

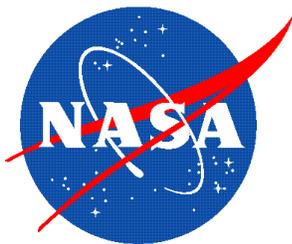
SUBORBITAL AND SPECIAL ORBITAL PROJECTS DIRECTORATE
803/Safety Office

Hurricane / Nor'easter Preparedness Plan

For

Wallops Flight Facility (WFF)

**Effective Date:
August 12, 2014
Version 01**



National Aeronautics and
Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

CONCURRENCE AND APPROVAL



Prepared
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12 AUG 2014
Date



Approved
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12 Aug 2014
Date

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1.0 INTRODUCTION

This plan establishes the responsibility and procedures to effectively and safely respond to and mitigate the effects of predicted severe wind events such as hurricanes or nor'easters occurring at or near the Wallops Flight Facility (WFF). Comments and questions concerning the contents of this plan should be addressed to the Safety Office, Code 803, Wallops Flight Facility, Wallops Island, Virginia 23337.

This is a controlled plan and will be reviewed annually and revised when necessary. This plan supercedes all previous versions of the Wallops Flight Facility Hurricane/Nor'easter Preparedness Plan.

1.1 Applicability

This plan applies to Goddard Space Flight Center (GSFC) personnel at WFF, all WFF Partner personnel, all Commercial Operations personnel and all Contract personnel at WFF. Use of the term "WFF personnel" in this Plan refers to all entities at WFF unless otherwise noted.

2.0 PURPOSE, SITUATION AND ASSUMPTIONS

2.1 Purpose

This plan provides for an effective and coordinated response in the event of a hurricane, significant nor'easter or other severe wind event. The objective for this plan's activation is to protect life, preserve WFF assets, and to quickly return to the conduct of our missions. This plan addresses the procedures to prepare projects, employees and facilities for storm impacts, for potential closure of the Island, for recovery projects and support to the local community.

2.2 Situation

WFF is one of many coastal localities in Virginia for which hurricanes and nor'easters may present major hazards. If a hurricane occurs in eastern Virginia, the coastal areas of Accomack County, including the entire WFF, are likely to be severely affected by storm surge and coastal flooding. If a hurricane passes near Accomack County, the storm surge at Wallops Island could reach almost 20 feet above sea level. The entire Island could experience major damage. All Island personnel will be evacuated if a major hurricane threatens the area. Nor'easters present similar hazards, and this plan will be used as appropriate when a nor'easter threatens WFF. When the term hurricane is used in the remainder of this plan, it is implied that the emergency response would be the same for a nor'easter or other severe wind/flood event.

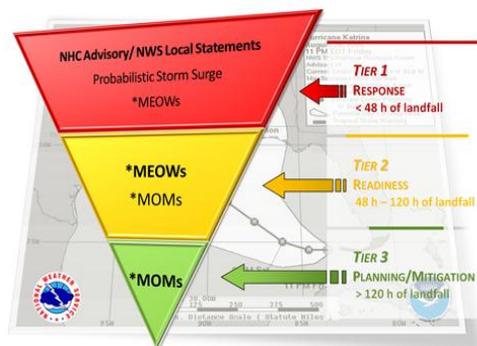
2.3 Assumptions

This plan was developed on the following assumptions:

- WFF will cooperate with local governments with planning and preparing for severe weather to the fullest extent possible.

- WFF will cooperate with the Virginia Department of Emergency Management (VDEM) with planning and preparing for severe weather to the fullest extent possible.
- WFF will cooperate with and support the Federal Emergency Management Agency (FEMA) and other agencies as available resources permit in post-hurricane recovery activities.
- Hurricane categories predict the intensity of hurricane winds according to the Saffir-Simpson Hurricane Wind Scale. Since the Wind Scale does not address the potential for other hurricane-related impacts (such as storm surge, wave height, rainfall-induced floods, and tornadoes), WFF responses will be dependent upon multiple storm forecasts issued from the WFF Weather Office, the NHC and Wakefield NWS. SLOSH modeling and HURREVAC software programs may also be utilized. Planned responses allow for protective actions and evacuations to be completed before the onset of Tropical Storm force winds. If a Category 3 or greater hurricane is expected, the Executive Management Team will decide whether to maintain a ride out crew or evacuate all personnel from WFF during the event.

<u>STORM TYPE</u>	<u>WINDS (MPH)</u>	<u>(KT)</u>
Tropical Storm	39 – 73	34-63
Category 1 Hurricane	74 - 95	64-82
Category 2 Hurricane	96 - 110	83-95
Category 3 Hurricane	111 - 129	96-112
Category 4 Hurricane	130 - 156	113-136
Category 5 Hurricane	>157	>137



3.0 CONCEPT OF OPERATIONS

3.1 Management

Emergency Operations will be directed and controlled by the Director of Suborbital and Special Orbital Projects who chairs the Executive Management Team (EMT) from Building F-6. The Emergency Coordinator will support these activities and establish an Emergency Operations Center (EOC) in Room 104 and an EOC Annex in Room 101 of Building E-107. Emergency operations will be phased, starting with a notification of impending storm conditions and ending with completion of the recovery process.

While close coordination is expected, the Director of Suborbital and Special Orbital Projects or the Emergency Management Coordinator may unilaterally close the Island and direct evacuation or other protective actions as necessary. WFF Partners & Commercial Operations may evacuate earlier at their discretion.

Each WFF Partner, Commercial Operation, and Contractor will direct and control emergency operations within its jurisdiction utilizing procedures they develop based on this Plan. These procedures will be implemented with life safety as a priority and include evacuation and governmental assets protection processes. These procedures will be provided to WFF Emergency Management.

Activities that involve shared resources (such as the WICC contract) will be coordinated by applicable department and agencies to ensure that the highest priorities are satisfied. All requests for WICC support will be made thru the WICC HELP desk (ext. 4357).

Procedures outlined in this plan are a guide to managing preparation, response, and recovery actions for hurricanes and nor'easters. For other extreme weather events (when sustained winds and/or flooding are not expected to exceed hurricane force, but are determined threats), the Executive Management Team (EMT) will meet and determine if actions within this plan should be implemented.

3.2 Sequence of Actions

Effective hurricane/nor'easter preparedness actions are continual. Preparation actions occur during normal operations, initial threat notifications, early coordination efforts to mitigate threats, deployment/demobilization of resources, and recovery operations. These actions will not necessarily occur in sequential order; some may be taken concurrently.

4.0 ROLES AND RESPONSIBILITIES

Each WFF Partner, Commercial Operation, and Contractor directs and controls emergency operations within its jurisdiction utilizing procedures they develop based on this Plan. It still remains essential that each jurisdiction within Wallops boundaries cooperate fully and fully assume all of its roles and responsibilities within this plan so that WFF personnel, and all its facilities, assets and environment remain as safe as possible.

4.1 Non-Emergency/Normal Operations: Roles and Responsibilities

Executive Management Team

- Review plans as requested
- Prior to each hurricane season, each team member will provide to Emergency Management updated and complete contact information.
- Participate in hurricane response exercises as requested

Emergency Management:

- Develop and maintain a WFF Hurricane/Nor'easter Response Plan. Update it annually prior to hurricane season.
- Maintain HURREVAC program on EOC and EM computers. Update the program as needed and at least annually.

- Maintain the SLOSH program on EOC and EM computers. Update the program as applicable.
- Assure the viability and accuracy of hurricane response contact lists
- Assure the viability and accuracy of hurricane response resource lists
- Assure the viability and accuracy of Space Act Agreements and any other applicable MOUs/MOAs
- Assign duties and responsibilities for staffing of the EOC
- Assure trained teams and their duties are available for implementation of emergency preparation, response and recovery operations
- Assure that facilities, equipment and resources are operative and sufficient for conducting emergency operations in the EOC
- Assure the EOC has a current copy of all Partners', Commercial Operations', & Contractors' Hurricane Response Plans
- Meet with Accomack County Emergency Management to review past year's events and responses. Review and update as necessary any MOU's needed with the county for effective hurricane response.
- Provide hurricane preparedness materials to the WFF community via newsletters, websites and other media
- Request that the WFF Fire/EMS department perform a pre-hurricane season size-up of WFF for location of possible mitigation actions
- Identify loose items located on WFF property that may become a hazard during high wind or flood events. Contact appropriate department or agency to assure that items are secured.
- Exercise the hurricane/nor'easter response plan at least annually. Develop an After Action Report after each exercise and implement needed changes into the Plan as necessary to assure effective emergency response.
- Maintain a record of NIMS compliancy training of hurricane response personnel
- Provide training classes to hurricane emergency response personnel as necessary to maintain NIMS compliancy

WFF Partners, Commercial Operations, and Contractors

- Develop and maintain a department/agency specific Hurricane/Nor'easter Response Plan. Review it annually and update as needed prior to hurricane season.
- Assure the viability and accuracy of your entity's hurricane response contact lists, resource lists, and emergency contracts and provide this information to WFF EM prior to each hurricane season
- Identify and maintain a list containing current contact information of essential services and facilities which must continue to operate, and may need to be protected during a hurricane and provide this information to WFF EM prior to each hurricane season
- Mitigate all possible actions identified as hazardous during a previous hurricane event or exercise
- Identify loose items or equipment present within your domain that may become a hazard during high wind or flood events. Take corrective actions to assure that items are secured.

