

SEMINOLE COUNTY GOVERNMENT AGENDA MEMORANDUM

SUBJECT: Agreement Between Seminole County and The University of South Florida for Work on the Seminole County Watershed Atlas Project

DEPARTMENT: Public Works **DIVISION:** Roads-Stormwater

AUTHORIZED BY: *W. Gary Johnson* **CONTACT:** Kim Ornberg, P.E. **EXT.** 5738
W. Gary Johnson, P.E., Director Michael K. Arnold, Manager

Agenda Date <u>07/26/05</u>	Regular <input type="checkbox"/>	Consent <input checked="" type="checkbox"/>	Work Session <input type="checkbox"/>	Briefing <input type="checkbox"/>
	Public Hearing – 1:30 <input type="checkbox"/>		Public Hearing – 7:00 <input type="checkbox"/>	

MOTION/RECOMMENDATION:

Approve and authorize the Chairman to execute the Agreement Between Seminole County and The University of South Florida (USF) for Work on the Seminole County Watershed Atlas Project.

District - Countywide (Michael K. Arnold, Manager)

BACKGROUND:

The Seminole County Watershed Atlas has been available via the World Wide Web since 2000 at <http://www.seminole.wateratlas.usf.edu> and is regarded as the preeminent water resource web site in the State. It has earned praise from citizens, businesses (real estate, engineering firms, etc.), environmental groups (Friends of Lake Jesup, Friends of Wekiva, etc.), as well as both government and regulatory agencies (FDEP, SJRWMD, EPA, County School Board, USGS, etc.) alike. It provides the only single source for all water quality and hydrologic data collected within Seminole County. It also provides near real-time meteorological data, which proved to be extremely valuable during the 2004 hurricane season.

In addition to providing both educational and useful information for both citizens and professionals, it also fulfills requirements of the County's federally mandated National Pollution Discharge Elimination System (NPDES) Stormwater Permit. To this end, annual funding assistance for the Atlas is provided by all of the County's NPDES co-permittees (all seven cities and FDOT District 5). Each provides an annual cost share of \$5,000 (\$40,000 total) and had provided an initial cost share of \$10,000. Grants from USEPA and SJRWMD provided nearly \$400,000 over the term of the first master agreement.

Reviewed by:	<u><i>HMB</i></u>
Co Atty:	<u><i>Star</i></u>
DFS:	_____
Other:	_____
DCM:	_____
CM:	_____
File No.	<u>CPWS02</u>

The Atlas is the product of the innovative technologies developed and implemented by USF. It is administered and resides on a server housed at the USF campus. The approval and execution of this interlocal agreement between Seminole County and USF is necessary for the continued routine maintenance, necessary upgrades and desired enhancements that will keep it functioning optimally and provide the maximum benefit to citizens, staff, students, and professionals.

Execution of this five-year agreement does not require the appropriation/commitment of any funding at this time. Annual work orders are subject to BCC approval and are limited by budgetary constraints, which include the cost share amount identified previously. The proposed two-year budget allocations are as follows: FY05/06 -- \$90,000 and FY06/07 -- \$100,000. A cap of \$880,000 has been included over the term of the agreement. Upon approval and execution of this agreement, the first work order is planned for the September 27, 2005, BCC Agenda.

Attachment: Agreement

**AGREEMENT BETWEEN SEMINOLE COUNTY AND
THE UNIVERSITY OF SOUTH FLORIDA FOR WORK ON
THE SEMINOLE COUNTY WATERSHED ATLAS PROJECT**

THIS AGREEMENT, made and entered into this _____ day of _____, 2005, by and between **SEMINOLE COUNTY**, a political subdivision of the State of Florida, (hereafter referred to as the "COUNTY"), and the **UNIVERSITY OF SOUTH FLORIDA BOARD OF TRUSTEES**, a public body corporate (hereafter referred to as the "UNIVERSITY")

WITNESSETH:

WHEREAS, the parties have previously entered into several agreements regarding the Watershed Atlas Project; to-wit, the agreement dated July 13, 1999, as amended and the agreement dated March 27, 2002 (those agreements and amendments thereto being referred to herein as the "Previous Agreements");

WHEREAS, the UNIVERSITY and the COUNTY have reached an understanding on the type, extent, quality and time of performance and service and/or materials to be rendered and the amount and method of compensation to be paid to the UNIVERSITY on the project, and both wish to reduce the understanding to a written Agreement.

