

## College of Lake County Green Building Guidelines

The College of Lake County has identified Sustainability as a core area of excellence for building and operational practices in its Strategic Plan goals. The college's Sustainability Plan further calls for "Greening our Campus" with sustainable building and maintenance practices. Such practices improve the quality of the environment inside the buildings, across the campuses, and in the surrounding region. The college is also committed to reducing its impacts on climate change by reducing its carbon emissions.

These Guidelines were originally developed by the Environmental Action Committee in 2011 and have been updated in 2017.

100% of college-owned and operated facilities are maintained in accordance with the procedures listed in this document. The College of Lake County's Green Building Guidelines include:

- I. New Construction & Major Renovations
- II. Operations & Maintenance of Existing Buildings
- III. Maintenance of Indoor Air Quality
- IV. Integrated Pest Management of Campus Grounds

### I. New Construction & Major Renovations

The College of Lake County Green Building Guidelines for New Construction and Major Renovations are aligned with Illinois Public Act 096-0073\*. Passed by the Illinois General Assembly on July 24, 2009, this Act requires that all new state-funded building and renovation projects be designed to a minimum level of LEED Silver certification, as developed by the USGBC, or meeting an equivalent standard. The college works with LEED accredited architects and designers to ensure all new projects meet or exceed this requirement. With the adoption of this policy, the College of Lake County commits to the following guidelines, with regards to new construction, and major renovation projects.

The College of Lake County commits to meeting the current LEED Silver standard or equivalent for all new construction and major renovation projects whenever practicable within the project budget. A major renovation is defined as a project with a construction budget that equals 40% or greater of the building's current replacement cost. The following would be reasons the college could not meet this commitment:

- An unreasonable financial burden would be placed on the college and taxpayers, taking into account the operating and construction costs over the life of the building and total cost of ownership of the building
- Obtaining LEED certification would create an unreasonable impediment to construction
- The LEED guidelines would impair the principal function of the building
- The LEED guidelines would compromise the historic nature of the structure

*\*Full Text of Public Act 096-0073 can be found at:*

<http://www.ilqa.gov/legislation/publicacts/fulltext.asp?Name=096-0073>

## II. Operations & Maintenance of Existing Buildings

All college-owned buildings are operated and maintained in accordance with Sustainable Operations and Maintenance Guidelines that cover the items listed below. Guidelines were established based on practices adopted by the Facilities Department and through use of a Computerized Maintenance Management System (CMMS). The Facilities Department reports operations quarterly to Environmental Action Committee Buildings, Energy, and Water Subcommittee.

- **Impacts on Surrounding Site**

- 49.65 acres of college-owned land remains deed-restricted by the Army Corps of Engineers to be preserved as high-quality wetland and natural habitat for native plant and wildlife species
- 8.6 acres of college-owned land on the Grayslake campus is a restored prairie preserve
- 34.6 acres on the Grayslake and Southlake campuses are designated wetlands
- 6.9 acres of college-owned land remains as dedicated arboretum
- Install and maintain Illinois native plant species as identified in the Landscapes Management Plan
- Replace metal halide parking lot and internal street lights with LED fixtures, consistent with dark sky standards

- **Energy Conservation**

- Continual retro-commissioning of all Heating, Ventilation, and Air Conditioning (HVAC) systems by Facilities Department
- Use of occupancy sensors for lighting and HVAC control where possible
- Use of Direct Digital Control (DDC) Building Automation Systems for temperature set-backs, lighting, and HVAC equipment scheduling
- Use of DDC Building Automation Systems and CMMS to monitor and manage energy consumption
  - Monthly scheduled check of utility consumption by Facilities Department and graph-back procedure for all diversions from typical utility rates
- Voluntary participation in utility load-shedding program by Facilities Department
- Use of double-paned glass for all windows
- All lighting applications converted to energy-efficient LED fixtures, where feasible
- Use high-albedo (i.e. white) roofing material and/or green roof plantings, where feasible