- Assure, as applicable, that at least 2 people from your entity are trained and competent in conducting Damage Assessments
- Participate in hurricane response exercises as requested
- As applicable, assure ample supply of sand bags are stored
- Ensure necessary hurricane related materials are stocked

WFF Weather Office

- Develop and maintain procedures for alerting WFF and all WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.) of potential storm events that may require activation of this Plan.
- Assure procedures for staffing of the Weather Office during activation of this plan are developed, updated and optimal.
- Prior to each hurricane season, all staff available for this Plan activation will provide to EM updated and complete contact information.
- Participate in hurricane response exercises as requested

All WFF Codes

- Department heads must become familiar with this Plan and assure that they or their specifically designated representative(s) are responsible for carrying out all applicable Plan responsibilities.
- Provide to EM annually prior to hurricane season, updated and complete contact information of department head or the designated representative.
- Assure, as applicable, that at least 2 people from the department are trained and competent in conducting Damage Assessments
- Participate in hurricane response exercises as requested

4.2 Condition V – 120 – 96 Hours – Alert & Begin Preparations: Roles and Responsibilities

Condition V may be established as soon as the WFF Weather Office alerts Emergency Management that tropical storm force winds (> 39 mph) or stronger are possible within 120 - 96 hours (5 - 4 days) at WFF. The WFF Weather Office will alert Emergency Management if an approaching storm may possibly impact a WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.) earlier than WFF. Partners, Commercial Operations and /or Contractors with interests in these off-site projects may have to proceed through these Condition levels at a different pace or in conjunction with Condition levels for WFF.

Condition levels, while based primarily on storm impact timing to WFF, may be adjusted to allow for protective action tasks completion during normal working hours.

WFF Center Director:

- Conduct initial meeting(s) with EM to consider, at a minimum, the following:
 1. Weather Office data regarding potential storm impacts to Wallops
 2. A discussion, with the weather briefing as the basis, for when and if to start mitigation preparations

3. Determine any actions needed for applicable WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.)
4. Determine a 96 Hour and/or 72 Hour-to-impact meeting time and place if applicable

Emergency Management:

- Notify EMT of impending storm
- Review impending storm timelines and develop an action plan
- Request that Fire/EMS department perform a pre-storm size-up of conditions and facilities possibly needing protective actions
- Evaluate long lead time preparation activities
- Prepare for the possibility of staffing the WFF EOC for the duration of the storm
- Notify the Navy and the Coast Guard that if any of their personnel or personnel's family will remain in WFF housing units during a storm ride out period, a representative may be requested in the EOC Annex capable of staying in the EOC for the duration of the storm
- Inquire of the Coast Guard and Navy if any of their assets must be secured at WFF and if those assets require a ride out crew separate from the EOC Annex
- Notify all applicable WFF entities that WICC requires a list of emergency protective action projects at least 72 hours in advance of tropical storm force winds
- Coordinate with applicable partners if the approaching storm may possibly impact WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.)
- Review this plan and any other applicable plans
- Review and update as necessary any contact lists
- Review and update as necessary MOU's and any other emergency contracts
- Notify GSFC – Greenbelt EM and NASA HQ EM of possible storm impact
- Assure that all EOC, Mishap Trailer and EOC Annex equipment is functional. Refer to EOC Equipment checklist in WebEOC.
- Survey EOC communications capabilities to include operative LMR radios, satellite phones, GETS cards, SHARES, etc.
- Begin inputting at least daily a situation report into WebEOC.
- *Ongoing throughout storm's progress* - Upon notification from the WFF Weather Office of any significant changes in the storm forecast, alert as soon as possible all entities having a role in this Plan.

Office of Communications

- Review this plan and any other applicable plans
- Review and update as necessary any contact lists
- Prepare for the possibility of providing representatives in the WFF EOC for the duration of the storm
- Assure EM has current contact information for Office of Communications staff
- Review and update as necessary “canned” announcements for WFF personnel and the general public regarding the pending storm – preparedness information, WFF closures, evacuations, sheltering information, etc.
- Alert all WFF personnel of possible storm conditions

- Coordinate ALL emergency public information news releases. Partner, Commercial Operations, and Contractor PIOs will coordinate any event specific news releases with WFF Office of Communications prior to dissemination to the media.

WFF Weather Office

- Review this plan and any other applicable plans.
- Assure EM has current contact information for Weather Office staff
- Alert Emergency Management if the approaching storm may possibly impact WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.).
- *Ongoing throughout storm's progress* - Alert Emergency Management of any significant storm forecast changes as soon as possible.

Navy, Coast Guard and Commercial Operations

- Prepare for the possibility of providing representatives in the WFF EOC Annex for the duration of the storm

All WFF Codes, Partners, Commercial Operations, and Contractors

- Review this plan and any other applicable plans.
- Assure EM has current contact information for any and all staff that will have a role in event emergency response
- As applicable, prepare for the possibility of providing representatives in the WFF EOC or EOC Annex for the duration of the storm
- Review and update as necessary any contact lists.
- PIOs will coordinate any event specific news releases with WFF Office of Communications prior to dissemination to the media.

4.3 Condition IV – 72 Hours – Begin and/or Continue Preparations: Roles and Responsibilities

WFF will transition into Condition IV preparations when tropical storm force winds (> 39 mph) or stronger are anticipated within 72 hours (3 days) at WFF. At the request of the WFF Center Director and EM, these preparations may begin prior to 72 hours before the storm's impact

Executive Management Team (EMT)

- Conduct meeting(s) with all applicable WFF entities to consider, at a minimum, the following:
 1. Assurance that all appropriate entities are present
 2. Assurance that only people listed in the EOC's Executive Management Team List (or their delegate) is present. This list is Appendix B of this plan.
 3. A weather briefing from WFF Weather Office regarding the current storm
 4. Review of potential storm impacts – to include at the minimum, inland rainfall and resultant flooding, high tides and potential coastal flooding, storm surge, wind predictions and impact date and times
 5. A decision, with the weather briefing as the basis, on how best to proceed with mitigation preparations

6. Prioritize a list of protective measures needed if Commercial Operations have substantial assets on site (rocket on the pad, payloads on site, etc.)
 7. Prioritize a list the list of protective measure projects provided by all affected WFF entities to be completed by WICC
 8. Determine if Commercial Operations assets are so situated (such as a rocket on the pad, payloads on site, etc.) as to require Commercial Operations representatives be part of the EOC Ride-Out crew
 9. Receive mitigating status updates for applicable WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.)
 10. Determine a 48 Hour – Condition III meeting(s) time and place
- Office of Communications will disseminate a post meeting summary of potential weather impacts and other pertinent information for distribution to WFF all

Emergency Management:

- Activate EOC with a skeletal crew that will begin monitoring storm system from the EOC
- Schedule for EOC storm ride-out crew, 2 shifts deep/position. Ride-out crews may not be applicable for Category 3 and above storms.
- Determine when EOC ride out crew will be allowed time away from work to prepare their homes and families for storm impacts. Ride-out crews should be allowed to make final preparations at their homes prior to Condition I.
- Contact Disaster Recovery Center team members for initial polling of work availability post-storm during Recovery operations
- Issue to all applicable entities the Essential Personnel roster request form for event Ride out crews, Windshield Survey team, Initial Damage Assessment teams, and Detailed Damage Assessment teams.
- Provide electronic standardized information sheets to all entities having ride out crews detailing what is necessary for ride out crew members to bring with them
- Disseminate EOC staffing schedule to all applicable parties - the schedule will be complete to the end of the ride-out period
- If applicable, coordinate Commercial Operations move to the EOC Annex for Ride Out operations
- Coordinate as necessary, the Navy's, Coast Guard's and/or Commercial Operations' EOC move to the EOC Annex for Ride Out operations
- Begin providing a daily situation report to GSFC - Greenbelt EM and NASA HQ EM
- Establish contact with Accomack County Emergency Management for at the minimum:
 1. Potential storm impact data sharing
 2. Conference call scheduling
 3. Potential activation of MOU for utility personnel sheltering in dorm rooms and equipment sheltering on main base
 4. Local shelter opening times: This information will be shared with the Office of Communications for dissemination to WFF personnel
- Establish contact with the Delmarva Emergency Task Force (DETF) for at the minimum:
 1. Potential storm impact data sharing
 2. Conference call scheduling

3. Local shelter opening times: This information will be shared with the Office of Communications for dissemination to WFF personnel

Office of Communications

- Update all WFF personnel of current storm conditions and possible impacts via intercom, blanket emails, website or other best available means. Include at the minimum the following information:
 1. Access to local (Delmarva) shelter locations and openings information - a listing of local media outlets is in the EOC Resource Annex
 2. General information on emergency preparedness – food supplies, sheltering at home, vulnerability of mobile homes and coastal homes, special needs considerations, pet considerations, preparing your boat, etc.
 3. Information on where to obtain emergency preparedness information – websites, etc.
 4. With assistance from FOMs, prepare and issue information on what they can do to protect their workspace – turning off electronics, protecting electronics with plastic sheeting, removing electronics and paper items off the floor, securing paper objects within plastic, backing up computer files, etc.

