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**Electric & Gas Engineering**  
*"Committed to Quality"*

December 15, 2017

Florida Public Service Commission  
Office of Commission Clerk  
2540 Shumard Oak Blvd.  
Tallahassee, Florida, 32399-0805

**Re: Fort Pierce Utilities Authority Submittal for Docket No. 20170215-EU – Review of Electric utility hurricane preparedness and restoration actions**

FPUA has prepared a submittal for the aforementioned. Our responses are embedded into the PSC staff's attached letter. FPUA has included an Appendix with additional information for questions 2, 4, 19, & 28. Additionally, the attached PDF has bookmarks for ease of navigating between these questions and the Appendix.

If you have any questions, please feel free to contact me at (772) 466-1600, ext. 3484 or email: [jcisneros@FPUA.com](mailto:jcisneros@FPUA.com).

Sincerely,

A handwritten signature in black ink that reads "Javier Cisneros".

Javier Cisneros, P.E.  
Supervising Engineer



Our mission is to provide our customers with economical, reliable and friendly service in a continuous effort to enhance the quality of life in our community.

[www.fpu.com](http://www.fpu.com)

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# Public Service Commission

November 14, 2017

## STAFF'S FIRST DATA REQUEST *via email*

To:

Duke Energy Florida, LLC ([Matthew.Bernier@duke-energy.com](mailto:Matthew.Bernier@duke-energy.com), [dianne.triplett@duke-energy.com](mailto:dianne.triplett@duke-energy.com))  
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Lee County ([dennie.hamilton@lcec.net](mailto:dennie.hamilton@lcec.net))  
Cooperative Group ([mhershel@feca.com](mailto:mhershel@feca.com))

**Re: Docket No. 20170215-EU - Review of electric utility hurricane preparedness and restoration actions.**

To Whom It May Concern:

By this letter, the Commission staff requests that each utility provide responses to the following data requests.

### Staging for Utility Personnel and Mutual Aid

1. Please describe the pre-storm coordination process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate. The description should include:
  - a. Dates and topics of internal meetings held after each storm was named.
  - b. Dates and topics of external communication pertaining to mutual aid held after each storm was named.
  - c. Date mutual aid was requested and nature of request.

*The initial planning and internal communication normally will start 7 – 10 days prior to a storm making landfall. These procedures will ramp up as the storm gets closer and a cone of certainty is narrowed down.*

*Once a storm is named and the projected path will impact FPUA's service territory we start the process of following our prewritten storm manual. This manual describes the duties required by each employee to ensure that our infrastructure is protected as well as to provide provisions for our employees and our mutual aid crews.*

*During these early stages we estimate the potential impact to our infrastructure and make a determination as to staffing needs. If we feel that our own internal crews will be able to handle the restoration we will not reach out for mutual aid. If we estimate that the damage will be severe we reach out to Florida Municipal Electric Association, FMEA, and request mutual aid through our in-state and nationwide resources. Once FMEA secures resources for FPUA we assign one employee to handle the coordination with these outside crews. This coordination effort includes number of employees, vehicles, equipment, material, and the possibility of pre-staging based on projected path. Responding crews are given FPUA staging areas and once onsite are given procedural briefings including safety training.*

*While we are securing mutual aid crews, we also assign staff to secure local lodging and meals for all FPUA and Mutual aid crews that will be assisting in restoration efforts. We also will determine staffing levels needed during the storm.*

*During Hurricane Irma FPUA started the process around Labor Day.*

2. Please provide a detailed description of the utility's allocation of storm duties for all personnel. This should include a description of each function and the number of utility personnel assigned.
  - a. *During the 1<sup>st</sup> quarter of each calendar year, each FPUA department performs an annual review and update of their storm manual accordingly. Each department's storm manual describes the responsibilities & tasks for each employee for all storm phases. Please see appendix for storm manuals for several departments.*
3. When did the costs for Hurricanes Hermine, Matthew, Irma, Maria, and Nate begin to accrue for receiving mutual aid?
  - a. *Cost began to accrue when mutual aid crews were dispatched from their own home facility.*

### Damage Assessment Process

4. Please provide a detailed overview of the initial damage assessment process for Hurricanes Hermine, Matthew, Irma, Maria, and Nate, including the number of utility employees or contractors involved, their duties, and how initial damage assessment is disseminated within the utility to assist in restoration activities. Additionally, please provide photographs or other visual media that memorializes storm damage, which was documented during the initial damage assessment process.
  - a. *FPUA's Initial Assessment team include the following:*
    - i. *One (1) T&D Superintendent and one (1) crew supervisor*
    - ii. *Three (3) substation technicians*
    - iii. *Twelve (12) lineman and four (4) apprentices*
    - iv. *One (1) engineer, two (2) utility designers, and two (2) engineering technicians*
  - b. *The initial damage assessment process is outlined in FPUA's storm manuals. A brief overview of the storm manual includes the following:*
    - i. *Immediately following the storm and wind speeds have dropped below 35 MPH, qualified staff begin immediate assessment of any transmission lines and distribution lines that provide service to critical customers such as the hospital, special needs storm shelters, public service facilities, water plant, wastewater plant, etc.*
    - ii. *Immediately following the initial assessment and restoration of any critical customers, the initial damage assessment continues for each feeder that were taken out of service as a result of the storm.*
    - iii. *Additionally, each feeder that remained energized throughout the storm was assessed for isolated lateral outages and potential hazards*
  - c. *Pictures are taken before and after any repairs are performed to identify any damaged facilities as a result of the storm. The picture file name is based on the unique identifier in our mapping/asset system with either "before" or "After" as a suffix. See Appendix for pictures.*
5. Please provide a description of how damage assessment data is updated and communicated internally.
  - i. *Damage assessment data (hazards) was communicated over radio from the field assessors to dispatch operators and entered into outage management system*
    1. *Hazards: Downed wires, broken poles, blown fuses, damaged equipment, vegetation obstruction, etc.*

### Restoration Workload

6. Please provide a detailed description of how the utility determines when and where to start restoration efforts.
  - a. *Each feeder is assigned an assessment team. The assessment team used the following process:*
    - i. *First, inspect backbone of the feeder.*

1. *Isolate as needed due to damage and communicate the isolation and associated hazard to dispatch operators*
2. *Restore backbone after repair*
- ii. *Second, inspect each lateral*
  1. *Isolate as needed due to damage and communicate the isolation and associated hazard to dispatch operators*
- iii. *Restore each lateral based on the largest number of affected customers*
  1. *This information was provided via maps based on the information provided from the assessment team*

7. For Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please complete the following table on workload priority:

Personnel Responsible for Restoration Workload Assignments		
Title	Years of experience	Number of crews managed
<i>Electric &amp; Gas Director</i>	<i>24</i>	<i>0</i>
<i>T&amp;D Superintendent</i>	<i>29</i>	<i>6 in-house, 6 mutual aide</i>
<i>Operations Superintendent</i>	<i>37</i>	<i>0</i>
<i>Supervising Engineer</i>	<i>17</i>	<i>0</i>

8. Please provide a description of how restoration workload adjusts based on work completed and updates to damage assessments.
- a. *Upon restoration of laterals or isolated areas, each repair was communicated back to the dispatch operators to update the outage management system. The outage data was managed by the engineering team to sort the largest groups of customers without power.*
  - b. *If any areas required replacement of poles, the mutual aid crews were assigned this work and allowing the local crews to quickly navigate throughout the service area to restore as many customers as possible.*
9. If applicable, please describe how mutual aid was determined to be no longer needed following Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
- a. *We based the need for continual mutual based on the percentage of restoration remaining and the type of work that was needed. Management team determined if our internal crews would be able to handle the work expeditiously.*

**Staffing Considerations**

10. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following, please provide the following:
- a. *Days of lodging provided for Utility personnel (Person-Days): FPUA had rooms available for its crews 1 to 2 days before Irma and Matthew and during the restoration process. This equated to 5 days for Matthew and 7 days for Irma*
  - b. *Days of lodging provided for mutual aid partners (Person-Days): FPUA provided lodging for it mutual aid crews during the restoration phase. For Mathew this was*

*4 days and for Irma it was 6 days. We has helped to coordinate lodging for our traveling mutual aid crews. This included 2 days for Mathew, crews from Kentucky, and 4 days for Irma, crews from Michigan.*

- c. Number of meals provided for Utility personnel: *FPUA provided 3 meals a day during the storm and also during all restoration for both of these.*
- d. Number of meals provided for mutual aid partners: *FPUA provided 3 meals a day for all work performed during the restoration. We also reimbursed theses utilities for money spent on meals while traveling.*
- e. Number of Utility personnel injuries: **0**
- f. Number of mutual aid partner injuries: **0**
- g. Number of Utility personnel fatalities: **0**
- h. Number of mutual aid partner fatalities: **0**

Please note any delays in restoration associated with items e-h above.

- 11. Please provide a detailed description of when your Utility was considered fully restored from each named storm event.
  - a. *FPUA considered full restoration when all customers that could be restored were restored. Those that remained without power could not be restored at that time due to customer damage either to their weatherhead or to their structure. We work closely with the City Building Department to ensure they were aware of each location that was not able to be restored and why.*

### **Customer Communication**

- 12. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following for each county in the Utility's service territory affected by the storms.
  - a. Total number of customer accounts: *Matthew – 28,274, Irma – 28,149*
  - b. Peak number of outages: *Matthew – 15,692, Irma – 23,774*
- 13. Please provide how call center customer service representatives were utilized before, during and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
  - a. *The Customer Service Manager requested volunteers to ride out the storm at the command center to help facilitate phones calls prior to landfall (> 35 mph). These storm riders would answer phone calls and log them into the outage management system.*
  - b. *After the storm, additional call center representatives arrived at the command center to facilitate all incoming calls. Each call was logged into the outage management system.*
    - i. *Any emergency were noted on a pink paper and walked over to dispatch for immediate attention*
- 14. Please provide the number of customer service representatives the Utility had during Hurricanes Hermine, Matthew, Irma, Maria, and Nate. *Ten (10) call center representatives were active at any given time at the command center.*
  - a. Were there additional personal deployed or 3rd party entities utilized to help address customer contacts during each named storm event? If so, how many? *No*

15. Please provide the number of customer contacts received by the customer call center(s) during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
  - a. *Matthew (2016) = 24,767*
  - b. *Irma (2017) = 65,823*
  
16. Please provide all methods (call centers, email, Utility website, etc.) utilized to submit and collect customer contacts before, during, and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
  - a. *Switchboard software was utilized monitor incoming calls before, during and after any storm. This software allowed the call center representative to take the next available call based on wait time*
  - b. *The outage management system was synchronized with our customer information database. Any information related to a customer was quickly accessible and logged within a few seconds.*
  
17. Please describe the step by step process(es) by which customer contacts are addressed before, during, and after a named storm event. If different during each timeframe, please describe the step by step process during each separately.
  - a. Did the Utility identify any delays in restoration as a result of addressing customer contacts related to Hurricanes Hermine, Matthew, Irma, Maria, and Nate? If so, please provide detail.

*FPUA Key Accounts team and personnel reach out to our key customers to discuss their needs before and after the storm. FPUA staff has primary contact information for all of our key accounts and we are in constant communication with these customers via land lines, cell phones, emails or text messages. Our key customers are encouraged to reach out to our key account team for any additional needs related to any utility services provided by FPUA.*
  
18. Please provide whether or not customer contacts are categorized (by concern, complaint, information request, etc.) If so, how are they categorized? If not, why not?
  - a. A customer call was grouped into one of two categories:
    - i. *Out of power. Any call that was not life threatening such as live wire down, arcing or sparking equipment*
    - ii. *Life threatening. Any call that was eminent danger to human life*
  
19. Please provide a detailed description of how customer service representatives are informed of restoration progress.
  - a. Is there a script provided to each customer service representative to relay restoration progress to customers? If so, what is the process by which the script is created?
    - a. *Call center representatives are provided training before the beginning of each storm season. This training is outline in the attached document*
    - b. *Additionally, this training is provided training during phase 1 as defined in the FPUA storm manual.*
    - c. *See Appendix for the Storm Training PowerPoint*
  
20. Please describe the process the Utility uses to notify customers of approximate restoration times. The response should include at a minimum:

- a. How restoration time estimates were determined.
  - a. *During the restoration process immediately following the storm, restoration times were not provided to customers until the initial damage assessment was completed. The restoration progress was provided to the general public via our website. As outage percentages declined, customers were provided approximate restoration times. In an effort to minimize call backs, customers were given a end of day time frame for restoration. The customers were advised to call back in the morning if they were still out of power.*
- b. How customers are notified.
  - a. *Customer were notified over the phone*
- c. How restoration time estimates are updated.
  - a. *Restoration times were not provided to the customers over the phone.*
- d. How restoration time estimates are disseminated internally, to the county and state Emergency Operations Centers, and to the public.
  - a. *FPUA had a designated staff representatives at the County Emergency Operations Center (EOC) to provide updates every three hours. FPUA also sent outage information every 3 hours to the Executive Director of Florida Municipal Electric Association to be compiled and sent to the Governor.*

## Material Considerations

21. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please provide a description of how vehicle fuel was procured for Utility personnel and mutual aid partners. As part of the response, please answer the following:
  - a. Whether or not the Utility has fuel stored for these types of events
    - a. *Three days before the storm, FPUA fuel storage were restock by the local provider*
  - b. Whether or not fuel shortage was an issue during these events
    - a. *FPUA did not experience any fuel shortage after the storm*
  - c. Whether or not there were any delays due to fuel shortage
    - a. *FPUA did not experience any fuel shortage delays*
  - d. Whether or not there were enough vehicles available during these events/any issues mobilizing crews
    - a. *Mutual Aid crews did experience fuel shortage in route to FPUA. FMEA provided assistance to provide fuel. FPUA sent internal employees with fuel during Irma to mutual aid crews in Northern Florida who were unable to secure fuel on I-95.*
22. Please detail any complications or delays such as shortage or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.
  - a. *FPUA did not experience any delays or shortage for materials. FPUA maintains quantities for the storm season.*

## Restoration Process

23. Please provide a summary timeline of the utility's restoration process for each hurricane: Hermine, Matthew, Irma, Maria, and Nate. The timeline should include, but not limited to, staging, stand-down, deployment, re-deployment, allocation, mutual aid, release of mutual aid, and date last outage was restored.