NOW, THEREFORE, in consideration of the mutual covenants, conditions and terms as set forth herein, the COUNTY and the UNIVERSITY mutually agree as follows:

ARTICLE I – INDEPENDENT CONTRACTOR

It is agreed that nothing herein is intended or should be construed as in any manner creating or establishing a relationship of co-partners between the parties, or as constituting the UNIVERSITY (including its officers, employees, and agents) the agent, representative, or employee of the COUNTY for any purposes, or in any manner

whatsoever. The UNIVERSITY is to be and shall remain forever an independent contractor with respect to all services performed under this Agreement.

ARTICLE II – SCOPE OF WORK

The UNIVERSITY shall, upon written notice from the COUNTY, perform the Tasks and provide the deliverables identified and described in Exhibit "A" entitled "Scope of Work", attached hereto and made a part hereof by reference. The UNIVERSITY shall provide all labor, materials, tools, equipment and transportation and any other service or facility for the proper execution of work in accordance with this Agreement.

ARTICLE III – TERM OF AGREEMENT

This Agreement shall commence upon approval and execution by both parties and end five (5) years thereafter, unless changed, in writing, by the parties.

ARTICLE IV – PROJECT MANAGER

The COUNTY and UNIVERSITY each hereby designate the following employees as their Project Managers to maintain coordination and review of the PROJECT. Each party's PROJECT MANAGER shall have sole and complete authority to transmit decisions, receive information, interpret and communicate his or her principal's policies and make decisions with respect to all matters pertinent to rendering the PROJECT, to the extent permissible by law or policy. Either party may change the project manager by written notice, without need to amend this Agreement. The PROJECT MANAGERS are as follows:

For the COUNTY:

Seminole County
Kim Ornberg, PE
Stormwater Division
520 W. Lake Mary Blvd.
Suite 200
Sanford, FL 32773

For the UNIVERSITY:

University of South Florida
Kyle N. Campbell
Florida Center for Community Design & Research
University of South Florida
Tampa, FL 33620

ARTICLE V –COMPENSATION

The COUNTY agrees to compensate the UNIVERSITY for the professional services called for under this Agreement a total amount of EIGHT HUNDRED EIGHTY THOUSAND AND NO/100 DOLLARS (\$880,000.00), allocated to the Tasks on an annual and total basis as shown in Exhibit "A". Should any task be deleted from this Agreement then the contract amount shall be reduced by the amount allocated to that task for the remaining year(s) of the Agreement.

ARTICLE VI – PAYMENT AND BILLING

(a) The UNIVERSITY may invoice for services as performed, however, no more often than monthly. Invoices shall describe the services rendered, work performed, by task, and project deliverable completed since the previous invoice and provide an estimate of the percentage of completion of each task billed. Payment shall be based upon the percentage of completion as compared to previous payments, if any.

The original of each invoice shall be sent to:

Director of County Finance
Seminole County Board of County Commissioners
Post Office Drawer Q
Sanford, Florida 32772-0869

A duplicate copy of the invoice shall be sent to:

Director of Public Works
520 W. Lake Mary Boulevard

Suite 200
Sanford, Florida 32773

(b) Payment shall be made after review and approval by the COUNTY within thirty (30) days of receipt of a proper invoice from the UNIVERSITY.

ARTICLE VII – INTEGRATION OF NEGOTIATIONS

This document incorporates and includes all prior negotiations, correspondence, conversations, agreements or understandings applicable to the matters contained herein and the parties agree that there are no commitments, agreements or understandings concerning the subject matter of this Agreement which are not contained or referred to in this document. Accordingly, it is agreed that no deviation from the terms hereof shall be predicated upon any prior representations or agreements, whether oral or written.

ARTICLE VIII – CHANGES IN THE WORK; CORRECTIONS

No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document executed with the same formality and of equal dignity herewith.

ARTICLE IX – PROTECTION OF WORK, PROPERTY AND PERSONS

(a) The UNIVERSITY shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. The UNIVERSITY shall take all necessary safety precautions and shall provide the necessary protection to prevent damage, injury or loss to all employees on the Project, and other persons who may be affected thereby. The UNIVERSITY shall comply with all applicable county, state, and federal laws, ordinances, rules, regulations and orders of any public body having jurisdiction over the Project or Project areas. The

UNIVERSITY shall remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the UNIVERSITY, any subcontractor or anyone directly or indirectly employed by any of them.

