

Your Touchstone Energy® Partner

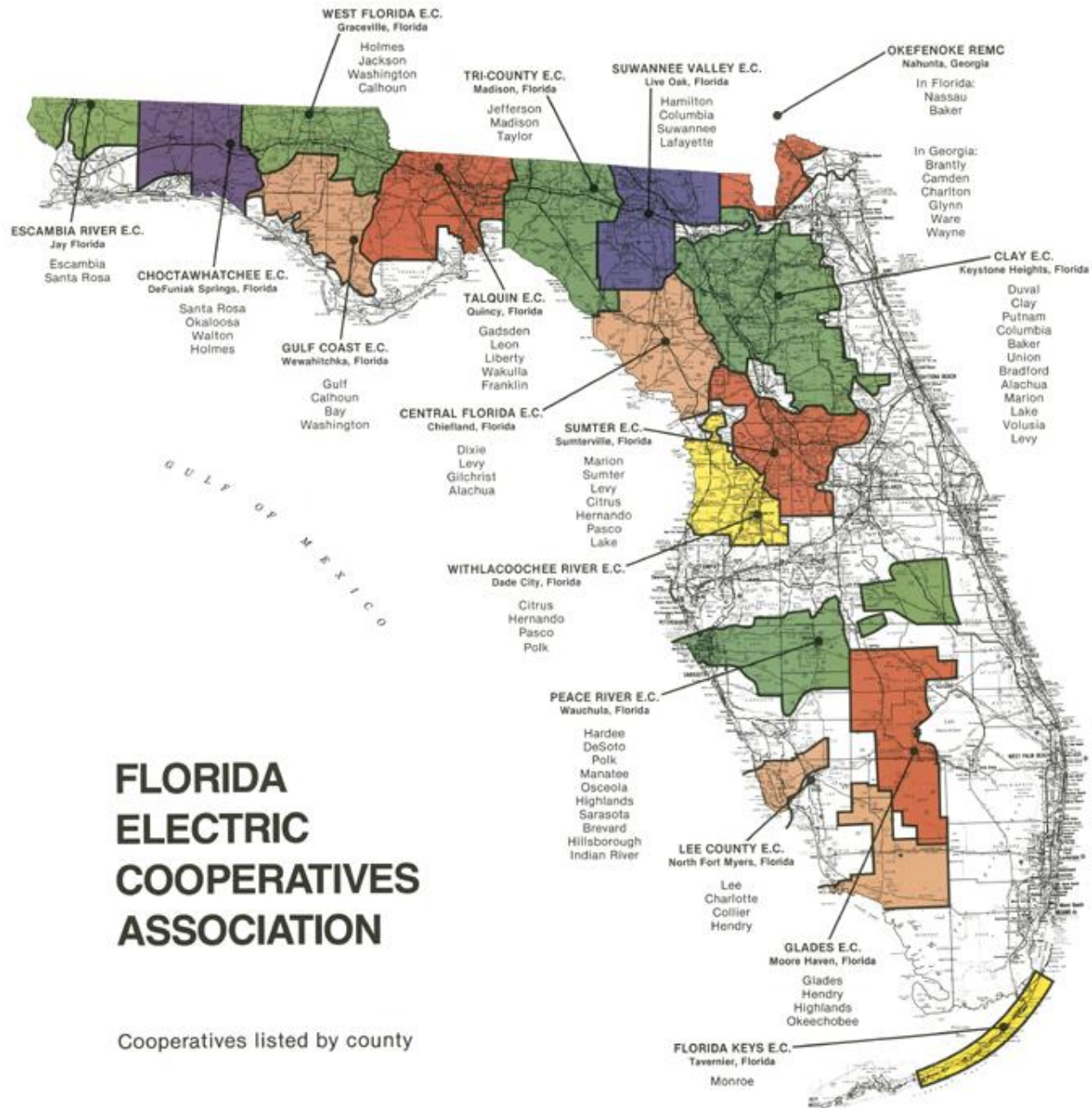


Withlacoochee River Electric Cooperative, Inc. (WREC)

2013 Hurricane Preparedness

Florida PSC Hurricane Preparedness Workshop

April 3, 2013



FLORIDA ELECTRIC COOPERATIVES ASSOCIATION

Cooperatives listed by county

System Statistics

- Miles of Transmission Line64
- Miles of Overhead Distribution Line7,099
- Miles of Underground Distribution Line3,634
- Number of Substations53
- Number of Services Connected217,210

Meters Served by County (March 31, 2013)

