

JEA Emergency Preparedness and Response

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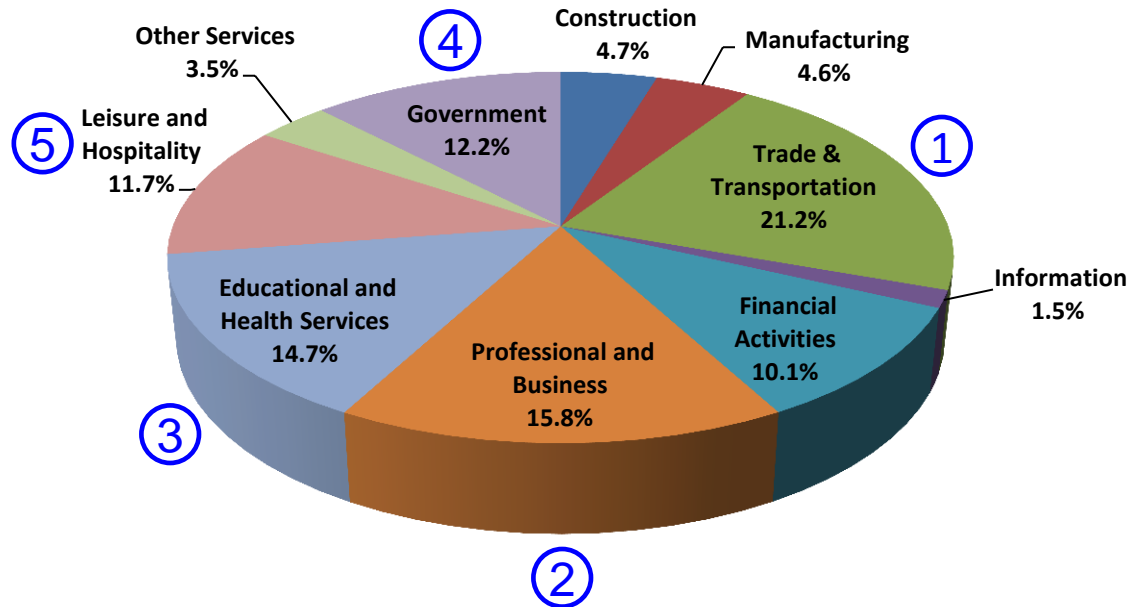
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CITY OF JACKSONVILLE

- Located in Northeast Florida, the Jacksonville Metropolitan Statistical Area has a population of over 1.38 million¹
- Economy is diversified among transportation and distribution, insurance sectors, health services, government, consumer goods and manufacturing
- Harbor improvements since the late 19th century have made Jacksonville a major military and civilian deep-water port. Its riverine location facilitates two U.S. Navy bases and the Port of Jacksonville, Florida's third largest seaport

Industry Breakdown



Source: "Florida Nonagricultural Employment, - Most Recent 12-Months (Sep. 2012 – Aug. 2013)," Florida Department of Economic Opportunity, Labor Market Information, Current Employment Statistics Program (in cooperation with the U.S. Department of Labor, Bureau of Labor Statistics).

¹ U.S. Census Bureau, MSA population estimate as of July 1, 2012

ABOUT JEA

- Municipal electric system and independent agency of the City of Jacksonville, Florida with more than 400,000 customers
- Separate Electric, Water and Wastewater (since 1997), District Energy (since 2004) Systems

Electric System

- Generating capacity of 3,747¹ MWs
- 734 miles of transmission and 6,543 miles of distribution²
- 47% overhead and 53% underground²

Water/Wastewater

- 134 wells to 36 water treatment plants
- 4,306 miles of water distribution mains, water storage capacity of over 69 million gallons, and 3,789 miles gravity sewer and force mains
- 1,313 pumping stations and 11 treatment plants

