Flagler County Information Technology Storm Preparedness and Recovery Guide

Introduction

This document outlines the steps necessary to prepare and recover Flagler County facilities in the event of a predictable natural disaster, such as a tropical cyclone impacting the Flagler County area.

In preparing the various facilities for a potential impact, remember to track time and any other expenses. In the event of a declared emergency, time and materials for protective measures and recovery efforts can be applied toward the local match for reimbursement.

Obviously there are several levels of impact to the County. In 2004 Flagler County essentially experienced several near misses. Yet in 2004 we boarded up facilities, and performed protective measures on all of our facilities and did suffer some damage. This document will attempt to outline the procedures that should be performed through the various levels of projected impact. Obviously some degree of judgment will have to be used based on the projected paths of the storm, and the degree of error of the projected path. Emergency Services generally plans for and performs protective measures for 1 category above the projected land fall. I.e. if the projected landfall is for a category 1 storm, protective measures are done for a category 2 storm. Other County Departments should follow this model.

GENERAL GUIDELINES FOR PREPARATION

Each department is responsible for the computers in their area. Generally the following tasks should be performed on all computers prior to the dismissal of employees for the duration of the event:

The most basic step in preparation is data backup. Computers that are connected to a County server by way of a local area network (LAN) (i.e. a server is on site) such as the Flagler County Government Complex, Agriculture Extension Service, Airport, etc. and have access to a network drive or share on a server (example: "S" drive or "G" drive), should not have any important data, or data whose loss would create hardship or violate Public records laws, stored on the local drive ("A" or "C" drives). Such information should be copied to the server where backups can be created and stored.

Computers that connect to the County network by way of a dial up or other connectivity (BrightHouse Roadrunner or BellSouth DSL), and do not have access to a network drive (i.e. "S" drive or "G" drive), such as the Wickline Center, Princess Place Preserve, Landfill, etc. should have another means of backing up data and storing it properly labeled identifying the department, location, content, and date created or updated in the EOC.

If such provisions have not been made, in a timely manner coordinate with the IT department to obtain a portable USB hard drive to backup systems, and important data. Those Departments with tape drives should make multiple complete system backups (coordinate with IT if necessary), clearly labeled identifying the department, location, content, and date created or updated, and provide them to the IT department for storage in a media safe in the EOC. If neither of these options are viable due to time or capacity, coordinate with IT to have the machines removed labeled and stored in the EOC.

Servers and equipment located in modular buildings, trailers or other such manufactured structures are to be evacuated to a more hardened facility.

Computers and all peripherals (such as printers, scanners, plotters, network switches, etc.) including uninterruptible power supplies (battery backup) should be;

- 1. Properly powered off.
- 2. The power cords unplugged from the wall.
- 3. Any peripheral cables unplugged from the computer and neatly wrapped or wound around the peripheral device.
- 4. Label the equipment with the current user's name or position.
- 5. The equipment is to be placed on top of a table or desk in an interior room without windows.
 - Note: plotters or scanners on their own stands which support the electronics of the device a couple feet from the supporting surface

would not need to be placed on a table or desk.

6. Covered with waterproof material such as a plastic trash bag.

Prior to an event, IT staff can provide training to any Department that wishes training on disassembling and reassembling machines. Please coordinate with IT.

IT Department Preparations

Two days before impact.

In this context, impact refers to the projected time of tropical storm force winds arriving in Flagler County.

- 1. Brief Constitutional Officers, and offer storage space for backups, etc in the media safe in the EOC.
- 2. Brief Board Department Heads on shutdown procedures, and what is expected in the departments in general.
- 3. Check all servers and confirm backups have been successfully running. Where possible, modify any incremental backup jobs to complete backup jobs. (Server locations Government complex, Library, Extension Service, Community Services, Station 92, Airport, and Tax Collector)
- 4. Coordinate with IT Staff on protective measures for homes and families.
- 5. Contact the City of Flagler Beach and coordinate the transfer of data and equipment to the EOC. The City requested by way of a letter to store servers and other equipment. They have purchased a lockable cabinet for this purpose.

