



Clay Electric Cooperative, Inc.

December 21, 2017

Wesley Taylor
Public Service Commission
Capital Circle Office Center
2540 Shumard Oak Boulevard
Tallahassee, Florida 32399-0850

Reference: Docket No. 20170215-EU – Review of Electric Utility Hurricane Preparedness and Restoration Actions

Dear Mr. Taylor:

Attached you will find Clay Electric Cooperative, Inc.'s response to Docket No. 20170215-EU.

Please contact me if you have any questions.

Sincerely,

Frank R. Holmes, P.E.
Chief Operating Officer

/kc

Staging for Utility Personnel and Mutual Aid

1. Pre-storm Coordination Process: CEC held many meetings with its personnel from the top to bottom of the Cooperative in advance of the 2017 storm season in order to obtain “lessons learned feedback” from the experiences of storms Hermine and Matthew that occurred in 2016. The objective was to take the entire collection of responses, review them and then make revisions as necessary to the existing Emergency Operation Plan (EOP) that was originally developed after the 2004/2005 storm season. Training was then conducted with the various areas to review the new EOP including the assignments and objectives for preparation purposes should a storm restoration event occur.
 - a. Specific internal meeting dates after the storms were named are not readily available for storms Hermine and Matthew; however, internal meetings and notifications did take place to ensure employees understood their storm assignments, were prepared and on stand-by should the storm impact our service territory.

For Irma, an email was distributed to the employees on Tuesday (9/5/2017) notifying them that EOP preparations had officially begun. Topics of the initial notification email consisted of: a request to review and understand the EOP plan and the specific assignments; fuel and equip vehicles; reminder of how the Crew Leads would be assigned; notification on schedule for delivery of additional laptop computers with electronic maps, “visiting crew” packets, and additional trucks; update on plans to acquire lodging, food services and outside crews and a reminder to utilize Storm Forms for recording restoration activities and crew times during the restoration process.

Dates of additional meetings and notifications that took place amongst the various departments are not included herein, but they did take place and consisted of more specific tasks for storm preparation including, but not limited to, taking care of personal properties and families in advance of storm arrival, specific show up times for duties, review of restoration processes and safety awareness, material acquisition, fuel arrangements for service pumps, generator locations and mobile units and specific plans for securing lodging, food and crew resources. Employees assigned to the County EOC’s were notified on Friday (9/8/2017) to show up on Sunday (9/10/2017) in advance of storm arrival.

An internal meeting was held on Saturday (9/9/2017) with the COO, Division Manager of T&D Construction and the Vegetation Management Supervisor to review the resource allocation plans and to insure all assignments and resources were accounted for and ready for implementation. Other employees were informed on Sunday (9/10/2017) that restoration work would likely begin on Monday (9/11/2017) due to latest storm track and to plan to be ready to show up at assigned locations. Confirmation notifications were sent on Monday AM (9/11/2017) to show up at your assignment as soon as it is safe or around 2:00pm Monday.

- b. Specific dates for external communications pertaining to Mutual Aid are not readily available for storms Hermine and Matthew; however, the effort to begin acquiring outside help began approximately five (5) days prior to the storms arrival.

For Irma, external communications began on Tuesday (9/5/2017) with various outside contractors to determine availability. Phone and email communications began on Wednesday (9/6/2017) with the FECA to determine Mutual Aid availability and to make formal requests for help to arrive by Sunday (9/10/2017) evening. Multiple communications continued throughout the week to get resource commitments from outside contractors and FECA along with the coordination associated with contracts, COI, lodging, OSHA Information Transfer, etc.

- c. For Irma, a formal request was made to FECA for Mutual Aid assistance on Wednesday (9/6/2017) for 200 – 250 linemen to be available within our service territory with lodging provided by CEC no later than Sunday evening. Crew make-up request was a mix of 2 - 3 men service bucket “wire” crews and 4 – 5 men digger derrick “pole change-out” crews. As stated in (b) above, phone calls began on Tuesday (9/5/2017) to acquire outside contract crews.

2. Below is a list of the various areas within the Cooperative along with a description of their storm duties and number of persons involved. Staffing quantities listed are associated with the Irma event noting that Hermine and Matthew were similar:

a. **Assignment of Duties for Specific Departments**

E&O Department

1. Construction - Transmission crew should be available for transmission line repairs. When it is known that no transmission work is needed, crew can be released to other areas. Total of (7) employees.
2. Electric System Operations - Relocating the ECC to the back-up emergency ECC location will be done at the discretion of the ECC Supervisor, the Electric System Operations Superintendent or the Division Manager of Substation and System Operations. The COO shall be notified of this prior to relocation.

Dispatching of crews on distribution will be done by the Districts, utilizing information and assistance from Keystone Control Center. The district dispatch boards should reflect the location of crews at all times.

Dispatching of crews on transmission will be done by Keystone Control Center and/or Electric System Operations Superintendent. Total of (10) employees.

Several portable or mobile 10 kW generators should be lined up to rent as necessary from Ring Power, Kohler, others.

As the storm moves toward the system, all LTC transformers may be put in the manual position. As storm moves toward the system feeder breakers in the substations, they may be switched to non-reclose at the discretion of the System Operator. Substation high sides may be opened at the discretion of the Electric System Operations Division if storm is severe enough.

Mobile transformers should be kept available for emergencies and not in use if at all possible, along with regulator trailer.

Leaking oil filled equipment should be sent to the TX shop as soon as possible and checked for PCB content.

Substation Maintenance and Construction employees will be first utilized for inspection of substation/transmission line damages. They will be responsible for substation repairs. After all transmission lines and substations are repaired, these employees may be released to support districts and help with distribution system repairs. Bucket trucks will be utilized first with two men crews. Total of (13) employees.

Equipment repair shop employees will be needed to handle leaking oil filled equipment and repair any special equipment as necessary. When possible, some employees may be released to help other departments. Total of (4) employees.

Substation Maintenance/Relay section should ensure that an adequate supply of oil clean up kits and other clean up materials are on hand and distributed as necessary.

OCR/Regulator technicians will be first utilized for substation restoration and special equipment maintenance before being released for distribution repairs. Total of (2) employees.

Energy Control Supervisor will ensure the Control Center is properly staffed and operating smoothly and then he may be used for inspection of transmission system and substations. Total of (1) employee.

3. Fleet Service – Total of (13) employees. Fleet Service Division will remain open with someone on duty to make repairs. A record of parts, labor, or fuel for outside crews will be kept. CEC will be reimbursed by the assisting Co-op or contractor for these costs because we pay for the equipment by the hour. Record should be kept on "Daily Crew Arrival/Departure Work Record" (not included).

Fleet Service Division should have made available tanker vehicles or trailers with fuel that can be mobilized for fuel delivery of both gasoline and diesel fuel.

All fuel tanks at Keystone and district offices should be filled ahead of time. Control Center standby generator fuel tanks and ICT standby generator fuel tanks included.

