This section includes discussion on the Environmental Health as well as physical safety issues on the University. For additional discussion on environmental and safety issues reference the urban design, infrastructure, and conservation sections.

The University is committed to a learning and employment environment where faculty, staff, and students are protected from the risk of injuries as a result of being exposed to health and safety hazards. These risks can be found in numerous settings on campus ranging from workshops, chemistry and biology laboratories and even office environments. The main state of the art health and safety standards are the Federal Occupational Safety and Health Administration (OSHA) standards, which the University has adopted.

In addition to compliance with University health and safety regulations the University is morally and legally bound by the need to follow regulations, which protect the natural environment around us. These regulations are promulgated and enforced by various agencies such as the Department of Environmental Protection, the State Health Department, the Nuclear Regulatory Commission and other state and federal agencies.

Building codes have a large influence on the safety and habitability of buildings on campus. Structural integrity, life safety and fire marshal regulations must be strictly adhered to during renovations and new construction on campus.

The Department of Environmental Health & Safety (EH&S) is tasked with ensuring compliance with these safety, environmental and building code mandates. Below are listed some of the programs and committees for which EH&S is responsible.

Occupational Safety Programs
A) Chemical Hazard Communication
B) Hearing Conservation
C) Personal Protective Equipment
D) Shop Safety
E) Forklift Safety
F) Welding Safety
G) Asbestos/Lead Abatement, Awareness
H) Confined Space Entry
I) Heat Stress
J) Indoor Air Quality
K) Fire Safety
L) Respiratory Protection
M) Academic Diving
N) Bloodborne Pathogens
O) Lab Safety/Chemical Hygiene Plan
P) Personal/Environmental Monitoring
Q) Safety/Environmental Training
R) Laser Safety
S) Safety in the Arts
T) Electrical Safety
U) Lock-out/Tag-out
V) Contractor Safety
W) Accident Investigations
X) Safety Audits
Y) Trenching and Shoring
Z) Ergonomics

Hazardous Materials Management
A) RCRA Hazardous Waste
B) Contractor Hazardous Waste
C) Special Regulated Waste Disposal/Recycling
   (Bulbs/Ballast, Batteries, Toner Cartridges)
D) Biological/Medical Waste
E) Radioactive Waste
F) Underground/Aboveground Storage Tank Management

Building Code Administration/Facilities Inspections
A) Life Safety
   1) State Fire Marshal Inspections
   2) Pre/Post Occupancy Construction Inspections
   3) Fire Extinguisher Annual and Monthly Inspections
   4) Water-based Fire Protection System Inspections
   5) Exit and Emergency Light Monthly Inspections
B) ADA Compliance
C) Building Construction Inspection & Permitting (proposed)
D) Building Interior/Exterior Safety Inspection Audits
   1) Lighting Surveys
   2) Building/Area Safety Inspections
   3) Laboratory Inspections
   4) Response to “unsafe” conditions by the University
   5) Indoor Air Quality Investigations
E) Regulatory Permitting
   1) Potable Water Quality
   2) Boilers
   3) Wetland Issues

Emergency Planning
A) Hurricane Preparedness
B) SARA Title III
C) Chemical Spill Response

Risk Management (In Collaboration with Human Resources & Controller’s Office)
A) Safety Awareness Training
B) Injury Reporting
   1) First Report of Injury
   2) Accident/Injury Trend Data Collection
C) Cost Reduction Activities
   1) Early Return to Work Programs
   2) Managed Care Program
   3) Case Management
D) Coordination with External Agencies
E) Maintaining State Required Accident/Injury Reports
F) Managing and Maintaining Records of Non-Occupational Liability and Property Insurance Claims

Government Regulatory Enforcement/Oversight Agencies
A) Department of Environmental Protection (DEP)
B) Department of Labor & Employment Security (DLES)
   1) Division of Safety
   2) Division of Workers Compensation
C) Department of Health/Escambia County Health Department
D) State Fire Marshal
E) Local Emergency Planning Council (LEPC)

University Environmental Health & Safety Committee
A) Charter
B) Responsibilities
C) Objectives
D) Membership