- Pasco 97,363
- Hernando 78,619
- Citrus 24,688
- Polk 517
- Sumter 932

Total Active Meters 202,109

Standards of Construction

- **NESC 2012 Compliance**
- **Prior 2012 – Compliance to standard at time**
- **RUS bulletins, drawings and engineering specifications**
- **WREC Construction & Operations Manual**
- **Pole Foreman – calculates pole strength capabilities & clearances of specified spans and compare results (extreme wind loading)**

Flooding & Storm Surges

- **Stainless Steel pad mounted equipment**
- **Strand-filled Jacketed cable inside duct**



Safe & Efficient Access / Attachments by Others

- **2012 – Relocated approx. 30,000’ of OH primary lines from rear lot line to street. (estimate 4 yr. completion time frame)**
- **Joint use agreements specify compliance with NESC & RUS requirements. Clearance and loading evaluated per each attachment request.**

Facility Inspections

- 2012 – approx. 2,800 miles of line inspected or addressed by line patrol, rear to front relocation, voltage conversion & S.T.A.R program
- Transmission = 62 miles patrolled annually (aerial and ground)
- Substations inspected monthly
- Pole inspection on schedule for 8 year cycle
- Monthly/Annually maintenance on equipment (control panels, relays and etc.)
- Annual Infrared of Critical Infrastructure

Vegetation Management

- **Aggressive VMP implemented in 2004 to increase both horizontal & vertical clearances and problem tree removal**
- **Currently on a three (3) year cycle for all distribution lines**
- **Transmission lines are trimmed annually as needed**
- **ROW service orders are generated and completed for cycle busters (1,334 in 2012)**

Storm Preparedness

Annual Activities:

- ERP Reviewed and Updated
- Roundtable Discussion of ERP
- Participate in Seminole & County EOC drills
- Internal Resources Pre-assigned
- Contractor Storm Restoration Contract
- FECA Mutual Aid Agreement

Communications

- **Personnel Assigned to County EOC's**
- **Web Based Graphical Outage Map**
- **Daily updates from Manager of PR**

FECA

Local EOC's

Local Media

Cooperative Website

Vulnerability Concerns

- Coastal Flooding - Raised pad mounted equipment
- Insufficient Outside Crews - Enter storm restoration contract
- Heavy Right-of Way – Increased clearances on distribution lines in rural wooded areas
- Multiple Storms – Conversion allows for back feed of any substation (80 % completed - 4 yr. completion)

WREC Emergency Restoration Plan



ERP

- **The Primary Objective of this plan is to:**
 - Evacuate employees and equipment from areas subject to storm surge.
 - Protect the public from exposure to hazardous conditions caused by the disaster.
 - Limit damage to Cooperative property.
 - Provide for the orderly restoration and repair of the Cooperative's transmission and distribution system.

Restoration Procedures

- Objective:

To establish uniformly implemented methods for expediting power restoration while maintaining the highest level of safety.



Damage Assessments

- General Assessment (ball park)
- Detailed Assessment (bird dogging)
- Assessment Teams pre-identified
- HQ Engineers assigned to districts

Priority Accounts

- Medical facilities, Shelters, Jails
- Major intersections
- County administration buildings
- Water, Sewer plants
- Restaurants, Grocery Stores, Pharmacies
- Hotel, Motels

Crew Briefings

- Hold each morning at 6:00 A. M. during restoration period.
- Discuss work hours, safety hazards, work progression and feedback from field personnel.
- Invite General Foremen of contract crews to attend.



FOREIGN CREWS



Circuit maps will be made available to all foreign crews due to their unfamiliarity of WREC's system.

Line Patrol

- All substations, transmission and distribution lines shall be inspected and/or patrolled prior to energizing.



Outage Management System

- Dispatch assigned for night duty
(3:00 P.M – 6:00 A.M.)
- Primary objective to update OMS.
- Identify outage areas with high consumer density.



Additional Topics

- **Drills – Major storm in March tested system. Meeting scheduled for April to discuss means of improvement**
- **The company removes problem trees at company expense – no replacement program**
- **Total of 200,446 poles on system and installed/replaced 26,000 since starting storm hardening (approx. 70% of wood poles are CCA)**
- **Company is on target to meet storm hardening goals**

Additional Topics

- Hurricane Sandy caused extreme flooding to some of our costal service area. We have raised pad mounted equipment.**
- Roundtable discussion scheduled in April – outcome will determine any revisions to plan.**
- Critical Infrastructure improvements are identified in 2 yr. work plans (2012-2014)**

QUESTIONS ?