

### 13.0 CONSERVATION ELEMENT

In order to appropriately manage native vegetative communities and wildlife habitats, campus expansion must be in accordance with local, state and federal regulations and when practicable, conform with various agency guidelines and policies. Landscape efforts will utilize native vegetation. Avoidance or minimization of wetland impacts and the establishment of upland buffers adjacent to wetlands will be implemented where feasible. Unavoidable wetland impacts will be mitigated. The undeveloped upland habitat will be left in its natural state when possible. Adverse impacts to protected wildlife species will be mitigated in accordance with local, state and federal guidelines. A depiction of these areas to be protected is shown in [Figure 13.1](#).

To minimize adverse impacts to localized air quality and maintain existing good air quality conditions, UNF will manage its stationary sources of air discharges through an organized preventative maintenance and inspection program. Points of discharges such as boilers and laboratory flues will be inspected regularly to ensure their operations are within applicable regulatory standards. Implementation of preventative maintenance of stationary sources will reduce the probability of unexpected releases of air pollutants as well as establish a reliable management tool.

UNF will periodically submit its review of the hazardous waste stream inventory to the City of Jacksonville with the goal of reducing both the volume and the potential hazardous impact of this waste. Where possible, less hazardous materials will be substituted for more hazardous materials. The purpose of such replacement will reduce the potential for more serious accidents affecting the environment, reduce the generation rate of hazardous waste on campus, and reduce the volume of hazardous wastes contributed by the University to landfills elsewhere. It is an objective of the University to minimize hazardous waste accumulation points on campus and implement a system of Best Management Practices to safely manage these locations.

UNF will attempt to utilize water from stormwater retention ponds for irrigation purposes to the extent practicable. Identification and utilization of other sources of water reuse will also be a goal as the campus continues to grow. UNF will implement engineering design features (such as water conserving plumbing fixtures) into future campus buildings to conserve its water demand from the existing city water supply system.

UNF will promote and expand existing recycling programs throughout the campus. Through support of on-campus organizations, recycling and reuse programs will be developed to reduce solid and regulated waste volumes and provide sources of revenue to support other conservation-oriented programs on campus. The University will continue to promote the use of recycled materials such as paper and recycled plastics to support the recycle market.

UNF will continue to reduce energy costs through the ongoing development of solar energy alternatives with the JEA. Energy efficient building design options will also be studied and if practicable implemented. In conclusion, this Master Plan provides for the long-range growth and expansion into most of the remaining upland areas, if required. Naturally, no campus development will occur without thought and consideration to existing regulations and regard to the existing natural environment.

## 13.0 CONSERVATION ELEMENT

**GOAL 1: The University of North Florida (UNF) shall conserve, protect and provide for the appropriate management of its natural resources and conservation areas.**

**Objective 1.1 UNF shall continue to facilitate conservation programs that protect the campus air quality and allow for the conservation and appropriate utilization of existing and future energy sources throughout the remainder of this 10-year plan.**

Policy 1.1.1 UNF shall initiate a preventative maintenance and inspection program of its stationary sources of air discharges to minimize the generation of on-campus air pollution. At a minimum, this program shall consider the following:

1. An inspection of all known points of discharge including boilers and laboratory flues.
2. Preparation and the submittal to the City of Jacksonville of an annual summary report which identifies needed maintenance improvements.

Policy 1.1.2 UNF shall reduce mobile sources of air pollution 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 1.1.3 UNF shall continue to promote existing recycling programs that strive to support the programs at UNF presently funded and initiated by the City of Jacksonville. UNF shall also encourage and support future recycling program initiatives sponsored by the University's students or faculty, where deemed appropriate.

Policy 1.1.4 Where feasible, existing buildings shall be retrofitted with energy conserving lighting fixtures.

Policy 1.1.5 New buildings shall be equipped with energy efficient lighting devices and be designed to take maximum advantage of available natural lighting.

Policy 1.1.6 Where feasible, buildings on campus shall be equipped with devices to automatically reduce energy consumption in rooms and buildings not in use, including programmable thermostats for air conditioners and sensors that automatically turn off lights.

