

## **Cost Savings and Productivity Improvements**

*As of November 1, 2009*

### **Germantown Campus**

#### *Biotechnology Scholarships*

- Worked with the Montgomery College Foundation staff to secure a \$75,000 endowed biotechnology student scholarship.
- Secured commitment from the MdBio Foundation for a \$10,000 a year biotechnology student scholarship for two years.

#### *Writing Programs*

- Extended the Germantown Writing Center's hours of operation during the summer months and changed to a Monday through Thursday schedule for the last two years. We are still able to serve students enrolled in English, Reading, American English Language Program (AELP) and Foreign Languages.
- Reduced a vacant instructional assistant position from 12 months to 10.

#### *The Science Learning Center*

- Fulfilled tutoring needs with science faculty. An instructional assistant (tutor) resigned at the beginning of January. This has led to a reduced staff, which is a significant loss because there were 780 students logging in a total of 7890 times in fall 2008! Knowing there were going to be difficulties filling the vacancy or hiring a temp, science faculty were asked to step in and tutor a few hours a week. The response has been terrific! Faculty members both in and out of the Science Department have volunteered and have posted regular schedules in the Science Learning Center. This showcases MC's dedication and commitment to our students.

### **Rockville Campus**

#### *Science, Engineering and Mathematics*

- Established a new cell biology lab through equipment donations from the National Institutes of Health and a grant from the industry. The NIH School Donation Program has enabled the Biology Department to obtain many pieces of used but usable laboratory equipment for Montgomery College. We joined this program in September 2006 and have received approximately \$850,000 of donated equipment. The items obtained included ultracentrifuges, refrigeration units, cryostats, thermal cyclers and many smaller pieces of laboratory equipment
- Obtained a grant worth \$50,000 for the Biology Department to purchase a new DNA sequencer from LI-COR Biosciences. As a result, the Rockville Campus Biology Department is offering a cell biology course that is offered at only one other community

college in Maryland and is comparable or even surpasses similar courses offered by many four-year institutions. This new lab will also provide undergraduate research experiences for students in the NIH-funded Biomedical Scholars Program and will become a nucleus for SEM Rockville's planning for "Early Undergraduate Research Experiences" opportunities for all students and for the planning of "A Community of Researchers Program" at SEM Rockville Campus.

- Received a donation of two double stack incubators worth \$24,000 and a water bath worth \$500 from the National Institutes of Health, which supported two additional sections of BI 203 Microbiology with 36 students in the spring 2009 semester.

#### *Faculty Professional Development*

- Received a two-year grant of \$50,000 per year from NSF CCLI (Course Curriculum and Lab Improvement Grants) to pay for professional development for faculty.
- Secured a grant from the University of Maryland in the amount of \$9,500 for professional development for faculty.

#### *Project Portal to Success in Engineering*

- Secured a grant from the U.S. Department of Education Fund for Improvement in Post Secondary Education (FIPSE). Montgomery College's Science, Engineering, and Mathematics Area was awarded a three-year, \$471,142 grant from FIPSE to boost the number of women and minorities at the college who pursue engineering degrees. The grant's goals include: increase minority and women transfers to four-year engineering programs during the grant period; implement a model engineering education transition program comprising secondary education, community college, and four-year college/university collaboration; outreach and teaching efforts at the local high school level, e.g. Project Lead the Way; establish inquiry-based instructional methods and a variety of student support systems, including extensive career and transfer advising, peer support, collaborative learning, structured program articulations between two-year and four-year colleges and universities; and professional development opportunities for faculty.

#### *Biomedical Scholars Program*

- Received a National Institutes of Health grant to support the Biomedical Scholars Program, which will amount to close to \$2.3 million over its life. Since inception in 2001, the Biomedical Scholars Program represents a very productive partnership with the University of Maryland College Park and the University of Maryland Baltimore County. Scholars complete a comprehensive, pre-matriculation summer bridge program focusing on math readiness, interdisciplinary writing and technology. A diverse array of local biotechnology companies and agencies provide internships and research opportunities to scholars, strengthening their preparation for junior and senior level coursework and inspiring them to pursue graduate studies. College faculty are involved as mentors and provide academic and career advising, as well as academic support and enrichment. Students in their senior year of high school are eligible to apply to become a Biomedical Scholar. This program, funded by a grant from the National Institutes of Health, is for

highly motivated students interested in a career in the natural or biomedical sciences. Biomedical Scholars participate in a six-week, pre-freshman Summer Bridge program and are part of a small learning community of peers and faculty. Students are eligible for paid summer research internships.

