



DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric  
Administration  
NATIONAL WEATHER SERVICE  
1325 East-West Highway  
Silver Spring, Maryland 20910-3283

MAR 2, 2010

MEMORANDUM FOR: Distribution

FROM: W/OPS2 – Neal DiPasquale (Acting)

SUBJECT: Operational Test & Evaluation Test (OT&E) Plan for the Full Operating Capability (FOC) All Hazards Emergency Message Collection System (HazCollect), dated March 2010.

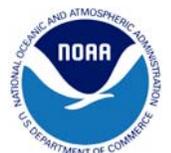
Attached for your information is a copy of the subject test plan defining how the National Weather Service (NWS) will conduct the Operational Test & Evaluation (OT&E) of the Full Operating Capability (FOC) All Hazards Emergency Message Collection System (HazCollect).

The HazCollect OT&E is scheduled to start **February 17, 2010** through **March 26, 2010**. The OT&E will be conducted at the following NWS Weather Forecast Offices (WFOs):

- WFO Pittsburgh, PA (PBZ)
- WFO Albuquerque, NM (ABQ)
- WFO Paducah, KY (PAH)
- WFO San Francisco, CA (MTR)
- WFO Sacramento, CA (STO)
- WFO Anchorage, AK (AFC)
- WFO Honolulu, HI (HFO)

Please direct any comments or questions to the OT&E Director, Bert Vilorio W/OPS24 at 301-713-0326 ext 131, (Bert.Vilorio@noaa.gov) or Jae Lee W/OPS24 at 301-713-0326 ext 158, (Jae.Lee@noaa.gov).

Attachment



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# **Operational Test & Evaluation (OT&E) Plan**

For the  
**Full Operating Capability (FOC)  
All-Hazards Emergency  
Message Collection System (HazCollect)**

**March 2010**

**U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Weather Service/Office of Operational Systems  
Field Systems Operations Center/Test and Evaluation Branch**

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## Executive Summary

This plan describes the Government tests planned during the Operational Test & Evaluation (OT&E) of the Full Operating Capability (FOC) All Hazards Emergency Message Collection System (HazCollect). The OT&E is intended to monitor and confirm the successful operation of the HazCollect system at the National Weather Service (NWS) Weather Forecast Offices (WFOs) in preparation for FOC and prior to nationwide deployment.

The HazCollect system will be a comprehensive solution for the centralized collection and efficient distribution of Non-Weather Emergency Messages (NWEMs). Authorized emergency managers (EMs) will use the Disaster Management Interoperability Services (DMIS) desktop client software or third-party vendor software (OPEN API-compliant) to write NWEMs in Common Alerting Protocol (CAP) format and send them through the DMIS central processor for authentication and dissemination. The HazCollect system will utilize the existing National Weather Radio All-Hazards (NWR) network that provides the most robust Government-owned dissemination infrastructure capable of meeting the all-hazard dissemination requirements with necessary upgrades.

The HazCollect system had previously undergone an Operational Acceptance Test (OAT) from June 5, 2006 through July 21, 2006. Due to problems and issues found during the OAT, a Field Operational Demonstration Test (FOD) was performed from November 6, 2006 through November 22, 2006. After the FOD, additional problems and issues were documented. Due to a change in network connectivity using NOAANet, the system underwent a Follow-On Operational Test & Evaluation (OT&E) from September 17, 2008 through December 5, 2008. Subsequently, another Mini-Operational Test & Evaluation was performed from March 16 through April 3, 2009 to verify fixes to previous problems and to prepare the system for initial operational capability (IOC). HazCollect officially proceeded to IOC at the end of April, 2009. The Office of Operational Systems, Test & Evaluation Branch (OPS24) was responsible for conducting all of the operational tests. Results were recorded in test reports available on the OPS24 website:

[http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect\\_docs.htm](http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect_docs.htm)

The FOC HazCollect service has now been re-engineered to be integrated within the NWS Telecommunications Gateway (NWSTG) and no longer installed as separate servers connecting to the NWSTG. The FOC HazCollect service will reside on the NWSTG hardware and software as an application service utilizing the enterprise architecture of the NWSTG, including the NWSTG security classification. The FOC HazCollect will also have the ability to fallback to the Backup Telecommunications Gateway (BTG) in the event of a NWSTG failure. Additionally, the previous ORACLE database has now been replaced with the Sybase database wherein previous data will be re-hosted.