¹ Based on winter ratings and entitled capacity

² Figures as reported in the Annual Disclosure Report dated as of April 16, 2013



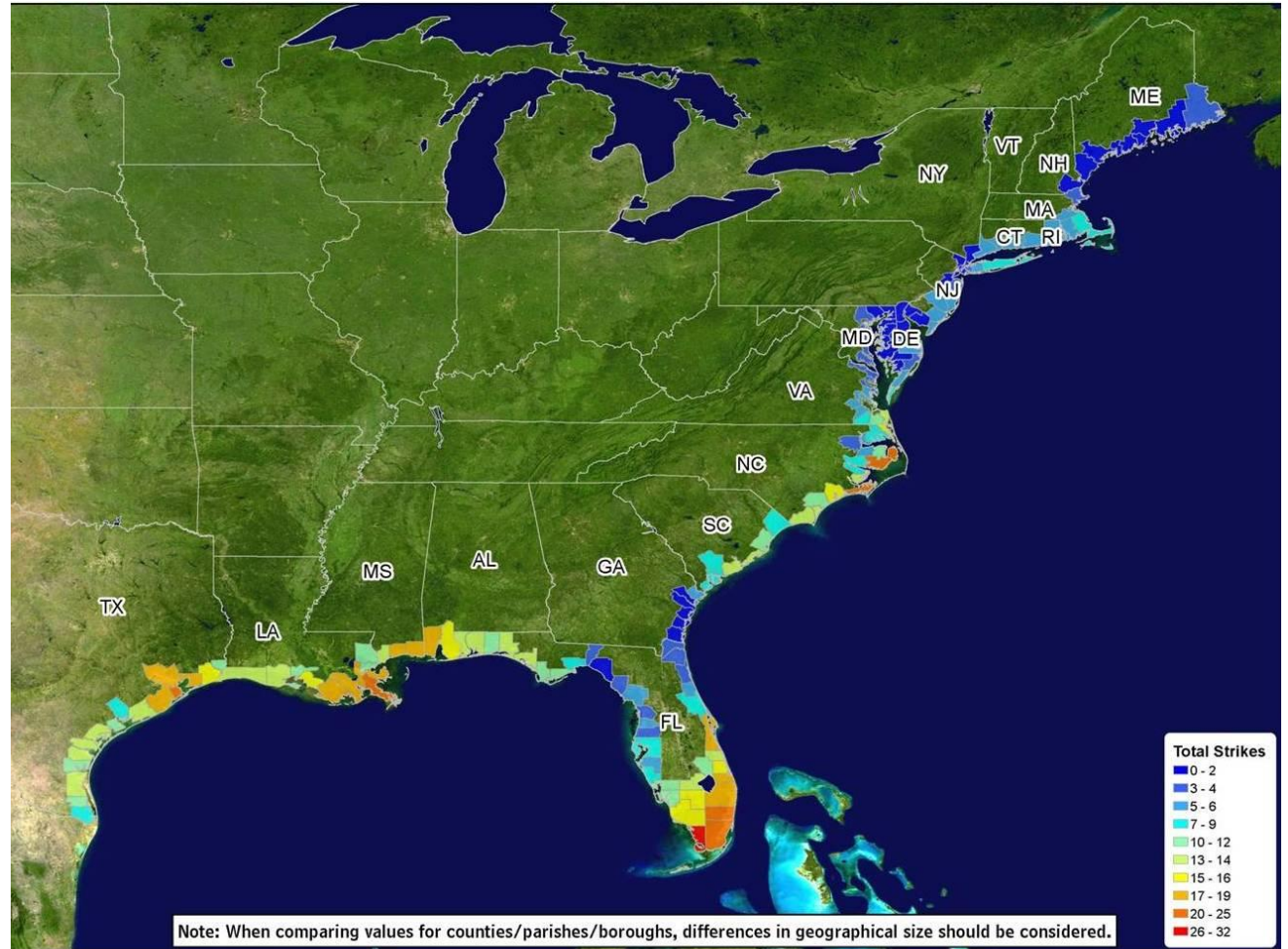
WHAT ARE THE KEY DISASTER RISKS AT JEA?

- Natural

- Hurricane
- Tornado
- Flood
- Wild Fire
- Sink hole
- Pandemic

- Manmade

- Cyber Attack
- Sabotage
- Terrorism
- Active Shooter



Total number of hurricane strikes by counties/parishes/boroughs, 1900-2010

Data from NWS NHC 46: Hurricane Experience Levels of Coastal County Populations from Texas to Maine. Jerry D. Jarrell, Paul J. Herbert and Max Mayfield. August, 1992, with updates.