- a. *FPUA follows the same general process for all Hurricanes. We follow the 5 phase approach as laid out in our storm manual.*
- i. *Phase 1 – This occurs when an advisory is issued for our area. Each area proceeds with the execution of their section of the manual. Activities include purchasing non-perishable food items, fueling vehicles and emergency generators, and gathering emergency supplies and spare parts.*
  - ii. *Phase 2 – This occurs when a watch is issued for our service area. Activities include preparations for securing buildings and vehicles, and the purchase of any necessary materials. We also begin assessment of mutual aid needs and start communication with FMEA. This phase is also when communication with lodging and meal providers.*
  - iii. *Phase 3 – This occurs when a warning is issued for our service area. During this phase final preparation for facilities and set up for restoration occurs. Mutual aid crews are secured and are either staged or ready for deployment depending on storm track projections. Lodging is secured and caterers are ready for final deployment. Crews ride critical circuits.*
  - iv. *Phase 4 – During the storm we determine critical employees and positions that will be necessary to ride the storm out at our Operations Center. The system is monitored and planning is taking place for storm restoration.*
  - v. *Phase 5 – Restoration. As soon as it is safe to travel all crews that rode out the storm will start damage assessment and restoration of critical circuits. All employees that were not defined as critical are called back in for restoration. Mutual aid crews are brought in or released from their holding pattern. The caterer is brought in. Lodging keys are acquired and distributed.*  
*As restoration progresses, FPUA's team will determine the needs of our system to decide on the length and number of crew needs. As outage numbers decline decisions are made as to length of stay for mutual aid crews. Prior to release we communicate with FMEA to determine if the crews will be heading back to their home base or to another utility in need. We will continue working until all customers that can be restored are restored.*

24. Please explain how the Utility validates adherences and departures from its storm preparation plan.
- a. If the Utility does not assess departures from its storm plan, explain why not.
  - b. If the Utility does not document or otherwise memorialize departures from its storm plan, explain why not.
  - c. Have departures from the Utility's storm preparation plan resulted in modification of the storm preparation plan during 2015 through 2017? If so, please explain how with examples.

*After every event we perform a storm debrief across the entire company and determine lessons learned. These lessons learned are then incorporated into the storm manual during its yearly review. An example of a change that occurred was the moving of dinner to 8:00 PM to coincide with the crews finishing for the day.*

25. Please explain how the Utility validates adherences and departures from its storm restoration plan.

- a. If the Utility does not assess departures from its storm restoration plan, explain why not.
- b. If the Utility does not document or otherwise memorialize departures from its restoration storm plan, explain why not.
- c. Have departures from the Utility's storm restoration plan resulted in modification of the storm restoration plan during 2015 through 2017? If so, please explain how with examples.

*This will occur during the storm debriefing that we do across the entire company.*

**Outages**

26. Please identify all counties, including reporting regions/division for each county if applicable, that were impacted (had outages or damage) due to Hurricanes Matthew, Hermine, Irma, Maria, and Nate.
- a. St. Lucie County (Only) as FPUA's service territory is only in the County.*
27. Please complete the table below summarizing the wind speed and flooding impacts by county in the utility's service area. If the requested information is not available by county, please provide the information on a system basis. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Weather Impact				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)
<i>SLC</i>	<i>71</i>	<i>100</i>	<i>13.85</i>	<i>N/A</i>
<i>SLC</i>	<i>68</i>	<i>97</i>	<i>3.45</i>	<i>N/A</i>

**Hardened and Non-Hardened Structures**

28. Please provide a county map or graphic indicating the geographic locations where the Utility's infrastructure was storm hardened after 2006. For purposes of this question, do not include vegetation management.
- a. The map identifies the number of assets such as poles, underground primary and secondary work that have been replaced after 2006. Since 2005, all new projects are designed to Grade B construction and considered as a storm hardening improvement. See Appendix for attached map*

29. Please complete the table below summarizing hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

<b>Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	0	0
Substations	0	0
<b>Total</b>	0	0
<b><i>Distribution</i></b>		
Poles	0	0
Substation	0	0
Feeder OH	0	0
Feeder UG	0	0
Feeder Combined	0	0
Lateral OH	0	0
Lateral UG	0	0
Lateral Combined	0	0
<b>Total</b>	0	0
<b><i>Service</i></b>		
Service OH	0	0
Service UG	0	0
Service Combined	0	0
<b>Total</b>	0	0

30. Please complete the table below summarizing non-hardened facilities that required repair or replacement as a result of Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

<b>Non-Hardened Facilities</b>		
<b>Hurricane</b>	<b>Number of Facilities Requiring</b>	
	<b>Repair</b>	<b>Replacement</b>
<b><i>Transmission</i></b>		
Structures	0	0
Substations	0	0
<b>Total</b>	0	0
<b><i>Distribution</i></b>		
Poles	0	24+
Substation	0	0
Feeder OH	0	0
Feeder UG	0	0
Feeder Combined	0	0
Lateral OH	440	80
Lateral UG	0	0
Lateral Combined	200	40
<b>Total</b>	440	144
<b><i>Service</i></b>		
Service OH	650	80
Service UG	0	0
Service Combined	400	60
<b>Total</b>	1050	204

31. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the five highest volume of outage causation that impacted the Utility's service area.
- Vegetation on power lines*
  - Broken poles due to wind damage*
  - Damaged Weather heads*
  - Salt Tracking*
32. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the top five drivers that protracted service restoration time.
- Pole Replacement*
  - Open Wire secondary repair*
  - Customer point of service connections*
  - Vegetation clearing*
33. If applicable, please describe any damage prevented by flood monitors during Hurricanes Matthew, Hermine, Irma, Maria, and Nate.
- FPUA does not use flood monitors for the electric system*

34. How many outages were avoided by automated feeder switches during Hurricanes Matthew, Hermine, Irma, Maria, and Nate? Please explain how the data for each event was collected.
  - a. *FPUA does not use automated feeder switches*

**Critical Infrastructure Restoration**

35. Please complete the table below for all critical infrastructure facilities (CIFs), by location (city/county) and facility type, which lost power, the restoration time for the CIFs and the cause of the outage (such as wind, storm-surge, flooding, debris, etc.) and facilities structure type that required replacement and/or repair. Please provide this information for Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Hurricane (Name) – CIF						
CIF Name/Type (i.e. Hospital)	County/ Location	Restoration Time	Outage Cause	Number of Facilities Requiring		
					Repair	Replace
<i>Lawnwood/Hospital</i>	<i>St Lucie County</i>	<i>3 hours</i>	<i>Wind</i>			
<i>Fenn Center/Special Needs Shelter</i>	<i>St Lucie County</i>	<i>6 hours</i>	<i>Wind</i>	<i>Transmission</i>		
<i>Police Station</i>	<i>St Lucie County</i>	<i>6 hours</i>	<i>Salt tracking at sub</i>	Structures	<i>0</i>	<i>0</i>
<i>Wastewater Plant</i>	<i>St Lucie County</i>	<i>6 hours</i>	<i>Salt tracking at sub</i>	Substations	<i>0</i>	<i>0</i>
<i>Causeway Substation</i>	<i>St Lucie County</i>	<i>18 hours</i>	<i>Salt Tracking</i>	<b>Total</b>	<i>0</i>	<i>0</i>
<i>King Substation</i>	<i>St Lucie County</i>	<i>12 hours</i>	<i>Salt tracking</i>	<i>Distribution</i>		
				Poles	<i>0</i>	<i>0</i>
				Substation	<i>0</i>	<i>0</i>
				Feeder OH	<i>0</i>	<i>0</i>
				Feeder UG	<i>0</i>	<i>0</i>
				Feeder Combined	<i>0</i>	<i>0</i>
				Lateral OH	<i>0</i>	<i>0</i>
				Lateral UG	<i>0</i>	<i>0</i>
				Lateral Combined	<i>0</i>	<i>0</i>
				<b>Total</b>	<i>0</i>	<i>0</i>
				<i>Service</i>		
				Service OH	<i>0</i>	<i>0</i>
				Service UG	<i>0</i>	<i>0</i>
				Service Combined	<i>0</i>	<i>0</i>
				<b>Total</b>	<i>0</i>	<i>0</i>

**Underground Facilities**

36. Please provide an assessment of the performance of underground facilities during Hurricanes Matthew, Hermine, Irma, Maria, and Nate. As part of this assessment please summarize the number of underground facilities that required repair or replacement for each event.

- a. Underground facilities performed well during the hurricane.*
- b. Two pieces of underground equipment were damaged due to flooding. These facilities and similar facilities will be replaced with submersible rated equipment as part of an on-going storm hardening plan.*

37. Please provide a discussion what programs/tariffs the utility has in place to promote
  - a. Undergrounding of new construction (e.g., subdivisions)
    - a. *The City of Fort Pierce has an ordinance for all new projects must be constructed underground.*
  - b. Conversion of overhead to underground
    - a. *The City of Fort Pierce has an ordinance for improvement projects must be constructed underground. Additionally, FPUA has a resolution that will contribution a 25% credit towards construct of construction to convert to underground.*



Please file all responses electronically no later than December 15, 2017 from the Commission's website at [www.floridapsc.com](http://www.floridapsc.com), by selecting the Clerk's Office tab and Electronic Filing Web Form. Please contact me at [wtaylor@psc.state.fl.us](mailto:wtaylor@psc.state.fl.us) or at 850.413.6175 if you have any legal questions, or contact Emily Knoblauch for technical questions at [eknoblau@psc.state.fl.us](mailto:eknoblau@psc.state.fl.us) or at 850.413.6632.

Sincerely,

*/s/Wesley Taylor*

Wesley Taylor  
Attorney

WDT/as

cc: Office of Commission Clerk  
Office of Public Counsel ([kelly.jr@leg.state.fl.us](mailto:kelly.jr@leg.state.fl.us), [sayler.erik@leg.state.fl.us](mailto:sayler.erik@leg.state.fl.us))

## Appendix

Question 2 – Storm Manual for Department 55 and 56

## SECTION 51-56

### ELECTRIC & GAS ENGINEERING

#### 51-56.01 GENERAL INFORMATION

- A. In the absence of the Supervising Engineer, the Acting Supervisor, assigned to be in temporary charge of the Department, shall perform all duties and assignments indicated herein for the Electric & Gas Engineering department personnel.
- B. All Electric & Gas Engineering department personnel shall be subject to duty or standby as requested or required by the Supervising Engineer.
- C. The immediate function of the Electric & Gas Engineering department personnel will be to prepare for the pending emergency in accordance with the procedures described herein or as otherwise may be assigned by the Director of Utilities or the Director of Electric & Gas Systems.

#### 51-56.02 PRE-HURRICANE PROCEDURES AND ACTIONS

- A. This plan shall be reviewed in detail by the Supervising Engineer each year no later than the end of March. Any changes, corrections or improvements that are deemed necessary shall be made accordingly. The department staff will meet each year during the month of May to review the Storm Manual, specifically, read/review Sections 1 and 99, to discuss Hurricane preparedness, and to ensure that sufficient supplies and equipment are in stock.
- B. This annual review shall specifically address and verify the following:
  - 1. Run Cogsdale report on employee information. Ensure that information is up-to-date and correct; make changes if necessary.
  - 2. Any departmental phone extensions changes are forwarded to the ITS Help Desk.
  - 3. Any radio and cellular phone number changes are forwarded to Information Technology Services (ITS).
  - 4. All FPUA radios are in good operating condition and spare batteries are available. Any radio problems shall be taken for repair or replaced, as necessary.
  - 5. Vacation hour totals are reviewed; employees with excessive vacation hours are encouraged to use them before the height of storm season (August-September) so that they will be available as required.
  - 6. Employee I.D. badges are in good condition.
  - 7. Vendor and Contractor lists are updated and verified.
  - 8. Boxes, tape, etc. are available for file storage and transfer if deemed necessary.