WFF Weather Office

- Conduct weather briefing for EMT meeting
- Conduct protective actions with other partners listed below

All Other WFF Codes, Partners, Commercial Operations, and Contractors

- Complete submittal requests for WICC support of all protective actions thru the WICC HELP desk (x4357) using priority list generated at EMT meeting as a guide
- Conduct planning meetings to reaffirm responsibilities and review specialized requirements Meetings should include at the minimum:
 1. Implementation of hurricane/nor'easter emergency preparations checklist - a hard copy form of this checklist is Appendix A of this Plan
 2. As applicable, review and assure return to EM of Essential Personnel roster, at least 2 shifts deep/position via electronically sent standardized form. Ride-out crews may be inappropriate for Category 3 and above storms.
 3. When applicable, determine when ride out crew will be allowed time away from work to prepare their homes and families for storm impacts. Ride-out crews should be allowed to make final preparations at their homes prior to Condition I.
- Begin regular updates of completed hurricane/nor'easter emergency preparations checklist items into WebEOC. A hard copy form of this checklist is Appendix A of this Plan.
- Assure that Facility Operations Managers (FOMs) continue to secure high wind/flooding hazard items and other preparations duties. Contact appropriate department or agency to assure that items are secured.

4.4 Condition III – 48 Hours – Active Preparation: Roles and Responsibilities

WFF will transition into Condition III preparations when tropical storm force winds (> 39 mph) are anticipated within 48 hours (2 days) at WFF.

Executive Management Team (EMT)

- Conduct meeting(s) with all applicable WFF entities to discuss, at a minimum, the following:
 1. A weather briefing from WFF Weather Office regarding the current storm
 2. Review of potential storm impact changes from previous day – to include at the minimum, inland rainfall and resultant flooding, high tides and potential coastal flooding, storm surge, wind predictions and impact date and times.
 3. With input from Emergency Management, determine if and when to close WFF, allowing time for employees to evacuate their homes
 4. Review list of protective measure projects provided by all affected WFF entities to be completed by WICC and adjust as necessary
 5. Receive status updates and determine any additional protective actions needed for applicable WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.)
 6. Determine a 24 Hour – Condition II meeting(s) time and place

Emergency Management:

- Staff the EOC with a part time crew that will continue to monitor storm system and its impact on WFF and the county
- Request through the Fire Chief that Fire Department patrols report areas which need additional preparation
- Utilize HURREVAC, input from the WFF Weather Office, input from NWS Wakefield, VDEM, and evacuation announcements from surrounding counties to advise EMT of evacuation needs
- Continue as applicable, coordination activities for Navy, Coast Guard, and Commercial Operations into EOC Annex operations
- Continue as applicable, to coordinate EOC Annex activities with Commercial Operations
- Continue providing a daily situation report to GSFC – Greenbelt EOC and NASA HQ EOC
- Continue contact with Accomack County Emergency Management for at minimum:
 1. Potential storm impact data sharing
 2. Update of utility personnel sheltering in dorm rooms and equipment sheltering on main base needs
 3. Local shelter opening times
- Continue contact with DETF for at minimum:
 1. Potential storm impact data sharing
 2. Local shelter opening times

Contact Town of Chincoteague EOC for status data sharing

Assure the return from all applicable entities the request form for Essential Personnel roster - including Ride out crews, Windshield Survey team, Initial Damage Assessment teams, and Detailed Damage Assessment teams Discuss with WEMA the possibility of operating the

building E-2 cafeteria post-storm for WFF recovery teams, emergency crews and others before WFF is returned to normal operations

Office of Communications

- Continue to update via best available means, all WFF personnel of WFF closures, evacuations, current storm conditions and possible impacts

WFF Weather Office

- Conduct weather briefing for EMT meeting
- Conduct protective actions as with other partners listed below

Navy, Coast Guard & Commercial Operations

- Continue, as applicable, to coordinate EOC Annex activities with WFF EM

All WFF Codes, Partners, Commercial Operators, and Contractors

- Submit any unforeseen mitigation requests for WICC support of all protective actions thru the WICC HELP desk (x4357) using priority list generated at EMT meeting as a guide.
- Conduct meetings to reaffirm responsibilities and review specialized requirements.
- As able, continue progress updates on hurricane/nor'easter emergency preparations checklist into WebEOC. If unable to access WebEOC, supply applicable checklist items actions electronically to WFF EM. A hard copy form of this checklist is Appendix A of this Plan. Assure that Facility Operations Managers (FOMs) have secured all high wind/flooding hazard items from around their buildings.

4.5 Condition II – 24 Hour – Active Preparation: Roles and Responsibilities

WFF will transition into Condition II preparations when tropical storm force winds (> 39 mph) are anticipated within 24 hours at WFF.

Executive Management Team (EMT)

- Conduct meeting(s) with all applicable WFF entities to contain, at a minimum, the following:
 1. An updated weather briefing from WFF Weather Office regarding storm status
 2. Review of potential storm impact changes from previous day – to include at the minimum, inland rainfall and resultant flooding, high tides and potential coastal flooding, storm surge, wind predictions and impact date and times
 3. Make final determination of when to close WFF, allowing time for employees to safely evacuate their homes
 4. Review list of protective measure projects provided by all affected WFF entities to be completed by WICC and re-prioritize as necessary
 5. Assure all protective measures and evacuations needed for applicable WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.) have been completed
 6. Determine a 12 Hour – Condition I meeting(s) time and place

Emergency Management:

- Prepare to fully staff the EOC within 12 hours
- Continue requests for Fire Department patrols to report areas which need additional preparation
- Assure adequate food, water and janitorial supplies for ride-out crews are complete
- Assure scheduling of ride-out staff
- Assure scheduling of Windshield Survey (WS), Initial Damage Assessment (IDA), Detailed Damage Assessment (DDA) Teams, and Disaster Recovery Center staff
- Assure all WS, IDA, and DDA Team contact info is current and reflective of any evacuation moves made
- Continue to utilize HURREVAC, input from the WFF Weather Office, input from NWS Wakefield, VDEM, and evacuation announcements from surrounding counties to determine safe evacuation times for WFF personnel
- Continue progress updates of hurricane/nor'easter emergency preparations checklist into WebEOC
- Continue as applicable, coordination activities for Navy and Coast Guard EOC Annex operations
- Continue as applicable, to coordinate EOC Annex activities with Commercial Operations
- Continue providing at least daily a situation report to GSFC – Greenbelt EOC and NASA HQ EOC

Office of Communications

- Continue to update all WFF personnel of WFF closures, current storm conditions and possible impacts via all available means

WFF Weather Office

- Conduct weather briefing for EMT meeting
- Conduct protective actions as with other partners listed below

Navy, Coast Guard & Commercial Operations

- Continue, as applicable, to coordinate EOC Annex activities with WFF EM

All Other WFF Codes, Partners, Commercial Operations, and Contractors

- Continue to complete hurricane/nor'easter emergency preparations checklist items. A hard copy form of this checklist is Appendix A of this Plan
- As able, continue progress updates of hurricane/nor'easter emergency preparations checklist into WebEOC. If unable to access WebEOC, supply applicable checklist items actions electronically to WFF EM. Assure that ride-out crews from your department/agency have or will have soon completed home and family preparations

4.6 Condition I – 12 Hours – Final Preparations: Roles and Responsibilities

WFF will transition into Condition I preparations when tropical storm force winds (> 39 mph) are anticipated within 12 hours at WFF.

Executive Management Team (EMT)

- Conduct final meeting(s) with all applicable WFF entities to contain, at a minimum, the following:
 1. An updated weather briefing from WFF Weather Office regarding storm status
 2. Review of potential storm impact changes from previous briefing – to include at the minimum, inland rainfall and resultant flooding, high tides and potential coastal flooding, storm surge, wind predictions and impact date and times.
 3. Assure list of WFF protective measure projects are complete
 4. Assure all protective measures and evacuations needed for WFF off-site project locations under the cognizance of NASA (Bermuda, Coquina, etc.) are complete
 5. Assure EMT event contact info is current and reflective of any evacuation moves made
 6. Determination of when/if to cut electrical power to Wallops Island – if possible, at least 2 hours' notice given to Code 700 for communications shut off to Island
 7. Determine a Post Storm meeting time and place

Emergency Management:

- Assure full staffing of the EOC
- Assure all GSA vehicles are topped off with fuel
- Assure GSA vehicles are parked in an area accessible to the EOC
- Assure at least two Security 4 WD vehicles are parked in an area accessible to the EOC for post storm damage assessment
- Inquire as to feasibility of obtaining access to contractor vehicles needed for potential damage assessments
- Assure optimal placement of Mishap Trailer and tow vehicle for post storm activities
- Utilize HURREVAC, SLOSH, input from the WFF Weather Office, and evacuation announcements from surrounding counties to determine absolute evacuation times for WFF personnel
- Assure EOC staff, Fire/EMS, Security and Facilities personnel for Ride-Out conditions through to Recovery is adequate and complete
- Assure Commercial Operations, Navy and Coast Guard personnel in EOC Annex for Ride-Out conditions through to Recovery is adequate and complete
- Assure adequate food, water and janitorial supplies for EOC/EOC Annex ride-out staff
- Assure EOC Ride-out staff has brought enough food to support themselves for 3 – 5 days
- Assure scheduling & positioning of Recovery Teams (Windshield Survey, IDA, Detailed DA)
- Assure Recovery Team contact info is current and reflective of any evacuation moves made
- Continue providing at least daily a situation report to GSFC – Greenbelt EOC and NASA HQ EOC

- Contact Accomack County to confirm or receive final requests for utility personnel sheltering
- Deploy Fire Department patrols to report and/or assist with any areas which need final preparations
- Complete updates of hurricane/nor'easter emergency preparations checklist into WebEOC

Office of Communications

- Notify all WFF personnel of WFF absolute closures, anticipated return dates, and how to obtain updated facility information off-site
- Conduct protective actions as with other codes listed below

WFF Weather Office

- Conduct final weather briefing for EMT meeting
- Conduct protective actions as with other partners listed below

