

13. 6C-21.208 CONSERVATION ELEMENT

Information Sources

- George F. Young, Interview notes, June 2002
- Sasaki Associates, Inc., interview notes, April, 2000
- Interviews between DRMP Staff and USF Staff, May, 2000
- 1995 Master Plan and Data and Analysis Report (part)
- Conservation Management Document, February, 1999
- Team meetings with USF Staff, June, 2000
- Individual interviews between DRMP Staff and USF Staff, June, 2000

Purpose

The purpose of this element is to ensure the conservation, protection and wise use of all natural ecosystems and natural resources on the University campus and in the context area.

1. Data Requirements

(1)(A) Inventory of the following existing natural resources on the USFSP Campus or within the context area adjacent to the University.

(1)(A) 1. Wetlands, lakes, rivers and other surface waters and bottom lands;

The peninsula that houses the Marine Science and DEP facilities is surrounded by Bayboro Harbor to the west, and the Port of St. Petersburg waters to the east. The existing Library and Administration Building, are located along the water frontage of Bayboro Harbor. Bayboro Harbor provides recreational marina facilities, while the Port of St. Petersburg operates as a commercial docking and cruise facility.

There are no rivers, lakes or major waters located within the St. Petersburg Campus. To the south, entering into Bayboro Harbor and in the Bayboro Redevelopment Plan, is Salt Creek, which is associated with a heavy commercial district.

According to the base drawings as provided by USF staff, it appears that a portion of the “bottom lands” within Bayboro Harbor immediately south of the existing Library and Administration Buildings are “controlled” by the University. There has been no specific documentation provided

regarding the ownership of that bottom land. In addition, a series of docks and boat lifts along the western portion of the peninsula provide access for a variety of boating activities.

Bayboro Harbor is designated as an Outstanding Florida Water and also recognized as a Manatee habitat area. Bayboro Harbor is part of Tampa Bay which is part of the National Estuarine Program.

(1)(A) 2. *Floodplains;*

According to the Flood Hazard Boundaries map in the City's Comprehensive Plan, the entire campus, except for the southeast corner of Sixth Avenue South and Fourth Street South, is located within Flood Zone A, an area of 100 year floods. This classification requires that the base flood elevation for new construction be at nine feet above mean sea level.

(1)(A) 3. *Known unique geological features (springs, sink holes, etc.);*

Other than the bayfront waters of Bayboro Harbor and the Port of St. Petersburg, there has been no information provided that would indicate that there are any other unique geological features within the context area.

(1)(A) 4. *Existing mitigation sites;*

Based on information provided, no existing mitigation sites have been identified on campus or within the context study area.

(1)(A) 5. *Existing fisheries, wildlife marina habitats, and vegetative communities;*

The USFSP campus is located along Bayboro Harbor on the western shore of Tampa Bay. The waters immediately adjacent to USFSP provide a recreational fishery which includes the gamefish Snook and Tarpon. Other recreationally important fishes also occur in these waters. The waters adjacent to USFSP are part of the Pinellas County Aquatic Preserve, designated as an Outstanding Florida Water. They are also recognized as a Manatee habitat area.

The USFSP campus is located within the downtown boundaries of St. Petersburg, and is an urban campus. The campus has been expanding

upon previously developed urban properties. There appears to be no dominant species or vegetative communities within the campus area.

Bayboro Harbor, Salt Creek and a portion of the Port of St. Petersburg is identified and recognized as a manatee habitat area. Special concern should be associated with any expansion of land area or boat activity within Bayboro Harbor.

During the cooler months of the year, manatees have been identified as frequenting Bayboro Harbor and Salt Creek, due to is warmer waters. In addition, on-site observations have noticed dolphins residing in the harbor. No other information has been provided relating to animal species.

(1)(A) 6. *Well field cones of influence;*

The USFSP Campus is provided its potable water through the City of St. Petersburg system. No wells or well-field cones of influence have been identified.

(1)(A) 7. *Aquifers and aquifer recharge areas;*

The general geologic character and high water table in St. Petersburg (approximately one to two feet below ground surface) does not promote recharge to the Floridian aquifer. Recharge to the water table (shallow aquifer) does occur by percolation through the soil.

(1)(A) 8. *Air quality, including but not limited to the pollutants subject to National Ambient Air Quality Standards;*

According to the City's Comprehensive Plan, the City of St. Petersburg is considered a Class Two area, as defined by the Clean Air Act. A Class Two area exhibits cleaner air quality levels than national standards for most of the indicative parameters. Pinellas County Department of Environmental Management monitors four air quality stations within the City of St. Petersburg. Current data regarding the specifics of these monitoring reports has not been provided.

The University has done air quality testing since the 1995 Master Plan.

- (1)(A) 9. *Surface Water quality, including but not limited to nitrogen, phosphorus, coliform bacteria, and dissolved oxygen;*

Based upon the information received, no specific review can be performed. However, Salt Creek, to the south side of Bayboro Harbor, is a tidal creek, transitioning from salt water to fresh water. Based upon the ecological assessment classification and management of tidal creeks performed by the Tampa Bay Regional Planning Council (TBRPC) in 1986, Salt Creek's condition was identified as "stressed". The increased load of nutrient-laden stormwater runoff from development changes the natural water courses and vegetation. Since the 1995 master plan, the City of St. Petersburg has prepared a Stormwater Master Drainage Plan for the entire City, including the Campus. In addition, the City is now in compliance with National Pollutant Discharge Elimination System regulations and are addressing these water quality issues. Drainage plans for the campus are coordinated with the City's Stormwater Master Drainage Plan and NPDES regulations.

