Name: Liz Tomaszewski
Title: Facilities Systems Manager/Sustainability Coordinator, Worcester Polytechnic Institute
Date survey submitted: 7/21/09

ADMINISTRATION

SUSTAINABILITY POLICIES
1) Does your school have its own formal sustainability policy?
[ ] No
[X] Yes. Please describe and provide URL, if available:

WPI has established policies to guide our efforts for responsible design and use of resources and to seek out sources of renewable resources, to minimize the amount of waste produced while increasing the amount that can be recycled, and to incorporate the values of sustainability in our institution's daily operations.
http://www.wpi.edu/About/Sustainability/climateprotection.html
http://www.wpi.edu/About/Sustainability/materialsmgmt.html
http://www.wpi.edu/About/Sustainability/facility.html

2) Has the president of your institution signed the American College and University Presidents Climate Commitment (ACUPCC)?
[X] No
[ ] Yes. If completed, please provide the date the GHG Report was submitted to the ACUPCC:

3) Has your institution signed the Talloires Declaration?
[X] No
[ ] Yes

4) Is there a sustainability component in your institution's master plan and/or strategic plan (check all that apply)?
[ ] No
[X] Yes, in the master plan. Please describe and provide URL, if available:

The Master Plan describes a strategy for the "renewal, modernization, and reuse of existing facilities and critical campus infrastructure. It will develop a strategy for the enhancement of the physical campus including open space, circulation systems, campus entrances, parking and signage. Further the Plan is intended to define relationships and opportunities between WPI and the surrounding community." http://www.wpi.edu/Master/?alumnews

[X] Yes, in the strategic plan. Please describe and provide URL, if available:
The Strategic Plan describes the sustainability component of our undergraduate experience and academic programs.
The IQP and the Global Perspective Program constitute WPI's most distinctive educational programs. The IQP focuses on the use of technology to improve aspects of society, and most students complete this required project abroad, within the Global Perspective Program. … We will continue to develop new academic programs that build on traditional strengths, reaching

across disciplines to reflect the integration of knowledge and its contemporary applications. Examples of such initiatives include interactive media and game development, robotics engineering, environmental engineering, fire protection engineering, and metals processing. http://www.wpi.edu/Admin/President/strategicplan.html

ADVISORY COUNCIL
5) Does your school have a council or committee that advises on and/or implements policies and programs related to sustainability?
[ ] No
[X] Yes *If you answered "No" to question 5, please proceed directly to question 11.*

6) Please provide the name of the committee and list the number of meetings held since August 2008.
Name: President's Task Force on Sustainability

Membership

Task Force members are appointed by the President. Current membership includes:

Provost: John A. Orr

CFO: Jeffrey S. Solomon

Assistant VP for Facilities: Alfredo DiMauro

VP for Student Affairs and Campus Life: Janet Begin Richardson

Director of Public Relations: Eileen Brangan Mell

Facilities Systems Manager/Sustainability Coordinator: Liz Tomaszewski

Dining Services Manager: Joe Kraskouskas

Other Faculty and Staff

> Scott Jiusto, Assistant Professor, Interdisciplinary & Global Studies
> Rob Krueger, Assistant Professor, Interdisciplinary & Global Studies
> Matthew Ward, Professor, Computer Science
> Fred Hard, Professor, Civil & Environmental Engineering

Undergraduate Student Representatives

> Carol Okumura
> Scott Guzman

Number of meetings: 17 meetings:
8/18/08, 9/8/08, 9/26/08, 10/10/08, 10/29/08, 11/17/08, 12/1/08, 12/16/08, 1/6/09, 2/10/09, 3/3/09, 3/17/09, 3/31/09, 4/29/09, 5/19/09, 6/10/09, 7/8/09

7) Please provide number of stakeholder representatives on the committee.
[# 4] Administrators
[# 4] Faculty

[# 3] Staff
[# 2] Students
[#   ] Other. Please describe:

8) Please provide the name of the chair(s) of the committee for the 2009-2010 academic year, and indicate which stakeholder group the chair(s) represents.
Provost John Orr, represents the Administrative group, and in his role as Chief Academic Officer, Provost Orr represents the students and faculty of WPI

If 2009-2010 academic year information is not yet available, please provide information for 2008-2009 instead.
Name of chair(s):
Position(s) (e.g., administrator, faculty, staff, student):

9) To whom does the committee report (e.g., president, vice president)?
The President's Task Force on Sustainability reports directly to the President, Dr. Dennis Berkey.