Navy, Coast Guard & Commercial Operators

- Complete assimilation activities into EOC Annex

All WFF Codes, Partners, Commercial Operations, and Contractors

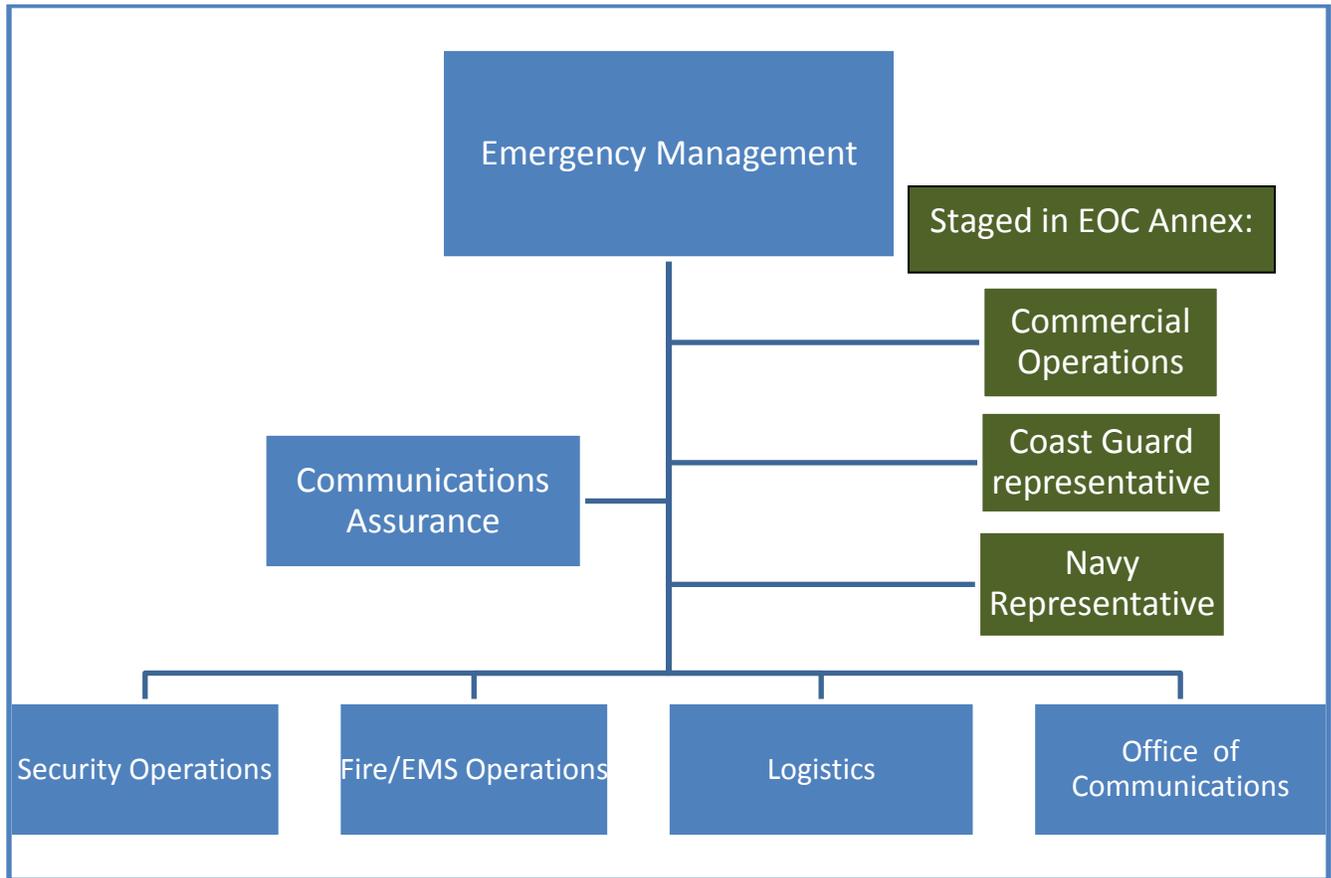
- Complete hurricane/nor'easter emergency preparations checklist items – a hard copy form of this checklist is Appendix A of this Plan
- As able, complete updates of hurricane/nor'easter emergency preparations checklist into WebEOC – a hard copy form of this checklist is Appendix A of this Plan. If unable to access WebEOC, supply applicable checklist items actions electronically to WFF EM.
- Assure that ride-out crews from your department/agency have completed home and family preparations

4.7 Ride-Out – In Preparation for onset of Tropical Storm Force Winds: Roles and Responsibilities

All WFF personnel not involved in emergency response must evacuate WFF before the onset of tropical storm force winds. All WFF Ride Out personnel not in Building E-107 (Fire/EMS, WICC, and Security) will have a point of contact within the EOC and will follow the direction of the EOC for any and all operations from the time WFF closes until the EOC issues distinct direction on Recovery efforts. Representatives from the Navy, as well as Commercial Operations (if applicable) and the Coast Guard (if applicable) will stage their operations in the EOC Annex, will have a point of contact (POC) within the EOC and will follow the direction of the EOC for any and all operations from the time WFF closes until the EOC issues distinct direction on Recovery efforts.

The EOC will be fully staffed for the duration of the storm and will operate per the following EOC command structure. A detailed list of roles and responsibilities follows the EOC Structure diagram.

EOC Command Structure



EOC Staff Roles and Responsibilities –

Emergency Management:

- Incident Command during the entire event
- Resource requests
- Manage & maintain ride out personnel access list
- Continue to monitor storm's progress using WFF Weather Office feeds, NWS Wakefield, VDEM, SLOSH and HURREVAC updates
- Prior to 50 mph sustained winds or flooding, order Island power be shut off using the procedures outlined in Appendix G
- Monitor all camera feeds to observe possible damage to WFF (seawall breach, storm surge flooding, wind damage to buildings, etc.).
- Record if possible, by photo, video and/or WebEOC, storm damages to WFF infrastructure
- Continue providing, at least daily, a situation report to GSFC – Greenbelt EOC and NASA HQ EOC
- Continue contact with Accomack and Chincoteague EOCs as needed
- Continue to apprise GSFC WFF Facility Director of WFF status updates

- Track expenditures by WICC and Codes that support storm protective actions and recovery activities
- Develop a recovery plan
- Develop and coordinate damage assessment team activities
- Develop and coordinate Disaster Recovery Center activities
- Maintain EOC & EM action logs for briefing of next shift

Communications Assurance:

- Assure radio communications between all Ride-out staff is maintained and reliable.
- Assure EOC handheld radios are charged and operative
- Assure HF radio communication pathways to Accomack EOC, Chincoteague EOC, VEOC, NASA SHARES, and other necessary contacts
- Maintain action log for briefing of next shift

Security Operations:

- Monitor Weather Office televised information for wind increase values to determine adequate amount of time for 50 mph sustained winds or flooding evacuations and other applicable procedures (power shut down, gate closure, etc.)
- When sustained wind speeds reach 40 – 45 mph, advise ride-out security personnel at WFF that emergency services will shut down when sustained winds reach 50 mph on the Main Base gauge or Island gauge - whichever measures 50 mph sustained first.
- Notify Main Base, Island, and housing gate security officers of approach of 50 mph sustained winds and assure closure of gates and evacuation of security officers
- When sustained winds reach 50 mph, notify all ride-out security personnel that emergency services are suspended.
- Instruct Dispatch to maintain a log of calls that cannot be answered because of emergency services suspension
- When sustained winds fall below 50 mph, notify all ride-out security personnel that emergency services are again operative.
- Maintain action log for briefing of next shift

Fire/EMS Operations:

- Monitor Weather Office televised information for wind increase values to determine adequate amount of time for 50 mph sustained winds or flooding evacuations and other applicable procedures (Station 2 evacuation, gate closure, etc.)
- Implement evacuation of Fire Station 2 prior to 50 mph sustained winds or before storm surge over wash of roadways
- When sustained wind speeds reach 40 – 45 mph, advise ride-out Fire/EMS personnel at WFF that emergency services will shut down when sustained winds reach 50 mph on the Main Base gauge or Island gauge - whichever measures 50 mph sustained first.
- When sustained winds reach 50 mph, notify all ride-out Fire/EMS personnel that emergency services are suspended.
- When sustained winds fall below 50 mph, notify all ride-out Fire/EMS personnel that emergency services are again operative.

- Contact Eastern Shore 911 Communications of both emergency services suspensions and resumption
- Maintain action log for briefing of next shift

Logistics:

- Ride out crew food and lodging requests
- Monitor all camera feeds to observe possible damage to WFF (seawall breach, storm surge flooding, wind damage to buildings, etc.)
- Monitor Weather Office televised information for wind increase values to determine adequate amount of time for 50 mph sustained winds or flooding evacuations and other applicable procedures (power shut-downs, gate closure, etc.)
- If needed, arrange for electrical power shut off to the Island
- When sustained wind speeds reach 40 – 45 mph, advise all ride-out WICC personnel at WFF that emergency services will shut down when sustained winds reach 50 mph on the Main Base gauge or Island gauge - whichever measures 50 mph sustained first.
- When sustained winds reach 50 mph, notify all ride-out WICC personnel that emergency services are suspended
- When sustained winds fall below 50 mph, notify all ride-out WICC personnel that emergency services are again operative
- Respond to trouble calls, as able during the event, if response can be made without jeopardizing personnel safety
- Record if possible, by photo, video and/or WebEOC, storm damages to WFF infrastructure
- Maintain action log for briefing of next shift

Office of Communications:

- Disseminate information to WFF personnel and local media outlets using all available means of communication
- Record if possible, by photo, video and/or WebEOC, storm damages to WFF infrastructure
- Maintain action log for briefing of next shift

EOC Annex Staff Roles and Responsibilities –

Navy:

- A Navy representative will manage Navy assets and resources.
- The EM Coordinator or EOC Coordinator will be the Navy's EOC POC

Coast Guard:

- A Coast Guard representative will manage Coast Guard assets and resources.
- The EM Coordinator or EOC Coordinator will be the Coast Guard's EOC POC

Commercial Operations:

- A Commercial Operations representative will manage Commercial Operation assets and resources.
The EM Coordinator or EOC Coordinator will be the Commercial Operations' EOC POC

4.8 Recovery and Damage Assessment: Roles and Responsibilities

WFF will manage a comprehensive and coordinated recovery process to bring about the most effective restoration of facilities, services, infrastructure, and mission related activities, while providing for the health, welfare and safety of the WFF community. The recovery process is comprised of the following phases: Windshield Surveys, Initial Damage Assessments, Detailed Damage Assessments, the formulation of short and long term priorities, and implementation of appropriate restoration strategies. The entire damage assessment plan is located in the WFF Emergency Operations Plan (803-PLAN-0003)

Recovery operations may begin as emergency operations continue.

