

13.0 CONSERVATION ELEMENT

13.1 Introduction

Prior to submittal of the initial conceptual permit, the site of Florida Gulf Coast University underwent a detailed analysis of the existing environmental conditions. This analysis included vegetation mapping using newly flown aerial photography, on-site flagging of jurisdictional wetland boundaries (ACOE, DEP, SFWMD), securing of binding jurisdictional determinations, surveying of jurisdictional lines, and wildlife surveys. All of this information was utilized in the preparation of the 1995 Campus Master Plan, and incorporated in the USACOE dredge and fill permit application and the SFWMD conceptual permit application. These permit applications were filed in February 1994, and permits have since been granted.

As a result of this process, the University's program for environmental conservation is well underway. The USACOE and SFWMD permits define the way in which the campus must be developed and the natural environment maintained. No additional development outside of the initial conceptual permit is proposed or contemplated at this time. Consequently most of the policies in the following section reference the provisions defined in the environmental permits.

13.2 Goals, Objectives and Policies

GOAL 1301

Develop the campus of Florida Gulf Coast University in a manner that conserves, protects, restores, and enhances the natural ecosystems and natural resources (See Figures 13-1 through 13-4).

Objective 1301.1 – Protection of Air Quality

Develop facilities that meet National Ambient Air Quality Standards as well as State ~~and local~~ air quality standards.

Policy 1301.1.1

Design and develop University facilities in accordance with applicable federal and ; State ~~and local~~ air pollution, standards and permitting procedures.

Policy 1301.1.2

Improve air quality by restricting vehicles on Campus and through Transportation Element policies designed to discourage dependence on the personal automobile as the primary transportation mode on campus, and to encourage the use of alternative modes of transportation on-campus (i.e., bicycles, public transit, etc.).

Policy 1301.1.3

Encourage laboratory users to modify their operations as needed to minimize the discharge of pollutants from laboratory exhaust hoods. The University shall install appropriate filtering devices on fume hoods and minimize the storage and use of volatile and hazardous materials in campus buildings.

Policy 1301.1.4

The University shall monitor both indoor and outdoor air quality. Indoor sampling shall occur at chemistry laboratories, kitchens, and other sites where fumes are produced. Outdoor sampling sites shall include parking lots and congested intersections. Failure to meet air quality standards adopted by the Florida Department of Environmental Protection (FDEP) shall result in an assessment of the probable cause and the preparation and implementation of a plan to improve and maintain air quality.

Objective 1301.2 – Conservation and Protection of Quantity and Quality of Water Resources.

Design and develop facilities in a manner that conserves, appropriately uses, and protects the quantity and quality of water resources.

Policy 1301.2.1

Develop the University campus in accordance with the surface water management plan defined in the SFWMD Conceptual Permit.

Policy 1301.2.2

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Design and develop campus landscape that utilizes native vegetation to the extent practicable and appropriate, retains existing native vegetation and applies xeriscaping principles to conserve water.

Policy 1301.2.3

Design and develop University facilities in adherence to federal and ; State ~~and local~~ water use permits.

Policy 1301.2.4

Protect water quality on-campus by following the management practices defined in the General Infrastructure Element.

Policy 1301.2.5

The University shall not undertake activities on-campus that would contaminate groundwater sources or designated recharge areas, unless provision has been made to prevent contamination or otherwise provide mitigation for such activities so as to maintain water quality and quantity standards.

Policy 1301.2.6

The University shall mitigate the impacts of University-generated stormwater-borne pollutants through the implementation of a system of Best Management Practices, which includes but is not limited to:

- a) Incorporating stormwater management retention and detention features into the design of parks, trails, commons, and open spaces, where such features do not detract from the recreational or aesthetic value of a site;
- b) Use of slow release fertilizers and/or carefully managed fertilizer applications timed to ensure maximum root uptake and minimal surface water runoff or leaching to groundwater;
- c) Educating maintenance personnel about the need to maintain motor vehicles to prevent the accumulation of grease and other fluids on impervious surfaces, where they might be conveyed to surface or ground waters by runoff, and the need to regularly collect and properly dispose of yard debris;
- d) Avoid the widespread application of broad-spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified targeted species;
- e) Coordinating pesticide application with irrigation practices to reduce runoff and leaching to ground water;
- f) Consider turf blocks to minimize impervious surface area;
- g) Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.

~~Minimize stormwater borne pollutants generated as a result of University operations and maintenance practices of adhering to the management practices identified in the General Infrastructure Element.~~

Policy 1301.2.7

Protect and conserve the natural functions of soils, rivers, and floodplains on the campus by:

- a. Adhering to the policies defined in the conservation element.
- b. Adhering to State, local and federal environmental permits, when received.
- c. Instructing architects, engineers, landscape architects, etc., designing facilities for the University to identify modifications to facility programs or site plans that would improve the functions of soils, rivers and floodplains.
- d. Instructing University personnel involved in maintenance activities on the campus in the proper procedures for use and disposal of hazardous and toxic substances.

Policy 1301.2.8

Limit construction in designated floodplains to facilities which have relatively small impacts on the floodplain, minimal impervious surfaces for example, and which retain floodwater capacities in as close to natural conditions as possible, such as recreational and athletic fields.

Policy 1301.2.9

The University shall continue to implement comprehensive water conservation measures, to include:

- a) Compliance with ~~S~~FWMD conservation program requirements;
- b) Limiting the hours of outdoor irrigation;
- c) The use of automated timers and other irrigation flow monitoring equipment;
- d) Xeriscape landscaping procedures; and
- e) The use of low-volume and ultra-low volume fixtures.

