

Agency Sustainability Tracking, Reporting and Plan Update form

Fiscal Year 2005 (July 1, 2004 through June 30, 2005)

MA State Sustainability Program



OVERVIEW

Measuring and tracking the environmental impacts of Massachusetts agency operations is a critical component of the Massachusetts State Sustainability Program and a requirement of Executive Order No.438. **This 4-part form is intended to be a simple, clear way for the program to collect and manage state agency operational data**, which will allow the State Sustainability Program to measure progress toward sustainability goals and targets, and compile an annual report on sustainability efforts in Massachusetts State Government operations.

WHO SHOULD FILL OUT THIS FORM?

1. The largest State entities identified below are required to fill out the entire form, as these agencies are included in the greenhouse gas inventory and other statewide annual reporting. (*In the case of the 4 authorities this is by voluntary commitment rather than executive order, but continued active participation is essential for consistent State government reporting.)

State Entities required to fill out all 4 sections of the form

EXECUTIVE AGENCIES: BSB, CHE, DCAM, DCR, DMH, DMR, DOC, DPH, DYS, MHD, MIL, POL

AUTHORITIES*: MassPort, MWRA, Mass Turnpike, MBTA.

COLLEGES AND UNIVERSITIES: All 5 UMass Campuses. All 24 state and community college campuses.

2. All other **State entities should, as a minimum, complete sections 3 and 4**, and are encouraged to report on sections 1 and 2 on a voluntary basis, as this information is helpful and may be required in future years.

DEADLINES FOR SUBMISSION

All relevant parts of this form should be filled out and returned to the State Sustainability Coordinating Council by **November 30, 2005** and may be submitted by **email (preferred)** or through regular mail to:

Ian Finlayson - State Sustainability Program Manager

ian.finlayson@state.ma.us

Executive Office of Environmental Affairs

100 Cambridge Street, Suite 900, Boston, MA 02114

Additional Information: If you have any questions, or wish to review your agency's data with State Sustainability Program staff please contact Ian Finlayson at 617-626-4910 or using the above contact information.

GENERAL INSTRUCTIONS

Each agency must complete and submit to the State Sustainability Coordinating Council a Tracking & Reporting Form that is inclusive of data from **all facilities** (or as many as is available) within that agency.

This form is divided into 4 Sections, covering different State Sustainability reporting requirements. Please:

1. **Collect energy, water and waste data for your agency** and enter it in Section 1: FY05 Operational Data (page 4). Page 2 and 3 explain what data is requested from different agencies.
2. **Complete the Sustainability Plan Update Checklist** (pages 5-6). Please do this whether you have a sustainability plan in place or are still in the process of developing one.
3. **Provide written information on recent and current sustainability activities** by filling in the Agency Sustainability Activities form (pages 8-9). Please try to include new or recent programs, activities and efforts from all your facilities, and where possible, provide information on their environmental and fiscal benefits.
4. **Provide information on planned and expected capital projects**, facility retrofits and new sustainability initiatives by answering the questions and filling out the form (pages 10-11).

Agency Coordinators may wish to send this Form to regional directors, facility directors, or other relevant staff, and compile the received information into one, agency-wide reporting form response.

Section 1. Instructions for FY05 Operational Data

This section of the form is used to track Fiscal Year 2005 data for:

- a) Energy consumption
- b) Water and Sewer use
- c) Solid waste and recycling

Data Collected and Data Required from Agencies

DATA TYPE		Executive Agencies	Authorities & UMass	Colleges
a) Energy Consumption	Building Fuels (Fuel oil #2,#4, #6)	Collected from State Contracts	Need to Report	Collected from BHE (But please provide if available)
	Vehicle Fuels (gasoline, diesel, CNG, propane, etc.)	Collected from State Contracts	Need to Report	Collected from BHE (But please provide if available)
	Electricity	Collected from MPower	Need to Report	Collected from BHE (But please provide if available)
	Natural Gas Other	Need to Report	Need to Report	Collected from BHE (But please provide if available)
b) Water and Sewer		Need to Report	Need to Report	Need to Report
c) Solid Waste & Recycling		Need to Report	Need to Report	Need to Report

a) Energy Consumption Data

As summarized in the table above, EOEA is able to compile some Energy data for executive agencies, as well as for colleges from a variety of sources, including:

1. Statewide contract reports for vehicle and certain building fuels purchased by executive agencies – these reports are provided by the Operational Services Division (OSD)
2. Electricity consumption from Mpower database reports for executive agencies (through OSD)
3. Reports from the Board of Higher Education on all energy and water consumption at state and community colleges

Note: On occasion we may ask you to confirm or explain any discrepancies in OSD or BHE data with your agency records.

1. The Program is **unable to centrally compile natural gas consumption data, or energy from renewable sources** other than from state and community colleges.
2. If you are an executive agency that purchases fuel other than through state contracts, you will **need to report those purchases**. Also, if you **lease space and know your electricity and/or fuel consumption**, please report that information on this form.
3. If you are an **authority or an UMass campus**, you will **need to report all energy data**, as the Program is not able to collect any data centrally.

b) Water and Sewer Data

The Program is unable to centrally track Water and Sewer usage volumes. This form asks that you report water and sewage volume data. Please take care to use the correct units: gallons, cubic feet (cf) or 100 cubic feet (ccf) are commonly used. If you do not already keep track of water and sewer use by volume as well as cost, we strongly encourage you to **discuss tracking this data with your water and wastewater treatment supplier**.

c) Solid Waste and Recycling Data

The Program is unable to centrally track solid waste and recycling generation. This form asks that you provide solid waste generation and recycling data to the best of your ability. If you do not have actual tonnages for waste, we strongly encourage you to **request this data from your hauler** – almost every hauler will have this information. If you do not have specific data on recycling tonnages, **you may alternatively report estimates based on material, volume collected, and frequency of collection.** *[For example, it is sufficient to report that you recycled 10-96 gallon totes of mixed paper once per week for 48 weeks, and then calculate tonnage based on the conversion sheet in the Appendix of this form.]*

NOTES: Please check your Units and explain any unusual data reporting

- i) Please be sure to check and fill in the name of the units that you are using for Water, Sewer and the various Recycling programs that you have.
- ii) Commonly used Conversion Factors for solid waste and recycling are available in **Appendix I** of this Tracking Form.
- iii) Please include any additional information you feel is needed to explain the data (e.g. explain why you don't have cost information, if data is only for some facilities, or if the energy unit of measure differs from what is listed)

Section 1. FY05 Operational Data

CONTACT INFORMATION

Name: Paul A. Righi **Agency/Department:** BUNKER HILL COMMUNITY COLLEGE

Phone: 617-228-3474 **Email:** prighi@bhcc.mass.edu

* Please remember to indicate units of measurement used if different from measure listed

Topic	FY05 Data	Unit*	Cost	Notes	
Building Energy Use					
Electricity	5,247,240	KWh	\$485k		
Natural Gas	212,181	therms	\$201k		
Fuel Oil #2	n/a	gallons	\$		
Fuel Oil #4	2,786	barrels	\$190k		
Fuel Oil #6	n/a	barrels	\$		
Biodiesel	n/a	Gallons	\$	e.g. B20	
Renewables	n/a		\$	Type:	
Other (e.g. Steam)	n/a		\$		
Vehicle Fuel Use					
Gasoline	6,200	gallons	\$16k		
Low Sulphur Diesel	n/a	gallons	\$		
Ultra low sulphur Diesel		gallons	\$		
Regular Diesel	2,450	gallons	\$7k		
Biodiesel	n/a	gallons	\$	e.g. B20	
CNG	n/a	gallons	\$		
Propane	n/a	gallons	\$		
Ethanol	n/a	gallons	\$		
Gasohol	n/a	gallons	\$		
Water Use					
Water	1,751,849	c.f.	\$59.5k		
Sewer (if separate)	1,310,666	c.f.	\$57k		
Solid Waste and Recycling (see Appendix I for common volume/weight conversions)					
Solid Waste total *	403	Tons	\$34k		
Recycling total *	57	Tons	\$0	above	
Recycling Programs	Y/N	Amount	Units	\$ Cost	Notes
Mixed Paper	Y	57	Tons	\$ 0	above
Cardboard	Y	above	above	\$ 0	above
Mixed Cans & Bottles	N			\$	
Toner Cartridges	Y	250			
Lawn and Yard Waste	N			\$	
Food Waste	N				
Scrap Metal	N/A			\$	
Other C&D Waste	N/A			\$	
White Goods	N			\$	
Electronics/Computers	Y	4297 lb	286	\$1185	
Batteries	Y				
Cell Phones	N/A				
Other _____	N/A			\$	

