

Cline Library

Northern Arizona University
PO Box 6022
Flagstaff, AZ 86011-6022

928.523.6802 phone
928.523.3770 fax
nau.edu/library

1.0 Purpose

The purpose of this policy is to reduce the environmental and health harms associated the materials purchased, installed, and disposed of during any future maintenance and renovations of the Cline Library.

2.0 Scope

This policy applies any ongoing facility maintenance activities and any facility renovations that occur in the Cline Library. This policy includes guidelines for purchasing materials related to these activities, disposing of waste generated from these activities, and managing indoor air quality during these activities.

The following materials are covered under this policy:

- Base building elements permanently or semi- permanently attached to the building (mechanical, electrical and plumbing components and specialty items such as elevators are excluded). Exclude fixtures and equipment, which are not considered base building elements
- Furniture and furnishings as well as the components and parts needed to maintain them

For the purposes of this policy, routine maintenance includes (not exclusively) painting, carpet replacement, and ceiling tile replacement. Renovations include fit-outs affecting more than one room, or large rooms such as the lobby or board room, and involve multiple elements, such as moving walls and electrical work, or replacing multiple different architectural finishes.

3.0 Goals

Component	Goal
Materials purchased for facility maintenance and renovations	60% of materials (by cost) purchased will meet the sustainability criteria described below
Furniture purchases	80% (by cost) of furniture purchases will meet the sustainability criteria described below
Waste disposal from facility maintenance	70% of waste (by weight) will be diverted from landfills
Waste disposal from facility renovations	70% of waste (by weight) will be diverted from landfills
IAQ best management practices	IAQ Best Management Practices will be implemented for 100% of renovation projects and 100% of maintenance activities requiring material installation/repair lasting longer than one hour

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4.0 Standard Operating Procedures

Purchasing: Facility Maintenance and Renovations

This portion of the policy covers materials purchased for use in facility maintenance and renovations, as well as furniture purchases. These products may include, but are not limited to: building components and structures (wall studs, insulation, doors, windows), panels, attached finishes (drywall, trim, ceiling panels), carpet and other flooring materials, adhesives, paints and coatings.

Purchases will need to meet at least one of the following criteria:

- **Recycled content.** Recycled content is the sum of postconsumer recycled content plus one-half the preconsumer recycled content.
- **Wood products.** Wood products must be certified by the Forest Stewardship Council or USGBC-approved equivalent
- **Bio-based materials.** Bio-based products must meet the Sustainable Agriculture Network's Sustainable Agriculture Standard. Bio-based raw materials must be tested using ASTM Test Method D6866 and be legally harvested, as defined by the exporting and receiving country. Exclude hide products, such as leather and other animal skin material.
- **Materials reuse.** Reuse includes salvaged, refurbished, or reused products.
- **Extended producer responsibility.** Products purchased from a manufacturer (producer) that participates in an extended producer responsibility program or is directly responsible for extended producer responsibility. Products valued at 50% of their cost.
- **GreenScreen v1.2 Benchmark.** Products that have fully inventoried chemical ingredients to 100 ppm that have no Benchmark 1 hazards.
 - If any ingredients are assessed with the GreenScreen List Translator, value these products at 100% of cost.
 - If all ingredients are have undergone a full GreenScreen Assessment, value these products at 150% of cost.
- **Cradle to Cradle Certified.** End use products are certified Cradle to Cradle. Products will be valued as follows:
 - Cradle to Cradle v2 Gold: 100% of cost
 - Cradle to Cradle v2 Platinum: 150% of cost
 - Cradle to Cradle v3 Silver: 100% of cost
 - Cradle to Cradle v3 Gold or Platinum: 150% of cost
- **Product Manufacturer Supply Chain Optimization.** Use building products that:
 - Are sourced from product manufacturers who engage in validated and robust safety, health, hazard, and risk programs which at a minimum document at least 99% (by weight) of the ingredients used to make the building product or building material, and