- **Usage of Environmentally Preferable Materials**

- FSC or similarly certified sustainable harvest lumber shall be used in all outdoor applications
- All new carpet installed as tile for more efficient replacement and maintenance with materials
  - Made from recycled materials
  - Recyclable at end-of-life
- Interior structures should be made of recycled and reclaimed materials when possible
- All paints applied to walls shall contain low to no Volatile Organic Compounds (VOCs)

- **Green Cleaning**

- 80% of cleaning products shall be certified by Green Seal™ or similar rating program
- Explore expanding the use of aqueous ozone for surface cleaning across the three campuses
- Effective green cleaning policies require procedural elements in addition to the purchasing of environmentally-sensitive supplies and equipment. In researching procedures for school-wide green cleaning policies, CLC identified documentation from the “Missouri Green Cleaning Guidelines and Specifications for Schools” (2009) as providing a set of easy-to-follow, common sense practices.

- **Water Conservation**

- Sensors on grounds irrigation system detect soil moisture content to allow system to water only when necessary
- Automatic motion sensors on all toilets, urinals, and bathroom faucets
- Use of low-flow aerators on all faucets
- Consider rain water for flushing of toilets
- All new toilets and urinals built at low capacity where possible to allow for 50% reduction in water use

### III. Operation and Maintenance of Indoor Air Quality

**Indoor environmental quality is regulated by the college Indoor Air Quality Plan (IAQ Plan):**

Building Heating, Ventilation, Air Conditioning and Refrigeration (HVACR) engineers operate and monitor the DDC Building Automation System. This system continually adjusts return air and percentage of outdoor air which enters the building, ensuring the correct air flow and percentage of fresh air ventilation. Building HVACR engineers perform daily planned maintenance procedures that include inspections and filter changes. Known pollutant sources are contained and stored within designated isolation areas to prevent contamination of indoor air quality.

HVACR engineers are responsible for monitoring and addressing concerns and complaints about indoor air quality and temperatures on all three campuses.

- Room temperatures are kept between 70-72 degrees for maximal occupant comfort.
- Detectors have been located in new systems to monitor CO<sub>2</sub> levels and bring in fresh air as needed. For older systems that do not have Co2 detectors, we set a minimum of outside air at 10%.
- Occupants call the Facilities office (847)543-2080 to register complaints about air quality or temperature and a Work Order ticket issued and tracked.
- HVAC staff are able to make immediate adjustments for complaints about temperatures.
- An environmental monitoring company must be called in to deal with complaints about air quality (not temperature). This company will take air samples and make recommendations for the HVAC staff to follow.

### IV. Integrated Pest Management of Campus Grounds

All campus grounds are maintained in accordance with the college Integrated Pest Management (IPM) Plan, as identified in the Landscape Management Plan. This plan is comprised of this four-tier approach to sustainable management of campus grounds identified here:

#### **Tier-1: Set Action Thresholds**

Facilities Department, Native Landscapes Subcommittee, Biology Division, and Horticulture Department identify key action thresholds and natural areas of greatest concern. Current priority concerns include:

- Willow Lake, ponds, and wetlands:
  - a. Erosion along shoreline, especially near sump and storm drain outlets
  - b. Invasive species in lake buffer area and adjacent wetlands
  - c. Weakening weir dam
- Utilities easement along prairie:
  - a. Remove invasive species and restore native prairie ecosystem
- Invasive species control in all campus natural areas
  - a. Increased proactive control of invasive species including planting of native species

#### **Tier-2: Monitor and Identify Pests**

Grounds team staff are trained in horticulture to identify and monitor pests and other problems. The college consults with the Illinois Farm Bureau for up-to-date pest identification and management strategies.

#### **Tier-3: Prevention**

Preventative maintenance occurs regularly in wetland area including cut-back of invasive species before seed. The college contracts with an environmental consultant for maintenance and restoration of wetland and prairie areas.

#### **Tier-4: Control**

Continuous weed and pest control management by Grounds staff and potentially to involve regular volunteer work days for site management projects.