9. Stock of major material items is to be reviewed and additional purchases recommended for those deemed low.
10. Storm Restoration maps are continuously updated to reflect any major changes. The following personnel will have hard copies of these maps: Supervising Engineer, Electric Operations Superintendent, Electric T&D Superintendent, Dispatch Supervisor, and others as designated by the Supervising Engineer. Digital copies are available for download under:
  - i. Restoration Maps – [Click Here](#).
11. GIS Manager to work closely with Key Accounts and Operations to identify critical customers and assets:
  - i. Hospital, Designated Shelters, Assisted Living Facilities, Funeral Homes, and others as designated by criticality.
  - ii. Water Plant, Wastewater Plant, and any related re-pumping facilities.
  - iii. Feeder Backbone System.

51-56.03      PHASE 1 - ALERT

Upon notice that our area has been placed into a Phase 1 condition, the Supervising Engineer will assure that the following steps are taken.

A. All Department Personnel

1. Shall verify that their individual emergency kits are completely stocked with all items designated to be therein, and that the items are not expired. Departmental Safety officer shall review list and provide to department staff.
2. Self-contained emergency tire repair products, insect repellent, and other items shall be added to the kit at this time.
3. All pertinent company related files shall be backed up to the Network. If necessary, these files may be backed up to an external hard drive and secured.
4. Any radios and cellular phone number changes are forwarded to ITS.
5. Review 3-way protocol used for radio communication.

B. Technicians

1. All department vehicles are checked to verify roadworthiness and communication equipment is functional to include radio and/or cell phone chargers.
2. Marginal tires shall be replaced, tire pressure checked, oil changed, and other such functions shall be performed as needed.
3. The vehicle's interior shall be cleaned of all unnecessary items.
4. Survey equipment and related items shall be stored indoors.

C. Engineers

1. Employees authorized to utilize their personal vehicles on FPUA business shall also verify roadworthiness and make necessary corrections.
2. GIS Manager shall coordinate the production of digital maps, schematics, and diagrams as required for field coordination of restoration. **(No hard copy production is required at this time.)**

51-56.04      PHASE 2 - WATCH

Once it is known that our area has been placed into a Phase 2 condition, the Supervising Engineer will assure that the following steps are taken.

- A. All personnel shall report to work no later than 8:00 AM on the following morning if the watch is issued at any time other than normal work hours. Identification badge shall be worn at all times.
- B. Storm Restoration Map books shall be reviewed to ensure the any pending updates are printed and distributed accordingly.
- C. All department vehicles along with private vehicles authorized for use on FPUA business shall be filled with fuel by the employee assigned to each vehicle.
- D. All personnel shall provide necessary support for Electric & Gas departments and Materials Management as directed by Supervising Engineer.
- E. Upon notification by Human Resources, Staff Assistant (Dept. 54) shall print and distribute an alphabetical list containing the personal information of all employees, including home addresses and phone numbers. This list will be attached as Appendix F to this document.
- F. Upon notification by ITS, Staff Assistant (Dept. 54) shall print and distribute updated FPUA communication information for each employee (cell phone and radio). This list will be attached as Appendix E to this document.

All of the above shall be repeated daily as required until the Director of Electric & Gas Systems authorizes resumption of normal activities.

**Once all department preparations have been completed, the Supervising Engineer will release employees to take preparatory steps to secure their homes and families.** All employees so released shall keep the Supervising Engineer informed at all times as to how they may be contacted on short notice, if necessary. Once they have completed their preparations, they shall return to work unless instructed otherwise by the Supervising Engineer.

Department employees on excused absence from the department other than sick leave shall contact the Supervising Engineer immediately upon becoming aware of the Phase 2 condition and provide information on how quickly they can be available for work and how they can be contacted. Employees on sick leave shall advise the Supervising Engineer of their expected ability to return to work.

51-56.05      PHASE 3 - WARNING

Once it is known that our area has been placed under a Phase 3 condition, the Supervising Engineer will assure that the following steps are taken.

- A. All personnel shall print a copy of this section for reference.
- B. All Restoration Map Books shall be reviewed for completeness.
  - 1. Supervising Engineer shall assigned substation and/or feeders to staff. Each assigned staff member shall be responsible for the coordination of restoration efforts.
- C. All technicians - All job files, drawing originals and other paperwork items shall be moved to secure areas, if deemed necessary by the Supervising Engineer.
- D. Engineering Technicians will prepare truck stock material boxes for all engineering field personnel working with mutual aid assistance.
- E. Departmental PC Administrator - All computer equipment shall be covered and secured.
- F. Department personnel who so desire may ride out storm at the Energy Services Center, provided they make necessary arrangements with the Supervising Engineer. Those who wish to go elsewhere may leave as soon as items under A through D are complete.

51-56.06      PHASE 4 – DURING THE STORM

No work is contemplated while the storm passes our area.

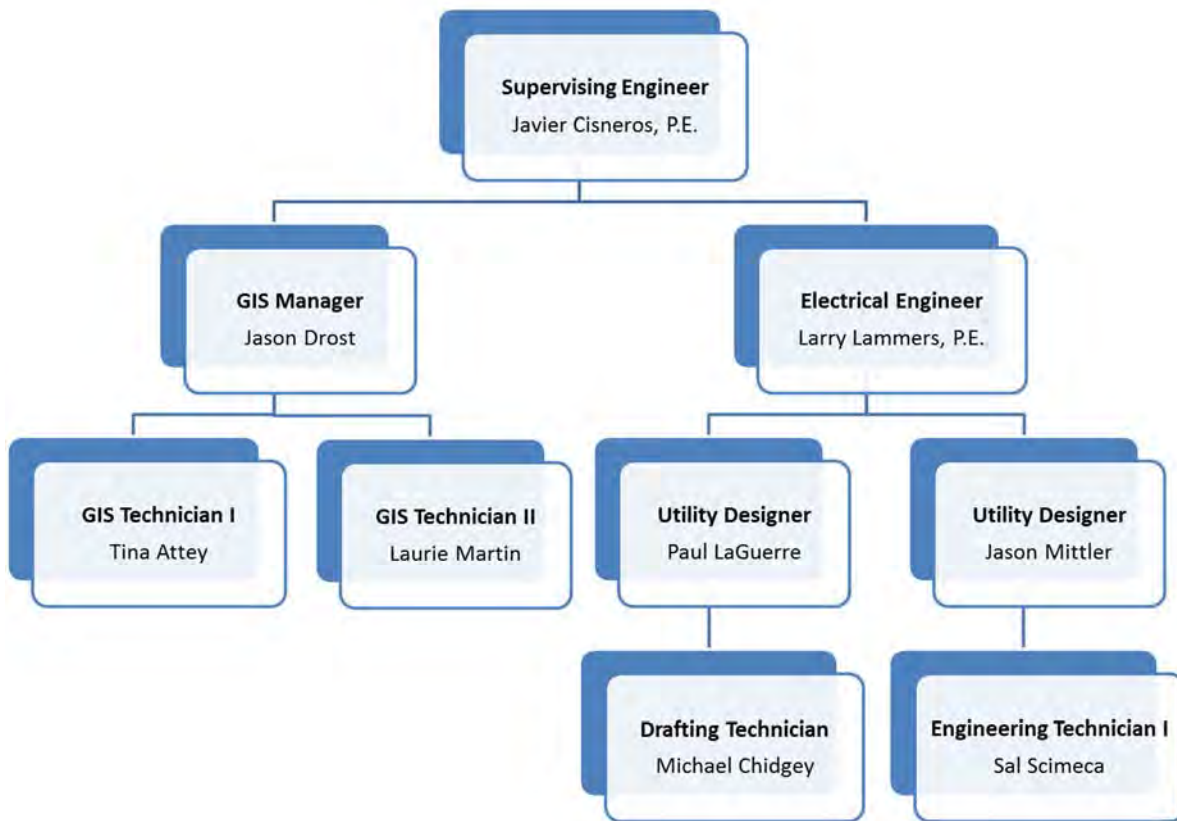
51-56.07      PHASE 5 - RESTORATION

Employees are to report to work at the Energy Services Center as soon as hurricane force winds have subsided and it is safe to travel, regardless of radio or TV announcements on openings and/or closings of other public offices including the City of Fort Pierce. The Director of Electric & Gas Systems and the Supervising Engineer shall meet to determine the initial order of restoration and review available resources to begin same. Once the initial order has been determined, the Supervising Engineer will assign department personnel to perform one or more of the following tasks:

- A. Engineers:
  - 1. Assist Materials Management in contacting of vendors to arrange material deliveries,
  - 2. Coordinate with FPUA operation departments (electric, water, wastewater, gas, and communication),
  - 3. Manage the GIS staff as described in B.2 below.
- B. Utility designers and technicians and other personnel as delegated by the Supervising Engineer:
  - 1. Serve as project manager for restoration projects and working closely with Transmission and Distribution line crews or contractor.
  - 2. Maintain GIS to depict the daily progress of the restoration efforts for display in War Room and Dispatch. See Section 51-56.07.C.

3. Coordinate with City of Fort Pierce Public Works with respect to street clearing.
  4. Coordinate with other utilities (Bellsouth, FP&L, & CATV).
  5. Coordinate with FEMA and other code enforcement agencies.
- C. If damage is such that outside help from Mutual Aid Utilities and/or Contractors is needed, department personnel may be assigned to work with such teams to provide logistical support & communications.

51-56.08      ORGANIZATIONAL CHART/EMERGENCY RESPONSE TEAM  
Dept. 56- Electric & Gas Engineering



- **Supervising Engineer:** Assigned Substations - Hartman & Tie-Line. Coordination - FPL, City, COVB, County, FDOT, Water Plant, Wastewater Plant
  - FEMA (Moved to Finance), FMEA (Moved to Director of Electric & Gas).
- **Electrical Engineer:** Assigned Substations – Lawnwood & Savannah
- **Utility Designer, Engineering Technician I:** Assigned Substations – Garden City & Totten
- **Utility Designer, Drafting Technician:** Assigned Substations - Causeway & King
- **GIS Manager, GIS Technician II, GIS Technician I:** Mapping restoration efforts.



51-56.09      EMPLOYEE NAMES, ADDRESSES, AND PHONE NUMBERS

An alphabetical list containing the personal information of all employees, including home addresses and telephone numbers, will be made available by Human Resources during Phase 2. Upon notification by Human Resources, all departments shall print and attach the list to this manual as Appendix E.

Updated FPUA communication information for each employee (extension, cell phone, and radio) will be made available by ITS during Phase 2. Upon notification by ITS, all departments shall print and attach the information to this manual as Appendix F.

## SECTION 51-54, 55

### ELECTRIC TRANSMISSION & DISTRIBUTION AND ELECTRIC OPERATIONS

#### 51-54, 55.01 GENERAL INFORMATION

This procedure establishes a basic and orderly method to properly maintain and/or restore electric service to customers before, during, and after an emergency situation.

There is no attempt in these procedures to provide for every contingency. Common sense and good judgment must be exercised to provide for the safety of employees and members of the public. It is mandatory that any person involved in restoration work on the electric system acquaint himself with these and normal day-to-day procedures.

Communication to the Electric Operations Dispatch Office shall be done by telephone (in-house extensions 6208, 6209, 6360, 6390, 6391, 6434, 6472). If the phone service is inoperable, 950 MHz radio, cellular phones, or any way possible under the circumstances shall accomplish communications.

The sections of this procedure are aligned with the corresponding Emergency Phase. The following definitions apply.

#### Pre-Hurricane Procedures and Actions

- Phase 1 – Alert
- Phase 2 – Watch
- Phase 3 – Warning
- Phase 4 – During the Storm
- Phase 5 – Restoration

51-54, 55.02 PRE-HURRICANE PROCEDURES AND ACTIONS

- A. Electric T&D Superintendent (Dept. 54) shall ensure that
  1. Contracts are in place with Mutual Aid crews that are assisting in storm restoration work.
  2. Contracts are in place for environmental services.
  3. FMEA's mutual aid contact information for FPUA is up to date.
  4. Review Sections 1, 99 and the Electric T&D and Electric Operations section of the storm manual with all employees in Departments 54 and 55. At this time, the following will be discussed:
    - a. The importance of hurricane preparedness, both on and off the job.
    - b. Ensure that employee information is current and any discrepancies are corrected immediately.
    - c. Review radio, mobile phone and office phone extension numbers, with any changes forwarded to ITS.
    - d. Vacation hour totals are reviewed. Employees with excessive vacation hours are encouraged to use the excess before the peak of the storm season (August-September) so that they will be available as required and minimize the risk of losing unused vacation hours.
- B. Operations Superintendent (Dept. 55) shall verify that
  1. There is adequate stock of proximity voltage detectors.
  2. There is adequate stock of high-visibility flags to mark locations for protective grounds.
  3. Training has been completed for all employees that are not Line Specialists that may be asked to investigate wire down reports.
  4. The list of Essential Customers is reviewed and updated.

