

UMW'S SUSTAINABILITY POLICIES IN COMPARATIVE PERSPECTIVE



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President's Council on Sustainability, 2017-2018

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The University of Mary Washington is facing two challenges. The first challenge is that confronting all humanity: How should we live in a carbon-constrained world with finite natural resources that are being steadily depleted? The second challenge is unique to higher education: How can UMW distinguish itself from peer institutions, in a cost-effective manner, in order to attract the very best students? By developing and adopting ambitious sustainability strategies, our university can make important headway towards meeting both needs.

Students, faculty, and staff at UMW have long recognized the need to become a greener institution. Aware of the importance of sustainability, UMW promotional material claims that “the University of Mary Washington has been ranked among the nation’s top ‘green colleges.’”¹ The reality, however, is that UMW has not yet earned this distinction; its sustainability policies are barely equivalent to Virginia peer universities like Christopher Newport and Longwood Universities, as will be shown in a comparison between UMW’s policies and those of other public colleges and universities. But this doesn’t have to be the case. UMW has the potential to become a true leader in sustainability, and could do so without significant costs. Accomplishing this would require determination and ambition, along with a real commitment from university leadership to make sustainability a priority. Learning from other schools, this report will provide a set of specific recommendations on how we might more effectively achieve sustainability at UMW in a cost-effective way.

Additionally, the University’s strategic plan calls on “the President’s Council on Sustainability [to] annually update recommendations for steadily reducing the University’s carbon footprint, promoting sustainability initiatives, and enhancing the University’s visibility and reputation as a “green” campus.” This report should serve as a beginning place to have this kind of regular conversation.

SUSTAINABILITY POLICIES IN COMPARATIVE PERSPECTIVE

The table presented below compares UMW’s sustainability policies to four other selected COPLAC schools,² two peer Virginia state schools—Christopher Newport University and Longwood University—and to Appalachian State University, which is a regional public university that is a nationally recognized leader in sustainability. The table reveals several important truths.

The first truth is that the University of Mary Washington is not, at least at the current time, a leading green school. Our sustainability policies are, perhaps, stronger than those of Christopher Newport University, but as a whole they are weaker than those of Truman State and Longwood Universities. Our school unfortunately lags far behind the other universities included on the list.

¹ Morrison, Marty. 2017. “Princeton Review Ranks UMW as a Green College.” UMW Press Release, Sept 21. Available at: <http://www.umw.edu/news/2017/09/21/princeton-review-ranks-umw-green-college-2/>

² Schools which are members of the Council of Public Liberal Arts Colleges.

Comparison of Sustainability Policies Between UMW and Other Selected Universities

School Name	Student Body Size	LEED Building Certification	On-Site or Nearby Renewable Energy	Composting of Food Waste	Green Cleaning Policy	Move-Out Waste Diversion
COPLAC Schools						
University of Mary Washington	4,800	Yes	No	No	No	Yes
St. Mary's College of Maryland	1,675	Yes	Yes	Yes	Yes	Yes
University of Minnesota, Morris	1,800	Yes	Yes	Yes	Yes	Yes
University of North Carolina, Asheville	3,800	Yes	Yes	Yes	Yes	Yes
Truman State	6,000	No	Yes	Yes	No	Yes
Virginia Peer Public Universities						
Christopher Newport University	5,100	Yes	No	No	Yes	No
Longwood University	5,096	Yes	Yes	Yes	No	Yes
Aspirational Regional Public University						
Appalachian State	17,300	Yes	Yes	Yes	Yes	Yes

Comparison of Sustainability Policies Between UMW and Other Selected Universities

School	Sustainability Council	Sustainability Fund	Dedicated Sustainability Staff	Effective Sustainability Website	Organic or Sustainable Landscaping
COPLAC Schools					
University of Mary Washington	Yes	No	No	No	No (Fredericksburg Campus)
St. Mary's College of Maryland	Yes	Yes	Yes	Yes	No
University of Minnesota, Morris	No	No	Yes	Yes	Yes
University of North Carolina, Asheville	Yes	No	Yes	Yes	Yes
Truman State	Yes	Yes	No	No	No
Virginia Peer Public Universities					
Christopher Newport University	No	No	No	Yes	No
Longwood University	No	No	No	Yes	No
Aspirational Regional Public University					
Appalachian State	Yes	Yes	Yes	Yes	Yes