#### *ACCESS Engineering S-STEM Program:*

- Awarded a competitive, four-year, \$600,000 grant from the National Science Foundation's Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM) program. The grant will help SEM to support promising engineering students who need financial help to pursue their studies. The NSF S-STEM program was established by the National Science Foundation in accordance with the American Competitiveness and Workforce Improvement Act of 1998. The Act reflects the national need to increase substantially the number of American scientists and engineers.

ACCESS Engineering (Achieving Community College Excellence, Success, and Scholarship in Engineering) will provide 150 scholarships to engineering students. The project promotes full-time enrollment, academic achievement, and successful transfer and completion of a bachelor's degree in engineering. Once awarded for the first time, ACCESS Engineering scholarships may be renewed annually by complying with the requirements stipulated in the application materials. Awards are available for as many as four academic years for full-time students pursuing associate's or bachelor's of science degrees in engineering.

#### *Music*

- Added seven new keyboards in our piano class room. We can now add up to 21 students in each section of piano class. This has maxed out five sections with 21 rather than 14 students. The keyboards cost \$650 each. It was a one-time expenditure that will carry us through many years.

#### *Paul Peck Humanities Institute*

- Secured a donation of \$10,000 helped cover the cost of student scholarships in the Smithsonian (and now Holocaust Museum) internship course and student stipends.

#### *Montgomery Scholars*

- Worked with Cambridge University last summer to book the Montgomery Scholars and Renaissance Scholars as groups rather than as individuals, which led to a \$14,000 rebate check to be applied to next year's registration.

#### *Faculty*

- Paid substitutes only in cases of unplanned, unavoidable absences. By following this policy, we expect that our substitute expenditures will be down approximately 20 percent.

## **Takoma Park/Silver Spring Campus**

### *Learning Center*

- Reallocated the learning center for business, management, accounting, computer science and paralegal students from a walking closet to a larger room due to new space at the Takoma Park/Silver Spring Campus. The closet could only handle, very tightly, three computers. Today we are using six with the possibility of adding four more after a renovation is completed. We serve more students in a more appropriate setting.

### *Health Sciences*

- Acquired outdated/expired trays and supplies from many hospitals and businesses that can no longer use the equipment because they are no longer considered sterile. For example, the surgical technology and radiological technology programs get supplies donated when they reach their replacement cycle. We are able to use this equipment to teach which reduces our costs and saves upwards of \$10,000.
- Won equipment for teaching CPR and then was given a second unit for the Workforce Development and Continuing Education division, which saved \$2,000.
- Developing a new curriculum/credit certificate for emergency preparedness management, which is cost-effective to teach because it will use outside experts as part-time faculty and will not require an outlay for capital equipment.

### *Going Green at TP/SS: Paper-saving and WEB CT*

- Saving paper by printing exams, handouts, other documents on two sides with wide margins, and size 11 fonts. For power points, the physical therapy assistant program is also using the "Outline" feature as opposed the "Handouts" feature to print. These examples have been met with approval from students and significantly lessened pages on handouts and exams.
- Using supplemental sites on WebCT for courses that allow posting of the lecture notes in pdf format and all paperwork is online for the students to print out as they need/want. Students can also submit their assignments on WebCT so there is no paper involved.

## **Auxiliary Services**

### *Bookstore Services*

- Using the EDI (Electronic Data Interface) program by Bookstore Services allows our Receiving Department staff to process incoming used books shipments faster. This program is designed to reduce the amount of time staff spend on entering invoice information into the MBS system as well as the amount of staff time spent on handling/processing used books.

