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The Paradox of “Sustainable Development”:
A Critique of the Gulf Park Campus Master Plan
(An Essay by Lacy Lawler, Gulf Coast Eco-Eagles)

Of a Place: Gulf Park-on-the-Sound

On the Mississippi Gulf Coast, there is a university where nearly every window frames a breathtaking view. Looking south across the campus of the University of Southern Mississippi Gulf Park, a panorama of white sand beach dominates the middle ground, with the distinct lines of Cat Island visible on the horizon across the ever-mutable, multicolored spectacle of the Mississippi Sound. From second story windows, centuries-old Southern live oaks that dot the landscape can be appreciated in all their magnificence. One of them, the famous Friendship Oak, is thought to have been a sapling when Columbus arrived in 1492. Between classes, students can take in the sights and sounds of a natural freshwater stream—teeming with red eared sliders, spiny softshell turtles, frogs and brim—as it meanders through the center of the property. It is picturesque and unique, the only university campus situated on the Mississippi Gulf Coast. Its biome—a combination of wetland, artificial pond, natural stream, oak savannah and formal landscaping—is fragile and complex. However, a growing student population requires that the university look at expanding and developing the Gulf Park campus, perhaps at the cost of the living land and waters. Can Gulf Park's ecosystems, its unique water, land, flora and fauna, be preserved while still accommodating the institution's needs for growth? That's the question being examined here.

USM released the Gulf Park Campus Master Plan in 2016 to “provide a guide for the growth and enhancement of the Gulf Park campus” (9). There are four main goals identified by the plan: (a) to deliver state-of-the-art learning environments, (b) to preserve and protect the aesthetics of the existing campus, (c) to promote a sustainable and resilient campus, and (d) to provide cost effective solutions to ensure long-term value. (20). This paper will look at the master plan from a sustainable development perspective.
Sustainable Development
Sustainable development has been criticized as an oxymoron (Redclift 2010). After all, the words sustain, as in maintain, and develop, as in grow, are contradictory. The term is most commonly described as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (WCED, 1987). The concept encompasses three areas: economic development, social equality, and the natural environment (UN, 2011) (Figure 1). Achieving sustainability in one area without neglecting another is challenging. Deep ecologists argue that economic development is unsustainable because it has, traditionally, depleted resources and deteriorated the natural environmental. Nevertheless, economic development is usually given top priority when it comes to institutional policy making. Regardless of its complexities, sustainable development is now widely considered “the new paradigm to development” (Lélé).

Most development practices used today, however, are neither cost-efficient nor environmentally-friendly. If we rely on finite natural resources to build and maintain facilities, for instance, development will become increasingly costly over time as resources continue to dwindle. Plus, development in certain environments destroys fragile ecosystems. Sustainable development, thus, favors environmentally-friendly building practices that use renewable sources and previously-developed land, that is, land with existing manmade structures.

USM made a commitment to sustainability in 2008, when the president of the university, Dr. Martha Saunders, signed the American College and University Presidents’ Climate Commitment (ACUPCC). The ACUPCC “is a high-visibility effort to address global warming by garnering institutional commitments to neutralize greenhouse gas emissions, and accelerate the research and educational efforts of higher education to equip society to re-stabilize the earth’s climate” (Medlin, 2008). In his “Letter from the President” prefacing the USM master plan, Dr. Rodney Bennett reiterates this commitment when he writes that “creating a sustainable campus” is one of the “key principles
of this new plan” (3). The section labeled *Sustainability + Resilience* promotes “reducing the economic and environmental costs associated with constructing and operating campus facilities, and preserving undeveloped land, which protects habitats” (27.) The following paper examines the master plan in these terms, and attempts to reveal if USM is, in fact, committed to “sustainable development” at Gulf Park.

**CHALLENGES OF DEVELOPMENT**

Sustainability will prove challenging at Gulf Park as it faces two obstacles in development: (a) the limited amount of space and (b) the physical environment of the location. The freshwater stream that runs through the campus forms a natural bayou. Bear Point Bayou and the wooded wetlands located on the property are typical landscapes of the coastal bioregion. Because of the fragile ecosystems, developing these areas is not a viable option. This limits the amount of space the university can use.

Natural hazards associated with this region should also be taken into consideration as the school continues to develop. The property has been heavily damaged by several strong hurricanes in the past and will no doubt face one again. In fact, the university has only recently completed reconstruction from Hurricane Katrina. The flooding, high winds, and tornadoes associated with hurricanes are all risks that have to be planned for. Any future development at Gulf Park should be built to withstand the coastal environment.