The table also refutes several common misunderstandings about sustainability in higher education. The first misconception is that only private schools, or schools with very large endowments, can afford ambitious sustainability policies. The table featured in this report, however, only considers public schools, none of which are known for having especially large endowments. Similarly, another common misunderstanding is that only very large universities have the capacity to undertake cutting-edge sustainability policies. This is simply not the case; both the University of Minnesota at Morris and St. Mary's College of Maryland are less than half the size of UMW, but both have far greater commitments to sustainability. Finally, another misconception is that ambitious institutional commitments to sustainability are only possible in more liberal political environments like Minnesota or Maryland. But the examples of Appalachian State University and the University of North Carolina at Asheville indicate that major advances in sustainability are possible even in more politically conservative states.

Before moving on to discuss the comparisons in more detail, it should be noted that the data here is provisional, and has been gleaned from the respective universities' websites. The President's Council on Sustainability (PCS), perhaps in collaboration with other members of the university community, should conduct follow-up investigations that might also include interviews and/or site visits at other schools. Additionally, future reports should include additional important sustainability criteria, such as measures of energy efficiency and total amounts of waste produced per student.

LEED Certified Buildings

The University of Mary Washington community takes pride in its LEED certified building policy.³ The school has a policy that all new buildings must be certified at a Silver level or higher, and the Randolph and Mason building restoration on the Fredericksburg campus was LEED certified at a Gold level. While this policy is important, it hardly distinguishes UMW as a top green school. All the universities considered for this report, with the exception of Truman State, have new buildings that meet LEED Silver standards, with several—such as UMN Morris, UNC Asheville, and Appalachian State—with new buildings that are certified as LEED Gold.

Certainly, UMW should continue this policy in LEED certification, but it also needs to look beyond this policy if it hopes to distinguish itself as a green school and if the UMW community wants to take further steps to address climate change and other environmental problems.⁴

³ LEED—or Leadership in Energy and Environmental Design—is a national green building certification. Buildings can be certified at bronze, silver, gold, or platinum levels.

⁴ There is considerable scholarly and public debate about the extent to which LEED building certification actually results in environmentally beneficial outcomes. See for instance Scofield, John H. 2010. "Do LEED-certified buildings save energy? Not really..." *Energy and Building*, 41: 1386-1390. Or see Roy, Avik. 2014. "LEED Certified Buildings are Often Less Energy-Efficient than Uncertified Ones." *Forbes*, April 30. Available at: <https://www.forbes.com/sites/realspin/2014/04/30/leed-certified-buildings-are-often-less-energy-efficient-than-uncertified-ones/#67da61e02554>.

On-Site or Nearby Renewable Energy Generation

The University of Mary Washington and Christopher Newport University are unique among the group of universities examined here due to their lack of on-site or nearby renewable energy generation.⁵ Producing renewable energy on a local level is an extremely important step that our society must take in order to aggressively reduce carbon emissions and avert catastrophic climate change, eventually transitioning away from fossil fuels altogether. But producing energy on, or nearby campus, is also a means by which a university can signal to prospective students and the surrounding community that it has a strong commitment to sustainability.

The amount of renewable energy production at some universities is very modest; examples here include the rooftop solar arrays at UNC Asheville and at Truman State.⁶ But the energy that other universities produce is quite considerable. Longwood University, for instance, heats its buildings with steam generated from locally sourced biofuel, which is sawdust derived from nearby lumber mills. Appalachian State University produces three types of renewable energy: electricity from solar arrays and two wind turbines, along with heat from concentrated solar.⁷ Most impressively, UMN Morris also heats its buildings with locally sourced biomass—dried corn cobs and other agricultural waste—and produces more than half the electricity the university uses on a yearly basis through two large wind turbines adjacent to campus.

Composting Food Waste

Every university considered here, other than the University of Mary Washington and Christopher Newport, composts food waste. Composting turns material destined to the landfill into a valuable soil amendment which some universities, like Longwood and Appalachian State, apply to flowerbeds and other landscaping on campus. Composting food waste is also an important means through which schools can reduce their carbon footprints.

Some universities, like UNC Asheville, contract with outside providers to haul off waste for composting, while others, like Appalachian State, have a compost facility on campus. Smaller universities can face a barrier to composting if they do not produce enough waste to be commercially viable for an outside composting business. The University of Minnesota at Morris met this challenge by partnering with three local elementary schools. UMW will need to begin composting its food waste like other peer institutions if it hopes to become a truly green school.

