Public Service Commission

Data Request: Hurricane Preparedness & Restoration Actions

11/14/17

Data Acquisition Outline

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.

Response:

Leesburg Electric Department ("Leesburg Electric') pre-storm coordination meetings are held one business day prior to the expected date that a storm will be named (Tropical Storms or Hurricanes). Coordination and preparation assignments given during the pre-storm meeting are accomplished by each group within Leesburg Electric. The key topics (include, but not limited to) during a pre-storm coordination meeting are:

- Current Storm Levels
- Organizations expected to be involved if we sustain damage
- Employee Checklist & Phone Numbers Updated
- Crew Assignments issued
- Mutual Aid Documents
- Budget Accounts / Work Order tracking process
- Meal preparation
- Lodging preparation
- Warehouse & material status
- FEMA Forms and documents
- Coordination with Leesburg's Public Information Officer
- Customer notifications and education efforts

Hermine – Storm Meeting held on 8/25/16. The list from above was discussed.
Matthew – Storm Meeting held on 9/26/16. The list from above was discussed.
Irma – Storm Meeting held on 8/28/17. The list from above was discussed.
Maria – Storm Meeting held on 9/14/17. The list from above was discussed.
Nate – Storm Meeting held on 10/3/17. The list from above was discussed.

    b. Dates and topics of external communication pertaining to mutual aid held after each storm was named.

Response:

Hermine – N/A
Matthew – N/A
Irma – On September 10, 2017, FMEA emailed a Mutual Aid request to Leesburg Electric, we responded that we were unable to offer assistance. On September 22, 2017, FMEA emailed a Mutual Aid request to Leesburg Electric, we responded that we were unable to offer assistance. On October 2, 2017, FMEA

emailed a Mutual Aid request to Leesburg Electric, we responded that we were unable to offer assistance.

Maria – On September 28, 2017, FMEA emailed a Mutual Aid request to Leesburg Electric, we responded that we were unable to offer assistance. On November 12, 2017, FMEA emailed a Mutual Aid request to Leesburg Electric concerning Maria and Irma, we responded that we were unable to offer assistance.

Nate – On October 5, 2017, FMEA emailed a Mutual Aid request to Leesburg Electric, we responded that we were unable to offer assistance.

c. Date mutual aid was requested and nature of request.

Response:

The City of Leesburg Electric Department did not request any Mutual Aid assistance during Hermine, Matthew, Irma, Maria and Nate.

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.

Response:

Leesburg Electric has within its Distribution Service Restoration Plan an organizational chart with a detailed description of storm duties. It also lists the personnel by name who have primary and backup responsibilities for those storm duties. The document also shows the current available staffing levels for each work group within Leesburg Electric. See Appendix A – Organizational Chart and Description of Storm Duties.

3. When did the costs for Hurricanes Hermine, Matthew, Irma, Maria, and Nate begin to accrue for receiving mutual aid?

Response:

Leesburg Electric did not request Mutual Aid during Hermine, Matthew, Irma, Maria and Nate.

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.

Hermine

Response:

No Damage Assessment was performed. No wide spread damage was experienced.

Matthew

Response:

No Damage Assessment was performed. No wide spread damage was experienced.

Irma

Response:
The initial damage assessment was performed by sixteen (16) two-person damage assessment teams. Each assessment team is assigned, in advance, a specific feeder(s) for which they are responsible. Damage assessment assignments are issued between 24-48 hours prior to the storms arrival. There were a total of 32 employees involved in the initial damage assessment.

The assessment crews were given assessment documents to capture all the damage to Leesburg Electric facilities. After the assessment crews completed their "ride-out" of their assigned feeder, the assessment crews submitted their assessment documentation to the Distribution Operations Center. The Electric System Operators/Line Dispatchers and the Information Tracking Specialist organized the data by Feeder ID. A team of Electric System Operators/Line Dispatchers and the Information Tracking Specialist logged the damage noted on each assessment document. Another team of Electric System Operators/line Dispatchers and the Information Tracking Specialist in coordination with the Dispatching Coordinator (or their designate) compiled the outages and created a prioritized outage and damage list based on the number of customers affected. The Electric Operations Manager/Dispatching Coordinator (or their designate) reviews the prioritized outage and damage list and it was given to the Electric Superintendent/Restoration Superintendent. See Appendix B – Photos of Hurricane Irma Damage.

Maria

Response:
No Damage Assessment was performed. No wide spread damage was experienced.

Nate

Response:
No Damage Assessment was performed. No wide spread damage was experienced.

5. Please provide a description of how damage assessment data is updated and communicated internally.

Response:
After the initial damage assessment data was entered in the Outage Management System (OMS), additional damage assessments were conducted to confirm all damage and hazards have been addressed. The updated damage assessments was communicated internally to the Electric Operations Center via damage assessment forms utilized in the initial damage assessment, via phone call from the crew performing the assessment and in person after the additional assessment was completed.

The findings from the updated damage assessment were logged into the OMS. Any reports that were deemed to be critical were immediately communicated to the Electric Superintendent/Restoration Superintendent so that a crew(s) could be re-assigned to the situation. The updated damage assessment data logged into the OMS became part of the overall information communicated when the next day's restoration plan was developed and implemented by the Electric Superintendent/Restoration Superintendent.
The updated damage assessments became an important part of the evaluating the status of our restoration efforts and an important tool to insure that all damage, faults, hazards and damage are tracked as well as included in the restoration plan.