(b) Neither the UNIVERSITY nor any subcontractor shall discriminate against anyone with regard to race, creed, sex, or national origin in connection with activities of the Project. The UNIVERSITY shall comply with all federal, state, and local laws, ordinances, rules and regulations regarding non-discrimination.

ARTICLE X – INDEMNIFICATION

To the extent provided by law, the UNIVERSITY shall defend, indemnify, and hold harmless the COUNTY and all COUNTY agents, employees, and officers from and against all actions, claims, demands, judgements, losses, payments, recoveries and suits of whatever nature arising under this Agreement, including but not limited to claims for the injury or death of persons arising out of or occurring as a result of any act or omission of the UNIVERSITY, or its agents or employees in execution of the Project work. Nothing herein shall be deemed an express or implied waiver of the sovereign immunity of the UNIVERSITY or the COUNTY.

ARTICLE XI – INSURANCE

(a) The UNIVERSITY is a public university of the State of Florida. As such, it is self insured by the Florida Casualty Insurance Risk Management Trust Fund (FUND), pursuant to *Section 768.28 and Chapter 284, Part II, Florida Statutes (2004)*, for liability coverages.

(b) The UNIVERSITY shall maintain workers compensation benefits in accordance with Florida Statutes for the duration of this Agreement.

(c) A certificate of insurance and/or letter from FUND shall be issued to the COUNTY evidencing the above requirements prior to the UNIVERSITY commencing work pursuant to this Agreement.

(d) The COUNTY shall receive thirty days prior written notice of any change or cancellation by the FUND of any of the required coverages, including the liability coverages.

ARTICLE XII – SUBCONTRACTORS

(a) The UNIVERSITY may utilize subcontractors in the performance of this Agreement. The UNIVERSITY shall be fully responsible to the COUNTY for the acts and omissions of the subcontractors, and of all persons either directly or indirectly employed by the subcontractors.

(b) The UNIVERSITY shall insert provisions in all subcontracts, which bind subcontractors to the UNIVERSITY for the completion of the work as provided in this Agreement. All subcontractors shall empower the UNIVERSITY with discretion to terminate any subcontract.

(c) Nothing contained in this Agreement shall create any contractual relationship between any subcontractor and the COUNTY.

ARTICLE XIII – PROJECT RECORDS AND DOCUMENTS

(a) Upon request, the UNIVERSITY shall allow the COUNTY to examine all Project records, and audit any Project books, documents and papers. This right of examination and audit shall continue for the duration of the Project, and for three (3) years following completion of the Project. The UNIVERSITY shall maintain all Project records, books, documents, and papers for at least three (3) years following completion

of the Project. The UNIVERSITY recognizes and agrees that the COUNTY is subject to the Public Records provisions of *Chapter 119, Florida Statutes (2004)*, and that all documents, papers, letters and other materials made or received by the UNIVERSITY in conjunction with the Project are subject to said provisions.

(b) All data collected by the UNIVERSITY shall be reported to the COUNTY in a clear, concise, chronological format. The COUNTY and the UNIVERSITY shall mutually agree on an acceptable format for data summaries.

ARTICLE XIV – STOP WORK ORDER

The COUNTY reserves the right to issue a Stop Work Order to the UNIVERSITY and may instruct that all performance under this Agreement shall immediately cease and desist, and that no further billable costs are to be incurred. The Stop Work Order shall continue in full force and effect until rescinded in writing by the COUNTY.

ARTICLE XV – TERMINATION

This Agreement may be terminated either partially or as a whole by either party, if either party substantially fails to fulfill its obligation pursuant to this Agreement through no fault of the terminating party, and the other party is provided (1) at least thirty (30) calendar days written notice delivered by Certified Mail, Return Receipt Requested, and (2) an opportunity to consult with the terminating party prior to termination of the Agreement.

