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Infrastructure Supporting Data

The purpose of the Infrastructure Element is to ensure adequate provision of public facilities and services required to meet the future needs of the University, including the following:

- Ensure provision of adequate stormwater management capacity to protect the welfare of both the University's and host community's residents and prevent water damage to public and private property;
- Ensure provision of sufficient potable and fire water to meet anticipated University needs;
- Ensure provision of adequate sanitary sewer and treatment capacity to meet anticipated University needs; and
- Ensure provision of adequate solid waste handling and disposal capacity to meet anticipated University needs.

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STORMWATER MANAGEMENT SUB-ELEMENT

1. Inventory and Analysis of Existing Conditions

The University site is within the St. Lucie West development and the campus site was specifically platted as Parcels 27C and 27G of St. Lucie West Plat No. 34, Parcel 27-Phase I. The campus site is a 50 acre tract of land in Sections 23, 24, 25 and 26, Township 36 South, Range 39 East, St. Lucie County, Florida and is generally described as being bound on the south by N.W. University Drive, on the east by California Boulevard, on the north by Indian River Community College (IRCC) and on the west by the spring training baseball stadium.

The existing ground elevations on the University site are approximately elevation 25.0 NGVD. Stormwater runoff is directed by sheetflow from the undeveloped portions of the University site and by positive drainage pipe within the developed portions of the campus to the manmade lake east of the building. The outfall structures (for the St. Lucie West development) were designed, permitted by South Florida Water Management District (SFWMD) and constructed to provide a removal rate from the basin of 545 cfs during the 25-year design storm. Discharges from the outfall structures are directed into the North Fork of St Lucie River via C-108 and the Turnpike Canals. The existing drainage system is shown on **Figure 9.1**.

1.a. Inventory of System

The existing facilities consist of one (1) water control structure at the north end of Sub-Basin 78-2, set at elevation 22.0 NGVD. This structure discharges to the C-108 Canal, which connects to the North Fork of the St. Lucie River.

Within the campus site exists positive drainage of the parking lot which discharges to the manmade lake surrounding the south and east sides of the campus (see **Figure 9.2**).

1.b. Shared Facilities

There are no shared facilities other than the receiving C-108 Canal and North Fork of the St. Lucie River Canal. These canals serve a large watershed area, which includes St. Lucie West (including the University site) and is under the jurisdiction of the SFWMD.

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SFWMD approved a Conceptual Permit Modification (Permit No. 50-00573-S), issued August 12, 1993 for the entire St. Lucie West development, including the University site (**Exhibit 9.1**).

1.c. Data

1. St. Lucie West Services District (SLWSD) is responsible for the operation of the existing system; FAU will be responsible for any on-site facilities constructed to discharge to the ultimate water conveyance body along the south and east perimeters of the University site.
2. The receiving North Fork of St. Lucie River, serves a large watershed area comprised of mixed uses.
3. SFWMD approved a Conceptual Permit of the entire St. Lucie West development, including the University site.

1.d. Major Drainage and Hydrological Features

See discussion in 1.a. above and **Figure 9.1**.

2. System Analysis

2.a. Facility Capacity

1. The Water Management Tracts within the St. Lucie West development have been sized for ultimate development and allows direct discharge from the University site to the water conveyance.
2. Since the current campus consists of developed and undeveloped land, soil percolation and the existing lake have been adequate to dispose of stormwater. However, as development of the campus occurs, a form of positive drainage needs to be incorporated into the master planning and development phases to offset the loss of available pervious land. As each phase of development occurs, positive drainage, discharging to future lakes, will be constructed to drain each phase of development.

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2.b. Performance of Existing Facilities

SFWMD has approved a Conceptual Permit of the entire St. Lucie West development, including the University site. There are minimal existing stormwater management facilities on the campus. Presently, stormwater either percolates through the sandy soil or runs off to the existing water management tracts to the groundwater to recharge same. As development continues and progresses, a positive drainage system will be constructed to offset the loss of available soil percolation and storage availability in the existing lake. The impact on the natural resources (lake and groundwater recharge) will be negligible since water management tracts will be constructed within the campus.