Pick up list of contractor's names from the COO or designee for fuel key preparation.

The peak shave generator units at the Orange Park Medical Center, Green Cove LLC, FSP, UCI, Putnam Hospital, Lake Butler Prison Hospital, Keystone, Sparton or other locations as applicable should have fuel tanks filled.

Tires and tire repair supplies should be well stocked.

Fleet Service Superintendent shall have arrangements in place to secure additional vehicles (i.e. pickup trucks and service trucks). The number of units required will be determined per EOP event and will be coordinated with the Division Manager of T&D Construction.

4. Operations Support - Should have microwave and tower technicians available to re-align antennas and microwave dishes as necessary.

Division employees should be available for radio, telephone, SCADA, microwave, and other related problems. Total of (7) employees.

Metering technicians will be first utilized to repair specialized metering as necessary as well as substation repairs, if needed. Employees and their bucket trucks may be released to aid districts when they are no longer needed by the Operations Support Division. Total of (4) employees.

EOC telephone line and media telephone line.

- a. EOC Line: This line will only be staffed during a storm or other major emergency when one or more of the county EOCs go active. This line will be used by EOCs to request information on the current status of CEC's restoration efforts. This line will have two phones, one in Member and Public Relations and one located in the Control Center. The phone in Member and Public Relations will be wireless. This line will have voicemail. Both phones will have a feature that detects stutter-dial tone

and illuminate a light when there is a new voicemail message. The phone in the Control Center will have a ringer that can be silenced. Member and Public Relations will be responsible for making sure this line is staffed during an emergency and distributing and controlling the distribution of the phone number for this phone line. Member and Public Relations will manage the voicemail left on this line. This line will be used by CEC in addition to stationing employees at the various selected EOCs. Operations Support will assure that this number is not published and is unavailable to the public and provide the number to Member and Public Relations Director only.

- b. Media Line: This new line will be used by the media to request information. This line will have one phone in Member and Public Relations. This phone will be wireless and have "Call Forwarding" so calls can be forwarded to any phone with a 10-digit number. This line will have voicemail. This phone will have a feature that detects stutter-dial tone and illuminate a light when there is a new voicemail message. The phone will have a ringer that can be silenced. Member and Public Relations will be responsible for making sure this line is staffed as needed and distributing and controlling the distribution of the phone number for this phone line. Member and Public Relations will manage the voicemail left on this line. Operations Support will assure that this number is not published and is unavailable to the public and provide the number to Member and Public Relations Director only.

- 5. Engineering - To be in charge of contacting construction contract crews, coordinating/ organizing central Crew Leads, generating necessary maps, overseeing the UC OMS system and databases, issuing work orders, and billing verification of contract crews. Total of (6) employees.

Finance and Administrative Services Department

- 1. Purchasing/Warehouse /Storeroom - staffing consist of (6) Purchasing and (5) Warehouse employees. Additional employees from other departments are brought in as needed. Storeroom should remain open with someone on duty to issue material and tools. A record should be made of all extra tools and material issued by using the "Stock Room Order Form" (not included) and "Tool Requisition Form" (not included). All extra tools and materials left over at departure time should be returned to CEC Storeroom by assisting crews, whether CEC's own crew or an outside crew. Items issued to a contractor will become part of the billing.

Purchasing should assure that they have an up-to-date list of all vendors with correct phone numbers.

Stores should be well stocked with materials and tools, especially fuses, sleeves, connectors, lights, saws, batteries, etc.

If necessary, the Florida Air National Guard should be contacted by the Manger of Purchasing and Stores to fly supplies and equipment into Camp Blanding where CEC employees could pick it up.

- a. Flow of Material - Once the EOP has been initiated, material supply and replenishment to each district office or substation will be completed as follows:

1. Material Supply
 - a. Material – Advise the Keystone Warehouse (See Section 2) of how many outside crews will be receiving material from each district. This will determine how much material is loaded for each district to begin the restoration process. (see STORM-2210 for material quantities).
 - b. Pole – When system inspection has been completed, advise the Keystone Warehouse of the quantity and sizes of poles needed.
 - c. Transformers – When system inspection has been completed, advise the Keystone Warehouse of the quantity, KVA, voltage, and type (CSP, 1BU, 2BU, PAD) of transformers needed.

2. Material Replenishment
 - a. Material – Each district will supply a material order to their respective District Storekeeper using form STORM-2210. District Storekeepers should advise the Keystone Warehouse of material needs by location. Material replenishment information should be provided to the Keystone Warehouse by 12:00 p.m. (noon) each day. Material orders sent to the Keystone Warehouse should be completed on form STORM-2210.
 - b. Pole – If additional poles are needed after the inspections, advise the Keystone Warehouse of the quantity and sizes of poles needed.
 - c. Transformers – If additional transformers are needed after the inspections, advise the Keystone Warehouse of the quantity, KVA, voltage, and type of transformers needed.

3. Material Return
 - a. Material – After restoration is complete, all material should be returned to the district office by the outside contract crew and accounted for by the contract crew's CEC representative on form STORM-2210. **IMPORTANT** – If an outside contract crew is removed from the district and told to report to a new district, the contract crew's CEC representative should inventory CPR items (highlighted on form STORM-2210) to be turned in to the District Storekeeper so they can be transferred to the new district. This will allow contract crews to keep the material on their vehicles that can then be used at the new district location.
 - b. Poles – All poles should be handled the same as material.
 - c. Transformers – All transformers should be handled the same as material.

- d. Once the EOP has been initiated, communication for material supply should be used in the following order:
- Email – Email is the quickest way to communicate large amounts of information. Material orders using form STORM-2210 should be attached to an email and sent to the appropriate District Storekeeper. Transformer and pole orders can be included in the body of the email. The District Storekeeper will review and place an order for the district by sending an email to kharper@clayelectric.com or dloper@clayelectric.com.
 - Phone – In the event that email is not working in a particular district, all orders for material will need to be phoned in to the Keystone Warehouse by each District Storekeeper.
- e. All material orders should include the name of the district, name of the District Storekeeper, and date. This information will be needed to properly account for material usage.

- b. Refer to organization chart for the Emergency Operations Command Center (EOCC) including the duties for each area. In addition, refer to the organization chart that describes the functions of the field personnel involved in the actual inspection and restoration process referenced from the EOCC, Districts and Substation locations.