Green Cleaning Policy

Most of the schools considered here—other than UMW, Longwood University, and Truman State—have policies that ask facilities management to utilize plant-based cleaning products

⁵ This is considered energy or significant heat production. It should be recognized that UMW's Dahlgren campus does utilize geothermal techniques for cooling and heating.

⁶ Though here again, these solar panels likely have a value beyond the renewable energy they produce in terms of the message of sustainability that they communicate.

⁷ Appalachian State is committed to purchasing more renewable energy systems, funded through a student fee.

whenever possible. These products introduce fewer potentially harmful toxins into the school environment and are also much safer for university staff who come in contact with them on a daily basis.

Move-Out Waste Diversion

Community waste facilities receive an influx of trash when students move out of their dorms at the end of the spring semester. Universities can reduce this waste by working with local community partners to create opportunities for students to donate unwanted furniture and other goods, rather than throwing them out. UMW adopted this policy several years ago in order to reduce the amount of reusable materials that were being placed in dumpsters and hauled off campus at the end of each school year. All universities examined here—other than Christopher Newport—have such programs in place.

Sustainability Council

Sustainability Councils create opportunities for cross-campus collaboration between students, faculty, and staff to develop, implement, and oversee university sustainability projects and policies. They also provide an important means to disseminate sustainability-related information across campus. The University of Mary Washington maintains the President's Council for Sustainability (PCS), which meets regularly throughout the semester, similar to four other universities considered here. The University of Minnesota at Morris is unique in that it is a school with otherwise strong sustainability policies without a council. Apart from this exception, the greenest schools examined here have sustainability councils, and it is something that UMW should certainly continue into the future. While UMW has an active council comprised of committed faculty, staff, and students, if the University had a dedicated sustainability budget along with a full-time staff member—rather than a part-time student employee—UMW's PCS could accomplish a great deal more.

Sustainability Fund

Three of the universities considered here—St. Mary's College, Truman State, and Appalachian State—have dedicated funding for sustainability efforts through student fees. St. Mary's Green Revolving Fund, for instance, is replenished through \$35 in fees per student each year. This money is additionally supplemented by funding from 2.5% of the total student government budget. Money from the fund is used to purchase renewable energy credits and to pay for green projects on campus. If these green projects result in increased energy efficiency or otherwise reduce operating costs for the university, the money saved goes back into the Revolving Green Fund in order to make future sustainability investments.⁸ Appalachian State also uses its student sustainability fees to fund renewable energy installations, while Truman State uses fees to fund student-identified green efforts. A green fund can also be used to pay the salary of a dedicated sustainability staff person.

⁸ St. Mary's College. 2018. "The Green St. Mary's Revolving Fund." Accessed April 17, 2018. (Available at: <http://www.smcm.edu/sustainability/support-gsmrf/>)

It's important to note, however, that a sustainability fund—derived from student fees—is not the only way to pay for green projects and sustainability staff. Both UMN Morris and UNC Asheville have significant sustainability efforts and dedicated sustainability staff persons, but this is evidently paid for out of their universities' general operating budgets. Appalachian State seems to fund its sustainability efforts through a combination of student fees and its general operating budget.

Dedicated Sustainability Staff

The leading green schools that are included in this report—St. Mary's College, UMN Morris, UNC Asheville, and Appalachian State—all have a dedicated staff person who does work advancing and coordinating sustainability efforts on campus. Right now, UMW's Office of Sustainability consists of the Director of Landscaping and Grounds, along with a student sustainability coordinator who works ten hours a week during the fall and spring semesters. Beyond these two individuals, whose main focus cannot be sustainability at UMW due to their other obligations and busy workloads, green efforts depend upon faculty, staff, and student members of the PCS and a few student-run clubs. While all these individuals care deeply about the environment and have developed important projects in the past, there is also a widely shared opinion among members of the PCS that, in order to make UMW greener, a professional staff person with an expertise in sustainability is needed.

This person could, for instance, identify and help overcome hurdles UMW faces in food-waste composting, coordinate a student garden and maintain it over the crucial summer season (varieties of which exist at several of the universities considered here), write grants for renewable energy and green projects, and provide more environmental student programming at UMW which—other than Earth Week—is virtually nonexistent. The sustainability director would also provide expertise related to other green energy initiatives on campus such as waste reduction and increasing energy efficiency that would help bring us up to the levels of some of the greenest institutions considered here.

