STORMWATER MANAGEMENT

GOAL 1: To provide an on-site storm water management system which, to the extent possible, provides for adequate system capacity to protect campus populations and facilities, while remaining sensitive to the natural functions and environmental attributes of the campus' native plant and animal communities.

OBJECTIVE 1.1: To correct existing storm water permitting deficiencies, if any, by modifying the existing SJRWMD stormwater master permit.

POLICY 1.1.1: The University shall continue to implement the St. Johns River Water Management District (SJRWMD) approved UCF Stormwater Master Plan. The University's Facilities & Safety shall be responsible for the continued permitting of the stormwater management system. The plan shall continue to recognize a variety of implementation priorities to (1) eliminate existing system deficiencies, if any, (2) maintain the existing system, and (3) expand the system to accommodate new drainage needs. A stormwater permit data bank shall be maintained to monitor modifications and additions to the permit from ongoing design and construction projects. Such monitoring data shall be electronically maintained and provided to all staff, consultants and reviewing agencies as requested.

POLICY 1.1.2: UCF shall design and construct stormwater management ponds, as necessary, during the planning period. The proposed location of these ponds is identified in the master stormwater permit. The timing and phasing requirements and priorities for these stormwater management improvements are driven by the Capital Improvements Element.

OBJECTIVE 1.2: To coordinate future campus development with the provision of adequate storm water management system capacity.

POLICY 1.2.1: Any future development on the UCF campus which increases the amount of impervious surface area shall be approved per the provision of an on-site drainage system which serves the proposed development area under one or more of the following St. Johns River Water Management District (SJRWMD) permitted level of service standards:

1. Building finished floor elevations shall be a minimum 1' above the measured/calculated 100- year floodwater elevation,

2. Stormwater quality treatment shall be on a basin by basin basis. Basin storm water ponds will be provided treatment per the following: greater of (a) 2.5" times the area of impervious surface or (b) the calculated first 1" of runoff for the basin.

3. Post development stormwater discharge from the campus shall be less than the predevelopment discharge rate for the 25 year/24 hour storm event as determined per the approved SJRWMD Master Stormwater Plan.

4. UCF shall strive to exceed this standard by implementing changes so that post development discharge volumes will not exceed the predevelopment discharge volumes for the 25 year/24 hour storm event.

POLICY 1.2.2: Any proposed increase in campus impervious surfaces shall be implemented only upon verifying that existing facility capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line at the time of need. In this respect, the University shall maintain a record of existing and committed impervious surface areas relative to the agency approved permit maximums, as amended.

POLICY 1.2.3: Pursuant to the St. Johns River Water Management District (SJRWMD) regulatory permit requirements, the University's Storm water Management Sub-Element shall continue to take into account those off-site stormwater flows which travel through the campus' wetlands and drainage basins.

POLICY 1.2.4: The University shall rely upon the stormwater system permitting criteria and processes of the SJRWMD to coordinate drainage issues with off-campus entities.

OBJECTIVE 1.3: Through the year 2025, UCF shall protect natural drainage system functions by (1) generally prohibiting development within the campus' existing jurisdictional wetland areas, (2) by maintaining a common pre-post development rate and volume of stormwater discharge for newly developed areas and, (3) by maintaining or reestablishing normal wetland hydro-period elevations.

POLICY 1.3.1: The UCF Facilities Planning and Construction Department shall be charged with reviewing all proposed development projects to ensure that increases in impervious surface can be accommodated in the capacity of the existing and/or committed drainage system.

POLICY 1.3.2: No storm water discharges shall cause or contribute to a violation of water quality standards in waters of the State.

POLICY 1.3.3: UCF shall continue to mitigate University-generated storm water and to minimize stormwater borne pollutants through the implementation of a

system of Best Management Practices (BMPs), which includes, but is not limited to:

- Incorporating stormwater management retention and detention features into the design of parks, trails, commons and open spaces, and building roof tops where such features do not detract from the recreational or aesthetic value of a site.