Penny Overstreet
City Clerk,
City of Flagler Beach
Phone (386) 517-2000 ext 235
Cell: (386)931-2260
Fax (386) 517-2008
poverstreet@cityofflaglerbeach.com

24 hours before projected impact.

- 1. Confirm complete backups are running, and make additional copies.
- 2. Coordinate employee dismissal and any system shutdown with Constitutional Officers, and Board Department Heads.
- 3. Brief the Constitutional Officers and or department heads on procedures for shutting down and preparing workstations in their area, as indicated above. Include procedures on turning off and disconnecting ups.

6 hours before impact.

Transfer media and equipment to the EOC as necessary.

Specific Preparations by Projected Impact Level.

In the table below, the Trigger is what happens to trigger the action described, they are a general guideline, and personnel should exercise caution, and adjust timelines based on conditions. Seek shelter immediately during high winds and do not risk life to preserve property.

Tropical Storm

Given the scope of this document, a Tropical Storm would be the least impact on Flagler County. A tropical storm is defined by the National Hurricane Center as: Atropical cyclone in which the maximum sustained surface wind speed (using the U.S. 1 -minute average) ranges from 34 kt (39 mph or 63 km/hr) to 63 kt (73 mph or 118 km/hr).

<u>Department</u>	Location	<u>Description</u>	<u>Trigger</u>
IT	General	For all locations, check to make sure all backup systems are working correctly. Provide USB hard drives as needed. Check off site backup for completeness and content.	48 hours before TS force winds are predicted in Flagler County
IT	General	Rotate USB hard drives to other facilities as necessary. Begin transferring backup media to the EOC.	24 hours before TS force winds are predicted in Flagler County
Airport	Airport	 Make sure data is backed up properly. Transfer properly labeled backup media to the EOC. Relocate all computer and network equipment to an interior room without windows. 	24 hours before TS force winds are predicted in Flagler County. At 50 MPH sustained winds, break down the network and computer equipment as noted.
General Services	Landfill	Make sure data is backed up properly. Relocate all computer and network equipment from the trailer to the General Services Building.	Issuance of a Tropical Storm Warning.
General Services	Utility Plant	 Make sure data is backed up properly. Transfer properly labeled backup media to the EOC. 	Issuance of a Tropical Storm Warning.

Category 1 Hurricane - Winds 74-95 mph (64-82 kt or 119-153 km/hr). Storm surge generally 4-5 ft above normal. As the projected storm intensifies, the more damage anticipated, and the more protective measures to be carried out. Triggers become very important, as the time required to perform the protective measures increases. All of the protective measures above plus:

<u>Department</u>	Location	<u>Description</u>	<u>Trigger</u>
Extension Service	Extension Service	1. Make sure data is backed up properly. 2. Transfer properly labeled backup media to the EOC. If still a shelter: 3. Prepare any unnecessary workstations as indicated in the General Section above. If NOT a shelter: 3. Prepare all workstations as indicated in the General Section above transfer the equipment to the class room. 4. IT to properly shutdown the server as indicated in the General Section above. 5. Transfer the server and all network equipment to the classroom.	12 Hours prior to the predicted arrival of hurricane force winds in Flagler County.
Parks and Recreation	Princess Place Preserve Offices.	Make sure data is backed up properly. Transfer hardware to the EOC.	Prior to the close of business for the duration of the event.
Community		Make sure data is backed up properly.	
Community Services / Senior Services	Wickline Center	 Transfer properly labeled backup media to the EOC. Shutdown all workstations and network equipment and relocate to the computer lab. 	Prior to the close of business for the duration of the event.
Community Services / Senior Services	Human Services Bldg / David Segal Center	 Make sure data is backed up properly. Transfer properly labeled backup media to the EOC. Prepare workstations as indicated in the General Section above. 	Prior to the close of business for the duration of the event.
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Library	Palm Coast	 Make sure data is backed up properly. Transfer properly labeled backup media to the EOC. Prepare workstations as indicated in the General Section above. 	Prior to the close of business for the duration of the event.
		Make sure data is backed up properly.	
Library	Bunnell Branch	 In Make Sure data is backed up properly. Transfer properly labeled backup media to the EOC. Prepare workstations as indicated in the General Section above. 	Prior to the close of business for the duration of the event.