2.c. Facility Expansion

The main challenge for stormwater management expansion will be the distance (500+ feet) required to span the southernmost reaches of the campus to the northernmost reaches of the campus to the discharge point. However, either positive drainage (culverts) can be constructed at the time of development or in the interim, open ditches/canals can be constructed to convey the stormwater runoff to the future water management tracts. The University can also maintain undeveloped areas where runoff can percolate through the soil.

2.d. Existing Regulations

The governing regulation is the approved Conceptual Permit (**Exhibit 9.1**) issued by the South Florida Water Management District (SFWMD) and ditch discharge into the Water Management Tract to the west is allowed. Additionally, the U.S. Army Corps of Engineers (COE) claimed additional (wetlands) (**Figure 13.4**) which may be incorporated, thereby expanding the capacity of the water management tract. Therefore it is anticipated that the current permit is adequate for the development of the campus through ultimate development.

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POTABLE WATER SUB-ELEMENT

The purpose of the Potable Water Sub-Element is to ensure adequate potable and fire protection water to serve the University. Low maintenance, economy of operation and initial cost are significant considerations.

1. Existing Conditions.

1.a. Inventory of Existing Facilities

This is an existing campus on a partially developed site; there are limited existing water distribution facilities on-site.

The FAU campus will be an integral part of the water distribution system of the larger St. Lucie West development.

A Development of Regional Impact application for the St. Lucie West project, including the campus, has been approved and governs development.

See **Figure 9.3** for off-site mains that will serve the campus.

1.b. Shared Facilities; Proportional Capacities

Distribution mains on campus will serve the University primarily but are (and will be) connected to the larger St. Lucie West Utilities' system. The campus will not be master metered but will have individual building meters.

The campus distribution system will be connected to the off-site 12" watermain at a minimum of two locations, for looping purposes, along N.W. California Boulevard. See **Figure 9.3**.

Since there is a limited existing Campus, data on the proportional capacity of water facilities required to meet existing needs does not exist, therefore this data requirement does not apply.

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1.c. Potable Water Facilities

1. Operational Responsibility

The St. Lucie West Utilities will own, operate and maintain the water mains on and off campus. Building service lines will be owned and maintained by FAU. Individual building meters will be used in lieu of system master metering. Easements will be required for the St. Lucie West owned water lines and appurtenances.

2. Geographic Service Area and Land Uses

The area of St. Lucie West and outlying areas, consisting principally of southern Martin County comprises the service area of St. Lucie West Utilities.

Predominant land uses are urban-residential, commercial and recreational.

3. Design Capacity

- Treatment capacity is 2 MGD (million gallons per day)
- 11 existing groundwater wells are permitted; no additional wells are proposed
- Consumptive use permit from SFWMD for 4 MGD groundwater withdrawal
- Peak factor is 2.5 times average
- Average daily demand is 0.617 MGD

4. Current Demand

Current (September 1998) demand on the facility is 0.617 MGD average daily flow, with a peak factor of 2.5.

The demand has resulted in an average of 350 gallons per day, average, for a standard household unit, which consists of 3.5 persons.

5. Level of Service

350 gallons per day per standard household unit, or 100 gallons per capita per day, gpcd.

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Line pressures near the water treatment plant are 70 psi; line pressures in the St. Lucie West area should be over 60 psi.

Current (September 1998) reserve capacity is 1.383 MGD average daily flow.

Potable water is from the St. Lucie West Utilities Water Department. The FAU campus will be a customer of the Utilities' water department and will depend on it for service.

The University will expand an Agreement with the St. Lucie West Utilities Water Department for potable water service and must advise the Utility of phased quantity demands. The current charge for potable water is \$2.33/1000 gallons (September 1998).

1.d. Major Hydrological Features

St. Lucie West Utilities' water sources are groundwater wells (11 existing). The Utility operates a 2 MGD treatment plant. Present consumptive use permit from SFWMD allows groundwater withdrawal of up to 4 MGD.