Restoration Workload

6. Please provide a detailed description of how the utility determines when and where to start restoration efforts.

   Response:

   As soon as weather conditions permit, Damage Assessment Crews begin riding out their assigned feeders. After documenting what they find in their assigned area, the Damage Assessment Crews submit their assessment documents to the Distribution Operations Center. A team of Electric System Operators/Line Dispatchers and the Information Tracking Specialist enter the faults and hazards from the assessment documents into the Outage Management System. After the all of the data from the assessment documents have been entered, another team of Electric System Operators/Line Dispatchers in conjunction with the Electric Operations Manager/Dispatching Coordinator (or their designate) and the Information Tracking Specialist compile a prioritized outage and damage list. The Electric Operations Manager/Dispatching Coordinator (or their designate) submits the list to the Electric Superintendent/Restoration Superintendent. Along with the prioritized outage and damage list, the Electric Superintendent/Restoration Superintendent uses the Electric Department's Priority Restoration List to develop a Restoration Plan. See Appendix C – Service Restoration Procedures and Appendix D – Storm Levels and Organization.

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

   Response:

Personnel Responsible for Restoration Workload Assignments		
Title	Years of experience	Number of crews managed
Electric Superintendent	30	10

8. Please provide a description of how restoration workload adjusts based on work completed and updates to damage assessments.

Response:

After the initial Restoration Plan has been put into action, the Plan is followed until the end of the work day, unless emergencies arise (i.e. car hits pole, etc.).

At the end of each work day, the restoration crews report the status of their assignments. Determining the status of their assignments is a key part in determining if the restoration plan needs to be adjusted. The status of the restoration crews are provided to the Dispatching Coordinator (or their designate) and the Information Tracking Specialist. In coordination with the Dispatching Coordinator, the Information Tracking Specialist and the Electric System Operators/Line Dispatchers update the prioritized outage and damage list so that the list is current at the end of each days' work. The Dispatching Coordinator and the Information Tracking Specialist will review the updated list prior to the Dispatching Coordinator providing the list to the Electric Superintendent/Restoration Superintendent. Utilizing the updated prioritized outage and damage list, the Electric Superintendent/Restoration Superintendent uses the Electric Priority Restoration List to determine if adjustments are needed to the current Restoration Plan. At the beginning of the work day meeting with all the restoration crews, the Electric Superintendent/Restoration Superintendent will let the restoration crews know if the current Restoration Plan is still effective or if adjustments have been made to the Restoration Plan. At this time, the Electric Superintendent/Restoration Superintendent will issue work assignments to the restoration crews. Crews will be assigned or re-assigned based on the status of work needing to be accomplished to restore the power as soon as safely possible. This process is repeated every night until all customers that can receive power have been restored.

9. If applicable, please describe how mutual aid was determined to be no longer needed following Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Response:

This question is not applicable to any of the five Hurricanes listed in question # 9.

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)

Response:

Hermine – 0
Matthew – 0
Irma – 1 person for 1 day
Maria – 0
Nate – 0

b. Days of lodging provided for mutual aid partners (Person-Days)
Response:
Hermine – N/A
Matthew – N/A
Irma – N/A
Maria – N/A
Nate – N/A

c. Number of meals provided for Utility personnel
Response:
Hermine – 0
Matthew – 80 people per meal X 3 meals per day X 2 days = 480 meals served
Irma – 80 people per meal X 3 meals per day X 6 days = 1440 meals served
Maria – 0
Nate – 0

d. Number of meals provided for mutual aid partners
Response:
Hermine – N/A
Matthew – N/A
Irma – N/A
Maria – N/A
Nate – N/A

e. Number of Utility personnel injuries
Response:
Hermine – 0
Matthew – 0
Irma – 0
Maria – 0
Nate – 0

f. Number of mutual aid partner injuries
Response:
Hermine – N/A
Matthew – N/A
Irma – N/A
Maria – N/A
Nate – N/A

g. Number of Utility personnel fatalities
Response:
Hermine – 0
Matthew – 0
Irma – 0
Maria – 0
Nate – 0

h. Number of mutual aid partner fatalities

Response:

Hermine – N/A

Matthew – N/A

Irma – N/A

Maria – N/A

Nate – N/A

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

11. Please provide a detailed description of when your Utility was considered fully restored from each named storm event.

Response:

Hermine – N/A

Matthew – Electric service to all Leesburg Electric customers that can receive power was fully restored by the end of the day on October 7, 2016. The maximum number of customers out at any time was 66 and the maximum duration of any outage during that day was 1 hour and 57 minutes**.**

Irma – Electric service was totally restored to every customer that could receive power on September 17, 2017 at 12:00pm.

Maria – N/A

Nate – N/A

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

Response:

Hermine – Lake County - Approximately 24,350 electric customer accounts

Matthew – Lake County - Approximately 24,350 electric customer accounts

Irma – Lake County - 24,351 electric customer accounts

Maria – Lake County - Approximately 23,350 electric customer accounts

Nate – Lake County - Approximately 23,350 electric customer accounts

b. Peak number of outages

Response:

Hermine – Lake County - N/A

Matthew – Lake County - The peak number of customer outages was 66

Irma – Lake County - The peak number of customer outages was 16,362

Maria – Lake County - N/A

Nate – Lake County - N/A

13. Please provide how call center customer service representatives were utilized before, during and after Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Response:

Hermine – N/A

Matthew – Customer Service Representatives manned phones prior to, during, and after Matthew. Representatives provided information updates, logged outages and answered general questions. They provided restoration estimates for the few customers without power.

Irma – Customer Service Representatives manned phones prior to, during, and after Matthew. Representatives provided information updates, logged outages and answered general questions. They provided restoration estimates for the 16,362 customers that lost power.

Maria – N/A

Nate – N/A

14. Please provide the number of customer service representatives the Utility had during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Response:

Hermine – N/A

Matthew – 11 Customer Service Representatives for 1.5 days

Irma – 13 Customer Service Representatives for 7 days

Maria – N/A

Nate – N/A

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?