Emergency Services / Fire Rescue	Station 11	1. Make sure data is backed up properly. 2. Check desktop and portable computers and make sure all run reports have been transmitted to the server. 3. Prepare workstations and network equipment as indicated in the General Section above.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 16	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Volusia County.
Emergency Services / Fire Rescue	Station 21	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 22	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 31	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 41	1. Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. 2. Check desktop and portable computers and make sure all run reports have been transmitted to the server. 3. Prepare workstations and network equipment as indicated in the General Section above.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 51	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Flagler County.

Emergency Services / Fire Rescue	Station 71	Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server.	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 81	 Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server. 	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Fire Rescue	Station 92	 Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Check desktop and portable computers and make sure all run reports have been transmitted to the server. 	Issuance of a Hurricane Warning in Flagler County.
Emergency Services / Flight Operations	Hangar	 Make sure data is backed up properly. Make arrangements with IT for a USB hard drive if needed. Prepare workstations as indicated in the General Section above. 	Prior to the evacuation of the hangar (approximately 12 hours prior to the arrival of hurricane force winds.)
IT / Video Production	Board Room AV booth	1. Relocate Character Generator, Encoding Computer, and secondary editing computer to the EOC.	Prior to the close of business for the duration of the event.

Category 2 Hurricane - Winds 96-110 mph (83-95 kt or 154-177 km/hr). Storm surge generally 6-8 feet above normal.

<u>Department</u>	<u>Location</u>	<u>Description</u>	<u>Trigger</u>
General	Government Services Building	 Prepare workstations as indicated in the General Section above. Equipment in offices with windows will need to be relocated to an interior room without windows. Network equipment in the wiring closets to be left operational. 	Prior to the close of business for the duration of the event.
Tax Collector	Government Services Building	 Prepare workstations as indicated in the General Section above. Equipment in offices with windows will need to be relocated to an interior room without windows. IT to properly shutdown the servers as indicated in the General Section above. 	Prior to the close of business for the duration of the event.
IT / Video Production	Government Services Building	 Make sure all systems are properly shutdown. Turn off, unplug from the wall and unplug equipment connected to the UPSs in the control room. Where space allows, move the CG (Character Generator), monitors, Digital Video Recorder and Extron transmitter to the 2 drawer fire box cabinet. Move the Podium computer (Madden machine) and the document camera to the storage room on the 2nd floor. Make sure all of the windows between the Board Room and the AV booth are closed and locked. 	Prior to the close of business for the duration of the event.
Community Services / Senior Services	Human Services Bldg / David Segal Center	Prepare workstations as indicated in the General Section above. Coordinate with IT to shutdown server as indicated in the General Section above. Disconnect network equipment in the rack (Senior Services Building) and on the back board (David Segal Center).	Prior to the close of business for the duration of the event.
Emergency Services / Fire Rescue	Station 16	Evacuate equipment with staff.	If ordered to evacuate.