Prior to the start of the OT&E, the HazCollect system will need to undergo a successful system test at the National Weather Service Headquarters (WSH). The Office of Science and Technology (OS&T) and their contractor (Prism) will be responsible for the system test. OPS24 will be responsible for the planning, conducting, and reporting of the OT&E. The HazCollect OT&E is scheduled to start on **February 17, 2010**, through **March 26, 2010**.

The OT&E will be conducted at the following NWS WFOs during the dates indicated:

- WFO Pittsburgh, PA (PBZ) (Feb 17, 2010 – Mar 26, 2010)
- WFO Paducah, KY (PAH) (Feb 18, 2010 – Mar 26, 2010)
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- WFO San Francisco, CA (MTR) (Mar 2, 2010 – Mar 26, 2010)
- WFO Sacramento, CA (STO) (Mar 2, 2010 – Mar 26, 2010)

Before the start of the OT&E, an OT&E Readiness Review meeting will be conducted by OPS24 on February 16, 2010, to confirm all prerequisites listed in this test plan have been met. During the OT&E, the test team will conduct, witness, and oversee the operational testing of HazCollect using test Non-Weather Emergency Messages (NWEMs) messages.

For the duration of the OT&E, the test sites will monitor and verify that any actual NWEMs generated by their local emergency managers are successfully scheduled in the Console Replacement System (CRS) and broadcasted to NOAA weather radio (NWR). The test sites will report any problems with the NWEM transmission.

During the OT&E, a Test Review Group (TRG) consisting of NWS headquarters personnel, regional and OT&E site focal points, a NWS Employees Organization (NWSEO) representative, and local emergency managers, will meet weekly to discuss the status of the testing, review OT&E activities, and adjudicate reported test trouble reports (TTRs). TTRs created during the OT&E will be tracked using the TestTrack Pro database and will be addressed during the TRG meetings for assignment and resolution. Each of the TTRs will be classified with a specific **Priority** and **Impact**.

At the end of the OT&E, OPS24 will provide the TRG with all the test results, including the status of all of the reported TTRs. Based on the test results and TTR status, the TRG will vote to recommend whether to proceed with the national full operating capability deployment of the software.

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## Acronyms

|          |   |
|----------|---|
| ASCII    | American Standard Code for Information Interchange      |
| AWIPS    | Advanced Weather Interactive Processing System          |
| BTG      | Backup Telecommunications Gateway                       |
| C & A    | Certification and Accreditation                         |
| CAP      | Common Alerting Protocol                                |
| COG      | Collaborative Operations Group                          |
| CRS      | Console Replacement System                              |
| CRSFM    | CRS Formatted Message                                   |
| DHS      | Department of Homeland Security                         |
| DM       | Disaster Management                                     |
| DMIS     | Disaster Management Interoperability Services           |
| EM       | Emergency Manager                                       |
| EMWIN    | Emergency Manager Weather Information Network           |
| FOC      | Full Operating Capability                               |
| FOTE     | Follow-On Operational Test & Evaluation                 |
| IOC      | Initial Operational Capability                          |
| MIC      | Meteorologist In Charge                                 |
| NCF      | Network Control Facility                                |
| NOAA     | National Oceanic and Atmospheric Administration         |
| NWEM     | Non-weather emergency message                           |
| NWR      | NOAA Weather Radio All-Hazards                          |
| NWRWAVES | NWR Valid Time Event Code Enhanced Software             |
| NWS      | National Weather Service                                |
| NWSTG    | NWS Telecommunications Gateway                          |
| NWWS     | NOAA Weather Wire Service                               |
| OAT      | Operational Acceptance Test                             |
| OCWWS    | Office of Climate, Water, and Weather Services          |
| OPS24    | Office of Operational Systems, Test & Evaluation Branch |
| OS&T     | Office of Science and Technology                        |
| OT&E     | Operational Test & Evaluation                           |
| PAMS     | Product Availability Monitoring System                  |
| POC      | Point of Contact  |
| ST       | System Test   |
| TG       | Telecommunications Gateway                              |
| TRG      | Test Review Group                                       |
| TTR      | Test Trouble Report                                     |
| WAN      | Wide Area Network                                       |
| WCM      | Warning Coordination Meteorologist                      |
| WFO      | Weather Forecast Office                                 |
| WMO      | World Meteorological Organization                       |
| WSH      | Weather Service Headquarters                            |

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## 1.0 Introduction

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## 1.1 Test Plan Organization

This OT&E Plan is comprised of four sections:

- Section 1 contains introductory materials describing the purpose of the test, the test objectives, the testing strategy, and the prerequisites for the OT&E.
- Section 2 discusses the management of the OT&E including the roles and responsibilities of the personnel participating in the OT&E.
- Section 3 describes the process and procedures employed during the OT&E including the test schedule and test related activities performed at National Weather Service Headquarters (WSH) and the OT&E sites.
- Section 4 describes the final recommendation and the test report.

