INCREASE RESILIENCY, MAXIMIZE FEMA REIMBURSEMENT LESSONS LEARNED

&

Solutions for Disaster Readiness

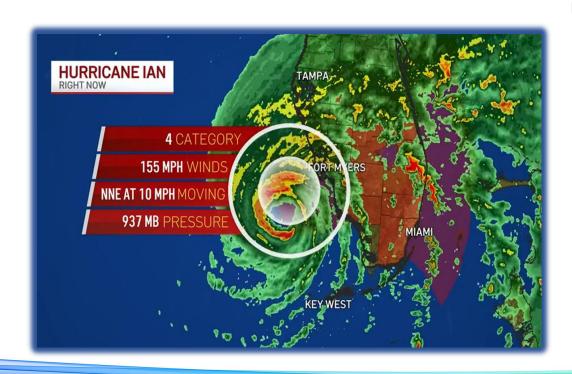
"Increase Financial Survivability"
MAINTAIN FEMA COMPLIANCE

Presented by:
Disaster Program & Operations, Inc.











INCREASE RESILIENCY, MAXIMIZE FEMA REIMBURSEMENT LESSONS LEARNED

&

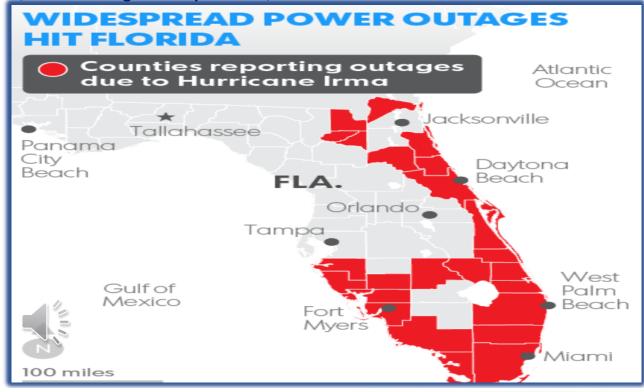
Solutions for Disaster Readiness

"Increase Financial Survivability"

MAINTAIN FEMA COMPLIANCE

Presented by: Gabrielle Benigni, President, Disaster Program & Operations, Inc.



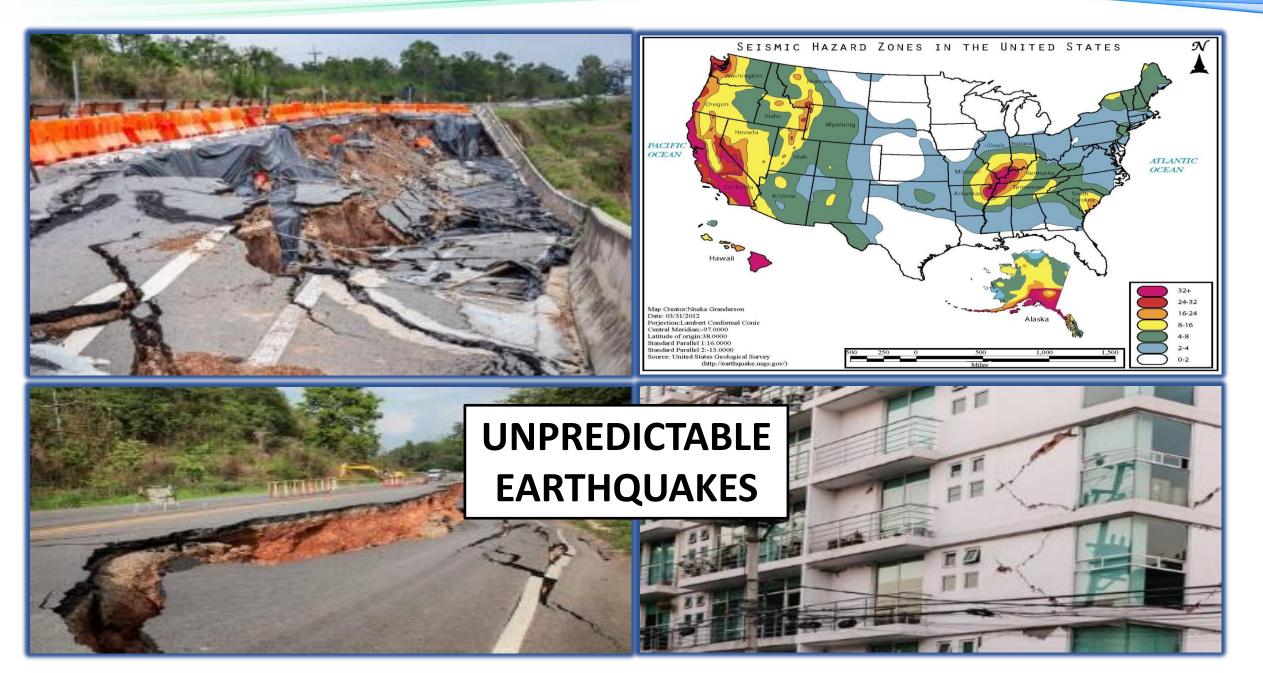




Confidential Information - copyright Disaster Program & Operations, Inc. and eXACT Recovery







Confidential Information - copyright Disaster Program & Operations, Inc. and eXACT Recovery

STAKEHOLDERS EXPECT FEMA FEDERAL REIMBURSEMENT

EXPECT Utility will have everything it needs to obtain FEMA Reimbursement.

Change of "heart" after disaster

ISSUES:



MAA crews are mobilized relocated as needed, But no Tracking of Details of their work.

Damage Assessments and Emergency Repairs being performed simultaneously.

NO DOCUMENTATION OF Damages or Repair Details.

HAZARD MITIGATION IS OVERLOOKED

CRITICAL ISSUES FINANCIAL RECOVERY: (FEMA REIMBURSEMENT)





MANY OF YOU HAVE BEEN INVOLVED IN DISASTERS EITHER DIRECTLY AS A UTILITY or PROVIDED MUTUAL AID SUPPORT

Challenges of Providing Disaster Recovery Costs Documentation

- > Paid MAA Contractors Invoices Without Having the Needed Backup
 - Many Times, the MAA Invoices are Overpaid!
 - > NO Damages Documentation (maybe just a few photos)
- ➤ NO Repairs Documentation No Photos, Incomplete Pole Inventory
- > NO Pre-Disaster Power Pole /Asset Inventory w/ Construction Units & GPS



HOW MANY HAVE HAD the EXPERIENCE of Dealing with FEMA or Preparing the Field and Costs Recovery Documentation for FEMA Reimbursement?

FEMA has Strict Deadlines for Disaster Project Submittals Preferably in Audit Ready Format



The increase of severe weather and disaster events with access to technology are shaping the way we think, function & do business every day as well as the way we plan for disasters.

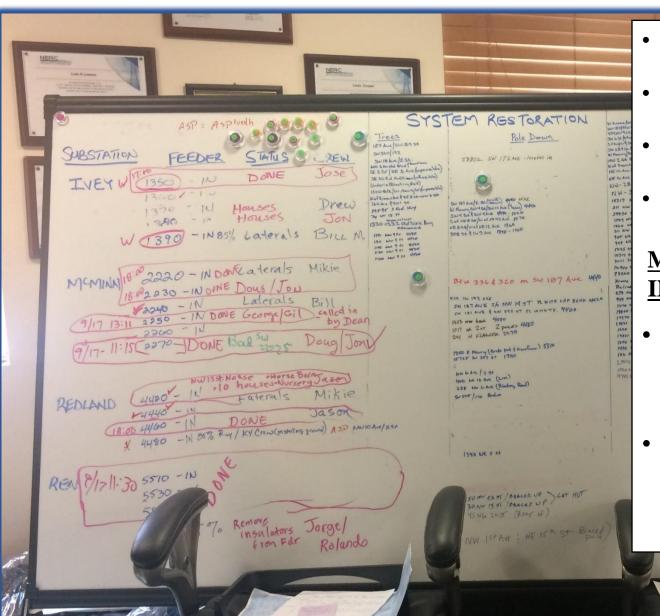
OUR GOAL:

- ✓ Build confidence to respond (not react) to obstacles;
- ✓ Decrease financial impact and recovery time;
- ✓ Be Disaster READY and
- ✓ MAINTAIN FEMA COMPLIANCE!!