10) Please list key issues/programs that the committee has addressed or implemented since August 2008.
Key issues/programs that the group has addressed/implemented since August 2008:
1) Promotion of, maintenance of, and use as a teaching tool the new "green" resident hall, East Hall
2) Program to reduce water and energy consumption
3) Program to provide incentives for fuel-efficient vehicles and car pooling on campus, and reduce the total number of vehicles on campus.
4) Program to draft and finalize policies for Hybrid Vehicles, Preferred Parking, and LEED Certification.
5) Programs to increase awareness of waste and recycling and initiate a comprehensive program on recycling
6) Issue to increase students, staff, and faculty awareness of environmental issues on campus and in the community
7) Program to incorporate more sustainability topics in curriculum

Progress made on each of these issues since August 2008:
1) Opened new resident hall, East Hall in August 2008. East Hall was launched as an example in sustainable design, construction, and living. Won CMMAA Building Project of the Year Award in March 2009; won Green Building of America Award in March 2009.   Earned Gold LEED in July 2009. Using wastewater runoff from green roof system as teaching vehicle. Design and construction includes energy efficiency mechanical and electrical equipment, detailed in item #49, below.
2) Water and energy reduction: Our dining service contractor, Chartwells, went trayless in August 2008, saving approximately 120,000 gallons of water each year. East Hall, our new resident hall, opened in August 2008 with sustainability features including waterless urinals, low flow showers, front loading washing machines, motion sensors for heating and cooling

in the student suites; motion sensors for lighting in the corridors, window contacts, T5 lighting, and temperature setbacks. HVAC systems have been equipped with motion and CO_2 monitors in the general campus area to control heating and cooling based on CO_2 detected.   Solar panels were installed along the walkway to Alumni Field in September 2008.   LED exit signs have been installed across campus.

3) WPI contracted with ZIP cars and brought two ZIPcars to campus in September 2008; built bicycle storage facility in new East Hall resident hall to encourage students to use alternate transportation; created carpooling parking spaces on campus in December 2008; encouraged student project to study carpooling for campus in March 2009 to be launched in summer 2009.

4) Policies written for definition of Hybrid Vehicles, Preferred parking, and LEED certification in December 2008.

5) Students collaborated with our facilities department and conducted a PREcyclemania event during the month of December 2008 to raise awareness of our recycling efforts.   Developed a poster to clarify what could be recycled and where.   Participated in Recyclemania from January – March 2009, claiming 63rd place out of 206 institutions in the National Grand Champion prize and in Massachusetts, placed 7th out of 13.   In January, WPI partnered with a local pig farmer to provide food waste to the farm, reducing food waste by 400 pounds per day. In April, we provided gently-used items to the Salvation Army during the two weeks prior to students moving away from campus. In May, female staff participated in donating suits and accessories to Dress for Success, a national program where office-wear is donated to underrepresented females looking for employment in the community.

6) In December, students, staff and faculty were recruited to form GreenWPI to execute ideas developed by President's Task Force for Sustainability for 2009. Students suggested and ran PreCyclemania, a precursor to the winter's Recyclemania event, where we could raise awareness and enthusiasm for recycling. A group of students worked to launch the National Teach-In on campus in February 2009, and subsequently sent a digital letter to our congressional delegation. GreenWPI worked with student group GAEA and the Green Team to sponsor Earth Week events (April 2009), including hosting a talk by State Rep. Spellane on "What Can Be Created and Sustained When the Worlds of Public Policy and Scientific Research Meet" and our First Annual Sustainability Poster Competition, as well as several local park clean-ups.   Our efforts were spotlighted in several issues of The Towers" student newspaper and in the WPI Transformations of Winter 2009.

7) Creation of new seminar course on Sustainable Design, and launched a new project site in Edmonton with Stantec.   The project site is called "Stantec Sustainable Design Project Center," and two projects were conducted there, 1) Six Foundation Steps Towards Campus Sustainability, and 2) Green Guide for Roads Rating System. The National Teach-In in February 2009 was used to encourage faculty to bring a sustainability-themed topic into the classroom for that day. A Sustainability Poster Competition was launched for Earth Day which would bring student Interactive Qualifying Projects, Master Qualifying Projects, and Great Problem Seminar Projects together.   This project competition was a means of encouraging students to incorporate topics of sustainability into their academic efforts.   The second year of WPI's Great Problems Seminar for first year students (see http://www.wpi.edu/Admin/OAA/Designs/gpsandplc.html) focused on Power the World, Heal the World, and the Grand Challenges Seminar, which included such topics as solar

cells, organic waste management, sustainable water and food systems in Sierra Leone, and business and education plan for soap production in Kenya.

SUSTAINABILITY STAFF
11) Does your school employ sustainability staff (excluding student employees and interns)?
[ ] No
[X] Yes. Please provide titles and number of sustainability staff.
[#] Number of full-time staff (in FTE). Titles:]
[# 1] Number of part-time staff (in FTE). Titles: [Sustainability Coordinator, Liz Tomaszewski (0.25 FTE]

12) Does the head of the sustainability staff report directly to the president or another high-level administrator (e.g., vice president, vice chancellor)?
[ ] N/A
[ ] No
[X] Yes. Please describe: Sustainability Coordinator Reports to the Assoc. VP of Facilities who reports to the CFO.