Section 2. Sustainability Plan Update

Instructions: This part of the form is designed to help state agencies meet the requirement in Executive Order No. 438 to provide annual Sustainability Plan Updates (SPUDs). The purpose of these SPUDs is to ensure that agencies are engaged in a process of continuous improvement and that sustainability efforts do not halt or become stagnant. This checklist is meant to facilitate provision of annual updates on these plans to the State Sustainability Coordinating Council. If you are not required to submit a plan, please proceed to section 3. If you do not know whether your agency is required to submit a plan, please contact state sustainability staff.

Agency Name: **BUNKER HILL COMMUNITY COLLEGE**

Agency Sustainability Coordinator: **Paul A. Righi**

I. Sustainability Team Activity:

Our agency/campus has a sustainability team Yes No

Our sustainability team meets:

- At least every other month
 A few times a year
 We have met only once or twice

Our team does not meet:

- But we have plans to meet within the next several months
 And we do not currently plan to do so

Team members:

The name and title of the chair of our Sustainability Team is: **Paul A. Righi, Manager of Buildings and Grounds**

We have seven (7) members on our Sustainability Team. (Please list members below)

<u>Name</u>	<u>Position/ Title</u>
Diane Smith _____	Director of Library and Information Services
Robert Steeper _____	Chair of Science Department
John Chirichiello _____	Facilities-Chelsea Campus
Richard Pishkin _____	Contracts, Business Office
Bret Mouller _____	CIO
Paul A. Righi _____	Manager of Buildings and Grounds
Joseph E. Steffano _____	Director of Facilities and Engineering Services

II. Sustainability Plan Review:

Our agency/campus has submitted a sustainability plan Yes No

If you have said no and you are required to complete one, please say if and when you plan to complete your plan: mo/day/yr _____. Then please proceed to Section 3 on page 7.

Section 2. Sustainability Plan Update Checklist Cont...

If you have submitted a sustainability plan, have you reviewed the plan since it was written?

Yes No

If No, do you have any plans to review your sustainability plan during FY06?

Yes No

Please describe plans: _____

If yes, has the plan been amended/revised in any way? Yes No

Please check how the plan has been changed:

- Deadline/timeline has been altered
- Personnel responsibilities have changed
- Sustainability objective has been modified

Please provide more detail if available: _____

Do you have a process in place to review your Sustainability Plan on an annual (or more frequently) basis?

Yes No

If yes, please describe: _____

If you have amended or revised your plan, please provide that document electronically to:
Eric Friedman: eric.friedman@state.ma.us or Ian Finlayson: ian.Finlayson@state.ma.us

III. Sustainability Plan Objectives

Have one or more of your sustainability plan's short-term objectives been achieved?

Yes No

If no, have you initiated efforts to achieve one or more objectives? Yes No

Have you achieved any sustainability objectives not listed in your plan? Yes No

Please list all objectives achieved here:

Objective Achieved	Date Achieved
Initiated installation of motion activated wall switches in various offices	On-going
Initiated purchase of copy paper with at least 30% recycled content	On-going

If you have specific information about any of the above objectives listed, are you included this information in the Sustainability activities section below (Section 3 of this form)?