HURRICANE IAN WAS ANOTHER WAKE-UP CALL



POST DISASTER ISSUES: HARD TO INTERPRET WHITE BOARD NOTES 1.5 YEARS LATER



- CRITICAL DATA IS LOST / ERASED
- MANUAL DOCUMENTATION DAMAGED
- RECEIPTS LOST, SOGGY, RUINED, NOT LEGIBLE
- NO TASK NOTES

MAA & OTHER CONTRACTORS INVOICES INCORRECT

- Mutual Aid Crews don't Document Exact Locations Worked and Move Crews Where Needed Most
- Utilities Pay MAA Crews without Reconciling the Invoices with Daily Logs and Actual Work Locations





I. Pre-Disaster Reimbursement (FEMA) Requirements, Most Critical Elements for Utility Operations

- A) Pre-Disaster Assets Status/Condition Documentation
- **B)** Materials / Supplies
- C) Internal Policies
- D) Procurement; Emergency Contracting; Mutual Aid Agreements; Contract Compliance (2 CFR 200)

II. Damage Assessments, Emergency/Recovery Repairs, and Mutual Aid Contractors Documentation

- A) Asset Status pre-disaster; Facilities Mapping with GPS
- B) Damage Assessments Structures Degree of Damage; Cause of Damage (Wind, Water, Debris etc.) Facility use; Damage Impact on Use; Documentation backup
- C) Emergency Repairs/Tasks and Costs Documentation
- D) Identifying HMGP opportunities

III. Debris Management Plan (DMP): Utility Line Clearing, Debris Management Sites

Critical Items: OPEN DISCUSSION

- A) Emergency Road Clearing, Critical Facilities, Utility Line Clearing Documentation
- **B)** Debris Management Sites
- **C)** Final Cleanup Site Inspections Documentation

IV. Lessons Learned

V. Innovative Solutions for Field Operations Documentation (per FEMA Compliance)



I. Federal Disaster Reimbursement (FEMA) Requirements, most critical elements:



- A) Pre-Disaster Assets Status/Condition Documentation
- B) Materials / Supplies
- **C)** Internal Policies
- D) Procurement; Emergency Contracting; Mutual Aid Agreements; Contract Compliance (2 CFR 200)

(Notice-To-Proceed (NTP), Purchase Order (PO), Task Order (TO), Change Order (CO)



I. Federal Disaster Reimbursement Requirements:

A. PRE-DISASTER ASSET DOCUMENTATION

- Pre-disaster asset inventories, with location, gps coordinates of ALL facilities and \$ value.
- Maintenance notes, purchase receipts maintenance or repairs, Engineering inspections.
- Items under construction status of construction and
 % complete prior to disaster.
- Pre-disaster photos of all assets.
- Proof of ownership or maintenance and lease agreements.
- Pre-disaster "Warehouse' and equipment inventories (make, model, serial numbers).





B. MATERIALS / SUPPLIES - Warehouse Inventory (pre-Disaster) with costs proof.

Existing Inventory: Maintain existing inventory records filed per Vendor,

Invoice # and Proof of Payment Information

MATERIALS INVOICES NOT JUST PO's

• Input all Materials & Supplies excel spreadsheet.





1. Force Equipment Inventories (make, model, serial #) with FEMA Costs Codes

• Equipment list- includes vehicles, all owned leased equipment

2. Rented Equipment – Rates and Rental Agreement

Rationale for use

3. Force Labor- Staff List with Payrate (RT, OT, DISASTER PAY) Include Titles, Fringe Benefit Overhead

- Titles can change with disaster roles require written document
- OT per payroll policy and federal requirements



C. INTERNAL POLICIES

Administrative Policies for Department procedures - following timesheet and overtime approvals.

Payroll Policies

- ✓ Make Sure Provisions for OT per 40-hour Work Week and Disaster Pay
- ✓ Address Overtime for Holidays Worked
- ✓ Provides for Management and Comp/Extra Time Paid after a Stated Amount of Salary Hours Worked
- ✓ Provides for Displaced Key Staff Emergency Assistance (ex: housing, car...)
- ✓ Provides for Courtesy for Emergency Staff Work (ex: gas, food, clothes...)



D. PROCUREMENT EMERGENCY CONTRACTING & MUTUAL AID

Must comply with Federal Procurement Standards per Title 44 Code of Federal Regulations (CFR), Part 13.36, Procurement and 2CFR 200; and all Local or State Regulations including EPA.

- Contracts, Vendors For ALL Contractors, Material Suppliers
- Copy of the Contract, RFP, Award Selection criteria & Scoring Tabulation
- Contract Awards Council / Board Meeting Notes Letter of Award
- Maintain Task Work Orders AND Purchase Orders.





D. PROCUREMENT EMERGENCY CONTRACTING & MAA

STATEWIDE MUTUAL AID – CAN BE USED FOR EMERGENCY CONTRACTOR SUPPORT

- When to Activate: Emergency Situations "A natural or human caused event or circumstance causing, or imminently threatening to cause, loss of life, injury to person or property," but not limited to fire, flood, explosion, inclement weather etc.
- Due to the Emergency the Entity has been affected beyond its capability of services, of personnel, equipment, and facilities to fully manage and mitigate internally and will require assistance Mutual Aid and Assistance Program Member to.
- Authorization, Contacts, Crew Supervision Clauses
- Labor & Equipment Rates
- Provisions to be Provided for (Hotel, Food, Gas, Laundry...)
- Payment Terms
- Dated with a Reasonable Current Date & Signed



Time and Material (T&M) - "Time and Equipment" (T&E) contracts

Applicants may use <u>T&M contracts only when it has been determined that no other contract is suitable</u>, the contract includes NOT TO EXCEED price and the contractor exceeds at its own risk (44 CFR §13.36(b)(10), Procurement standards).

T&M / T&E are Acceptable:

- Due to the critical nature of FACILITY post disaster,
- The emergency situation which requires swift action to protect public safety, Health and well being does not allow the Utility to fully assess the damages before repair work begins.
- Scope is not Well Defined.



Sole Source for Materials – in limited situations, MATERIAL SUPPLY IS EXHUASTED;

May use noncompetitive RFQs to procure materials, provided they meet the requirements of 44 CFR §13.36(d)(4),

Document the Public Emergency for the Material is Urgent; Does NOT Permit Delay from Competitive Solicitation.

The Item is Available a from Single Source.

II. POST Disaster Documentation:



- A) Damage Assessments
 Identify HMGP Opportunities
- B) Emergency /Recovery Repairs
- **C)** Identify HMGP Opprotunities
- D) Debris Removal <u>Documentation</u>





DAMAGE ASSESSMENTS & EMERGENCY REPAIRS OCCUR SIMULTANEOUSLY: WHO MOBILIZES WHERE & IS RESPONSIBLE FOR WHAT?



A. DAMAGE ASSESSMENTS

- 1. Several Levels of DAs that are Performed
 - Windshield Assessment Preliminary/ Initial DA (During first 24 hours of event)
 - Detailed Assessment
 - DESIGNATED DA TEAMS:

Resist the Urge to Get all Staff and Equipment Resources into the field Immediately

IDENTIFY HMGP OPPORTUNITIES AT ALL TIMES!!







A. DAMAGE ASSESSMENTS DOCUMENTATION:

- Windshield Survey Photos, Location, Maps & GPS
- Before Emergency Repairs Maintain Critical Documentation of Damages

This includes but is not limited to:

- **✓ Reason** for the Damage (Wind, Water, Hail, Ice, etc..)
- **✓ Damage Percent** of items destroyed asset needs replacement
- **✓ Functionality Partial; No Function**
- ✓ Damages Defined with Dimensions (Length, Width, Depth, and Capacity)
- ✓ Photos BEFORE and AFTER Damages; or other Documents Drawings, Notes...)



IDENTIFY HMGP OPPORTUNITIES AT ALL TIMES!!



A. DAMAGE ASSESSMENTS DOCUMENTATION: TRANSFORMERS

IDENTIFY ALL TRANSFORMERS DAMAGED!

Transformer Map Locations and Excel Inventory with GPS and:

- ✓ POWER POLE INVENTORY: INLCUDES Transformer Serial #, Model; GPS Locations; Pole ID or Substation ID
- **✓ Bag and Tag Chain of Custody**
- ✓ Disposal: Chain of Custody, Analytical to Prove no PCB's





Transformers with PCB:

- Require Verify NO LEAKAGE, Ground Contamination at Location of Damage
- Photo of Proof there is NO Ground Contamination
- Soil Analysis Where Transformer was Found (IF Contained PCB); Coordinate with State Environmental Agency and Reporting Requirements.