Effective Sustainability Website

In order to distinguish itself from its peers, UMW needs to not only adopt meaningful and forward-thinking green policies, it needs to communicate its commitment to sustainability and its specific policies/programs in a clear and concise way. Compared to other universities, UMW could create a much more compelling and effective website.

Organic or Sustainable Landscaping

UMW's Dahlgren campus features sustainable landscaping, including a living roof and a focus on native plants. These kinds of features, which might also be further explored at the Fredericksburg campus, are in line with pioneering sustainable campus landscaping initiatives at other schools: UMN Morris features a campus orchard and edible landscaping, UNC Asheville is striving to achieve organic landscaping, and Appalachian State has a "sustainable development farm," along with several other campus gardens designed around sustainability principles.

UMW landscaping at the Fredericksburg campus does extremely important work protecting and caring for the University's beautiful trees, for which it has been recognized by the National Arbor Day Foundation as a Tree Campus. UMW also has a "no grow zone" to protect pollinator habitat, and it maintains a lovely perennial garden near Jepson Hall. But the campus should do more to think about how it can further advance sustainability in a comprehensive manner across its grounds, which would also help the university meet new state regulations regarding surface runoff.

SUSTAINABILITY ON A BUDGET: RECOMMENDATIONS

The results of this comparative analysis indicate that UMW is not a top green school. In fact, in comparison with other public colleges, UMW comes out somewhere between the bottom and mid-tiers. This doesn't have to be the case. The comparisons in this report also indicate that UMW could, without too much difficulty, catch up with its national peers and leap ahead of Virginia universities like Longwood and Christopher Newport. Doing so would not only be worthwhile in terms of better distinguishing UMW from other institutions in order to attract the very best students, but also because we are facing a global ecological crisis, which requires organizations of all types to make changes.

It is true that finances are tight and that the University is operating in a difficult budgetary environment. At the same time, the long-term benefits of committing to more sustainable policies here at UMW far outweigh the costs. In conclusion, this report will make several recommendations on how UMW might better achieve its goals of "reducing the University's carbon footprint, promoting sustainability initiatives, and enhancing the University's visibility and reputation as a green campus," as stated in the strategic plan. Making UMW a state-wide leader in campus sustainability is possible, even on a restricted budget, but it will take imagination, bravery, and a real commitment.

Recommendation #1: Create a Sustainability Fund and Hire a Dedicated Professional Sustainability Staff Person

Achieving future sustainability goals requires a professional staff person who has the time, energy, knowledge, and skills necessary to bring new policies to fruition. For example, the UMW sustainability office and PCS have attempted, several times over the past six years, to create both a composting program for food waste and a student garden. When doing so, the group has hit roadblocks that it has been unable to overcome. Having a professional sustainability staff person could help surmount these barriers because he or she would have more time and energy to spend studying the problem, along with the ability to network with potential community partners and to learn from other institutions about their successful programs.

Hiring a professional sustainability staff person does not require the creation of a sustainability fund paid for through student fees, but it might be the easiest route to create this new position. If student sustainability fees were set at \$15 per student each semester, the resulting fund could easily pay for a staff person's salary, while additional money could be used to support student, staff, and faculty-proposed sustainability projects.

Recommendation #2: Compost Food Waste

Composting food waste is an extremely important way that UMW can both cut down on the garbage it sends to the landfill while also reducing its carbon footprint.⁹ UMW and Christopher Newport are the only schools included in this report that do not do already compost. Clearly, it's possible. We only need to make it happen.

Recommendation #3: Increase UMW's Use of Renewable Power

Ultimately, increasing use of renewable energy and phasing out fossil-fuel based energy is not an option if our society is to avoid the worst kinds of impacts associated with unmitigated global warming. But a commitment to renewable energy is also important because it sends a visible message to students and prospective students about the University's dedication to a more sustainable future. There are two possible pathways here, neither of which are mutually exclusive. In fact, UMW might consider adopting both approaches suggested below.

The first option is to produce renewable energy on campus, most likely by installing solar arrays. Upfront costs for renewable energy can be expensive, but these costs can be recovered through reduced energy spending over time and can, perhaps, be further defrayed through grants and other funding from the state and charitable foundations. If upfront costs are prohibitive, the University could consider working with private renewable energy companies that can install solar panels on campus without an initial fee, but then charge UMW competitive rates for the energy produced by such installations in the future.