Included in the OT&E test plan are the following attachments:

- Attachment A lists all valid NWEM products in HazCollect
- Attachment B includes the HazCollect TTR form for use by OT&E site personnel to report problems identified during the OT&E.
- Attachment C lists all the members of the TRG.
- Attachment D lists the test sequence and corresponding descriptions.
- Attachment E displays the example test message field values.
- Attachment F displays all the valid HazCollect server modes.
- Attachment G lists information for all the OT&E sites.
- Attachment H displays the OT&E resource requirements.
- Attachment I displays the schedule.
- Attachment J is the HazCollect OT&E site questionnaire for use by OT&E site personnel after the OT&E to evaluate and rate specific test activities.
- Attachment K is the HazCollect emergency manager questionnaire used to evaluate and rate specific test activities after the OT&E.
- Attachment L displays the OT&E Conduct Survey.

## 1.2 Purpose

The HazCollect OT&E will verify the end-to-end operation of the HazCollect system from the DMIS user interface client software or third party vendor software (OPEN API-compliant), the HazCollect software, and at specified NWS dissemination infrastructure verification points [e.g., NOAA Weather Wire Service (NWWS), CRS, NOAA Weather Radio All-Hazards (NWR), and NWR "Public Alert Certified" receivers].

The OT&E will ensure the DMIS user interface client software, the National Weather Service Telecommunications Gateway (NWSTG), Network Control Facility (NCF), NOAA Weather Wire Service (NWWS), Emergency Manager Weather Information Network (EMWIN), CRS, and NWR systems will be validated for communication reliability, and availability to support HazCollect. The OT&E will also confirm the overall HazCollect system does not adversely affect current field office operations.

## 1.3 Test Objectives and Evaluation Criteria

The OT&E test objectives will include the following:

- a. **Confirm the following setup/configurations:**
  - i. **DMIS installations for emergency managers**
  - ii. **Collaborative Operations Groups (COG) setup and EM/user registration**
  - iii. **OT&E sites configured [AWIPS, CRS, NOAA Weather Radio With All-Hazards Valid Time Event Code Enhanced Software (NWRWAVES)] for HazCollect**  
CRITERIA: The setup and configurations listed above are complete and accurate.
- b. **Verify the operation of the HazCollect system.**  
CRITERIA: The HazCollect and OT&E site service operations perform successfully without adversely affecting current field office operations via test site status confirmations during test review group meetings. The current dissemination of any existing non-HazCollect NWEMs is still fully functional.
- c. **Verify HazCollect products for end-to-end dissemination.**  
CRITERIA: HazCollect NWEM messages are successfully created and verified for end-to-end dissemination from DMIS clients and routed to the HazCollect and forwarded to NWS dissemination systems (NWWS, EMWIN, CRS, NWR, etc.).
- d. **Verify availability of required HazCollect documents.**  
CRITERIA: HazCollect documentation listed in **Attachment H** is accurate and available.
- e. **Verify the HazCollect operational modes.**  
CRITERIA: The HazCollect operational modes are functional.
- f. **Verify the HazCollect database functionality.**  
CRITERIA: The HazCollect database functionality is functional.

**g. Verify the HazCollect failover functionality.**

CRITERIA: The HazCollect failover functionality is functional.

**h. Verify the HazCollect national message functionality**

CRITERIA: The HazCollect system will successfully receive and transmit national messages to all designated listening areas.

**i. Verify COGs/user registration and file upload into HazCollect.**

CRITERIA: The HazCollect COGs/users registration and file upload into HazCollect is functional.

**j. Demonstrate DMIS OPEN NWEM API end-to-end functionality**

CRITERIA: The DMIS OPEN NWEM API end-to-end functionality is demonstrated successfully.

**k. Verify user-related HazCollect performance-based test procedures (3).**

CRITERIA: Performance tests are performed and meet thresholds including:

- i. Verify the transmission of single NWEM messages to dissemination systems within 2 minutes of submission from EM interfaces.
- ii. Verify NWEM message processing for multiple simultaneous users (up to 20 users).
- iii. Verify the EM authentication into HazCollect within 5 seconds.