A. DAMAGE ASSESSMENTS DOCUMENTATION: CONDUCTOR REPLACEMENT

Conductor is Beyond Point where it can be "EFFECTIVELY" BE Repaired as Follows:

- 1. Conductor Span is 25% or more of span is damaged.
- 2. Span -30% or more are visibly out of sag and do NOT Meet Clearances.
- 3. 40% of Poles Replaced or need Replacement or Straightened.
- 4. 40% of Support Structures (X Arms, Braces, Pins, Ties, Insulators, Guys, Anchors, Poles).
- 5. The SUM OF ABOVE IS > 65%.
- 6. Other COMPELLING Damage Information Supplied by Professional Engineer.



B. EMERGENCY TASKS/RECOVERY COSTS DOCUMENTATION: Force Accounts:

- 1. Facility Location GPS; Pre-Disaster Status and Post Disaster Damages
- 2. Force Equipment Inventory: Make, Model, Serial # (Operator sign in /out sheets)
- 3. Assign FEMA Cost Codes
- 4. Force Labor/ Time Sheets (Regular and Overtime); Disaster "Work Orders", Tasks Worked and Supervisor Signature
- 5. Daily Logs: Field Equipment and Labor Logs, including for ALL Contractors (date, location, hours, City staff supervisor)
- 6. Rented Equipment Lease Agreement and Rental Terms
- 7. Maps of Areas Worked and Photos
- 8. Emergency Repairs Locations, Materials Installed, Disaster Status of Each Damaged Asset (Photos)
- 9. Materials List, Quantities per Vendor Invoice, PO, Copy of Canceled Check and Date Paid
- 10. Donations: Food, Supplies etc. Receipt or Invoices
- 11. Hotel: Names per Room; Invoice Paid; Proof of Payment



B. EMERGENCY TASK COSTS DOCUMENTATION: MAA & EMERGENCY CONTRACTORS

Daily Logs (Labor, Equipment Hours (time in/out); **Location; Task Performed; Materials Supplied or Used**).

- ✓ DAILY LOGS Locations, Materials Installed, Disaster Status of each Damaged Asset (Photos)
- **✓ Maps of Areas Worked WITH Photos**
- ✓ Equipment: does NOT Need to be per FEMA Cost Codes; MAA Equipment Billing Rate: Make Model, Serial # (Operator sign in /out sheets)
- **✓ Labor /Time Sheets (Regular and Overtime); per MAA Contract Billing Rates**
- **✓ Tasks Worked and Supervisor Signature**
- **✓ Food and Supplies Receipts with Details:** Who food was provided to Supplies Reason Needed



C. IDENTIFY HAZARD MITIGATION OPPORTUNITIES

FEMA 406 Hazard Mitigation: ONLY DAMAGED ASSETS DUE TO THE DISASTER

Note: State Provides 404 Hazard Mitigation: (on Non-Damaged Assets)

PRE-DISASTER - Identify Assets that Continually get Damaged Due to Severe Weather Events

FEMA 406 HMP CRITERIA for DISASTER DAMAGED ASSETS

- 1. Be Appropriate to the Disaster & Prevent Future Damage of Similar Event
- 2. Be Applied to Damage Components of the Facility.
 This is Important when Conducting Repairs to Portion of the Facility
- 3. Cannot Increase Risk or Cause Adverse Effect to Facility
- 4. MUST CONSIST OF WORK BEYOND ELIGIBLE WORK Required to Return Facility to Pre-Disaster Condition.



PAPPG: APPENDIX J LIST COST EFFECTIVE HAZARD MITIGATION if measures do not exceed 100% of Eligible Repairs Costs.

EXAMPLE #1

B. Power Poles

- Replace Pole with Higher Rated Poles (Classes Stronger)
- Remove Large Diameter Lines
- Add Cross Bracing to H Frame Poles to Provide Additional Strength
- Power Lines add Guy-Wires or Add'l Support

EXAMPLE #2

C. Buildings

- Elevate / Flood Proof
- Siding: Replace Siding with Stronger Siding to Structure
- Vents: Replace with Water Resistant Vents

EXAMPLE #3

D. Roofs

- Install Hurricane Clips, Fasteners or Straps
- Strengthen High Wind Pressure
 Areas (Corners, Roof Soffits,
 Overhangs)
- Strengthen Roof Openings (Hatches or Skylights)
- Low Slope Roofs Replace with Fully Adhered Roof Bitumen Covering



D. DEBRIS REMOVAL – UTILITY LINE CLEARING; FEMA REIMBURSEMENT REQUIREMENTS

- <u>Utility Line Clearing:</u> Locations of Utility Line Clearing; Photos
- Maps and or Streets: of Utility lines or Areas Emergency Roads Requiring Clearing
- Photos with GPS Locations
- Force Labor and Equipment:

Payroll Data: Time Sheets, Payroll Ledgers

Work Orders or Daily Logs (214's) with Date, Location(s) Worked, Task Performed; Labor Hour, Equipment Used Hours

Hauling Truck / Equipment Certifications

• Contractors:

Hourly Work Documentation: Daily Logs with Date, Location(S) Worked; Task, Labor & Equipment Hours, Photos if available

Contracts Information: Request For Proposal (RFP), Selection Criteria; Emergency Contract(s)

D. DEBRIS MANAGEMENT SITES:

- For Debris Staging & Reduction: Veg, Mixed with Metals
- Obtain State Permit as soon as Possible Before or After Disaster

DMS Site Location & State Permit Criteria:

Sites with Good Entry and Exit's; Can be Public or Private

Leased DMS sties can be FEMA reimbursed

- Not in Flood Prone Area or Adjacent to Tributary, Estuarine, Wetlands, Archaeological, Historical where surface runoff could contaminate surface water or soil.
- Stay Away From Using: Residential Areas (distance to residence varies by State), Schools and Hospitals Consider site location and impacts from noise, dust, and traffic.
- Photos Before, During Use and After Closure
- **Designated Area for:** Transformers or Contaminated items on concrete or Visqueen w berm
- **DMS Closure Report:** Documenting Site Restoration.





FEMA REQUIREMENTS FOR DISASTER REIMBURSEMENT HAVE BECOME MUCH MORE STRINGENT

FEMA REQUIRED DOCUMENTATION

- LOCATIONS WORKED WITH MAPS / GPS OF EACH ASSET
- TIME IN & OUT, DAILY LOGS, WORK ORDER TASK NEEDS TO MATCH MAPPING
- CONTRACTOR LABOR TIME, INVOICES, DAILY LOGS
- MATERIALS USED, PURCHASED / INSTALLED
- DAMAGES PHOTOS
- POST REPAIR PHOTOS
- PRE- DISASTER ASSETS STATUS (of damaged repaired assets) WITH PHOTOS AND INVENTORY DETAILS

IF YOU DON'T HAVE THIS

WHAT YOU GET IS THIS

DOES NOT MEET FEMA'S REQUIREMENTS

- DENIALS
- "INELIGIBLE PROJECT COSTS"
- DELAY OF REIMBURSEMENT
- APPEALS = MORE \$\$ COSTS & TIME
 UP TO 3-4 YEARS REVIEW & APPROVAL

Lessons Learned will HIT YOU HARD FINANCIALLY!!



AUDIT PROOF FORMAT !!!

PRECISE RECONCILIATION OF ALL COSTS SUBMITTED

Hurricane IAN Could Have Been DEVASTATING to YOUR AREA



The Disaster after the Disaster: The Loss of Documentation; Field Notes Inclement Weather