- Using and training of the online adoption program *inSite*. The *inSite* program allows faculty members to submit their textbook adoptions to be transmitted electronically to the Bookstore's computer system. This process not only saves the College on the amount of paper used in the adoption process, but it also reduces staff (Bookstore, faculty and academic administrative aides) hours used for research, data entry, and mail delivery.
- Printing of lab manuals/course syllabi by the Takoma Park/Silver Spring MC Copies Center. This has reduced Bookstore Services' on-hand inventory by taking advantage of the "Printing on Demand Concept".
- Provided summer food service at Takoma Park/Silver Spring Campus through the bookstore services MC Munchies. MC Munchies partnered with Chartwells, the College's contracted food service provider, to provide grab and go sandwiches, salads and other food items, off-setting a potential \$40,000 loss to Chartwell's while still offering on-campus food options to the campus community.

### *Child Care Services*

- Continued monitoring of teacher/child ratios ensures that a 1 to 6.5 ratio is met. This keeps teacher salaries at a cost-efficient level while providing high quality care and education to the children.
- Received the Child Care Access Means Parents In School (CCAMPIS) grant from the federal Department of Education for \$116,000 per year for four years beginning in the fall 2009 semester. This grant provides child care tuition support to qualified low income student parents to support them in persisting in and completing their educational goals. The total award is for \$464,000 over the four year period.
- Reduced temporary employees, which led to a reduction in salaries by 35% (\$57,000), and overtime, which saved 78% (\$6,062), because five positions were filled at all three center programs.
- Used the online payment system for 67 additional families, which increased the amount of online revenue received; FY09 YTD is up \$36,482.33 or 24.5% over FY08 YTD.
- Enhanced the usefulness of supplies/equipment by implementing the practice of rotating classroom and program support materials among/between all three campus Early Learning Centers, leading to a cost savings \$17,000.

### *Director's Office*

- Reorganized and combined similar functions within its various units to streamline, expedite and improve efficiency throughout the department.

### **Business Services**

- Stopped mailing pay advices to employee homes. The new process promotes better utilization of staff and reduces mailing costs by approximately \$36,000 per year. This new

information will be available for all pay information including past years and employees may access and print their pay information 72 hours prior to the direct deposit.

- Stopped mailing monthly budget obligation reports to all budget account managers. The new process reduces staff time spent on inter-office mailing activities and reduces the cost of printing the reports for a total annual savings of \$1,700. In addition, account managers can download their own departmental reports anytime they need them for account analysis and expenditure control purposes.
- Engaged an outside firm to evaluate vendor billing and payment activity for supplies and related consumable products and generated a return of \$51,200 for the College.
- Transitioned the College's banking business to PNC from Wachovia and generated a savings on banking fees that average \$3,300 per month, a 40% improvement.
- Implemented a new electronic billing system in the Bursar's Office in January, 2009. Since then, the unit has distributed over 15,000 invoices to students and saved approximately \$7,500 in reduced postage, supplies and staff time.

## **Facilities**

### *Germantown Campus*

- Acquired a larger mower which takes half the time to mow the grounds. In addition to conserving fuel, staff time can be used more efficiently.

### *Collegewide*

- Purchased wind energy electricity for FY2010 as a part of the County's joint procurement effort, translating to a reduction of millions of pounds of pollutants when compared with standard electrical power generation. The purchase was made within the budget allowance for electricity due to favorable market conditions.
- Continuing the College's leadership in designing life cycle cost effective energy and environmentally sustainable buildings and campus infrastructure, since the 1980s, now commonly referred to as green building design. Current building designs such as the Rockville Science Center and the Germantown Bioscience Center will be submitted for certification under the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System. Although green building technologies are estimated to increase first costs by 2-3%, reduction in operating (energy and maintenance) costs are expected to provide a reasonable return on the investment while reducing the environmental impacts.
- Coordinated efforts with Procurement for College participation in joint utility procurements with the County and other government agencies in order to take advantage of lower rates for volume purchases.
- Received a refund of \$29,588 from Pepco due to a billing error that was caught by diligent College staff.

## *Leased Space*

- Negotiated a lower priced lease for off-campus commercial office space to house the Office of IT. In FY 2008, during negotiations prior to the expiration of the lease for the building that had housed IT since 2000, the landlord would not consider a lower lease rate even though the market rate was now significantly less. The College used this opportunity to negotiate a new lease at a lower rate with a different landlord in another building. This allowed the College to lease more space. The former lease rate was \$26.80/sf versus a new lease rate of \$21.50/sf. If the revised total amount of space was leased at the old, higher rate, the College would have had to pay an additional \$221,926.
- Negotiated a waiver of fees that the landlord would have charged us for President's Day. We were open, but everyone else was closed because of the federal holiday. As such, the landlord would charge us for HVAC that day. Since we are closed on days that building is open at end of December, we said we are saving them money by being closed, so we should get this cost waived. Estimate is about \$1,500 saved based on last year.