51-54, 55.03 PHASE 1 – ALERT

- A. Electric T&D Superintendent (Dept. 54) and Electric Operations Superintendent (Dept. 55) shall
  1. Notify all Electric T&D Department employees of impending threat and that vacation requests in the immediate future cannot be granted.
  3. Suspend all service disconnects for non-payment at such time that is deemed appropriate.
  4. Monitor the National Weather Service updates on storm direction and intensity and provide regular updates to the personnel listed above until the danger of the storm has passed Fort Pierce.
  5. Provide an estimate of restoration maps needed from the Supervising Engineer.
  6. Establish liaisons with:
    - a. AT&T
    - b. Emergency Operations Center (EOC).

- B. The Electric Operations Superintendent (Dept. 55) shall
1. Notify the following personnel that the National Weather Service has issued a Hurricane Alert for the Fort Pierce area:
    - a. Email the following Directors: Clay Lindstrom, [clindstrom@fpu.com](mailto:clindstrom@fpu.com); Eve Walker, [ewalker@fpu.com](mailto:ewalker@fpu.com); Bo Hutchinson; [bhutchinson@fpu.com](mailto:bhutchinson@fpu.com)
    - b. Call Director of Electric & Gas Systems, Paul Jakubczak at 772-618-3528 and Customer Solutions Manager Jason Hoffman at 772-216-1014.
  2. Attempt to return to normal all abnormally switched T&D elements.
  3. Patrol from the substation up to the point of service the circuits that serve the sites listed below. The intent is to identify any imminent hazards to the overhead distribution system that would delay FPUA's efforts to restore vital services to the community.
    - ESC Building
    - Lawnwood Medical Hospital
    - SLC Fire Department
    - Water Treatment Plant (25<sup>th</sup> St.)
    - WWTP
- C. The Electric T&D Superintendent (Dept. 54) will meet with respective staff to:
1. Review storm preparedness.
  2. Discuss the potential need for additional crews with the FPUA unit price contractor for tree trimming, underground and overhead line work.
  3. Employees have an updated ID badge and are carrying a valid driver's license.
  4. Vehicles are topped off with fuel.
  5. Vehicles are stocked with anticipated storm restoration materials.
  6. Line trucks have an oil spill kit on board.
  7. Direct substation personnel to perform substation walkthroughs to ensure any potential hazards are addressed and that all doors are left closed and outdoor equipment cabinets are secured using tie wraps or other suitable means.

51-54, 55.04 PHASE 2 – WATCH

- A. Electric T&D Superintendent and Electric Operations Superintendent shall.
  - 1. Meet with his employees to discuss emergency working hours, restoration priorities and work teams.
  - 2. If requested, supply a line crew with a bucket truck to assist Facilities Management with the installation of storm shutters at the upper level windows of the Boston Ave. and 206 S. 6<sup>th</sup> St. buildings.
  - 3. Consider sending crews home to secure personal property and make arrangements for their family. The determination should give due consideration to the minimum requirements for continuity of service as well as the timing and advance notice of impending storm.
- B. The Utilities Services Supervisor
  - 1. Assemble a team of MIRs to install storm shutters on the lower level windows located on the south side of the ESC building.
- C. The Dept. 54 Staff Assistant
  - 1. Secure petty cash from Finance using Emergency Storm Cash Authorization form located on page 21-9 of the Storm Manual. Petty Cash balance shall be no less than \$1,500.
  - 2. Print Employee Alphabetic List, including the name, address, telephone number, mobile number, and radio number of all employees. Provide a copy to the Operations Superintendent (Dept. 55), the Electric T&D Superintendent (Dept. 54).
  - 3. Distribute plastic covering for computers, copiers, and fax machines and check equipment to make sure everything has been covered.

51-54, 55.05 PHASE 3 – WARNING

- A. Superintendent of Electric T&D (Dept. 54)
  - 1. Determine what crews will remain at the ESC during the storm. Crews may be comprised of volunteers or be designated by the Superintendent.
  - 2. Send remaining employees home at an appropriate time after hurricane preparations have been completed.
  - 3. Discuss with the Director of Electric & Gas Systems of potential need for outside help. A copy of Mutual Aid Agreement is at the end of this section.
  - 4. Switch WWTP to King Substation.
- B. The Operations Superintendent (Dept. 55)
  - 1. Request ITS set up customer service workstation into the ESC War Room to assist handling trouble phone calls.
  - 2. Ensure all proximity voltage detection devices are available and have working batteries and spare batteries are on hand.

51-54, 55.06 PHASE 4 – DURING THE STORM

- A. During the course of the emergency, only those personnel deemed to be absolutely necessary would remain at work. Others will be allowed to return to their homes, but will remain “on call” until all emergency procedures have been completed. Communications will be conducted by telephone with “on call” personnel as necessary and conditions permitting.
- B. The Electric Operations Superintendent (Dept. 55) will
  - 1. Ensure a member of the management team remains at the ESC building monitoring the storm’s impact to the electrical system.
  - 2. Submit a report to the Department of Energy using Form OE-417 if the applicable thresholds are met. The form is available at [https://www.oe.netl.doe.gov/docs/OE-417\\_Form013115.pdf](https://www.oe.netl.doe.gov/docs/OE-417_Form013115.pdf).
  - 3. Notify the Florida Public Service Commission (FPSC) of an accident or incident meeting the notification criteria per FPAS Rule 25-6.019. Refer to Attachment D for the notification protocol. *(Note: there are specific exclusions for incidents resulting from storms named by the National Hurricane Center and tornadoes recorded by the National Weather Service.)*

51-54, 55.07 PHASE 5 – RESTORATION

All personnel will be expected to report to work as soon as the emergency is over or the storm winds have subsided to safe levels. The emergency number for employees is 466-1600, ext. 5000.

- A. Unless otherwise instructed, all employees will report back to the ESC as soon as hurricane force winds have subsided and it is safe to travel, regardless of radio or TV announcements on openings and/or closings of other public offices including the City of Fort Pierce.
- B. Employees may be advised of any additional safety measures to be enforced. The Electric T&D Superintendent (Dept. 54) or designee will cover, at a minimum, the following safety reminders at the onset of restoration:
  - 1. All safety rules must be adhered to, placing heightened emphasis on the following:
    - a. Wear high voltage rubber gloves when handling primary conductors unless they are isolated, tested, and grounded. Hold all conductors away from the body when handling them on the ground. There is always a potential for a backfeed from an improperly connected generator.
    - b. Use all required PPE, including safety glasses, hard hat, and FR uniforms.
    - c. Lockout / tagout procedures need to be carefully followed.
    - d. Avoid cutting corners. The focus for an efficient restoration effort should be on working smart instead of working fast.
    - e. Oil spills must be acted upon immediately to minimize the environmental impact. Initial actions can be limited to
      - i. Reporting the spill to the person in charge of the “Field Verification of PCB Content” sub-process contained as an attachment to this procedure.

- ii. Making an attempt to verify PCB content from manufacturer's nameplate.
  - iii. Taking measures to limit the propagation of oil on soil or water by using adsorbents or other acceptable means.
- C. Provisions for food services to all designated employees and contractors will begin as soon as possible when it is expected that service restoration efforts will take longer than three days. Employees are expected to bring meals for the first day (and possibly second) of service restoration to allow time for the caterer to mobilize and set up.
- D. Restoration must be performed in a safe and orderly manner. The priority for service restoration is provided below. An updated list of Essential Customers is attached to this document.
  - 1. 138kV & 69kV transmission circuits
  - 2. 13kV substation power transformers
  - 3. Feeder backbone serving Essential Customers
  - 4. Remaining feeders
  - 5. Feeder taps and fused laterals previously stripped from feeder backbone
  - 6. Transformer sections
  - 7. Individual services.
- E. Initial crew assignments are as follows:
  - 1. Substation personnel will inspect all substation sites for damage and make reports to the Dispatcher.
  - 2. Two-person crews will be used initially for patrolling, lifting jumpers and opening fused laterals to isolate faulted sections.
  - 3. The Meter Technicians, Electric Engineering personnel, and MIRs will be used to report back on status of essential customers, assist with delivery of material, and assist with wire down patrols.
- F. Employees who are not Line Specialists may patrol circuits. The purpose will be to quickly determine:
  - 1. The extent of initial damage and major material estimates
  - 2. Which feeder taps are stripped from the circuit
  - 3. Which laterals are found or left opened.
- G. Dispatchers must be given an all-clear by field crews assigned to patrol circuits prior to energizing any elements via SCADA.
- H. The Electric Operations Superintendent (Dept. 55) will determine if additional foreign line and/or tree trimming crews are needed based on preliminary damage estimates.
- I. The Electric Operations Superintendent will ensure the following personnel are ready to manage the restoration sub-process assigned to them as indicated below. - These sub-processes are contained as attachment to this document.

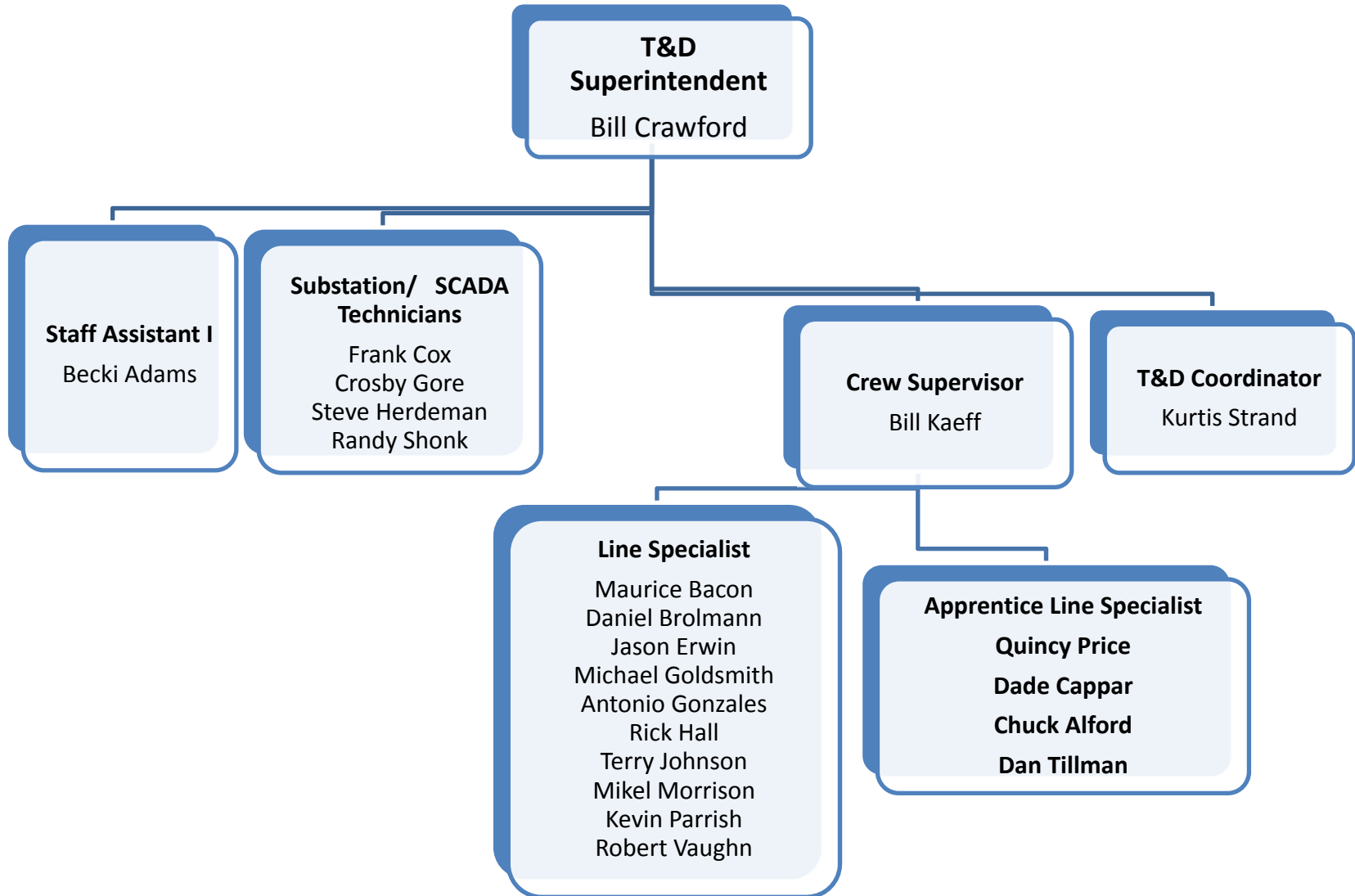
<b>Process</b>	<b>Description</b>	<b>Person Responsible</b>
Customer Solutions Liaison	Receives all calls from Customer Solutions and provides	Jennifer Krip
Wire Down Investigation	Coordinates personnel to investigate wire down calls to assist line crews	Gordon Hayman or Larry Tyndall
Location of Underground Utilities	Coordinates all requests from line crews and AT&T to locate underground facilities	Bill Norton
Tree Trimming	Coordinates and prioritizes tree trimming efforts	Bill Kaeff
Traffic Lights	Coordinates surveys of traffic signals not operating	Patrick Gillespie
Field Verification of PCB Content	Assists crews in determining whether PCB content in transformers oil is <5%	Mike Gift or Jim Stang
Electrical Inspections	Tracks accounts that will need an electrical inspection due to flood or wind damage	Kurtis Strand