2. Facility Analysis

2.a.1. Consumption

Based on the current campus records, the potable water demand is estimated at 30 gallons per day per FTE (full time equivalent), annual average.

The projected potable water demand for the campus, per FTE, includes the entire campus population - students, faculty, administration, visitors, etc.

Estimated daily demand, based on projected FTE enrollment, is as follows in **Table 9.1** Potable Water Demand.

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Year	FTE	GPCD	Annual Average Daily Demand
Current 1999	218	30	6,540 Gallons
2002-03	289	30	8,670 Gallons
2003-04	315	30	9,450 Gallons
2004-05	335	30	10,050 Gallons
2005-06	355	30	10,650 Gallons
2006-07	378	30	11,340 Gallons
2007-08	400	30	12,000 Gallons
2008-09	421	30	12,630 Gallons

Potable water will not be used for irrigation; re-use water will be available.

2.a.2. Facility Capacity

Off-site mains that will serve the campus were designed to include FAU's Treasure Coast Campus requirements. The DRI approval includes the University as well as St. Lucie West.

St. Lucie West Utilities Water Department advises that the treatment plant is southeast of the campus and line pressures near the plant are 70 psi. Line pressures in the campus development should be over 60 psi.

On-site distribution mains will be 8-inch diameter.

Limiting capacity is the treatment capacity currently at 2 MGD. Future plant expansion is undetermined at this time. Source, from groundwater, currently is permitted for 4 MGD. Sources are the Floridan Aquifer and the Surficial Aquifer. Water from the Floridan

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Aquifer is treated by the reverse osmosis process and water from the Surficial Aquifer is treated by the lime softening process.

Current (September 1998) reserves of the St. Lucie West Utilities' Water Department are 1.383 MGD.

The projected demands for the University amount to the following percentages of St. Lucie West Utilities' Water Department current capacity, average daily flow.

<u>Year</u>	<u>Percentage</u>
Current 1999	1%
2002-2003	3%
2003-2004	3.2%
2004-2005	3.5%
2005-2006	3.8%
2006-2007	4%
2007-2008	4.4%
2008-2009	4.7%

2.b. General Performance

Refer to the **Appendix** for a brochure on St. Lucie West Utilities Water Department.

Facilities for the new campus are still in the planning stages and off-site mains to the campus site are under construction.

All facilities were designed for the ultimate campus requirements. Refer to St. Lucie West Development of Regional Impact.

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Source of potable water for the campus is groundwater, the Floridan and Surficial Aquifers. As noted in **2.a.2** above, the Campus demand in year 2009 is 4.7% of the Utilities' present plant capacity 0.7% and of the Utilities' current permitted withdrawal.

2.c. Expansion and Replacement

The Campus is being planned and designed for future growth and expansion. Off-site and on-site mains are sized for future growth, 10-year projection.

Maintenance and replacement and/or supplementation of mains and appurtenances are the responsibility of St. Lucie West Utilities' Water Department.

Maintenance and replacement are included in the normal services of a utility company. Cost for supplementation (adding mains for increased capacity) would probably be paid, or at least shared, by the University.

2.d. Underground Hydrology; Source Availability

Two principal aquifers underlie the proposed campus site, the shallow or surficial aquifer and the deep Floridan. The surficial aquifer contains fresh water and the Floridan contains brackish water.

The surficial aquifer varies from approximately 125 to 250 feet thick with the top near the surface. The Floridan aquifer thickness is not accurately known but the top of the aquifer is approximately 600 feet deep and is known to extend to 1,500 feet. Water in the surficial aquifer is unconfined and must be withdrawn by pumping; the Floridan aquifer is artesian.

The two aquifers are separated, approximately 350 feet, by a confining bed of low permeability, generally known as the Hawthorne Formation.

The shallow, surficial aquifer has, for years, been the principal source of fresh water supply. Wells in this aquifer could yield over 500 gallons per minute, depending on the type of well construction and material encountered at the well point.