Yes No

Section 3. Instructions for Agency Sustainability Activities

In addition to the numerical operational and environmental data collected and compiled by the State Sustainability Program, EOE and the Coordinating Council are asking **ALL AGENCIES TO PROVIDE INFORMATION ON SUSTAINABILITY PROJECTS AND PROGRAMS** that have occurred at facilities since FY02. **If you have already provided us with information, you do not need to do so again.** This information will be used to:

- 1) Acknowledge and recognize innovated efforts at state agencies
- 2) Identify the current “state of sustainability” in Massachusetts state agencies
- 3) Create a database of “best management practices”
- 4) Assist with the development of a sustainability report for Massachusetts state government

Please use the template included below to provide an overview of all key sustainable activities either currently on-going or recently completed at your agency.

Some **examples** of the types of projects and information we are looking for are:

- **Planning & Budgets** – Do you include sustainability goals in your long-term planning? Do you have any budget line items for sustainability? Did you hire a full-time sustainability coordinator/manager?
- **Energy** – Did your agency complete energy retrofits at facilities? Replace incandescent light bulbs with compact fluorescents? Buy energy star appliances? Do you have any renewable installations?
- **Recycling/Waste Reduction** – What recycling programs does your agency currently have in place and what materials do you recycle? Did you recently initiate a new recycling program? Improve upon your recycling rate? Issue a paper reduction policy? Start Composting?
- **Sustainable Design** – Did your agency design or build a green building? Apply for or obtain LEED certification?
- **Transportation** – Do you have any alternative fuel or electric vehicles? Retrofit vehicles for bio-diesel? Do you have a ride-share program? Provide incentives to use public transportation? Have bicycle storage and shower facilities?

[SAMPLE]

Project Name **Dormitory Container Recycling Program**

Topic:	<input type="checkbox"/> Energy <input type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input type="checkbox"/> Natural Resources		
Facility Info:	XXX College, Boston MA		
Contact Name	John Smith		
Contact Phone	617-555-5555	Contact Email:	John.smith@state....
Project Description:	Initiated a can and bottle recycling program in the dorms at XXX College campus. Purchased 10 two-hole top recycling bins, to be placed on each floor in the dorm. College facility staff, with a student coordinator, will manage program and the building will sponsor a contest, with prizes for the floor that recycles the most material.		
Cost:	\$ 200 for bins, hauling	Savings (if relevant):	None
Results (env. and cost benefits)	Expected to pull 5 tons of cans & bottles from the waste stream each year. Results will be tracked based on hauler reports, and posted on student floors every quarter.		

Section 3. Agency Sustainability Activities

Agency Name: Bunker Hill Community College Sustainability Coordinator: Paul A. Righi

Contact Phone/Email: 617-228-3474 prighi@bhcc.mass.edu

Project Name Recycled Toner

Topic:	<input type="checkbox"/> Energy <input checked="" type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input type="checkbox"/> Natural Resources		
Facility Info:	Bunker Hill Community College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	Initiated purchase of only recycled toner cartridges facility wide.		
Cost:		Savings (if relevant):	
Results (env. and other benefits)	Less waste being produce for landfills. Cost savings seen since these cartridges are less expensive to purchase.		

Project Name Bottle and Can Recycling

Topic:	<input type="checkbox"/> Energy <input checked="" type="checkbox"/> Waste/Recycling <input type="checkbox"/> Sustainable Design <input type="checkbox"/> Other <input type="checkbox"/> Water <input type="checkbox"/> Purchasing <input type="checkbox"/> Mercury/Toxics <input type="checkbox"/> Natural Resources		
Facility Info:	Bunker Hill Community College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	Student Activities instituted recycling of bottles and cans throughout the building.		
Cost:	None	Savings (if relevant):	
Results (env. and other benefits)	Less waste being produced. Revenue being produced for student activities. This year revenue is a donation for Hurricane Katrina relief.		