J. Other personnel assignments:

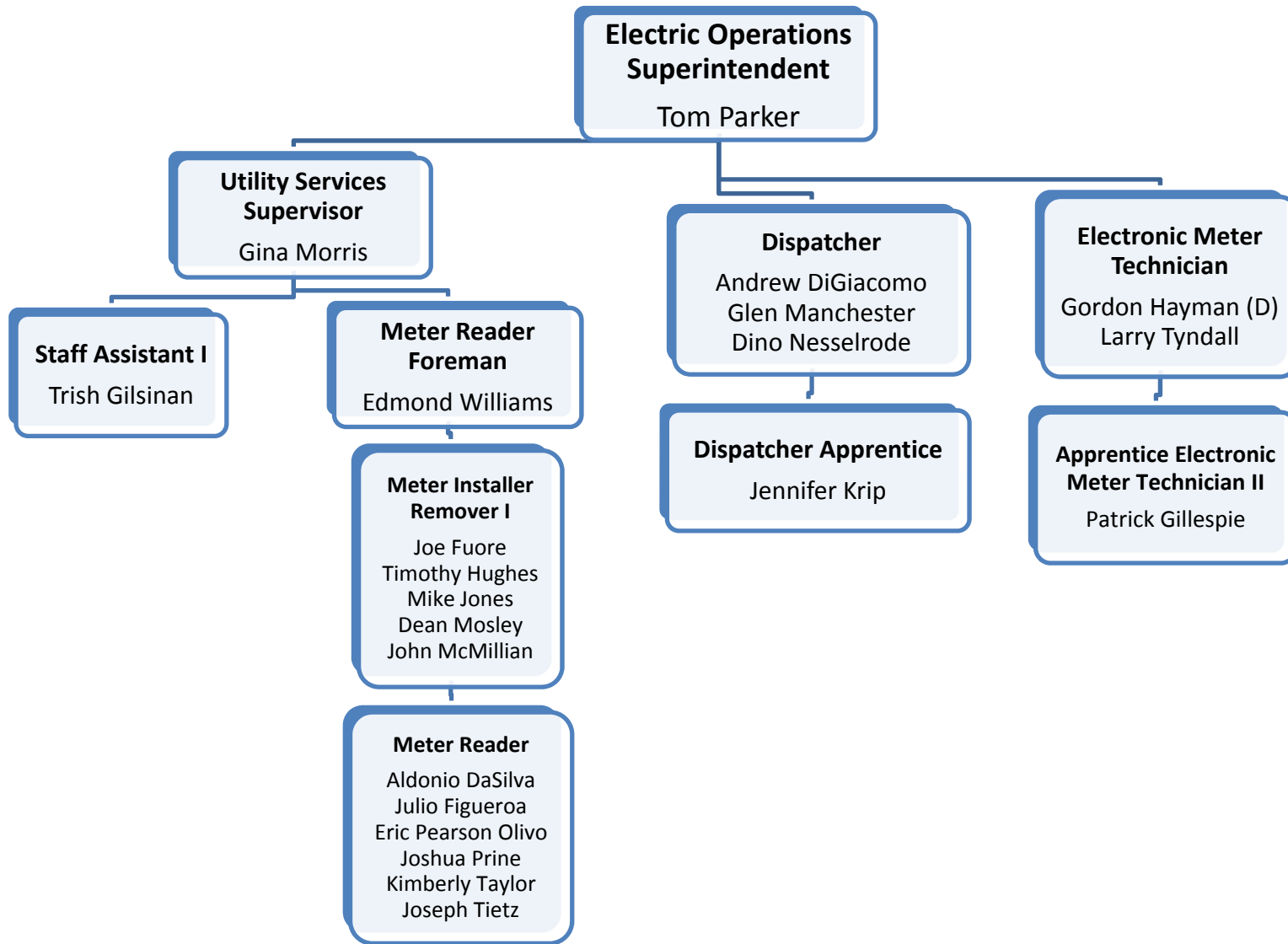
1. The Electric Operations Superintendent (Dept. 55) will work at the ESC Dispatch to oversee the distribution of trouble calls and ensure the proper priority is followed.
2. T&D Coordinator will be in charge of assisting with logistics (lodging, arrangements for laundry, etc.) for foreign crews.
3. T&D Coordinator will be in charge of reviewing and keeping records of the Linemen's timesheets and for Mutual Aid crews.
4. Meter Readers will resume reading meters only after there is some reasonable assurance that areas are safe for meter reading activities and power has been restored in those areas.



ORGANIZATIONAL CHART/EMERGENCY RESPONSE TEAM  
FOR ELECTRIC T&D - DEPT. 54



ORGANIZATIONAL CHART/EMERGENCY RESPONSE TEAM (NEED TO GET CORRECT EMPLOYEE CHARTS)  
FOR ELECTRIC OPERATIONS - DEPT. 55



51-54, 55.09 EMPLOYEE NAMES, ADDRESSES, AND PHONE NUMBERS

An alphabetical list containing the personal information of all employees, including home addresses and telephone numbers, will be made available by Human Resources during Phase 2. Upon notification by Human Resources, all departments shall print and attach the list to this manual as Appendix E.

Updated FPUA communication information for each employee (extension, cell phone, and radio) will be made available by ITS during Phase 2. Upon notification by ITS, all departments shall print and attach the information to this manual as Appendix F.

51-54, 55.10 LIST OF ATTACHMENTS

- Attachment A - Storm Restoration Sub-processes
- Attachment B - FPUA Electric Accounts - Essential Customers
- Attachment C - List of Emergency Contractors
- Attachment D - PSC Emergency, Accident, Incident Notification Protocol
- Attachment E - MODEF Emergency Response Protocol
- Attachment F - FEMA Activity Log

## **Attachment A**

### **Storm Restoration Sub-processes**

Depending on the actual or expected magnitude of the storm restoration effort, there may be a need to assign certain functions to individuals to facilitate the efficiency of the service restoration. The following is a list of storm restoration functions that have been identified and assigned, per section 51-54, 55.07 of this document.

#### Customer Solution Liaison:

The Customer Solution Liaison is the primary person who receives notifications from internal FPUA personnel acting in the function of Customer Solutions during storm restoration. This person will help ensure that most calls are routed through the regular trouble call process while establishing a process to handle elevated calls. This process will include calls meeting the following criteria:

- Personal safety concerns with FPUA electric facilities posing an imminent threat
- Executive level calls, such as from an FPUA Board Member, City, or County Official
- Calls from other first responder agencies, such as FPL, police, fire department, 911
- Calls from a customer providing medical services such as a hospital, kidney dialysis, urgent care center, etc.

In some cases, the Customer Solution Liaison will need to quickly ascertain the status of the circuit serving the customer or other reported problems that would delay service restoration to avoid dispatching a crew unnecessarily.

The Customer Solution Liaison will be responsible for ensuring that proper feedback is provided to the originator of the call, upon request or when deemed appropriate, to advise of FPUA's progress or resolution.

#### Wire Down Investigation Coordinator

The Wire Down Investigation Coordinator will receive all wire down call reports when all available line crews have already been assigned work. This person is responsible for ensuring all calls are assigned to Investigators who are familiar with transmission and distribution facilities have received safety training and have been assigned a functional proximity voltage detector.

If it is determined that a downed wire is an FPUA electrical conductor that is not isolated (disconnected) from the system upon arrival, the Investigator shall stand by at a safe distance until a line crew arrives to make repairs or make the area safe. For the purpose of this section, isolated shall mean

- the circuit breaker is open
- all fuses on a lateral with a wire down condition are open
- all fuses on a transformer bank are open.

The Wire Down Investigation Coordinator shall

- Communicate with the appropriate agency (AT&T, Comcast, FPL, etc.) when it is determined that the wire down does not belong to FPUA.
- Keep track of all investigated calls to minimize unnecessary repeat calls.

A caller reporting that a wire down is sparking or that the power went out when the lines broke shall not follow this process and instead be assigned to the first available crew.

#### Location of Underground Utilities

The Utility Locate Foreman will receive all requests from FPUA and foreign crews performing electric service restoration. From past hurricane restoration experience, it is known that the Sunshine One Call system may be down and/or other utilities may not provide adequate emergency response to allow us to perform repairs in a timely manner. The Utility Locate Foreman shall

- Dispatch FPUA Utility Locators to sites where FPUA-owned underground facilities must be marked to allow FPUA crews and foreign crews working on our system to dig safely.
- Assist, to the extent possible, in locating third-party facilities such as traffic signal, SLC water facilities, Comcast and AT&T when those agencies cannot provide an adequate response due to a widespread emergency conditions.
- Create underground locate tickets as soon as possible, but may be after the fact due to workload or system unavailability, to comply with regulations.
- Maintain all appropriate information for recordkeeping and submit to Operations Superintendent at the conclusion of storm restoration.

#### Tree Trimming

The Tree Trimming Coordinator will be in charge of dispatching all tree trimming resources. A key responsibility will be to ensure that tree trimming requests that must be completed in advance of repairs are prioritized appropriately. This position will be responsible for alerting management when additional tree trimming resources may be needed. Depending on the size of the storm, a patrol person may be assigned to the Tree Trimming Coordinator to complete patrols to ensure tree conditions are identified as soon as possible.

#### Traffic Lights

A Traffic Light Patrol person will be in charge of patrolling all traffic lights signals to ensure that all lights are functional. If lights are found to be non-functional, a visual assessment shall be made in attempt to identify the necessary repairs (i.e., transformer fuse blown or service wire damaged). The traffic light patrols may not be necessary during smaller storms (typically those within restoration lasting 1-3 days) and typically will not begin until a majority of the system is known to be restored.

It will be the duty of this person to inform the following agencies if a malfunctioning light is determined to be the responsibility of others.

- Saint Lucie County Traffic Signals (outside of City limits) – Signal Group-Marvin -561-719-3353 or alternate- 561-719-0298.
- City of Fort Pierce Traffic Signals– Carr Construction – Shawn Carr- 863-447-0321.

#### Field Verification of PCB Content

The person assigned this duty will be responsible for

- Making appropriate records of the spill, including pictures, all manifest records and the MODEP Interim Source Removal report.
- Assisting crews in confirming the PCB content of spilled oil when the nameplate is not available, either by a reference sheet or by performing a field test.
- Dispatching to the field oil spill cleanup supplies.
- Notifying the environmental contractor when additional support is needed for oil spill cleanup due to the scope of the spill or for oil release over water.
- Turn over to the Operations Superintendent all locations that will require follow up work after cleanup has been completed, such as backfill or replacement of grass.

#### Electrical Inspections Coordinator

The Electrical Inspections Coordinator will be responsible for making sure there is a proper follow-up on accounts that are deemed to require an inspection prior to re-energizing. This process will prevent reconnecting the electric utility service to a structure that has sustained:

- Structural damage
- Fire
- Flooding
- Damage to the building's electrical distribution that will require repairs that typically require an inspection.

The Electrical Inspections Coordinator will:

- Be the primary point of contact with the City, County or State Electrical Inspector.
- Collect information from crews.
- Make appropriate comments in Cogsdale and generate the required service orders to document the meters removed from the field.
- Handle customer inquiries on accounts that have been left out of service pursuant to this process.

**Attachment B**  
**FPUA Electric Accounts - Essential Customers**

It is FPUA’s practice to restore service to all customers as soon as possible following a storm of any magnitude. For minor impact storms, it is typically most effective to follow a restoration procedure as stated in 51-54, 55.07 (D). When electric service restoration is expected to take several days, the following list will be used in attempt to focus on certain electric accounts that will serve vital roles in providing essential services to our community. The following list of customers have been identified as entities that

- Provide essential medical or emergency services to the public, or
- Are considered critical infrastructure, or
- Serve as St. Lucie County storm shelters.