Policy 1.1.7 UNF shall continue to reduce energy costs through the ongoing development of solar energy alternatives with the JEA.

Policy 1.1.8 UNF shall study energy efficient building design options and if practicable integrate positive features into new buildings and/or retrofit existing structures.

Policy 1.1.9 In order to protect the campus air quality, UNF shall, either on its own volition or through a cooperative effort with the City of Jacksonville, establish an air quality monitoring station at the campus.

**Objective 1.2 UNF shall comply with applicable water quantity and quality consumption and protection programs including those addressing impacts to wetlands of the Florida Department of Environmental**

**Protection (FDEP), the St. Johns River Water Management District (SJRWMD), the U.S. Army Corps of Engineers (USACOE) and the City of Jacksonville.**

**The SJRWMD has determined that UNF does not fall within a regional aquifer recharge area, that minimal demands for irrigation do not necessitate a determination of cones of influence and further, does not recognize the existence of any rivers on the UNF campus.**

Policy 1.2.1 UNF shall maintain its Consumptive Use Permit (CUP) with the SJRWMD throughout the remainder of this ten (10)-year planning period, which ensures the protection and restriction of on-campus wellfields.

Policy 1.2.2 UNF shall, to the extent practicable, utilize existing stormwater retention ponds for irrigation purposes.

Policy 1.2.3 UNF shall continue to minimize stormwater borne pollutants through the Environmental Resource Permit (ERP) process and through the implementation of a system of Best Management Practices (BMPs), which includes, but is not limited to:

1. 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.
2. The 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.
3. Educating maintenance personnel about the need to maintain motor vehicles to prevent the accumulation of oil, grease and other fluids on impervious surfaces, where they might be conveyed to surface and ground waters by runoff, and the need to regularly collect and properly dispose of yard debris.
4. Avoiding the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified targeted species.
5. Coordinating pesticide application with irrigation practices to reduce runoff and leaching to groundwater.
6. The use of turf blocks to minimize impervious surface area.
7. Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.

Policy 1.2.4 UNF shall continue to protect and conserve the natural campus environment by maintaining the following practices:

1. Compliance with applicable FDEP, SJRWMD, USACOE and City of Jacksonville regulations and procedures.
2. The establishment of conservation areas as shown in the Future Land Use Map (Figure 4.1).

Policy 1.2.5 UNF shall comply with all applicable federal, state and local regulations impacting the development of floodplain areas and/or jurisdictional wetlands and shall comply with the mitigation procedures required to offset such development impacts.

Policy 1.2.6 UNF shall continue to comply with those regulations adopted by the FDEP, SJRWMD, USACOE and City of Jacksonville that provide for the existing designation and subsequent identification of on-campus environmentally sensitive lands.

Policy 1.2.7 UNF shall cooperate and support the City of Jacksonville's efforts to utilize reclaimed water as an efficient means to meet on-campus irrigation needs.

Policy 1.2.8 UNF shall conserve water and reduce chemical use through the use of xeriscape design principles, which include but are not limited to:

- Use of drought tolerant and native plant material;
- Use of low volume delivery fixtures;
- Zoned irrigation systems;
- Moisture sensors and rain switches;
- Use of canopy trees; and
- Use of soil amendments and mulch to enable soils to retain moisture.

Policy 1.2.9 In order to track potential pollutant loading of the surface waters of the campus and in the context area, UNF shall establish water quality monitoring stations at all the lakes on the campus and at least one station each at Boggy Branch, Buck Head Branch and Sawmill Slough.

**Objective 1.3** **UNF shall comply with and abide by applicable native vegetative and wildlife habitat protection and conservation programs and procedures of the U.S. Fish and Wildlife Service (USFWS), the Florida Fish and Wildlife Conservation Commission (FWC), the Florida Department of Agriculture and Consumer Services (FDA) and the City of Jacksonville.**

Policy 1.3.1 UNF shall minimize destruction of vegetative communities and undeveloped upland parcels (see [Figure 13.2](#)) and known wetlands by complying with state, local and federal regulations concerning development of wetlands and by adhering to the City of Jacksonville Tree Ordinance and the UNF Landscape Design Guidelines adopted as part of this plan.