Damage Assessment Teams:

- As soon as possible after wind/rain conditions allow for safe travel, one firefighting unit staffed with 2 personnel and a ride-out team (consisting of 1 representative each from: Code 228 Engineering, Security, WICC, and Code 803Safety) will travel to the Island Causeway Bridge. The Code 228 Engineer will conduct an initial assessment of the Bridge, looking for structural damage or other hazards that may pose a traffic passage risk.
- Once bridge integrity is established:
 1. If known potential for chemical hazards exists, the firefighting unit ONLY will proceed across the bridge performing continuous sniff tests en route to areas related to any chemical alarms.
 2. If no known potential for chemical hazards exist on the Island, the firefighting unit can proceed WITH the ride-out team to conduct a Windshield Survey of the Island.
- The Windshield Survey team will report back to the EOC conditions and recommend any forward actions. Initial Damage Assessment will continue only after this assessment of the bridge and a safe chemical hazards report is complete. **NO ONE ELSE WILL BE ALLOWED ON THE ISLAND BEFORE THE WINDSHIELD SURVEY TEAM'S SURVEY IS COMPLETE AND REPORTED.**
- Once given EOC authority to proceed, Initial Damage Assessment (IDA) teams will deploy. IDA teams will consist of 3 – 4 teams composed of personnel only from Code 803 Safety, Security, Fire/EMS, IT, WICC, and Code 228 FMB. As applicable, 1 Navy representative and 1 commercial operations representative may be part of the IDA. This team will report back to the EOC conditions and recommend any forward actions.
- Once given the EOC authority to proceed, Detailed Damage Assessment Teams may be deployed. Detailed Damage Assessment Teams will consist of personnel with safety training in hazard recognition and identifying hazards within their respective expertise. Teams will include personnel with training and or expertise in building structure, electrical, utilities and systems, optics, communications and safety. Teams may include partner & commercial operations personnel. If additional personnel are needed to assess damages (i.e. range personnel etc.) appropriate personnel will be called.

Executive Management Team (EMT)

- ** Participate, if possible and needed, in a meeting/conference call with EM to discuss at a minimum the following:

1. Briefing with regards to storm's severity and known impacts to surrounding areas
 2. Windshield Survey report
 3. Initial Damage Assessment report
 4. Detailed Damage Assessment report
 5. Restoration of power to the Island
 6. Safety review and release of Island for re-opening
 7. Additional post-storm actions as needed
 8. Prioritize recovery actions
- After EMT briefing of facility conditions, concur with Emergency Management on most effective timing and limitations of personnel returning to WFF
 - Determine employee work status (facilities open/closed/partially opened)

** For less severe storms, the EMT may elect to suspend this meeting **

Emergency Management:

- An “All Clear with any defined limitations” order to the Ride Out team will be given by Emergency Management based on the following conditions:
 1. Confirmation from NWS reports that the storm has passed WFF
 2. The WFF has not experienced sustained winds in excess of 39 mph for more than one hour
- Once “All clear” is given by EM, deploy a Windshield Survey team to evaluate overall condition of Island if bridge inspection and chemical hazard reports deems it safe to do so
- Deploy Initial Damage Assessment (IDA) team(s) to:
 1. Evaluate condition of roadways
 2. Evaluate condition of utilities
 3. Evaluate exterior condition of buildings
 4. Inspect for other hazards such as hazardous material, dead animals, UXO, etc.
- If applicable, make recommendation on opening Island, Mainland and Main Base for Detailed Damage Assessments
- Contact designated Code 250 POC regarding any hazardous material or other environmental issues
- Issue an “All Clear with any defined limitations” order for WFF based on the following conditions:
 1. An Initial Damage Assessment verified that personnel needing access for Detailed Damage Assessment and/or general WFF personnel can do so safely. Special consideration was given to the stability of roads, bridges, safety of electrical power, potable water and wastewater systems. Areas were checked for the presences of hazardous materials, and other issues that could provide serious health concerns
 2. Concurrence has been received from the Code 800 Director or designee
- If applicable, stand up a Disaster Recovery Center in the EOC Annex
- Coordinate with WICC for activation of their Power Up/Down Plan. All power up/down operations will be per the WICC Plan.
- If applicable, notify SCSC (ext. 2068) and Commercial Operations for coordination of activities prior to restoring power on the Island so as to minimize damage to equipment in the facilities.

- After coordination with Code 228 FMB, notify GSFC – Greenbelt of Initial Damage Assessment results within 24 hours of storm’s end
- After coordination with Code 228 FMB, submit follow-up written IDA report of repair estimates to GSFC – Greenbelt within 48 hours
- Continue providing, at least daily, a situation report to GSFC - Greenbelt EM and NASA HQ EM until Damage Assessment is complete
- Request assistance, if necessary, from GSFC – Greenbelt EM and NASA HQ EM
- Cooperate, as able, with FEMA and other applicable organizations to support airlifts, communications, emergency power, water, and other services as available
- Conduct an after actions meeting with applicable entities within ten working days post storm, to review lessons learned and to determine if adjustments to the plan are needed

Security:

- Assure that no unauthorized access occurs on the Island, Main Base and Mainland

Office of Communications

- Notify all WFF personnel of WFF damage conditions, opening times, and/or how to obtain updated facility information off-site

APPENDIX A – HURRICANE PREPAREDNESS ACTIONS CHECKLIST

CONDITION V – 120 - 96 HOURS TO TROPICAL STORM FORCE WINDS (>39 MPH)

All Entities having a part in implementation of this Plan

- Assure Roles and Responsibilities of your respective organization as listed in Section 4.2 have been reviewed and understood by all affected
- Review Hurricane Response plans for Condition IV

Code 200 and SCSC Public Works/Supply Officer

- Assure ample supply of sandbags
- Review portable generator status and possible relocation
- Review Hurricane Response plans for Condition IV

CONDITION IV -- 72 HOURS TO TROPICAL STORM FORCE WINDS (>39 MPH)

Code 200 and SCSC Public Works/Supply Officer

- ❑ Move hazardous waste to Mainland (250)
- ❑ Checkout fuel pumps, generators, and vehicles (228/PW)
- ❑ Assure generator at X-79 is moved up the ramp
- ❑ Secure X-141 Switch Box
- ❑ Stock emergency supplies, (plywood, anchors, rope etc.) (233/SO)
- ❑ Remove equipment and debris adjacent to buildings (all)
- ❑ Assure availability of all Island floodgates (228)
- ❑ Notify Construction Contractors to remove/secure equipment, and inform them of possible WFF closure, etc. (228/PW)
- ❑ Fill fuel tanks, also contact NOAA for emergency fuel needs
- ❑ Stock janitorial supplies for EOC
- ❑ Stock janitorial supplies for Ride-out crew locations
- ❑ Review Hurricane Response plans for Condition III

Code 800/500/400 and SCSC Operations

- ❑ Notify range users and projects
- ❑ Identify storage/parking areas for Island equipment
- ❑ Plan hanger space utilization
- ❑ Initiate Security Plans for classified materials
- ❑ Secure antennas identified at EMT meeting (453)
- ❑ Review Hurricane Response plans for Condition III

Security

- ❑ Survey the Main Base and Wallops Island for any loose materials that may be picked up by strong winds or any other potential hazards and report to Shift Supervisor
- ❑ Brief all Security personnel of daily updates of Hurricane plans and weather updates
- ❑ Review Hurricane Response plans for Condition III

Management Education Center

- ❑ Consider and plan for possible re-scheduling of programs occurring during storm period and possibly after storm passes
- ❑ Plan for scheduling early departure of guests needing an extended travel timeframe
- ❑ Review Hurricane Response plans for Condition III

CONDITION III -- 48 HOURS TO TROPICAL STORM FORCE WINDS (>39 mph)

