surface cleaners.
  - UL EcoLogo 2795, for carpet and upholstery care.
  - Green Seal GS-40, for industrial and institutional floor care products.
  - UL EcoLogo 2777, for hard-floor care.
  - EPA Design for the Environment Program's Standard for Safer Cleaning Products
  - Cleaning devices that use only ionized water or electrolyzed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

- Disinfectants, metal polish, or other products not addressed by the above standards must meet one or more of the following standards (or a local equivalent for projects outside the U.S.):
  - UL EcoLogo 2798, for digestion additives for cleaning and odor control.
  - UL EcoLogo 2791, for drain or grease trap additives.
  - UL EcoLogo 2796, for odor control additives.
  - Green Seal GS-52/53, for specialty cleaning products.
  - California Code of Regulations maximum allowable VOC levels for the specific product category.
  - EPA Design for the Environment Program's standard for safer cleaning products.
  - Cleaning devices that use only ioniz ed water or electrolyz ed water and have third-party-verified performance data equivalent to the other standards mentioned above (if the device is marketed for antimicrobial cleaning, performance data must demonstrate antimicrobial performance comparable to EPA Office of Pollution Prevention and Toxics and Design for the Environment requirements, as appropriate for use patterns and marketing claims).

- Disposable janitorial paper products and trash bags must meet the minimum requirements of one or more of the following programs, or a local equivalent for projects outside the U.S.:
  - EPA comprehensive procurement guidelines, for janitorial paper.
  - Green Seal GS-01, for tissue paper, paper towels and napkins.
  - UL EcoLogo 175, for toilet tissue.
  - UL EcoLogo 175, for hand towels.
  - Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.
  - FSC certification, for fiber procurement.
  - EPA comprehensive procurement guidelines, for plastic trash can liners.
  - California integrated waste management requirements, for plastic trash can liners (California Code of Regulations Title 14, Chapter 4, Article 5, or SABRC 42290-42297 Recycled Content Plastic Trash Bag Program).

- Hand soaps and hand sanitizers must meet one or more of the following standards, or a local equivalent for projects outside the U.S.:
  - no antimicrobial agents (other than as a preservative) except where required by health codes and other regulations (e.g., food service and health care requirements)

- Green Seal GS-41, for industrial and institutional hand cleaners.
- UL EcoLogo 2784, for hand cleaners and hand soaps.
- UL EcoLogo 2783, for hand sanitizers.
- EPA Design for the Environment Program's standard for safer cleaning products.

For projects outside the U.S., any Type 1 eco-labeling program as defined by ISO 14024: 1999 developed by a member of the Global Ecolabelling Network may be used in lieu of Green Seal or Environmental Choice standards. Retain service slips from exterior maintenance contractors to confirm actual outcomes.

Erosion and Sedimentation Control

During ongoing operations, keep debris, garbage, and organic waste out of storm drains through routine maintenance such as pavement sweeping. Provide cigarette butt receptacles at the designated smoking area, empty them regularly, and sweep butts off of the ground frequently. Regularly inspect, clean, and repair rainwater infrastructure, including roof drains, gutters, and downspouts. Ensure that any groundcover and vegetation on site is healthy to prevent erosion, especially in sloping areas. Where erosion occurs, restore soils by reestablishing vegetative cover, mulching, or adding stone aggregates. Track all erosion and sedimentation control inspections, maintenance, and repairs in an activity log.

Before any construction project begins, work with the general contractor to develop a site-specific erosion and sedimentation control plan. Review local and national rainwater management codes, standards, and prevention measures such as the U.S. EPA Stormwater Pollution Prevention Plans for Construction Activities. Develop a process for communicating, implementing, and tracking erosion and sedimentation control strategies during construction. Activities should include the following:

- Prevent the loss of topsoil during construction.
  - Minimizing the amount of soil disturbed and preserve mature vegetation.
  - Utilize stabilization methods such as seeding, mulching, and the use of geo-textiles.
- Prevent the sedimentation of receiving streams.
  - Install structural controls such as silt fences, drainage swales, and storm drain inlet protection.
- Prevent air pollution by particulate matter.
  - Prevent the tracking of soil onto paved surfaces on and off-site through measures such as gravel skirts at drive entries and exits, transit ways for heavy vehicles, and wash stations for trucks.
  - Promote good house-keeping strategies on site.

