

# MAINE STATE LEGISLATURE

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## **Introduction**

This report is submitted to the members of the Joint Standing Committee on Natural Resources and the Joint Standing Committee on State and Local Government from the directors of the Clean Government Initiative (the “Initiative”) pursuant to 38 MRSA §343-H. The Initiative is intended to encourage environmentally sustainable practices by State government and by the State’s institutions of higher education, and to ensure environmental regulatory compliance by the same.

By statute, the directors of the Initiative (the “Directors”) are the commissioner of the Department of Environmental Protection (DEP), the commissioner of the Department of Administrative and Financial Services (DAFS), the chancellor of the University of Maine System (UMS) or the chancellor's designee and the president of the Maine Community College System (MCCS) or the president's designee.

The Initiative has seen many successes since it was established in 2002.

Perhaps the most noteworthy observation at this time is the overall increased prominence of all things “green” in the public sphere. Public environmental awareness and expectations have increased particularly with concerns about global warming and renewable energy, the definition of “green” initiatives has expanded, environmentally proactive practices have become routine in the public sector, and environmentally-informed conduct is becoming widely and sustainably institutionalized in state and university programs.

We take all of this as a sign of success by the Initiative along with many other like-minded efforts. While such efforts once sought merely to encourage discussion of environmentally-conscious efforts, they now are seeing real results with broad public awareness. Indeed, where the Initiative itself at one time would have seen only reports or plans, it now sees measurable action and accomplishments. More information is attached about a variety of the recent initiatives and successes of state agencies and the state institutions of higher education.

Pursuant to the law, the Directors provide the information in this biennial report for your use and hope you find the report helpful. They are not seeking any statutory changes at this time on behalf of the Initiative.

## **Directive**

According to the enabling legislation, state agencies and state-supported institutions of higher learning shall cooperate with the Directors in implementing the Initiative and shall provide staff assistance and technical support upon request. In addition, each state agency and state-supported institution of higher learning shall:

- A. Complete or demonstrate completion of an audit of its facilities to determine compliance with applicable state and federal environmental laws;

- B. Develop a biennial plan that outlines the actions the agency or state-supported institution of higher learning will take to incorporate compliance efforts and environmentally sustainable practices into its planning and operational functions;
- C. Appoint an employee in the agency or state-supported institution of higher learning to be responsible for ensuring the development and implementation of agency activities under the Initiative; and
- D. Establish standards for leasing or building state facilities consistent with the Initiative.

## **Directors' Duties and Responsibilities**

The Directors shall seek to achieve continuous improvement in environmental compliance and performance of all state agencies through: pollution prevention, improvements in energy efficiency, and procurement of environmentally friendly commodities and services as assessed on a life cycle basis. The latter includes identifying technically comparable, cost-effective and reasonably available alternatives to products that may release dioxin or mercury to the environment. The Directors must also examine ways to increase recycling of waste products and enhance fleet efficiency.

## **Reports**

To facilitate incorporation into the budget process, the biennial plans for state agencies other than the state-supported institutions of higher learning must be submitted to the Directors prior to June 1st of each even-numbered year, beginning in 2002. The plans for state-supported institutions of higher learning must be submitted to the Directors prior to June 1st of each odd-numbered year, beginning in 2003.

In 2007, the biennial plans (in a new streamlined format) for 2005 and 2006 were submitted for the Maine Community College System and the University of Maine System.

In 2006, the biennial plans for 2004 and 2005 were due for the state agencies. There were no plans submitted in 2006 by any state agency so the strategy for 2008 is to distribute the streamlined form that the institutions of higher learning submitted in 2007.

## **Successes of the Clean Government Initiative**

With the implementation of the Initiative, state agencies and institutions submitted initial reports identifying objectives for meeting the goals for the Initiative. The lack of subsequent reporting may reflect the fact that many agencies are struggling with resources. However, effective initiatives that have been put in place since 2006, and these are outlined below; these successful efforts demonstrate that the original enthusiasm to reduce environmental impact still exists despite the lack of submitted reports.