Policy 1301.2.10 ~~1301.4.4~~

Provide on-campus facilities for collection/storage of hazardous materials used in University operations as required by federal, state and local regulations. Provide for disposal of such materials in accordance with applicable regulations.

Objective 1301.3 – Conservation and Protection of Native Vegetative Communities and Wildlife

Develop the University campus in harmony with the land's natural characteristics by conserving, protecting, restoring and enhancing native vegetative communities and wildlife habitat to the extent practicable and appropriate.

Policy 1301.3.1

Develop the campus with natural areas that are comprised of a system of interconnected restored, enhanced and created wetlands linked with upland buffers and preserves, as shown in Figures 13-1 through 13-4 and the environmental permits for site development.

Policy 1301.3.2

Conserve and protect the wetlands that are designated for preservation/restoration on the University campus in a manner that maintains wetland soils, re-establishes wetland hydroperiods, eradicates exotic vegetation, and restores native wetland vegetation and wildlife habitat, as defined in the environmental permits for site development.

Policy 1301.3.3

Conserve and protect the native upland vegetation adjacent to wetland restoration areas on the campus, and in accordance with environmental permits for site development.

Policy 1301.3.4

Preserve and restore on-campus wetland areas and adjacent upland buffer areas as potential wildlife habitat, by removal of exotic vegetation and maintaining them free of exotic infestation.

Policy 1301.3.5

Design roads and other horizontal site improvements crossing wetlands and upland buffer areas in a manner which will facilitate wildlife movement among those areas and to minimize mortality associated with road crossings.

Policy 1301.3.6

Plant and wildlife species protected by law will be addressed during site development in accordance with federal and ; State ~~and local~~ regulations, and the environmental permits for site development.

Policy 1301.3.7~~8~~

The University shall, in its C.I.P. submissions, identify and request funding for actions necessary to implement the Conservation Element of the Campus Master Plan and maintain conformance with the environmental permits for site development.

Policy 1301.3.8

The University shall use native plant species in restoration or enhancement plantings. The use of native plant species in general campus landscaping shall be encouraged.

Policy 1301.3.9

It is the intent of the University to remove from campus grounds all non-native or exotic invasive plants (whether grasses, forbs, shrubs or trees) that are identified by the Florida Department of Agriculture and Consumer Services (Division of Plant Industry) as Noxious Weeds or identified by the Florida Department of Environmental Protection (Bureau of Invasive Plant Management) as Prohibited Plants. As these species are located on campus, the University shall coordinate with Division of Plant Industry and Bureau of Invasive Plant Management to ensure the proper removal of these exotic species.

Policy 1301.3.10

The University shall continue to protect and conserve known endangered and threatened species of plants and wildlife, and species of special concern, as required by the Endangered Species Act of 1973, as amended, Chapter 372, F.S., Chapter 39, F.A.C., and federal and state management policies relating to the protection of threatened and endangered species and species of special concern.

Policy 1301.3.11

During the initial design phase of any programmed improvements to the campus, the University shall perform a census of wildlife and plants in the area to be affected where appropriate. Plants or animals identified in the "Official Lists of Endangered & Potentially Endangered Fauna and Flora in Florida", which is updated annually by the Florida Game and Fresh Water Fish Commission, or otherwise afforded protection by the host communities and local, state and federal agencies, shall be noted. Protection plans for listed species shall be formulated consistent with those of the host communities and appropriate state and federal agencies.

Policy 1301.3.12

University personnel shall, when encountering listed species, follow procedures and seek consultation with the appropriate agencies as identified in the Florida Game and Fresh Water Fish Commission's Wildlife Methodology Guidelines (January 15, 1988).

Objective 1301.4 – Conservation of Energy

Develop the University site and facilities in a manner that conserves energy.

Policy 1301.4.1

Energy conservation fixtures, air conditioning and lighting systems, and other building specific energy use and management techniques shall continue to be a required element of all new and renovated buildings on campus. ~~Design University facilities to conserve energy using design principles identified in policies stated in Element 3.0, Urban Design, and Element 15.0, Architectural Design Guidelines.~~

Policy 1301.4.2

Design all University buildings with facilities to accommodate collection, storage, and disposal of recycled materials.

Policy 1301.4.3

Coordinate on-campus recycling programs with those of local government in regard to materials collected, and disposal/collection procedures.

Policy 1301.4.4

Encourage walking and biking on campus through Transportation Element policies designed to reduce dependence on the single-occupant automobile as the primary mode of transportation.

Policy 1301.4.5

Continue review procedures for mechanical and electrical equipment replacement that shall guarantee improved energy efficiency with the incorporation of new equipment.

Policy 1301.4.6

Where feasible, buildings on campus shall be equipped with devices to automatically reduce energy usage in rooms and buildings not in use, including programmable thermostats for air conditioners and sensors that automatically turn off lights.

Policy 1301.4.7

The University shall continue to investigate the possibility of using alternative energy sources.

Objective 1301.5 – Funding of Conservation Activities

Provide funding for conservation activities as required to fulfill preceding policies.

Policy 1301.5.1

Request funding for conservation activities in C.I.P. submissions, separate from other construction projects.

Policy 1301.5.2

Complete all projected wetland mitigation activities indicated in the Capital Improvements Elements by 2015 (ten years), as funding allows.