



Sustainability at W&M





Building on Community

- ▣ COS is an administrative structure that taps into the academic strengths and tradition of service at W&M.
- ▣ COS emphasizes transparency, flexibility and responsiveness.
- ▣ COS seeks the full engagement of faculty, students and staff through participation in task driven working groups.
- ▣ COS taps the intellectual capital of faculty, students and staff.
- ▣ COS reports directly to the President of the College and includes key senior administrators.



The COS Mission

- Promoting a culture of sustainability through the College community by engaging the powerful education, research and service traditions of the College;
- Promoting sustainable practices that recognize the need to manage human interactions with ecosystems to minimize impacts of use, conserve the regenerative capacity of the natural environment, and promote its ecological integrity;
- Serving as a faithful steward of the Student Green Fee through prudent management of those fees to maximize their impact on sustainability;
- Building an operational model that ensures the long-term future of the College's commitment to sustainability; and
- Implementing and promoting the President's Policy on Sustainability through full engagement of faculty, students and staff.

Committee on Sustainability

STEERING COMMITTEE

Co-Directors: Lynda Butler, Dennis Taylor

Members: Randy Chambers, Steve Cole, Rowan Lockwood, Dave Shepard, Caroline Cress, Lauren Edmonds, Sarah Hanke

COS Fellow: Phil Zapfel

Ex officio: Anna Martin, Sam Jones, Ginger Ambler

- **Science and Technical Advisory Committee (STAC):**

- **Chair: Randy Chambers**

- **Working Groups:**

- Greenhouse Gases
- Stormwater Management
- Procurement
- Policy Analysis

- **Operations (OPS):**

- **Chair: Dave Shepard**

- **Working Groups:**

- Energy
- Land Use
- Recycling/Waste Management

- **Programs and Education (PEDS):**

- **Chair: Rowan Lockwood**

- **Working Groups:**

- Academic Programs
- Food Services
- Student Life
- Continuing Education/Outreach

STAC: Greenhouse Gases

- Initial Audit Using IPCC Workbook (2009):
 - Three “scopes” – Produced Energy, Consumed Energy, and Emissions (transportation and waste).
 - GHG emissions fell by 16% per ft² since 2002.
 - Reductions occurred as total ft² of building space increased by nearly 20%
- Activities:
 - Update GHG Emissions Audit for 2010.
 - Complete Comprehensive Transportation Audit.
 - First Phase of Climate Action Plan for W&M and VIMS.
- Goals:
 - Develop second phase of Climate Action Plan to set a carbon emissions reduction goal as well as detailed planning to achieve it by 2025.
 - Develop comprehensive environmental models for the W&M and VIMS campuses to aid long range planning.

STAC:

Stormwater Management

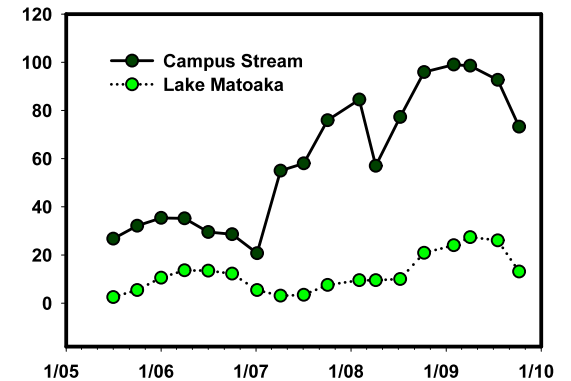
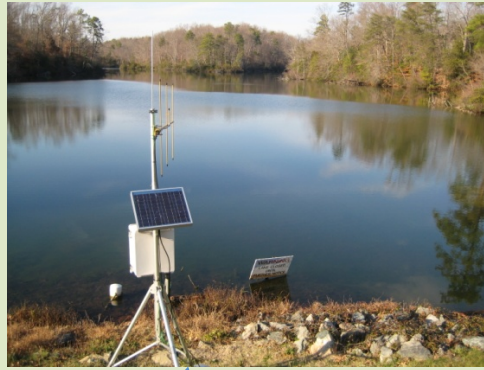
Goals:

- Comprehensive Stormwater Management Plan for W&M.
- Redesign to control erosion and nutrients and enhance water conservation

Activities:

Focus on the main Williamsburg campus (amount and quality of water flowing into Lake Matoaka)

- Remote recording equipment already installed
- Working with Geology and ENSP classes to collect data on nutrient and contaminant sources
- Developing a GIS-based model using impervious surfaces, stormwater management plans, and sources of nutrients and contaminants
- Testing properties of green roofs
- Installing rain garden using native vegetation
- Greening of open space at VIMS



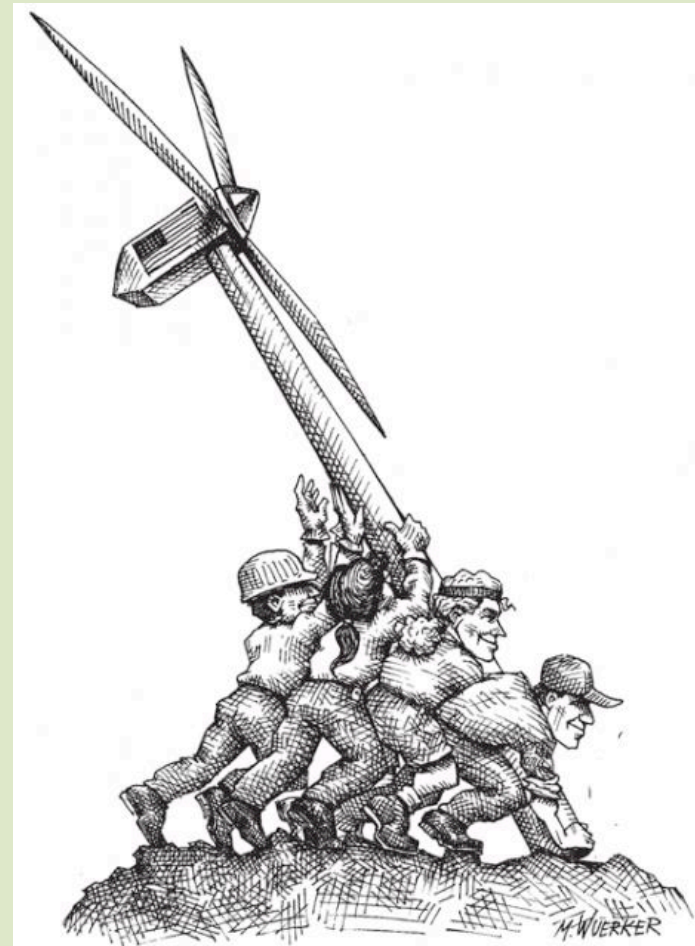
STAC: Procurement

- **Activities:**
 - “Green” Purchasing Operations at W&M.
 - Develop a Green Purchasing Guide.
- **Goals:**
 - Lead and coordinate Virginia higher education to achieve statewide standards for green purchasing that offer sustainable options for colleges and universities.
 - Reduce the W&M carbon footprint.



OPS Energy

- **Activities:**
 - **Lighting:**
 - Upgrade lighting systems
 - Add motion sensors.
 - **Heating and Air Conditioning:**
 - Retrofit variable speed drives.
 - Retrofit digital controls.
 - Reduce, recycle and reuse water in HVAC systems
 - **On Campus Production:**
 - Renovation of campus steam power plants
 - Replace chillers and towers
 - **New Construction:**
 - Plan to LEED building standards.
- **Goals:**
 - Reduce the campus carbon footprint



OPS: Recycling and Waste Management

- **Activities:**
 - Student Summer Research Grant – Saves \$40K in recycling costs, optimizes recycling and waste streams.
 - Housekeeping and chemical use
 - Composting organic waste.
- **Goals:**
 - Minimize the campus waste stream, maximize recycling, composting and re-use.



OPS: Land Use

- Activities:
 - Developing a comprehensive land use plan for the W&M and VIMS campuses.
- Goals:
 - To support sustainable development and planning for the College.