## **Human Resources**

- Saved advertising costs by using of job boards and very little print advertising. Job boards and banners that were utilized are: highered.com, insiderhighered.com, Nations Jobs, The Washington Post, and a new free site called Indeed.com, which is saving the College \$102,609.
- Implemented retiree group insurance premium payment deductions directly from pension checks, and 49% of our retirees have elected to participate in this program. The estimated savings for those retirees that have elected to participate is \$9,000 per year.
- Scaled back the Length of Service Awards luncheon and the Retiree Reception to save approximately \$8,000.
- Saved \$11,000 by not sponsoring the Maryland Work-Life Alliance Annual Award Luncheon and the Mental Health Association's Business Conference.
- Reduced the Leadership Development Institute (LDI) graduation luncheon by 50%, resulting in a \$2,500 savings.
- Utilizing in-house facilitators in conjunction with the County's Health and Human Services Limited English Proficiency Language training, OHR expects to save the equivalent of \$1,500.
- Received donated gym equipment for the OHR Health and Wellness program, which includes seven spin bikes with an estimated replacement value of \$1,800-\$2,000 each, totaling an estimated gift value of \$12,600-\$14,000. Employees reported less absenteeism and a reduction in the need for routine medications as a result of participating in the College's Wellness program.

## **Information Technology**

- Proposed that ACS provide a discount for contracted services in FY10. They have determined that they will charge this year's rates next fiscal year (rather than increase the rates as per their contract rate schedule) and will give us a 2% discount on top of that. The bottom line difference of that 2% reduction for FY10 is \$317,592.
- Extended FY09 contract pricing with the following vendors: 1. Data Watch \$15,600 (same price as FY09); 2. Cavalier Cleaners \$5,175, same monthly rate as FY09, and they agreed to pro-rate the month of December to 50% since the College is closed for winter break.
- Negotiated savings by renegotiating savings on postage for book shipments, the College realized savings of \$5,000.
- Maintaining the current year rates for the onsite contractors, Cipher. Cost savings for FY10 is \$16,992.
- Developed and rolled out the Strategic Customer Care/Sustainable Support Model (SCCM) in the Office of Information Technology's Instructional Technology (InTech) Rockville unit. Over the two years SCCM was rolled out, our scope increased by 574 workstations across 37 computer-equipped labs and classrooms (We now support about 1,700 workstations in 250 sites). No additional resources were added to deal with this and we kept pace.
- Reduced the number of software configuration models from over 250 to fewer than 90. Controllable failures have been nearly eliminated; hardware work orders (essentially breakdown reports) decreased over 50 percent and software work orders by an astounding 83 percent. When breakdowns do occur, the problems are quickly and permanently resolved; the number of "call-backs" on problems is near zero. Staff time is now spent preventing, rather than solving, problems.
- Continued progress toward new financial efficiencies in the Library within its print and electronic resources. Library staff across the three campuses collaboratively deleted duplicate materials, deleted print formats where titles existed in an electronic format, and updated the criteria for collecting online and for buying in print. As a result of new resource management processes, the Library was able to:
  - Withstand cuts and no growth allocations;
  - Assure the MC community of a reasonable balance of Library resources and materials among the various formats to meet patrons' curricular needs;
  - Provide enhanced online resources for MC's changing population of learners as well as simultaneous access to online resources for multiple users 24/7;
  - Acquire 400-plus electronic journal titles through reallocated funds and increase Library databases from 26 databases in 2005 to 85-plus in 2007;

## **Institutional Advancement**

- Hosted an event in conjunction with the Universities at Shady Grove for the first time. Not only did we share the cost, but we are also utilized the talents of the students in both hospitality programs to prepare and provide the food. We are also relying solely on e-mail invitations, no postage, no printing. The students at USG designed the invitation, also saving MC staff resources.