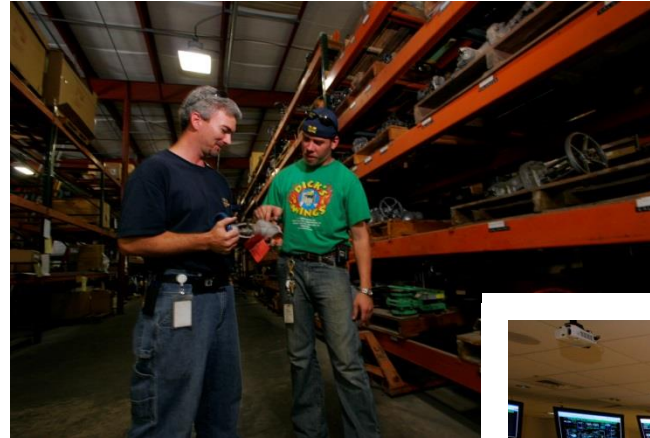
HOW DO WE PREPARE TO RESPOND?

- Dedicated Emergency Preparedness Team
- Individual training on National Incident Management Standards
- Multiple in-house Table Top Exercises
 - Intra-Departmental
 - Corporate wide
 - Countywide
- Hard Security exercises
- Joint Agency exercises with the alphabet soup
- Cyber Attack exercises



PREPARATION, TESTING & OPTIMIZING READINESS

- Annual audit of preparedness capabilities:
 - Food
 - Fuel
 - Communication devices
 - Gray Sky assignments
 - Computers
 - Cash on hand
 - Contact information
 - Sheltering
 - Contract services
- Material quantities vary over the year based on level of preparedness
- All levels are based on a standard of preparedness for expected storm intensity



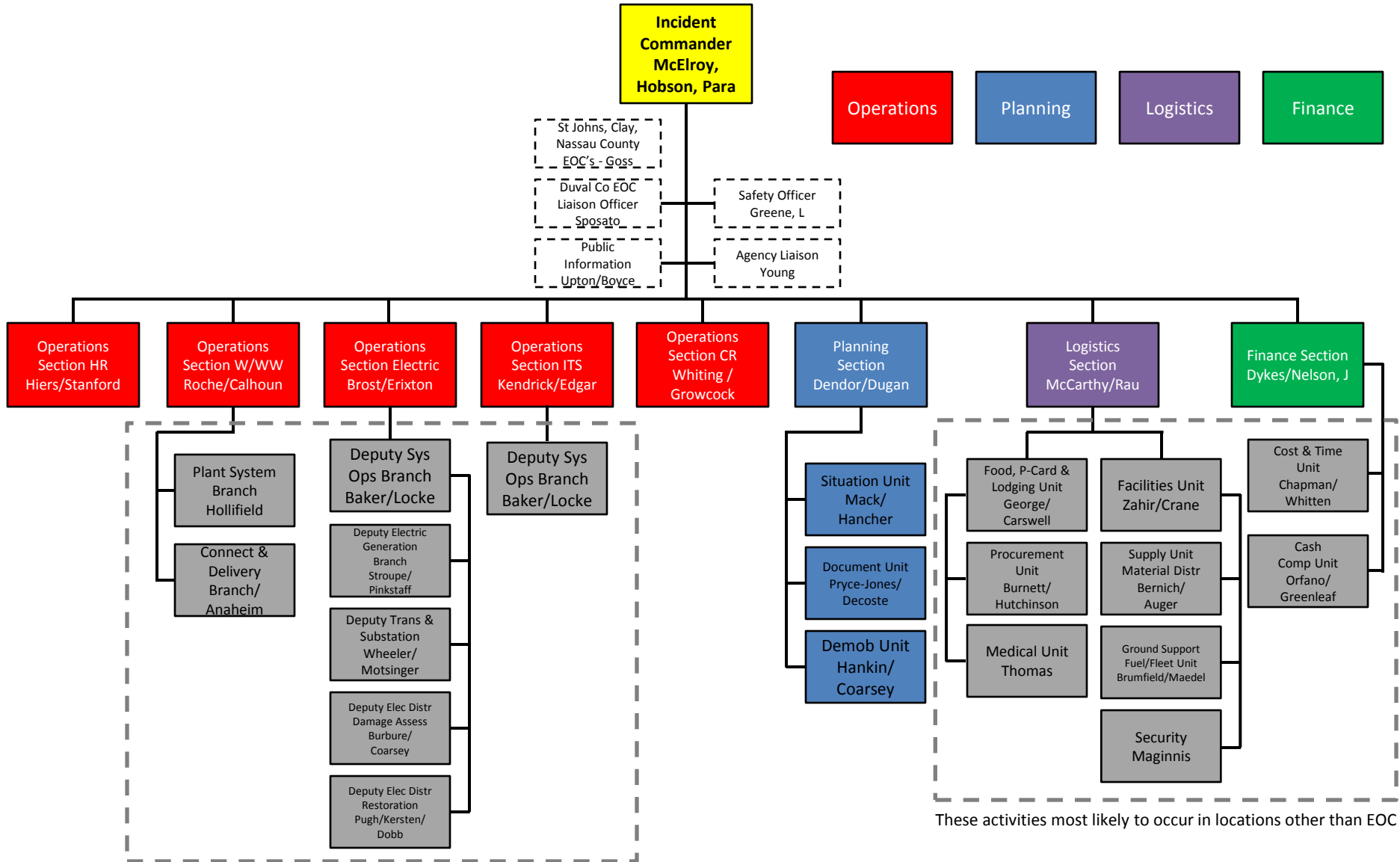
HOW DOES JEA MANAGE INFORMATION DURING RECOVERY?