- Using slow release fertilizers and/or carefully managed fertilizer applications timed to ensure maximum root uptake and minimal surface water runoff or leaching to groundwater.

- 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.

- Avoiding the widespread application of broad spectrum pesticides by involving only purposeful and minimal application of pesticides, aimed at identified targeted species.

- Coordinating pesticide application with irrigation practices to reduce runoff and leaching to groundwater.

- Incorporating features into the design of fertilizer and pesticide storage, mixing and loading areas that are designed to prevent/minimize spillage.

POLICY 1.3.4: The University shall design all storm water management facilities to retain on-site all volume of runoff generated by the University and shall not adversely impact adjacent property. At a minimum, the University will design the systems consistent with the SJRWMD criteria. Post development stormwater discharge volumes from the campus shall be less than the predevelopment discharge volume for the 25 year/24 hour storm event.

POLICY 1.3.5: The University shall prioritize the use of stormwater and reuse water for irrigation as follows:

1. Reclaimed water from the Iron Bridge for all landscape irrigation if possible.

2. Irrigation from existing stormwater ponds when possible and practical.

3. Reduce, minimize, and eliminate, where possible, the use of groundwater for irrigation.

OBJECTIVE 1.4: To improve the existing SJRWMD permitted stormwater management system when possible and funding is available.

POLICY 1.4.1: The University shall identify storm water basins that do not meet current SJRMWD standards, develop an improvement plan that will meet current standards, and implement the plan when funding is available.

POTABLE WATER SUB-ELEMENT

GOAL 2: To continue to produce and provide quality potable water to the campus with reliable backup sources.

OBJECTIVE 2.1: To ensure that adequate potable water supply and distribution piping is available for both new and re-developed facilities.

POLICY 2.1.1: The University shall periodically design and construct potable water system improvements to (1) eliminate existing system deficiencies, (2) maintain/improve the existing system characteristics, and (3) expand the system to accommodate increased demand from proposed growth. The University will continue to correct deficiencies in the piping system and maintain that piping system and its associated valves.

POLICY 2.1.2: The campus water system shall have redundancy built into the supply and distribution network. Supply redundancy can be achieved by multiple water plant sources (i.e. Orange County and the Central Florida Research Park) and by multiple raw water wells. Interconnects with various utilities are desired for their capability to be used as backups in emergencies. Distribution network redundancy can be achieved by creating looped piping systems and eliminating dead-end pipe systems.

POLICY 2.1.3: Future increases in campus consumptive uses, whether residential or non-residential related, shall be approved only upon a finding that existing potable water treatment and distribution facility capacity is already on-line and available to accommodate the increased need. If capacity is not available, funding will be provided so capacity can be brought on-line at the forecasted future time of need

OBJECTIVE 2.2: **To meet adopted levels of service for potable water system fire flow and consumptive capacity to accommodate the proposed demand.**

POLICY 2.2.1: Future development on the UCF campus which increases the demand for potable water shall be approved on the provision of a potable water distribution system which serves the proposed development under one or more of the following level of service standards:

1. Fire flow pressures of 20 psi residual for 2 hour sprinkler system flow

2. Fire flow volumes of approx. 1,000 gpm (ordinary to light hazard buildings) to 2,500 gpm (assembly occupancies and higher hazard buildings) Note: This is occupancy specific and must be accounted for in design phase of all new projects.

3. Category demands according to the following:

Offices	0.03 gpd/sf
Classrooms	0.06 gpd/sf
Common areas	0.11 gpd/sf
Residence Halls	50 gpd/bed
Frat./Sororities	50 gpd/bed

OBJECTIVE 2.3: To maintain the current quality and quantity of raw water available in the campus' potable water well field.

POLICY 2.3.1: The UCF potable water treatment and distribution system shall be primarily oriented to the needs of the campus and secondarily oriented to the needs of off-campus consumers. The University shall make every effort to cooperate with the St. Johns River Water Management District (SJRWMD) with respect to the consideration and implementation of existing and future regional ground water management strategies.