Most of the recharge to the shallow aquifer is from rainfall. Water from the shallow aquifer is discharged by outflow into streams, canals, other surface water bodies, by evapotranspiration and by pumping. The principal recharge to the Floridan aquifer is from rainfall in the topographically high areas (green swamp area), in Polk and Pasco Counties.

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Water is discharged from the Floridan aquifer through flowing wells. Yields from the Floridan aquifer can range from 10 to 750 gallons per minute.

At the campus location, relatively close to the coast, continued withdrawal from the fresh, surficial aquifer will probably become very limited. Principal concern is salt-water intrusion due to lowering of the water table from increased pumping. The South Florida Water Management District will continue to be more restrictive about withdrawal from the surficial aquifer.

The surficial aquifer, at best, should be considered only as a limited source of water for the campus with continuing increased restrictions. The Floridan aquifer could be utilized as a potable water source. This will require deeper wells, more expensive treatment to remove chlorides and expense to dispose of the brackish concentrate.

2.e. Regulatory Agencies

Public water systems are regulated by the local County Health Department, the State Department of Health and Rehabilitative Services, and possibly County and local environmental agencies.

Florida's Planning Act, Chapter 163, Florida Statutes, Section 163.3180 establishes Concurrency requirements for water and sewer; these facilities must be in place for the issuance of certificate of occupancy; local governments may also have concurrency requirements.

The FAU Treasure Coast Campus will continue to be a customer in St. Lucie West Utilities' water service area. The large majority of regulatory compliance will be the Utilities responsibility.

Fire flow must be acceptable to the State Fire Marshall.

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SANITARY SEWER SUB-ELEMENT

The purpose of the Sanitary Sewer Sub-Element is to ensure the provision of adequate sewerage facilities to serve the University. Low maintenance and economy of operation and initial cost are significant considerations.

1. Existing Conditions

1.a. Inventory of Existing Facilities

This is an existing campus on a partially developed site; there are sewer facilities.

The campus sewage collection system will serve only the FAU campus and will discharge to an off-site forcemain serving the larger St. Lucie West development.

A Development of Regional Impact application for the St. Lucie West project, including a campus, has been approved.

See **Figure 9.3** for the off-site forcemain that will serve the campus.

1.b. Shared Facilities; Proportional Capacities

The campus gravity collection system, the pump station and the on-site forcemain will serve the University exclusively and will not be shared with others. The off-site forcemain which the campus system will discharge to is shared by the St. Lucie West development and the University. It is anticipated that the University's flow would be a small percentage of the off-site forcemain capacity.

Since this is a limited existing campus, data on the proportional capacity of facilities required to meet existing needs does not exist, therefore this data requirement does not apply.

1.c. Sanitary Sewer Facilities

1. Operational Responsibility

The Campus sewer mains, forcemain, appurtenances and pump station will be owned, operated and maintained by the sewer utility company, St. Lucie West Utilities.

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Service laterals from mains to buildings and satellite pump stations for remote areas such as recreational fields and entrance areas will be owned, operated and maintained by FAU.

2. Geographic Service Area and Land Use

The area of St. Lucie West and outlying areas, consisting principally of southern Martin County comprises the service area of St. Lucie West Utilities. See the Appendix for the St. Lucie West Surface Water Recharge System and Well Inventory Map.

Land uses are urban-residential, commercial and recreational.

3. Design Capacity

The St. Lucie West Utilities treatment capacity is 0.990 million gallons per day (MDG). Treatment is the limiting factor; collection and transmission capacities exceed the treatment capacity. Effluent disposal capacity is 1 MGD.

4. Current Demand

The current (September 1998) demand on the St. Lucie West Utilities facilities is 0.583 MGD.

5. Level of Service

108 gallons per capita per day, gpcd.

1.d. Major Sanitary Sewer Facilities

The campus is in the St. Lucie West Utilities service area. St. Lucie West Utilities will treat and dispose of the University's sewage.

The sewage treatment plant is located southeast of the campus. Treatment capacity for the University currently is available at this plant. A significant part of the treatment plant's effluent disposal is the re-use water system.