Transition from a Blue Sky to a Gray Sky organization (task realignment)

- Incident Command Team is the best model for coordination with city, four counties and state
- JEA's EOC is our hub for:
 - Communication, one voice
 - Resource requests
 - Planning, one plan
 - Situational Awareness
 - Accumulation of information & documentation
 - Integrate resources across multiple agencies



JEA'S INCIDENT COMMAND STRUCTURE



These activities occurs at the respective site facility:
SOCC; Ridenour; Pearl Street; Tower; Customer Care Center

MUTUAL AID AGREEMENT

- Large-scale emergencies and disasters may exceed the capabilities of state and local government to effectively respond and recover. Resources to augment recovery efforts may be provided by:
 - State Resources
 - Statewide Mutual Aid Agreement
 - Emergency Management Assistance Compact
 - Federal Resources

- Mutual aid agreements and memoranda of understanding are essential components of emergency management planning, response and recovery operations
 - Provide reciprocal emergency aid and assistance during an emergency or disaster
 - Increase available resources and improve response and recovery efforts

- Current mutual aid agreements with:
 - Florida's Water/Wastewater Agency Response Network
 - Florida Municipal Electric Association (for Extended Generation Outages)
 - Florida Electric Power Coordinating Group, Inc.
 - American Public Power Association

HURRICANE SANDY: MUTUAL AID AGREEMENT IN ACTION



On the evening of October 29, 2012, Hurricane Sandy made landfall in southern New Jersey, with impacts felt across more than a dozen states. The storm battered the East Coast, particularly the densely-populated New York and New Jersey coasts, with heavy rain, strong winds, and record storm surges. During Sandy's immediate aftermath, more than 8.5 million customers lost power.

Source: www.fema.gov/hurricane-sandy



Through the American Public Power Association mutual aid agreement, JEA sent seven crews and 32 vehicles to Baltimore and Long Island. The crew drove JEA trucks and equipment to both locations and assisted in the effort to restore power in those areas. All in all JEA personnel spent a total of 26 days as part of the total restoration effort to bring back power to approximately 870,000 customers.



BALTIMORE GAS AND ELECTRIC THANKS JEA FOR ITS MUTUAL AID SUPPORT

Dear Mr. McElroy,

As BGE and the central Maryland community worked together over a five-day period to recover from the impact of Hurricane Sandy, we were made stronger by the dedication and support from so many members of your team who quickly and safely worked alongside us to help restore BGE's overhead distribution system, from main line feeder work to individual service loops.