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- Are sourced from product manufacturers with independent third party verification of their supply chain that at a minimum verifies:
 - Processes are in place to communicate and transparently prioritize chemical ingredients along the supply chain according to available hazard, exposure and use information to identify those that require more detailed evaluation
 - Processes are in place to identify, document, and communicate information on health, safety and environmental characteristics of chemical ingredients
 - Processes are in place to implement measures to manage the health, safety and environmental hazard and risk of chemical ingredients
 - Processes are in place to optimize health, safety and environmental impacts when designing and improving chemical ingredients
 - Processes are in place to communicate, receive and evaluate chemical ingredient safety and stewardship information along the supply chain
 - Safety and stewardship information about the chemical ingredients is publicly available from all points along the supply chain
- **For facility maintenance and renovation materials: Low emissions of volatile organic compounds.** The following products must either be inherently non-emitting or be tested and determined compliant in accordance with California Department of Public Health Standard Method V1.1–2010, using the applicable exposure scenario. The default scenario is the private office scenario; classroom furniture may use the school classroom scenario. Both first-party and third-party statements of product compliance must follow the guidelines in CDPH SM V1.1–2010, Section 8. Organizations that certify manufacturers' claims must be accredited under ISO Guide 65. Laboratories that conduct the tests must be accredited under ISO/IEC 17025 for the test methods they use.
 - thermal and acoustic insulation
 - flooring materials and finishes
 - ceiling materials and finishes
 - wall materials and finishes
- **For furniture: Low emissions of volatile organic compounds.** Products must have been tested, following ANSI/BIFMA Standard Method M7.1–2011, and must comply with ANSI/BIFMA e3-2011 Furniture Sustainability Standard, Sections 7.6.1 (valued at 50% cost) or 7.6.2 (valued at 100% cost), using either the concentration modeling approach or the emissions factor approach. For classroom furniture, use the standard school classroom model in CDPH Standard Method v1.1. Salvaged and reused furniture more than one year old at the time of use is considered compliant, provided it meets the requirements for any site-applied paints, coatings, adhesives, and sealants.

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- **For facility maintenance and renovation materials: VOC content requirements for wet-applied products.** In addition to meeting the general requirements for VOC emissions (above), on-site wet-applied products must not contain excessive levels of VOCs, for the health of the installers and other tradesworkers who are exposed to these products. To demonstrate compliance, a product or layer must meet the following requirements, as applicable. Disclosure of VOC content must be made by the manufacturer. Any testing must follow the test method specified in the applicable regulation.
 - All paints and coatings wet-applied on site must meet the applicable VOC limits of the California Air Resources Board (CARB) 2007, Suggested Control Measure (SCM) for Architectural Coatings, or the South Coast Air Quality Management District (SCAQMD) Rule 1113, effective June 3, 2011.
 - All adhesives and sealants wet-applied on site must meet the applicable chemical content requirements of SCAQMD Rule 1168, July 1, 2005, Adhesive and Sealant Applications, as analyzed by the methods specified in Rule 1168. The provisions of SCAQMD Rule 1168 do not apply to adhesives and sealants subject to state of federal consumer product VOC regulations.
 - If the applicable regulation requires subtraction of exempt compounds, any content of intentionally added exempt compounds larger than 1% weight by mass (total exempt compounds) must be disclosed.
 - If a product cannot reasonably be tested as specified above, testing of VOC content must comply with ASTM D2369-10; ISO 11890, part 1; ASTM D6886-03; or ISO 11890-2.
- **For facility maintenance and renovation materials: Low emissions of formaldehyde.** Built-in cabinetry and architectural millwork containing composite woods must be constructed from materials documented to have low formaldehyde emissions that meet the California Air Resources Board requirements for ultra-low-emitting formaldehyde (ULEF) resins or no-added formaldehyde based resins. Salvaged and reused architectural millwork more than one year old at the time of occupancy is considered compliant, provided it meets the requirements for any site-applied paints, coatings, adhesives, and sealants.

Waste Management: Facility Maintenance and Renovations

For each facility renovation project, the Property Manager will coordinate with the renovation manager and contracted vendors to discuss the scope of the renovation. The scope of the renovation must be determined and the materials to be used and discarded during the renovation must be identified. Packaging will be a consideration in the materials that will be discarded. The approximate volume of each type of waste will be broken out. Separate categories may include cardboard, wood products and cabinetry, drywall, tile, etc.

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From this material flow, the five largest waste categories will be determined. The renovation manager will coordinate proper waste disposal and landfill diversion for these waste categories. This will involve contacting the appropriate vendors, scheduling haul dates, and ensuring properly sized storage areas for the construction waste. If necessary, a separate secured storage area will be secured for hazardous waste, such as paint.

Once the waste disposal has been coordinated, the renovation manager will write waste disposal instructions for each waste category and will distribute to the appropriate vendors. For regular maintenance activities, the facility manager will ensure that the proper materials are recycled or composted.