PEDS: Academic Programs

- Activities:
 - Academic Audit of Sustainability in teaching.
 - “Do One Thing” DOT Campaign
- Goals:
 - To integrate sustainability into the education, research and service missions of W&M.



PEDS: Dining Services

- Aramark supported 5 Food Sustainability Interns in 2009/2010
- Together they designed and implemented initiatives that
 - Reduce waste produced by the dining halls
 - Improve disposal methods for remaining waste
 - Promote purchasing of sustainable food products
- Goals
 - To provide sustainable dining services for the College that minimize waste and optimize local and sustainable foods.



PEDS: Dining Services

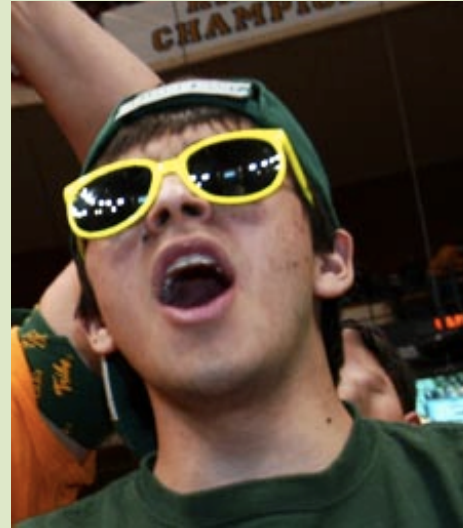
Accomplishments 2009/2010

- Composting all organic dining hall waste products
 - Waste is sent to a composting facility for processing and sale as commercial compost.
 - Almost all pre- and post-consumer waste is composted, over 3 tons weekly
 - Decreases waste sent to landfills
- Increasing sustainable food purchasing
 - Surveyed campus community to determine opinions about sustainable food procurement.
 - Created a sustainable food procurement guide for dining services
- Increased recycling
 - Worked closely with dining services employees to enhance their knowledge of why recycling is important and what specifically can be recycled
- Reduce waste
 - Audited napkin use and implemented single use napkin dispensers that reduce napkin use by 36%. Saves thousands of dollars annually
 - Switched to localized bulk condiment dispensers
 - Reduces waste from disposal of individual condiment dispensers
 - Saves hundreds of dollars monthly
 - Started reusable to-go container program
 - Reduces disposable to-go container waste
 - Saves over \$100 a month
 - Expanding program in the next academic year



PEDS: Student Life

- **Activities:**
 - Establishment of the ECO-House, special interest housing for sustainable living.
 - Inter-house energy competitions in the Randolph Complex.
 - Energy and water use signage.
 - Orientation for new students.
 - Greening of move out days.
 - GoodWill partnership.
- **Goals:**
 - To integrate concepts and practices for lifelong sustainable living.