Response:

Hermine – No, 0

Matthew – No, 0

Irma – No, 0

Maria – No, 0

Nate – No, 0

15. Please provide the number of customer contacts received by the customer call center(s) during Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Response:

Hermine – N/A

Matthew – Customer contacts received by the customer Call Center is not available.

Irma – The customer Call Center received 5306 customer contacts

Maria – N/A

Nate – N/A

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.

    Response:

    Hermine – N/A

    Matthew – The methods for customer contacts were Call Center, emails, and the City of Leesburg website

    Irma – The methods for customer contacts were Call Center, emails, and the City of Leesburg website

    Maria – N/A

    Nate – N/A

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.

    Response:

    Hermine – N/A

    Matthew & Irma – Leesburg Electric utilizes one phone number for outage reporting. For customer contacts before a named storm event, calling the outage number, the customer is placed in a call queue and then distributed to the next available Electric System Operator in the Distribution Operations Center.

    For customer contacts in the hour's right before a named storm event, and during a named storm event, the customer Call Center is staffed and activated. Calling the outage number, the customer is placed in a call queue and then distributed to the next available customer Call Center staff.

    For customer contacts after a named storm event, calling the outage number, the customer is placed in a call queue and then distributed to the next available Electric System Operator in the Distribution Operations Center.

    When the customer's call is answered, the customer's information and the outage/hazard report information from the customer will be received and enter it into the Responder Outage Management System Dashboard. The Responder Outage Management System extracts information from the Leesburg Electric customer database and creates an outage Incident. The Incident information from the Responder Outage Management System is displayed for the Distribution System Operators Responder Outage Management System screen. The Incident may remain a standalone outage or be rolled into an existing larger area outage.

    Maria – N/A

    Nate – N/A

    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.

    Response:

    Hermine – No

    Matthew – No

    Irma – No

    Maria – No

Nate – No

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?

Response:

Hermine – N/A

Matthew – The Outage Management System (OMS) handles the categorizing of customer contacts. They are categorized by: Initial Call Trouble, Initial Call Hazards, Cause, Equipment, and weather. All concerns, complaints, and information requests are directed to the appropriate individual(s).

Irma – The Outage Management System (OMS) handles the categorizing of customer contacts. They are categorized by Initial Call Trouble, Initial Call Hazards, Cause, Equipment, and weather. All concerns, complaints and information requests are directed to the appropriate individual(s).

Maria – N/A

Nate – N/A

19. Please provide a detailed description of how customer service representatives are informed of restoration progress.

Response:

Hermine – N/A

Matthew – The customer service representatives were given a link to the Outage Management System's (OMS) analytical and tabular data so that they have up-to-date progress reports. The customer service representatives are also given a briefing at the beginning of each day on the restoration plan for the day.

Irma – The customer service representatives were given a link to the Outage Management System's (OMS) analytical and tabular data so that they have up-to-date progress reports. The customer service representatives are also given a briefing at the beginning of each day on the restoration plan for the day.

Maria – N/A

Nate – N/A

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?

Response:

Hermine – N/A

Matthew – Multiple scripts are provided to each customer service representative when they are given training prior to the Hurricane Season and a generic restoration progress script is included with those scripts.

Irma – Multiple scripts are provided to each customer service representative when they are given training prior to the Hurricane Season and a generic restoration progress script is included with those scripts.

Maria – N/A

Nate – N/A

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.
       Response:
       The on scene crew supervisor performs a comprehensive on sight survey of the damage and an assessment of the required resources, then determines the estimated time of repair. This estimate is then provided to the Restoration superintendent for future resource planning and determining the progress of the restoration plan.
    b. How customers are notified.
       Response:
       Customers are notified of the overall progress on the restoration plan through the use of public information releases and statements provide by the City of Leesburg Public Information Office. The City of Leesburg Website is also used to post information on the number of customers without power as well as other pertinent facts. The City of Leesburg also has a static outage map displayed on the City of Leesburg Website that is updated periodically.
    c. How restoration time estimates are updated.
       Response:
       Restoration times are updated throughout the operational period as significant advances are made and at the beginning and end of each work period. The process for updating the estimated restoration times takes place at specific times. Prior to the beginning of each operational period the restoration plan is updated and restoration times are updated. We are required to report our current outage totals and the estimated restoration time every three hours throughout the day. This report is submitted to FMEA, the Lake County EOC, the City Manager and the Public Information officer. FMEA and Lake County EOC have their own reporting requirements as it relates to updating the estimated restore time. The City Manager and the Public Information Officer work together to update our customers through press releases, news outlets, our Call Center, social media and other means. The three hour updates, including the current outage totals and estimated restoration time, continue until the start of the next operational period.
    d. How restoration time estimates are disseminated internally, to the county and state Emergency Operations Centers, and to the public.
       Response:
       Progress through the restoration plan with the number of customers out and restoration estimates are provided to the City of Leesburg leadership, FMEA (state reporting) and the City of Leesburg EOC at intervals determined by agency.

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:
       Response:
       The City of Leesburg Purchasing Department is responsible for procuring vehicle fuel for the entire City, which includes the Electric Department.

a. Whether or not the Utility has fuel stored for these types of events

Response:

Fuel storage levels are increased and maintained at elevated levels during the Hurricane Season. This is the responsibility of the City's Purchasing Department.

b. Whether or not fuel shortage was an issue during these events

Response:

There were no fuel shortages experienced during any of the Hurricanes listed above.

c. Whether or not there were any delays due to fuel shortage

Response:

There were no restoration delays experienced due to fuel shortages.

d. Whether or not there were enough vehicles available during these events/any issues mobilizing crews

Response:

There were adequate vehicles available for the Electric Department during the Hurricanes listed above.

22. Please detail any complications or delays such as shortage or delayed delivery of materials for Hurricanes Hermine, Matthew, Irma, Maria, and Nate.