**GOALS OF THE MASTER PLAN**

*State of the Art Learning Environments*

Six of the fourteen proposed projects in the plan are presented in *Learning Environments* (29). The plan admits that the school is lacking indoor communal spaces for students; therefore this section introduces several new extracurricular buildings. A Student Resource Center, Wellness Center, and Executive Education Center (EEC)
are all new buildings introduced in this section. The construction of fourteen new projects on 52 acres of fragile ecosystems does not sound environmentally friendly. Construction alone will produce carbon emissions from equipment and dumpster loads of trash for the landfill. Once completed, the projects have the potential to change drainage patterns, and impede storm water removal, as well as interfere with the root networks of the legacy oak groves. Other than mentioning “storm-resistant materials and construction” (27) and stating that buildings will continue to be built in a “uniform Spanish architectural style” (18), the plan says nothing else about how buildings will be constructed.

To give due credit, the university did agree to “Establish a policy that all new campus construction will be built to at least the U.S. Green Building Council’s LEED (Leadership in Energy and Environmental Design) Silver standard or equivalent” when it signed the ACUPCC (usm.org). But because LEED certification has become so convoluted the process has been heavily criticized for being little more than “greenwashing” (Schnaars & Morgan, 2013). According to the U.S. Green Building Council, the organization that developed LEED standards, “the newest version of LEED is designed to be more flexible and improve the overall user experience” (USGBC.org). That statement gives the impression that the council is more concerned with development than sustainability. Living ecosystems tend to be somewhat “inflexible” too. If you remove a keystone species, sometimes an entire biome will just collapse.

For reasons such as these, the Urban Land Institute’s (ULI) Sustainable Development Council challenged LEED standards in 2012. This organization also developed the Building Healthy Initiative as an alternative to LEED. However, the ULI concedes that, “LEED is here to stay; it is too well established in the marketplace to fade away” (Spivak, 2013). In future versions of the master plan for Gulf Park it would be beneficial if USM were to include more information about construction methods and materials. It might actually be cheaper to follow the LEED Standards to sustainability than not. Solar power and energy efficiency are a case in point.
LEED states that it is typically more efficient to modify existing buildings for alternative energy production and efficiency than it is to demolish an existing one and start from scratch: “Consider that it can take up to 80 years to make up for the environmental impacts of demolishing an existing building and constructing a new one, even if the resulting building is extremely energy efficient” (“LEED for Building Operations + Maintenance”). USM would not need to demolish existing buildings and start from scratch to become an alternative energy producer and engineer greater efficiency into our currently obsolete buildings (See McMillan, et al, below, this volume). Instead, we would make improvements in our current systems of transportation, waste management, water efficiency, energy usage, and environmental quality to nudge ever closer to true sustainability. Many universities around us have successfully achieved LEED certification on already constructed buildings, and we can, too. Even if we do not achieve a Platinum rating (80+ points), simply getting the Fleming Center or the Nursing Building LEED certified (40+ points) would a huge step toward a more energy efficient, sustainable campus. Unfortunately, the Master Plan makes no mention of any of this, which is too bad.

I. PRESERVE AND PROTECT THE AESTHETICS OF THE EXISTING CAMPUS

One aim stated under this heading is to “protect and enhance unique natural features that shape the campus character” (20). Two of the unique natural features that should be protected on the property are Bear Point Bayou and the Friendship Oak.

Bear Point Bayou is created by a natural stream that runs across campus. The bayou is home to numerous turtles—especially red eared sliders--and a multitude of other plant and animal species. The willows, cypresses, and other trees bordering the bank make the space appealing. The fountain in the center of the pond serves as another visual element, while adding an audible dimension to the space as well. Two wooden
walkways span the bayou so pedestrians can cross from one side to the other. Both the chimney site on the south side of the bayou and the FEC patio on the north are popular spots for students to congregate.

The Friendship Oak is located in the center of campus. Said to be over five hundred years old, the tree is well-known regionally and draws visitors to the university. For all of the school’s history, some 97 years, students have enjoyed the shade of the massive tree, while professors have used the space for outdoor learning, with some even conducting minor research on the historic oak. The cultural significance and striking beauty of the tree adds intrinsic value to the campus. The legend of the oak, dating from the old Gulf Park College days, is that those who meet under its branches will always be friends. The natural elements located throughout the property not only add character to the school but also give the campus a “sense of place” (44).