### *Bank Partnerships*

- Placed more than 250 students in jobs at Chevy Chase Bank as a result of the partnership. Placements result in financial contributions by Chevy Chase Bank for every MC student placed and or retained in a job.
- Received \$107,000 from Chevy Chase Bank for the Montgomery College Foundation. An additional benefit of the partnership has been the Chevy Chase/UMD scholarship program. As a result of the partnership, 19 students received \$2,000 scholarships to attend College Park and 27 students received \$2,000 scholarships to attend Shady Grove for a total benefit to MC graduates of \$92,000.
- Received \$1,000 from Sandy Spring Bank based on their satisfaction with three MC students that were placed in teller and customer service positions.

### *Communications*

- Use “Inside MC Online” as the daily online newsletter for Montgomery College employees. It is pushed to their computers each morning or available via the Web for viewing. Its main purpose is to streamline internal communications and eliminate widespread use of broadly distributed printed materials and/or misdirected and previously ignored collegewide emails. “Inside MC Online” is widely read by most employees on a daily basis. Some cost savings, primarily from less need for printed materials, have been realized, but the main benefit so far has been highly improved internal communications and better informed employees.
- Continued use of Montgomery College ALERT for cell phone text messages or e-mail messages notifying the College community of closures, delays or major emergencies on a Montgomery College campus. Rather than using a vendor-provided commercial system, the College partnered with the County’s Office of Homeland Security to make the service available as a part of the countywide Alert Montgomery system. In partnering with the County, rather than using an external service, the College implemented this important and potentially life-saving initiative at no additional cost to the College or the County. It will also help to boost the use of Alert Montgomery, overall, with the additional promotion from the College, and will thereby help to ensure that more County residents are directly notified about emergencies within the County or at the College.
- Reduced costs because students now have a Montgomery College e-mail address. This electronic use of student communication via e-mail has reduced our printing and postage costs. For example, the majority of forms are available online, reducing our printing costs.

- Found a \$6,614 error in its student services publications account. If not caught, the account would have been \$6,614 lower, and as the year progressed and funds get depleted, the office may have thought that there were not enough funds to cover necessary printing requests from the College. This catch is an example of good fiscal stewardship and oversight.
- Caught an error in July 2009 that could have resulted in the College overpaying \$4,447. The vendor's invoice stated that the College was reducing a publication by four pages, but the vendor was still charging the College for those deleted pages. When we inquired with the vendor, the error was corrected, saving the College from incorrectly paying \$4,447.

### *Development/Foundation*

- Gave over \$1 million in scholarships to support the College in fiscal year FY08.
- Provided \$3.6 million in program support to the College in fiscal year FY08, which included funds to support the renovation of the Giant Bakery into the Morris and Gwendolyn Cafritz Foundation Arts Center.
- Received a \$400,000 grant from NASDAQ for endowed Macklin Business Institute scholarships.
- Received a \$100,000 grant from the Wal-Mart Foundation which will support veterans.
- Received a \$100,000 grant from the National Campaign to Prevent Teen and Unplanned Pregnancy to engage students in a discussion about pregnancy at the TP/SS Campus.
- Received a generous donation of \$50,000 from Clark Construction Group, LLC, to create an endowed scholarship in construction management honoring recently retired employee Joe H. Smith, who enjoyed a 30-year career at Clark. Smith now teaches full time in the College's construction management program.
- Established the Florence Ashby and Laird Anderson Endowed Scholarship at Montgomery College with a \$200,000 bequest from longtime Montgomery College Professor Florence Ashby and her husband Laird Anderson.
- Received a generous donation of 15 Inspiron 1420 laptop computers from Dell, a longtime technology partner of Montgomery College. The computers will go to Montgomery College's Macklin Business Institute (MBI) honors program. Students receive a laptop as part of the MBI program. Dell's contribution is helping to support the expansion of the MBI program to a full two-year program this semester.

### *Printing and Advertising*

- Decreasing the number of catalogs printed, resulted in a cost savings of \$5,400.
- Due to a printer's error on the Hobson's Guide, resulted in a cost savings of \$14,426.