You answered our call for help with generous outpouring of personnel, equipment and spirit. Working with BGE and utility professionals from 14 states, you helped us restore power to more than 350,000 homes and businesses. Workers left the comfort of home and family to assist in Maryland's restoration efforts, and we sincerely appreciate the tremendous support.

Simply put, we couldn't have done it without you. For your rapid response and selfless service, we extend a sincere Thank You. The power of teamwork brought the power back to Maryland.

Sincerely,

*Kenneth W. DeFontes, Jr.
President & CEO*

*Stephen J. Woerner
Senior Vice President & Chief Operating Officer*

RECENT JEA DISASTERS

Tropical Storm Fay

Date:	August 2008
JEA Electric Customer Outages:	150,000
Electric System Restoration Cycle Time:	6 Days (the storm lasted 100 hours)
JEA's Total Storm Expense:	\$5,919,820
Amount Reimbursed by FEMA:	\$3,553,234
Mutual Aid:	Not utilized for this storm



Hurricane Charley, Frances & Jeanne

Date:	2004
JEA Electric Customer Outages:	530,297
Electric System Restoration Cycle Time:	211 hours
JEA's Total Storm Expense:	Approximately \$10.5M ¹
Amount Reimbursed by FEMA:	Approximately \$10M ¹
Mutual Aid:	Not utilized for this storm



¹ Figure represent the sum of all three hurricanes

JEA'S PRIORITY RESTORATION AFTER A DISASTER

Priority 1:	Hospitals
Priority 2:	EOC Police and fire/rescue major stations and command centers First Coast Radio System JEA generating stations, substations, service and control centers and regional water and wastewater plants JIA/FAA transmitting towers Military installations
Priority 3:	Schools serving as shelters
Priority 4:	COJ City Hall and Motor Pool complexes JEA lift stations FSCJ Downtown Campus American Red Cross command and communications centers Florida/Georgia Blood Alliance Dialysis Centers
Priority 5:	Pre-determined major intersections: Major intersections mostly connected on the feeder side of main circuits. As feeders are being restored, intersections should return to service in parallel.
Remaining Priorities:	After all Priority 1-5 critical facilities have been restored, T&D Maintenance will begin restoration of electrical service to all Duval County schools. Since the list of schools inside the JEA service territory is predefined, underground line crews will be assigned to complete a pre-storm familiarization route paying close attention to schools designated by the City of Jacksonville as shelter sites. After the storm passes, the underground line crew will be assigned to repair any underground electric circuits as designated in the restoration priorities listed above. As time allows the underground crews will immediately begin restoration for schools in parallel. The underground line crews will follow the direction provided by the Director of T&D Maintenance.

OUR CREWS' HARD WORK AFTER THE STORMS DID NOT GO UNNOTICED



Dear JEA Lineman,

How are you doing? I am a student at Sabal Palm Elementary. I am a boy, I like playing video games. I hope you didn't get hurt, turning on the electricity. Thank you for giving me water and electricity. I hope you have a safe time working at JEA.

Sincerely,
Demetrius

Dear JEA,

Thank you for working so hard to get the electricity back on line. Now we can go back to school to learn and play with our friends!!! We love to learn and we couldn't do it without you.

Adara Ryan Austin zoch
 Ftini Kelsey Autumn
 Carter Patrick Miss Fife's first
 Dominique Micalla grade class
 Daniel Connor A.
 Cammy Milagros.

Sincerely,
Hannah

Dear JEA Lineman,

I hope you're having a wonderful day! I'm a fifth grader who likes to play outside. Before you came to clear the roads, I couldn't even ride my bike. I'm writing this letter to show my appreciation. Thank you for keeping my lights on. I also want to thank you for clearing the roads of trees that have fallen during the storm. Now you've made me much happier than I was before. So once again thank you so very much.

Sincerely,
Kasey

WHAT DOES THE FUTURE HOLD?

- Threats from all sides due to ever changing risks:
 - Technology
 - Criminal Activity
 - Civil Unrest
 - Population growth and evolution of system assets
- JEA is a leader in Emergency Preparedness by:
 - Constantly updating our state of readiness through training
 - Improved partnership and coordination with agencies, our community and the industry