Bayboro Harbor is designated as an Outstanding Florida Water. Consequently, SWFWMD will require that stormwater treatment be provided at a volume of 50 percent more than required for standard retention areas, or first-inch of runoff from the contributing basin area.

- (1)(A) 10. *Known septic tanks and grease traps, storage sites of hazardous, toxic or medical waste;*

Hazardous waste at the Marine Science Laboratory is handled on an interim basis and is transferred once weekly. Contaminated engine oil and fuel oil is transported monthly by outside vendors. The actual location of the storage sites has not yet been provided.

There are no septic tanks on campus. The cafeteria is the only building on campus with a grease trap. Two buildings, KRC and CRI temporarily store hazardous waste for a total of up to 90 gallons.

There is a new dilution tank of approximately 50 gallon capacity located just west of the USFSP Research Laboratory Building. Service of this hazardous waste facility is coordinated with removal of Marine Science Laboratory hazardous waste.

(1)(A) 11. *Chemical and hazardous waste disposal systems;*

The campus has made arrangements to transfer hazardous waste generated by the Marine Science Laboratory and the USFSP Research Lab on a weekly basis by Health and Safety, which included chemical, nuclear, and other hazardous wastes. Engine oil and fuel oil that is associated with the boat operations is removed by outside vendors on a monthly basis and disposed of at a processing plant in Tampa.

(1)(A) 12. *Surface groundwater hydrology.*

The campus soil is designated as urban land according to the Soil Conservation service (SCS) of the United States Department of Agriculture. Information regarding depth of seasonal high water and impermeability for this type of soil has not been documented by SCS. Soil borings conducted immediately to the east of the campus have indicated that the seasonal high water line was approximately 30 inches below grade.

Summary of Inventory Findings

The USFSP campus is located along Bayboro Harbor which is designated as an Outstanding Florida Water and also recognized as a Manatee habitat area. This designation will require that stormwater treatment be provided at a volume of at least 50 percent more than what is required for standard retention areas. In addition, given the fact that Bayboro Harbor is identified as an Outstanding Florida Water, it is classified as a conservation area requiring a management and monitoring plan.

2. Analysis Requirements

(2)(A) *For each of the resources identified above, identify existing commercial, recreational or conservation uses..*

Bayboro Harbor and the Port of St. Petersburg are utilized by the on-going operations and research of the Marine Sciences and DEP Facilities located on the peninsula of the campus. In addition to the boat operations of these facilities, open space/passive recreation utilization of the Bayboro Harbor frontage is utilized near the existing library and Davis Building. Immediately to the south of the University is a commercial marina for recreation and pleasure crafts.

The campus has a University sail club that is not open to the public. The public utilizes the area of the Bay at USFSP for recreational fishing as do commercial guides.

(2)(B) *For each of the resources identified above, assess the available and practical opportunities and methods for protection or restoration of those resources on University property.*

The expansion and utilization of the open space abutting Bayboro Harbor should be encouraged. Although the campus is an extension of Downtown St. Petersburg and on-campus resources are minimum, the creation of open space along Bayboro Harbor within the city rights of way should be encouraged.

Given the fact that Bayboro Harbor is identified as an Outstanding Florida Water, it is classified as a conservation area requiring a management and monitoring plan. In addition, the USFSP Master Plan includes numerous objectives and policies which should provide protection and improvement of the resource.

(2)(C) *For each of the resources identified above identify known sources and rates of discharge or generation of pollution.*

USFSP is discharging chemicals. Information regarding the rates of discharge and generation of pollution on campus has not been provided for review on the preparation of the campus master plan.

(2)(D) *For each of the resources identified above, assess opportunities or available and practical technologies for reducing pollution and/or its impacts generated by USFSP.*

Currently, the host community conforms to the National Pollutant Discharge Elimination System Program. The University cooperates with the host community in this program to identify opportunities to further eliminate stormwater borne pollutants. Potential opportunities include street cleaning and additional stormwater filtering programs. Opportunities to utilize alternative fuel vehicles for on-campus utilization including natural gas vehicles to reduce air borne pollutants could be utilized. Opportunities to mitigate traffic and parking will also further reduce and improve air quality demands on the University.

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(2)(E). An analysis of current and projected water needs and sources, based on the demand for industrial, agricultural and potable water use and the quantity and quality available to meet those demands.

See Element 9 for details on potable water.

(2)(F). Methods and technologies to reduce USFSP energy consumption.

As appropriate, opportunities to utilize solar energy as an alternative source of power for the irrigation systems, lighting, potential on-campus shuttles, emergency phones, etc. should be considered to reduce these energy demands. In addition, utilizing alternative fuel vehicles for on-campus uses including compressed natural gas or electricity should be considered. All new buildings should be sited to minimize solar heat gain.