- Received the equivalent of \$158,700 in free bus advertising over five months. Currently, the College has an advertising contract with Ride-On Buses. In the past, the College advertised with Metro Bus (CBS Outdoor). The contract with Metro ended on May 30, 2008, however, the College's "endless possibilities" exterior bus sides ran on some Metro buses without cost to the College for several more months that fall.
- Continuing our usual bidding process with three very competitive bids for each project, and including close consultations with Procurement when reviewing large purchase orders that may require a larger pool of bidders.
- Credited \$12,000 from Yellowbook Directory Advertising. An error by Yellowbook led to an incorrect Montgomery College advertisement. The College filed a claim, which resulted in a credit of 100% back to the College.
- Ran the College's 30- second television commercials during the pre-show at the Rio Cinemas in Germantown through mid-November 2008. The original contract was due to expire at the end of August, but a week of technical glitches at the Rio led Screenvision Advertising to give Montgomery College two whole months of free advertising to make up for the problem.
- Worked with high schools to put our new 30-second "Endless Possibilities" television commercials on the television stations and TV monitors in the high schools. This is free advertising exposure.
- Recycled leftover letterhead into notepads. The Office of Procurement and a Montgomery College printing contractor, Formost, thought of an inventive way to use the leftover letterhead (out-of-date due to old phone numbers). The letterhead was converted into notepads, which the Office of Communications funded for a minimal amount considering the thousands of dollars that were originally spent on the letterhead.
- Used stickers to correct outdated information rather than paying for a reprint. The MC velcro folders that are used by the recruiters, counselors, and others throughout the college were outdated due to old phone numbers. Rather than reprint folders, we took the remaining 9,000 folders and created a new phone number sticker that can be placed over the old numbers, saving the College thousands.
- Using self-stamped envelopes as a cost savings measure so that we save almost \$.40 per business reply envelope mailed back to the College.
- Worked with Admissions to create an electronic viewbook, which will help reach a wider audience.

### *Special Events*

- Using artificial plants that can be reused instead of fresh flowers for stage decoration.

- Received a donation of \$10,000 from Pepsi to help with the commencement expenses and reduced the cost of the commencement reception, regalia, portable toilets, and eliminated use of a bus, resulted in a cost savings of \$10,000.

#### *Other Cost Savings*

- Secured funding for the Takoma Park/Silver Spring parking garage through the Montgomery County Revenue Authority. The cost of the bond offering was much less than expected because the cost of the garage came in significantly under budget, \$13 million versus \$17 million; and the parking garage team worked very closely with financial consultants to watch the bond market and was able to place the bonds during a small window of favorable rates.

### **Productivity Enhancements**

#### *Employment Services*

- Assisted an additional 1,500 students to receive employment services (total of 3,600) and ensured that students had access to services on each campus at least three days per week, thanks to the additional Job Opportunity Coordinator (JOC) position with Student Employment Services (SES). The additional position has also contributed to the unit being able to initiate or expand various initiatives.
  - For example: the new job matching system "ejobs" which SES launched in September of 2006, has resulted in over 1,700 students connecting with over 1,000 local employers in the last 5 months.
  - It has also dramatically increased the speed and efficiency in which MC students, employers, faculty and staff can connect across three campuses and multiple WDCE locations. MC students can now search and sign-up for career-related events, search for PT, FT, and seasonal employment, locate Federal Work Study, Student Assistant, Internship opportunities, and sign-up for volunteer opportunities 24/7 from any computer with an internet connection. Since 80 percent of MC students work while attending college, this significant enhancement for student success and retention.

### **Workforce Development and Continuing Education**

- Outsourced its delivery needs of instructional materials and brochures to a courier service. This service was previous handled in-house and the cost savings are approximately \$40,000 per year.
- Revamped online distance learning program with partner Education to Go. The entire program inventory was opened up to the public and a new online registration system was implemented to better meet this populations needs. Enrollments and state FTE has doubled since this new format was implemented.