--	--



Section 3. Agency Sustainability Activities (con't.)

Project Name _____

Topic:	<input type="checkbox"/> Energy	<input type="checkbox"/> Waste/Recycling	<input type="checkbox"/> Sustainable Design	<input type="checkbox"/> Other
	<input type="checkbox"/> Water	<input type="checkbox"/> Purchasing	<input type="checkbox"/> Mercury/Toxics	<input type="checkbox"/> Natural Resources
Facility Info:				
Contact Name:				
Contact Phone:		Contact Email:		
Project Description:				
Cost:		Savings (if relevant):		
Results (env. and other benefits)				

Project Name _____

Topic:	<input type="checkbox"/> Energy	<input type="checkbox"/> Waste/Recycling	<input type="checkbox"/> Sustainable Design	<input type="checkbox"/> Other
	<input type="checkbox"/> Water	<input type="checkbox"/> Purchasing	<input type="checkbox"/> Mercury/Toxics	<input type="checkbox"/> Natural Resources
Facility Info:				
Contact Name:				
Contact Phone:		Contact Email:		
Project Description:				
Cost:		Savings (if relevant):		
Results (env. and other benefits)				

Please add additional pages as needed

Section 4. Future Plans and Projects

To help the Commonwealth develop a simple model of likely future trends and progress towards meeting our State government goals for GHG reduction, waste reduction and water conservation, we are requesting information on any agency level future plans that are likely to affect your environmental impacts. The primary impacts come from new capital projects and retrofits driven by expansion and modernization plans that might be described in a Strategic or 5-year plan.

1. Agency Strategic / Long-term Plans

1.1 Does your agency/college have a Strategic or long-term plan that impacts facilities and or staffing? Yes No

1.2 If YES, does this plan include expansion or contraction in staffing and facilities, and over what time period? Expansion Contraction

Time period: _____

2. New Construction / Capital Projects

2.1 Does your agency/college currently have any new buildings under construction? Yes No

2.2 Does your agency/college have any plans for new building construction or expansion in the next 5 years? Yes No

3. Retrofits for Existing Buildings / Facilities Maintenance

3.1 Does your agency/college have any plans in place for future energy and/or water retrofit projects (not including existing projects with DCAM)?

Yes No

4. Renewable Energy/Water/Waste reduction

4.1 Does your agency/college have any plans for future Renewable Energy installations? Yes No

4.2 Does your agency/college have any planned projects for Water conservation? Yes No

4.3 Does your agency/college have any planned projects for Waste reduction and/or Recycling? Yes No

If you answered **Yes** to any of the questions above, please describe the project details, and provide data where available, on the anticipated impacts on energy/water use and waste generation that you anticipate using the forms on the next page.

Section 4. Future Plans and Projects Details

Current / Future Project Name Wellness and Fitness Center

Project Type:	<input checked="" type="checkbox"/> New Construction <input type="checkbox"/> Renewable Energy <input type="checkbox"/> Waste/Recycling		
	<input type="checkbox"/> Building Retrofit <input type="checkbox"/> Water Conservation <input type="checkbox"/> Other		
Facility Info: (sqft, Bldg type)	40,000 sqft Gym and Health Labs/Classrooms		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	Building new gym and health labs/classrooms. Considering Leeds Certification for this building project.		
Capital Cost:	13M	Savings (if relevant):	
Expected Results (env. and other benefits)	State of the art HVAC, electrical and plumbing system. Environmentally friendly use of construction materials and building systems.		

Current / Future Project Name Wind Farm _____

Project Type:	<input type="checkbox"/> New Construction <input checked="" type="checkbox"/> Renewable Energy <input type="checkbox"/> Waste/Recycling		
	<input type="checkbox"/> Building Retrofit <input type="checkbox"/> Water Conservation <input type="checkbox"/> Other		
Facility Info: (sqft, Bldg type)	In thought process of building wind farm on campus.		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	To build wind farm to generate renewable energy.		
Capital Cost:	Unknown at this time	Savings (if relevant):	
Expected Results (env. and other benefits)	If built wind farm would lessen the need for fossil fuels.		