Code 200 and SCSC Public Works/Supply Officer

- Inspect and test emergency generators at D-50
- Inspect and test emergency generators at F-16
- Inspect and test emergency generators at U-12
- Inspect and test emergency generators at U-25
- Inspect and test emergency generators at U-55
- Inspect and test emergency generators at V-16
- Inspect and test emergency generators at X-15
- Inspect and test emergency generators at X-75
- Inspect and test emergency generators at ASR 8
- Inspect and test emergency generators at critical site X-79
- Inspect and test emergency generators at critical site H-100
- Move heavy equipment off the Island
- Assist in securing/relocating trailers, antennas, radar units, etc. - ROC will be responsible for securing most ROC assets
- Inspect all hazardous waste storage sites for cleanup and secure storage (250)
- Inspect all hazardous material and waste containment areas for possible overspill/overflow during heavy rain periods (250)
- Inspect all oil water separators for possible overspill/overflow during heavy rain periods (250)
- Assure Strap Tie-Downs on above ground fuel storage are in place
- Check operation on all storm water flood gate @ Bld. X-15 (11 gates)
- Check operation on all storm water flood gate @ Bld. X-75 (3 gates)
- Check operation on all storm water flood gate @ Bld. Y-15 (2 gates)
- Check operation on all storm water flood gate @ Bld. Y-30 (4 gates)
- Check operation on all storm water flood gate @ Bld. Y-40 (5 gates)
- Check operation on all storm water flood gate @ Bld. Y-60 (4 gates)
- Check operation on all storm water flood gate @ Bld. Z-40 (3 gates)
- Check operation on all storm water flood gate @ Bld. Y-25 (2 gates)
- Check operation on all storm water flood gate @ South By-Pass Rd (2 gates)
- Check operation on all storm water flood gate @ North By-Pass Rd (1 gate)
- Check operation of storm pumps at X-53
- Check operation of storm pumps at Y-46
- Check operation of portable pumps stored at M-1
- Remove Boiler Burner/Secure Chiller @ Bld. X-15
- Remove Boiler Burner/Secure Chiller @ Bld. X-35
- Remove Boiler Burner/Secure Chiller @ Bld. X-75
- Remove Boiler Burner/Secure Chiller @ Bld. Y-15
- Remove Boiler Burner/Secure Chiller @ Bld. Y-55
- Remove Boiler Burner/Secure Chiller @ Bld. Y-60
- Remove Boiler Burner/Secure Chiller @ Bld. W-15

- ❑ Remove Boiler Burner/Secure Chiller @ Bld. W-40
- ❑ Review Hurricane Response plans for Condition II

Code 800/500/400 and SCSC Operations

- ❑ Terminate project activities and secure equipment (800/SCSC)
- ❑ Initiate removal of equipment from Island (840)
- ❑ Move rocket motors to secure facility (840)
- ❑ Notify GSFC - Greenbelt of possible interruption of WOTS support (453)
- ❑ Ensure antennas on Main Base, Mainland and Island are secure (453)
- ❑ Complete aircraft relocation plan (830)
- ❑ Test applicable communication systems in the Control Center
- ❑ Manage hanger space utilization
- ❑ Review Hurricane Response plans for Condition II

Security

- ❑ Have roving patrols report areas that need additional preparation
- ❑ Brief security staff of storm location, storm track, and last weather briefing details
- ❑ Review Hurricane Response plans for Condition II

Management Education Center

- ❑ Cancel and/or re-schedule all pending classes
- ❑ Assure safe departure of guests needing extended travel timeframes

CONDITION II -- 24 HOURS TO TROPICAL STORM FORCE WINDS (>39 MPH)

Code 200 and SCSC Public Works/Supply Officer

- ❑ Require two-way communication capability for access to Island
- ❑ Establish controlled access to Island
- ❑ Support elevation, moving and/or securing of equipment, per FOMs' requests
- ❑ Revisit all construction contractors to ensure their construction sites are secure and are aware of final WFF closure time frames. Inspections are to be performed by Code 228 construction inspectors (228/PW)
- ❑ Review Hurricane Response plans for Condition I

Code 800/500/400 and SCSC Operations

- ❑ Prepare to Move Fire Station 2 to Main Base
- ❑ Elevate items not removed from Island
- ❑ Elevate all applicable equipment in flood prone or Island buildings
- ❑ Ensure all flood gates/barricades to doors of applicable buildings have been installed (WICC)
- ❑ Complete the removal of equipment from Island including all passenger vehicles and mobile equipment (WICC)
- ❑ Terminate project activity and secure equipment (800/SCSC)
- ❑ Finish removal of equipment from Island; move rocket motors (840)
- ❑ Implement Aircraft Relocation plan (830)
- ❑ Test applicable communication systems in the Range Control Center
- ❑ Manage hanger space utilization
- ❑ Review Hurricane Response plans for Condition I

FOMS

- ❑ Report status of building preparations to Executive Management Team
- ❑ Elevate items off the floor of facility – especially if located on the Island
OR
- ❑ Move equipment and /or supplies located in the facility to a safer location

Security

- ❑ Deploy roving patrols to report areas that need additional preparation
- ❑ Brief security staff of storm location, track of storm, and latest weather briefing
- ❑ When notified by Emergency Management, implement sign-in procedures of all personnel entering the Wallops Island gate
- ❑ Log personnel entering Island gate; limit to essential personnel
- ❑ Review Hurricane Response plans for Condition I

CONDITION I -- 12 HOURS TO TROPICAL STORM FORCE WINDS (>39 MPH)

WICC:

- ❑ Ensure that all vehicles and equipment need for emergency activities are topped off with fuel and fully operative
- ❑ Coordinate with NAVY CDO, Commercial Operations and Code 700 on Plans to cut island power
- ❑ If the decision is made, cut power to Island when evacuation is complete or waves are coming over the seawall. Action to be completed before arrival of tropical storm force winds
- ❑ Evacuate ride-out personnel to safe location
- ❑ Review Hurricane Response plans for Ride-Out and Recovery

Coast Guard

- ❑ Move equipment to Hanger N-159 per Interagency Agreement between NASA and USCG
- ❑ Report ride-out staffing to the EOC if applicable (personnel and/or families residing in housing), have a representative report to the EOC Annex
- ❑ If applicable, review Hurricane Response plans for Ride-Out and Recovery

Navy

- ❑ Report to EOC Annex for ride-out staffing
- ❑ If applicable, review Hurricane Response plans for Ride-Out and Recovery

Commercial Operations

- ❑ If applicable (substantial launch assets in/on WFF facilities) report to EOC Annex for ride-out staffing
- ❑ If applicable, review Hurricane Response plans for Ride-Out and Recovery

WEMA

- ❑ Assure preparations are complete for any utility crews sheltering in F-4 dorm rooms per MOU with Accomack County. POC for WEMA is the WFF EOC

Security

- ❑ Restrict access to the Island. When a restriction is in effect, only personnel with two-way communication will be permitted into the closed areas. FM Radios on WFF Net or cellular phones will fulfill the requirement. Use of the buddy system will be required

- ❑ Brief security staff of storm location, track of storm, and latest weather briefing
- ❑ Implement procedures for receiving evacuees
- ❑ Coordinate with Navy Security/Hurricane Command Post to remove all personnel from Wallops Island
- ❑ Secure all security posts on Wallops Island and evacuate all remaining security personnel to Main Base
- ❑ Coordinate with emergency services to have their emergency equipment stored in safe areas for rapid response (N159, D1, Fire Dept., etc.)
- ❑ Deploy roving patrols to report areas which have critical needs
- ❑ When notified by Emergency Management, implement sign-in procedures of all personnel entering the Island and Main base gates
- ❑ Review Hurricane Response plans for Ride-Out and Recovery

APPENDIX B – EXECUTIVE MANAGEMENT TEAM (EMT) MEMBERSHIP

The WFF Executive Management Team (EMT) consists of existing government departments and supporting organizations. The EMT, chaired by the Director of Suborbital and Special Orbital Projects, determines overall preparedness, response and recovery priorities and will have the authority to change or modify these procedures as the situation dictates. WFF Emergency Management (EM), with assistance from department heads, Contractors, WFF Partners (NOAA, Navy, Coast Guard), and Commercial Operations (MARS & Orbital) will direct and control emergency operations. Emergency operations will follow a stepped sequence of actions in response to anticipated storm impacts.

The EMT is composed of representatives from the following organizations. Those indicated by an * are required to have a representative at all meetings. Others may or may not be present depending on conditions present during an individual storm event.

Only entities (or their designated representative) listed below may attend EMT meetings. Post meeting, the Office of Communications will issue an email briefing to the WFF community regarding weather impacts and other pertinent information. An email stating the time and location of the meeting will be sent from EM. Only one representative per entity will be allowed at the meeting.