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The University must expand the existing Developers Agreement with St. Lucie West Utilities for service including additional connection fees and operating costs. The Agreement will include data on building gross square footage, student population and estimated water consumption, by phase. St. Lucie West Utilities has requested this information as soon as possible for capacity planning.

1.e. Shared Facilities; Proportional Capacities

2. Sanitary Sewer Analysis

2.a.1. Demand

The projected campus demand per FTE includes the entire campus population - students, faculty, staff, administration, visitors, etc.

Based on current (September 1998) campus records, the sewage flow will be approximately 15 gallons per day per FTE. It is recommended 20 gpcd FTE be used for planning. The following in **Table 9.2** are projected demands based on anticipated FTE enrollment and 20 gpcd.

TABLE 9.2 FUTURE SEWAGE DEMAND

Year	FTE	Annual Average Daily Demand
Current 1999	216	4,320 Gallons
2002-2003	289	5,780 Gallons
2003-2004	315	6,300 Gallons
2004-2005	335	6,700 Gallons
2005-2006	355	7,100 Gallons
2006-2007	378	7,560 Gallons
2007-2008	400	8,000 Gallons
2008-2009	421	8,420 Gallons

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2.a.2 Capacity

The off-site forcemain that will serve the expanded campus was designed by St. Lucie West to include the campus requirements. The DRI approval includes the University as well as St. Lucie West.

St. Lucie West Utilities should be advised of the University's projected sewage flows, by phase, as soon as possible.

Campus gravity lines will be 8-inch diameter with a 6-inch diameter forcemain. The pump station can be designed to increase pumping capacity as enrollment increases.

The facility capacity is 0.990 MGD, limited by treatment capacity. Current (September 1998) surplus is 0.407 MGD.

The projected sewage generation from the University amounts to the following percentages of the current St. Lucie West Utilities facility capacity:

<u>Year</u>	<u>Percentage</u>
Current 1999	0.5%
2002-2003	1.3%
2003-2004	1.4%
2004-2005	1.5%
2005-2006	1.6%
2006-2007	1.7%
2007-2008	1.8%
2008-2009	2.0%

The St. Lucie West Utilities projected demand for the year 2009, based on 20 gpcd, is 0.019 mgd.

2.b. General Performance

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Existing level of service is adequate with reserve capacity in treatment, disposal and collection facilities available. A phased expansion of facilities is planned to start in 2001 and be completed by 2003.

Re-use water for irrigation is a significant source for effluent disposal from the St. Lucie West Utilities plant. This percentage will definitely increase as the St. Lucie West development is built-out. Re-use water will be used extensively in the St. Lucie West development for irrigation.

Projected sewage generation from the Campus in the year 2003 is 1.3% of St. Lucie West Utilities plants' present capacity and in the year 2009 is 2% of present plant capacity. The campus sewage generation is 1.2% and 1.9% for years 2003 and 2009, respectively, of St. Lucie West Utilities' current effluent disposal capacity.

2.c. Expansion and Replacement

The Campus is being planned and designed for future growth and expansion. Off-site and on-site mains are sized for future growth, 10-year projection. Pump station design will allow for increased capacity by adding or replacing pumps.

Maintenance, replacement and/or supplementation of mains and appurtenances are the responsibility of St. Lucie West Utilities'.

Maintenance and replacement are part of the normal services of a utility company. Cost for supplementation (adding mains for increased capacity) would probably be paid, or at least shared, by the University.

2.d Regulatory Agencies

Sewerage facilities, sewage treatment, collection systems, effluent disposal, operation and maintenance are subject to the State Department of Environmental Regulation, County and local environmental agencies, and the State Health Department.

Florida's Planning Act, Chapter 163, Florida Statutes, Section 163.3180 establishes Concurrency requirements for water and sewer; these facilities must be in place for the issuance of certificate of occupancy; local governments may also have concurrency requirements.

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Since the University will continue to be a customer of St. Lucie West Utilities; sewage system, principal regulatory compliance is St. Lucie West Utilities; responsibility.

2.e. Maintenance and Operation

St. Lucie West Utilities' will own and maintain the gravity sewer mains, the pump station and forcemain on campus. Lateral lines from mains to buildings will be owned and maintained by the University.