## **1.4 Background**

Current NWS systems address non-weather emergency messages (e.g., chemical spills, AMBER alerts, and radiological events), but they must be manually transcribed by NWS staff. While currently operational, these messages are prone to processing delays and human error. In some areas, EMs will manually create the text messages and then proceed to call their local weather forecast offices. These messages are subsequently manually entered into the WFO's broadcast schedules for NWS forecast, watches, and warning products.

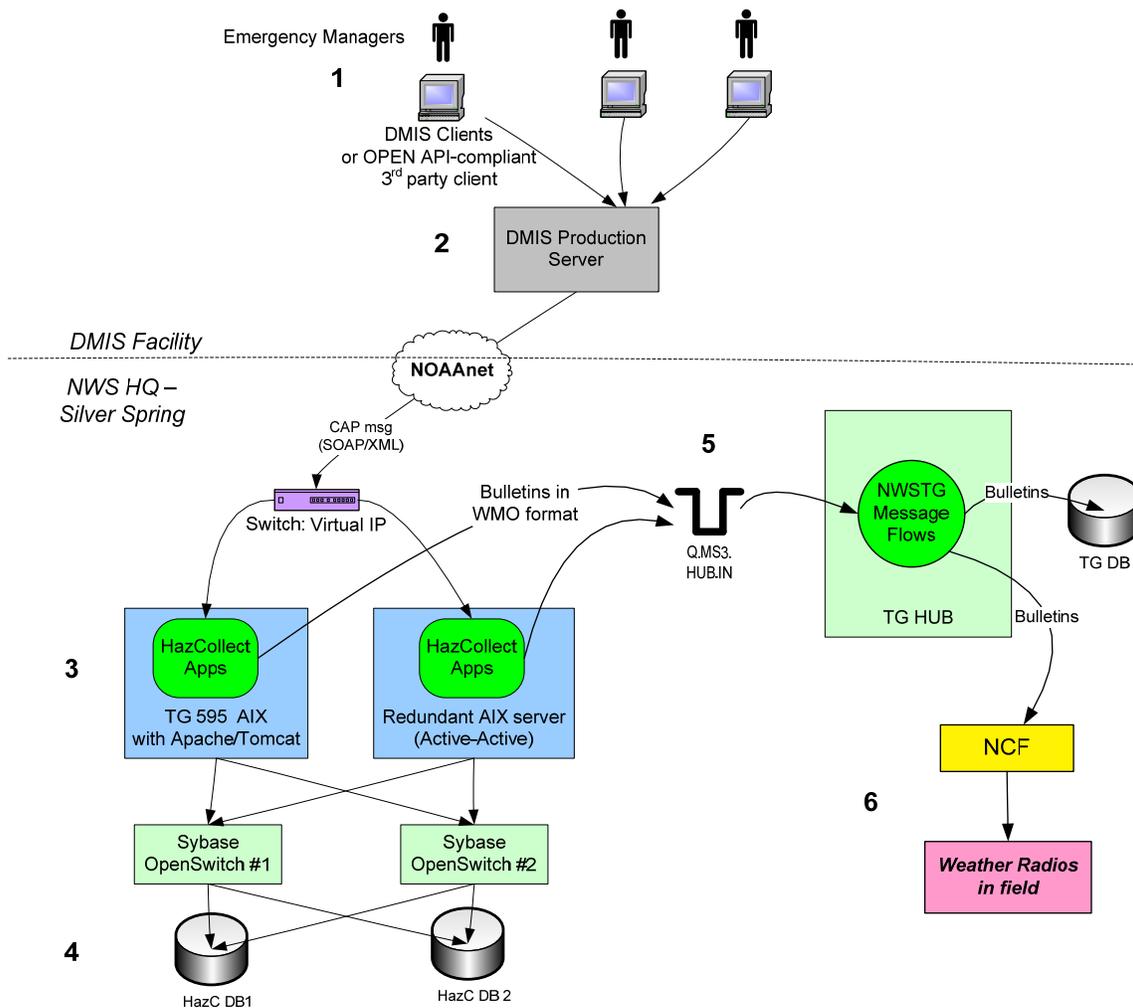
The HazCollect system provides an automated capability to streamline the creation, authentication, collection, and dissemination of non-weather emergency messages in a quick and secure fashion. Using the proposed HazCollect system, in conjunction with existing NWS dissemination systems like NWR and NWS, NWEMs can be disseminated as standard AWIPS messages. EMs will use the DMIS client software, or other third-party vendor software (OPEN API-compliant), to compose NWEMs in the CAP format. The DMIS client software, which was developed by the Department of Homeland Security (DHS), will send authorized and authenticated CAP-formatted NWEM messages to the HazCollect server for conversion to the NWS World Meteorological Organization (WMO) communication format. The HazCollect server will send the WMO-formatted NWEMs to the NWSTG. The NWEMs will be disseminated through the existing NWS and broadcasted by the CRS to the NWR transmitters. The general public will subsequently hear the NWEM messages from NOAA weather radios.