<b>FPUA Electric Accounts - Essential Customers</b>	<b>Primary Feeder</b>	<b>Backup Feeder</b>	<b>Generator Installed</b>
Haisley Funeral Home - 3015 Okeechobee Blvd.	7		
Kidney Dialysis RAI (Care Center), 2501 Ohio Ave.	7		
Assisted Living - Chateau at Lawnwood, 1550 N Lawnwood Cir.	8		
Kidney Dialysis - Fort Pierce Artificial Kidney, 1801 S 23 St.	8		
Lawnwood Medical Center (Hospital)	8		Yes
Water Treatment Plant (Todd Center, N 25th St.)	26	9	Yes
St. Lucie County Fire Dept. - 2400 Rhode Island Ave.	12		
Fort Pierce Walk In Clinic - 900 Virginia Ave.	12		
Hurricane Shelter (Special Needs) - Fenn Center, 2000 Virginia Ave.	12		
Lawnwood Well Fields - Lawnwood Park, 2001 Virginia Ave.	12		
Nursing Home - Abbiejean Russell, 700 S 29th St.	26		Yes
Nursing Home - Integrated Health Services, 703 S 29th St.	26		
Todd Center	26		Yes
33rd St. Canal Well Field - 33rd St. from Ave. D to Q	26		
Belcher Canal Well Fields – Ave. T from 24 to 29 St.	26		
Assisted Living - Broadmoore, 200 Dixieland Dr.	33		
City of Fort Pierce Savannah Rd. Compound	35		
Senior Housing - Beull Brown Ctr., 707 N 7 St.	52		
FPUA - Administration & Annex Bldgs. (206 S. 6 <sup>th</sup> St., 500 Boston Ave.)	54		Yes
Fort Pierce Police Dept. - 920 S. US #1	54		
Senior Housing - 601 Ave. B	54		

St. Lucie County Health Dept. - 714 Ave. C	54		
Lift Station A	55	53	Yes
Water Reclamation Facility (WRF)	55	45	
Wastewater Lift Stations (Orange Blossom Mall)	63		
FPUA - ESC Bldg.	64		Yes
IRSC Morgue	65		



**Attachment C**  
**List of Emergency Contractors**

An asterisk (\*) designates a company that currently has contract with FPUA.

	<b><u>Auto Supply</u></b>	
NAPA	1270 Bell Ave. Fort Pierce, FL 34982	466-1114
Sunrise Ford	5435 S. US Hwy. 1 Fort Pierce, FL 34979	461-6000
	<b><u>Vehicle Repair</u></b>	
Ring Power	415 Community College Pkwy. SE Palm Bay, FL 32909	321-952-3001
Palm Truck Centers	5750 Orange Ave. Fort Pierce, FL 34947	489-2300
Rechtien International Trucks	1699 N. US Hwy. 1 Fort Pierce, FL 34950	466-1842
Kenworth of Florida	1850 S. US Hwy. 1 Fort Pierce, FL 34950	409-1800
Elpex	5575 Okeechobee Rd. Fort Pierce, FL 34947	464-4211
	<b><u>Wildlife Management</u></b>	
Eco-Wise	Okeechobee Rd.	772-462-0602 1-800-CRITTER
Alpine Farms	Bee Removal	335-0441
	<b><u>Environmental</u></b>	
SWS*Environmental Cleanup	1619 Moylan Rd. Panama City, FL 32407	877-742-4215
Cliff Berry	400 Angle Rd. Fort Pierce, FL 34947	800-899-7745
	<b><u>Locksmith</u></b>	
Gardner Lock Shop	2925 S. US 1 Fort Pierce, FL 34982	772-242-1427
	<b><u>Vehicle Towing</u></b>	
Tri- County Towing	3345 Okeechobee Rd. Fort Pierce, FL 34947	465-5404

**Attachment D**  
**PSC Emergency, Accident, Incident Notification Protocol**

Rule 25-6.019 of the Florida Public Service Commission requires that notification is made to them under certain circumstances. The FPSC rule is shown below. Note that there are specific exemptions for named storms and tornadoes under 3(a) and 3(b).

**25-6.019 Notification of Events.**

(1) Form PSC/ENG 159 (12/12), entitled "Electric Utility Event Report – Injury," is incorporated in this rule by reference and may be obtained from the Commission's Division of Administrative Services and is also available at <http://www.flrules.org/Gateway/reference.asp?No=Ref-02041>. As soon as practicable, but no later than two business day after it learns of the occurrence, each investor-owned electric utility, rural electric cooperative, and municipal electric utility shall notify the Commission's Bureau of Safety, in writing, using Form PSC/ENG 159 (12/12), of any event involving any part of the electrical system which:

- (a) Involves death or injury requiring hospitalization of non-utility persons, or
- (b) Is significant from a safety standpoint in the judgment of the utility even though it is not required by paragraph (a).

(2) Form PSC/ENG 158 (12/12) entitled "Electric Utility Event Report – Damages," is incorporated into this rule by reference and may be obtained from the Commission's Division of Administrative Services and is also available at <http://www.flrules.org/Gateway/reference.asp?No=Ref-02041>. Each investor-owned electric utility, rural electric cooperative, and municipal electric utility shall report, in writing, to the Commission's Bureau of Safety, using Form PSC/ENG 158 (12/12), within 30 days of learning of any event involving any part of the electrical system that:

- (a) Involves damage to the property of others for an amount in excess of \$10,000, or,
- (b) Causes significant damage, in the judgment of the utility, to the utility's facilities.

(3) Unless requested by the Bureau of Safety, reports are not required with respect to personal injury, death, or property damage resulting from vehicular equipment striking poles and/or other utility property or events directly caused by:

- (a) A storm named by the National Hurricane Center;
- (b) A tomado recorded by the National Weather Service;
- (c) Ice on line;
- (d) An extreme weather or fire event causing activation of the county emergency operation center.

*Rulemaking Authority 350.127(2), 366.05(1) FS. Law Implemented 366.04(2)(f), (6), 366.05(1) FS. History—New 7-29-69, Amended 4-13-80, Formerly 25-6.19, Amended 12-16-12.*

The following two pages is the form the FPSC requires us to fill out for notifications under this rule. The completed form should be sent to the Public Service Commission using the following contact information:

Tony Velazquez, Supervisor  
Office: 813-673-8664  
After hours: 813-344-6365  
Email: [avelazqu@psc.state.fl.us](mailto:avelazqu@psc.state.fl.us)

**ELECTRIC UTILITY EVENT REPORT - INJURY**

<b>Narrative of Event:</b> [REDACTED]		
<b>Location of Event:</b> [REDACTED]		
<b>Type of Injury:</b> [REDACTED]		
<b>Date:</b> [REDACTED]	<b>Time:</b> [REDACTED]	<b>County:</b> [REDACTED]
<b>Facilities Involved</b>		
<b>Voltage:</b> [REDACTED]		<b>Constructed Before 7/1/86? (Y/N):</b> [REDACTED]
<b>Overhead:</b> [REDACTED]	<b>Underground:</b> [REDACTED]	
<b>Parallel To:</b> [REDACTED]	<b>Parallel To:</b> [REDACTED]	
<b>Crossing Over:</b> [REDACTED]	<b>Crossing Under:</b> [REDACTED]	
<b>Vertical Clearance:</b> [REDACTED] ft. [REDACTED] in.	<b>Pad Mounted Equipment:</b> [REDACTED]	
<b>Horizontal Clearance:</b> [REDACTED] ft. [REDACTED] in.	<b>Burial Depth:</b> [REDACTED] in.	
<b>Remarks:</b> [REDACTED]	<b>Was Line Marked? (Y/N):</b> [REDACTED]	
	<b>If Yes, Interval of Markings:</b> [REDACTED] ft.	
<b>Was Company Given Advance Notification of Work? (Y/N):</b> [REDACTED]		
<b>Electric Utility:</b> [REDACTED]	<b>Reported By:</b> [REDACTED]	
<b>Date Reported:</b> [REDACTED]	<b>Time Reported:</b> [REDACTED]	
<b>Number of Fatalities:</b> [REDACTED]	<b>Number of Injuries:</b> [REDACTED]	

Form PSC/ENG 159 (12/12)  
 Rule 25-6.019(1), F.A.C.

## Description of Electric Utility Event Report Fields

**Constructed Before 7/1/86? (Y/N):** Was the power line/equipment involved in the event constructed after July 1, 1986?

**Overhead:** Did the event involve an above ground power line? (Y/N)

**Underground:** Did the event involve a buried power line? (Y/N)

**Parallel To:** Does the power line in question run parallel to a street, highway or other suitable landmark? If yes, enter the name of the street, highway or landmark. Example: Highway 301, rear lot line, drainage canal, Wachovia Bank Building, etc.

**Crossing Over:** Does the overhead power line in question cross over a street, highway or other suitable landmark? If yes, enter the name of the street, highway or landmark. Example: Billboard sign, rooftop, balcony, lake, etc.

**Crossing Under:** Does the buried power line in question cross under a street, highway or other suitable landmark? If yes, enter the name of the street, highway or landmark. Example: Driveway, Highway 301, fence, etc.

**Vertical Clearance:** Depending on the circumstances of the event, the vertical clearance of the power line from a roadway, rooftop, scaffold, platform, etc.

**Pad Mounted Equipment:** Did the event involve a pad mounted transformer or switchgear?

**Horizontal Clearance:** Similar to Vertical Clearance but for lateral measurements.

**Burial Depth:** If power line is underground, depth to which it is buried.

**Remarks:** This space to be used by reporting company as needed.

**Was Line Marked? (Y/N):** Was the location of the underground power line marked or identified in some way?

**If Yes, Interval of Markings:** What was the interval of the markings? Example: Every 3 feet, every 10 feet, etc.

**Was Company Given Advance Notification of Work? (Y/N):** If the event involved non-utility workers, was the utility given advance notification of the work to be performed?

Form PSC/ENG 159 (12/12)

Rule 25-6.019(1), F.A.C.

**Attachment E**  
**MODEF Emergency Response Protocol**

**MINERAL OIL DIELECTRIC FLUID**  
**EMERGENCY RESPONSE ACTION PROTOCOL**

Introduction

The Florida Electric Power Coordinating Group, Inc. (FCG) submits the following proposed protocol for emergency response actions that may be followed by Florida electric utilities to respond to highly/severely refined mineral oil dielectric fluid (MODEF) (e.g., CAS Nos. 64742-53-6, 64742-46-7, 64742-54-7, and 64741-88-4) discharges from transformers and other MODEF filled electrical equipment discovered on residential, commercial, and industrial properties. The protocol is founded on certain of the requirements of 40 CFR Section 761.125(b), which applies to cleanup of spills from equipment containing concentrations of PCBs ranging from 50 to 499 parts per million (ppm). The proposed protocol is also based on the toxicological profile of MODEF, provided in Attachment "A", which concludes that MODEF used in transformers and other electrical equipment exhibit a negligible degree of toxic potential. The FCG believes that this proposed protocol adequately protects human health and the environment while allowing Florida electric utilities the necessary operational flexibility to meet their statutorily mandated obligation of providing cost effective, safe, and reliable electric service to Florida residents. The FCG is submitting this proposal to confirm our mutual understanding with the Florida Department of Environmental Protection (FDEP) regarding how FCG members intend to comply with FDEP's Rule 62-780.550, F.A.C. In responding to MODEF discharges, including those into or near waters of the state, FCG members will also comply with all other applicable laws and regulations, including applicable notification requirements.

The electric utility industry strives to maintain high electric service reliability to its customers. As a result, there is an immediate response by Florida electric utilities to electrical outages. Emergency response to electrical equipment outages, including MODEF discharges resulting from the failed equipment, typically occurs concurrently with the replacement of the failed or damaged equipment so as to minimize outage time to customers.

Emergency response to electric equipment outages consists of mobilization of utility company personnel and/or its contractors assist with the immediate restoration of electrical service to customers including remediation of any newly released MODEF to the environment that may have occurred during the equipment failure. During emergency response, remediation of newly released MODEF typically occurs during the time period in which the failed electrical equipment is being replaced. This activity is initiated no later than 48 hours from the time the failed electrical equipment is discovered or reported.

Non-emergency response to MODEF discharges is a planned process that may require an electrical outage to customers so that the electrical equipment may be removed or safely worked around (i.e., in substations) so that remediation of the MODEF discharge may be completed. Non-emergency response actions typically take longer than 48 hours to initiate but are completed within 30 days. Non-emergency response activities

include newly released MODEF discharges as well as any older MODEF discharges that are identified.

All responses will be made after a determination has been made regarding whether the MODEF release is believed to have resulted from a PCB transformer or other PCB-contaminated electrical equipment as defined in 40 CFR part 761, based on company knowledge, records search, screening (e.g., Clor-N-Oil), etc. MODEF releases containing PCB concentrations of 50 ppm or greater will be remediated in accordance with all applicable sections of the U.S. Environmental Protection Agency regulations contained in 40 CFR Part 761. MODEF releases containing PCB concentrations greater than 0 and less than 50 ppm will be remediated according to this protocol and disposed of in accordance with applicable solid waste laws and regulations.