Emergency Services / Fire Rescue	Station 21	Evacuate equipment with staff.	If ordered to evacuate.
Emergency Services / Fire Rescue	Station 22	Evacuate equipment with staff.	If ordered to evacuate.
Emergency Services / Fire Rescue	Station 31	Prepare workstations and network equipment as indicated in the General Section above.	12 Hours prior to projected arrival of hurricane force winds in Flagler County.
Emergency Services / Fire Rescue	Station 51	Prepare workstations and network equipment as indicated in the General Section above.	If ordered to evacuate.
Emergency Services / Fire Rescue	Station 71	Prepare workstations and network equipment as indicated in the General Section above.	12 Hours prior to projected arrival of hurricane force winds in Flagler County.
			12 Hours prior to
Emergency Services / Fire Rescue	Station 81	Prepare workstations and network equipment as indicated in the General Section above.	12 Hours prior to projected arrival of hurricane force winds in Flagler County.
Emergency Services / Flight Operations	Hangar	Prepare workstations and network equipment as indicated in the General Section above.	24 hours prior Hurricane force winds in Flagler County
Library	Palm Coast	Prepare workstations as indicated in the General Section above. Shutdown and prepare servers as indicated in the General Section above.	Prior to the close of business for the duration of the event.
General Services / Utilities	Plant	Shutdown workstation and relocate to the General Services Building.	8 Hours prior to the predicted arrival of tropical storm force winds in Flagler County.
General Services & Public Works	Admin Offices	This facility has a generator on site. Recommend preparing those workstations in offices with windows as indicated in the General Section above	8 Hours prior to the predicted arrival of hurricane force winds in Flagler County.

Category 3 Hurricane - Winds 111-130 mph (96-113 kt or 178-209 km/hr). Storm surge generally 9-12 ft above normal.

At this point, EOC, Station 92 and portions of the Public Works building are all that are left on-line. IT to be aware of any issues for Constitutional Officers IT may be able to assist with, and of any additional facility evacuations.

Category 4 Hurricane - Winds 131-155 mph (114-135 kt or 210-249 km/hr). Storm surge generally 13-18 ft above normal.

Department	<u>Location</u>	<u>Description</u>	<u>Trigger</u>
Emergency Services / Fire Rescue	Station 92	 Prepare workstations as indicated in the General Section above. Relocate workstations and network equipment to the EOC - EMS storage area. 	When ordered to evacuate.

Category 5 Hurricane - Winds greater than 155 mph (135 kt or 249 km/hr). Storm surge generally greater than 18 ft above normal.

At this point everything but the EOC and portions of the Public Works building (safe room) are shutdown and backed up. IT to monitor the situation and assist where possible.

Recovery Efforts

After an event the recovery efforts will depend greatly on the amount of damage, to what facilities, and the availability of power at the various locations. Below is a list of priorities to be followed depending on damage, and the availability of power.

At this point it is necessary to discuss the safety of recovery personnel. Recovering a facility after such an event can be somewhat dangerous, depending on the damage done to the facility, and the availability of power to the facility. If you are not comfortable entering a facility for recovery purposes, coordinate with ESF2 (313-4202) in the EOC for further damage assessment of the facility.

If any structural or electrical damage has been sustained to a facility, a Building Inspector is to look over the structure to declare it sound prior to any IT recovery efforts.

IT Personnel participating in the recovery efforts are to be very aware of there surroundings when recovering a building. Look for water leaks and other damage as you enter facilities and move from room to room. In the event of water leaks, keep an eye out for power strips or other electrical devices that may still be plugged in to an electrical outlet in the area of a leak. If you find a device still connected to the power in the area of a leak, do not approach it. Have the circuit breaker turned off. If the circuit breakers are not identified, have the main turned off before proceeding. Evaluate the device for possible water intrusion on the device. If there is any indication of water, add the device to the damage report for the facility.

Reporting Damage

Report all damage and coordinate recovery efforts with EOC - Communications Unit in the EOC via e-mail communicationsunit@flaglercounty.org or by phone (386)313-4202.