Easements will be required for the St. Lucie West Utilities' owned facilities. Pump station and lines will be designed and constructed to St. Lucie West Utilities' requirements and specifications.

Sewage flows will not be metered. Sewer service costs will be based on potable water consumption, \$2.58 per 1,000 gallons of water (September 1998).

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SOLID WASTE SUB-ELEMENT

1. Existing Collection and Disposal Systems

Jennings Waste Management has an exclusive agreement to serve St. Lucie West and charges customers directly. It is understood that Jennings Waste Management is scheduled to provide solid waste collection for the campus. The dumpsters will be owned by Jennings Waste Management.

Jennings Waste Management charges by the volume, which results in a cost per dumpster pick-up, with no consideration of the quantity of waste in the dumpster.

Final disposition of solid waste is St. Lucie County Solid Waste Division's Glades Road Landfill on Midway Road between I-95 and the Turnpike which was constructed in 1978. This Class 1 landfill site is a pie-shaped, 331 acres and also includes a separate landfill area for "C&D" (construction and demolition materials). There is no incinerator on-site. The landfill permit has been renewed for five (5) years to the year 2003. The life expectancy of the landfill site is another 40 years (or until the year 2038). The projected ultimate capacity of the landfill site is 4.3 million tons (8.5 million cubic yards); approximately 4 million cubic yards are in place. 140,000 tons of solid waste was processed in 1997. However, the average for the past five (5) years was 106,000 tons of solid waste processed.

Tipping charges for disposal of solid waste is by weight.

Recycling should be implemented and encouraged. Strategic location of containers will enhance recycling. Recycling materials would include:

- Aluminum cans
- Plastics
- Glass
- Cardboard Boxes
- Paper

At the Boca Raton Campus the total recycling operation is operated by the University. The waste collection vendor, Nichols, will also handle the recycling operation, including furnishing the containers.

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The Boca Raton Campus is reimbursed for cardboard and aluminum and pays for disposal of paper, glass and plastics. The operation is a net savings to the University considering the reduction in solid waste.

Estimated solid waste generation is 0.15 to 0.2 ton per FTE per year resulting in a projected 145 to 194 tons per year in 2008-2009. One cubic yard of solid waste is approximately 0.067 ton. Solid waste generation at the Boca Campus, including PBCC, was 1,128 tons in 1993-94 and 1,177 tons in 1994-95.

Recycled quantities at the Boca Raton campus for recent years are noted in **Table 9.3** below.

9.3 Recycled Materials at the Boca Raton Campus

TONS	MIXED PAPER	CARDBOARD	ALUMINUM	PLASTICS & GLASS
1992	181.6	42.3	0	21.9
1993	193.0	58.5	1.19	23.0
1994	199.2	49.1	2.54	25.1

Dumpster locations and pick-up schedules should be developed jointly by the University and the vendor to maximize dumpster utilization. A dumpster pick-up is charged at the full volume of the dumpster, regardless of contents. The operation should be monitored periodically to determine needed changes, if any.

Jennings Waste Management will charge less for bigger dumpster and less number of dumpsters. A balance should be determined between economy and adequate service to the campus.

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2. Analysis

The projected solid waste generation per FTE was estimated from data available at the FAU Boca Raton Campus and is estimated to be between 145-194 tons per year in 2008-2009.

It is difficult to accurately determine the quantity of solid waste generated on campus. The waste is not measured nor weighed. The University pays the collection vendor per dumpster pick-up, with no consideration for the amount of waste in the dumpster. Pick-ups are on a set schedule not just when the dumpster is full.

The University pays the County tipping charges (currently September 1998 \$32/ton) for disposal, by weight. The weight of the campus waste is not identified at the disposal site as it is co-mingled with other entities' waste.

At the Boca Raton Campus, FAU and the Palm Beach Solid Waste Authority jointly study and monitor the solid waste generation to establish an annual, flat disposal (tipping) charge.