## 1.5 Test Strategy

The OT&E will be conducted at selected WFO sites from **February 17, 2010** through **March 26, 2010**. During the OT&E, sites will use their current AWIPS and the associated NWRWAVES formatter to receive and send data products.

**Figure 1** provides a quick overview of the HazCollect system data flow processing, with each step designated by a corresponding step number:

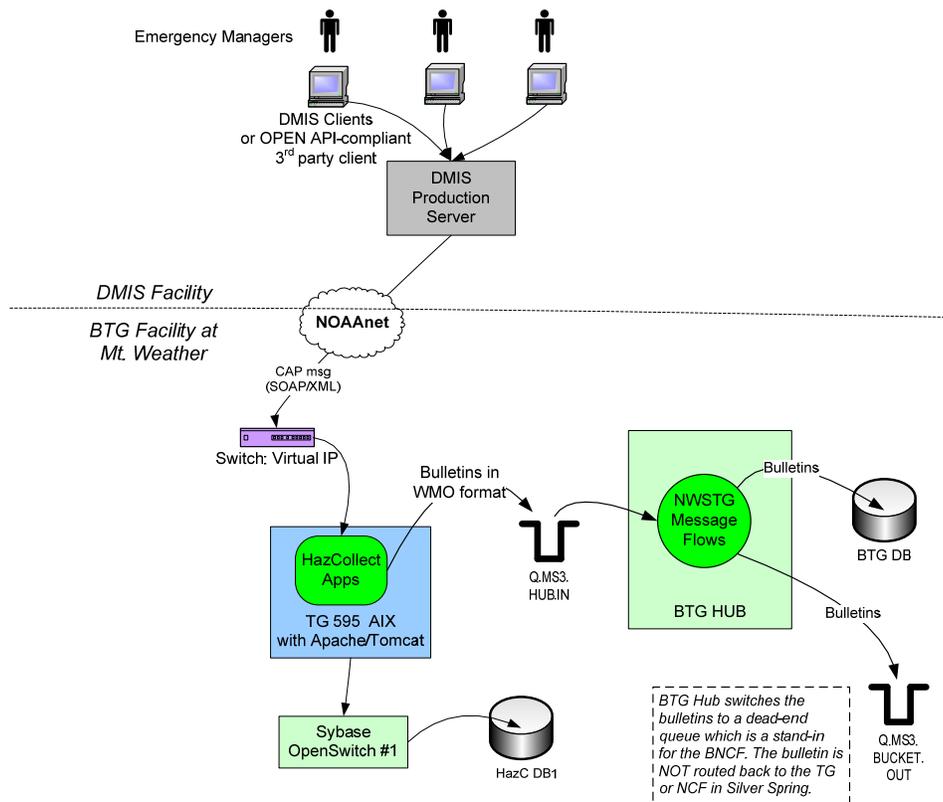
1. EMs will need valid DMIS accounts and belong to authorized HazCollect Collaborative Operations Groups (COG) to log into the DMIS user interface client or other third-party vendor client.
2. The DMIS client toolkit or third-party vendor software that is OPEN API-compliant will be used to create NWEMs. The resulting output NWEM message format will be in CAP format. The message will be sent through the DMIS server and forwarded to the NWS NOAA.net.



**Figure 1 – HazCollect System Data Flow**

3. The CAP NWEM message will be routed to the HazCollect servers within TG. These CAP messages will be converted from CAP to WMO-formatted messages.
4. Incoming Messages (CAP and WMO), including lookup data, will be saved to the SYBASE database.
5. The WMO messages will be transferred, via the Q.MS3.HUB.IN queue, to the NWSTG hub, where the WMO message is validated for against WMO standards, stored in the bulletin database and subsequently routed to the other dissemination resources (e.g., NCF, NWWS, Weather Radio, etc.)
6. When the WMO-formatted message is finally received by the NWS WFO, the message is initially saved into the local AWIPS text database. The message is converted to a CRS-Formatted Message (CRSFM) via the NWRWAVES formatter. The CRSFM message is sent to the CRS system. This message will be processed, saved in the CRS database, and scheduled for broadcast as an emergency message together with other weather-related products. The CRSFM message will be scheduled (based on message type product priorities set by individual field offices), broadcasted on NWR transmitters, and is finally heard on NOAA weather radios.