Response:

There were no known complications or delays due to shortages or delayed delivery of materials during the Hurricanes listed above.

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.

Response:

Hermine – N/A

Matthew – Staging: All Leesburg Electric personnel and all Call Center personnel were required to be on Electric Department property no later than October 6, 2016 at 6pm.

Stand-Down: All trouble crews were required to be on the Electric Department property at sunset on October 6, 2016.

Deployment for Damage Assessment: Due to the weakness of the storm when it reached our service area and the lack of customer reported events, a Damage Assessment Deployment was not necessary.

Re-Deployment for Reported Outage: Due to the weakness of the storm when it reached our service area, trouble crews were dispatched to customer reported outages and hazards as they were received by the Distribution Operations Center.

Allocation of Resources: Due to the weakness of the storm when it reached our service area and the lack of customer reported events, an allocation of resources was not required.

Mutual Aid requested by Leesburg Electric: Due to the weakness of the storm when it reached our service area and the lack of customer reported events, no request for Mutual Aid was made to FMEA.
Release of Mutual Aid: N/A
Date Last Outage was restored: October 7, 2016 at 9:15pm.

Irma – Staging: All Leesburg Electric personnel and all Call Center personnel were required to be on Electric Department property no later than September 10, 2017 at 6pm.
Stand-Down: Trouble Crews were required to return to the Electric Department property on September 10, 2017 @ 7:34pm due to dangerous weather.
Deployment for Damage Assessment: Deployment of Damage Assessment Crews took place on September 11, 2017 starting at 7am.
Deployment of Electric Restoration Crews: Deployment of Electric Restoration Crews began at approximately 11:00am on September 11, 2017 and continued as Damage Assessment Crews returned.
Allocation of Resources: The only resource allocation that Leesburg Electric made was to activate Lewis Tree Service as per their contract with Leesburg Electric. This took place at approximately 12:00pm on September 11, 2017.
Mutual Aid requested by Leesburg Electric: No request was made by Leesburg Electric for Mutual Aid. It was determined that current staffing levels were sufficient for a timely restoration of service to our customers.
Release of Mutual Aid: N/A
Date Last Outage was restored: On September 17, 2017 at 12:00pm, power was restored to all Leesburg Electric Customers that could receive power.

Maria – N/A
Nate – N/A

24. Please explain how the Utility validates adherences and departures from its storm preparation plan.

Response:
Leesburg Electric strictly adheres to its Distribution Service Restoration Plan which includes the storm preparation plan. Our adherence to the plan is re-enforced by the City Manager and the Incident Commander. Departures from the plan are not an option unless an extreme unforeseen situation arises. If an extreme unforeseen situation arises, the change in the storm preparation plan will be changed by the Incident Commander and documentation of the change will be the responsibility of the Incident Commander.

a. If the Utility does not assess departures from its storm plan, explain why not.

Response:

Leesburg Electric assess departures from the storm plan. This is done at the time the departure is proposed, when the Incident Commander makes the change, continued evaluation of the plan change during the course of the restoration, and at the storm debrief held at the end of the event.

b. If the Utility does not document or otherwise memorialize departures from its storm plan, explain why not.

Response:

Leesburg Electric does document or otherwise memorialize departures from its storm plan.

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.

Response:

There have been no know modifications of the storm preparation plan from 2015 through 2017 that are a direct result of previous departures from the storm preparation plan.

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.

Response:

Leesburg Electric strictly adheres to its Distribution Service Restoration Plan. Our adherence to the plan is re-enforced by the City Manager and the Incident Commander. Departures from the plan are not an option unless an extreme unforeseen situation arises. If an extreme unforeseen situation arises, the Incident Commander along with the Command Staff and the Section Chiefs will access the planned departure from the storm restoration plan. The ultimate decision to depart from the restoration plan rests with the Incident Commander. The departure in the storm preparation plan will be implemented by the Incident Commander and documentation of the departure will be the responsibility of the Incident Commander.

If the Utility does not document or otherwise memorialize departures from its restoration storm plan, explain why not.

Response:

Leesburg Electric does document or otherwise memorialize departures from its storm plan.

b. 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.

Response:

There have been no know modifications of the storm preparation plan from 2015 through 2017 that are a direct result of previous departures from the storm preparation plan.

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.

    Response:
    Hermine – N/A
    Matthew – Lake County Florida
    Irma – Lake County Florida
    Maria – N/A
    Nate – N/A

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.

    Response:
    Hermine – N/A
    Maria – N/A
    Nate – N/A

Weather Impact - Matthew				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)
Lake	28	44	.73	N/A

Weather Impact - Irma				
County	Maximum Sustained Winds (MPH)	Maximum Gusts (MPH)	Maximum Rainfall (inches)	Maximum Storm Surge (Feet)
Lake	43	69	2.15	N/A

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.

    Response:
    This was throughout our entire service area. We installed new underground facilities, converted overhead facilities to underground, rebuilt multiple feeders for system expansion and hardening, and replaced many poles since 2006 all across the service territory.

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.

Response:

Leesburg Electric had no hardened facilities that required repair or replacement as a result of the above named Hurricanes.

Hardened Facilities		
Hurricanes Hermine, Matthew, Irma, Maria and Nate	**Number of Facilities Requiring**	
	Repair	**Replacement**
Transmission	0	0
Structures	0	0
Substations	0	0
Total	0	0
Distribution		
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
Total	0	0
Service		
Service OH	0	0
Service UG	0	0
Service Combined	0	0
Total	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.