### **How “Green” is Montgomery College?**

#### *The Past and the Current*

- Won Montgomery County recycling awards for 2002, 2004, 2006, 2007, and 2009.
- Recycled more items than ever before (tires, batteries, pallets, used oil, computers, toner, cardboard, cans, bottles, paper, etc).
- Continues to improve the recycling program. The Germantown Campus is running a pilot program by removing trash containers from classrooms while co-locating larger trash and recycling containers in hallways. This has already resulted in an increased amount of recyclable materials being collected. The recycling program is continuously stressed with the housekeeping and grounds staff on each campus.
- Retrofit of light fixtures from T-12 to T-8 (energy efficient) lamps started 15 years ago. Now, we are moving from T-8 to T-5 lamps.
- Changed exit signs from energy inefficient bulbs to energy efficient light emitting diodes (LED).
- Converting parking lights from yellow low pressure sodium to high cut-off, pulse-start metal halide fixtures and lamps over the course of the next few years as we renovate parking lots and sidewalks. The exterior lighting for new construction or renovations will incorporate these new lighting standards. A number of these new fixtures and lamps have already been installed on the Germantown Campus.
- Overseeing the design and construction of every building project by the College architect, Eric Koh, to ensure the maximum “tightness” of the building envelope and insulation values. Every care is taken to ensure increased insulation values are obtained. Recently the Mannakee roof was replaced. We paid an additional charge in order to double the thickness of roof insulation installed. We exceed code requirements on roof insulation in almost all projects.
- Adhered to the County’s energy design guidelines for new construction or renovations for more than 15 years. These standards exceed building code requirements and guidelines provided by the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE). In fact, the County’s energy design guidelines are often cited as being some of the strictest in the country.

*How do we meet these guidelines?*

- High efficiency boilers and chillers in the HVAC systems. Central plants on each campus make use of ice storage in order to minimize electricity use during peak periods. Two of the campuses have chillers with heat recovery systems.
- High efficiency pumps and motors.
- Lower temperature chilled water central plant systems thus allowing for increased efficiency.
- Variable frequency drive (VFD) motors.
- “Smart” direct digital control (DDC) energy management systems.
- High insulation values in walls and roofs, high e-ratings in windows and store front enclosures.
- Standardized interior lighting (T-8, now going to T-5).

- Design lighting power density levels at .5 to .75 watt per square foot as compared to 1.2 watts per square foot as directed in the energy guidelines.
- Use of day lighting where practical and appropriate.
- Exterior building sunshades where appropriate.
- Occupancy sensors control lights. CO2 sensors control HVAC systems.
- Use of photo-voltaic (PV) panels at Germantown and TPSS. Not cost effective but does provide opportunities for education and increased awareness to energy consumption.
- 10 percent of the College's procured electricity comes from wind power.
- Use of public transportation or carpool (students: 41 percent at Rockville, 27 percent at Germantown and 51 percent at TP/SS).
- Since 1983, facilities members sit on the County's Interagency Committee on Energy and Utility Management (ICEUM), the County's Electricity Deregulation Task Force and the County's Environmental Policy Implementation Task Force (EPITF).
- The Central Facilities Office has an energy manager on staff as well as a LEED (leadership in energy and environmental design) certified registered architect. These two individuals, and others, review almost all projects for energy efficiency improvements. The master schedule for facilities projects contains a column that identifies which projects have an energy efficiency component.
- The grounds staff on each campus switched from two-stroke engines for the maintenance equipment to four-stroke engines. The grounds staff also uses the best practices of integrated pest management (IPM).
- Facilities review the purchase of every vehicle in order to attempt to purchase the most fuel-efficient vehicle possible.
- Facilities staff members have visited Seneca Meadows Elementary School (LEED Silver) and Shady Grove III (LEED Gold) to get a better understanding of the steps needed in order to qualify for the various levels of LEED certification.
- A facilities staff person researched, found and purchased a biological cleaning device for the GITE auto-shop and the Germantown Facilities auto shop. These devices replaced the previous cleaning devices which used gasoline to clean parts.

### *The Future*

- Working toward LEED certification of the Rockville Science Center and the Germantown Bioscience Center. These buildings will not only be energy efficient but will incorporate programs such as an environmental education program, "green" cleaning, partial storm water management on site, carpool parking spaces, electric car or hybrid car parking spaces, and others. These buildings will also incorporate sustainable design for landscaping.
- Continuing lighting retrofits.
- Recycling to be emphasized and improved upon.
- Replacing aged HVAC and electrical systems that have reached the end of their useful life with new more energy efficient systems.
- Continues to work with parking and transportation management consultants to develop strategies for transportation demand management (TDM) to encourage a reduction in the

use of single occupancy cars.

- Exploration by Montgomery County on the issue of implementation of “green” purchasing program.
- Conserving energy for 70% of the projects on the Office of Central Facilities’ near term calendar.