Committees with Environmental Health & Safety Related Components
A) Animal Care and Use Committee
   1) Charter
   2) Responsibilities
   3) Objectives
   4) Membership
B) Campus Safety and Security Committee
   1) Charter
   2) Responsibilities
   3) Objectives
   4) Membership
C) HIV/AIDS Committee
   1) Charter
   2) Responsibilities
   3) Objectives
The Escambia County Utilities Authority (ECUA) funded a study entitled Numerical Modeling of Ground Water Flow and Contaminant Transport in the Sand-and-Gravel Aquifer, Escambia County, Florida, dated June 1993. This document, prepared by the Northwest Florida Water Management District (NWFWM), provides comprehensive data and analyses regarding well field cones of influence. The Sand-and-Gravel Aquifer is the main groundwater-producing zone within Escambia County and provides UWF with its potable water supply.

There are 26 wells within a 5.0 mile radius of the UWF Campus. ECUA operates nine wells south of the campus, Gulf Power Crist Steam Plant operates six wells and Monsanto operates eleven wells north of the campus. Despite the concentration of wells within this area, the relatively high transitivity (a function describing the rate at which water moves through an aquifer), 8,000 sq. ft./day, will allow additional withdrawals to meet UWF needs. There is a significant reduction in the elevation of the potentiometric surface (the elevation to which groundwater would rise if not confined) in the vicinity of the Monsanto and Champion International wells to an elevation 10 feet below MSL. This pumpage effectively isolates the groundwater flow system in the north from the southern portion of Escambia County. The UWF Campus lies within the northern groundwater flow system with the boundary between the north and south zones occurring along Interstate 10.

Aquifers and Areas of Aquifer Recharge

An aquifer is a geological formation of suitable permeability for the transmission of usable quantities of groundwater. There are three major aquifers located in Escambia County, Florida.

The uppermost aquifer is known as the Sand and Gravel Aquifer and it is composed mainly of sand with lenses and layers of clay and gravel. The thickness of the Sand and Gravel Aquifer is variable and ranges from 400 to 1000 feet. The Sand and Gravel Aquifer provides the potable water supply for the UWF Campus.

Below the Sand and Gravel Aquifer lies an impermeable micaceous clay layer or aquiclude. This clay acts as a confining layer and traps the groundwater in the underlying limestone formations. The upper limestone formation is known as the Upper Floridian Aquifer. The Upper Floridian Aquifer is approximately 100 feet thick in the vicinity of the UWF Campus.

Underlying the Upper Floridian Aquifer is a layer of clay known as the Bucatunna Clay Member of the Byram Formation. This clay is approximately 100 feet thick and acts as an aquiclude.
There are eight known locations of septic tanks on the main UWF Campus. On the eastern end of the campus, the Day Care Center (Bldg. 42), the ERC for Child Development (Bldg. 43), Records Retention (Bldg. 48), and Archeology (Bldg. 49) are served by septic tanks. Other buildings that are served by septic tanks include its close proximity to the Escambia River and Thompson Bayou as well as the significant topographic relief in the area. The method of recharge of the Sand and Gravel Aquifer, the movement of groundwater from high to low elevations, leaves it vulnerable to contamination. Because the recharge occurs off campus, it is beyond UWF control; however, the Escambia County Comprehensive Plan, Florida Department of Environmental Protection (DEP) and NWFWMD presently address groundwater contamination through land development regulations, environmental rules and consumptive use permitting. An adequate, safe, potable water supply should be available for future development needs.

**Air Quality**

UWF is located in Escambia County, Florida and falls under the regulatory jurisdiction of the Florida Department of Environmental Protection (DEP). Presently, the Northwest District Air Quality Division is only required to monitor sulfur dioxide (SO₂), nitrogen oxide (NOₓ), and particulate matter with a diameter equal to or less than 10 microns (PM 10). No air quality data is collected for carbon monoxide (CO), hydrocarbons (HC) or volatile organic carbons (VOC), but NOₓ monitoring is expected at all O₃ monitoring sites in the near future. The DEP most recently conducted water quality sampling of the Escambia River on four occasions during water year 1992. Although the sampling station is located approximately 50 miles upstream of the UWF Campus near Century, Florida, the water quality information gained can be an indicator of the relative health of the aquatic ecosystem. The dissolved oxygen (DO) concentration ranged from 6.3 to 7.6 mg/l and the fecal coliform bacteria concentration ranged from 29 to 340 colonies per 100 ml of sample. A DO concentration equal to or greater than 5 mg/l is considered to promote a healthy ecosystem while a coliform bacteria concentration equal to or greater than 300 is cause for concern. It should be noted that the U.S.G.S. sampling station is located immediately downstream of two publicly owned wastewater treatment facilities, and the presence of coliform bacteria is not surprising.

