

**FELLSMERE WATER CONTROL DISTRICT
ANNUAL ENGINEER'S REPORT
MAY, 2014**

We are pleased to submit this annual engineer's report as a yearly summary of the engineering related activities involved in the operations and functions of the Fellsmere Water Control District (F.W.C.D.), as required under Chapter 298 of the Florida Statutes.

CLIMATOLOGICAL REVIEW

As reported by the National Oceanic and Atmospheric Administration in their 2013 Atlantic Hurricane Summary, the 2013 Atlantic Hurricane Season ended on November 30, 2013 with the fewest number of hurricanes since 1982, primarily due to persistent, unfavorable atmospheric conditions over the Gulf of Mexico, Caribbean Sea and Tropical Atlantic Ocean.

This unexpectedly low activity is linked to an unpredictable atmospheric pattern that prevented the growth of storms by producing exceptionally dry, sinking air and strong vertical wind sheer in much of the main hurricane formation regions.

Thirteen named storms formed in the Atlantic region this year. Two, Ingrid and Humberto, became hurricanes, neither became major hurricanes. Although, the number of named storms was above the average of twelve, the number of hurricanes and major hurricanes were well below their average of six and three respectively. Major hurricanes are categories three and above.

Tropical Storm Andrea, the first of the season, was the only named storm to make landfall in the United States this year. Andrea (June 5th through June 7th) formed in the southern Gulf of Mexico on June 3rd, upgraded to tropical storm status on June 5th moving northwesterly, making landfall near Steinhatchee, Florida and accelerated Northeast tracking across Georgia and South Carolina. Andrea brought tornadoes, heavy rainfall and minor flooding to portions of Florida, Eastern Georgia and Eastern South Carolina, causing one fatality.

Only two other tropical storms threatened Florida. Tropical Storm Dorian (July 23rd – August 3rd) emerged off the African Coast on July 22nd and passed through the Florida Straits, between Florida and the Bahamas on August 3rd, degenerating into a remnant low.

Tropical Storm Karen (October 3rd – October 6th) formed near the Yucatan Peninsula, moved North and stalled off the Coast of Mississippi, weakened to a tropical depression and eventually moved easterly out of the Gulf of Mexico across the northern Florida Peninsula.

So far this winter season, with only a couple of frosty mornings, no significant freeze events have occurred. Several high temperature record days have been recorded for the

season, and unlike most of the lower forty-eight states, the Peninsula of Florida has enjoyed another mild winter.

Total rainfall, as measured and recorded at the F.W.C.D. office/shop complex for Year 2013, totaled 54.62 inches with above normal rainfall in January 2014, (4.84”), February (2.01”), March (1.41”), and April (1.34”). Soil moisture and water stage conditions remain good thus far during the normal dry season of the year.

MAY 9, 2013 ANNUAL LANDOWNERS AND BOARD OF SUPERVISORS MEETING

At the May 9, 2013 annual landowners meeting, Richard Carnell was elected to the Board of Supervisors of the District for a three year term.

At the following Board of Supervisors organizational meeting, the following officers were elected/appointed to serve for the following years:

President	Michael Monroe
Vice-President	Richard Carnell
Secretary	Joyce Hertel
Treasurer	Rodney Tillman
Deputy Secretary	Jeff Bowen
Deputy Treasurer	Judy Warga

CLIFFORD TYSON

Long time resident of Fellsmere (since 1953), retired as Ranch Manager of Sun Ag in 1993; was Honorary Director of the Florida Cattleman’s Association, and served on the Board of Supervisors of the F.W.C.D. for the past 21 years, died on November 6, 2013, at the age of 86. His dedication and service to the F.W.C.D. and community of Fellsmere is gratefully appreciated and will be missed and remembered for many years to come.

As required under Chapter 298 of the Florida Statutes, Jeff Bolling, Chief Operations Officer of the National Elephant Center, was appointed to fill the unexpired term of Cliff Tyson until the F.W.C.D.’s annual landowners meeting on May 8, 2014.

F.W.C.D. ANNUAL PERMIT SUMMARY

Twelve (12) permits have been issued by F.W.C.D. since last year’s annual report.