Emergency Operations Command Center

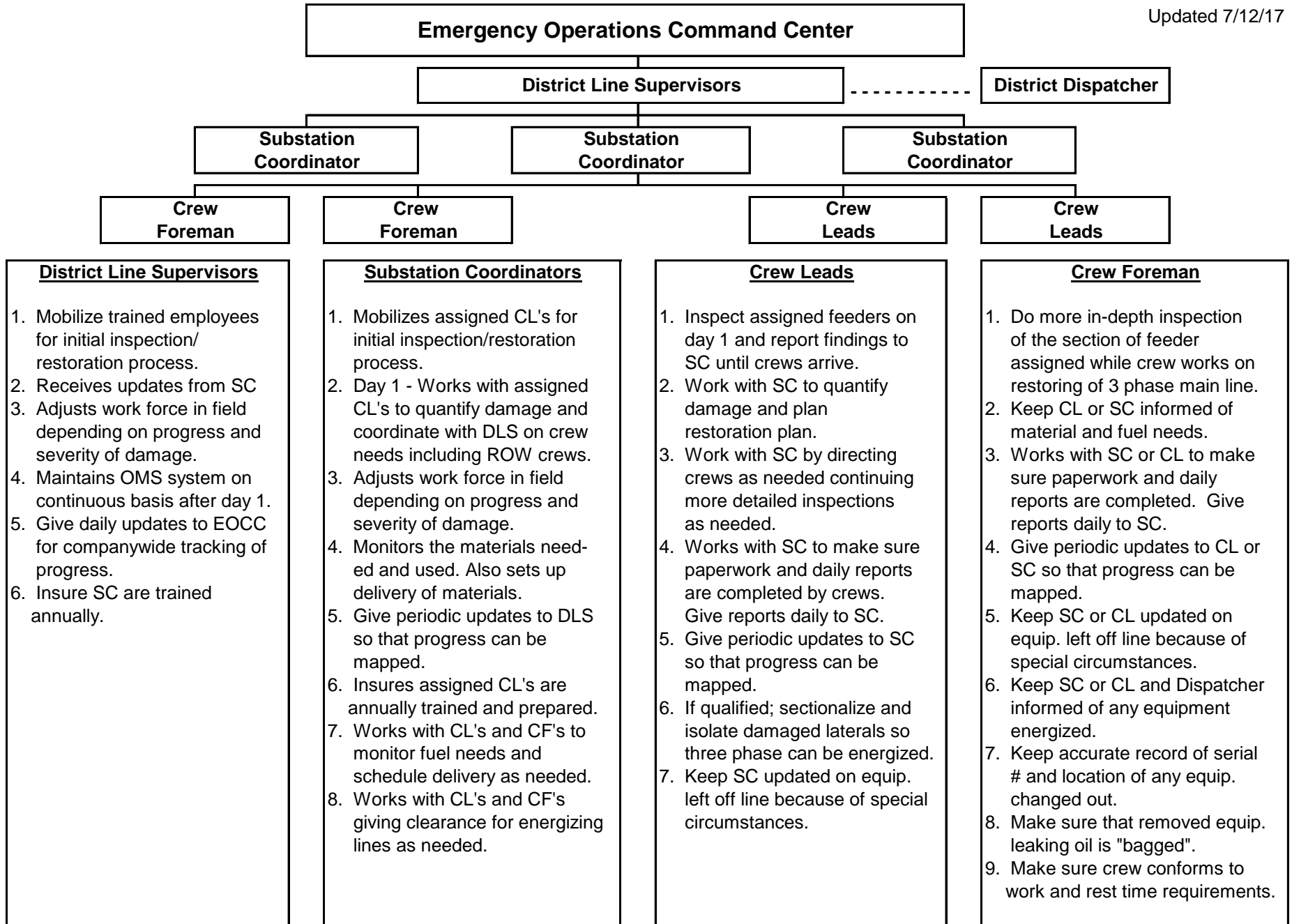
Updated 7/17/17

**Chief Operating Officer
Frank Holmes**

Administrative Assistants Kim Coffey / Renee Arzie	Division Manager of T&D Construction Mark Townsend	Division Manager of Substation & System Oper Bryan Gunter	Division Manager of Operations Support Mike Grantham	Division Manager of T&D Engineering Chris Bryan	Division Manager of Engineering Services Joe Johnson	Director Member & Public Relations Derick Thomas	Director Information & Com. Tech. Toby Moss
<p>Kim</p> <ol style="list-style-type: none"> 1. Assist COO in crew acquisition/scheduling process. 2. Assist in contacting construction contract crews. <p>Renee</p> <ol style="list-style-type: none"> 1. Coordinate and manage food/catering for E&O. 	<ol style="list-style-type: none"> 1. Supervise / coordinate Construction Division. 2. Oversee mobilization of construction contract crews. 3. Oversee transmission and distribution repair crews. <div style="background-color: #cccccc; text-align: center; padding: 2px;"> Fleet Service Superintendent Tex Gillen </div> <ol style="list-style-type: none"> 1. Supervise / coordinate Fleet Service Division with equipment and vehicle repairs. 2. Coordinate fuel deliveries at Headquarters and districts. 3. Insure fuel tanks are full. <div style="background-color: #cccccc; text-align: center; padding: 2px;"> Vegetation Management Superintendent Rus Lott </div> <ol style="list-style-type: none"> 1. Mobilize and supply contract R/W crews for districts. 2. Supervise / coordinate Vegetation Management Division and R/W contract crews. 	<ol style="list-style-type: none"> 1. Oversee Control Center operations. 2. Oversee substation and transmission inspections 	<ol style="list-style-type: none"> 1. Supervise / coordinate communications repairs and SCADA repairs. 2. In charge of buildings and associated equipment if needed. 3. Assist in keeping communication networks up and running. 	<ol style="list-style-type: none"> 1. In charge of billing verification of contract crews. 2. Assist in Assessment of Crew Leads. 3. Responsible for coordinating/organizing central Crew Leads. 	<ol style="list-style-type: none"> 1. In charge of generating necessary maps. 2. In charge of UAI system and databases. 	<ol style="list-style-type: none"> 1. In charge of contact with media. 2. Coordinate with EOC's. 	<ol style="list-style-type: none"> 1. In charge of keeping the AS400/iSeries operable. 2. In charge of responding to PC problems at Headquarters and districts. 3. Supply additional hardware equipment needed for hurricane and storm operation.

Emergency System Organizational Chart Summary

Updated 7/12/17



- c. Districts (total of six): Each District is staffed based on pre-planning evaluations and acts as a sub-command center in charge of its own restoration process after obtaining resources from the Emergency Operations Command Center (EOCC). Districts also handle arrangements for lodging and meals and have their own fuel pumps and material warehouses. Communications with the EOCC continue throughout the preparation stage and actual restoration process in order to regulate resources as needed. Refer to below sample District Organization Chart for Palatka District. Staffing for Districts as follows: Gainesville: 39; Keystone Heights: 46; Lake City: 41; Orange Park: 60; Palatka: 31; Salt Springs: 30. Vacant positions are filled in by EOCC based on actual need at time of the event. Typical plan for large restoration events is to obtain outside crews to perform the restoration work with CEC personnel acting as Substation Coordinators and Crew Leads.
- d. Call Center: Refer to Item No. 13.
- e. Control Center: duties are to monitor the status of the electric system, dispatch crews as needed to assist in the restoration process and close out outages on the OMS upon completion of restoration; take calls and emails from EOC's and dispatch as necessary. Staffing = 12 Control Center employees plus 7 additional employees from other departments/districts.