Efforts include:

- State agencies along with UMS are working together to reduce the impact that the toxic chemical lead is still having on the environment.
- The State is implementing State procurement of environmentally friendly commodities and services, as assessed on a life cycle basis. These include cleaning chemicals, electronics, lights, uniforms and paper.
- The State has led the way in use of biodiesel. The State continues to use a biodiesel blend to heat the Capitol complex as it has done since 2003. The State is committed to continuing and expanding its biodiesel program with due consideration given to economic and technical factors. The University of Southern Maine continues to use biodiesel to heat a few small buildings and to run its third party-operated bus fleet.
- In the beginning of the Initiative, an Executive Order established a goal for the State to purchase 40% of its own power from renewable resources. Since July 1, 2006, the State has purchased 100% of its electricity from renewable resources through the purchases of Maine-generated renewable energy credits.
- In FY 2007, approximately 91% (up from about 80% in FY 2006) of the paper and paper products purchased by state government had at least 30% post-consumer content. For both FY 2006 and FY 2007, this far exceeds the statutory requirement that 50% of paper purchased by the State be recycled content paper.
- Over the past seven years, state government, through Central Fleet Management, has increased the number of hybrid vehicles from one to more than 80.

## **State of Maine Initiatives: Leadership by Example**

### Environmentally Preferable Procurement

The practice of environmentally preferable procurement (EPP) has had a strong history under Maine state government through its Bureau of General Services (BGS), Division of Purchases. For several years green procurement strategies have been utilized for acquiring Green Seal certified cleaning chemicals (see [www.greenseal.org](http://www.greenseal.org)), Energy Star® rated equipment and appliances, environmentally preferable paper and printing supplies, highway paint, retreaded tires and numerous other products.

With the adoption of an EPP Policy in 2004, BGS pledged “to purchase products and contracts for services that have a reduced negative impact on human health and the natural environment in comparison to other products and service that serve similar purposes.”<sup>1</sup> Under this policy, BGS has undertaken several initiatives in coordination with other agencies. These initiatives include the adoption of Leadership in Energy and Environmental Design standards for Existing

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<sup>1</sup> <http://www.maine.gov/cleangovt/rulesanddocuments/epppolicyprogdocs.doc>

Buildings (LEED-EB) and new construction, the procurement of “green” lamps and ballasts, the adoption of Electronic Product Environmental Assessment Tool (EPEAT) standards for acquiring computer related equipment, procurement of lead-free wheel weights and green chemical procurement.

#### Environmentally Preferable Procurement for Janitorial Products.

In July 2005, the Maine Board of Pesticides Control (BPC) in the Department of Agriculture Food and Rural Resources (DAFRR), in concert with BGS’s Property Management Division (PMD) and DEP, established an interagency committee to evaluate the purchase and use of “safer” cleaners and disinfectants. The scope of this committee was expanded to include “cradle to grave” product characteristics with the issuance of the Governor’s *Executive Order 12 FY 06/07, An Order Promoting Safer Chemicals in Consumer Products and Services*, to create improved specifications for the procurement of “green” janitorial products. . Additionally, *Executive Order 8 FY 04/05* requires that existing State buildings shall incorporate the LEED-EB standards, which require that cleaners meet the Green Seal Environmental Standard for Industrial and Institutional Cleaners standard (GS-37).

Guidelines created by the committee are two-pronged in their approach to addressing the use of safer chemicals. For cleaners, future products must qualify as meeting the criteria set forth in GS-37 or must be certified by an independent accredited laboratory as qualifying under GS-37 criteria. Disinfectants must meet Maine specifications developed using a Maine-developed criteria based on the Battelle Pacific Northwest Laboratories standards and the expertise of committee members. One major objective of this program is to identify “safer” products that also work effectively.

A three month pilot on EPP cleaning chemicals that are Green Seal certified was successful and the contract was extended for one year. As current cleaning supplies are used up, new EPP cleaning supplies will be brought in. Based on information learned from EPP cleaning chemicals, the principles of requiring Green Seal certification have been extended to hand soap used in agency bathrooms. The new Green Seal certified hand soap has already been installed in buildings that are directly cleaned by BGS.

To promote environmental and human health and welfare throughout the state, the new “green” janitorial products specifications will allow municipal, county and regional government subdivisions an opportunity to integrate their own purchasing needs into the State’s Request for Quotations (RFQ). Extending this opportunity to other government sectors will create opportunity for expanded environmentally preferable purchasing at all levels of government.

In 2007, 389 gallons of Green Seal certified chemicals were purchased, including 47.5 gallons of janitorial cleaners and 341.5 gallons of certified hand cleaner.

#### Environmentally Preferable Procurement Lamps and Ballast

BGS and DEP are developing a new Electrical Lamps and Ballasts RFQ. The intent is to purchase products that, in comparison to other products, have a reduced impact on human health and the natural environment while balancing price, performance, availability and safety.

In order to reduce the mercury content of lamps purchased by BGS, they have incorporated standards developed by LEED-EB. Respondents to the RFQ must now document the mercury content of all mercury containing light bulbs included in their bid. Vendors will also be required to provide assistance to building managers to ensure conformance with LEED-EB standards.