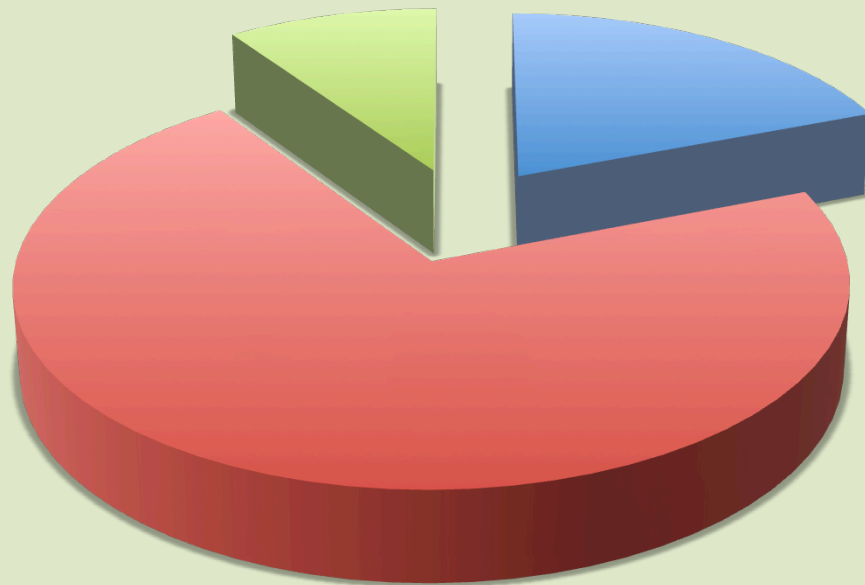
PEDS: Education and Outreach

- **Activities:**
 - “Do One Thing” (DOT) Campaign.
 - Eco-Ambassadors Program.
 - Bottled Water Campaign,
 - Dormitory Signage.
 - Earth Day.
 - Building Community Partnerships.
- **Goals:**
 - To promote sustainability within the W&M community.
 - To build viable, cooperative sustainability programs with the surrounding communities.



AY 2008/2009 Green Fees

Total Green Fees \$208,845



■ Green Endowment
\$40,000

■ Project Funding \$148,845

■ Summer Student Grants
\$20,000

2008/2009 GREEN FEE PROJECTS

Fall 2008

SPRING 2009

- Energy Meters in Randolph Complex
- Light Sensors in SWEM Library
- Campus Recycling
- Solar Cell Project on Small Hall
- Stormwater Management Research

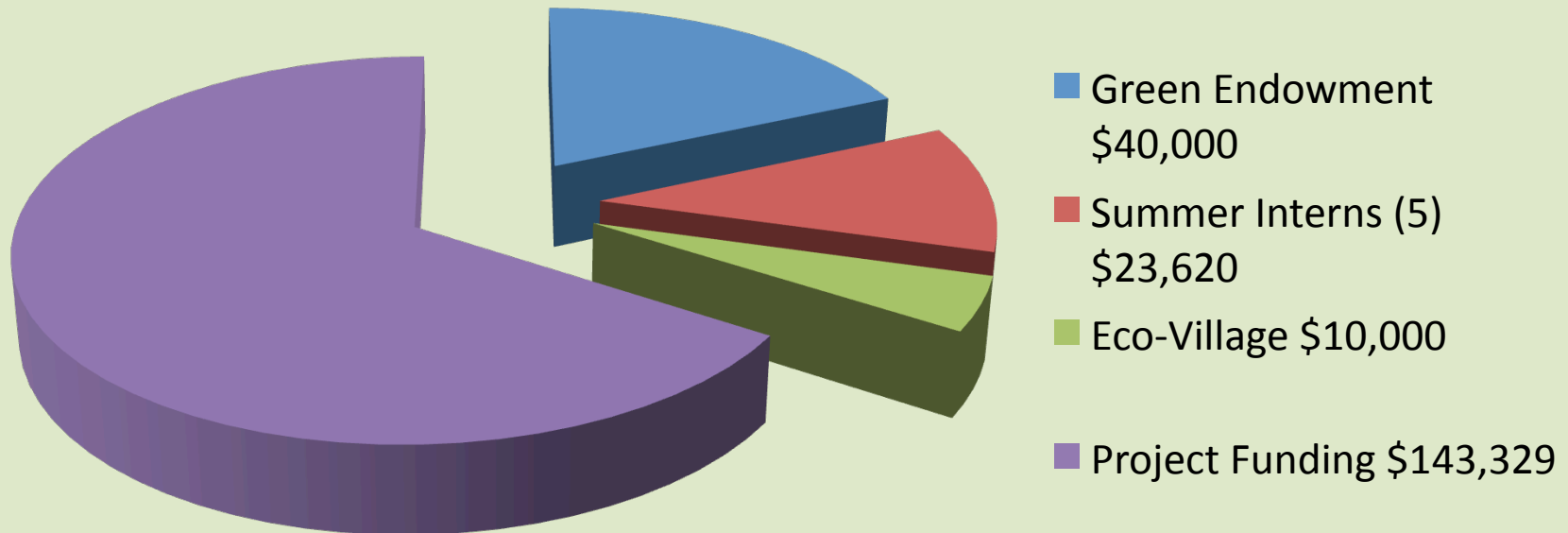


Phil Zapfel, COS Fellow

- Tyler Hall HVAC Upgrade
- Washington Hall HVAC Upgrade
- Swem Library Towel Dispensers
- VIMS: Lighting in Hargis Library
- Eco-House Energy Monitoring
- Reduce Your Use-Athon
- Campus Kitchen Green Containers
- Eco-Ambassador Program
- Green Roof Feasibility Study
- GreenBoard
- Reusable Takeout Pilot Study
- VIMS: Green Team Motion Sensors
- Waste Receptacle Pilot Study
- Student Life Signage