Mid-Atlantic Regional Spaceport (MARS)

* Representative

NASA

- * Suborbital and Special Orbital Projects Directorate (800)
- * Emergency Management
- * Safety (803)
- * Range and Mission Management (840)
- * Management Operations Directorate (200)
- * Facilities Management Branch (228)
- * Security (240)
- * IT & Communications (700)
- * FOM Coordinator (228)
- Environmental (250)
- * Mission Services Program Office (453)
- * Applied Engineering and Technology Directorate (500)
- * Office of Communications (130)

NOAA

Station Manager or Representative

Orbital

* Representative

ROC/SCNS

- * Program Manager or Representative
- * Safety Manager or Representative
- * EOC Coordinator

US Coast Guard

- * Command Office Representative

US Navy – Surface Combat Systems Center

- * Command Office Representative
- Public Works

Weather Office

- * A representative available to do weather briefings via Polycom

WICC

- * Program Manager
- * Deputy Program Manager
- * Fire Chief

APPENDIX C – MOBILE FM RADIO CALL SIGNS**FIRE AND RESCUE**

CALL SIGN	TALKGROUP	CONTACT INFORMATION
CHIEF 25	FIRE DISPATCH	B-129
CAPTAIN 25	FIRE DISPATCH	SHIFT DUTY CAPTAIN - MAINBASE
LIEUTENANT 26	FIRE DISPATCH	SHIFT DUTY LIEUTENANT - ISLAND
WALLOPS	WALLOPS DISPATCH	B-129
ES-1	FIRE DISPATCH	WALLOPS EMERGENCY COORDINATOR E-106
ES-2	FIRE DISPATCH	WICC DEPUTY PM
INDIVIDUAL'S NAME	ENVIRONMENTAL	ENVIRONMENTAL, HEALTH, AND EMERGENCY SERVICES

SECURITY

CALL SIGN	TALKGROUP	CONTACT INFORMATION
WALLOPS-1	SECURITY DISPATCH	SUPERVISORY SECURITY SPECIALIST
WALLOPS-2	SECURITY DISPATCH	PHYSICAL SECURITY
OPS-1	SECURITY DISPATCH	SECURITY OPERATIONS MANAGER
INDIA-1	SECURITY DISPATCH	SECURITY TRAINING MANAGER
LIMA-1 through 10	SECURITY DISPATCH	SHIFT SUPERVISOR
WALLOPS	WALLOPS DISPATCH	B-129

WICC OPERATIONS

CALL SIGN	TALKGROUP	CONTACT INFORMATION
WICC-1	MAINTENANCE 1 or 2	WICC PROGRAM MANAGER
WICC-2	MAINTENANCE 1 or 2	WICC DEPUTY PROGRAM MANAGER
WICC-3 or ES-2	MAINTENANCE 1 OR FIRE DISPATCH	WICC DEPUTY PROGRAM MANAGER

APPENDIX D – COMMUNICATIONS RESOURCES

- Normal communications will be through Siemens phones, the land mobile radio system, and local paging systems.
If the Siemens phone system fails, bypass phones may be utilized (see Appendix D).
- The Emergency Coordinator contact info during Condition 1 through to Recovery is:
EOC - x2657, x2658, x2648
Office - x1159
Fire Station #1 – x1300
Call Sign EM-1 on the WFF LMR radio system
- Communications with County fire and rescue units will be by way of the EOC consoles or Emergency Dispatch consoles in Building B-129.
- The NASAWIDE1 talk group will be utilized for pre-storm planning.
- In the event that the LMR Trunked radio system is damaged as a result of the storm, the backup FS1 and FS2 repeaters will be the main talk channels.
- If the backup FS1 and FS2 repeaters are also damaged, radio users will have to use the TALKAROUND function on the MA/COM radios.
- Loaner MA/COM radios will be provided as required.
- Satellite phones are available for use in the EOC if all other phone systems are down
- In addition, the Wallops SHARES radio network station is located in N-134. The SHARES network is part of the National Security Emergency Preparedness (NSEP) network, which allows all the national communication systems to share their capabilities in a national emergency. Agencies supporting SHARES are MARS (All branches), Bellcore, CAP, DLA, DMA, DOE, DOI, DOJ, DOMS, EPA, FAA, FBI, FCC, FEMA, FHWA, GSA, HHS, INS, MARAD, NASA, Nat. Guard, NCC, NCS, NTIA, OET, USA, USACE, USCG, USCS, USDA, USN, USTRANSCOM, and VA. NASA uses 14.455 MHz and net control is in CA
- Regional FEMA office in Philadelphia, Pennsylvania (215) 931-5500.
- Virginia EOC (804) 674-2400

- WFF organizations to be notified are as follows:

<u>ORGANIZATION</u>	<u>PHONE NUMBERS</u>
U.S. Navy, Surface Combat Systems Center, Officer-Of-The-Day	(757) 824-2058* or 2068* Cell 757-894-0769*
National Oceanic and Atmospheric Administration Wallops CDA Station, Shift Supervisor	(757) 824-7304* (757) 824-3446
U.S. Coast Guard Group Duty Officer Officer of the Day 24/7 Command Center	(757) 336-2841* (757) 336-2836* (757-668-5555)
U.S. Postal Service, Postmaster for GSFC/WFF Branch Post Office Chincoteague	(757) 824-1243 (757) 336-2934
Mid-Atlantic Regional Spaceport	(757) 824-2335 Or (757) 824-2336
Orbital	(757)-824-6509

*These lines are manned 24 hours per day. By dialing this number, the "Officer-Of-The-Day" will contact all parties from that organization that need to be notified.

NASA INTERNAL NOTIFICATION LIST

<u>Org. Name</u>	<u>EXT.</u>		
130/Mr. J. Eggers	2958	840/Mr. S. Kremer	1114
240/Mr. T. Northam	1885	Chief FOM W. Redmond	1191
Or for the WSO	1111		
210/Mr. B. Pagliaro	1277		
228/Mr. G. Lilly	1299		
200/Mrs. C. Massey	1959		
231/Mr. K. Webb	1144		
453/Mr. S. Schaire	1646		
500/Mr. F. Nelson	2396		
614.6/Mr. W. Petersen	1567		
800/Mr. W. Wrobel	1201		
800/Mr. B. Underwood	2555		
801/Ms. H. Garrison	1206		
803/Mr. G. Liebig	1498		
810/Mr. P. Eberspeaker	2202		
820/Ms. D. Fairbrother	1453		
830/Mr. S. Dover	1529		

APPENDIX E – GENERATOR & CAMERA RUN TIMES

STATIONARY GENERATORS								
BUILDING SERVED/BUILDING #	KW	MAKE	NASA/NAVY	TYPE OF CONNECTION	ESTIMATED FUEL CONSUMPTION AT 100% LOAD	MODEL #	TANK SIZE	FUEL TYPE
R-30	250	STATELINE	NAVY	AUTOTRANSFER	26.4/HR; 7.5/HR	SJ350	200 GAL	FUEL OIL BELLY TANK
R-1	250	STATELINE	NAVY OUT OF SERVICE	AUTOTRANSFER	N/A	N/A	N/A	N/A
V-18	275	CAT	NAVY	AUTOTRANSFER	19.4 GAL/HR; 10.3 HRS	GENSET 3400	200 GAL	FUEL OIL BELLY TANK
F-16	30	KOHLER	NASA	AUTOTRANSFER	19.5 GALS/HR; 25.6 HRS; 1 DAY	30RZ82	500 GAL	PROPANE
B-129	75	ONAN	NASA OUT OF SERVICE	AUTOTRANSFER	53.7 GALS/HR; 9.31 HRS	75 ENAD	500 GAL	PROPANE
A-3	80	ONAN	NASA OUT OF SERVICE	AUTOTRANSFER	51.7GALS /HR; 4.8 HRS	80GGHC	250 GAL	PROPANE
F-166 WATER TOWER	20	KOHLER	NASA OUT OF SERVICE	AUTOTRANSFER	17.3 GALS/HR; 14.4 HRS	20RZ82	250 GAL	PROPANE
N-127 SECURITY	60	ONAN	NASA	AUTOTRANSFER	41.4GALS /HR; 12 HRS	60ENA	500 GAL	PROPANE
D-8	3.0MW	CAT	NASA	AUTOTRANSFER	209 GALS/HR; 191/HRS; 7.9 DAYS	C175	40,000 GAL	FUEL OIL
D-50A	500	ONAN	NASA	AUTOTRANSFER	37.4 GALS/HR; 26 HRS; 1.1 DAYS	500DFGA	1,000 GAL	FUEL OIL
U-12	750	KATO LIGHT	NASA REMOVED	AUTOTRANSFER	64.9 GALS/HR; 46.2HRS; 1.9DAYS	D75FRY4	3,000 GAL	FUEL OIL
U-12	3MW	CAT # 1	NASA	AUTOTRANSFER	209 GALS/HR; 191/HRS; 7.9 DAYS	C-175	20,000 GAL.	FUEL OIL

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U-12	3MW	CAT #2	NASA	AUTOTRANSFER	209 GALS/HR: 191/HRS; 7.9 DAYS	C-175	20,000 GAL.	FUEL OIL
U-65 COMMUNICATION BLD	225	CAT	NASA	AUTOTRANSFER	17.9GALS HR; 27.9 HRS; 1.1 DAYS	3306 ENGINE SR4B GENERATOR	500 GAL	FUEL OIL
U-25	15	KOLHER	NASA	AUTOTRANSFER	11.3GALS/HR 22 HRS;	15REYG	250 GAL	PROPANE
X-16 FIRE HOUSE	30	KOHLER	NASA	AUTOTRANSFER	2.8 GALS PER HR; 714 HRS; 29 DAYS	30ROZ J81	2,000 GAL	FUEL OIL
X-76	40	KOHLER	NASA	AUTOTRANSFER	3.4 GALS PER HR; 294 HRS; 12.25 DAYS	40ROZ J81	1,000 GAL	FUEL OIL
W-20	15	KOHLER	NASA	AUTOTRANSFER	1.3 GALS PER HR; 769 HRS; 32 DAYS	15ROZ 81	1,000 GAL	FUEL OIL
V-66	80	KOHLER	NASA	AUTOTRANSFER	46 GALS PER HR; 43 HRS; 1.8 DAYS	80RZG	2,000 GAL	PROPANE
Portable DESIGNATED FOR HIF	300	CAT	NASA	POSILOC CONNECTIONS	22.3 GALS PER HR; 21 HRS	3456-XQ300	470 GAL	FUEL OIL