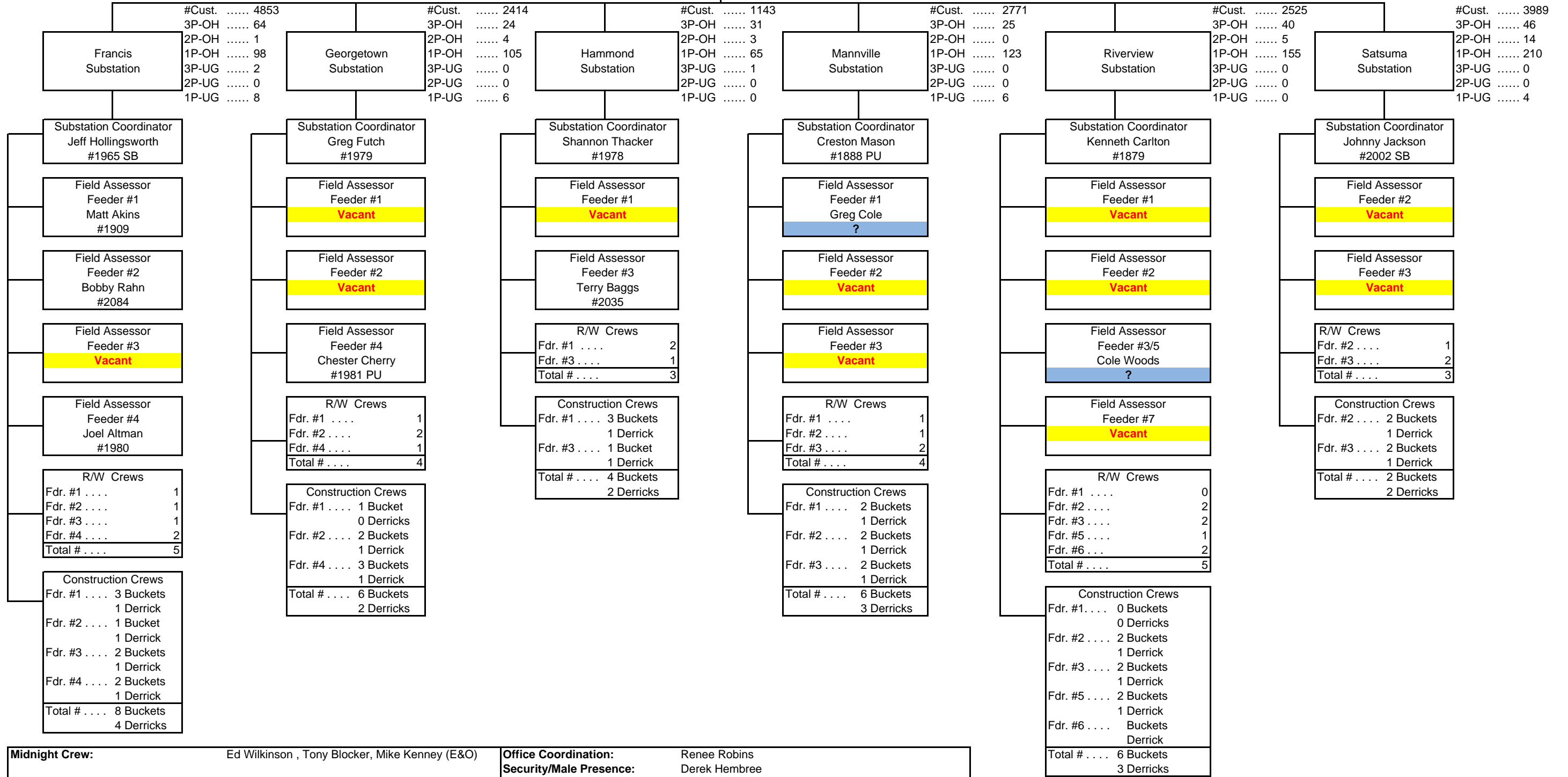
District Manager: Jimmy Beeler

Palatka District

R/W Coordinator
Andrew Hinnant
#2017 LB

Billy Roberson #1933 PU
Eric Saxon

Dispatch (2 Shifts)
Rebecca Fleck, Caity Owens
Renee Robbins



Midnight Crew:	Ed Wilkinson , Tony Blocker, Mike Kenney (E&O)	Office Coordination:	Renee Robbins
Hotel/Food:	Derek Hembree, Treva Baggs, Nancy Butcher	Security/Male Presence:	Derek Hembree
Warehouse/Stores/Ice:	Ron Williams, Brett Bennett	Front Office Duties:	Ashley Reed, Lisa Peebles, Ashley Morris
IT Support/Misc.:	Bob Hickenlooper (ICT)	Billing/Bad Debt:	
Record Keeping:	Derek Hembree, Treva Baggs, Nancy Butcher	Support/Clerical/Email, etc.:	Nancy Butcher
EOPPA@clayelectric.com (Email List)	Eric Saxon, Renee Robbins, Derek Hembree, Jim Beeler, Billy Roberson, Nancy Butcher	Items Needed:	Van and Driving to Shuttle from College to PDO
EOC Assistance - Putnam:	Jeff Thacker (AUDIT) (6am-6pm) Ashley Reed (4pm-10pm)	Employees NOT Assigned:	

Field Assessors - 11 Vacant Positions

3. Costs began to accrue for receiving Mutual Aid upon CEC declaration that the EOP was activated. More specifically, accrual of costs for Mutual Aid began when crews left their home locations to come and help us.

Damage Assessment Process

4. The following are the approximate number of persons that worked for each storm:
 - Hermine - Total of 457 (In-house: 282, Contractor/Mutual Aid Linemen: 146, Vegetation Management: 26);
 - Matthew - Total of 1140 (In-house: 425, Contractor/Mutual Aid Linemen: 507, Vegetation Management: 208);
 - Irma – Total of 1419 (In-house: 466, Contractor/Mutual Aid Linemen: 745, Vegetation Management: 208).

Restoration and Record Keeping

CEC has adopted an “Inspect and Restore” method for restoration purposes noting a full inspection of damage will not be done should restoration resources be available to begin work.

“Inspect and Restore” consists of Crew Leads being assigned to lead construction crews. This team will commence a patrol of a particular section of line and perform the line repairs along with the inspection process. Once work begins, the crew lead may patrol ahead of the construction crews in order to inspect damage and determine where to go next in order to restore service.

Even though CEC has adopted an “Inspect and Restore” method of restoration, the District Line Supervisors will still be responsible for inspecting damage and this should be the first order of business. Employees who are knowledgeable of the system should be utilized for damage inspection and areas assigned to each substation and feeder to cover all of the areas which have been hit.