AY 2009/2010 Green Fees

Total Green Fees \$215,000



Fall 2009 Green Fee Projects

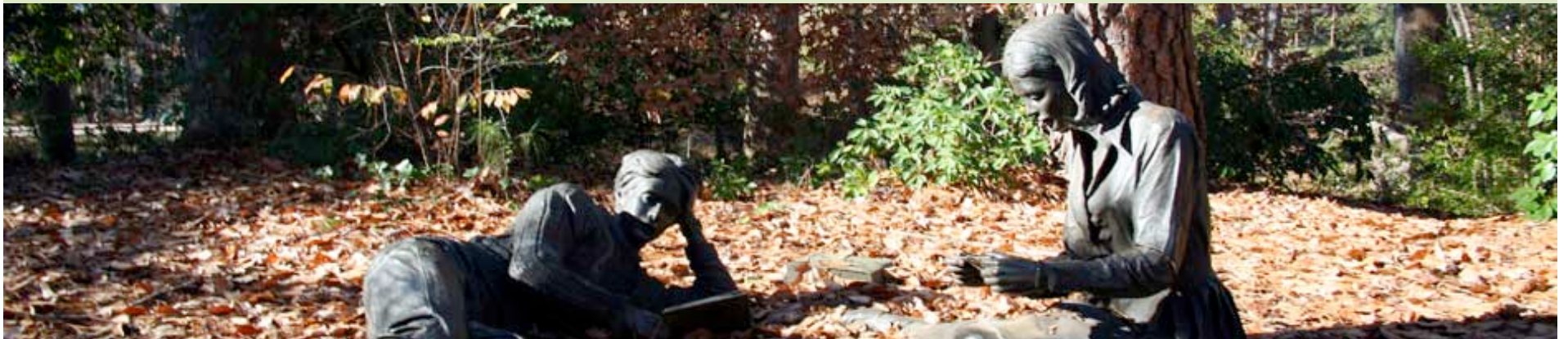
- Compost Bins for Commons Dining Hall
- College-wide DOT (Do One Thing) Campaign
- Swem Library variable frequency drives
- Campus Rain Garden
- Event Recycling Kits
- Law School Paper Towel Dispensers
- Facilities Management Thermal Imager Unit
- Hybrid Renewable Energy Stations at VIMS
- Campus Kitchens Herb Garden
- Electric Maintenance Truck
- “NO to Bottled Water” Campaign
- Replacement of Exit Signage with LED units at VIMS

Spring 2010 Green Fee Projects

- Tailgate Recycling Kit
- Energy Reduction Campaign
- Summer Recycling Swem Library
- LED Lampposts
- Eco-House Garden
- Public Transportation Awareness
- Sustainable Exercise Energy
- SEAC/COS/Mercury GIG Earth Day
- Environmental Improvisation Workshop
- Metering The Lodges