The BTG configuration (see **Figure 2**) looks similar, but using only one BTG HazCollect server.



**Figure 2 – HazCollect System BTG configuration**

The list of NWEM products that are valid in the HazCollect system are listed in **Attachment A**. For

the OT&E, only test **Administrative Message (ADR)** products will be used to perform tests, unless actual events occur. Before the start of the OT&E, the HazCollect system will be verified for COG, system administration, and database setup. During the OT&E, the planned tests will include:

1. Verify end-to-end dissemination – verify NWEM messages creation (local counties, state, overlapping areas) and subsequent dissemination by monitoring the NWS, CRS, and NWR transmission (**Test Procedure #110**).
2. Verify NWEM dissemination using different HazCollect modes – verify NWEM dissemination using the HazCollect **Actual, Test, and Training** HazCollect server modes, including the correction, and update processing (**Test Procedures #300, #310, #320, and #330**).
3. Verify database functionality – verify the HazCollect database functionality by performing data updates (add, update, delete) on the nine HazCollect database tables (**Test Procedure #600**).
4. Verify failover processing – verify the HazCollect system failover processing within the TG at Silver Spring, MD, and between the TG and the fallback system at the BTG in Mt. Weather, VA. HazCollect operational modes will be changed during the failover to verify redundancy. Test NWEM messages will be monitored for non-broadcast (**Test Procedure #500**).
5. Verify national message processing – verify HazCollect national message functionality by generating national messages and verifying proper dissemination to NWS, CRS, and NWR (**Test Procedure #110**).
6. Verify the NWRWAVES functionality – verify the NWRWAVES NWEM formatter has been configured for use in HazCollect end-to-end dissemination.
7. Verify new COGs/user registration verification – verify NWS website for registration of new COGs/users is functional. OPS24 will work with OS51 to verify COG/user registration and file upload into HazCollect.
8. Demonstrate the DMIS OPEN NWEM API end-to-end functionality – demonstrate the DMIS OPEN NWEM API end-to-end functionality by generating NWEM messages using third party client software that are DMIS OPEN API-compliant and monitor dissemination to NWS, CRS, and NWR (**Test Procedure #700**).
9. Verify user-related HazCollect performance-based functionality – verify specific performance-based tests including:
  - a. NWEM transmission within 2 minutes (**Test Procedure #230**)
  - b. Multiple and simultaneous NWEM dissemination (**Test Procedure #230**)
  - c. User authentication into HazCollect within 5 seconds (**Test Procedure #200**)

When the HazCollect NWEM message is input into the NWSTG, NWSTG processes it and output data are transmitted to numerous data output components. Each designated verification location will have support personnel who will assist during the OT&E. The OT&E support personnel will verify

message delivery and/or system logging indicating delivery. The failover and recovery testing will be performed on the HazCollect servers and validated for operability.

During the OT&E, OPS24 will document, in addition to other OT&E test results, site resolutions regarding any problems encountered during the test. These documented resolutions will be verified and, upon TRG adjudication, disseminated by the TRG to the WFOs participating in the OT&E.

For the duration of the OT&E:

1. The IOC HazCollect will be ‘disconnected’ at the beginning of OT&E, and the FOC HazCollect system will be continuously operational and handle all NWEM messages sent during OT&E.
2. The FOC HazCollect system will be under OPS24’s configuration control. Any modifications to the FOC system will be coordinated and approved by OPS24 during the OT&E.
3. The IOC HazCollect system will be maintained in an operational-ready mode. HazCollect COG and Data Table administration changes that may be operationally required will be made to both systems concurrently.
4. In the event of critical failure, the IOC system will be switched to become the operational system pending problem resolution of the FOC system.