Two (2) utility permits were issued. The first utility permit was issued to AGL Resources for extension of P.E. Gas Main from previous terminal along County Road 512 at Orange Avenue, southwesterly along County Road 512 right-of-way to, and across Lateral “U” to service both Florida Organic Aquaculture (F.O.A.) and Sun Ag, Inc. The second utility permit was issued to Florida Organic Aquaculture to provide electrical service to its project site.

Nine (9) driveway/roadway culvert installation permits were issued to various landowners, and one (1) outfall/discharge culvert connection was issued to a landowner.

A considerable amount of engineering review time has been expended over the past year regarding the F.D.O.T./I-95 bridge replacement across the Main Canal (now in litigation), and the Florida Organic Aquaculture project. Neither of these projects has received appropriate permits from F.W.C.D. for construction currently underway.

A permit for the proposed Florida Organic Aquaculture site plan was issued last year and work was started. The F.O.A. applicant/developer decided to revise the plan and submitted a permit modification request with plans and calculations prepared by a new Engineer. We have reviewed plans and issued "request for additional information" for four different submittal revisions. The failure of the plans and calculations to meet the permit criteria is due in part to the developer's on-going redesign of the site plan and lack of conformance with the submittal plans. The process has been frustrating for all and policy guidelines to prevent developers from building before permit modifications are approved are being pursued with the City of Fellsmere Planning Department.

A permit application from the F.D.O.T. from 2012, pertaining to replacement of the I-95 Bridge over the Main Canal remains open pending resolution of disputed design and construction issues. The F.W.C.D. requires additional fill and rock rip rap slope stabilization treatment for the transition sections of the realigned F.W.C.D. maintenance road. The matter was taken to a hearing in front of a Judge and the Judge issued a court finding that the F.D.O.T. would submit plans (including the requested rip rap) for approval by the F.W.C.D. The F.D.O.T. has ignored the Judge's ruling and proceeded in the construction of the bridge and relocated maintenance road without the requested rip rap. The F.D.O.T. excuse continues to be that the rock rip rap was not included in their project scope and therefore funds were not budgeted for it. Through the F.W.C.D. Attorney, the matter is being scheduled for trial.

CITY OF FELLSMERE (C.O.F.)

The City of Fellsmere continues to develop strategies and implement improvements to its street and drainage infrastructure, including additional paving and drainage grants and developing a city-wide drainage swale plan for driveway culverts.

During 2012, the C.O.F. adopted a Flood Plain Management and Stormwater Utility Ordinance (Ordinance Number 2012-19), entitled, "Stormwater Management Program" for the purpose of delivering to that area exclusive stormwater services, and exercising within that area the powers provided for by law. The stormwater reserve area contains all the lands lying within the corporate limits of the City.

The C.O.F. Stormwater Management Utility Program primarily addresses the secondary drainage system within the City and water quality issues mandated by other jurisdictional agencies, but does not overlap or duplicate the responsibilities of the F.W.C.D. in the

maintenance and operations of the District's primary drainage ditches, canals and flood protection functions.

The F.W.C.D. entered into an agreement with the City of Fellsmere to participate in the funding of an update to the F.W.C.D. East Master Drainage Plan and Stormwater Hydrologic Analysis of the Gravity Drainage System in late 2012. The update was then used in the development of the City of Fellsmere Master Stormwater Plan.

The F.W.C.D. update was completed as of May 2014, and is scheduled for adoption by the F.W.C.D. Board of Supervisors to replace the current model at the May meeting. The model update improvements include the conversion of the study to the NAVD datum, the use of recent Lidar topographic information, and the update of culvert pipe replacement data. The Lidar survey method of estimating the existing ground elevations is a significant improvement over the aerial photography method used in the original model and has improved the accuracy of the model results.

The work on the Fellsmere Master Drainage Plan was completed at the end of 2013. The F.W.C.D. updated model was used as the basis for the Master Plan. Storm event scenarios were modeled with impervious area build out conditions and various regional stormwater lake improvements. The City of Fellsmere is currently pursuing Grant opportunities to help fund the construction of the north and south regional lakes.

The City of Fellsmere has also completed the design and permitting associated with the Fellsmere CDBG Phase 6 Project. This project includes the paving and drainage improvements along Wyoming and South Carolina Avenues and Hickory and Pine Streets. The City re-applied for Grant funding during the recent CDBG Grant Application Cycle with a modified project scope in an effort to gain success in obtaining funds.