ARTICLE XVI – CONTINGENCY FEES

The UNIVERSITY warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the UNIVERSITY to solicit or secure this Agreement; and that it has not paid or agreed to pay any person, company,

corporation, individual or firm, other than a bona fide employee working solely for the UNIVERSITY any fee, commission, percentage, brokerage fee, gift or any other consideration, contingent upon or resulting from the awarding of this Agreement. Any breach of this warranty shall entitle the COUNTY to deduct the full amount of such fee, commission, percentage, brokerage fee, gift, or contingent fee from any monies that become due under this Agreement.

ARTICLE XVII – MODIFICATIONS

This contract constitutes the entire Agreement between the parties. Neither this Agreement nor any provision contained herein shall be corrected, modified, changed, revised, or assigned, nor shall the term hereof be extended or renewed, except by written agreement between the parties, authorized, signed and appended to the original Agreement.

ARTICLE XVIII – ASSIGNMENT

Neither the UNIVERSITY nor the COUNTY shall sell, transfer or assign, or otherwise dispose of this Agreement, nor any portion thereof, or of any right, title or interest therein, or obligations thereunder, without written consent of the other party.

ARTICLE XIX – NOTICES

All official notices, demands, requests, instructions, approvals, claims and reports shall be in writing. All such notices shall be delivered to the parties at the address below, unless specified elsewhere in the Agreement:

For the COUNTY

Kim Ornberg
Public Works Department
Senior Engineer
Stormwater Division

For the UNIVERSITY

Sue Endress
Director
Research Proposal Services
University of South Florida

520 W. Lake Mary Blvd.
Suite 200
Sanford, FL 32773

4202 E. Fowler Ave, FAO 126
Tampa, FL 33620

ARTICLE XX – CONFLICT OF INTEREST

The UNIVERSITY agrees that it will not commit any act that would cause or create a conflict of interest as defined by Chapter 112, Florida Statutes, to exist or occur in the performance of its obligations pursuant to this Agreement.

ARTICLE XXI – LIMIT ON COUNTY'S AUTHORITY

The UNIVERSITY acknowledges and agrees that the COUNTY has no authority to grant or pledge a security interest in any revenue source or property owned by or under the control of the COUNTY. As funding for this Agreement must be budgeted on an annual basis, there is no guarantee that funds will be available beyond those approved and in place in the most current fiscal year. Accordingly, this Agreement shall be terminated if funding is not budgeted in accordance with law. The COUNTY shall notify the UNIVERSITY as soon as the COUNTY is aware that funds will not be available in the future.

ARTICLE XXII – PREVIOUS AGREEMENTS

The parties acknowledge and agree that all the Previous Agreements, as identified above, are completed and no longer of any force or effect.

Exhibit A

SCOPE OF WORK

PROPOSED PROJECT DESCRIPTION

The purpose of this Agreement between Seminole County (County) and the USF of South Florida (USF) is to continue to provide the services necessary to maintain, enhance and improve the Seminole County Watershed Atlas. The anticipated tasks required for this project are listed below, with an estimated cost for this multiyear contract in Table 1.

Task #1: Project and System Maintenance: Years 1-5

Data Updates

The USF will work with Seminole County staff and data providers to update data for non-automated data sources once per month, quarterly, bi-annually or annually, depending upon the data provider. On a quarterly basis, the Watershed Atlas GIS sample site dataset, hydrography GIS dataset, and the Atlas database will be updated to include new sampling locations added to the sampling programs of existing data providers to allow new data to be accessible via the web interface. Reference layer GIS datasets, such as watershed boundaries and roads, will also be updated on a biannual basis when necessary as a result of updated data provided by the GIS data source.

The data sources that are currently maintained on the Seminole Watershed Atlas are:

- FDEP River Condition Index & Aquatic Vegetation
- FFWCC – Grass Carp Data
- GIS Reference Data
- LAKEWATCH water quality volunteer and supplemental data
- Orange County Water Quality
- Seminole County Water Quality, Hydrology Data, Near Real Time Water Quality, Near Real Time Weather
- SJRWMD hydrology layer and water quality
- STORET water quality
- USGS National Water Information System (NWIS)
- Watershed Action Volunteer (WAV) Water Quality Data

Website and Server Management

The USF will continue to function as web manager for the Atlas. The USF will continue to provide password-protected access to the Water Resource Atlas Database (WRAD), where the County can:

- Add/Edit Metadata
- Add/Edit Documents
- Add/Edit Organizations
- Edit Learn More Sections
- Approve/Edit Photos

- Add/Edit Announcements
- Add/Edit Bathymetric Maps
- QA SWADE Data
- Add/View/Edit/Delete Water Levels Data

The USF will provide four (4) quarterly reports that provide web usage statistics. The USF will also continue to maintain all software and hardware necessary to ensure that the web interface is online and accessible to the public. Software licenses to be maintained as part of this task includes: Microsoft SQL 2000 or higher, GreenPoint Webcharts 3D or another graphing software package, and a web statistics software package.