The estimate of 0.15 to 0.2 tons of solid waste per FTE per year is based on the above noted joint study and monitoring at the Boca Raton Campus.

The unit of solid waste per FTE includes the entire campus population including students, faculty, staff and visitors.

One cubic yard of solid waste is approximately 0.067 tons.

Jennings Waste Management, a private vendor, has the exclusive right to serve St. Lucie West for solid waste collection and will serve the FAU Treasure Coast campus which is in the city limits.

Waste is delivered to a Glades Road Landfill on Midway Road between I-95 and the Turnpike.

St Lucie County Solid Waste Division (SLCSWD) operates this Class 1 landfill; there is no resource recovery incinerator on-site.

The landfill has a depletion date (or life) to the year 2038.

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The SLCSWD processed 140,000 tons of solid waste in 1997 and averaged 106,000 tons during the last 5 years.

The SLCSWD will take recycled materials in the solid waste or the University may choose to separate and dispose of recyclables on their own.

SLCSWD will also dispose of fluorescent light bulbs, but will probably stop receiving them in the near future, classifying the bulbs as hazardous waste.

Household hazardous wastes such as fuels, flammables, solvents, oil, etc. are accepted by SLCSWD at its disposal sites only from residences. Commercial establishments cannot dispose of hazardous wastes directly to the SLCSWD.

The University may or may not qualify to dispose of wastes directly to the SLCSWD.

There are four (4) classifications of hazardous waste based on quantity: Large, Small Conditional Exempt and Household. Quantities of waste less than 100 kilograms per month will qualify as Conditional Exempt, CESQG; an entity with CESQG classification is exempt from regulations and is not required to be registered with the Florida DEP. Another requirement for CESQG qualification is no accumulation of 1,000 kilogram of hazardous waste at any time.

Establishments with over 100 Kg waste per month are classified as Small or Large and must be registered, must report directly to the State DEP and must comply with strict regulations in disposing of hazardous waste.

Compliance with regulations governing solid waste collection and disposal is primarily the responsibility of the collection vendor, Jennings Waste Management, and the disposal agency, SLCSWD. The University is only a customer.

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RE-USE WATER SUB-ELEMENT

The purpose of the Re-Use Water Sub-Element is to ensure adequate irrigation water to serve the University. Low maintenance and economy of operation and initial cost are significant considerations.

1. Existing Conditions.

1.a. Inventory of Existing Facilities

This is an existing campus on a partially developed site; there are limited existing irrigation facilities on the campus site.

Re-use water mains can be extended to the campus site from the existing 8" main along N.W. University Drive (see **Figure 9.3**).

A Development of Regional Impact application for the St. Lucie West project, including a campus, has been filed and approved.

1.b. Source.

Re-use water will be supplied from the St. Lucie West Utilities wastewater treatment plant located southeast of the University.

Re-use water will be pumped through the pressurized distribution system to serve the St. Lucie West development and the University.

St. Lucie West designed the re-use water system and determined allocations and flow rates available to each entity including the University.

1.c. Shared Facilities; Proportional Capacities

The re-use system will serve the new FAU campus and the St. Lucie West development.

Two (2) connections to the re-use off-site distribution system are planned for the University, from N.W. University Drive.

Quantity allocations and flow rates will be assigned the University at time of permitting.

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2. Analysis

2.a. Use

The University will be assigned a daily maximum allocation at time of permitting.

2.b. Capacity

Line pressure will be a minimum of 50 psi at connection point and could be 55 to 75 psi; line pressure upstream from the connection point could be as high as 120 psi.

2.c. Maintenance and Operation

The on-site campus irrigation system will be owned and maintained by the University.

The re-use water will be billed by acreage of developed area.

The University will pay St. Lucie West Utilities for re-use water and will negotiate an agreement with St. Lucie West Utilities for re-use water service.

The University must advise St. Lucie West Utilities of their anticipated minimum daily requirement; minimum costs and charges will be based on this quantity whether or not it is actually used.

Each connection point will have a sophisticated metering and flow-pressure regulating device. FAU will reserve the right to defer the purchase and installation of this equipment for future use when needed.