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

The construction of the new levee along the eastern boundary of S.J.R.W.M.D. property most recently acquired from Fellsmere Joint Venture (FJV) is nearing completion. The construction of the "Fellsmere Water Management Area" is scheduled for completion some time in 2015. This levee will be the east levee of the newly created stormwater management area and will serve as the new western levee of the F.W.C.D.

The levee is reported to be constructed to U.S.A.C.O.E. standards, and as such, designated as a U.S.A.C.O.E. certified levee, may be possible when the project is completed. The U.S.A.C.O.E. certification is important for F.E.M.A. flood zone mapping, as the levee will be recognized for flood protection and result in F.W.C.D. landowners receiving reduced flood insurance rates. The F.E.M.A. flood insurance rate maps will not be changed to recognize the benefits of a levee protected flood zone until a "certified levee system" is completed around the entire F.W.C.D. levee system. The balance of the perimeter levee system including the north, south and portion of the east boundary will have to be upgraded and certified to complete the F.E.M.A. certification

process. At some point in the future, we anticipate this land will be developed and the benefits of the F.E.M.A. certification will justify the cost.

The proposed construction of roadway access along Ditch 24 east of Willow Street to and southerly along the “east boundary levee” alignment, to the Sand Lake Conservation Area still remains held in abeyance. Apparently, departmental issues between F.D.E.P. and S.J.R.W.M.D. have delayed permitting and construction of this project.

ANNUAL ENGINEERING RELATED ACTIVITIES

By far, the single most engineering time consuming activity during this past year has been expended on the non-compliance design and construction issues of the F.D.O.T. Interstate 95 Bridge under construction across the F.W.C.D. Main Canal. As described above, this matter currently remains unresolved and Carter Associates, Inc. continues to assist F.W.C.D. and legal council in on-going litigation.

Permitting issues with the Florida Organic Aquaculture project continues to remain unresolved. As described above, modifications to the original permitted site plans have not met or provided the required F.W.C.D. permit criteria for such projects. Technical engineering review and assistance to F.W.C.D. on this matter continues to be a time consuming.

Carter Associates, Inc. provided the F.W.C.D. design/construction criteria and permitting assistance to the consulting engineers and contractors for the design and installation of gas main extension, from existing terminal in downtown Fellsmere, southwesterly along CR-512, across Park Lateral, Lateral “U”, and intervening Sub-lateral Canals to provide service to F.O.A. and Sun Ag sites.

We performed a topographic survey and hydraulic modeling analysis of Sub-lateral Canals U-22 and U-23 (not previously included in the F.W.C.D. East Master Drainage Plan) to determine proper size and grade of culverts for City of Fellsmere roadways being constructed to the F.O.A. site.

As stated above, Carter Associates, Inc. has recently completed an update revision of the F.W.C.D. East Master Drainage Plan for adoption by the Board of Supervisors at their May 2014 Board Meeting.

The City of Fellsmere is applying for a “Rails To Trails” Grant to construct a pedestrian/equestrian trail along the former Fellsmere railroad alignment. The City requested, and was granted, a perpetual easement (and temporary construction easement) for a pedestrian bridge across Park Lateral Canal from the F.W.C.D. Carter Associates, Inc. has prepared the legal description and required exhibits of these easements for the City of Fellsmere.

On-going annual engineering activities include the following:

- 1) Attend all regularly scheduled meetings of the Board of Supervisors and maintain a District Engineering file.
- 2) 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.
- 3) Continue to provide technical permit review assistance to Superintendent Rodney Tillman, and project consultants, in the submission and issuance of all permit applications to assure compliance with F.W.C.D. policies and requirements.
- 4) Review and monitor the quarterly stormwater quality analysis from the District.
- 5) Monitor and review the actions and activities of other jurisdictional agencies and related organizations that may affect the operations and functions of the District.
- 6) Review records and files in preparation of the Annual Engineer's Report as required under Florida Statutes – Chapter 298.

Once again, we are pleased to report that Superintendent Rodney Tillman and his staff, under the direction, guidance and support of the District's Board of Supervisors, continues to maintain and protect the works of improvement of the District, and to provide the landowners within the District a cost-effective level of service for flood protection.

Respectively submitted,

CARTER ASSOCIATES, INC.

By:


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