The USF will continue to configure and install these upgrades on an annual basis. This work service will also include server upgrades, quarterly usage and web statistics reports, application tuning, link tests and fixes, and website ArcIMS changes and upgrades.

ATLAS ENHANCEMENT TASKS

Task 2: Real-Time Data Service Enhancement: Years 1 – 5

As the real-time data provision continues to increase, USF will continue to work with the County to upgrade and enhance the availability and presentation of real-time data on the Atlas.

Task 3: Educational Component Enhancement Years 1 – 5

The USF in partnership with the County will continue to support and enhance the educational components to make lesson plans, data and other teaching tools more readily available to students and educators.

Task 4: Adopt-a-Pond and Adopt-a-River/Lake programs development and implementation: Years 1 – 5

With the implementation of the Seminole County Adopt-a-Pond and Adopt-a-River/Lake programs, USF will develop and implement Adopt-a-Pond and Adopt-a-River/Lake components/pages for the Atlas.

Task 5: Watershed Water Quality Trends and Cross-Watershed Comparison: Year 1 - 5

USF will develop new trend and status components for impaired waters to replace the discontinued EPA reporting vehicles currently used by the Atlas. Generally, current data from 303(d); TSI for lakes; WQI for rivers, and the recently-added river reach designation system shall be used to develop water quality indices or ratings use in trending the status of water quality within watersheds, as well as for comparison with similarly calculated values for other watersheds.

Task 6: Monitoring Technology Maintenance and Upgrades: Years 1 – 5

USF will assist the County in the maintenance and enhancement of their water quality, hydrologic and meteorological data acquisition network.

Task 7: Oral History Component Enhancement: Years 1 – 5

USF will conduct Oral History Interviews and provide point of contact for the public concerning the Atlas project. USF will be responsible for directing the graduate students' research to survey the public, conduct oral history interviews, write historical narratives, photograph sites, and archive historical documents and photographs concerning area lakes. USF will maintain and enhance this program and its Atlas component in the interest of continuing to provide information of significant historical value.

Task 8: Lake Assessments and Bathymetries: Years 1 – 5

USF will continue to support the County's efforts to collect, store, and display accurate morphometric data including bathymetries and aquatic plant growth patterns and trends.

Task 9: Water Quality Data Management System (WQDMS) and STORET Data Uploads: Years 1-5

USF will continue to improve/upgrade the WQDMS automated and STORET semi-automated data upload protocols, including the programming revisions required when STORET version 2.0 has been implemented by FDEP. USF will continue to provide data uploads to STORET at regularly scheduled intervals (approximately twice per year) throughout the term of this contract.

Task 10: Field Data Interface with Water Quality Data Management System: Years 1 – 5

USF will develop and implement an automated data upload for field parameters in conjunction with the field equipment vendor's (YSI) upgrade of its existing software. Once implemented the automatic field data will uploads to the Atlas will be provided one each quarter. This service will also include updates and enhancements to the system to accommodate changes to Seminole County SOP, and FDEP-STORET criteria.

Task 11: Automated Reporting: Years 1 – 5

USF will develop standardized (and non-standardized) reporting forms needed by the County to extract data from the Atlas database for regulatory compliance, as well as for other requirements. Each regulatory program requires reporting; the forms for which have been [mostly] standardized. Automation of these reports – especially regarding the collection and organization of required data – will be developed as a feature within the Seminole Water Atlas. Need and complexity, therefore cost, will be considered when prioritizing the development of these reports.