PROPANE; CONVERT CFH TO GAL = CFH
DIVIDED BY 7.4805

CAMERA RUN TIMES

Building	Description	UPS Runtime
ASR8	North East View	63 min
V50	West	91 min
ARTIST	North East View	NO UPS
ARTIST	South West View	NO UPS
W57	North East View	198 min
W57	South East View	198 min
300' MET Tower	North East View	480 min
Y88	North East View	NO UPS
Y88	South West View	NO UPS
Z-41	North East View	NO UPS
Z-41	South West View	NO UPS
U40	East	51 min
A-1	A-1 Runway Camera	154 min
A-41	A-41 Runway Camera	NO UPS
F-25	F-25 Runway Camera	NO UPS
N-159	N-159 Runway Camera	44 min
Y-88	Y-88 North East	NO UPS
ARTIST	V-100 North	NO UPS
ARTIST	V-100 South	NO UPS
U-10	Inbound	52 min
U-10	Outbound	52 min
U-10	Weapons (storage)	52 min
300' MET Tower	North East View	480 min
300' MET Tower	South West View	480 min
U40	South East View	51 min
Z-41	North East View	NO UPS
Z-41	South West View	NO UPS
N127	Parking Lot	158 min
H100	Lowbay	96 min
H100	Highbay 1	96 min
X-079	Highbay NE Corner	18 min
B-129	EOC	117 min
Pad0B	Pad0B Gantry Camera	75 min

X-75	Rooftop CAM	Generator
N-170	CSO Gateway	Unknown, Building UPS
N-001	Outside - building rear	Unknown runtime - but there is an UPS
N-001	Outside - building front	Unknown runtime - but there is an UPS
N-001	Outside - Parking Lot	Unknown runtime - but there is an UPS
N-001	Lobby Rear - North Side	Unknown runtime - but there is an UPS
N-001	Lobby Rear - South Side	Unknown runtime - but there is an UPS
N-001	Lobby front - North side	Unknown runtime - but there is an UPS
N-001	Lobby Front - South Side	Unknown runtime - but there is an UPS
N-159	Hangar - East	44 min
N-159	Hangar - West	50 min
D-1	Hangar - North	Unknown runtime - but there is an UPS
D-1	Hangar - South	Unknown runtime - but there is an UPS
U-12	U-12 Switch Station	NO UPS
X-141	X-141 Switch Station	NO UPS
Pad0B	pad0 HD-SDI CAM	NO UPS
Pad0B	Water Tower	
Pad0B		
Pad0A	Pad0A Nozzle Camera	
E106/RCC	RCC South Cam	
U3	U3 Ammo Cam	
X-81	Met Tower	

APPENDIX F – ISLAND EVACUATION PROCEDURES

Wallops Island may not be closed for all storms. If high winds and flood conditions are likely, power to Wallops Island may have to be shut off for the duration of the storm and the Island will have to be closed.

Preparations for possible power shut down will begin during Condition I and closure notices to all affected entities will be given if possible. All Power Up/Down operations will be per the WICC Plan. Power will be cut without notification in emergency situations.

In preparation for closure, Wallops Island access will be restricted to only employees involved in hurricane preparations. Island access will require two-way communication. FM Radios on WFF Net or cellular phones will fulfill the requirement. The buddy system will be in effect. Security officers at the Island gate will be verifying the presence of the communication equipment and maintaining a log of the vehicles and personnel entering and exiting the Island.

Once the EOC has determined that power to the Island needs to be shut off (allowing time for evacuation prior to 50 mph sustained winds or Island flooding), the following procedures will be followed.

- Efforts will be made for any prior notice by contacting the SCSC CDO at extension 2068.
- Security/Fire Department will be dispatched to conduct an on-site patrol of Island and selected essential facilities to ensure that Island facilities are evacuated. They will provide assistance to evacuees as appropriate.
- Facilities Management Branch (Code 228 and WICC) will station two electricians on the Mainland who have full authority to cut power prior to flooding of energized high voltage electrical equipment. These employees will ride out the storm event in U-12.
- The Island Fire Station will relocate to the Main Base.
- Closure of the Island - when all personnel have evacuated the Island and power is secured, the Island gate will close and all security personnel will relocate to the Main Base.

Restoration of power - All Power Up/Down operations will be per the WICC Plan. The EOC will coordinate with the SCSC, Ext. 2068 and commercial operations prior to restoring power so as to minimize damage to equipment in the Navy and commercial facilities.

APPENDIX G – ACRONYMS AND ABBREVIATIONS

DETF	Delmarva Emergency Task Force
EAS	Emergency Alert System
ECHO	Emergency Contact for Hazardous Operations – a NASA notification system
EM	Emergency Management
EMT	Executive Management Team
ENS	Emergency Notification System
EOC	Emergency Operations Center
ESARC	Eastern Shore Amateur Radio Club
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FMB	Facilities Management Branch – Code 228
FOM	Facilities Operation Manager
GETS	Government Emergency Telecommunications Service
GSFC	Goddard Space Flight Center
ICS	Incident Command System
IDA	Initial Damage Assessment
MARS	Mid-Atlantic Regional Spaceport
MEC	Management Education Center
MEOW	Maximum Envelope Of Water
MOA	Memorandum of Agreement
MOM	Maximum Of the Maximum MEOW
MOU	Memorandum of Understanding
NASA HQ	NASA Headquarters, Washington DC
NIMS	National Incident Management System
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
PDA	Preliminary Damage Assessment
PIO	Public Information Office
POC	Point of Contact
RACES	Radio Amateur Civil Emergency Services
RMMO	Range Mission Management Office
ROC	Range Operations Contract
SCNS	Space Communications Network Services
SCSC	Surface Combat Systems Center, US Navy
SHARES	SHARED RESources
SOP	Standard Operating Procedures
VDEM	Virginia Department of Emergency Management
USCG	United States Coast Guard

VDEM	Virginia Department of Emergency Management
VEOC	Virginia Emergency Operations Center
WEMA	Wallops Exchange and Morale Association
WFF	Wallops Flight Facility
WICC	Wallops Institutional Consolidated Contract
WO	WFF Weather Office
WOTS	Wallops Orbital Tracking System
WSO	Wallops Security Office

CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
Baseline	June 19, 2001	This version of the plan updates the procedures to comply with current requirements for emergency preparedness planning and reflects personnel and organizational changes.
Annual Review	June 1, 2002	Updates phone numbers and reflects impact of the WICC and Partners involvement. Adds National Hurricane Center URL for tracking charts and hurricane basics. Eliminates the need for legal size paper.
Annual Review	June 1, 2003	Updates phone numbers. Changes the first response period to reflect the 5 day forecast.
Annual Review	May 13, 2004	Update Phone numbers, The Town of Chincoteague has been replaced by Accomack County, Executive Management Team defined in Appendix G
Annual Review	June 1, 2005	Correct minor format errors. Create new cover sheet. Create new plan identification number. Place plan on Center's Configuration Control site in addition to the WFF Code 803 Safety website.
Annual Review	June 12, 2006	Implements incident command as identified in IG report on NASA's Katrina Response.
Annual Review	June 6, 2007	Paginate the document. Eliminate references to the old radio system. On Page 9, add references to the NASAWIDE1, FS1, FS2 and TALKAROUND radio channels. On page 15, eliminate reference to

		old radio system
Annual Review	July 10, 2008	Update EOC Manager location to E-107 on Page 27. Update NASA Internal Notification List on Page 29
Annual Review	June 17, 2009	Updated with new cover sheet. Updated Formatting. Minor grammatical corrections.
Annual Review	June 2, 2010	Updated NASA Internal Notification List on Page 30.
Revised	Nov 1, 2010	Updated to incorporate changes discovered during annual hurricane exercise. Changed evacuees from 1,000 to 200; added EMT decision making to close WFF during CAT 3 storm; Establishment of a phased in EOC with approaching storms; Emergency services ceasing when winds exceed 74 MPH; changed criteria for weather office personnel release from duties; changed criteria for weather office notification to emergency coordinator for tropical storms.
Annual Review	July 25, 2011	Added verbage for D-10 as “last resort shelter”, updated mobile generator locations, changed D-8 to D-50 as location of 24 hour coverage on P-19 and contact numbers in appendix C, Changed EOC location from RCC to E-107 room 104, changed command post to EOC on page 27, updated NASA Internal Notification List on Page 30.
Annual Review	July 12, 2012	Updated to incorporate needed changes discovered during Hurricane Irene event, needed changes discussed during 2012 hurricane/nor’easter tabletop exercise, changed wind speed trigger point for Condition levels to be in sync with Fire/EMS/USCG SOP values, changed format to reflect NIMS compliant formatting, added NIMS

		compliance and exercise participation to roles and responsibilities.
Annual Review	July 30, 2013	Updated Saffir-Simpson Hurricane Wind Scale, delineated and expanded Roles & Responsibilities of WFF Codes, Partners, Commercial Operations & Contractors, added E-107 Rm 101 for EOC ops, added potential need for Commercial Operations/Navy/Coast Guard representatives to be in the WFF EOC, incorporated needed changes discovered during Hurricane Sandy event, incorporated needed changes found in 2013 Hurricane/Nor'easter TTX, removed last resort sheltering verbage.
Annual Review	August 12, 2014	Corrected general grammatical errors; Added WFF support to VDEM and other decision-making forecast tools in Sect. 2.3; Included possible EOC/EOC Annex staffing for entities in Sect. 4.2; Added EM contact with DETF and availability of Disaster Recovery Center staffing in Sect. 4.3; Clarified and refined EOC staff command structure, roles and responsibilities in Sect. 4.7; Added chemical hazard check requirement for Island re-entry in Sect. 4.8; Updated information in Appendices A through H; Removed Bypass Phone Appendix – information will now be stored in the EOC directory; Added Camera Run Times to Appendix F; Referenced WICC Power Up/Down Plan and U-12 Ride Out crew in Appendix G