Evaluating for Water Damage

When evaluating an electronic device for potential water intrusion and damage;

- 1. Do not move the device at least initially until you have inspected the area for signs of water.
- 2. Initially look for water on the table or plastic used to cover the device.
 - a. If water is found on the plastic, pull the plastic gently in one direction to allow the water to flow off the plastic and direct it off the table and away from other devices. Use paper towels to dry the plastic prior to removing it. Then carefully remove the plastic trying not to let any remaining water get to the equipment.
 - b. If no water is obvious, carefully pull the plastic off the device watching for the appearance of water.
- 3. Once the plastic is removed, inspect the table and case for signs of water. Look for dried rings of dust or other signs water may have been present. Carefully look at seams in the case for water.
- 4. Without changing the orientation of the device, carefully pick it up and look at the

- table and underside of the device for signs of water.
- 5. If there are no signs of water thus far, plug the device into a power strip or UPS that is powered off. Do not attach any network cables at this point. Only connect the minimum number of peripherals as needed to test the device for normal operation.
- 6. Utilize the power switch on the power strip or UPS to power the device.
 - a. If the power strip or UPS immediately faults, turn the power switch off and unplug the device.
 - b. Watch and listen for obvious signs of damage such as smoke or a sizzling sound that might imply circuitry problems. Turn the power switch on the UPS or power strip off.
- 7. If the device powers up and seems to operate normally, proceed with recovery efforts. If not report it as damage and coordinate a work around utilizing spare inventory if available.
- 8. If the device being evaluated is a power strip or UPS, where ever possible, utilize a circuit breaker to add power to the device.

In the event water is present during the evaluation of a device, perform the following:

For Computers:

- 1. Thoroughly dry the case, and carefully open the case watching the opening of the case for any drips of water into the case.
- Carefully inspect the interior of the case for any signs of water intrusion. Remember water likes to hide in tiny little crevasse such as between layers of plastic or various drive bays in a case.
- 3. Thoroughly dry any water found in the case. If water is found on the motherboard or other circuitry, thoroughly dry any water visible water and set the computer aside preferably in an air conditioned space for a couple days before powering and testing.

For other devices:

Carefully inspect ports, and accessible areas of the device for signs of water damage. Look in seams of the case, and ports to see if there is any water present.

If you believe a device has been compromised, DO NOT UTILIZE THE DEVICE. Report it as damage and coordinate a workaround utilizing any spare inventory IT may have.

General recovery steps:

All devices within the facility are to be evaluated as indicated above. Then recovered in the following order of priority;

Power strips and UPS

Networking equipment such as switches, firewalls, etc.

Servers

Individual workstations

Printers copiers, etc.

Where possible, utilize a circuit tester on the duplex plug to test for proper current and grounding.

Facilities by Recovery Priority

Emergency Operations Center - being the focal point of the overall recovery efforts, any issues or damage sustained in the EOC is to be addressed first.

1. Telecommunications and internet access is critical during this phase. The telecommunications outside of the EOC is accomplished through a redundant fiber optic loop from AT&T.

AT&T Repair-Government, Education & Healthcare clients Network, CPE, BSLD, DIA, MetroE, DSL

- AT&T Network Repair
 - 1st Level Escalation:
 - **1**-800-247-2020
 - Be prepared with your account/circuit ID.
 - Record your BRC ticket #.
 - 2nd Level Escalation:
 - Request to be escalated to duty supervisor.
 - 3rd Level Escalation:
 - Jane Sloan DeVane Service Executive

Office: 904-798-6661
 Cell: 904-707-9651
 Home: 904-522-1725
 Email: js0767@att.com

- AT&T Business Systems
 - 1st Level Escalation:
 - **1**-800-925-2525
 - press 2, press 3
 - Be prepared with your customer number.
 - Notify if a Major outage.
 - Be sure to give the exact address of the problem.
 - Record your ticket #.
- AT&T Internet Services

DSL: 1-888-321-2375DIA, eMRS, VPN: 1-800-317-3343

AT&T Metro Ethernet

FDDI, MetroE, NMLI: 1-800-256-6923

AT&T Long Distance Repair:

• All 1-800-895-2222

 AT&T Account Team Members: (email is automatically forwarded to Blackberry)

Ismael "Ish" Gonzalez Account Mgr.