OFFICE OR DEPARTMENT
13) Does your school have an office or department specifically dedicated to furthering sustainability on campus?
[X] No
[ ] Yes. Please describe (including name of office or department and year created):

WEBSITE
14) Does your school have a website detailing its sustainability initiatives?
[ ] No
[X] Yes. Please provide URL:
      General sustainability website: http://www.wpi.edu/About/Sustainability/
      Sustainability initiatives: http://www.wpi.edu/About/Sustainability/ourini815.html

GREEN PURCHASING
15) Does your school have a formal green purchasing policy?
[X] No
(   )Yes. Please describe policy and provide URL to full policy, if available:

16) Does your school purchase ENERGY STAR qualified products?
[ ] No
[X] Some. Please describe: All appliances in our newest resident hall, East Hall, are Energy-Star qualified products.   As appliances in older buildings are replaced, they are replaced by Energy-Star qualified products. WPI has a special pricing for Energy Star products through two appliance dealers, Percy's or Better Electric
[ ] All

17) Does your school purchase environmentally preferable paper products (e.g., 100 percent post-consumer recycled content, certified by the Forest Stewardship Council)?

[ ] No

[X] Some. Please describe: Our printing office chooses paper that is 10-30% recycled materials, and are FSC certified, SFI certified, PEFC certified, Green-e certified, or Green Seal certified, and whose manufacturers uses wind as an alternative energy, or are carbon neutral.

[ ] All. Please describe:

18) Does your school purchase Green Seal, Environmental Choice certified, or biorenewable cleaning products?

[ ] No

[X   ] Some. Please describe: WPI uses all green Seal, Environmental Choice certified products to clean our new resident hall, East hall. We also now use only green shampoo to clean all carpets across campus.

[ ] All. Please describe:

19) Are your school's computer/electronics purchase decisions made in accordance with standards such as the Electronic Product Environmental Assessment Tool (EPEAT)?

[ ] No

[ ] Some. Please describe:

[X] All

WPI's Technology Management department has determined that the Energy Star and EPEAT ratings are a priority over initial investment costs when assessing options for acquiring technology.

In addition, our university bookstore, Barnes & Noble, purchased all IT products that are RoHS certified (restriction of Hazardous Substances) indicating that the technology provided has reduced or eliminated the use of hazardous materials such as lead, mercury, and cadmium.

20) Does your school use only pesticides that meet the standards for organic crop production set by the U.S. Department of Agriculture or Canadian Organic Standards (excluding on-campus farms)?

[ ] No

[X] Some. Please describe: Approximately 50% of our pesticides are organic.

[ ] All

CLIMATE CHANGE & ENERGY

GREENHOUSE GAS EMISSIONS INVENTORY

21) Has your school completed a greenhouse gas (GHG) emissions inventory?

Please check all that apply.

[ ] No.

[ ] In progress. Please describe status and provide estimated completion date:

[X] Yes. Please provide total annual GHG emissions (in metric tons of CO2e). Also, include the start date for each year as well as the URL to each inventory, if available online, or attach the document.

2008: 8,500 tons*

2007: **
2006: 18,171 tons***
2 005: 17,774 tons***
2004: 19,962 tons***
NOTES: *indicates Tighe and Bond source, data includes only CO2 emissions from heating sources
      **no data recorded
      ***data from project performed by students; data includes CO2 emissions from heating, cooling, electricity, and transportation
for 2004-2006: http://www.wpi.edu/Pubs/E-project/Available/E-project-031107-200452/unrestricted/GHGProjectFinalReport030407.pdf
For 2008, document referenced was Tighe and Bond, Source Registration Emissions Statement for 2008

COMMITMENT TO GREENHOUSE GAS EMISSIONS REDUCTION
The purchase of carbon offsets does not count toward greenhouse gas (GHG) reductions for this indicator. They are counted in a subsequent indicator.
22) Has your school made a commitment to reducing GHG emissions by a specific amount?

[ ] No
[X] Yes. Please list details.
 In 2005, WPI completed the boiler replacement project and submitted a report documenting its compliance with the Boiler Industry Performance Standard at 310 CMR 7.26(30) by January 1, 2006. The report included copies of the Environmental Results Program Compliance Certification forms and a discussion on the emissions reductions achieved with the new boilers. All boilers burn natural gas as the primary fuel. Results:
Reduction level: With the three new boilers, WPI has reduced its potential sulfur dioxide and nitrogen oxide emissions to the atmosphere by 251 tons and 72 tons, respectively.   Particulate and VOC potential emissions have also been reduced by 18 tons and 1 ton.
Baseline year: 2004 (19,962 tons)
Target date: 2005   (17,774 tons)

If you answered only "No" or "In progress" to question 21, please now skip to question 27.