**Location and Description of Known On-Campus Septic Tanks and Grease Traps**

There are three known grease trap locations on the main UWF Campus. Located in the center of the Campus, the Commons (Bldg. 22) has four - 2,600 gallon (gal) grease traps to serve the Campus cafeteria. The Day Care Center (Bldg. 42) and the ERC for Child Development (Bldg. 43) have a 750 gal. and 1,000 gal. grease trap respectively. Field observations have documented that these grease traps are not always used by the intended users, and grease can end up in the wastewater system. The method of recharge of the Sand and Gravel Aquifer, the movement of groundwater from high to low elevations, leaves it vulnerable to contamination. Because the recharge occurs off campus, it is beyond UWF control; however, the Escambia County Comprehensive Plan, Florida Department of Environmental Protection (DEP) and NWFWMD presently address groundwater contamination through land development regulations, environmental rules and consumptive use permitting. An adequate, safe, potable water supply should be available for future development needs.
However, stormwater runoff contains particulates and other constituents known to have a significant negative impact on sensitive receiving water ecosystems. The proper treatment of stormwater runoff is central to the long-term welfare of the UWF Campus. Rates of pollution discharge and levels of contamination are storm event dependent.

Pollution Reduction Techniques

Pollutants generated by stormwater runoff are generally known to occur in the first one-half inch of runoff. With all new construction on the UWF Campus, the Florida Administrative Code 17-25 (FAC) requires the construction of retention structures to hold the first one-half inch of runoff. The runoff is retained until it filters through the ground or artificial media so that contaminants are removed prior to its reaching the sensitive wetlands and surface waters that surround the UWF Campus.

Presently, there are no stormwater runoff retention requirements for structures constructed prior to the enactment of 17-25 FAC. Pollution could be reduced on the UWF Campus by developing additional retention structures to collect the contaminated runoff and treat it prior to its release.

Additional pollution reduction could also be obtained by creating artificial swales lined with selective vegetative species to enhance nutrient removal. The UWF faculty has research expertise in selective vegetation that could be employed.

Safety Issues

Personal safety has increasingly become an important issue on Campus. Proactive efforts over the last several years that have created a safer environment for Students and Faculty including additional lighting at pedestrian walks, escort programs (just two it), emergency phone systems (blue phones), and the clearing of undergrowth for visual security.

Safety by design is a concept wherein physical development on Campus considers personnel safety as a program requirement. Consideration for personnel safety should extend from the site into the building. Proper lighting and avoiding isolation of individuals are critical components of this concept. The infill approach noted in the Urban Design section furthers safety through the congregation of people.

It was suggested that a shuttle to move students across Campus might serve to reduce the incident of crime.

Crime on Campus remains relatively low and consists mostly of minor disturbances however there have been instances of date rape and stalking. Other reported crimes include binge drinking and theft. The police report the need for additional student safety educational programs and greater interaction with the student population.

CRIME STATISTICS

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Dormitory monitoring should be increased. It was noted that relatively fewer reports of vandalism and disruption occur in the smaller dorm facilities (under 250 rooms) suggesting a greater sense of community responsibility in the smaller dorm environment.

Disaster Preparedness and Prevention

Disaster Preparedness includes continued development of appropriate emergency preparedness plans in coordination with appropriate local government agencies as well as the physical development of emergency shelters. Florida Statute (F5) 240.295 (4) indicates new facilities should be constructed as hurricane facilities.

Hazard Evacuation Plan

Certain employees are expected to remain on campus during hurricanes to carry out essential operations. They are required to man duty stations at the points essential work is to be performed.