An RFQ was sent out in late 2007 to which five vendors responded. A contract was awarded in late December of 2007.

#### Environmentally Preferable Procurement Lead-Free Wheel Weights

Traditional wheel weights for tire balancing contain lead. An estimated 10% of the weights fall off of wheels annually. These weights degrade in the environment and contribute to levels of lead in stormwater runoff that is toxic to some aquatic organisms and to increased ambient lead dust in the urban environment. The U.S. Geological Survey estimates that 2000 tons of lead in wheel weights are lost on U.S. roadways annually.<sup>2</sup> Since July 2006, existing lead wheel weights on passenger vehicles and light duty trucks in the State vehicle fleet that are serviced in State agency garages in Maine have been replaced with less toxic covered steel wheel weights.

This replacement of lead wheel weights occurs during routine tire maintenance and the transition is going smoothly. The only obstacle identified to date is a limited number of vehicle models (less than 2%) with rim designs that do not accept the tab attachment for the coated steel wheel weights. (Alternative design wheel weights are being investigated.) Once this challenge is solved, State agencies plan on requesting the use of the non-lead alternative wheel weights on passenger and light duty trucks in the State vehicle fleet serviced by more than 350 independent auto facilities.

The University of Maine began converting away from lead wheel weights in spring 2007. The University Maine fleet garage in Orono also provides service to Town of Orono's municipal fire and police vehicles and they are included in the conversion to non-lead weights.

The Maine Department of Transportation (MaineDOT) has researched and piloted an internal liquid balancing media alternative which avoids the use of any external wheel weights on their larger trucks (known as "Big Wheels"). As of August 2007, MaineDOT conversion of their entire fleet of 450 larger vehicles was well under way. The liquid media being used is propylene glycol which has a very low human toxicity and, in fact, is sometimes used as a food additive. This change to internal weighting avoids the wheel weights falling off the tire altogether. Most garages are already set up to capture and recycle propylene glycol since it is also used as an antifreeze. MaineDOT is predicting that the switch to this internal media balancing alternative, which also avoids the need for wheel weight replacement over the life of the tire, will save money in addition to reducing lead in the environment.

The MaineDOT information has been shared with the operators of school buses across the state, and is also being shared with our national contacts through an organization known as Lead Free Wheels ([leadfreewheels.org](http://leadfreewheels.org)). It appears likely that the potential cost savings and clear environmental benefits of the internal liquid media alternative may result in the Big Wheel market moving away from lead wheel weights at a faster pace than the small wheel market. To

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<sup>2</sup> Robert A. Root 2004 Lead Loading of Urban Streets by Motor Vehicle Wheel Weights

the best of our knowledge, MaineDOT will be the first state fleet in the country to be lead free on all size vehicle tires.

#### State of Maine Property Management Division IPM Policy

In keeping with the Initiative's spirit of 'leading by example' and as directed by Governor Baldacci's Executive Order, BGS, in consultation with the DAFRR, drafted an integrated pest management (IPM) Policy and a Request for Proposals (RFP) for IPM service bids. As directed by the Executive Order, the Maine IPM Council was asked to evaluate the feasibility of requiring that State of Maine pest management contractors be IPM-certified. The IPM Council determined that such a requirement was feasible for structural pest control contractors and made a formal recommendation to DAFS that priority be given to IPM-certified contractors.

IPM policy documents, applicable to office buildings and grounds under the control of the Property Management Division (PMD) at BGS, are currently undergoing final review by DAFS. It is intended that the IPM policy and the IPM RFP will be implemented upon approval and will serve to establish a formal IPM program for PMD-managed properties. Key elements of the IPM policy include

- 1) appointment of an IPM coordinator to oversee the program;
- 2) assignment of a building coordinator to serve as a communication link between occupants and the IPM coordinator;
- 3) IPM training for PMD staff, and
- 4) establishment of a record-keeping system for tracking pest management actions and evaluating program effectiveness.

### **Detailed Recent Accomplishments from the University of Maine System**

UMS continues to improve its energy efficiency and environmental stewardship. UMS currently expends nearly \$17 million annually in energy costs with increases of \$1.5 to \$2 million expected with the recent surges in oil prices. The following is a summary of UMS's continuing efforts to improve energy efficiency and environmental stewardship.