REALIZED GREENHOUSE GAS EMISSIONS REDUCTIONS
23) Has your school achieved a reduction in GHG emissions?
[ ] No
[X] Yes. Please list details.
In an Interactive Qualifying Project, students compiled data on Greenhouse Gas emissions, and concluded: "From 2002 to 2006 the direct emissions from WPI have decreased from a total of 20 Million kg CO_2 to 18 Million kg CO_2. We see that over the years 2002 to 2006 the Million Metric Tons of Carbon per student has decreased from $1.39 \times 10_{-6}$ MMTC to $1.16 \times 10_{-6}$ MMTC a 17% decrease.
Percentage reduced: 11.1% direct emissions; 17% per student decrease
Baseline year: 2004
Date achieved: 2005

24) Please provide the total heating and cooling degree days averaged over the past three years.
Data on total degree heating and cooling days is available at: http://www.degreedays.net/. This information will be used to help reduce bias between schools in different climates.
Cooling degree days average over the past three years: 63.24
Heating degree days average over the past three years: 538.27

25) Please provide GHG emissions figures on a per-thousand-square-foot basis for the past three years.
Per-Thousand-Square-Foot Emissions = Total CO2e in metric tons / Total maintained building space in thousands of square feet.
2008:   4.490*
2007:   **   see notes below #26
2006:   11.39***
2005:   11.14***

26) Please provide GHG emissions figures on a per-full-time-student basis for the past three years.
Per-Student Emissions = Total CO2e in metric tons / Total number of full-time enrolled students.
2008:   2.238*
2007:   **   see notes below
2006:   5.485***
2005:   5.430***

*indicates Tighe and Bond source, data includes only CO2 emissions from heating sources
**no data recorded
***data from IQP project performed by students; data includes CO2 emissions from heating, electricity, and transportation

ENERGY EFFICIENCY
27) What programs or technologies has your school implemented to improve energy efficiency (e.g., cogeneration plant, retrocommissioning of HVAC systems, performing system tune-ups, temperature setbacks)?
An Energy Management System was installed throughout the campus, which includes daily monitoring and daily temperature setbacks based on scheduled occupancy of individual rooms. An individual was hired, the Mechanical Operations Supervisor, to oversee the Energy management System. Campus wide temperature setbacks at seasonal breaks in all buildings are implemented based on building occupancy.
Our university bookstore, Barnes & Noble, converted to LCD monitors to reduce energy consumption by 30%.

T8 lighting replaced T12 lighting in most areas of campus; T5 lighting was installed in East hall. The new resident hall, East Hall, has numerous technologies that have been implemented to improve energy efficiency: Occupancy-based, direct digital control (DDC) building automation system (BAS) for optimization of HVAC equipment and lighting operation with demand limiting

functionality in all suites and rooms. There are window contacts to ensure that the windows are closed when the heating or cooling is on. All corridor lighting is connected to motion sensors, so lights are not in use when no motion is detected. East hall consists of a high performance building envelope including low-e glazing and integral sunshades which were installed on the exterior windows to optimize the amount of daylight and to minimize the amount of heating and cooling loss. Some sunshades are vertical, some are horizontal, depending upon results of the computer model of the angle of the sun designed to maximize the amount of natural lighting and reduce the reliance on artificial lighting. One of the country's first magnetic aircooled chillers has been installed in this building.

In addition, East Hall includes the following mechanical systems for energy efficiency: Hi-efficiency lighting system. Water side economizer provides free cooling during late fall, winter and early spring. Energy efficient, magnetic bearing, oil-less compressor, air-cooled mechanical chiller with a minimum 10.2EEER at full load and a minimum 13.5 EER at part load conditions. ECM motors are provided for all fan coil units and premium efficient motors for all other fans and pumps. Variable Speed Drives (VSD's) on all fans and pumps; Hi-efficiency gas-fired condensing boilers. Induction units (chilled beams) are installed to serve the first floor spaces. Ventilation units equipped with a desiccant heat wheel energy recovery system component.   With such a system, heating and cooling energy needed to condition supply air is recovered from the building exhaust air. An added benefit of heat recovered is the reduction of peak heating and cooling design requirements for the HVAC system.   Heat recovery preheats outside air with resulting reduction in boiler plant peak capacity. Also, in the pre-cooling mode, the energy transfer system pre-cools outside air, thus reducing the size of cooling units.

Currently, energy consumption is not individually metered by building on campus except for the newer buildings, the Bartlett Center, Gateway Park, and East Hall. Facilities is currently organizing to install energy meters in Fuller Labs and the Daniels-Wedge-Morgan complex, allowing us to monitor energy consumption, provide education on energy consumption, and in the future to provide the means to allow for "energy competitions" between resident halls, and provide the means to allow for incentives for resident hall students.   In academic and administrative offices and in resident hall student rooms, motion sensors are in place and will turn off lighting automatically if movement is not detected.
A new heating plant was brought on-line in 2005. Annual tune-ups are conducted by the staff of the heating plant.