The Disaster after the Disaster: Additional Obstacles



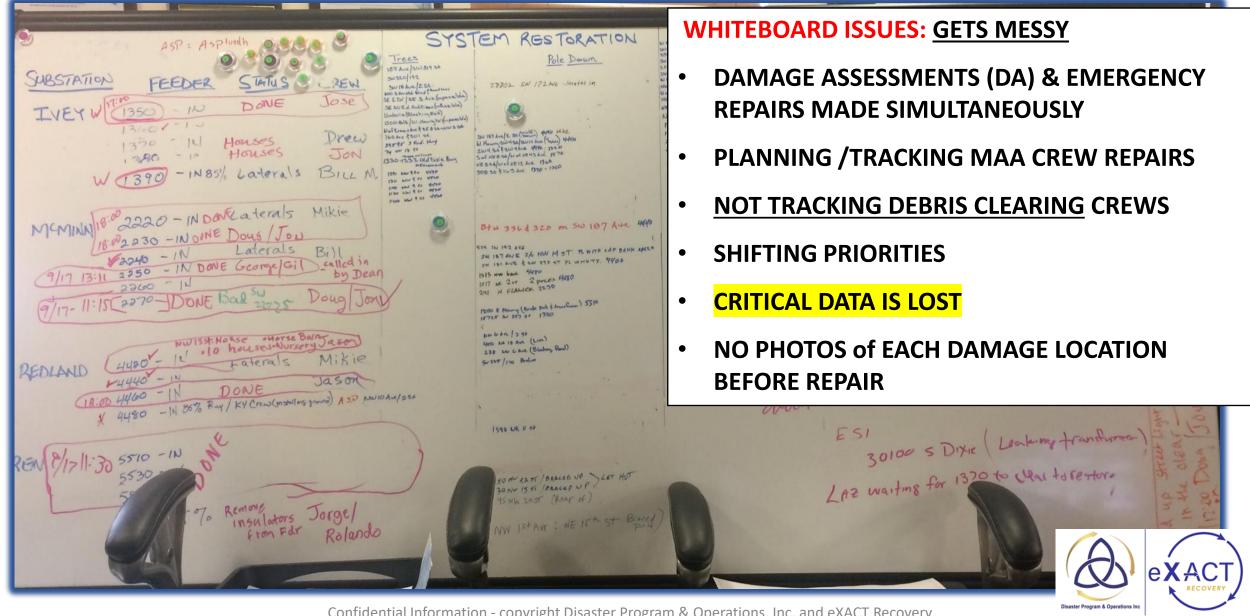


YOU ARE ACCOUNTABLE FOR ALL COSTS & DOCUMENTATION





LESSONS LEARNED TYPICAL POST DISASTER DOCUMENTATION: MANUAL DOCUMENTATION



Grand on fed land Kord 3 Phiso 1 set of GRAND on IVW 2nd 3+ /3 phase ormation 1 set of Gard or 10th Ave and moving 13 Phose |Equipment Other Equip Address Employees Time Lessons of Homestrad I sat of grand on move and 4th stil 3 Those's Set and transfer 45 pole 9/13/17 VW 14 Are 3 phase primary on all Learned **✓** Use ONE Daily Log Form f SV 14717 Between 9st & N Pole # 03342 Romoved cap bank nevin B15601 Pole H03643) ason / Billy 18/5602 ✓ Assign 1 Staff or Temp to Log Notes Pole# 03738 304 NW 16 Ave John, Bo7633 Replaced and transfer 45' Angel/Somud (5 13102 292 NW 14 Are/29218 N 292 St ✓ Material Sign Out/In Sheet Phase miman Jorge B 17603 Pole 403549 Komoved TX Please (have TX put back) one con San 187 to 192, one crea Sim 192-187 Daniel B13615 Ohio Tipp city Anthony Freels 2509 Polk # 3656 Burnt stinger 1340 NW 15 ST Sestin 45 fast the not from St phase 3 in Find of Mike Pecter B 507 Reurof-459 Sw 18 Ave MAY SOON DESCRIBE 284 st & 187 Am Rete Nonthomery SV 528 Cleared shade cloth Ryan McCarrol SV 528 Off of Freder 4420 \$ Cot forces ofound lutaral, fut up duplex and James milas Lateral Put up street light circul Cleared hunging street St Marys secondary Newbral & open Jason Durlez RegHard T/X at 6AV and 1st John Vogel D 600 Piqua Power 18th Hic and 415 th Put of New transferrer, lighting smeeters and insalater Justin Foutz mount and 6th the Three is 3 flavor suttiched BE-0-40 Other=0 Bucket=B Pickup-P Equipment Legend Hung Three Services Go 14th st and Krown Digger=D Other=O Safety=S Lineman=L

Not Acceptable

Hurricane Irma Food for emergency workers

Promenade at Silver Palm

23300 SW 112th Avenue

3.99 7.49 T

6.79 T

7.99 T 7.49 T 7.49 T 7.49 T 7.49 T

9.49 T

6.79 T

8.99 T 6.79 T

11.98 T

XXXXXXXXXXXXX818

BB474321E6C2C75

Chip Rea

\$1,777.

Issue-

Homestead, FL 33032 Store Manager: Chris Gilbert

BG PCK HNY BUN

S.S. CHEF KNFE

SS UTILTY KNIFE SS UTILTY KNIFE

I MIXING BOWL

T MIKING BOWL

T MIXING BOWL

S.3. CHEF KNFE

S.S. CHEF KNFE

S.S. CHEF KNFE

' S.B. CHEF KNFE

' SS CHEF KNIFE

SS UTILTY KNIFE

D" SS BREAD KNIFE

2 8 5.99

CREDIT CARD

PURCHASE

APPROVED BY ISSUEF

cashier was Jovanny

CUSTOMER COPY

1 7/2 J17 18:19 S1247 R110 6728 C021 e \$10 Publix Gift Card when you g

" SS UTILTY KNIFE .50T MIXING BOWL

3 #:103721

card AID:

roval Code:

ry Mathod:

TAUCMA 3

... Card:



No Task, **Specific** Use

> Not Legible



No **Location of** Use

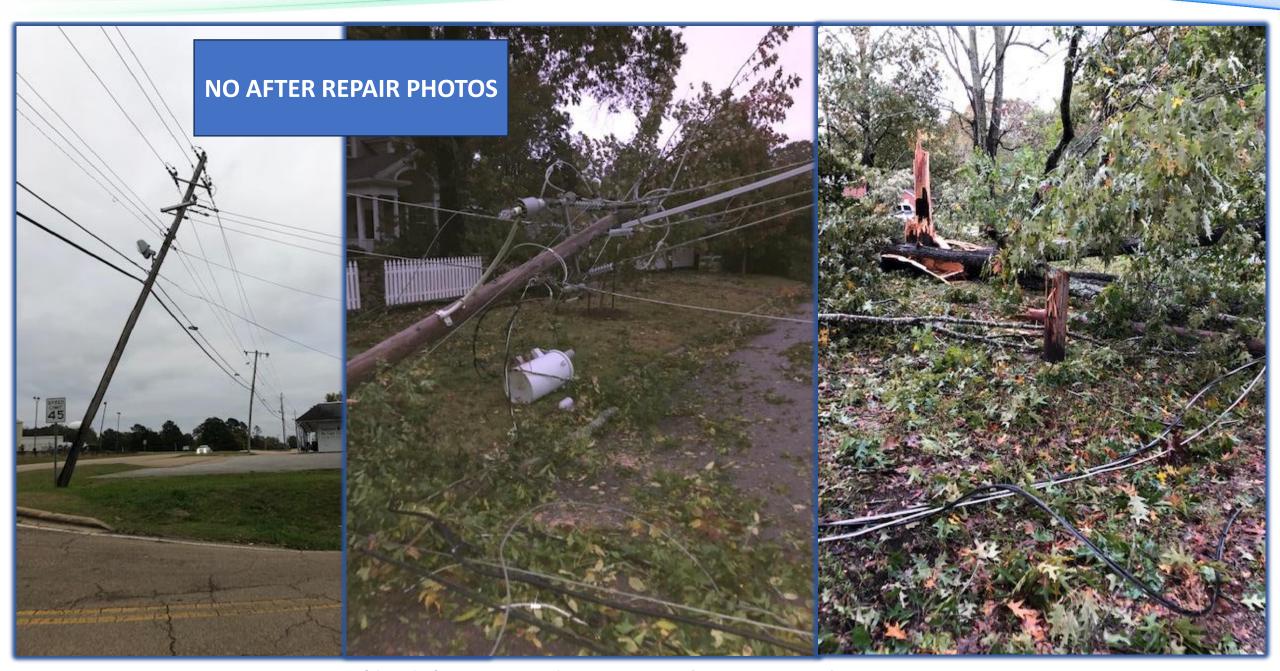
Order Total Sales Tax 0.00 Grand Total 921.08 Credit 921.08 Change 0.00 Savings Summary Savings Savings ********** Your Savings at Publix 123.81 ************ ace #: 033872 Reference #: 0688405647 cct #: XXXXXXXXXXXXX7952 schase VISA mount: \$921.08 Auth #: 007735 20:16:16 CREDIT CARD PURCHASE CARD #: XXXXXXXXXXXX7952 Trace #:033872 Chip Card: Visa Credit Chip Card AID: A0000000031010 ATC: TC: D4DE79F561A90F56 INVOICE: 033872 Approval Code: Entry Method: Chip Read Mode: Issuer SALE AMOUNT \$921.08 APPROVED BY ISSUER CUSTOMER COPY