The new de facto Board of Regents for the State University System of Florida established criteria for approved shelters. The criteria are currently being evaluated in conjunction with evacuation requirements established by Escambia County Emergency Management. As a result, the University is currently in the process of determining shelter needs for students, staff and faculty. Florida Statutes dictate that appropriate shelters be developed on Campus.

Goals, Objectives, and Policies


Objective 1.1: Management of hazardous wastes including radioactive materials, biomedical waste, asbestos, lead and PCB’s to protect natural resources and human life.

Policy 1.1.1: Implement hazardous material handling and storage procedures to include as a minimum the proper containerization, classification and labeling of all hazardous waste.

Policy 1.1.2: Standardize secured storage facilities for on-campus hazardous materials.

Policy 1.1.3: Provide training programs for staff and faculty.

Policy 1.1.4: Utilize only licensed hazardous waste transportation and disposal companies.

Policy 1.1.5: Implement a multi-phase plan to replace PCB Ballast lights with energy efficient fluorescent light (to be funded with state appropriations).

Goal 2: To formalize a department policy that promotes a safe campus environment.

Objective 2.1: To formalize a department policy that promotes a safe campus environment by maintaining all external campus lighting systems/fixtures in a high state of operation and repair.

Policy 2.1.1: In order to maintain a safe environment for all students, faculty, staff and others using the heavily wooded Pensacola campus at night, replace all inoperable lamps within a 24-hour period. This includes repair of all external lighting systems/equipment within this same time frame and/or providing temporary lighting as may be required.

Policy 2.1.2: The University Police will identify all lighting systems/equipment each night that are not working properly to include “burned out” lamps, systems/fixtures not working, tree/shrub “pruning” that may be required, construction area/contractor related lighting issues, etc. Reports will be made to Facilities Management on a daily basis.
### Policy 2.1.3:
The University Police will forward these trouble calls/service requests by no later than 8:00 a.m. the next day to the Facilities Management work control center. Accurate location, description of the problem, and pole number is required. In extreme circumstances, an electrician may need to be "called-in" the same night to repair critical lighting circuits/systems. This will be coordinated between the University Police night supervisor and Facilities Management personnel.

### Policy 2.1.4:
Once the Facilities Management has received the trouble call/service request to repair non-operating lighting system/equipment, every effort will be made to make those necessary repairs within a 24-hour period. This may require overtime work, out-sourcing to contractors, and/or the implementation of a night electrical crew during the academic school year time frame.

### Policy 2.1.5:
All exterior campus lighting trouble calls/service requests will be "tracked" and reported on a weekly basis. This will include date/time received and date/time completed. All incomplete work will require appropriate justification and an estimated completion date for the work.

### Policy 2.1.6:
The University Police should notify Facilities Management for any lamps/fixtures that have not been repaired/replaced within the 24-hour time frame. These should be noted as "2nd or 3rd requests with a comment indicating the date/time the original request was forwarded to the Facilities Management work control center.

### Policy 2.1.7:
Twice a year at the start of the Fall and Spring academic semester, a campus lighting survey will be conducted after dark with administrators, students and staff representatives. The Environmental Health and Safety Office will take the lead in coordinating these surveys to include preparing a list of recommendations for improved levels of illumination as required. Facilities Management and University Police personnel will also participate in these surveys. A lighting report indicating the condition and maintenance of these lighting systems will be prepared on a semi-annual basis and shared with the overall University community.

### Policy 2.1.8:
Architectural and Engineering Services will maintain "up-to-date" CAD drawings indicating the locations of all exterior lighting systems/fixtures to include appropriate "pole" or similar number systems.

### Policy 2.1.9:
Assessment of campus lighting and Blue Light systems should be made concurrent with all proposed new development.

### Goal 3:
Formalize a policy that promotes a safe working environment for all faculty and staff.

#### Objective 3.1:
Conduct routine safety visits to various campus work areas and promote safety awareness.

#### Objective 3.2:
Insure compliance with current occupational health and safety standards and other recognized resources.

#### Objective 3.3:
Insure departments maintain chemical inventories, have material safety data sheets available, and are informed about the hazardous chemicals in their working environment.