ENERGY CONSERVATION
28) Do you facilitate programs that encourage members of the campus community to reduce energy use (e.g., cash incentives, signs reminding individuals to turn off lights and appliances)?
[ ] No
[X] Yes. Please describe: There are reminders on WPI printers to print double-sided; WPI's Technology Department sends out emails reminding staff to shut down computers for holiday weekends.   Posters are placed in resident halls with energy-saving tips for our high-efficiency washers and dryers.   Energy-savings tips are included on the WPI Sustainability website. Our university bookstore, Barnes & Noble, sells an every-expanding array of eco-friendly products, including reusable travel mugs, CFL light bulb s, recycled notebooks, and organic foods and

snacks.

RENEWABLE ENERGY GENERATION
29) Does your school generate renewable electricity?
[ ] No
[X] Yes. Please specify percentage of overall electricity generated from each of the following sources and describe details below.
[100 %] B100 biodiesel 100% of one vehicle
[%] Clean biomass
[%] Concentrating solar power (CSP)
[%] Geothermal
[%] Low-impact hydropower
[100 %] Solar photovoltaic for lighting for the path from Alumni Field to the main campus
[%] Wind
[%] Other.

Description: cooking oil from the dining hall is used to power a biodiesel vehicle; solar photovoltaic lighting is used for lighting along the path to Alumni Field

30) Does your school have solar hot water systems?
[X] No
[ ] Yes. Please specify number of systems and total BTUs generated annually, if available:

RENEWABLE ENERGY PURCHASE
31) Has your school purchased electric energy from renewable sources or renewable energy credits (RECs)?
RECs and electricity from renewable sources must be Green-e certified or meet the requirements of the Green-e standard.
[X] No
[ ] Yes. Please describe.
Date of most recent contract:
Quantity (kWh):
Percentage of your total electric energy use that it represents:

32) Has your school purchased non-electric energy from renewable sources?
[X] No
[ ] Yes. Please describe.
Date of most recent contract:
Quantity (BTUs):
Percentage of your total non-electric energy use that it represents:

ON-SITE COMBUSTION
33) Please provide total BTUs of energy for heating and cooling from on-site combustion:
1.32683E+11

34) Please list each fuel source (e.g., coal, natural gas, oil) and the percent of overall BTUs derived from that source:
Natural gas   90.61%
Diesel   3.16%
#2 oil   6.23%

35) Is any on-site combustion for heating and cooling derived from renewable sources?
[X] No
[ ] Yes. Please describe.
Percentage on-site combustion derived from renewable sources: [%]
Total BTUs of energy generated from renewable sources: [#   ]
Description of renewable energy sources used for on-site combustion for heating and cooling:

FOOD & RECYCLING
The food portion of this category is covered in a separate dining survey.

RECYCLING OF TRADITIONAL MATERIALS
36) Please indicate which traditional materials your institution recycles (check all that apply).
[ ] None
[X] Aluminum
[X] Cardboard
[X] Glass
[X] Paper
[X] Plastics (all)
[ ] Plastics (some)
[X] Other. Please list: batteries, electronics, light bulbs, cell phones, printer cartridges, construction material, yard waste, food waste

37) Diversion rate: [20   %]

RECYCLING OF ELECTRONIC WASTE
38) Does your institution have an electronics recycling program?
[ ] No
[X] Yes. If available, please indicate the total annual weight or volume of each material collected for recycling or reuse.
[X] Batteries   1.44 tons
[X] Cell phones
[X] Computers   23.8 tons
   [X] Light bulbs   1.72 tons
   [X] Printer cartridges
   [X] Other E-waste. Please list: other electronics
In addition, our university bookstore, Barnes & Noble, partners with the company QSGI to dispose of older IT equipment in a secure and eco-friendly manner.

COMPOSTING (ASIDE FROM DINING FACILITIES)
39) What percentage of your campus's landscaping waste is composted or mulched?
[100   %]

40) Do you provide composting receptacles around campus in locations other than dining halls (e.g., in residence halls, offices, academic buildings)?
[x] No. Composting materials are removed from campus by a contractor
[ ] Yes. Please describe:

SOURCE REDUCTION
41) Do you have any source-reduction initiatives (e.g., end-of-semester furniture or clothing swaps and collections)?
[ ] No
[X] Yes. Please describe:
WPI partners with the Salvation Army two weeks prior to the time that our students leave campus. Containers are placed in central convenient locations around campus for students to deposit their unwanted and gently used clothes, small appliances, and other items. These items are then brought to the Salvation Army store to raise funds for their training programs.
We also participated in the Dress for Success program in May 2009, a national program which provides clothing, accessories and training for under-represented women entering the work force.