The inspection should be made using the "Initial Line Damage Inspection Form" (Refer to Item No. 5). This will help determine type of help and material needed.

Employees who are knowledgeable about our service areas and/or electric system, regardless of present job position, should be utilized as Crew Leads to guide others around or report conditions for damage inspection.

If it appears that the inspection could be aided by the use of an airplane or helicopter, the COO or the Division Manager of T&D Construction.

If it is determined by the District Line Supervisor and District Manager that outside help is needed, they will contact the COO or Division Manager of T&D Construction giving the following information:

- A. "Initial Line Damage Inspection Form" (Refer to Item No. 5); Any insight on overall types of needs.
- B. “Daily Storm Damage Restoration Report Form” (not included); to be completed by Crew Leads when guiding outside crews and by CEC construction lead for CEC crews. Include all locations and all work for all hours worked

C. Number of employees involved in the assessment process assigned to substations/feeders including two-man service crews and crew leads.

- Lake City District = 16
- Salt Springs District = 12
- Palatka District = 16
- Orange Park District = 29
- Keystone District = 26
- Gainesville District = 17
- Two-Man Crew Lead Crews = 16 (32 Men Total)
- Additional Crew Leads = 33

5. **Initial Line Damage Inspection (Form # STORM-2220, 9/6/17):** This form will be used to summarize system damage as soon as it is practical to place inspection personnel in the field. Inspection will be an ongoing process and not just a single one-time review. This form will be filled out by the field assessor and findings will be reported to the substation coordinator. The substation coordinator will give this information to the District Line Supervisor, which will help determine the crew needs. The District Line Supervisor will pass this information to the EOCC (Headquarters) for companywide tracking.

INITIAL LINE DAMAGE INSPECTION									
Clay Electric Cooperative, Inc.									
Substation: _____		Feeder: _____			Storm Name: _____				
Employee Name: _____				Date: _____					
(Pole Prikey #, Map #, Property #, or Meter #) Location	Type of Line			Section Driveable?	# Trees Down	# Poles Down	# Tran. Down	Wire Down (ft.)	Comments
	FDR.	Tap	Trans.						

STORM-2220 9/6/17

Restoration Workload

- 6. CEC has an Outage Management System (OMS) that records data associated with the status of the system and members that are out of service and an Energy Control Center (ECC) with employees that monitor the system and dispatch for outage restoration accordingly. Refer to “*What is Clay Electric Power Restoration Process*” located at the end of this report.
- 7. Include info in table for COO, Division Manager of T&D Construction, Vegetation Management Superintendent and Line Supervisors. Refer to table in packet.

Personnel Responsible for Restoration Workload Assignments – Hurricane Irma		
Title	Years of Experience	Number of Crews Managed
Chief Operating Officer	30	Data Not Available
Div. Mgr. of T&D Construction	31	Data Not Available
Veg. Mgmt. Superintendent	27	Data Not Available
Line Supervisor – Gainesville	33	Data Not Available
Line Supervisor – Keystone	30	Data Not Available
Line Supervisor – Lake City	29	Data Not Available
Line Supervisor - Palatka	31	Data Not Available
Line Supervisor – Orange Park	27	Data Not Available
Line Supervisor – Salt Springs	29	Data Not Available

- 8. Periodically, but at least once per day during the storm restoration process, a progress meeting is held between Central Command and all of the six (6) District Office Line Supervisors and District Managers to assess the progress of the restoration and determine where resources should be allocated based on priority and need. Damage assessments are also discussed in order to estimate time of restoration for meetings with political officials that may be held at other times of the day. In addition, the Line Supervisors are required to inform Central Command when they no longer need a crew resource so these resources can be dispatched to other locations (internal or external) that may have needs.
- 9. CEC’s need to continue using Mutual Aid or not is determined through the process described above in item 8. Prior to releasing any Mutual Aid resources, communication takes place with FECA so arrangements can be made as to where these resources may be needed elsewhere.

Staffing Considerations

10. Regarding Hurricanes Hermine, Matthew, Irma, Maria, and Nate, please respond to the following, please provide the following:

	Hermine	Matthew	Irma	Maria	Nate
a. Days of lodging provided for Utility personnel (person-days)	113	570	2,751	0	0
b. Days of lodging provided for mutual aid partners (person-day)	73	627	2,085	0	0
c. Number of meals provided for Utility personnel	797	3,842	26,294	0	0
d. Number of meals provided for mutual aid partners.	360	3,100	11,741	0	0
e. Number of Utility personnel injuries	0	0	4	0	0
f. Number of mutual aid partner injuries	0	0	0	0	0
g. Number of Utility personnel fatalities	0	0	0	0	0
h. Number of mutual aid partner fatalities	0	0	0	0	0

11. CEC was considered fully restored when 98% of accounts were back in service not counting accounts that cannot be restored due to flooding or customer repair issues at the point of service that would prevent the utility from re-energizing the service: Hermine: 9/5/2016; Matthew: 10/9/2016; Irma: 9/17/2017 with exception of scattered accounts in Gainesville District area where flooding was excessive. In addition, accounts on Drayton and Hog Island were restored on 9/18/2017.

Customer Communication

- 12.
- a. Total number of customer accounts affected by storms.
 - Hermine- 43,000
 - Matthew- 73,000
 - Irma- 161,000
 - Maria/Nate-Not Applicable

 - b. Peak number of outages
 - Maria/Nate-Not Applicable

Hermine

Peak date	09/02/2016 06:22	
County	Total Meters	Meters Out
Alachua	22,006	8,059
Baker	2,467	1,070
Bradford	5,825	1,137
Columbia	16,641	10,236
Clay	78,252	5,826
Duval	3	0
Flagler	2	0
Gilchrist	4	4
Lake	2,236	755
Levy	679	154
Marion	16,290	1,285
Putnam	21,003	1,179
Suwannee	5	6
Union	3,683	1,855
Volusia	2,118	5
Total:	171,214	31,571

Matthew

Peak date	10/08/2016 07:09	
County	Total Meters	Meters Out
Alachua	22,004	3,803
Baker	2,471	397
Bradford	5,814	918
Columbia	16,648	2,343
Clay	78,406	34,686
Duval	3	3
Flagler	2	2
Gilchrist	4	0
Lake	2,236	2,375
Levy	679	9
Marion	16,300	11,418
Putnam	20,985	17,798
Suwannee	5	0
Union	3,684	1,002
Volusia	2,121	1,955
Total:	171,362	76,709

Irma

Peak date	09/11/2017 11:08	
County	Total Meters	Meters Out
Alachua	22,341	21,739
Baker	2,483	2,604
Bradford	5,855	4,864
Columbia	16,875	13,563
Clay	79,841	69,947
Duval	3	3
Flagler	2	2
Gilchrist	4	4
Lake	2,239	1,666
Levy	685	692
Marion	16,375	16,490
Putnam	21,104	20,779
Suwannee	5	6
Union	3,738	3,442
Volusia	2,145	2,285
Total:	173,695	158,086