Indoor Air Quality Procedures: Facility Maintenance and Renovations

The following Best Management Practices for indoor air quality control will be implemented as applicable for maintenance and renovations that occur in the project and for maintenance activities requiring material installation/repair lasting longer than one hour. The Property Manager is ultimately responsible for ensuring that these control measures are implemented:

HVAC PROTECTION:

As much as possible, the HVAC systems serving the affected area will not be used during construction. All duct equipment openings will be sealed with plastic. In the event that the HVAC systems must be operated, the return side of the systems will be protected and closed off if possible. Alternatively, temporary filters over the duct openings will be used (MERV 8 or better). All filtration media will be replaced immediately prior to occupancy.

SOURCE CONTROL

Materials meeting the sustainability criteria prescribed above will be used as much as possible, particularly for paints, carpet, composite wood, adhesives, and sealants that have the potential for significant emissions. All containers for paints, adhesives and sealants will be stored in a separate, secure location at times when construction is not active. During construction, lids will be kept on all containers as much as possible.

PATHWAY INTERRUPTION

Construction areas will be isolated to prevent contaminating non-construction areas. This will be done by sealing off the work areas with plastic and de-pressurizing the construction area. As much as possible, with weather permitting, the construction area will be ventilated using 100% outside air to exhaust contaminated air directly to the outside. Dust guards and collectors will be used on saws, sanders, and other tools.

HOUSEKEEPING

All porous or absorptive building materials, such as dry wall and ceiling tiles, will be protected from exposure to moisture and will be stored in a separate, clean area prior to

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installation. The entrances to the construction area will have temporary walk-off mats to collect particulates. The construction area will be sealed off using plastic. During construction, daily housekeeping will include use of vacuum cleaners with high-efficiency particulate filters, and sweeping compounds or wetting agents for dust control when sweeping. Prior to building material installation, the installation area will be cleaned to remove dust and debris. Prior to occupancy, the construction area will be vacuumed using high efficiency particulate filters.

SCHEDULING

As much as possible, the use of paints, sealants, and adhesives will be used after normal working hours to prevent building occupant exposure to off-gassing. All absorptive-finish materials will be installed after wet-applied materials have cured. The construction schedule will include time for a building flush out prior to occupancy. See below for flush out details.

FLUSH OUT

The flush out will begin after all construction work, including punch-list items, has been completed and furniture and fixtures have been installed. Finalize all cleaning, complete the final testing and balancing of HVAC systems, and make sure the HVAC control is functional. 14,000 cubic feet per square foot of floor area will be delivered to the space, with an internal temperature of at least 60 degrees Fahrenheit and a relative humidity of no more than 60% where cooling mechanisms are operated. The area will not be occupied until after at least 3,500 cubic feet of outdoor air per square foot has been provided to the space. After occupancy, the outside air will be ventilated at a minimum rate of 0.30 cfm per square foot.

5.0 Performance Evaluation

After each renovation or quarterly (whichever comes first), the responsible party and renovation manager will evaluate whether the procedures described in this policy have been met. Purchasing and waste logs will be evaluated against sustainability criteria and project goals. If changes are necessary to the policy, the responsible party and renovation manager will determine how best to change the policy procedures to meet the specified goals for the next renovation and/or for ongoing maintenance activities. Indoor Air Quality practices will also be reviewed to ensure that any adjustments to the policy are made.

6.0 Responsible Party

The Office of the Dean shall implement this policy in coordination with other appropriate departments and personnel, including but not limited to, Information Tech Services for Cline Library, Cline Library Purchasing Officer, Cline Library employees, parties purchasing materials on Cline Library's behalf and/or companies contracted to provide goods to Cline Library.



Facility Maintenance & Renovation Policy

Effective: March 2014

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During renovations, the renovation manager, with help from the Property Manager as necessary, will oversee the work on the construction site to ensure that the procedures are being followed as required. Manufacturer documentation and purchasing data will be retained to ensure that sustainable purchasing goals are being met, and waste reports will be retained to ensure that recycling goals are being met. Weekly construction meetings will include an agenda item to ensure that the Indoor Air Quality practices outlined in this policy are being implemented.

7.0 Time Period

This policy shall take effect on March 1, 2014 shall continue indefinitely or until amended and/or replaced by subsequent sustainable purchasing policy.