The MODEF discharge response process under an "emergency" response scenario consists of the following:

- (1) Removal of all soil contaminated with freshly released MODEF within the spill area (i.e., visible traces of oily soil and a buffer of 1 lateral foot around the visible traces) and the ground restored to its original configuration by backfilling with commercially available fill; and
- (2) Physically removing all visible traces of oil/oil sheen observed in the groundwater with oil absorbent pads/material or via vacuum assisted equipment.
- (3) Solid surfaces will be washed and rinsed and the rinse water collected, or such surfaces will be cleaned using appropriate chemical, sorbent or absorbent materials;
- (4) These emergency response actions will be initiated within 48 hours after the Florida electric utility is notified or becomes aware of the electrical outage, unless such actions must be delayed in case of circumstances including but not limited to civil emergency, adverse weather conditions, lack of access to the site, or emergency operating conditions.

The MODEF discharge response process under a "non-emergency" response scenario consists of the following:

- (A) If the MODEF spill is 25 gallons or less and not resulted in contact with groundwater, follow items (1), (2) and (3) above.
- (B) If the MODEF spill is greater than 25 gallons, or (regardless of quantity discharged) if MODEF is found to be in groundwater or a sheen is removed from groundwater, follow (1), (2) and (3) above. Confirmatory field screening will be conducted via approved field test kits to ensure/verify that impacted soil has been removed. Verification (e.g., Petroflag) will be confirmed by ensuring the TRPH levels remaining in the soil are below the lower of the direct exposure or leachability soil cleanup target level for TRPH. For MODEF found to be in groundwater or where

a sheen is removed from groundwater, confirmatory laboratory analysis will be conducted to ensure that TRPH levels are below 5 mg/l in groundwater, or an alternative number agreed to with the Department. Removal will continue until TRPH levels are below the aforementioned concentrations, unless prevented by a physical obstacle such as a tree, building, etc. To the extent such removal cannot take place within 30 days, then the electric utility will contact the relevant Department district office to develop an appropriate discharge response in accordance with Chapter 62-780, F.A.C.

- (C) Non-emergency response actions may be initiated more than 48 hours after the Florida electric utility is notified or becomes aware of the MODEF discharge.

(5) Upon completion of response action activities, Florida electric utilities will prepare and maintain the following records for a period of at least 5 years constituting adherence to the Interim Source Removal Report requirement found in Rule 62-780.500(7), F.A.C.:

- (a) Date of discharge or date of discovery of discharge;
- (b) Location of discharge (e.g., street address of discharge, if known).
- (c) A statement regarding whether the MODEF release is believed to have resulted from a PCB transformer or other PCB-contaminated electrical equipment as defined in 40 CFR Part 761, based on company knowledge, records search, screening, etc.
- (d) Estimate of quantity of MODEF released;
- (e) Estimate of free MODEF collected, if any;
- (f) Estimate of volume of impacted soil excavated or groundwater recovered; and
- (g) Name and address of facility where free MODEF, impacted soil or groundwater was disposed or treated, including disposal and/or treatment manifests or certifications.
- (h) For non-emergency cleanups greater than 25 gallons,
  - (1) Narrative description or illustration indicating where discharge occurred;
  - (2) Narrative description or illustration indicating where samples were taken;
  - (3) Screening method used;
  - (4) TRPH information and a description of any physical obstacles, if applicable, preventing removal to levels below the lower of the direct exposure or leachability soil cleanup target level for TRPH (or 5 mg/l for groundwater), or an alternative number agreed to with the Department;
  - (5) Narrative description or illustration of the limits of the excavation.





Question 4 – Before and After pictures of work completed

Filename: "30382 Before.jpg"



Filename: "30382 After.jpg"



Filename: "22075 Before.jpg"



Filename: "22075 After.jpg"



Filename: "14333 Before.jpg"

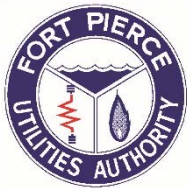


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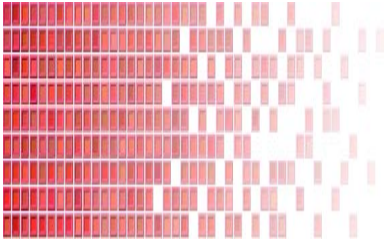


Question 19 – PowerPoint Storm Training presentation for staff. Presented each year and before each storm

# ***Electric System Restoration (Storm Manual)***

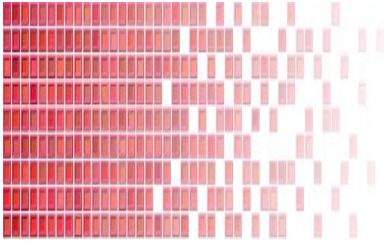






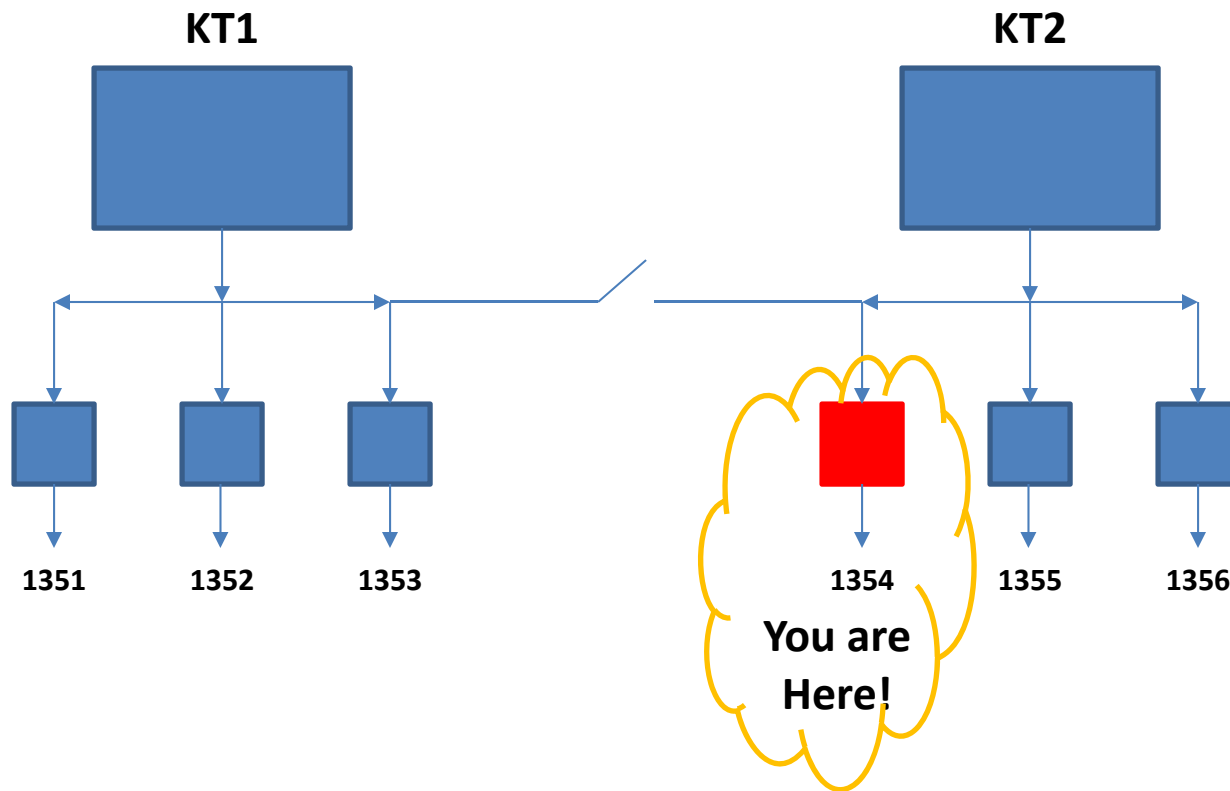
# Electric System Info

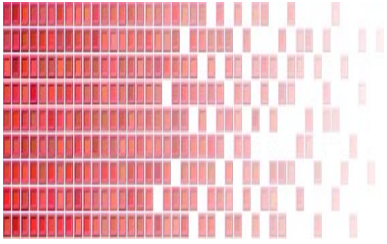
- **Six (6) Substations**
  - Two Transformers per substation
  - 3 Feeder per transformer
    - Garden City (#2)
      - 1321, 1322, 1323, 1324, 1325, 1326
    - Lawnwood (#1)
      - 1307, 1308, 1309, 1310, 1311, 1312
    - Savannah (#3)
      - 1331, 1332, 1333, 1334, 1335, 1336
    - Causeway (#4)
      - ~~1341~~, 1342, 1343, 1344, 1345, ~~1346~~
    - King (#5)
      - 1351, 1352, 1353, 1354, 1355, 1356
    - Totten (#6)
      - 1361, 1362, 1363, 1364, 1365, 1366



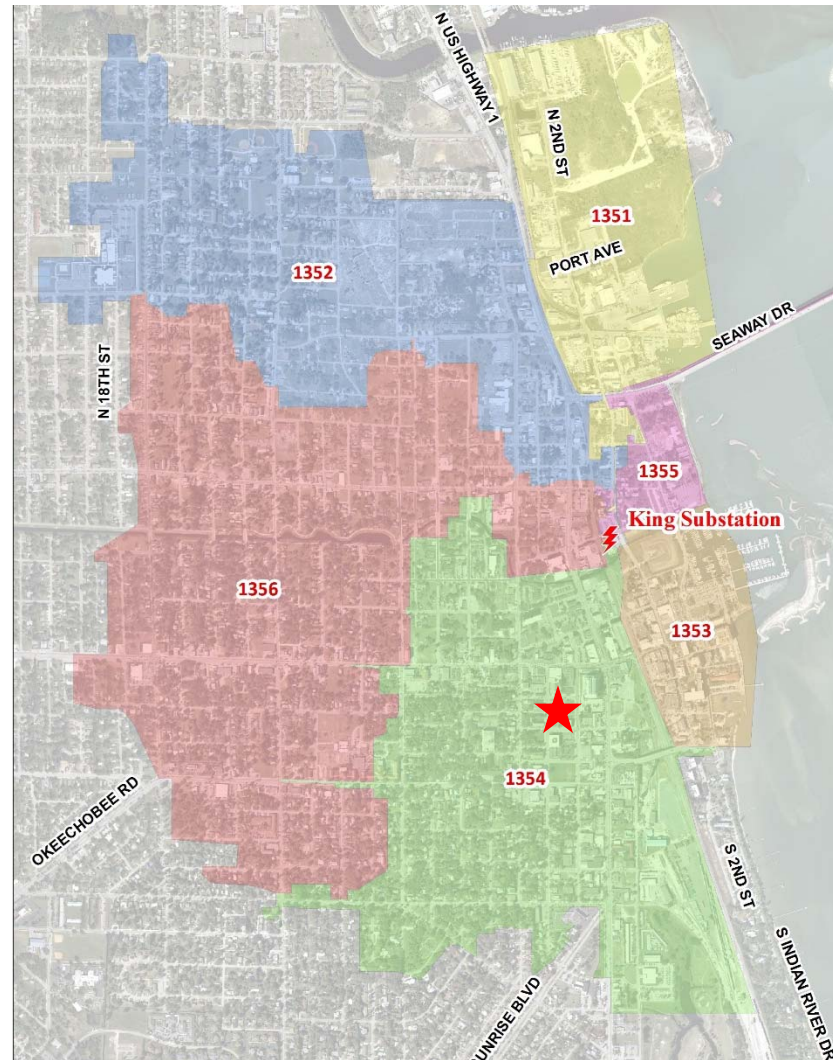
# Electric System Info

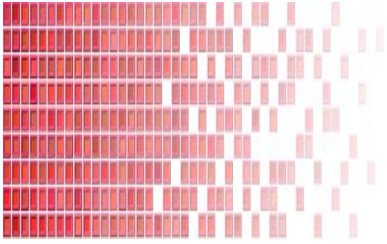
- **Six (6) feeders per substation**
  - Average of 825 customers per feeder