GREEN BUILDING

GREEN BUILDING POLICY
42) Does your school have a formal green building policy?
[ ] No
[X] Yes. Please describe policy and provide URL to the full policy, if available:
In February 2007, WPI's Board of Trustees voted to adopt a policy calling for all future buildings on campus to be environmentally friendly and LEED-certified structures.
http://www.wpi.edu/About/Sustainability/eastha764.html

GREEN BUILDING STANDARDS
43) Please indicate LEED-certified buildings.
[# 2   ] Total number of LEED-certified buildings.
[16,200   sq ft] Certified-level (combined gross square footage). Please list building names:
Bartlett Center
[0 sq ft] Silver-level (combined gross square footage). Please list building names:
[103,610 sq ft] Gold-level (combined gross square footage). Please list building names: East Hall
[0 sq ft] Platinum-level (combined gross square footage). Please list building names:

44) Please indicate buildings that meet LEED certification criteria but are not certified.
[# 0   ] Total number of buildings that meet LEED criteria
[0 sq ft] Certified-level criteria met, but not certified (combined gross square footage). Please list building names:
[0   sq ft] Silver-level criteria met, but not certified (combined gross square footage). Please list

building names:
[0 sq ft] Gold-level criteria met, but not certified (combined gross square footage). Please list building names:
[0 sq ft] Platinum-level criteria met, but not certified (combined gross square footage). Please list building names:

45) Please indicate buildings that are ENERGY STAR labeled.
[# 0   ] Total number of ENERGY STAR buildings. Please list building names: None currently, however, WPI has developed a strategy to install metering in all buildings. Currently our core campus is all on one meter, preventing us from measuring building performance. In the future, with individual building metering, we will be able to measure energy performance by building. New buildings, including our new Gateway Park and East Hall, are metered separately.
[0 sq ft] Combined gross square footage.

RENOVATIONS AND RETROFITS
46) Please indicate LEED-EB certified buildings.
[# 0   ] Total number of LEED-EB certified buildings. Please list building names:
[0   sq ft] Combined gross square footage.

47) Please indicate buildings that meet LEED-EB certification criteria but are not certified.
[# 0   ] Total number of buildings that meet LEED-EB criteria but are not certified. Please list building names:
[sq ft] Combined gross square footage.

48) Please indicate renovated buildings that are ENERGY STAR labeled.
[#   0   ] Total number of renovated buildings that are ENERGY STAR labeled. Please list building names:
[0   sq ft] Combined gross square footage.

49) What energy-efficiency technologies have you installed in existing buildings (e.g., HVAC systems, motion sensors, ambient light sensors, T5 lighting, LED lighting, timers, laundry technology)?
For each technology, please indicate the number and type of fixtures installed, and the number of buildings in which those fixtures are installed. If possible, include either the percentage of the overall campus fixtures each type represents or the percentage of overall maintained building space that has been renovated with the technology (e.g., 20 buildings representing 10 percent of maintained building space have been retrofitted with motion sensors; thus, 10 percent of the total maintained building space in square feet would be the desired data).
Specific numbers for the following equipment are not possible to provide at this time.
Motion sensors for lighting are located in approximately 75% of our offices and classrooms other than East hall, where motion sensors are located in 100% of rooms and corridors.
T5 lighting is located in approximately 15% of our offices and 100% of East hall.
Approximately 60% of our exit signs across campus are LED.
Nearly 100% of HVAC units across campus are equipped with CO_2 monitors to control heating and cooling.

Our university bookstore, Barnes & Noble, has saved more than 500,000 sheets of paper by putting store manuals online. They have converted to LCD monitors to reduce energy consumption by 30%.

East Hall, our newest resident hall, utilizes 100% of the following technologies that are energy-efficient:

Window contacts are located throughout the resident hall, which detect when windows are open.
Energy performance optimization and system commissioning achieve 30% reductions in energy.
Hi-efficiency lighting system was installed.
Water side economizer provides free cooling during late fall, winter and early spring.
Energy efficient, magnetic bearing, oil-less compressor, air-cooled mechanical chiller with a minimum 10.2EER at full load and a minimum 13.5 EER at part load conditions.
Occupancy-based, direct digital control (DDC) building automation system (BAS) for optimization of HVAC equipment and lighting operation with demand limiting functionality.
ECM motors are provided for all fan coil units and premium efficient motors for all other fans and pumps.
Variable Speed Drives (VSD's) are on all fans and pumps.
Hi-efficiency gas-fired condensing boilers were installed.
High performance building envelope including low-e glazing and exterior shading optimally positioned based on façade orientation.
Induction units (chilled beams) are installed to serve the first floor spaces.
Ventilation units equipped with a desiccant heat wheel energy recovery system component. With such a system, heating and cooling energy needed to condition supply air is recovered from the building exhaust air. An added benefit of heat recovered is the reduction of peak heating and cooling design requirements for the HVAC system.   Heat recovery preheats outside air with resulting reduction in boiler plant peak capacity.
Also, in the pre-cooling mode, the energy transfer system pre-cools outside air, thus reducing the size of cooling units.