13. Please provide how call center was utilized;
Call Center followed the same process for Hermine, Matthew and Irma see below:
- a. Before the storm:
 - 1. Regular duties were performed with a focus of informing callers of the approaching storm and reassuring necessary steps were being taken to prepare for the storm.
 - b. During the storm:
 - 1. The call center was not staffed incoming calls were answered by non-call center / non-essential to power restoration employees in the control center.
 - c. After the storm:
 - 1. When it was safe to travel employees reported to work and began answering calls.
 - 2. Call center was staffed from 6am to 10 pm. From 10pm to 6am calls were transferred to the control center (same as during the storm).
 - i. 23 call center CSR's were scheduled 10-hour shifts
 - ii. Non- call center employees assisted before and after normal business hours (8am -5pm) and week-ends
 - iii. 4 supervisors worked overlapping schedules

14. Number of CSR's
- a. Additional personal deployed? Yes, 9 additional personnel were used in the call center to cover extended hours for each storm.

15. Number of customer contacts received by call center

Storm and Dates Impacted	Calls Offered to a CSR	Calls Answered by a CSR
Matthew - 10/8/16 thru 10/10/16	8,900	7,584
Hermine - 9/1/16 thru 9/7/16	12,553	7,043
Irma - 9/11/17 thru 9/17/17	24,706	15,320

16. Please provide all methods utilized to submit and collect customer contacts.
- Hermine, Matthew and Irma-Customers could contact Clay Electric via;
 Our Call Center
 Our Outage Management System
 Email
 In-person at our district offices (Hermine and Matthew only)
17. Step by Step to address customer contacts are addressed before, during and after a named event. All contacts described in #16 above which required action or follow up were turned into a service order or task within our Customer Information System for routing to the appropriate department(s). Some customer contacts were emailed to groups of employees in operational districts for action or follow-up.
- a. Did the utility identify any delays in restoration as a result of addressing customer contacts related to Hermine, Matthew, Irma? No
18. Please provide whether or not customer contacts are categorized by concern, complaint, information if so, how? Yes, but they are not tracked only processed and handled. The four general types are Outage, Complaint, Information Request or Emergency
19. Detailed description of how CSR are informed of restoration progress. CSR's were provided restoration updates by Member and Public Relations with outage numbers by County, 3-4 times per day via email.
- a. Is there a script? Yes If so, what is the process by which the script is created? Once Estimated times of restoration were established they were provided those numbers by County daily to share with customers.
20. Please describe the process the Utility uses to notify customers of approximate restoration times.
- a. How restoration time estimates were determined? Daily phone conference with Operational supervisors gave estimates by County.
- b. How customers are notified? External Website, IVR, call center, Social Media, Traditional Media, and District Offices.
- c. How restoration time estimates are updated? Daily through all communication channels listed above.
- d. How restoration time estimates are disseminated;
1. Internally and to County and State EOC- Email
 2. Public- All external communication channels listed above under item 20B.

Material Considerations

21. CEC has fueling stations at its Headquarters in Keystone Heights and at its five (5) other District Offices. In addition, CEC procured mobile fuel units during Irma capable of fueling vehicles off-site in order to minimize congestion at the office locations. All vehicles and fuel storage tanks were filled prior to the storm's arrival. This fuel was available to Mutual Aid partners with costs being absorbed per contract arrangements.
- a. Yes. Refer to above response.

- b. No. Fuel was available as needed.
 - c. No delays occurred due to fuel shortages.
 - d. The number of available pick-up trucks is a concern and challenge depending on the magnitude of the restoration event; however, additional trucks were obtained through a rental agency during Irma. There were no issues mobilizing crews.
22. CEC did not experience any material shortages or delivery delays that compromised the restoration efforts for Hermine, Matthew and Irma. Maria and Nate were not applicable.

Restoration Process

23. Restoration Timelines for applicable storms are as follows: Hermine (9/2/2016 started restoration after storm and substantially completed restoration effort on 9/4/2016); Matthew (10/8/2016 started restoration after storm and substantially completed restoration on 10/10/2016); Irma (9/11/2017 started restoration and substantially completed restoration on 9/17/2017).
24. The Emergency Operation Plan (EOP) has an organizational structure with guidelines that are to be adhered to during the storm preparation and restoration process. Training and roundtable discussions take place annually prior to the storm season to review the EOP and make changes deemed necessary to improve the process. With that said, this plan is dependent on thorough and regular communication taking place amongst the employees within the cooperative in order to maximize the level of success.
- a. Not applicable.
 - b. Not applicable.
 - c. No; however, CEC did revise its EOP in 2017 as a result of overall experiences, feedback from lessons learned and employee roundtable discussions associated with the storm events that occurred in 2016.
25. Refer to item 24. Duplicate question.

Outages

- 26. Refer to Item No. 12b.
- 27. Data not Available.

Hardened and Non-Hardened Structures

- 28. Data not Available.
- 29. Data not Available.
- 30. Data not Available.
- 31. 1. Vegetation, trees contacting or falling on lines; 2 – 5 unknown.
- 32. Hermine: Data not Available; Matthew: Data not Available; Irma: 1. Flooding, 2. Other Utilities restoring their transmission lines or delivery point of services to the CEC substations, 3. Practicality of restoration process (coordination and sequencing of getting resources to service points at the end of feeder circuits), 4 – 5 unknown.
- 33. Not Applicable.
- 34. Not Applicable.

Critical Infrastructure Restoration

- 35. Data not Available.

Underground Facilities

- 36. The underground facilities performed well during the storm events with exception of isolated areas where flooding existed. Additional or more specific information is not available.
- 37. Generally, CEC has not promoted URD over OH service. CEC will provide electric service in the most economical way possible. If, at the customer's request and for their benefit, the facilities are designed and constructed in a way that is not the most economical, the customer is required to pay the cost differential between the two.
 - a. If customer installs PVC conduit, CEC will install URD service with no Contribution in Aid of Construction (CIAC) cost. Beginning 2018, all new service wires will be required to be URD. Beginning 2018 for residential customers, there is no CIAC for up to 400 linear feet of primary URD including transformer being installed by CEC in customer installed PVC conduit.
 - b. CEC will install URD service wire with no CIAC costs in customer installed PVC conduit for OH to URD conversions.

What is Clay Electric's procedure for restoring power?



Restoring power after widespread outages is a big job that involves more than simply throwing a switch or removing a tree from a line. It involves a huge coordination effort with hundreds of linemen working in very dangerous situations. There is nothing routine when restoring power after a storm.