Policy 1.3.2 UNF shall maintain a minimum buffer of 25 feet for those upland areas adjacent to existing known on-campus wetland areas. This buffer requirement may be waived under the following circumstances.

1. Needed transportation improvements including future road construction and parking areas.
2. Recreation and open space facilities with the exception of building improvements.

3. Utility improvements including stormwater retention, water and sewer lines, electric and telecommunication lines and other utilities and general infrastructure requirements as determined by the University's Vice President of Administration and Finance.
4. Building improvements in areas already shown within the 2005-2015 Master Plan Update.

Before any encroachment into the buffer area is authorized and a plan of development approved, UNF shall review all available environmental and economic options (including the costs of mitigation). If this review indicates that encroachment into the buffer area is the only viable option, then UNF will pursue all reasonable efforts to minimize and mitigate any unavoidable impacts.

Policy 1.3.3 UNF shall continue to protect and conserve endangered and threatened species of plants and wildlife, and species of special concern, as required by the Endangered Species Act of 1973, amended by Public Law 97-304 in February 1983, Chapter 372, Florida Statutes, Chapter 39, Florida Administrative Code, and federal and state management policies. Regulatory agency-approved, species specific Best Management Practices will be utilized during any construction at the campus.

Policy 1.3.4 UNF shall continue to utilize the Florida Committee on Rare and Endangered Plants and Animals (FCREPA) list and the Convention of International Trade in Endangered Species of Wild Fauna and Flora (CITES) list as a consensus planning mechanism for the development of the UNF campus over the ensuing ten (10)-year planning period.

Policy 1.3.5 UNF shall allow wetland and/or wildlife mitigation on those parcels designated as upland conservation areas as shown in the 4.0 Future Land Use Map (Figure 4.1).

Policy 1.3.6 UNF shall coordinate with the Florida Fish and Wildlife Conservation Commission and other appropriate governmental entities in the preparation of an appropriate strategy for the management of gopher tortoises and commensal organisms.

Policy 1.3.7 UNF shall avoid, to the maximum extent possible, development of existing scientific research sites and areas with documented populations of rare or listed species as shown in [Figure 13-1](#).

Policy 1.3.8 UNF shall protect, to the maximum extent possible, the existing natural communities present within the conservation areas designated along the western side of the campus. Design of passive recreation features will be in strict adherence to state and federal regulations and will be accomplished with minimal disturbance to the natural environment.

Policy 1.3.9 UNF shall develop a land management plan for all conservation areas on campus with the goal of maintaining the integrity of the natural communities that are present.

Policy 13.3.10 UNF shall restrict vehicular access to all conservation areas and wetland areas on the campus with the exception of authorized university staff and contract employees for maintenance or scientific research purposes.

Policy 13.3.11 UNF shall, if feasible, relocate all rare or listed species from proposed development zones to the conservation areas of the campus.

Policy 13.3.12 UNF shall designate the "Sawmill Slough Preserve" on the Master Plan in perpetuity as a deterrent to any development occurring in this area. "Development" in this area is defined as any buildings, structures or roads, other than the proposed western ridge road, that would impact or be a detriment to the vegetation and habitat with this preserve.

**Objective 1.4 UNF shall reduce the volume and degree of hazardous wastes generated by University facilities.**

Policy 1.4.1 UNF shall adopt "Hazardous Waste Management Principles" as a part of implementing a series of Best Management Practices to safely manage hazardous wastes on campus.

Policy 1.4.2 UNF shall maintain a hazardous waste inspection and initiatives program that, at a minimum, considers the following:

1. Adherence to the principles established by the "Hazardous Waste Management Principles".
2. A periodic inventory of hazardous waste accumulation points.
3. Continued evaluation of ideas and initiatives that help replace more hazardous waste discharge with less hazardous waste discharge.
4. Continued evaluation of ideas and initiatives seeking to reduce the volume discharge of hazardous waste that is consistent with recycling program initiatives developed and adopted by UNF.

Policy 1.4.3 UNF shall adhere to existing hazardous waste management policies and laws established by the Environmental Protection Agency (EPA) and the Florida Department of Environmental Protection (FDEP).