

**FELLSMERE WATER CONTROL DISTRICT
ANNUAL ENGINEER'S REPORT
MAY 2009**

This report is a brief summary of the engineering related activities affecting the operations and functions of the Fellsmere Water Control District (F.W.C.D.) during the past twelve months.

CLIMATOLOGICAL REVIEW

For a third consecutive year, and hurricane season, the F.W.C.D. and the East Coast of Florida has escaped the damages of a land fall hurricane.

However, Tropical Storm Fay did create some havoc for F.W.C.D., and a major portion of the Peninsula of Florida, with major rainfall and resulting flooding during the last one-half of August 2008.

Tropical Depression Fay passed over the Florida Keys late on August 18. Fay turned northwestward on August 19th, making landfall early that day on Florida's southwest coast at Cape Romano with maximum winds of 60 M.P.H. and lots of rainfall. Even after moving inland, Fay strengthened, exhibiting what resembled a classical eye on radar and satellite imagery, reaching its peak intensity of about 65 M.P.H. as it passed over the western shores of Lake Okeechobee. During the week of August 20th through 23rd, Fay continued interacting with the landmass of the Florida Peninsula producing heavy rainfall and maximum winds of 50-60 M.P.H. During most of that period, due to Fay's very slow motion, storm total rainfall amounts in some areas were staggering, including a few locations in East-Central Florida that received more than two feet of rain.

F.W.C.D.'s recorded field data, maintained at the District's office/shop complex, indicates a total of 9.54 inches of rainfall fell during the month of July, 2008, and a total of 16.67 inches fell during the month of August, with 12.08 inches of the August rainfall occurring during the Tropical Storm Fay event. For comparison, 9.66 inches fell during Hurricane Frances, 7.25 inches during Hurricane Jeanne, and 5.18 inches during Hurricane Wilma.

Fellsmere Farms weekly average rainfall log indicates that approximately 11.52 inches of rainfall fell during the month of July 2008, and a total average of 16.41 inches of rainfall fell in the month of August, 2008, with 10.25 inches of this amount occurring during the Fay event.

Yearly (2008) rainfall as observed at F.W.C.D.'s office/shop complex was 59.39 inches. At Fellsmere Farms the yearly overall average rainfall for 2008 was 55.44 inches.

Minimal damage resulted from the 40 M.P.H.± winds created by Tropical Storm Fay. However, the extreme rainfall event did cause some major flooding and collapse of several driveway and outfall culverts throughout the District.

During and immediately following the Tropical Storm Fay event, the extremely high water stages in the Upper St. Johns River Basin caused some concern along the western portion of the F.W.C.D., and severely restricted the maximum discharge capability of the local St. Johns

Improvement District to the south of F.W.C.D. The lowering of these high stages was late in coming with the reluctant opening and relief of excess stormwater discharge through C-54 Canal, to tide water, by the S.J.R.W.M.D.

Presently we are experiencing a record drought season for the area. Measured rainfall for the first quarter of Year 2009 (January through April) at the F.W.C.D. office is 2.88 inches; at Fellsmere Farms the average rainfall for the same period is 3.53 inches (approximately one-half the rainfall for the same normal dry period a year ago).

Stages in reservoirs in neighboring water control districts and in the Upper St. Johns Basin are approaching record low levels with approximately one month of the dry season remaining before the beginning of our next normal rainy season.

Attached to this report, please find an individual storm summary for the 2009 Hurricane Season prepared by the UNISYS Corporation.

MAY 8, 2008 ANNUAL LANDOWNERS AND BOARD OF SUPERVISORS MEETING

At the May 8, 2008 annual landowners meeting, Clifford Tyson was re-elected to serve a three (3) year term as District Supervisor.

In the following board of supervisors' organizational meeting, the following officers were elected for the following year:

President:	Patrick Leary
Vice-President:	Mike Monroe
Secretary:	Joyce Hertel
Treasurer (& Superintendent):	Rodney Tillman
Deputy Secretary:	Jeff Bowen
Deputy Treasurer:	Judy Warga

CITY OF FELLSMERE

The City of Fellsmere continues to develop strategies and implement improvements to improve its drainage infrastructure, including additional paving and drainage grants, developing a City-wide drainage secondary swale plan for driveway culverts, and the consideration of a stormwater utility to fund drainage improvements.

Roadway and drainage improvements in the remainder of Carter Hall James Subdivision and along Lime Street south of County Road 512 are now completed. This project was funded through a Community Development Block Grant.

In an effort to assist the City of Fellsmere in the permitting and proposed increase of their potable water allocation for the City's well field site, the F.W.C.D. has granted conceptual approval for the design of water control structures to be placed in Sub-laterals 12, 13 and 13A (railroad ditch) to assist in recharging the surficial aquifer in the area of the City's well field sites.

The City, together with S.J.R.W.M.D. and F.W.C.D., is currently seeking stimulus funding for the purchase and development of the former proposed "Foster Fellsmere Subdivision Site" as a future stormwater treatment park. This property lies immediately south of Sub-lateral 18 between the southerly extension of South Lime Street (on the east) and South Broadway Street (on the west).

The Grace Meadows project is now essentially completed. Phase I has been platted and homes are being constructed. All paving, drainage and utilities are completed within Phase II and this unit should be platted within the near future.

All of the remaining lands of F.J.V. have now been annexed into the City of Fellsmere. Revisions to the City's Comprehensive Plan for these lands are yet to be completed and approved.

Additional lands of the Ansin's property, lying east of the F.W.C.D. have also recently been annexed into the City of Fellsmere.