Rationale for continuous connection to FOC HazCollect during OT&E:

1. System Availability - The FOC HazCollect system must be operational for the duration of the OT&E in order to, with a high degree of confidence, confirm system availability for at least 30 days. System availability will include regular work weeks and weekends.
2. System Functionality – All Emergency managers (EMs) authorized for HazCollect should be able to exercise the FOC HazCollect in the event of an actual emergency. This confirms that the FOC HazCollect can actually handle real live situations in addition to controlled testing performed at headquarters and with the OT&E EMs.
3. System Readiness - The OT&E provides confirmation to the FOC HazCollect system deployment readiness. At the OT&E Wrap-Up meeting, the Test Review Group will vote to recommend the FOC HazCollect for deployment. Part of this readiness capability is the high degree of availability.

See **Section 3.0 Test Conduct** for how notifications will be sent for OT&E EM and all registered HazCollect users, including the DMIS help desk and the DMIS/DM-OPEN support team during actual OT&E testing.

## **1.6 Prerequisites, Assumptions, and Risks**

This section describes the actions required before the OT&E, the assumptions and limitations, and a description of the risks associated with performing the OT&E.

## 1.6.1 Prerequisites

Before proceeding with the HazCollect OT&E, the following prerequisites include:

- a. The HazCollect system successfully completes all system tests.
- b. HazCollect dissemination path, from HazCollect (in TG) to NCF, AWIPS, and to the WFO, is operationally available and functional.
- c. The nine tables used in HazCollect will contain all required non-weather emergency message products and correct data. These tables will include:
  - i. A2A (afos2awips file)
  - ii. Broadcast types
  - iii. Federal information processing standards (FIPS) to WFO
  - iv. NWEM Message Categories
  - v. State FIPS Codes
  - vi. State zones and FIPS codes (correlation)
  - vii. WFO
  - viii. WMO Regions
  - ix. NWEM Categories
- d. Required HazCollect documentation listed in **Attachment H** is available.
- e. An **OT&E Readiness Review** meeting is conducted by OPS24 to confirm with the HazCollect Project Manager that the HazCollect system is ready to begin the OT&E and is turned over to OPS24 for testing.
- f. All OT&E test sites will have their AWIPS and CRS setup configured and enabled for HazCollect on their respective OT&E start dates. Selected OT&E test sites must have the AWIPS OB9.2 Build already installed.
- g. Each of the participating emergency managers will have valid DMIS accounts and belong to at least one of the Collaborative Operations Group (COG) level supporting HazCollect – local, state, regional, and national level.
- h. The Dissemination Services (OS51) personnel will notify the NWS dissemination infrastructure users and other related agencies about the HazCollect OT&E by using a National public information statement (PNS) message.
- i. OS51 personnel will provide sample PNS message content to the OT&E sites for their use in preparation for the OT&E.
- j. The OT&E WFOs shall generate their local public information statement (PNS) messages to provide notification to the general public regarding the start of OT&E testing.

In Section 3.3, the Pre-OT&E required activities are listed for all WSH personnel, OT&E site POCs, and the their local emergency managers to perform prior to the start of the OT&E.

## 1.6.2 Assumptions and Limitations

It is assumed special training is not required for the OT&E. Additionally, most of the selected OT&E sites will have been already involved in previous training sessions to use the DMIS client software. For third-party vendor software used to generate NWEM messages, it is assumed to be OPEN API compliant and will not also require special training to use.

## 1.6.3 Risks

The FOC HazCollect system will be a new addition to the existing NWS infrastructure and as such, some risks are inherent. Risks are usually minimized by rigorous system testing. However, all tests before the OT&E are performed in a *simulated* environment. During the OT&E, the HazCollect system will undergo testing in an *operational* environment, wherein existing NWS systems, to be used, are currently working under operational conditions. However, even though the OT&E testing takes place at an operational field site, it is still conducted under controlled conditions as far as practicable without impacting normal operations. The following risks currently identified for the OT&E include:

- a. The testing of HazCollect at operational sites will be optimized if actual NWEM warning/watches do occur and are properly responded to by the HazCollect system. However, if non-weather emergency events do not occur, there will be no testing of actual watch and warning products and thus this capability and the HazCollect system behavior, under watch and warning conditions, will not be operationally verified.

**If actual NWEM watch and warning events do occur, the emergency manager is encouraged to use the DMIS client software to format his message and send them to the HazCollect for subsequent dissemination and broadcast. However, if actual watches and warnings do not occur, then there will be no verification of NWEM watch and warning products tested successfully for end-to-end transmission. For the list of HazCollect products, see Attachment A.**

## 2.0 Test Management

This section will provide descriptions of Test Review Group, including the major roles and responsibilities of OT&E test personnel.