Please copy and add additional pages as necessary

Current / Future Project Name Bathroom Water Conservation

Project Type:	<input type="checkbox"/> New Construction <input type="checkbox"/> Renewable Energy <input type="checkbox"/> Waste/Recycling <input type="checkbox"/> Building Retrofit <input checked="" type="checkbox"/> Water Conservation <input type="checkbox"/> Other		
Facility Info: (sqft, Bldg type)	Entire College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	To install automatic flushers and faucets in all bathrooms.		
Capital Cost:	Unknown at this time	Savings (if relevant):	
Expected Results (env. and other benefits)	Would save the amount of water being used.		

Current / Future Project Name Campus Wide Paper and Cardboard Recycling

Project Type:	<input type="checkbox"/> New Construction <input type="checkbox"/> Renewable Energy <input checked="" type="checkbox"/> Waste/Recycling <input type="checkbox"/> Building Retrofit <input type="checkbox"/> Water Conservation <input type="checkbox"/> Other		
Facility Info: (sqft, Bldg type)	Entire College		
Contact Name:	Paul A. Righi		
Contact Phone:	617-228-3474	Contact Email:	prighi@bhcc.mass.edu
Project Description:	To increase participation of entire college to recycle all paper products and cardboard.		
Capital Cost:	None	Savings (if relevant):	
Expected Results (env. and other benefits)	Lessen the amount of solid waste being generated.		

Please copy and add additional pages as necessary

Water Units and Volume-to-Weight Conversions for Recyclable Materials

Available on DEP website: <http://www.mass.gov/dep/recycle/cities.htm#mrpd>

Category	Material	Density
<i>Water and Sewage</i>	Water Volumes	1 CCF = 100 cubic feet = 748 gallons
<i>Paper</i>	Newspaper	
	Loose, unbaled	445 pounds / cubic yard
	Compacted	800 pounds / cubic yard
	Hand stacked	35 pounds / 12 inch stack
	Corrugated Cardboard	
	Loose, unbaled	200 pounds / cubic yard
	Compacted	460 pounds / cubic yard
Other Paper	Telephone Books	250 pounds / cubic yard
	Mixed Paper	490 pounds / cubic yard
<i>Containers</i>	Commingled	
	Cans, Glass & Plastic	180 pounds / cubic yard
	Cans & Glass	270 pounds / cubic yard
	Glass	
	Whole Bottles	620 pounds / cubic yard
	Crushed-semi (manually)	1,175 pounds / cubic yard
	Mechanically Crushed	1,840 pounds / cubic yard
	Steel/Tin Cans	
	Whole	150 pounds / cubic yard
	Flattened	850 pounds / cubic yard
Aluminum Cans		
Whole	60 pounds / cubic yard	
Flattened	225 pounds / cubic yard	
Plastics	All Plastics: #1 - #7 – whole	38 pounds / cubic yard
<i>Miscellaneous Materials</i>	White goods (appliances)	300 lb / cubic yard or 170lb each on average
	Textiles	175 pounds / cubic yard
	CRTs/Computers	50 lbs each (whole on average)
<i>Organics – Weight Conversions</i>	Grass Clippings	667 pounds / cubic yard
	Leaves	400 pounds / cubic yard
	Brush	500 pounds / cubic yard
	Unfinished Compost	1,500 pounds / cubic yard
	Finished Compost	1,350 pounds / cubic yard
<i>Organics – Volumetric Conversions</i>	Grass Clippings	3 cubic yards/ton
	Leaves	5 cubic yards/ton
	Brush	4 cubic yards/ton
<i>Hazardous Household Products (HHP)</i>	Auto batteries	39 lbs each
	Batteries (household)	40 pounds / 5 gallon pail
	Fluorescent lamps	0.5 pounds / four foot lamp
	Oil filters	250 pounds / 55 gallon drum