For reference see attached aerial map indicating the current boundaries of the City of Fellsmere.

The Ansin's are currently applying for a long term, 20 year, Conceptual Permit for that portion of their property lying immediately east of the F.W.C.D., known as "Pine Grove Development".

Although none of these lands drain into, or through, F.W.C.D., the Ansin's anticipate the utilization of the F.W.C.D. east boundary levee in the future design and construction of the project that will require actual construction permits for phased development of the project, most likely several years in the future. In preliminary discussions between the Ansin's and F.W.C.D., the District has advised the Ansin's that any such use of the levee will require an evaluation of and certain improvements (including the clearing and reinforcement) as a part of any such future permitted use of the levee.

ST. JOHNS RIVER WATER MANAGEMENT DISTRICT (S.J.R.W.M.D.)

At the July 10, 2007 board of supervisors meeting, the board adopted a resolution authorizing the District's attorney and engineer to investigate and determine the necessary procedures in modifying the boundaries of the F.W.C.D. to eliminate those portions of the District previously acquired by the S.J.R.W.M.D. as part of the St. Johns River Upper Basin Plan and/or other uses. Such reports were prepared and presented to the board at their November 13, 2008 meeting. No further action has been taken on this matter to date.

Representatives of the S.J.R.W.M.D. attended the January 8, 2009 meeting to request permission and access to the Sub-lateral 24 (77th Street) Canal and east boundary canal rights-of-way to construct an access roadway and parking area along this alignment to provide ingress-egress access to the Sand Lakes Conservation Area lying east of F.W.C.D., south of the Ansin property, north of Corrigan property and west of Interstate 95 Highway.

Carter Associates, Inc. was authorized by F.W.C.D. to survey and locate the District's right-of-way at the east end of Sub-lateral 24 and the east boundary canal in the vicinity of proposed roadway extension and parking area proposed by S.J.R.W.M.D.

Following joint on-site inspections with representatives of F.W.C.D. (including board members) and the S.J.R.W.M.D., and following discussions, the preliminary plans to construct the proposed roadway (south of Sub-lateral 24 to the Sand Lakes parcel) along the east toe and slope of the east boundary levee (rather than on top of levee as originally proposed) was tentatively agreed upon. To date, no final plans have been received by F.W.C.D. and no permit or easement agreement has been finalized in this matter.

In November of 2005, the F.W.C.D. received a copy of the proposed (Carson Platt Water Management Plan" prepared by S.J.R.W.M.D. This plan was stipulated in the 1999 Intergovernmental Agreement executed at the time of the Carson Platt Estate acquisition and including the abandonment and purchase of the internal F.W.C.D. rights-of-way. In this original stipulation S.J.R.W.M.D. agreed to reduce the peak discharge from the area purchased within the F.W.C.D. by at least 10%.

Past meetings, phone calls and correspondence indicate a disagreement between jurisdictional agencies on how this is to be accomplished.

It is now ten (10) years later and no plan has been approved or implemented.

The F.W.C.D. board of supervisors' primary concern is that landowners within the District, bordering and downstream of the state park not be negatively impacted by stormwater discharge coming from the park land.

The F.W.C.D. and S.J.R.W.M.D. need to revisit this Intergovernmental Agreement and agree on a plan to implement the required works of improvement to accomplish the stipulated reduction in peak discharge from the park.

ANNUAL ENGINEERING RELATED ACTIVITIES

During the past year, we worked with the engineer consultants representing PetroAlgae Aquaculture Facility, and with Superintendent Rod Tillman to assist PetroAlgae L.L.C. in meeting the District, and other local jurisdictional agencies requirements in issuing the required permits for this facility.

We completed the title research and prepared a sketch and legal description for all that portion of the existing ditch contained within the North Diversion Ditch (and the southerly extension thereof to north right-of-way of County Road 512) lying south of the existing Sub-lateral 15 Canal right-of-way. This description was utilized in a Quit-Claim Deed from F.W.C.D. to the City of Fellsmere conveying any right, title or interest the District may have in said parcel described.

The Total Maximum Daily Loads (T.M.D.L.'s) for the Indian River Lagoon have been adopted. Additional T.M.D.L.'s are being developed for the Indian River Lagoon tributaries. The next

step is to begin development of a Basin Management Action Plan (B.M.A.P.) to implement the T.M.D.L.'s. The Florida Department of Environmental Protection (F.D.E.P.) has scheduled the Indian River Lagoon Nutrient B.M.A.P. kick-off meeting for June 12, 2009 at the Brevard County Agriculture Center. We will monitor this process and anticipate how this program will impact the F.W.C.D.

In addition to those activities outlined in this report above, we have also been involved in the regular functions of the District as follows:

- 1) Remain on daily call to provide technical assistance and information to District personnel, supervisors, landowners and other governmental and public agencies concerning the operations, functions and regulations of the District.
- 2) Attend all regularly scheduled meetings of the board of supervisors and maintain a District Engineering file.
- 3) Review and monitor the quarterly stormwater quality analysis from the District.
- 4) Monitor and review the actions and activities of other jurisdictional agencies and related organizations that may affect the operations and functions of the District.
- 5) Review records, files in preparation of the Annual Engineer's Report as required under Florida Statutes – Chapter 298.

In conclusion, Superintendent Rod Tillman and his staff, under the guidance and direction of your board of supervisors, continues to address the growth management and environmental issues associated with the operations of the F.W.C.D., while providing the landowners its primary function of flood protection in a cost effective manner.

Respectfully submitted,

CARTER ASSOCIATES, INC.

By: Marvin E. Carter