Your cashier was Mayra

09/07/2017 20:16 S0510 R103 7141 C0258

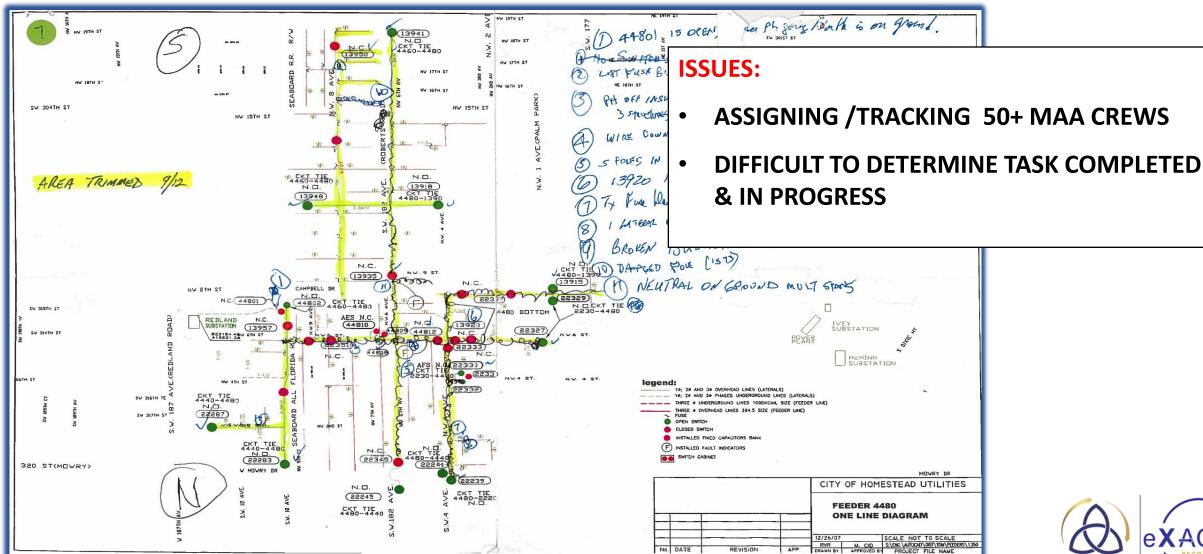
Free \$10 Publix Gift Card when you get your flu shot at any Publix Pharmacy. Please see Pharmacy for details.

Publix Super Markets, Inc.



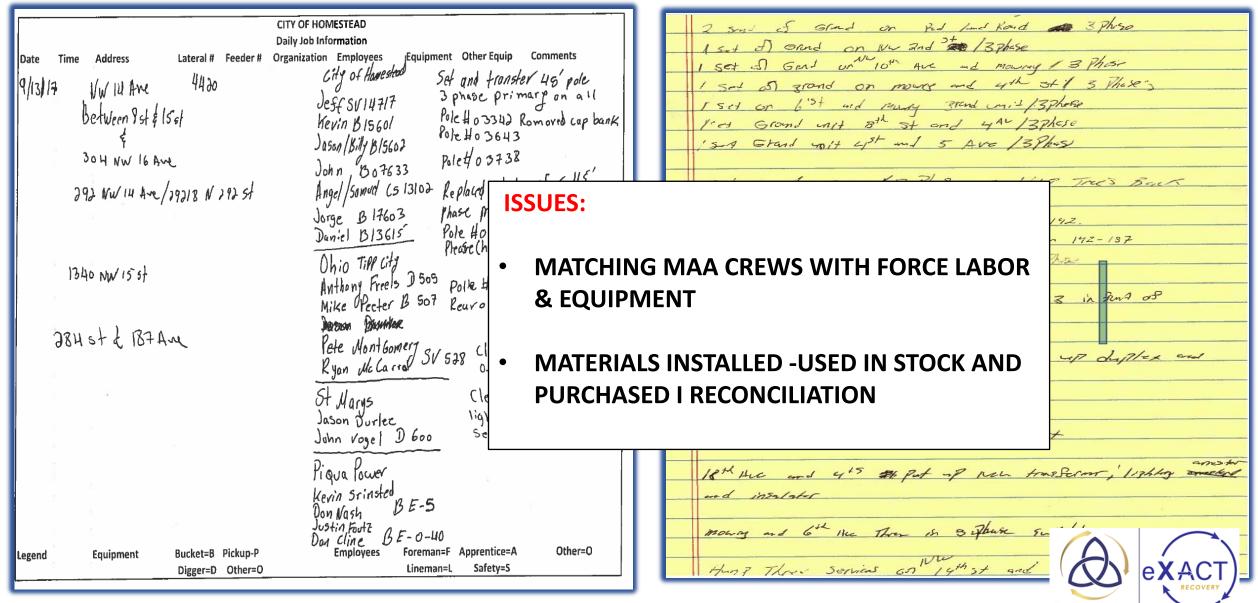
Confidential Information - copyright Disaster Program & Operations, Inc. and eXACT Recovery

LESSON LEARNED: MANUAL MAPS DOCUMENTATION: INEFFECTIVE MOBILIZATION AND TRACKING MAA / LABOR CREWS

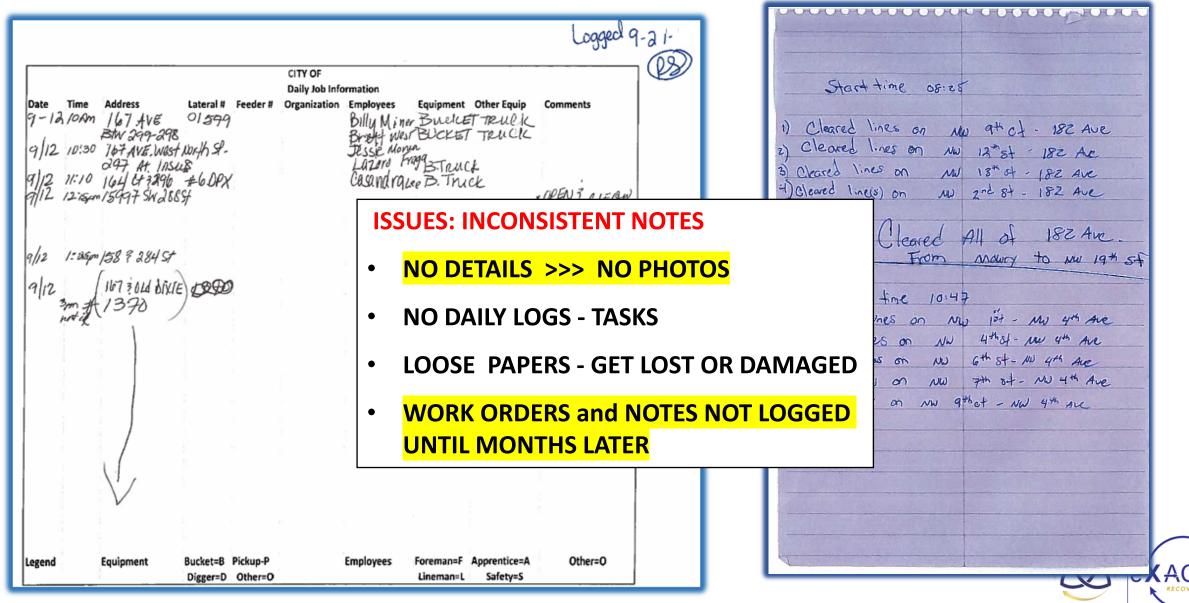


LESSONS LEARNED: MANUAL DOCUMENTATION:

EMERGENCY REPAIRS TRACKING:

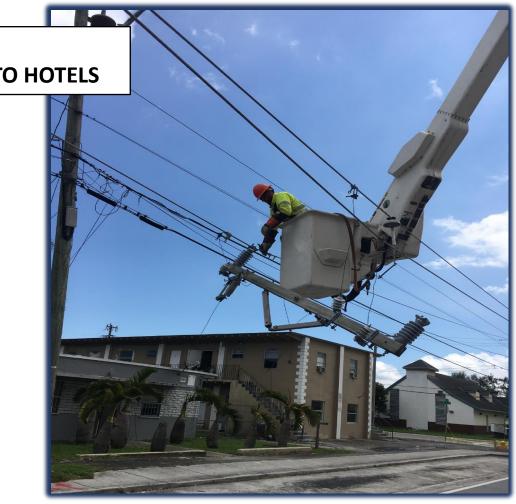


LESSONS LEARNED: MANUAL NOTES DOCUMENTATION POST DISASTER



LESSONS LEARNED: MANUAL DOCUMENTATION:

City of Homestead Mutual Aid Crew Info				ISSUES:						
Email	Organization	Phone #	•	NO C	CREW	TRAC	KING	ASSIGNED) T(
		ΑŤ	TENDA	INCE						
	Holyoke MA	413-207	-5618	Supervisor	Hampton	307	9/12/17	9/17/17 Pickup		
	Belmont Ma			Lineman	Hampton	211	9/12/17	9/21/17		
	Concord MA	617-999	-5225	Lineman	Hampton	213	9/12/17	9/22/17 Digger		
					Hampton	208	9/12/17	9/22/17 Bucket		
	Princeton Ma			Lineman	Hampton	208	9/12/17	9/22/17		
	Holyoke MA	413-250	-2550	Lineman	Hampton	511	9/12/17	9/17/17		
	Groton MA	978-490	-6160	Lineman	Hampton		9/12/17	9/22/17		
	Sterling MA	508-667	-7329	Lineman	Hampton	209	9/12/17	9/21/17 Bucket		
	Groton MA	978-727	-2010	Lineman	Hampton	408	9/12/17	9/21/17 Bucket		
	Concord MA	215-783	-0960	Lineman	Hampton	420	9/12/17	9/22/17		
	Chicopee			Lineman	Hampton	513	9/12/17	9/22/17		
	Chicopee			Foreman	Courtyard	513	9/12/17	9/22/2017		
	South Hadley			Lineman	Hampton	212	9/12/17	9/22/17		
	Concord MA	978-505	-3554	Lineman	Hampton	420	9/12/17	9/22/17 Bucket		
nlawler@lelwd.com	Littleton MA	978-265	-4570	Supervisor	Hampton	225	9/12/17	9/21/17 Pickup		
	Holyoke MA	413-210	2786	Lineman	Hampton	511	9/12/17	9/17/17 Bucket		
	Belmont MA	508-245	-0443	Lineman	Hampton		9/12/17	9/22/17		
	Littleton MA	978-479	-5697	Lineman	Hampton	508	9/12/17	9/22/17 Bucket		
	Belmont MA	781-760	-9880	Lineman	Hampton	211	9/12/17	9/21/17 Bucket		
	Littleton MA	978-265	-4571	Lineman	Hampton	508	9/12/17	9/22/17		
	Concord MA	603-915	-3164	Lineman	Hampton	213	9/12/17	9/22/17		
	Email	Email Organization Holyoke MA Belmont Ma Concord MA Princeton Ma Holyoke MA Groton MA Sterling MA Groton MA Concord MA Chicopee Chicopee South Hadley Concord MA Ittleton MA Belmont MA Littleton MA Littleton MA Belmont MA Littleton MA	Email Organization Phone AT	Email Organization Phone Holyoke MA 413-207-5618 Holyoke MA 413-207-5618 Belmont Ma 617-999-5225 Princeton Ma Holyoke MA 413-250-2550 Groton MA 978-490-6160 Sterling MA 508-667-7329 Groton MA 978-727-2010 Concord MA 215-783-0960 Chicopee Chicopee Chicopee South Hadley Concord MA 978-265-3554 nlawler@lelwd.com Littleton MA 978-265-4570 Holyoke MA 413-2102786 Belmont MA 508-245-0443 Littleton MA 978-479-5697 Belmont MA 781-760-9880 Littleton MA 978-265-4571	Email Organization Phone NO C ATENDANCE Holyoke MA 413-207-5618 Supervisor Lineman Concord MA 617-999-5225 Lineman Princeton Ma Lineman Holyoke MA 413-250-2550 Lineman Groton MA 978-490-6160 Lineman Sterling MA 508-667-7329 Lineman Groton MA 978-727-2010 Lineman Concord MA 215-783-0960 Lineman Chicopee Foreman Chicopee Foreman South Hadley Concord MA 978-505-3554 Lineman Inlawler@lelwd.com Littleton MA 978-265-4570 Supervisor Holyoke MA 413-2102786 Lineman Littleton MA 978-265-4570 Lineman Littleton MA 978-479-5697 Lineman Littleton MA 978-479-5697 Lineman Littleton MA 978-479-5697 Lineman Littleton MA 978-265-4571 Lineman Littleton MA 978-265-4571 Lineman Littleton MA 978-265-4571 Lineman	Holyoke MA	Holyoke MA	NO CREW TRACKING	NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW TRACKING ASSIGNED NO CREW NO CREW	







Grand on fed land Kord 3 Phiso 1 set of GRAND on IVW 2nd 3+ /3 phase ormation 1 set of Gard or 10th Ave and moving 13 Phose |Equipment Other Equip Address Employees Time Lessons of Homestrad I sat of grand on move and 4th stil 3 Those's Set and transfer 45 pole 9/13/17 VW 14 Are 3 phase primary on all Learned **✓** Use ONE Daily Log Form f SV 14717 Between 9st & N Pole # 03342 Romoved cap bank nevin B15601 Pole H03643) ason / Billy 18/5602 ✓ Assign 1 Staff or Temp to Log Notes Pole# 03738 304 NW 16 Ave John, Bo7633 Replaced and transfer 45' Angel/Somud (5 13102 292 NW 14 Are/29218 N 292 St ✓ Material Sign Out/In Sheet Phase miman Jorge B 17603 Pole 403549 Komoved TX Please (have TX put back) one con San 187 to 192, one crea Sim 192-187 Daniel B13615 Ohio Tipp city Anthony Freels 2509 Polk # 3656 Burnt stinger 1340 NW 15 ST Sestin 45 fast the not from St phase 3 in Find of Mike Pecter B 507 Reurof-459 Sw 18 Ave MAY SOON DESCRIBE 284 st & 187 Am Rete Nonthomery SV 528 Cleared shade cloth Ryan McCarrol SV 528 Off of Freder 4420 \$ Cot forces ofound lutaral, fut up duplex and James milas Lateral Put up street light circul Cleared hunging street St Marys secondary Newbral & open Jason Durlez RegHard T/X at 6AV and 1st John Vogel D 600 Piqua Power 18th Hic and 415 th Put of New transferrer, lighting smeeters and insalater Justin Foutz mount and 6th the Three is 3 flavor suttiched BE-0-40 Other=0 Bucket=B Pickup-P Equipment Legend Hung Three Services Go 14th st and Krown Digger=D Other=O Safety=S Lineman=L

LESSONS LEARNED: Not Acceptable



CHAOS REIGNS







LESSON LEARNED: Pre-Disaster Asset

- No Pre- Disaster Asset Inventory Inspections documented with inspection dates.
- No Photos of pre disaster status/ Condition.
- NO GPS with Addresses.
- No Facility USE or Not in Use documented.

SOLUTION

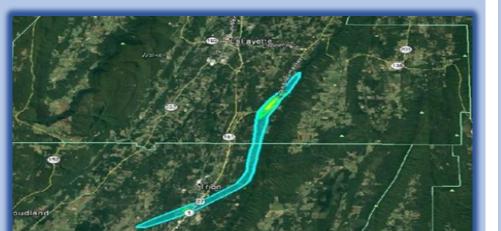
- ✓ Asset Inventory spreadsheet PER Dept:
- ✓ Include: Address, GPS, Photos of Asset Status; Inspection Date; Inspector.
- ✓ Photos
- ✓ Database for easy access post Disaster to verify damages.

Need Checklist/Spreadsheet

LESSONS LEARNED

Damage Assessment Issues

- 1.NOAA Tornado Path off by miles.
- 2. Inefficient Mobilization of Repairs Crews, Materials and other Resources.
- 3. No GPS Utility locations.
- 4. No Asset Inventory with RUS construction Units or Value per Type Pole.



SOLUTION: Assign DA Team

- ✓ Map exact Damage perimeter.
- ✓ Don't Mobilize Mutual Aid or Force Labor crews until Damage Perimeter is defined.
- ✓ Don't Mobilize Materials until know exact damages.
- ✓ Assign Pole Configuration RUS units with value.



CONTRACT Issues

CONTRACTS, PROCUREMENT, AWARD:

- Contract pgs missing; Not complete
- Files not labeled correctly for content
- No Signatures
- No Bid tabulation

INVOICE ISSUES:

Example 1: 2013 Council approved NTE \$156,200.00

- Contractor Invoices Larger amount then approved.\$581,597.00
- No Documentation of Hourly work.
- RATES DON'T MATCH CONTRACT;
 NO CHANGE ORDER.