#### AASHE Climate Commitment

- All seven UMS Presidents have signed the American College and University Presidents Climate Commitment sponsored by the Association for the Advancement of Sustainability in Higher Education (AASHE).
- Each campus will:
  - Set up a mechanism to guide the process.
  - Complete an inventory of greenhouse gas emissions within one year.
  - Create and implement a climate neutral plan (that includes a target date and interim milestones for achieving campus climate neutrality) within two years.
  - Take at least two immediate steps specified in the commitment to reduce greenhouse gas emissions while the more comprehensive plan is being developed.
  - Integrate sustainability into the curriculum and making it part of the educational experience.

- Make the action plan, inventory and periodic progress reports publicly available.

#### Leadership in Energy and Environmental Design (LEED)

- UMS is a member of the US Green Building Council (since 2005)
- UMS is a leader with LEED registered and LEED certified new construction. UMS holds over 1/3 of all LEED registered/certified projects/buildings in Maine.
  - UMS has 13 out of the 37 LEED registered buildings in Maine.
  - UMS has four out of the nine LEED certified buildings in Maine.
  - UMS has the only gold certified LEED building in Maine at USM (the Abromson Community Education Center).

#### UMS Fleet Vehicles

- Purchase/lease of non-hybrid vehicles by UMS includes requirements that they have gas mileage ratings and low emissions.
- UMS has 12 hybrid vehicles system-wide which has reduced their carbon dioxide emissions by 22.5 tons per year.

#### UMS Recycling

- On average, UMS recycles 4000 tons (65%) of its waste.
- Recycling accounts for a reduction in carbon dioxide equivalent emissions of 13,080 tons.

#### UMS Rebuild America Grants

- UMS received Department of Energy Rebuild America Grants in 2004, 2005, and 2006. The grants provided funding for consultative and engineering services. UMS hired a contract energy manager to assist their energy team in identifying and investigating energy-related issues.
- The energy manager assisted with investigations into cogeneration of energy, purchase of wind energy, geothermal energy, lighting efficiency upgrades, and the development and execution of a statewide Higher Education Energy Summit in 2005.
- The grants also assisted in the development of a high efficiency classroom lighting project at the University of Maine at Fork Kent and engineering associated with the University of Maine at Presque Isle's (UMPI's) interest in erecting a wind turbine.

#### Exploring Maine-based Wind Energy

- The energy team entered into discussions with a wind farm developer for the purchase of wind-generated electricity from a planned wind farm to be located in Maine. Unfortunately, the developer decided to sell all power output to a retail power marketer which reduced the potential cost advantage from committing to a direct purchase of wind power from the producer.
- UMPI is currently requesting proposals to install and operate a small wind turbine for its campus.

#### Lighting Efficiency Audits and Upgrades



- Lighting efficiency audits and improvements have been completed on every UMS campus over the past decade.

### Cogeneration

- Both the University of Maine (UM) and the University of Southern Maine (USM) investigated the principle of cogeneration at their respective central heat plants to provide electrical power for its facilities.
- Both Central Maine Power and Bangor Hydro-Electric have negotiated with USM and UM respectively to provide reduced electrical transmission and distribution costs in exchange for delaying the construction of their cogeneration facilities. This cost reduction is providing both campuses with some buffer to increased energy prices.
- UM, as an alternative to a full scale cogeneration facility, is installing a small back pressure turbine to generate a small amount of electricity from heat at its steam plant.

### Consolidation of UMS Operations

- Consolidation into a newly renovated UMS office in downtown Bangor increased efficiency by eliminating the need to heat two separate buildings.
- The new location reduces the roof and wall square footage by consolidating operations on three stories of a shared building.
- The consolidation reduced offices' consumption of energy (in BTUs) by 46%. The energy savings reduced the office carbon emissions from 20 pounds of carbon dioxide per square foot per year to 9.6 pounds of carbon dioxide per square foot per year.
- The new building is heated by natural gas rather than oil and features a well-insulated building envelope with energy efficient windows.
- The building includes a state-of-the-art energy management system and direct digital controls allowing for more efficient operation of their HVAC system.
- The new building features an under-floor air distribution system, one of the first in Maine, which more efficiently heats, cools, and provides fresh air to occupants in their work spaces. The system provides more uniform heating and cooling distribution in the building.

### Strategic Procurement

Like Maine's Division of Purchases, the UMS's Strategic Procurement Office has continued its practice of using EPP strategies to ensure that products and equipment meet or exceed environmental standards.

UMS has made a commitment to EPP purchases to the extent possible and to buy from vendors who are being good stewards of the environment. This is done by having every bid issued request information on products that display positive environmental attributes, products that generate less waste in packaging, products that are more durable, products that are reusable or remanufactured, products that meet environmental criteria during production, or suppliers that will reclaim or take back products or components following their use.