POLICY 2.3.2: The UCF potable water treatment and distribution system shall continue to meet or exceed FDEP requirements for a public water supply system and stay current with FDEP regulations and policies.

POLICY 2.3.3: The University shall perform annual reviews of major system components of the water supply and distribution system. Review shall include wells, well pumps, water treatment plant components, storage tanks, distribution pumps, backup generators, distribution piping and valves, etc. Based on review, the University shall prepare a capital improvements needs list with schedule for improvements.

POLICY 2.3.4: UCF shall continue to require low-flow and low-flush plumbing appurtenances in all new building construction and building renovations.

POLICY 2.3.5: The use of "xeric" landscaping techniques, including the maintenance or installation of selected vegetation species, low volume irrigation and compact hydra-zone concepts, shall be a required element of all new building and ancillary facility construction through the year 2025.

POLICY 2.3.6: The University shall utilize reuse water for all landscaping; thus, providing more available potable water capacity for future campus development.

SOLID WASTE

GOAL 4: To base future campus development on the provision of a solid waste on-campus collection and off-campus disposal system which adequately serves the future campus population needs, and to the maximum extent feasible, protects the function and quality of the surrounding natural environment.

OBJECTIVE 4.1: To insure that future development on the UCF campus shall occur based on a finding of adequate solid waste collection and disposal capacity to accommodate the future demand, which may call for new systems to be evaluated and installed if necessary such as to accommodate a composting system.

POLICY 4.1.1: Future development on the UCF campus which increases the demand for waste collection and disposal shall be approved under the provision of a solid waste collection and disposal system which serves the future development under one or more of the following level of service standards:

1. Multiple weekly collections
2. Approximately 1 pound per day per FTE student

POLICY 4.1.2: As necessary and appropriate, UCF shall continue to participate in the regional solid waste management, waste reduction, and facility planning strategies undertaken by Orange County. Such activities will include continued recycling efforts for paper, glass, metal, and plastics as currently collected on-campus.

POLICY 4.1.3: The University shall continue to rely upon private vendors to collect and convey the campus' solid waste to area disposal sites. As part of the campus development process, the University's department of Facilities Planning and Construction shall be responsible for coordination with the waste vendor to establish the appropriate dumpster sizing and pick-up scheduling for new campus development areas. This coordination activity shall also include the appropriate planning actions for the siting and scheduling of recyclable materials dumpsters.

POLICY 4.1.4: UCF shall continue to rely upon Orange County's solid waste facility planning efforts for plant expansion.

POLICY 4.1.5: Future increases in campus generating uses, whether residential or non-residential related, shall be approved only upon a finding by the University that existing solid waste disposal capacity is already on-line to accommodate the increased need, or that additional capacity will be funded and on-line at the forecasted future time of need. The University's Facilities Planning and Construction department shall be responsible for the review of all development proposals and perform the appropriate periodic coordination efforts with Orange County to determine that solid waste capacity is available.

SANITARY SEWER SUB-ELEMENT

GOAL 5: To insure that the future development of UCF shall be based on the current configuration of a combination of gravity and forced main sewer system that adequately serves the current and future campus population.

OBJECTIVE 5.1: To maintain the University's current sewer system and upgrade the mechanical and electrical components as needed and as funds are available.

POLICY 5.1.1: The University shall periodically design and construct sanitary sewer system improvements to (1) eliminate existing system deficiencies, (2) maintain/improve the existing system characteristics, (3) expand the system to accommodate increased demand from proposed growth, and (4)continue to correct deficiencies in the piping system and maintain that piping system and its associated infrastructure.

POLICY 5.1.2: The campus's main wastewater pumping stations shall have backup systems in place to handle emergency power and pump failures.

POLICY 5.1.3: Future increases in campus wastewater flows, whether residential or non-residential related, shall be approved only upon a finding that existing purchased wasterwater capacity is available. If capacity is not available, funding will be provided so capacity can be purchased from Seminole County prior to the forecasted future time of need.