Example 2: Contract requires Task Orders

- ITB Contracts used as "the Contract"
- No Task Orders

SOLUTION

- ✓ File Contract with: Contract, RFP/ITB, Selection Criteria, Rates, Council approval; with dates of Award.
- ✓ Notice to Proceed, Task Orders, Change Orders with Contractor name, dates of TO, CO.
- ✓ Check Contractor Invoices with actual Contract line items;
- ✓ Issue Contract <u>Change Orders</u> for additional line items.
- ✓ <u>Issue Task Orders</u> with: limited NTE \$ amount, Scope, Duration.
- ✓ Add Disaster Clauses and Addendums to Contracts.

Need Checklist

CONTRACT Issues

Example 4: QUOTES Lump sum- NOT per CONTRACT.

- CONTRACTOR provided Quotes Per Area-Debris NOT INCLUDED IN Contract.
- Different Rates from Contract.

Example 5: MAA Contractors

- Invoiced Split Cities % of work split
- Invoiced for Meals + Per Diem & hotel when the City supplied them
- Invoiced Hours not documented with date,
 Daily Log or areas worked.
- Invoiced MAA Equipment with FEMA Cost Codes & also included Fringe Benefit with Labor:
 - MAA Contractors do not apply Fringe benefit; ONLY Provide Hrly Rate PER Contract.
 - MAA Contractors Bill for Hourly Equipment rates.

SOLUTION

- ✓ Verify Contractor Invoices Rates with Actual MAA Contract line items;
- ✓ For additional line items add to contract via Change Order.
- ✓ Maintain Daily Logs (Labor, & Equipment) for Each MAA: Date, Location worked, Names, Hours worked; Equipment Used.
- ✓ Reconcile MAA Invoice with Daily logs of work, and MAA rates.

Need Checklist

ITEM: Materials

- NO Pre-Disaster Inventory with Vendor, tied to Stock #, Quantity and Cost \$
- Vendor PO's \$ amount different from Vendor Invoices
- USED In Stock Inventory:

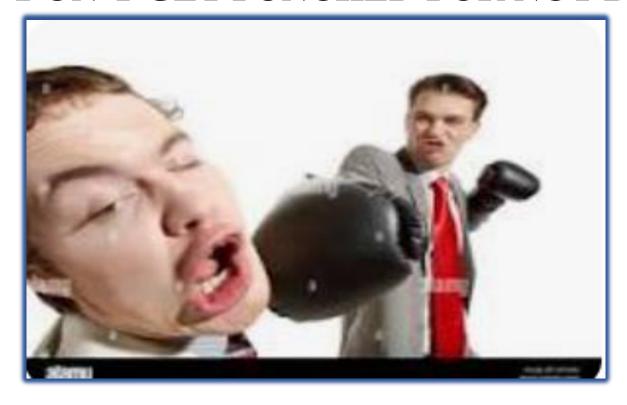
No Tracking of Materials to each Crew or Location Used

SOLUTION

- ✓ TIE STOCK # TO VENDOR W/ INVOICES OR PO'S!!
- ✓ Maintain Pre-disaster Materials Warehouse Inventory with Vendor, Invoice, Quantity, COST \$ & Check/Credit Card Paid.
- ✓ Reconcile PO's with Actual Delivery and Costs !!!
- ✓ DISCUSS RESPONSIBILITY AT DEPT. WHO IS RESPONSIBLE
- ✓ During Disaster Assign 2 people on inventory 1 TRACK SUPPLIES, ORDERING & RESTOCK; 1 for CHECKOUT ITEMS.
- ✓ Material Check Out Sheet: Document Crew who received it and Location(s) to be installed.
- ✓ Reconcile USED IN STOCK Materials with Damaged Repaired Items.

Need Checklist

DON'T GET PUNCHED FOR NOT BEING DISASTER READY



DON'T PUNCH YOURSELF FOR NOT BEING PREPARED



LEVERAGE INNOVATIVE SOLUTIONS, AND SYSTEMS IN PLACE

LESSON LEARNED: EXISTING SYSTEMS

CURRENT PRACTICE in many Utility Departments - USE MULTIPLE SYSTEMS/PROGRAMS OPERATING SEPARATELY

- ACCOUNTING & SEPARATE PAYROLL (MANUAL TIME ENTRY)
- ARC GIS MAPPING
- ASSET MANAGEMENT
- WORK ORDER
- MATERIALS INVENTORY (BY STOCK NUMBER NOT PER VENDOR)
- UTILITIES SCADA & OMS

DOCUMENTATION EXISTS IN SEPARATE DEPARTMENTS & LOCATIONS

WORKS for NORMAL EVERYDAY OPERATIONS: Work Orders, Materials Ordering, Materials Tracking, PRODUCING Stake-Holders Financial Reports



ISSUE:

- INEFFICIENT DISASTER RESPONSE & RECOVERY TASK COST TRACKING
- DOES NOT PRODUCE THE DETAIL DATA & BACK UP FEMA REQUIRED DOCUMENTATION TO OBTAIN REIMBURSEMENT

SEPARATE SYSTEMS:

Require a LOT OF MANUAL INTENSIVE LABOR, DATA

MINING, REVIEW & RECONCILIATION of Records & Costs

for Proper FEMA Required Documentation of Damaged Repaired

Assets, Structures and other Utility Assets.

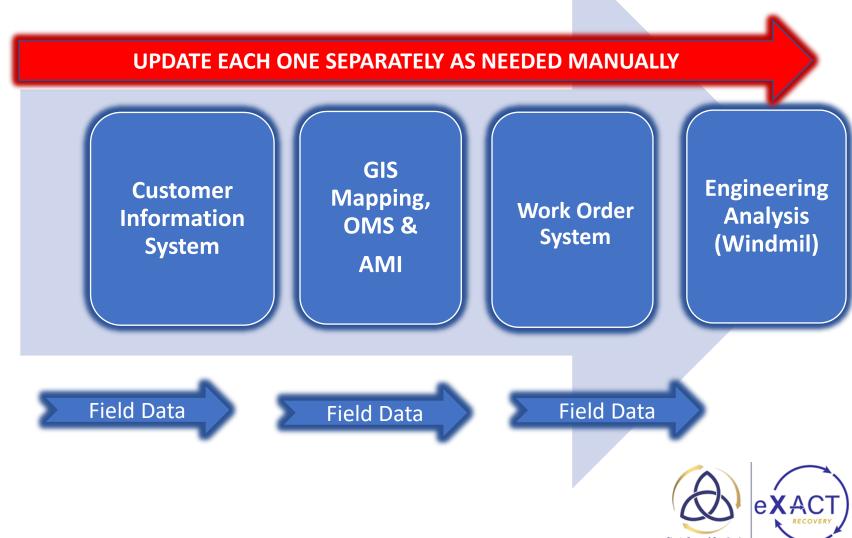




EXISTING SYSTEMS (SEPARATE OPERATING SYSTEMS) ISSUES;



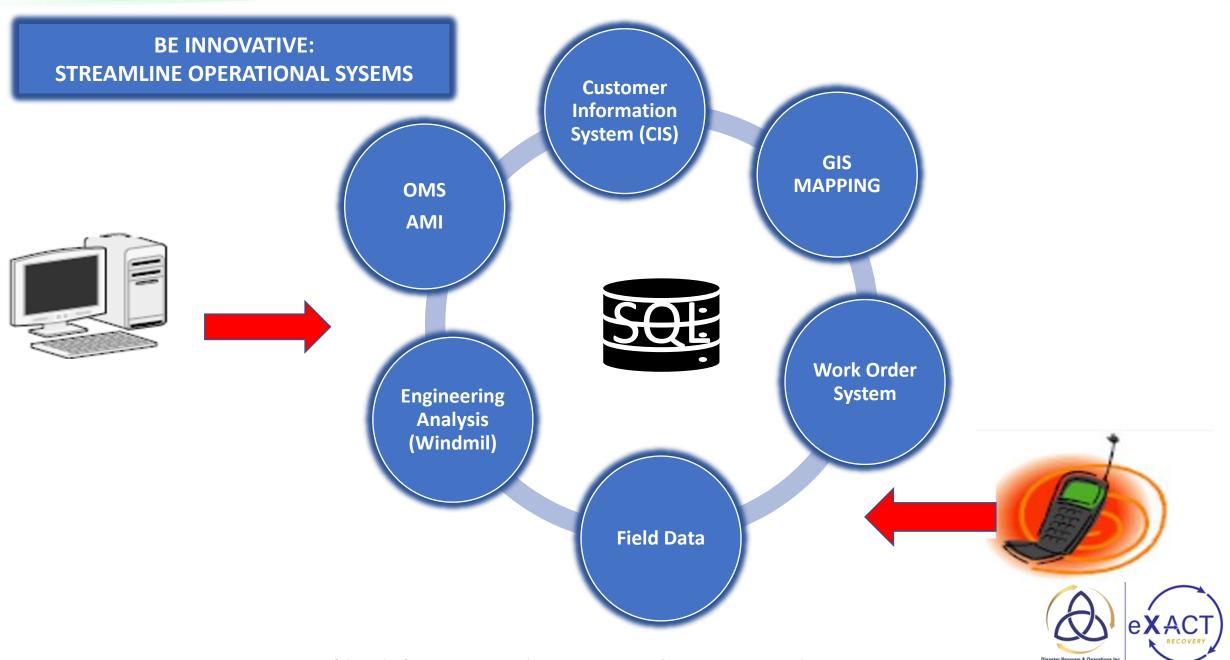
- No Process for maintaining "Field Data"
- Data Did Not Talk to Each Other
- Update Data in One System; Need to Update the Other System
- Time Consuming
- Labor Intensive
- Manual Mistakes