UMS also provides alternate recycled material content proposals in every bid to allow UMS to buy as many products as possible with recycled material content. Alternates must meet or exceed U.S. Environmental Protection Agency (EPA) recycled content procurement guidelines.

UMS also prefers to purchase Energy Star compliant equipment where possible.

When requesting proposals from licensed pesticide applicators, UMS reserves the right to select an IPM-certified company over a non-IPM certified company.

## **Detailed Recent Accomplishments from the Maine Community College System (MCCS)**

### Staffing

1. MCCS converted the position of contract environmental health and safety (EH&S) coordinator to a full-time permanent EH&S director.
2. MCCS appointed the EH&S director as the campus sustainability coordinator.

### Buildings

1. MCCS is nearing completion on construction of an energy-efficient dormitory that complies with many LEED requirements (but not LEED certified due to the cost to obtain official certification).
2. MCCS has completed renovations of science laboratories in Hildreth Hall including new windows and upgrade of chemical storage areas and safety equipment.
3. MCCS has continued a program of installing improved heat monitoring systems to reduce fuel consumption.
4. MCCS has continued installing energy efficient lighting with non-mercury ballasts.
5. MCCS has continued a program of asbestos and lead-paint abatement (as repairs are made).

### Air Issues

1. MCCS has reduced greenhouse gas emissions from heating by 40 percent from 2002 to 2007 (based upon analysis done as a part of air permit renewal).
2. MCCS has replaced solvent-based parts washers with low emissions units using non-hazardous biodegradable cleaning agents.

### Water and Stormwater Issues

1. MCCS has completed an inventory of stormwater outfalls in accordance with the requirements of MCCS's stormwater general permit.
2. MCCS has eliminated a significant illicit discharge to storm sewerage resulting from leaks in the water supply system.
3. MCCS has reduced water consumption by 40 percent through repairs to system leaks (based upon charges from the Portland Water District).

4. MCCS has instituted best management practices for reducing the potential for stormwater pollution.
5. MCCS has incorporated innovative stormwater management into the construction of parking lots and a new dormitory.
6. MCCS has developed a stormwater pollution minimization policy.
7. MCCS has received a U.S. EPA merit award for effective stormwater management.

#### Waste Management Issues

1. MCCS has reduced hazardous waste generation to a level that moved the college into the DEP small-quantity generator category.
2. MCCS has set up a rule-compliant universal waste management area for computers and monitors.
3. MCCS has recycled 700 tons of office paper annually.

#### **State Government Compliance Assistance Issues:**

Part of the Initiative is to ensure that all state agencies comply with state and environmental laws, and this has worked successfully with the participation of various state and federal agencies.

#### Water Issues

The DEP has worked with Maine Department of Inland Fish & Wildlife (IFW) fish hatcheries concerning operational and compliance violations at various IFW facilities, including a comprehensive review of IFW's fish hatchery compliance record which is currently underway. DEP has also addressed wastewater issues at the Maine Correctional Center in Windham.

#### Air Issues

The EPA addressed issues involving the installation of large paint "spray booths" and volatile organic compounds at the Maine Army National Guard in Loring.

#### Compliance of Government Underground Storage Tanks

There are 1,613 federally regulated underground oil storage facilities (or sites) with a total of approximately 3,213 tanks in Maine. Of these, 199 facilities (sites) with a total of 264 tanks are owned by federal, state or local governments.

Corrosion protection, overfill prevention, spill prevention (spill buckets) and tank and piping leak detection are items included in all annual inspections and detailed in annual reports submitted to the DEP. Determining compliance with the annual inspection is an effective and accurate way of determining compliance with these requirements. The few government tanks that fail their annual inspection are tracked until corrective action is taken.

## **Recommendations**

The Directors should continue to meet to review and adjust the priorities of the Initiative to make it more manageable, useful and efficient. Directors should consider increased identification and sharing of resources and best practices among participants that reduce the impact on the environment. Directors should also work to streamline reporting requirements.

EPP work across state agencies should continue to focus on cleaning detergents particularly within leased buildings that hire cleaning staff which do not obtain cleaning chemicals from the state-operated Central Warehouse but instead supply their own. Making recommendations for employees who bring in their own desk cleaners from home should also be considered.

Improvements should continue to be researched and encouraged, where economically feasible, in the area of energy efficiency programs, alternative energy options and fleet vehicles. Improvements will continue to be documented and reported in future Initiative reports.

Ensuring compliance with environmental laws at all State facilities and institutions should continue to have priority. Initiative agency contacts should determine accountability and consistency with this effort