

PRESIDENTIAL PERSPECTIVES



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Elevating Sustainability Through Academic Leadership

CHAPTER

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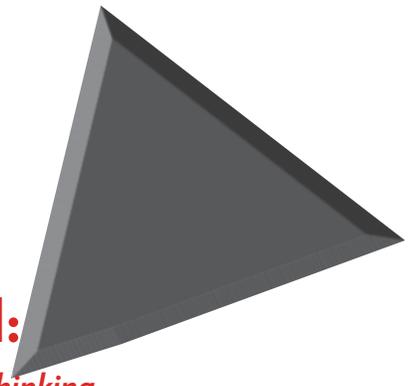
A Sustainability State of Mind:

*Smart Growth for UMaine as
a Green Campus with Blue
Sky Thinking*

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A Sustainability State of Mind:

Smart Growth for UMaine as a Green Campus with Blue Sky Thinking

Dr. Paul W. Ferguson: President of University of Maine

Marten and Samels writing in *The Sustainable University: A Need to Move Forward* (2012) suggest that: “for a chief executive officer or trustee committee chair, sustainability is now as much about strategy as operations, as much about broad institutional identities as individual position papers.” In quoting Anthony Cortese, founding president of Second Nature, they further challenge the placement of sustainability within higher education’s priorities by suggesting that writers “continue to define sustainability as simply environmental, scientific, or technological, rather than as an element of the core mission of higher education: to produce graduates who will shape a thriving civil society...Sustainability is increasingly strategic and perhaps the most persistent wrong that presidents and provosts must now address is that sustainability initiatives are viewed as off to the side when strategic plans are developed for their campus.”

Sustainability definitions vary from an early definition in *Our Common Future* (1987) that “sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs” to the Environmental Protection Agency’s principle (2013) that “everything that we need for our survival and well-being depends either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permits fulfilling the social, economic and other requirements of present and future generations.” Thwink.org (2013), perhaps, cohesively summarizes the definition suggesting that sustainability “is the ability to continue a defined behavior indefinitely.”

This integration of sustainability into the fabric of the core mission of the university—developing a campus “sustainability state of mind”, if you will, is precisely the commitment of the University of Maine. UMaine has implemented a new strategic plan, *The Blue Sky Project* (2012), that embraces the guiding principles and areas of distinction for Maine’s Land Grant University of innovation, interdisciplinarity, inclusivity, sustainability, stewardship, and renewability. This process has renewed commitment to our mission as a 21st Century Land Grant University consistent with the Kellogg Commission on the Future of State and Land-Grant Universities (2001) to “return to our roots, becoming once again the transformational institutions we were intended to be.”



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As proposed in the *University of Maine Climate Action Plan* (2010), such transformation toward a sustainability state of mind can be accomplished by an “overarching institutional focus on climate protection and sustainability in our own research, public policy development, public outreach, and student training and in so doing mount a significant challenge to the widespread but nonetheless specious notion that sustainability is “soft” and generally at odds with “hard” economic development and technological progress.

UMaine’s Land-Grant heritage is a centrally important piece of its *Climate Action Plan* and its ongoing participation in the American College and University Presidents’ Climate Commitment (ACUPCC). Participation in cutting-edge technologies impacting the state’s economic development has been integral to the Land-Grant mission on campus and through the Cooperative Extension Service. As a Land-Grant institution in the 19th and 20th centuries, UMaine collaborated with a dynamic community of its peers to address a wide variety of socially important challenges, ranging from agricultural security and economic/industrial development to environmental protection. In the 21st century, UMaine and sister institutions within Maine and throughout New England (including Land-Grant peers as well as fellow members of the Green Campus Consortium of Maine) who, in addition to focusing on the above issues, are committed to collaboratively addressing challenges related to consumption of energy and materials on respective campuses, procurement of renewable energy, and development of academic and research programs providing society with tools necessary to prosper in the coming era of climate instability and insecurity. The challenges ahead cannot be underestimated, but UMaine anticipates a future where core institutional values of sustainability, renewability, and innovation are used to catalyze societal transformation that is almost certainly necessary.

Sustainability plays a central role in the UMaine Learning Community. Sustainability, renewable energy research and innovation are already important components of the UMaine experience for both undergraduate and graduate students. UMaine is striving to be a “leader in training the next generation of environmental innovators who will be confident in their ability to incorporate the latest and most exciting findings in natural systems and renewable energy research into the day to day workings of the global marketplace” (University of Maine, 2010). The following academic, research, outreach, and management programs reflect UMaine’s commitment, and progress, to a sustainability state of mind:

- On-campus student groups such as the Green Team, Green Campus Initiative, and the University of Maine Sustainability Alliance work with the UMaine Office of Sustainability on climate action planning.
- The UMaine Office of Sustainability, led by the Conservation and Energy Compliance Specialist, encourages diverse and campus-wide sustainability programming including:
 - » Completion of Maine’s first advanced in-vessel composting system for food waste in partnership with UMaine’s Cooperative Extension and Dining Services
 - » Collaborations with Auxiliary Services to promote single-stream recycling, trayless dining in all UMaine commons, growing edible greens to be served in the dining commons, pulping post-consumer food waste, and beginning the Real Food Challenge to expand the use of locally sourced food — currently 17 percent of all Dining Services’ food is from local sources.
 - » Expanding the Blue Bike Project to more than 90 bikes and providing shuttle bus service to more than 175,000 riders annually
 - » Central Steam Plant upgrades that include installation of a 600 kW backpressure steam turbine for electricity generation and a 60,000 lb/hour natural gas-fired boiler designed with the promising capability to utilize landfill gas
 - » Working with Facilities Management on the EPA WasteWise Waste Diversion Program to significantly reduce the volume of waste sent to landfills
 - » Completion of the ACUPCC Greenhouse gas (GHG) Emissions Inventory
 - » Working with students and faculty from the New Media Program to develop the Terrell House Permaculture Living and Learning Center
 - » Managing 13,000 acres of forest with 2,600 acres held by the UMaine Foundation for a “green” land endowment to fund student scholarships and internships