50) What water-conservation technologies have you installed in existing buildings (e.g., low-flow faucets, low-flow showerheads, waterless urinals, dual-flush toilets, gray water systems, laundry technology)?
For each technology, please indicate the number and type of fixtures installed, and the number of buildings in which those fixtures are installed. If possible, include either the percentage of the overall campus fixtures each type represents or the percentage of overall maintained building space that has been renovated with the technology (e.g., 20 buildings representing 10 percent of the maintained building space have been retrofitted with low-flow faucets; thus, 10 percent of the total maintained building space in square feet would be the desired data).
Specific numbers for the following equipment are not possible to provide at this time.
Low-flow plumbing fixtures achieve 30% reduction in water consumption in East Hall.
Dual flush toilets are located in East hall and Goddard Hall.
Waterless urinals are located in four rest rooms in Goddard Hall.
Low flow showers are located in East hall
Front-loading washing machines in laundry rooms are located at East Hall

Low flow faucets are located in east Hall and Goddard hall.
The planting of native plants that do not require irrigation, Bartlett Center and East Hall

51) What percentage of your institution's non-hazardous construction and demolition waste is diverted from landfills?
[93.9 %]

STUDENT INVOLVEMENT

RESIDENTIAL COMMUNITIES
52) Are there any sustainability-themed residential communities or housing options at your school?
[ ] No
[X] Yes. Please provide details below.
Name of program: East Hall residence hall
Type of community (e.g., hall, building, house): Sustainability-themed resident hall
Number of students involved: 232
Additional details: students live in an apartment-style residence with sustainable features including motion sensors for heat and cooling, door and window contacts for heat and cooling, high performance building envelope including low-e glazing and exterior shading optimally positioned based on façade orientation; low flush toilets, environmentally friendly cleaning supplies, recycling areas in each wing, bicycle storage area, different sustainability themes on each floor, waste water study from green roof

NEW STUDENT ORIENTATION
53) Does a portion of your new student orientation specifically cover sustainability?
[X] No But plans are underway for faculty and staff to address both parents and students at NSO in 8/09 and to produce flyers for new and returning students
[ ] Yes. Please describe how sustainability is incorporated (e.g., information sessions, green tour):

INTERNSHIPS/OUTREACH OPPORTUNITIES
54) Does your school offer on-campus office-based sustainability internships or jobs for students?
[ ] No
[X] Yes. Please provide number of students and average number of hours worked weekly per student:
[# 1] Paid positions. Average hours worked weekly per student: academic year: 15 hours/week; summer: 30 hours/week
[#] Unpaid positions. Average hours worked weekly per student:

55) Does your school have residence hall Eco-Reps or other similar programs to promote behavioral change on campus?
[X] No
[ ] Yes. Please provide details below, and indicate URL if available:
[#] Paid positions. Average hours worked weekly per student:

[#   ] Positions that award academic credit. Average hours worked weekly per student:
[#   ] Uncompensated positions. Average hours worked weekly per student:

STUDENT ORGANIZATIONS
56) Does your school have active student-run organizations devoted to sustainability efforts on campus?
[ ] No
[X] Yes. Please provide total number of active organizations, names of organizations, a brief description of each, and URLs, if available:
    Engineers without Borders http://users.wpi.edu/~ewbwpi/home/index.html
    Global Awareness of Environmental Activities (GAEA) dedicated to environmental issues on campus – no URL
    Habitat for Humanity of Greater Worcester http://users.wpi.edu/~wpihabitat/index.html
Green Team – student group which works directly with sustainability staff to promote and execute student initiatives; no URL

SUSTAINABILITY CHALLENGES AND COMPETITIONS
57) Does your school organize any sustainability challenges/competitions for your campus and/or with other colleges?
[ ] No
[X] Yes. Please list details for all competitions.
1)   Name of competition: Precyclemania – Internal competition
Year initiated: 2008
Frequency of competition: annually
Participants: at least 2 students from each floor of each resident hall or house
Incentives: party for winners prior to term break
Goal of competition: increase awareness of recycling and waste
Percent of energy/water/waste reduced: 2%

2)   Name of competition: Recyclemania – national competition
Year initiated: 2008
Frequency of competition: annually
Participants: at least 2 students from each floor of each resident hall or house
Incentives: Trophy made from recycled items presented on earth day
Goal of competition: National and state recognition in event
Percent of energy/water/waste reduced: 6.5% of annual waste

3)   Name of competition: Envisioning Sustainable Futures: Student Poster Competition
Year Initiated: 2008
Frequency of competition: annually
Participants: 20 teams of students (teams ranged from 1-4 students)
Incentives: two $250 prizes, one for technical, one for interdisciplinary
Goals of competition: Raise awareness of sustainable themes in our projects
Percent of energy/water/waste reduced: N/A

Lasting effects of competition: Student and staff awareness, more diligence in recycling
Website: http://www.wpi.edu/About/Sustainability/materialsmgmt.html
And http://www.wpi.edu/About/Sustainability/precyc620.html
Poster competition: http://www.wpi.edu/About/Sustainability/ourini815.html

TRANSPORTATION

CAMPUS MOTOR FLEET
58) How many vehicles are in your institution's fleet?
[#   31   ]   Including campus police, facilities, and grounds equipment vehicles

59) Please list the number of alternative-fuel vehicles in each class.
[#   ] Hybrid. Please list makes and models:
[#   1   ] Electric. Please describe type of vehicles: Facilities vehicle manufactured by ClubCar
[#   ] Biodiesel. Please describe type of vehicles and list biodiesel blend(s) used:
[#   ] Other. Please describe:

60) What is the average GHG emission rate per passenger mile of your institution's motorized fleet?
[# 1.5   ] pounds of carbon dioxide equivalent (CO2e) per passenger mile traveled.