TECHNOLOGY:

HAVING A "HARD" TIME LETTING GO of HOW DOCUMENTATION USED TO BE HANDLED??





STREAMLINE OPERATIONAL SYSTEMS BENEFITS

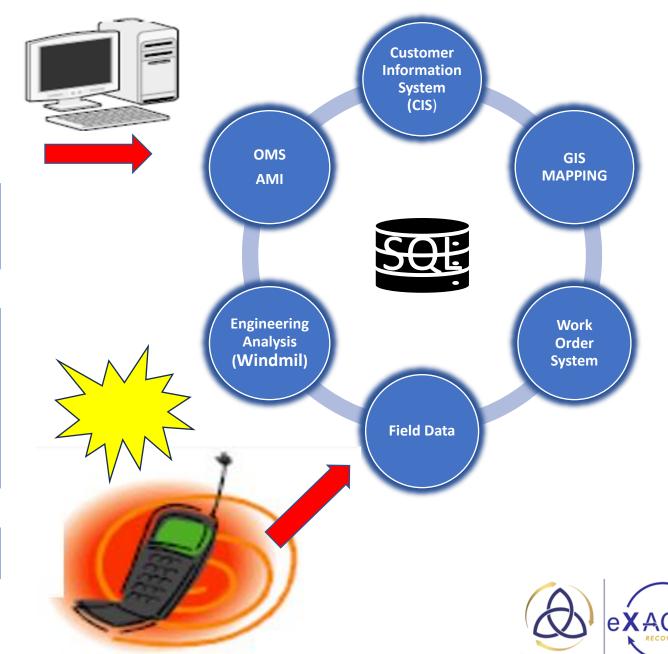
ONE DATABASE

Add Multiple Operating Systems

DATA UPDATES In SQL

- UPDATES Data IN ANY System and Updates in SQL
- Only 1 Data Entry
- Tracks Changes by User

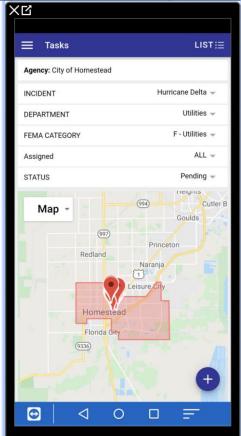
EXPORT DATA EASILY: EXEL, PDF, MAPS



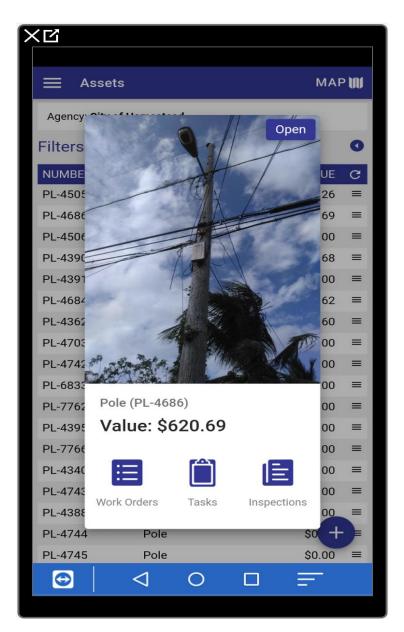
LEVERAGE MOBILE APPS

- Damage Assessments with Mapping, & Photos
- Track Repairs with Photos & Task Details
- **Saves Data without Internet Connection**
- During Field Collection Interfaced with ARC GIS and

Updated Existing DATA









LEVERAGE WEB & MOBILE SOLUTIONS FOR:

PRE DISASTER : MAINTAINING ASSET INVENTORY – ACCESS 24/7

POST DISASTER: TRACK DISASTER RESPONSE COST & DOCUMENTATION PER FEMA REQUIREMENTS



Make Order
Out of Disorder



ENSURE FEMA COMPLIANCE / MAXIMIZE FEMA \$\$\$ REIMBURSEMENT

USING MOBILE SOLUTIONS CAN BE READY FOR INEVITABLE:

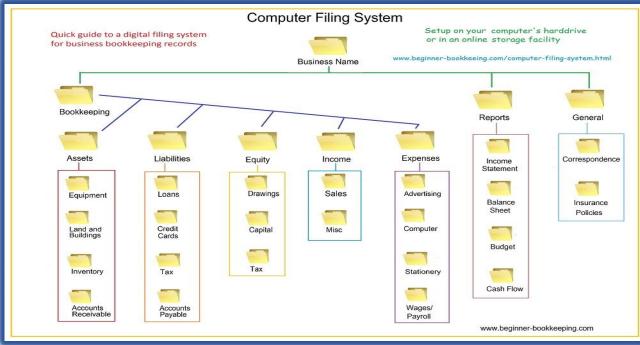
- IMPROVE RESPONSE / RECOVERY TIME
- SIGNIFICANTLY DECREASE RECOVERY ADMIN COST
- PREVENT DELAYS, DENIALS OF FEMA \$ REIMBURSEMENT



Types of Computer Software











SUMMARY DISASTER READINESS: MAINTAINING FEMA COMPLIANCE

PRE DISASTER:

Asset Inventory: Track Maintenance & Inspections; Know Status & Condition.

List Power Poles with all Equipment, GPS & Photos.

Track <u>Transfomers</u> with Power Poles;

Contracts: MAA Contracts Updated with Labor, Equipment Rates; & Signed.

Adhere to 2CRF 200 For solicitations: Emergency, Recovery work.

FEMA PA Program Management: Solicit per 2CFR 200 before Disaster

Solicit for Utility Line Clearing/ Debris Removal & Debris Monitoring

Equipment: Inventory w Make Model , Serial...

<u>Labor</u>- Staff Titles , Rates RT, OT, Disaster Pay : Update Pay Policies.

MATERIALS INVENTORY; Include Vendor Name, with Stock ID numbers, POs..

Implement a Document Management system.

Centralize documents

Streamline Operating systems to update inventory during maintenance.

Use Mobile Software for Field Documentation.



SUMMARY POST DISASTER RECOVERY COSTS TRACKING & SUBMITTALS:

DAMAGE ASSESSMENTS: Assign DA Teams. Take Photos.

EMERGENCY REPAIRS / RESTORATION:

Track MAA Crews Locations,

Use DAILY LOGS: Detail Date, Location, Names, Equipment, Hours worked: TASK PERFORMED.

Photos Damages, Before Repairs and After.

Force Labor: Payroll, T Sheets, Work Orders/ Daily Logs; Equipment Used & who.

Material Sign Out Sheets.

Reconcile MAA Invoices with back up daily logs and MAA Rates.

MAA HOTELS: Names Per Room.

UTILITY LINE CELARING: USE DAILY LOGS: LOCATIONS CLEARED: Date, Labor, Euipment, Hours.

<u>Debris Removal: Permit Debris Management Site –if at Utility Storage Yard .</u>

<u>Debris Monitoring company – mobilized with Debris Removal Company; Certify all debris removal trucks, equipment; before Debris Removal Operations begin.</u>

USE Document Management

system.

Centralize documents.

Review / Reconcile Data.

MAA Invoices- Verify with Daily Logs.

Use Mobile Software for Field Documentation.



Make Order Out of Disorder





Don't Get Blamed for Lack of Financial Documentation



CHAOS

IT'S ON MY DESK - SOMEONE MOVED IT



IT'S IN 1 OF THE STACKS