Response:

Non-Hardened Facilities		
Hurricane	**Number of Facilities Requiring**	
	Repair	**Replacement**
Transmission		
Structures	N/A	
Substations	N/A	
Total	N/A	
Distribution		
Poles		Approx. 20
Substation	0	
Feeder OH	0	
Feeder UG	0	
Feeder Combined	0	
Lateral OH	2,000 feet	1,000 feet
Lateral UG		500 feet
Lateral Combined	2,000 feet	1,500 feet
Total		
Service		
Service OH	25	
Service UG	0	
Service Combined	25	
Total		

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.

Response:

Hermine – N/A

Matthew -
1. Trees Down
2. Lines Down
3. Broken Poles
4. Wind
5. Debris

Irma -
1. Trees Down
2. Lines Down
3. Broken Poles
4. Wind
5. Debris

Maria – N/A

Nate – N/A

32. For Hurricanes Matthew, Hermine, Irma, Maria, and Nate, please provide a ranking of the top five drivers that protracted service restoration time.

Response:

Hermine – N/A

Matthew -
1. Vehicular traffic around the crew locations
2. Road Clearing

Irma -
1. Road Clearing
2. Vehicular traffic around the crew locations
3. Duke Energy Transmission Lines Down

Maria – N/A

Nate – N/A

33. If applicable, please describe any damage prevented by flood monitors during Hurricanes Matthew, Hermine, Irma, Maria, and Nate.

Response:

Hermine – N/A

Matthew – N/A

Irma – N/A

Maria – N/A

Nate – N/A

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.

Response:

Hermine – N/A

Matthew – Although one of our substations had automated feeder switches during the time Hurricane Matthew affected our service area, it is believed that outages were avoided, however, there is no firm data available.

Irma – Although we are not able to determine the exact number of outages that were avoided by automated feeder switching, there was a marked difference in the number of outages in the area where Leesburg Electric has one substation with all of the feeders being operated within a Distributed Automation Loop concept and other substations that do not employ the same technology. This concept utilizes automated feeder switches to automatically isolate compromised sections of a feeder and restore power to unaffected parts without operator intervention. The only named storm that had any significant electrical system wide impact was Irma. After reviews of the electric system SCADA data, System Operator logs and Responder Outage Management System data, it was determined that no faults were detected by the automated feeder switches, although there were several lateral outages associated with the feeders, the main backbone remained in service.

Maria – N/A

Nate – N/A

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.

Response:
Hermine – N/A
Matthew – N/A
Maria – N/A
Nate – N/A
Irma – See Table below.

Hurricane Irma - CIF

CIF Name/Type (i.e. Hospital)	County / Location	Restoration Time	Cause	Facilities Requiring Repairs and/or Replace
Savannah Court	Lake County Florida	1.08:03	Weather	Feeder OH Repair
Beacon College	Lake County Florida	36:14	Weather	Feeder OH Repair
Beverly Shores Elementary	Lake County Florida	1.15:15	Weather	Transmission Structures Repaired/Replaced
Water Treatment - Well # 15	Lake County Florida	14:06	Weather	Feeder OH Repair
Days Inn	Lake County Florida	10:58	Weather	Feeder OH Repair
Leesburg EOC / Police Department	Lake County Florida	14:06	Weather	Feeder OH Repair
Carver Middle School	Lake County Florida	14:20	Weather	Feeder OH Repair
Water Treatment - Newell Hill Tank	Lake County Florida	1.08:30	Weather	Lateral OH Repair
Quality Inn	Lake County Florida	1.15:15	Weather	Transmission Structures Repaired/Replaced
Florida Blood Centers	Lake County Florida	1:33	Weather	Feeder OH Repair
Parks & Recreation	Lake County Florida	14:20	Weather	Feeder OH Repair
Avante' at Leesburg	Lake County Florida	13:28	Weather	Lateral OH Repair
Fire Station 61	Lake County Florida	36:14	Weather	Feeder OH Repair
Municipal Operations Center	Lake County Florida	14:20	Weather	Feeder OH Repair
IT Server Room at Electric Department	Lake County Florida	14:20	Weather	Feeder OH Repair
Fire Station 62	Lake County Florida	14:20	Weather	Feeder OH Repair
Fruitland Park Water & Waste WaterTreatment	Lake County Florida	1.19:49	Weather	Feeder OH Repair
Life Stream Psychiatric Hospital	Lake County Florida	14:20	Weather	Feeder OH Repair
Police Fuel Facility	Lake County Florida	14:06	Weather	Feeder OH Repair
Daily Commercial	Lake County Florida	14:06	Weather	Feeder OH Repair
Breakfast Station	Lake County Florida	1.14:48	Weather	Feeder OH Repair
Aldi	Lake County Florida	1.14:48	Weather	Feeder OH Repair
Water Treatment - Lake Pointe Booster Station	Lake County Florida	1.09:06	Animal	Lateral OH Repair
Griffin Tower-Location of Radio Antenna	Lake County Florida	14:20	Weather	Feeder OH Repair
Walmart Supercenter	Lake County Florida	1.14:48	Weather	Feeder OH Repair
Fruitland Park Elementary	Lake County Florida	1.23:28	Weather	Lateral OH Repair
Water Treatment - Well # 9	Lake County Florida	14:06	Weather	Feeder OH Repair
-BBQ Express	Lake County Florida	1.23:28	Weather	Lateral OH Repair
Century Link Operations	Lake County Florida	13:28	Weather	Lateral OH Repair
Fruitland Park Police / City Hall	Lake County Florida	1.19:49	Weather	Lateral OH Repair
Life Stream Academy - Administrative Services	Lake County Florida	36:14	Weather	Feeder OH Repair
Lk. Co. Public Safety Dept, Emerg. Mngmt Div	Lake County Florida	1.08:03	Weather	Feeder OH Repair
Solid Waste Mgt & Fleet	Lake County Florida	1.08:03	Weather	Feeder OH Repair
Water Treatment - Well # 14	Lake County Florida	14:06	Weather	Feeder OH Repair
LRMC- Hospital	Lake County Florida	14:07	Weather	Feeder OH Repair
LRMC Day Surgery Center	Lake County Florida	14:08	Weather	Feeder OH Repair
LRMC Urgent Care Center	Lake County Florida	14:09	Weather	Feeder OH Repair
Waste Water Treatment #1	Lake County Florida	1:33	Weather	Feeder OH Repair
Sterling House of Leesburg	Lake County Florida	14:06	Weather	Feeder OH Repair
Leesburg Health & Rehab LLC	Lake County Florida	14:06	Weather	Feeder OH Repair
Lake County Medical Examiner	Lake County Florida	14:06	Weather	Feeder OH Repair

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.