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- Examples of sustainability-oriented degree programs include the MBA Business and Sustainability Track, M.S. degree in Renewable Energy and the Environment with a focus on deepwater wind energy, an undergraduate minor in deepwater wind energy, M.S. in Quaternary and Climate Studies, M.A. in Global Policy with concentration in International Environmental Policy, B.S. in Sustainable Agriculture, and B.S. in Environmental Horticulture with a Sustainable Horticulture concentration.
- Examples of major academic and research centers focused on sustainability include the Climate Change Institute, Advanced Structures and Composites Center (a national leader in offshore deep sea wind development), Forest Bioproducts Research Institute, Center for Research on Sustainable Forests, School of Earth and Climate Sciences, School of Food and Agriculture, School of Forest Resources, School of Biology and Ecology, School of Marine Sciences, and the George J. Mitchell Center, home to the Sustainability Solutions Initiative.
- Over the last five years, UMaine has received nearly \$110 million in extramural funding for sustainability-related research from such agencies as the U.S. Department of Energy, U.S. Department of Agriculture, National Science Foundation, National Institute of Standards and Technology, and the Maine Technology Institute.
- Public Outreach throughout Maine and New England by Cooperative Extension and the National Oceanic and Atmospheric Administration (NOAA)-funded Sea Grant provide education and support related to energy conservation, organic food production, community-supported agriculture, sustainable living, and resilient coastal communities.
- Sustainable energy management and procurement policies and practices by the Division of Administration and Finance between 2002-13 have resulted in:
 - » Increased usage of individual room temperature controls and occupancy sensors across campus.
 - » Total campus trash generation down 35 percent since 2007.
 - » Campus recycling rate for common household materials up 37 percent since 2007
 - » From 2002-05, total campus energy use increased sharply by 33 percent due to addition of approximately 200,000 gsf of new energy-intensive space.
 - » Since 2005, despite an additional growth of approximately 200,000 gsf of energy intensive space, total campus energy use has actually decreased by 5 percent due to fuel-switching and efficiency upgrades. Additionally since 2005, Campus Scope 1&2 Greenhouse Gas emissions have been reduced by 24 percent through use of less carbon-intensive fuels. Campus Carbon Neutrality is projected by 2040.
 - » Actual accumulated 2012 cost savings in avoided costs from trended base calculations since 2005 due to improved campus practices are \$7,400,342 for purchased electricity and \$8,666,905 for purchased fuels.

Such progress and impacts reflecting *smart* growth are noteworthy for their inherent success in reducing the impacts of climate change and ensuring a sustainable university. The University of Maine has been recognized for such efforts by the Princeton Review's Guide to Green Colleges for the past four years, a member of the Princeton Review Green Honor Roll in 2011 and 2012 (one of only 16 universities nationwide), and awarded LEED® certification on five university buildings (one LEED, three Silver, one Gold).

UMaine looks to continue this progress through: additional strategies transforming the campus-built environment with focus on super-efficient new construction, deep energy retrofits, and resilient design; innovative operations where most material is recycled, reused, composted, or donated; expansion of on-campus food production, and encouraging statewide initiatives that may address emerging climate trends such as described in *Maine's Climate Future: An Initial Assessment* (Jacobson, et.al., 2009).



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In the recently released *President's Climate Action Plan* (2013) the necessity to address climate change and promote sustainability is clear. Although this challenge speaks to all Americans, higher education leaders should be especially challenged to respond to the call: "Climate change represents one of the greatest challenges of our time, but is a challenge uniquely suited to America's strengths. Our scientists will design new fuels, and our farmers will grow them. Our engineers [will] devise new sources of energy, our workers will build them, and our businesses will sell them. All of us need to do our part."

This challenge is uniquely suited to higher education leaders who are best positioned to foster a vital cultural and societal change, to move intentionally in shaping a comprehensive sustainability state of mind. Such a state of mind will clearly benefit our bottom line, saving dollars and cents in an environment of fiscal challenge while also preserving our sense of mission and place promoting communities of enlightened citizens. This approach, which at UMaine we now refer to as *Blue Sky Thinking*, requires creative conversations and a focused return on investment coupled to a positive outlook for the future; a future dependent upon strategic sustainability.

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Dr. Paul W. Ferguson became the 19th president of the University of Maine in July 2011. President Ferguson is leading the University of Maine through an inclusive, campus-wide strategic planning process known as the *Blue Sky Project* where the University aspires to become the most student-centered and community-engaged of the American Research Universities.

Dr. Ferguson began his academic career on the faculty of the University of Louisiana, Monroe School of Pharmacy, becoming an award-winning professor, Head of the Division of Pharmacology and Toxicology, and eventually, Vice Provost and Dean of Graduate Studies and Research. He continued his administrative career eventually becoming Vice President for Research and Graduate Studies at the University of Nevada, Las Vegas where he facilitated UNLV becoming a premier research university. Prior to arriving at UMaine, Dr. Ferguson served as Provost and Vice Chancellor for Academic Affairs at the Edwardsville campus of Southern Illinois University. President Ferguson, a Southern California native, graduated from Whittier College with a B.A. in Biology and from the University of California, Davis, with a Ph.D. in Pharmacology and Toxicology.