Organic Waste Management

Divert 100% of plant material waste generated on-site by landscaping activities, tracked by weight in pounds. Diverting landscape waste to waste-to-energy facilities and composting or mulching on or off-site are all acceptable strategies. Consider the use of mulching mowers on turf areas. Track the dates and details of each occurrence in the activity log.

Invasive and Exotic Plant Species Management

Retain a list of regionally invasive or exotic vegetation and regularly monitor grounds for their presence. Consider engaging a local nursery, county extension agent, or other knowledgeable resource to help identify invasive and exotic vegetation. Eradicate any invasive or exotic vegetation found on the project site through low-impact means such as hand-weeding. Ensure that no more than 25% of the existing landscape, by square footage, is inhabited by invasive and exotic plant species at any given time unless otherwise specified in the building-specific Site Improvement Plan. Work with neighboring properties to remove their invasive and exotic species to help prevent the spread onto the project site.

The following plant species are considered invasive in our area. The landscape vendor will monitor the site for these plant species during routine operations and document on service slips. If identified, the invasive species will be removed by digging up the plant roots and disposing through compost.

Technical name	Common name
Capsella bursa-pastoris	Mother's Heart
Fallopia japonica	Japanese Knotweed
Alliaria petiolata	Garlic Mustard
Morus alba	White Mulberry
Rubus phoenicolasius	Japanese Wineberry
Elymus repens	Common Couch
Rosa multiflora	Multiflora Rose

*Revise table based on the building location

Resources for locating climate appropriate plan species:

- Lady Bird Johnson Wildflower Center Native Plant Database: www.wildflower.org/plants

Soil Testing
To prevent over-application of nutrients, test soils once every other year to determine the soil type (classification and texture), including current nutrient content and pH. For sites with multiple planting beds, landscape areas, or vegetation types, sample the soil in each location. Testing the soil optimizes the type and frequency of fertilizer applications. Track the dates and findings of each testing in the activity log.

Fertilizer and Herbicide Use
Use 100% environmentally preferred fertilizers, tracked by weight in pounds, such as organic waste generated on site (grass clippings, compost), fertilizers derived from animal or vegetable matter, organic or natural fertilizers, and slow-release formulas. Do not use ammonia-based fertilizers, biosolid-based fertilizers formulated for continuous application, synthetic quick-release formulas, or weed-and-feed formulations. Apply fertilizers based on plants' needs as determined through soil testing, rather than on a pre-determined schedule. Review local or national sources, such as the U.S.-based Organic Materials Review Institute (OMRI) database for environmentally preferred fertilizer products that comply with USDA organic standards. Do not use blanket applications for herbicides and control turf weeds by spot spraying only. Track the dates and details of each occurrence in the activity log.

Irrigation Management
Monitor irrigation systems at least once every two weeks during the system operating season for any leaks, breaks, irregularities in water usage, and to ensure accurate operation during system time settings. All system components should be tested during this season. Install high-efficiency irrigation systems such as drip irrigation and use weather-based controllers that used weather forecasting data to optimize irrigation. Install pressure sensors that respond to water pressure surges by closing the main line.

When visually inspecting the irrigation system for leaks and breaks, note any landscaped areas that are being over or under-watered by the irrigation system. Monitor the watering schedule regularly and adjust it based on plant and soil conditions.

To optimize irrigation system use, group plantings according to their water requirements. Turn off or remove irrigation zones in areas with established plants that do not require supplemental water and replace plants that are inappropriate for the region with native or adaptive plants. Turf is one of the

highest water-using forms of vegetation. Convert cool-season lawns to warm-season grasses which require less water in the summer. Track the dates and details of each occurrence in the activity log.

Materials and Equipment Storage
In order to prevent air and site contamination, store materials and equipment according to manufacturers' recommendations. Ensure that products and equipment are properly contained and secured to prevent leaking fuels. Ventilate storage areas so that chemicals and equipment fuels do not degrade indoor air quality. Confirm compliance in the activity log.

Responsible Party

The property manager, insert name, will manage the process and review monthly to ensure that building employees, suppliers, vendors, and contractors are in compliance.

Time Period

This policy will be enacted during the project establishment period and will continue to be in place on a continual basis at insert building name.