Universities are where many people experience the most transformative years of their lives. In his article, *The Power of Place on Campus*, Earl Broussard writes, “Universities have a unique and disproportional influence on the self-development process, and thus an obligation to create a bond between the student and the university”. By fostering the relationship students have with the campus environment, the university encourages a strong sense of place. Oxford’s *Dictionary of Geography* defines “sense of place” as “either the intrinsic character of a place, or the meaning people give to it, but, more often, a mixture of both”. Simply put, it is an individual’s relationship to a place. The Gulf Park campus offers a variety of landscapes that contribute to the sense of place and character of the university. Cultural geographer John Jackson, in *Discovering the Vernacular Landscape*, even goes so far as to state, “it is place, permanent position in both the social and topographical sense that (sic) gives us our identity”. Scholars from many disciplines have, like Jackson, begun to consider ways that place may be as significant a factor in determining human identity as race, gender, class, ethnicity and sexuality.

In *Aesthetics of the Campus*, the USM master plan acknowledges
that “landscapes are a pivotal components of the environment”. At the same time the plan insists that “landscape improvement projects enhance the... campus”. This statement expresses a certain ambiguity about what “landscape” actually means.

There is a great difference between the verb “landscape” and the noun “landscape”. The former describes an artificial process of terraforming land to suit particular “aesthetic” ideals; the latter, one would assume, is synonymous with an existing natural landform, such as the oak savannahs, wetlands and vegetation at Gulf Park, for instance. To terraform an existing landscape can be disastrous to the living land. Again, the paradox of “sustainable development” tends to go unexamined in the master plan.

Under Aesthetics of the Campus, one encounters plans for development of outdoor learning plazas, promenades, and quadrangles. These outdoor learning plazas are shaded areas provided with tables and chairs. They are designed to give the campus a unified, cohesive look. The promenades are “significant pedestrian connections” that will serve as the major east-west and north-south axis (.47). Materials for these projects will be laid out in the next step of the plan. There is no way of knowing if USM will use conventional impermeable materials to construct the hundreds of yards of proposed walkways or perhaps use something more environmentally-friendly . . . such as one of the various “permeable pavers” that filter rainfall down into the soil, and the aquifer, rather than causing it to run off in ditches, drains and eventually the sea. The proposed quadrangles are green spaces designed for communal events. There are two proposed in the plan and both will serve as hubs for the surrounding buildings. These spaces will replace two large parking lots. Although the plan proposes adding more parking around the periphery of campus, which , will add to the overall amount of impermeable surface, it does suggests using “bioswales”--drainage courses dug with gently sloped sides and filled with vegetation or crushed stone--to channel surface water runoff away from the parking lots.
II. PROMOTE A SUSTAINABLE AND RESILIENT CAMPUS

The four subtopics under *Sustainability + Resilience* are “Storm Water Management, Storm Resistant Construction, Solar Orientation, and Land Preservation”. As previously mentioned, sustainable development must balance social, economic, and environmental factors. In this section of the plan, the first sentence talks about not only conserving natural resources but economic resources too.

The first subtopic looks at implementing better storm water management as one way to protect the environment from pollution. Better preparing for storm water will help with flooding. In conjunction with using bioswales as previously discussed, planting more trees around the grounds to divert runoff are both sound storm water management strategies that the plan would like to see implemented.

Because tropical downpours and cyclones are a part of life in this region, the second subtopic also deals with storms. Siting buildings so they do not flood is one way for the campus to protect economic and environmental interests. This section is the only place where construction materials or methods are mentioned in the plan, and only in relation to storms. The plan references “elevating buildings” and “using water-resistant materials” as two recommended development strategies (27). While this type of construction is consistent with local building codes—which were themselves upgraded after Hurricane Katrina--USM should consider the use of alternative construction methods and materials that are better suited for the specific environment of this particular place.

To make use of passive solar heat in the winter, the plan insists that new buildings should be oriented with regard to the direction of sunlight. This would help reduce operation costs, the goal under the third subtopic. In the discussion of solar energy, however, there was no consideration given to using solar panels as an alternative power source. This is an untapped source of energy that
could be utilized to offset energy consumption. As solar technology has improved by leaps and bounds, the cost of solar panels has fallen sharply. Any number of universities around the US have found ways to save on power bills while also reducing their carbon footprint. The University of North Carolina for instance, has incorporated solar panels to warm a dorm building and make hot water (unc.edu). Dozens of other examples could be presented (See McMillan et al, this volume). As discussed above, LEEDS researchers found that the carbon footprint of retrofitting existing building for alternative energy production is much smaller than building from the ground up. Why have no provisions for solar power and solar water heaters made their way into the Master Plan? The lack of such is distressing.

Lastly, the Master Plan proposes “protecting undisturbed land from development” (27). The only area identified for protection in this section, however, is the wooded wetland located at the northeast corner of the property and Bear Creek Bayou. And yet again the focus is on flooding, rather than preservation, as the plan mentions that leaving these areas alone will ensure an “adequate area” for the water to “ebb and flow during storm events” (27).