Although Clay Electric is committed to restoring the electric power to all co-op accounts as safely and quickly as possible, our initial goal is to safely restore power to the greatest number of members in the shortest time possible. In order to accomplish that, the process begins with a damage assessment of the co-op's lines and facilities by employees who have been specifically trained to accomplish those tasks. The assessment allows the co-op to direct its resources (both labor and materials) to the areas where they are needed the most.

Repairs are first made to the co-op's large transmission lines which carry high-voltage electricity to our distribution system from generation stations like Seminole Electric Cooperative's coal-fired plant near Palatka. Lines such as

these must be repaired first along with any damage to transmission substations. Transmission lines serve many thousands of accounts.

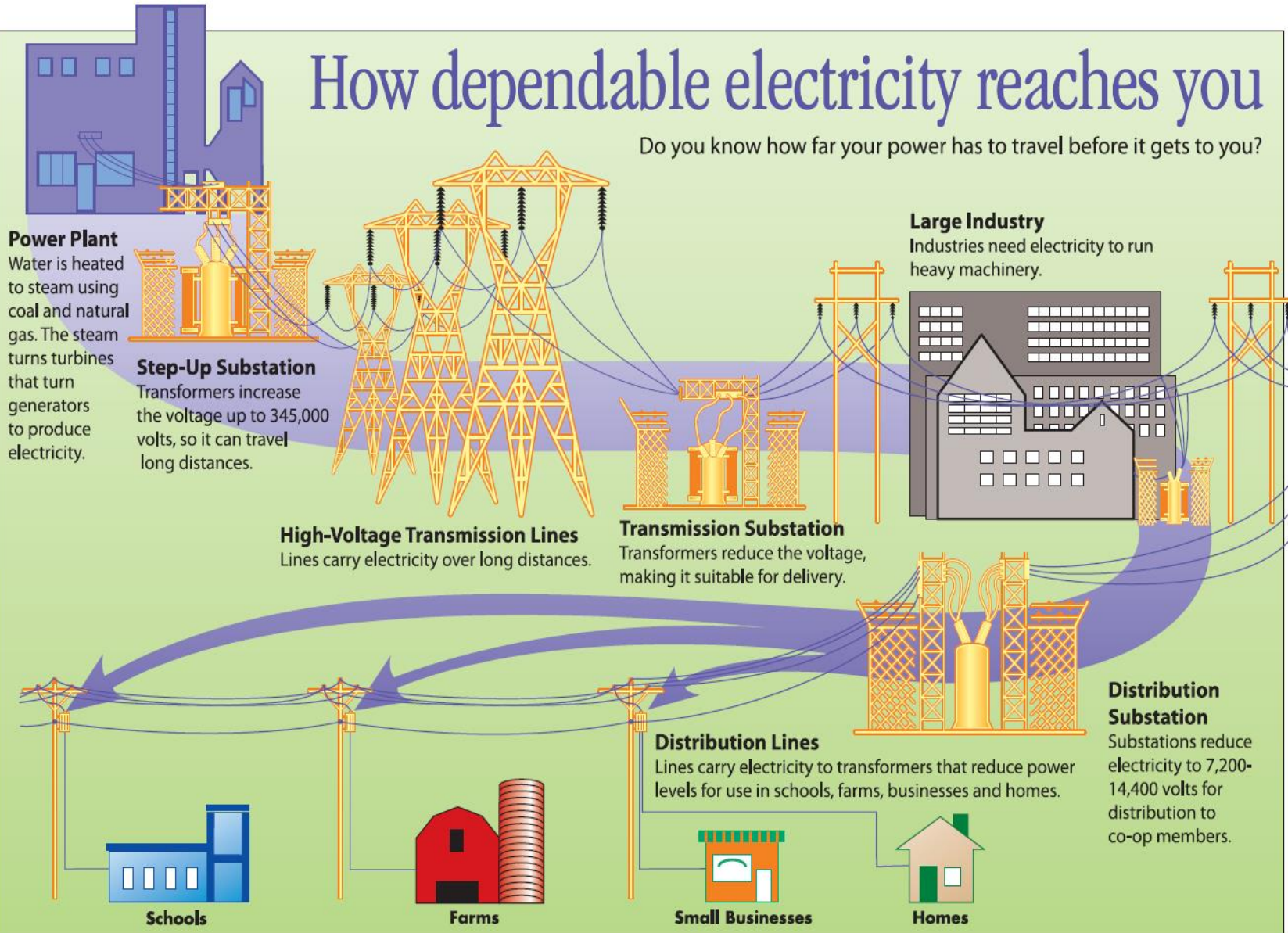
Next in the process of restoration of power are the distribution substations and their respective main feeder lines. The co-op has over 50 substations on its system and there are over 12,000 miles of distribution lines which are routed from the substations. Main feeder lines are those that you normally see alongside a highway.

The number of members served by Clay Electric's distribution substations range from a few hundred to nearly 9,000 members - so you can see the importance of getting the substations back in service. A main feeder line on Clay Electric's system serves as many as 2300 members.

Individual tap lines are repaired next in the restoration process. Tap lines typically serve the fewest number of members.

How dependable electricity reaches you

Do you know how far your power has to travel before it gets to you?



See how dependable electricity reaches you

The steps to restoring power

Step 1. Transmission towers and lines supply power to one or more transmission substations. These lines seldom fall, but they can be damaged by a hurricane or tornado. Tens of thousands of people could be served by one high-voltage transmission line, so if there is damage here it gets attention first.

Step 2. A co-op may have several local distribution substations, each serving thousands of consumers. When a major outage occurs, the local distribution substations are checked first. A problem here could be caused by failure in the transmission system supplying the substation. If the problem can be corrected at the substation level, power may be restored to a large number of people.

Step 3. Main distribution supply lines are checked next if the problem cannot be isolated at the substation. These supply lines carry electricity away from the substation to a group of consumers, such as a town or housing development. When power is restored at this stage, all consumers served by this supply line could see the lights come on, as long as there is no problem farther down the line.



hurricanes and tornadoes, fires and floods. Electric cooperative members have seen them all. And with such severe weather comes power outages. Restoring power after a major outage is a big job that involves much more than simply throwing a switch or removing a tree from a line.

The goal is to restore power safely to the greatest number of members in the shortest time possible. The major cause of outages is damage caused by fallen trees. That's why your electric cooperative has an ongoing right-of-way maintenance program. This illustration explains how power typically is restored after a major disaster.

Area enlarged: Consumers themselves (not the co-op) are responsible for damage to the service installation on the building. Your co-op can't fix anything beyond this point. Call a licensed electrician.

Step 5. Sometimes, damage will occur on the service line between your house and the transformer on the nearby pole. This can explain why you have no power when your neighbor does. Your co-op needs to know you have an outage here, so a service crew can repair it.

Other co-ops
During a major outage, other cooperatives send line crews to assist with restoring power. These additional crews, as well as communications, equipment and supplies, are coordinated through the cooperative's statewide organization.