    Response:

    Hermine – N/A

    Matthew & Irma – Leesburg Electric has one substation with all of the feeders being operated within a Distributed Automation Loop concept and other substations that do not employ the same technology. This concept utilizes automated feeder switches to automatically isolate compromised sections of a feeder and restore power to unaffected parts without operator intervention.
    The Distributed Automation Loop performed well during both Hurricanes, however, the only named storm that had any significant electrical system-wide impact was Irma. After reviews of the electric system, SCADA data, System Operator logs and Responder Outage Management System data, it was determined that no faults were detected by the automated feeder switches during Irma, although there were several lateral outages associated with the feeders, the main backbone remained in service.

    On the Distributed Automation Loop, no main backbone underground feeder facilities required repairs or replacement during this event. There were outages in other areas of our service territory that have mainly underground facilities, however, those outages were caused by damage/faults on the overhead lines upstream.

    Maria – N/A

    Nate – N/A

37. Please provide a discussion what programs/tariffs the utility has in place to promote
    a. Undergrounding of new construction (e.g., subdivisions)

    Response:

    Prior to the timeframe of this data request, Leesburg Electric has requirements in place that will in most, if not all, new residential construction to be installed underground. All new subdivisions are required to be served by underground lines.

    b. Conversion of overhead to underground

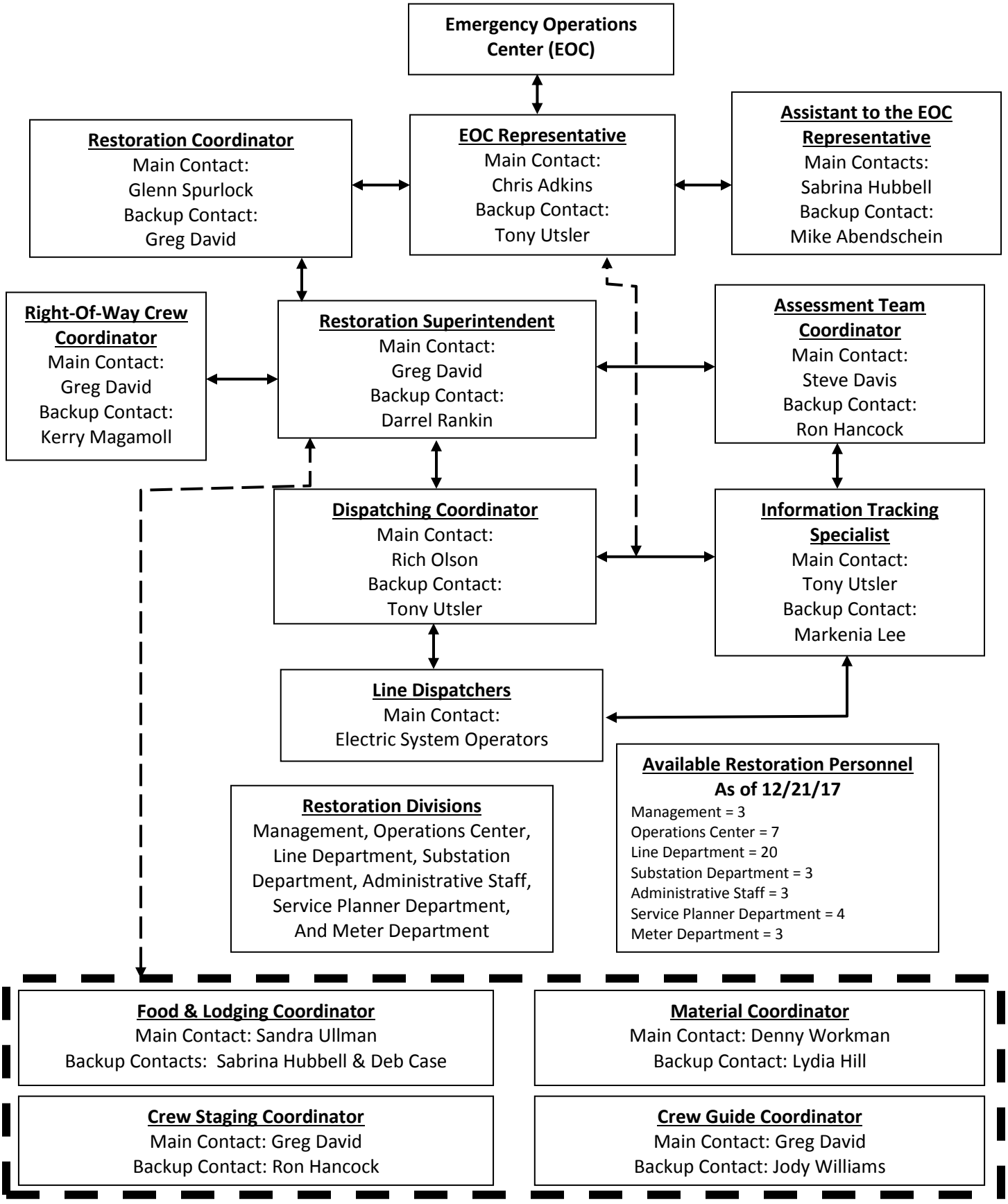
    Response:

    Prior to the timeframe of this data request, Leesburg Electric has requirements in place that will in most cases, if not all, require upgrades of service be converted to an underground service.