III. PROVIDE COST EFFECTIVE SOLUTIONS TO ENSURE LONG-TERM VALUE

*The Planning Vision* states that the first three goals are “designed to meet the fourth goal”, cost effectiveness (25). By keeping cost-effectiveness primary while pursuing the other goals, however, the plan ensures economic development remains the top-priority. The objectives of the last goal are to “maximize the intrinsic value of existing land and facility resources” and “obtain requisite funding from university, state, federal and private sources over the next 10 years to implement identified development plans” (21). The term “intrinsic value”, expresses the central paradox of the master plan and indeed of the entire sustainable development paradigm. What is “value”? When something is valued intrinsically, the worth is determined by the feelings or
memories individuals associate with the object. Rarity, history, and beauty are all qualities that can determine the value a person places on an object or place. Beautiful natural objects and places can have a value, in other words, that “economic development” may actually destroy . . . even if it is only through economic development that resources can be mustered to preserve and protect those objects and places!

This has been the central paradox behind the preservationist movement ever since John Muir championed the expansion of the national parks over 100 years ago. The mission statement of the National Park Service expresses this paradox perfectly, as Edward Abbey pointed out in his 1968 classic Desert Solitaire: “The National Park Service preserves unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations.” The question Abbey poses is the same question posed by “sustainable development” at Gulf Park: can such “enjoyment, education and inspiration” be effected without impinging on that preservation? Can the Friendship Oak, the south lawn oak grove, the wetlands around Bear Point Bayou, the south-facing viewscape and the other “intrinsic values” of this beautiful place be preserved while also “maximizing” the educational mission of the institution?

Many details of the Master Plan should trouble anyone cognizant of the inner contradictions of “sustainable development”. The lack of attention given to sustainable construction methods and materials in the plan is currently the biggest disappointment. Although future plans may discuss these in greater detail, a preference for green building and paving practices should at least be mentioned if the university intends to use them. And the failure to even mention—amid the current revolution in solar energy—the possibility of PV power at Gulf Park is positively inexplicable. The Master Plan stipulates that the early 20th-century Spanish Colonial style of architecture of the old Gulf Park College be preserved, but the plan also preserves the wasteful construction and energy practices of the late 20th-Century. This paradox, among others, appears to remain unaddressed in USM’s
CONCLUSION

One path out of this quandary may be through the educational mission of the University itself. The concept of place-based education has recently come to the forefront of modern education as a way of establishing a sense of place, thus encouraging sustainability. David Sobel defines the term as,

“The process of using the local community and environment as a starting point to teach concepts in language arts, mathematics, social studies, science and other subjects across the curriculum. Emphasizing hands-on, real-world learning experiences, this approach to education increases academic achievement, helps students develop stronger ties to their community, enhances students’ appreciation for the natural world, and creates a heightened commitment to serving as active, contributing citizens. Community vitality and environmental quality are improved through the active engagement of local citizens, community organizations, and environmental resources in the life of the school.”

Sobel’s vision is within reach, given that the Gulf Park Master Plan already acknowledges that, “learning occurs in a range of formal and informal campus environments” (29) and projects the use of outdoor educational spaces. By offering a variety of new spaces the university can practice a more holistic approach to education and conservation, but this is only a first step.

Recent student initiatives may point the way forward towards a more sustainable and ecoliterate campus. For instance, the Friendship Oak offers the exact kind of pedagogical value Sobel extols. The university already benefits from the value the Friendship Oak adds by the amount of visitors drawn to see it. Earlier this semester, students
discussed the idea of selling Friendship Oak saplings to finance rebuilding and maintenance of a campus green house. Ideas like this are paramount to successfully integrating sustainable development practices into the university; they would ensure preservation and sustainability while also benefiting the university economically.

The need and desire for universities to expand and grow can be predicted as college enrollment continues to rise. However, the grounds of Gulf Park cannot be replicated or duplicated, so therefore must be preserved. The USM administration will have to find innovative ways to balance the need for expansion while maintaining the ecological integrity of the landbase. Nothing that damages the landbase, as Aldo Leopold would remind us, can possibly be considered “sustainable”. USM is caught in the bind between sustainability and growth. It recognizes the uniqueness of the campus and understands that its unique sense of place gives the property intrinsic value, but at the same time needs to exploit and develop that property. Through the practice of place-based education—education shaped by and based on the unique, beautiful biome of this place, Gulf Park—USM can cultivate an ecoliterate campus culture with a root structure that reaches into the surrounding communities. My best hope is that through the long term cultivation of an ecoliterate culture of place the shortcomings of the current plan may be assuaged.

**Works Cited**


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