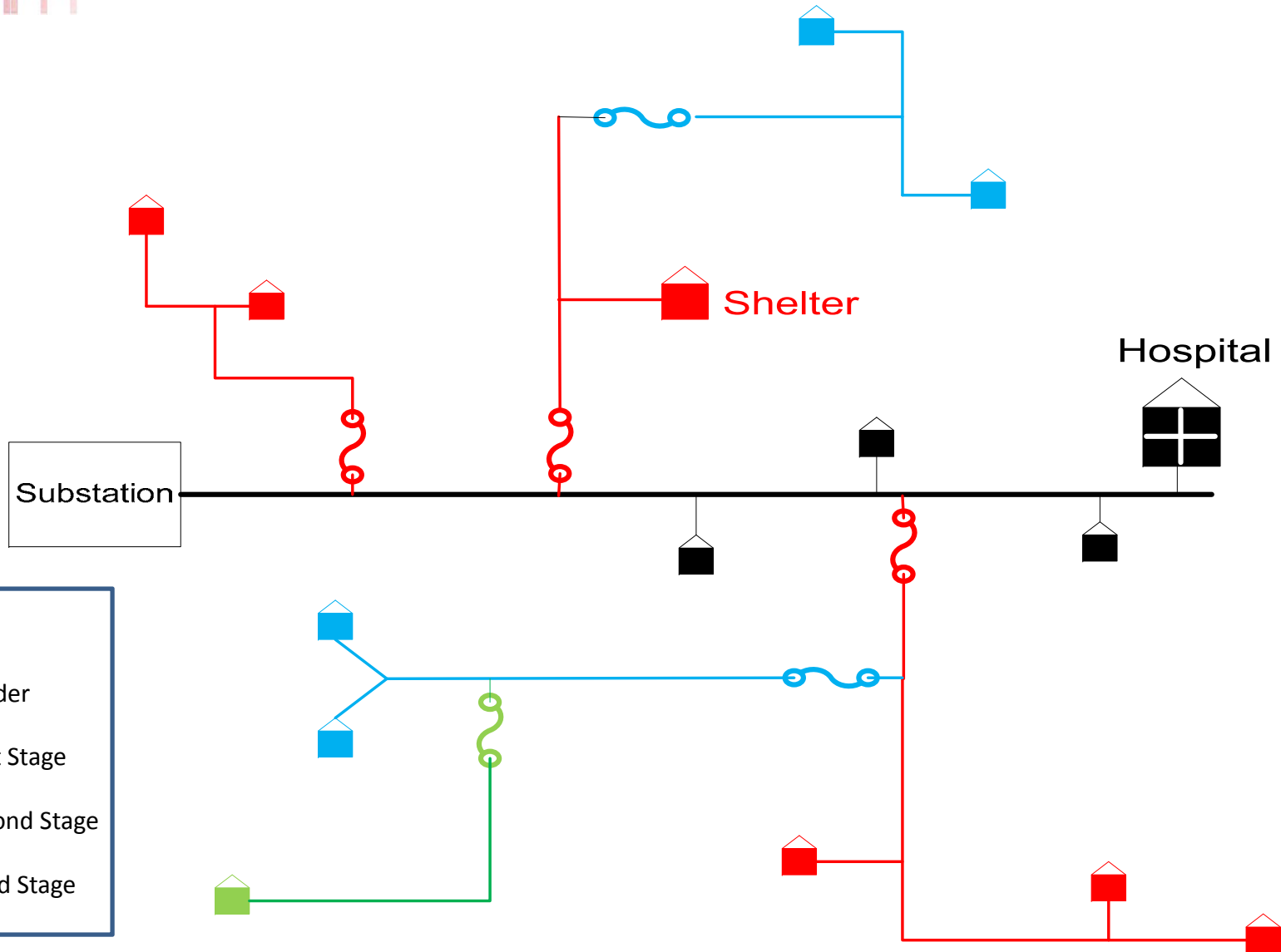


# King Sub (#5) Service Area



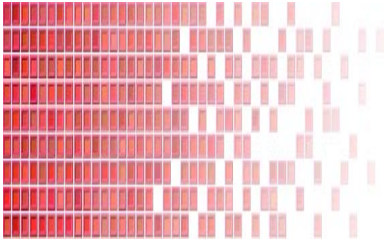


# System Configuration



**Legend**

- Feeder
- First Stage
- Second Stage
- Third Stage



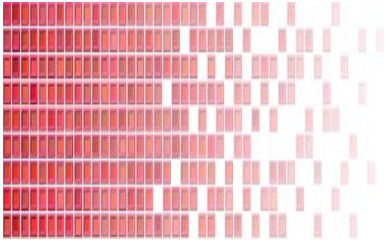
# Restoration Efforts

- **Initial Restoration Effort**

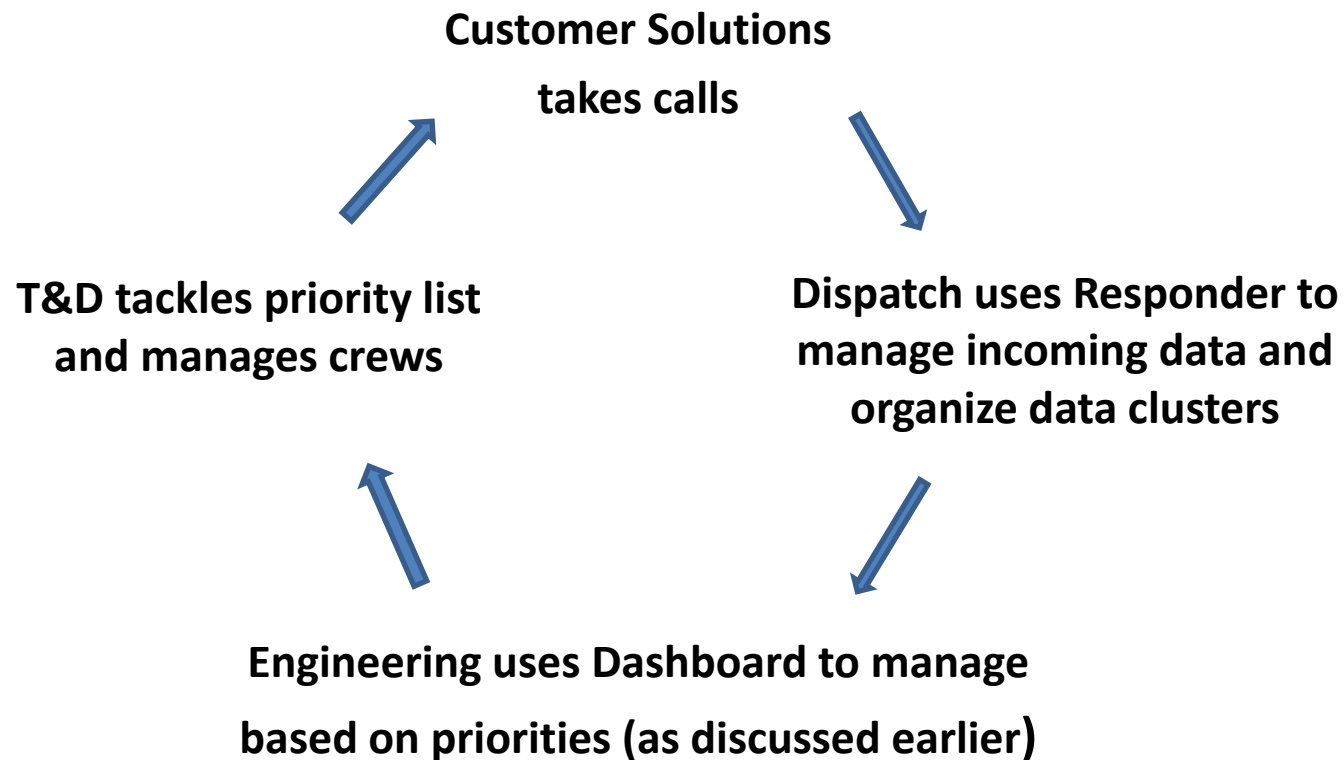
- Identify hazards and isolate them from the system
- Primarily to protect customers from these hazards until properly addressed

- **Priority List**

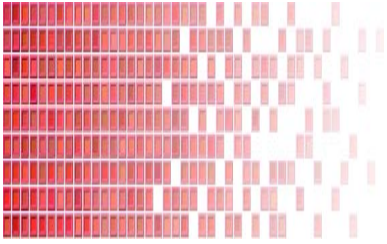
- Essential Customers
  - *Hospital, Shelters, Nursing Homes, Morgues*
- Largest groups of customers
- Customers with extensive property damage



# What we learned From Matty & How it works

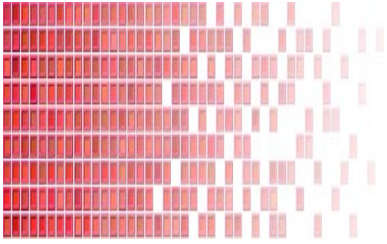


*Field conditions make require going back to Dispatch for logging into Responder - Example, downed line but lots of vegetation debris preventing restoration*



# Tools at your disposal

- **Customer Service OMS Dashboard**
  - **5 tabs with search capabilities**
    - **Current Electric Outages**
    - **Outages within the past 72 hours**
      - Time of outage, estimated restoration time, remarks
    - **Essential Customers**
      - Hospital , Shelter
        - » Contact information from Cogsdale
    - **Key Account**
      - Commercial customers (includes essential customers)
      - FPUA facilities - Water Plant, WW Plant, Lift station, etc
    - **Restoration Summary**



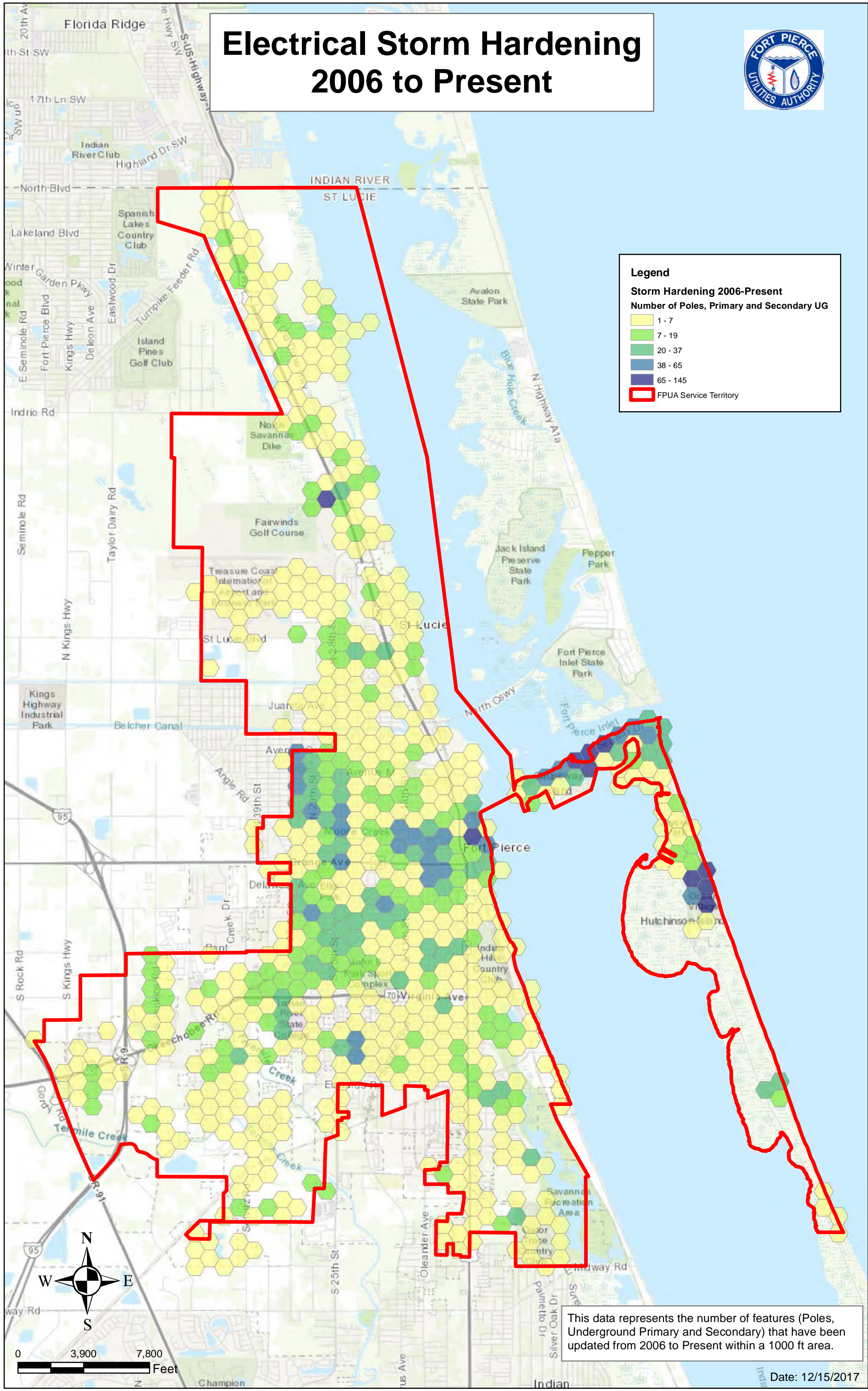
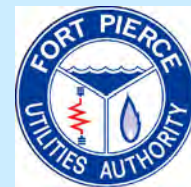
Information Only

**Questions?**



Question 28 – Map of System Hardening since 2006

# Electrical Storm Hardening 2006 to Present



**Legend**

**Storm Hardening 2006-Present**  
Number of Poles, Primary and Secondary UG

- 1 - 7
- 7 - 19
- 20 - 37
- 38 - 65
- 65 - 145
- FPUA Service Territory



This data represents the number of features (Poles, Underground Primary and Secondary) that have been updated from 2006 to Present within a 1000 ft area.