Appendix A – Organizational Chart and Description of Storm Duties

3. STORM LEVELS AND ORGANIZATION (Cont.)

Positions filled as required for Level I, II, or III



3. STORM LEVELS AND ORGANIZATION (Cont.)

Storm Title	Description of Responsibilities
Restoration Coordinator Main Contact: Glenn Spurlock Backup Contact: Greg David	1. Develops and Implements the emergency restoration plan. 2. Provides training and conducts pre-storm planning and review with management team. 3. Performs continuous evaluation of the effectiveness of efforts and implements needed changes in the restoration efforts as required. 4. Coordinates assistance with other City departments. 5. Informs the City Manager on the status of the restoration efforts. 6. Requests or offers Mutual Aid depending on the situation through FMEA.
Restoration Superintendent Main Contact: Greg David Backup Contact: Darrel Rankin	1. Provides training and conducts pre-storm planning and review with management team and distribution crews. 2. Performs continuous evaluation of the effectiveness of efforts and implements needed changes in the restoration efforts as required. 3. Coordinates assistance from other City departments. 4. Informs the Restoration Coordinator on the status of the restoration efforts. 5. Coordinates dispatching and Assessment Team assignments for initial damage assessment with Assessment Team Coordinator. 6. Recommends requests or offers for Mutual Aid depending on the situation. 7. Works closely with the Dispatching Coordinator to prioritize initial restoration efforts based on information reported by the Scouts during the initial assessment.
Dispatching Coordinator Main Contact: Rich Olson Backup Contact: Tony Utsler	1. Coordinates all activities in the Distribution Operations Center. 2. Works closely with the Restoration Superintendent to prioritize initial restoration efforts based on information reported by the Scouts during the initial assessment. 3. Interfaces with the Information Tracking Specialist and other available resources frequently to analyze the outage situation. 4. Review outages continually and make judgments on the best use of available crews and guides.
EOC Representative Main Contact: Chris Adkins Backup Contact: Tony Utsler	1. To be posted at the Leesburg Distribution Operations Center (“DOC”) at a time determined by the Incident Commander. 2. Receives emergency and damage reports from multiple agencies associated with the DOC. 3. Compiles emergency and damage reports for submission to the Distribution Operations Center. 4. Responsible for compiling and submitting outage data and estimated restoration times to the Director of Electric, FMEA, the County EOC, the City Manager and the Public Information Officer on a predetermined timetable. 5. Processing requests from various staff positions within the EOC. 6. Submit requests for resources from Leesburg Electric. 7. Document all activity though the use of the City’s EOC email system and all other programs or systems in place.

Storm Title	Description of Responsibilities
Assistant to the EOC Representative Main Contact: Sabrina Hubbell Backup Contact: Mike Abendschein	1. To be posted at the Leesburg DOC at a time determined by the Incident Commander. 2. Receives emergency and damage reports from multiple agencies associated with the DOC. 3. Assist in compiling emergency and damage reports for submission to the Distribution Operations Center. 4. Assist in compiling and submitting outage data and estimated restoration times to the Director of Electric, FMEA, the County EOC, the City Manager and the Public Information Officer on a predetermined timetable. 5. Assist in processing requests from various Staff positions stationed within the EOC. 6. Submit requests for resources from Leesburg Electric. 7. Document all activity though the use of the City's EOC email system and all other programs or systems in place.
Information Tracking Specialist (2 Positions) Main Contact: Tony Utsler Backup Contact: Markenia Lee	1. Posts outage locations and trouble found in the Outage Tracking System and posts the master outage map with information updates. 2. Provides trouble found and location information to the Dispatching Coordinator.
Line Dispatchers (6 Positions) Electric System Operators	1. Dispatch assignments to line crews by radio or telephone. 2. Interface with Information Tracking Specialist to update crew assignments and restoration completion at trouble locations. 3. Answers unlisted telephones. 4. Informs the Dispatching Coordinator of work progress.
Assessment Team Coordinator (2 Positions) Main Contact: Steve Davis Backup Contact: Ron Hancock	1. Using system maps and assigned feeders, patrols the feeders to quickly locate and record the location and trouble found along the feeder rout. 2. Recognize various components of the distribution system and determine what equipment may or may not be operational.
Right-of-Way Crew Coordinator (2 Positions) Main Contact: Greg David Backup Contact: Kerry Magamoll	1. Interfaces with the Restoration Superintendent to determine additional tree crew needs or if tree crews can be released to other organizations. 2. Coordinates dispatching of ROW crews.