TASK	Annual Cost	Number of Years	Total Cost
1 Project/System Maintenance	\$50,000.00	5	\$250,000.00
2 Real-Time Data Service: Enhancement	\$13,200.00	5	\$66,000.00
3 Educational Component Enhancement	\$8,800.00	5	\$44,000.00
4 Adopt-A-Pond/Stream: Development & Implementation	\$17,600.00	5	\$88,000.00
5 WQ Trends & Cross-Watershed Comparison: Design/Implement	\$35,360.00	5	\$176,800.00
6 Monitoring technology maintenance and upgrades	\$8,800.00	5	\$44,000.00
7 Oral History Component Enhancement	\$8,800.00	5	\$44,000.00
8 Lake Assessments and Bathymetries	\$4,400.00	5	\$22,000.00
9 Water Quality Data Management STORET	\$7,040.00	5	\$35,200.00
10 Field Data Interface with WQDMS	\$5,000.00	5	\$25,000.00
11 Automated Reporting	\$17,000.00	5	\$85,000.00

	Total Contract All Tasks	\$880,000.00
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Watershed Atlas Work Order Summary

Work Order	Description	Cost	Cost Share *	Costshare participants
1	Initial Atlas development & implementation, including advisory committee, beta testing & launching website; 20 lake assessments	\$225,000.00	\$15,000.00	sjrwmd (10), lake mary(5)
2	Annual maintenance (data collection from all agencies, data formatting, atlas improvements, software upgrades, etc.) , STORET database integration, 20 lake assessments, 20 oral histories	\$150,000.00	\$54,500.00	lake mary(5), oviedo(10), alt. springs (10), winter springs(10), longwood (9.5), cassel (10)
3	Annual maintenance (data collection from all agencies, data formatting, atlas improvements, software upgrades, etc.) , STORET database integration, 20 lake assessments, 20 oral histories	\$153,750.00	\$45,000.00	LM (5), Ov (5), AS (5), WS (5), Long (5), Cas(5), San (10)
4	Stormwater inventory protocol development and post-processing for county NPDES stormwater system	\$50,700.00	\$0.00	
5	Annual maintenance (data collection from all agencies, data formatting, atlas improvements, software upgrades, etc.) , STORET database integration, 10 lake assessments	\$85,000.00	\$35,000.00	LM (5), Ov (5), AS (5), WS (5), Long (5), Cas(5), San (5)
6	Stormwater inventory post-processing for county NPDES stormwater system	\$62,400.00	\$0.00	
7	Annual maintenance (data collection from all agencies, data formatting, atlas improvements, software upgrades, etc.) , STORET database integration/TMDL, 10 lake assessments, oral histories	\$94,059.00	\$45,000.00	LM (5), Ov (5), AS (5), WS (5), Long (5), Cas(5), San (5), DOT(10)
Total		\$820,909.00	\$194,500.00	

separate contract required by EPA	Enhanced mapping capabilities, overall enhancements, STORET, curriculum development, realtime water quality stations, real time weather stations, marketing costs	\$0.00	\$371,500.00	EMPACT grant (USEPA)
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Total YTD \$566,000.00 Costshare

8	Maintenance	\$59,091.00	\$40,000.00	FY04/05 Costshare
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Contract total:	\$880,000.00	\$606,000.00	Costshare total
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Net cost to county: \$274,000.00 (880,000 - 606,000)

Atlas Resources and Benefits:

1. NPDES permit compliance:
 - a. Public educational outreach/water resource education
 - b. Public input for illicit discharges/illegal dumping
2. Provide a “one stop shop” for staff, outside agencies, citizens, etc. to find all available water resource information from numerous different agencies (**saving much staff time and money!!!**)
 - a. Water quality data
 - b. Lake level data
 - c. River/stream flow data
 - d. Lake assessments
 - e. Aquatic plant information
 - f. Biological assessments
3. Historic significance:
 - a. Oral histories
 - b. Historic photographs
4. Lake contour maps (fishing holes!)
5. Aerial photographs
6. Interactive mapping tools/GIS coverages/monitoring locations
7. SCPS curriculum/educational tools (meeting FCAT/Sunshine State Stds.)
8. Real time data
 - a. Rainfall/meteorological (being utilized by Public Safety and NOAA)
 - b. Water quality
9. Water resource management tool (especially for areas of special concern such as the Wekiva Study Area & Lake Jesup/TMDLs)
10. Volunteer opportunities
 - a. WAV
 - b. LakeWatch
 - c. Lake level readings
 - d. Public education
 - e. Clean ups/revegetation projects
11. GIS coverage developed for stormwater inventory