Office: 407-826-6628
 Cell: 407-256-7418
 Email: ig2476@att.com

Tom Gill Technical Sales Consultant

Office: 850-216-3548
 Cell: 850-591-6366
 Email: tg2394@att.com

Les Tomlin Technical Sales Consultant

Office: 904-359-7230
Cell: 904-228-6676
Email: It8142@att.com
Jeff Parsons Branch Manager
Office: 904-359-7211
Cell: 904-945-6472

Email: jeff.parsons@att.com

Jane Sloan DeVane Service Manager

Office: 904-798-6661
 Cell: 904-707-9651
 Home: 904-522-1725
 Email: js0767@att.com

Donna Reimer Service Consultant

Office: 954-838-1692
Email: dr6564@att.com

2. Telecommunications within the facility (and complex) is accomplished via a Nortel CS1000 phone switch in the EOC. The system is monitored 24 hours by the vendor.

Ronco Information:

Phone number: 888-879-8011

e-mail address: tampaservice@ronco.net

Customer number: 108475AA

3. Primary internet access is from BrightHouse Direct Access.

BrightHouse RoadRunner

877-632-2337

Direct Connect trouble reporting and escalation procedure:

First Contact Number: 407-215-5751 Tech Event Coordination

Team 24/7

2nd Contact Number: 386-267-7557 ext 1 Dispatch 3nd Contact Number: 386-804-1587 Steve Brislenn

Headend Manager

There is a secondary satellite based internet access system that can be put in place if necessary. This does not help with hosted internet sites, but would allow us to get information out of the facility if necessary.

4. Networking throughout the complex is primarily legacy Nortel switches and cores. Technical support for these systems is through:

Avaya Site Support Avaya Sold To # (Customer #) 0005202785 - Flagler County EOC 800-242-2121

5. Recover any servers or other damage.

Financial Systems - Tracking the costs of preparedness and recovery efforts will rapidly become a major issue. This facility has a backup generator for certain areas of the building. Verify power to the Kim C. Hammond Justice Center data center, and check fiber optic circuits to make sure connectivity is available.

With the exception of the Document Management System (DMS) County IT is not directly responsible for the day to day operations of the financial systems contact the Clerk's Office to offer any assistance in getting this system back up and running. Check and recover the DMS server as needed.

Government Services Building - This facility has a backup generator for the entire building. This facility houses many of the damage assessment teams, and as these teams return to report on damage, various departments within this facility will be needed. The priorities within this facility would be:

- 1. Property Appraiser's Office Recover network connectivity as necessary. Offer any assistance in recovering systems. These systems will be necessary in generating initial maps and cost analysis from the Damage Assessment teams.
- 2. Administration and Financial Services Financial tracking.
- 3. Building Department Damage Assessment teams, and permitting for repairs.
- 4. Planning Department Damage Assessment teams, and permitting for repairs.

Public Works Building - Public Works, General Services, Transportation etc. for financial tracking of personnel, equipment and material.

Airport - The airport will be the primary staging area for initial response from outside agencies. The ability for the airport to dispense fuel and process payments will become critical as soon as conditions are favorable to fly into or out of the facility.

Stations 11, 16, 21, 22, 41, 51 and 92 - Fire Rescue recovery efforts, inventory tracking, unit checkout and run reports.

Flight Operations Hangar - Damage assessment

Extension Service - Damage assessment of agricultural facilities.

Landfill - Even though closed this facility will still be used during the recovery process for debris management.

Remainder of the GSB.

Remainder of the Fire Rescue stations 31, 71 and 81

Utility Plant

Library

Senior Services facilities - David Segal Center, Senior Services administrative offices, and the Wickline Center for adult daycare and comfort stations.

Princess Place parks offices.