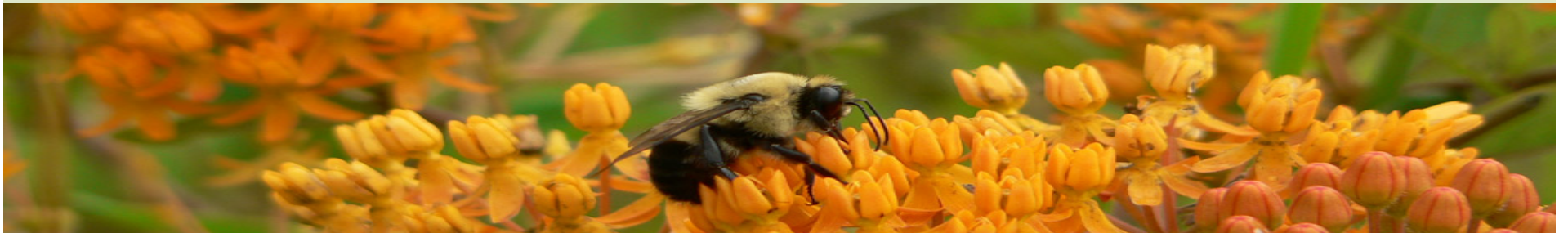
2009 Green Fee Summer Research Grants

- **Judi Sclafani and Tyler Koontz:** Research on alternative cost options and possible obstacles to a self-sustaining campus-wide recycling program. Advisors: Rowan Lockwood (Geology) and Sandra Prior (Facilities Management)
- **Margaret Challand:** Research on water quality in the College stormwater management system. The goal of the project is to quantify water quality issues and identify problem areas as an to aid campus planning and mitigation efforts. Advisor: Randy Chambers (Biology/Environmental Studies)
- **Connor Horne:** Research in collaboration with Dining Services to develop a program for sustainable food procurement emphasizing increased reliance on locally produced foods and sustainably grown agricultural products. Advisors: Eric Engstrom (Biology) and Larry Smith (Dining Services)



2010 Green Fee Summer Internships

- Amanda Anderson for “*Green Roof / Green Design*”. Professor Randolph Chambers is the Faculty Advisor.
- Max Cunningham for “*A Comprehensive Transportation Plan for W&M.*” Professor John Swaddle is the Faculty Advisor.
- Anna Jane Morris for “*Public Spaces in Sustainable Gardens at W&M.*” Professor Eric Engstrom is the Faculty Advisor.
- Jamison Shabanowitz for “*E-Recycling at W&M.*” Professor Eric Bradley and Rebecca Bliley are the Advisors.
- Alexandra Volpert for “*Reducing Nutrient Loading in Lake Matoaka.*” Professor Randolph Chambers and Jianjun Tian are Advisors.



Measuring Sustainability Progress

	• 2008	• 2009	• 2010
• The Endowment Institute:	• D-	• C+	• B
• Princeton Review:	• NA	• 84	• 90
• Green Building Council / Princeton Review Guide to Green Colleges & Universities:	• NA	• NA	• 300 Greenest Colleges and Universities





WILLIAM & MARY Sustainability



- Committee on Sustainability
- Initiatives
- Progress
- Get Involved
- Give Green

Sites » Sustainability

Sustainability at W&M

Hark Upon the Green.

[DOT -- Do One Thing for Sustainability at W&M!](#)



William & Mary's 315-year tradition of academic excellence, unparalleled community engagement, and creative interdisciplinary partnerships have prepared the College well for meeting the challenges of a sustainable future. Drawing upon the strengths, passions, and expertise of its faculty, students, and staff, William & Mary is creating a new model of sustainability for higher education. From faculty/student research and student internships to innovative community partnerships and widespread volunteerism, the College is promoting sustainability by producing leaders for tomorrow's world who understand both the challenge and the opportunity in a sustainable future.

"It is good to think of ourselves as a helpful and contributing part in the plan of a cosmos, and as participators in some far reaching destiny."

-Liberty Hyde Bailey, "The Holy Earth"

EVENTS

Do One Thing (DOT) Campaign
 January 25 - April 25, 1:00 PM
 DOT = Do One Thing. Choose a Personal Sustainability Practice and share it with us!

[All Events >>](#)

NEWS

[Spring 2010 Call for Project Proposals](#)

[Call for Summer 2010 Research Grant Applications](#)

[President's message regarding the 'Do One Thing' campaign](#)

[W&M Dining Services to compost food waste](#)

[Fall 2009 campus sustainability projects announced](#)

[View More >>](#)

HARK UPON THE GREEN



Keep up on the latest in sustainability at W&M. Read the blog by our Sustainability Fellow, Phil Zapfel. [More...](#)