### Goal 4:
The continued protection of life and property as relates to other natural disasters.

#### Objective 4.1:
To reduce the hazards borne by natural disasters such as hurricanes.

**Policy 4.1.1:** To continue to build facilities according to the building codes prevailing but in particular as regards wind loads.

**Policy 4.1.2:** To continue the meetings of those department heads most directly responsible for the protection of life and property within the University campus; i.e., Environmental Health and Safety, University Police, Architectural and Engineering services, and Facilities Planning.

#### Objective 4.2:
To increase the availability and use of University facilities in support of state and local evacuation and sheltering requirements.

**Policy 4.2.1:** Continue to have hurricane preparedness meetings of those department heads responsible (directly and/or indirectly) for the protection of life and property; with especial emphasis on the upgrading of the UWF emergency preparedness handbook, and ensure consistency with the local area's hurricane evacuation plan and procedures.

**Policy 4.2.2:** Continue to evaluate and ascertain those facilities on campus best suited for a "command center" for core personnel. According to the State University System Emergency Shelter Space Assessment (February 1994), there were no public shelter space available on the University campus.

Currently Buildings 22, 51, 52, 74, and 86 are used as shelters for those students and staff unable to evacuate from the Campus.

**Policy 4.2.3:** The University will continue dialogue with the individual requests from various utilities companies to utilize certain open areas as staging areas for equipment, emergency management personnel and such.

**Policy 4.2.4:** The University shall provide facilities for use as public shelters in compliance with FS 252.385 and 240.295 (4).

**Policy 4.2.5:** Upon completion of the shelter survey, the University shall identify those facilities that are to be retrofitted to comply with the public shelter standards and criteria adopted by the Florida Department of Community Affairs. These facilities will be scheduled for retrofitting for use as public shelters as needed.

**Policy 4.2.6:** The University will identify facilities for use as evacuation shelters as required by FS 252.
Objective 4.3: To design and build future facilities considering service as public shelters as required by statute (re: 240.295(4), F.S.) and such standards as might be adopted by the BOE.

Policy 4.3.1: To require, in new building programs, when applicable, the answering of the statutory requirements applicable for designing and building University facilities to serve as public shelters; i.e.: new buildings or portions thereof shall be constructed in accordance with public shelter standards unless the Board of Education, with the concurrence of the local emergency management agencies and the Department of Community Affairs, exempts the building or part thereof from shelter standards because of location, size or other characteristic.

Policy 4.3.2: To require, in building retrofits and renovations, when applicable, the answering of the statutory requirements for designing and building University facilities to serve as public shelters.

Policy 4.3.3: To consider the following large open areas on campus to be designated for use as staging areas for personnel, resources and supplies in the event of an emergency:

- The sports complex on the east campus.
- The intramural fields adjacent to the core campus.
- The various helicopter pads about the campus.
- The large parking lot adjacent to the (24 hour Broadcasting) public radio station: WUWF-FM
- Other areas as found applicable

Objective 4.4: To maintain and/or reduce hurricane evacuation time for University personnel and students.

Policy 4.4.1: In the event of a hurricane condition, the University President may cancel classes and recommend to all faculty, students and staff that they evacuate.

Note: Certain core personnel will stand their duty stations to protect the property.

Objective 5.1: Minimize potential hazards.

Policy 5.1.1: When financially feasible and funded – remove existing septic tank.

Policy 5.1.2: When feasible all new construction should be placed on the sewer system.

Policy 5.1.3: Existing storm water run off and retention systems should be reviewed and upgraded if pollution problems are noted.

Policy 5.1.4: All new development should include adequate storm water management facilities that reflect UWF’s goals.

Policy 5.1.5: All land directly disturbed should be carefully maintained to avoid accidental discharge of pollutants.

Policy 5.1.6: All maintenance staff should have training on the correct handling and disposal methods of potentially hazardous materials.

Policy 5.1.7: Adoptions of Architectural and Engineering Standards that include long lasting, durable, recycled and recyclable materials should be adopted.

Policy 5.1.8: All proposed maintenance and renovation projects should be reviewed for potential hazards including asbestos and lead.

Policy 5.1.9: Continue to construct outside of the 100-year flood plain.

Goal 5: Formulate a policy to minimize negative effects on the environment by concentrating new development in the core and away from more sensitive ecosystems.