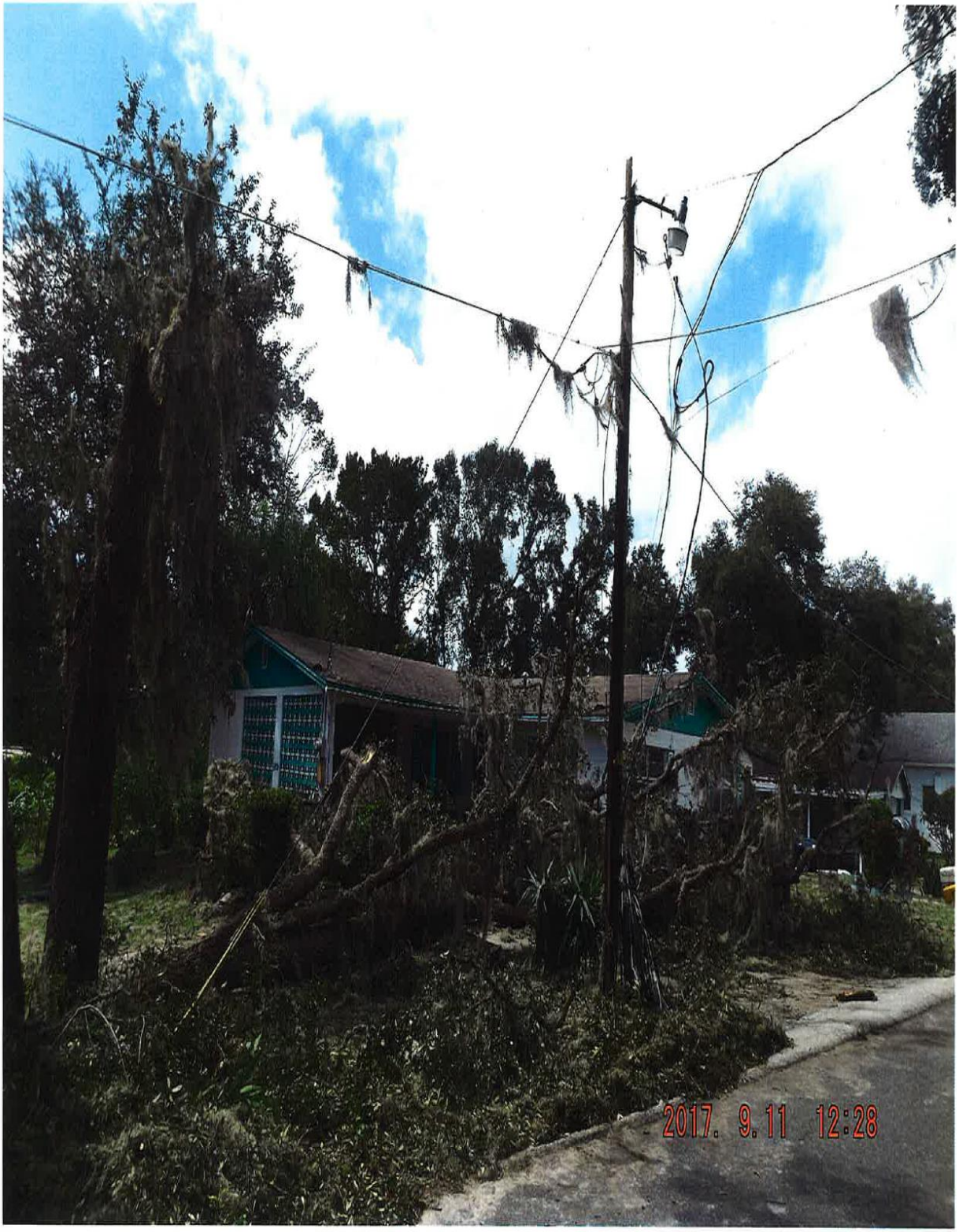
Storm Title	Description of Responsibilities
Material Coordinator (2 Positions) Main Contact: Denny Workman Backup Contact: Lydia Hill	1. Coordinates storeroom staffing. 2. Interfaces with Restoration Superintendent on emergency material needs and delivery of materials to crews.
Crew Guide Coordinators (2 Positions) Main Contact: Greg David Backup Contact: Jody Williams	1. Leads foreign crews to work assigned locations. 2. Pre-check the next work location for assigned crew. 3. Make sure all meal tickets are properly processed with Restoration Superintendent.
Crew Staging Coordinator Main Contact: Greg David Backup Contact: Ron Hancock	1. Intercepts incoming foreign crews and alerts the Dispatching Coordinator of their arrival 2. Coordinates Staging Areas for foreign crews. 3. Directs foreign crew supervisor to the MOC and get work locations and guide assignment. 4. Arranges all overnight accommodations for foreign crews and other outside help.
Food and Lodging Coordinator (2 Positions) Main Contact: Sandra Ullman Backup Contact: Sabrina Hubbell & Debra Case	1. Coordinates provision for meals, snacks, drinks, etc. for all personnel. 2. Coordinates food and drink delivery to job sites if needed.

Appendix B – Photos of Hurricane Irma Damage


2017. 9.11 8:18


2017. 9.11 9:00


2017 9.11 9:59


2017. 9.11 12:28


2017. 9.11 14:54

Appendix C – Service Restoration Procedures

City of Leesburg Electric Department Distribution Service Restoration Plan

2. Service Restoration Procedures

Whenever outages occur, appropriate resources must be immediately assembled to identify the outage footprint, the severity and the cause; then determine the resource requirements, and implement restoration procedures. As the outage footprint expands, additional resources will be required in the restoration effort. (This section details the degree of involvement required as outage severity increases.)

During the restoration effort, personnel must give priority to:

- Identification and resolution of hazardous conditions
- Restoration of feeders
- Restoration of essential services and critical customers (public safety, health)
- Restoration of fused laterals based on the number of customers affected

Damage Assessment Process

This section details assessment procedures and identification of special needs.

Identifying the footprint, severity, and cause(s) of an outage allows the Department to restore service in an efficient manner. Assessing the damage may be as simple as dispatching a lineman to a suspected location - or it may require deployment of office and field assessment teams.

The Operations Center is the focal point of all information flow.

Appendix D – Storm Levels and Organization

City of Leesburg Electric Department Distribution Service Restoration Plan

3. STORM LEVELS AND ORGANIZATION

A. RESTORATION EFFORT LEVEL IDENTIFICATION

Level I - Department requires no assistance from outside crews and
- Less than 24 hours to restore service to all customers.

Level II - Limited assistance (five crews or less) required from FMEA mutual assistance and/or
- Greater than 24 hours required to restore service to all customers.

Level III - Significant assistance (more than five crews) required from FMEA mutual assistance and
- Greater than 5 days required to restore service to all customers.