LOCAL TRANSPORTATION ALTERNATIVES
61) Does your school offer incentives for carpooling?
[ ] N/A. Please explain:
[ ] No
[X] Yes. Please describe details of the program including the type of the incentive and eligible community members (e.g., faculty, staff, and students):
All carpooling students, staff and faculty are eligible to park in premium parking spaces marked specifically for carpoolers

62) Does your school offer public transportation subsidies?
[ ] N/A. Please explain:
[X] No
[ ] Yes. Please describe the program including the size of the discount (as a percent of full price) and eligible community members (e.g., faculty, staff, students):

63) Does your school provide free transportation around campus?
[ ] N/A. Please explain:
[ ] No
[X] Yes. Please describe:
WPI provides the use of van services to the Prescott street side of campus to the main campus 3 times per hour. (During the academic year 2009, we recorded 15,276 total trips in this van). We also provide use of SNAP van (Security Night Assistance Patrol) as a student escort service to areas within one mile of campus as needed. (During the academic year 2009, we recorded 26,417 total trips in this van).

64) Does your school operate a free transportation shuttle to local off-campus destinations?
[ ] N/A. Please explain:
[ ] No
[X] Yes. Please describe:
There is a Consortium-wide bus service which transports students to the different campuses as well as desirable shopping, restaurant and entertainment venues in the Worcester area.

BICYCLE PROGRAM
65) Does your school offer a bicycle-sharing/rental program or bicycle repair services?
[X] No, However, there is a new bicycle storage area located in East hall.
[ ] Yes. Please provide details below.
Year created: 2008
Number of bikes available:
Fees for participation: $0
Repair services provided:

CAR-SHARING PROGRAM
66) Does your school partner with a car-sharing program?
[ ] No
[X] Yes. Please provide details below.
Year created: 2008
Total number of vehicles: 2 Honda Civic Hybrids
Number of hybrid vehicles: 2
Fee for membership: for students, staff, and faculty: $35 per year
http://www.zipcar.com/wpi/

Two self-service Zipcars –2008 Honda Civic Hybrids– are now available for use any time of the day, parked on the Quad. The car is available to all staff and students aged 18 and older. Zipcar was selected as WPI's car sharing partner based on its superior technology and operations, membership experience, and track record of providing peer universities with a proven, cost effective, and environmentally friendly transportation solution.

PLANNING
67) Does your school have policies that support a pedestrian-friendly or bike-friendly campus (e.g., in the school's master plan, a policy prohibiting vehicles from the center of campus)?
[ ] N/A. Please explain:
[X] No
[ ] Yes. Please describe:

68) What percentage of individuals commute to campus via environmentally preferable transportation (e.g., walking, bicycling, carpooling, using public transit)?
[13   %]

STATISTICS

69) Campus setting:

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[ ] Rural
[ ] Suburban
[X] Urban
[ ] Other. Please describe:

70) **Total number of buildings:** [# 72   ]
71) **Combined gross square footage of all buildings:** [# 1,824,633   ]
72) **Full-time enrollment (undergraduate and graduate):** [# 4561   ]
73) **Part-time enrollment (undergraduate and graduate):** [# 1071   ]
74) **Part-time enrollment as a proportion to a full-time course load:** [# 411   ]
75) **Percent of full-time students that live on campus:** [57   %]

Questions 76-87 are for informational purposes only; responses will NOT be included in the Report Card *evaluation process.*

OTHER AREAS OF ENVIRONMENTAL ENGAGEMENT

Please mark an "X" next to each item that applies to your institution.

76) **Outdoors club:** [X]
77) **Disposable water bottle ban:** [ ]
78) **Participation in Recyclemania:** [X]
79) **Student trustee position:** [ ]
80) **Environmental science/studies major:** [X]
81) **Environmental science/studies minor or concentration:** [X]
82) **Graduate-level environmental program:** [X]
83) **Student green fee:** [ ]
84) **Alumni green fund:** [ ]
85) **Revolving loan fund for sustainability projects:** [ ]
86) **Campus garden or farm:** [ ]
87) **Single-stream recycling:** [X]

PLEASE NOTE: Some schools have requested that more detailed descriptions of their sustainability programs be made available to readers of the College Sustainability Report Card. *Accordingly, we plan to post the completed surveys on* www.GreenReportCard.org *as a link from each school's profile. If you would prefer that the full text of your survey not be published, please let us know. (As in previous years, we will continue to publish relevant excerpts in the school profile.) To opt out of online publication of your full survey response, please enter your name and position here:*

Thank you for completing the campus survey for the College Sustainability Report Card 2010 *on behalf of your institution. We greatly appreciate your participation.*