During a major storm outage it is not necessary to immediately call and report your outage. Automated equipment identifies main feeder lines that are not in service. The co-op will advise through radio spots, news releases and the co-op's website when members should call and report an outage.

Clay Electric's
Toll-free Automated
Outage Reporting Line
1-888-434-9844

DANGER!
Stay clear of fallen lines

When will Clay Electric be working to restore power?

Clay Electric employees begin restoration work just as soon as it is safe to do so. If there are sustained winds of 35 mph or above, it's too dangerous for restoration efforts. As soon as the storm has passed and winds have died down, damage assessments will be made followed by crews working to restore power. Field workers are on the job as much as possible during the daylight hours because daylight hours are the most productive and safest for our field crews. Field workers are normally on the job 16 hours, then rest for eight hours.

Is there preferential treatment for restoring power?

The only accounts receiving preferential treatment are those which are described as "Essential Service" accounts. They are related to community safety, health and welfare. They include hospitals, police, fire, communications and water, sanitary and transportation providers. These accounts are often referred to as priority accounts.

Are there some general expectations regarding how long restoration might take following a hurricane? What kind of situations could prolong the effort?

Restoration time frames depend upon damage to Clay Electric's facilities and the numbers of members served by those facilities. There is a systematic approach to restoring power. Some members may have power restored within two or three days. Other members may take longer because of their remote locations and the amount of work required to repair the lines.

To Report a Power Outage on Clay Electric's Lines

Call 1-888-434-9844

Please call the toll-free, automated outage reporting line seven days a week, 24 hours a day. Please do not report outages via email, as email communication may not receive immediate attention.

To Report Damage (non-life threatening) on Clay Electric's Lines

Call 1-888-434-9844

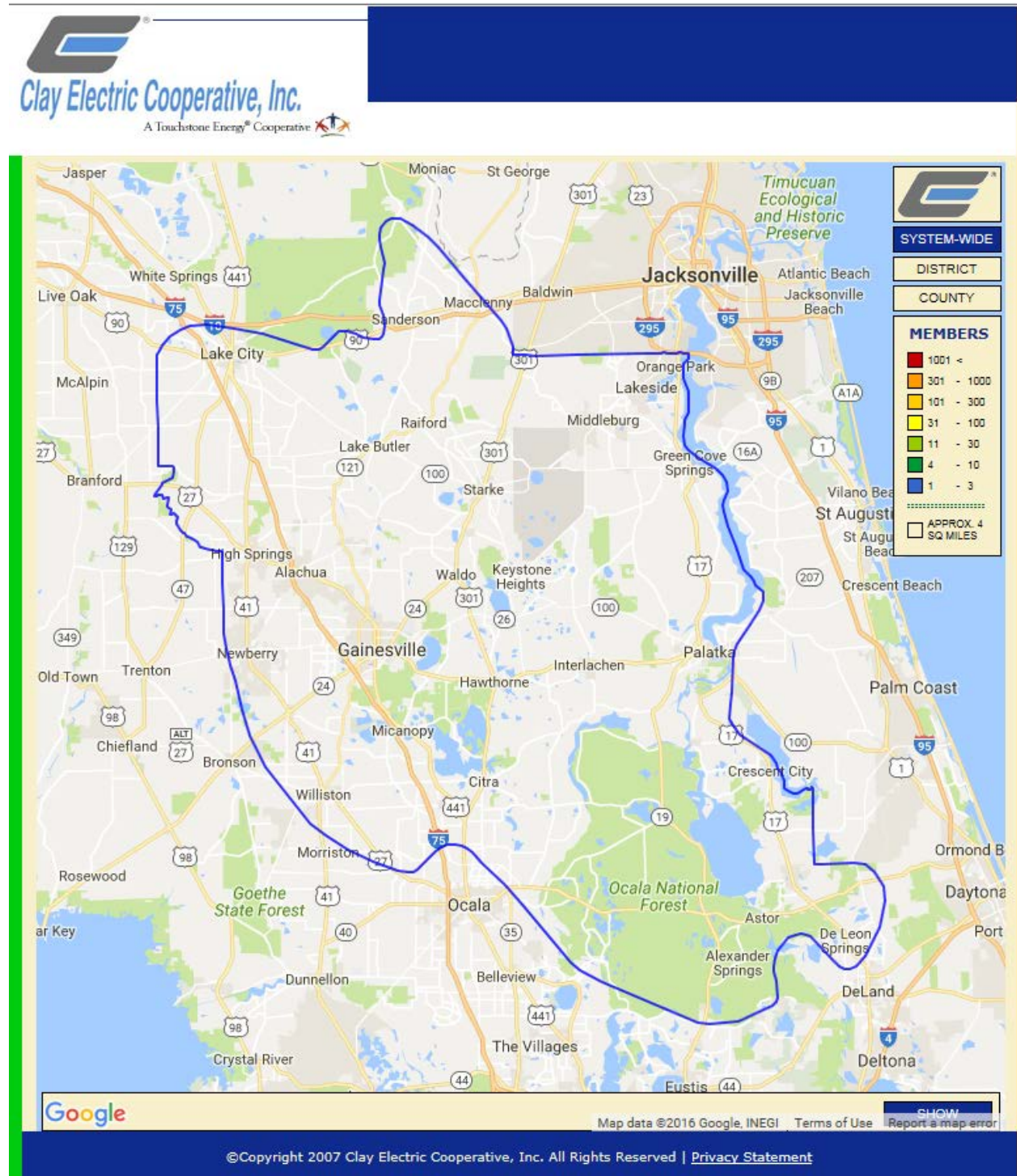
Please stay on the line to talk with a customer service representative to report the damage and location. Personnel are on duty seven days a week, 24 hours a day. Also, stay clear of the damage and warn others.

To Report a Life Threatening Situation

Call 911

Power Outage Map

View the Power Outage Map (see below first for more information)



The online Power Outage Map shows the general location and the approximate number of power outages on Clay Electric's lines. The outage map also shows the outage information in two views: (1) System-wide and (2) by county. When viewing information by county, you can "left"click on any of the counties that Clay Electric serves to zoom-in for a more detailed view.

A rectangular icon represents a four square mile area which is color coded to reflect a range of members out of power. When an outage is located on the perimeter of Clay Electric's service area, the icon may extend outside the service area boundaries. To protect the privacy and security of our members, the power outage map does not display specific street addresses.

To see power outage numbers and percentages, click on "SHOW" at the bottom of the page. The total number of members in the county and the number of members without power will be presented. A percentage of the members out of power within the county is also shown.

When a member calls in an outage report, the co-op's automated phone answering system uses the member's phone number to determine their address. A computer program sorts the outage calls by location, and then predicts the location and scope of the outages.

The online outage information is automatically updated approximately every five minutes. While the method for determining the extent of an outage is quite accurate, the information presented is an estimation and may not reflect the actual number and precise location of members without power.