The second option is to make commitments to increase renewable energy purchases from Dominion Energy or other suppliers. Right now, UMW already purchases renewable energy to power campus, but such purchases are of limited value if they do not constitute a significant amount of the total quantity of energy used on campus, and if such purchases are not communicated to the public and to the university community. But if the University committed to purchasing a certain amount of the total energy it uses per year from renewable sources, and then if it publicized those commitments, it would have much the same symbolic impact as installing solar arrays on campus, but might be even more consequential in terms of reducing the University's carbon footprint.¹⁰ Going further, UMW could adopt a sustainable energy plan with renewable energy targets that progressively increase in future years. For instance, a renewable energy target might start at 30% for 2020, but then slowly increase to eventually become a campus powered by 100% renewable energy by 2050. Whole cities like Atlanta, GA, Minneapolis, MN, and Blacksburg, VA have already made similar, if not more aggressive,

⁹ For a concise overview on the importance of food waste composting in efforts to reduce carbon emissions, see Hawken, Pau. 2016. *Drawdown: The Most Comprehensive Plan Ever Proposed to Reverse Global Warming*. New York: Penguin Books.

¹⁰ UMW might be able to achieve a lower cost for renewable energy if it made its purchases in conjunction with other large public institutions, such as other Virginia colleges or universities. For example, Amherst, Bowdoin, Hampshire, Smith and Williams colleges recently partnered together to make purchases of solar energy. See https://www.amherst.edu/news/news_releases/2018/4-2018/five-leading-liberal-arts-college-partner-to-create-new-solar-energy-facility-in-maine

commitments.¹¹ Right now, 50% of the energy American University uses comes from renewable energy produced off campus, while AU uses additional money to purchase carbon offsets to achieve carbon neutrality.¹² UMW does not, of course, have the same resources as American University. But by following a similar—but less expensive—approach our university would significantly advance its reputation as a green school.

Recommendation #4: Prioritize Sustainability in Landscaping and Purchases

UMW could better prioritize sustainability in its purchasing and landscaping. In terms of purchasing, UMW—like some of the other schools considered here—could adopt a green cleaning product policy. It could also break new ground in other ways, for instance if the university stopped purchasing bottled water for individual, one-time use. The university could also better prioritize sustainability in landscaping by shifting away from annual ornamental plants towards edibles and/or native perennials that do not need to be replaced every year. Going even further, the university could try to move toward an organic model of landscaping, which is UNC Asheville’s goal. Any of these policies would require imaginative thinking, building relationships with university staff, and a willingness to change expectations and old habits.

Recommendation #5: Reconsider/Revise UMW’s Sustainability Communications

Easiest to achieve among these recommendations is a revision of UMW’s sustainability webpage in order to include compelling pictures/visuals and concise information that is regularly updated. St. Mary’s College, UNC Asheville, UMN Morris, and Appalachian State University’s webpages could all serve as models.

Recommendation #6: Regularly Conduct Effective Sustainability Analysis

In the future, the University of Mary Washington should pursue more effective assessment of its sustainability policies. The PCS, UMW’s Office of Institutional Analysis and Effectiveness, and interested faculty and students should regularly follow up with this report, potentially adding or changing criteria, for instance by including measures of the waste produced and energy consumed per student.

While the University participates in Princeton Review’s Guide to Green Colleges, this review does not provide a meaningful means to understand how UMW’s sustainability policies compare to other schools. In order to produce more useful metrics, UMW should consider participating in the Association for the Advancement of Sustainability in Higher Education’s ranking system, which would provide a more meaningful assessment of how UMW compares to other schools and how we might further advance sustainability at our institution.¹³

¹¹ For more information on city and county-wide commitments to renewable energy in the United States, see: Sierra Club. 2018. “100% Commitments in Cities, Counties, and States.” <https://www.sierraclub.org/ready-for-100/commitments>

¹² See: American University. 2018. “American University Achieves Carbon Neutrality.” American University, May 4. webpage, <https://www.american.edu/finance/news/AU-Achieves-Carbon-Neutrality.cfm>

¹³ See: The Association for the Advancement of Sustainability in Higher Education’s “Sustainability Assessment, Ranking, and Tracking System (STARS) <https://stars.aashe.org/>