### 2.1 Test Review Group

A Test Review Group (TRG) will oversee the conduct of the OT&E. The TRG is comprised of subject-matter experts selected from WSH, NWSEO, NWS Regional Headquarters, and the OT&E sites. The TRG will authorize tests of the HazCollect at selected OT&E sites and may suspend these tests at any time, should the performance of the HazCollect is found unacceptable. If OT&E tests are suspended, the TRG will authorize the resumption of tests when the appropriate corrective actions have been taken. The TRG may recommend additional regression tests prior to the resumption of the OT&E.

The TRG will meet weekly during the conduct of the operational tests. The TRG may also meet irregularly or on an emergency basis. The TRG meetings will be conducted via teleconference calls and will be coordinated by the OT&E Director.

Meetings of the TRG are conducted to review, clarify, and validate deficiencies documented by the TTRs. The TRG will evaluate each TTR and assign an **Impact** and **Priority** according to the criteria provided in Section 3.6.2. The TRG will work to resolve validated deficiencies and other test-related issues, and may recommend corrective actions to the HazCollect Project Manager.

Following the completion of the OT&E, the TRG will convene to review the findings of the test and vote to recommend whether to proceed with national deployment of the HazCollect. The decisions of the TRG are based on a simple majority among the voting members. In the event of a tie, the TRG Chair casts the deciding vote. Dissenting opinions will be recorded and reported in the test report.

The members of the TRG, including the designated voting members, are listed in **Attachment C**.

### 2.2 Test Personnel and Responsibilities

**Test Review Group Chair** – The Chief, Test and Evaluation Branch (OPS24) will chair the TRG. The Chair convenes the meetings of the TRG. The Chair works with the OT&E Director to ensure that tests are conducted efficiently and works to resolve any issues that may arise during the conduct of the OT&E.

*The Test Review Group Chair is a non-voting member of the TRG except in the case of a tied vote. The TRG Chair will cast the deciding vote in the event of a tie.*

**OT&E Director** – The OT&E Director will ensure that tests are performed as described in this OT&E Plan. In addition, the OT&E Director will:

- Write the HazCollect OT&E Plan.
- Ensure all tests defined by the OT&E Plan are completed and documented.

- Coordinate meetings of the TRG.
- Collect and present TTRs to the TRG for classification, and ensure that all TTRs documented and classified during the OT&E are forwarded to the proper WSH organization or board for resolution.
- Prepare status reports summarizing TTRs, operational issues, and test completions. Status reports will be distributed to the members of the TRG prior to the weekly meetings. During on-site testing in the first two weeks, the OT&E Director will create and distribute daily status reports to the TRG.

Following the completion of the OT&E, the OT&E director will coordinate a wrap-up meeting to brief the TRG on the status of the tests conducted, summarize the TTRs submitted, and report any other test related issues. The OT&E Director will ensure that the results of the OT&E are properly documented in an OT&E Report.

*The OT&E Director is a voting member of the TRG.*

**HazCollect Project Manager** – Ensures the HazCollect system and documentation are available for the OT&E. The Project Manager will participate in the OT&E conference calls. The Project Manager will review all problems documented and classified during the OT&E and coordinate their adjudication. The Project Manager will review the OT&E test plan and report documents.

*The HazCollect Project Manager is a non-voting member of the TRG.*

**WSH Test Support** –The WSH Test Support is comprised of subject-matter experts selected from WSH. Members of the WSH Test Support are responsible for providing the OT&E Director with technical information and advice on problem solutions. Test support members could help perform operational testing. The Office of Climate, Water, and Weather Services (OCWWS) support can be solicited for operational services requirements and procedures, HazCollect COG administration, test participation, issues that impact policy for the NWS awareness, preparedness, external warning coordination, and technical user education.

*The WSH test support personnel are non-voting members of the TRG.*

**OT&E Test Team** – The OT&E Test Team is comprised of personnel including the OT&E Director and members from the WSH Test Support. Members are responsible for performing operational tests and support duties as assigned, and assist in completing TTRs when problems are observed. Test Team members will conduct site visits, if necessary, to perform operational testing.

*The OT&E Test Team members are non-voting members of the TRG.*

**Information Technology Security Officer** – Ensures the HazCollect system has met the required technical objectives and/or project requirements, including C&A, security and configuration management.

*The Information Technology Security Officer is a voting member of the TRG.*

**National Weather Service Employee Organization (NWSEO) Test Support** – The NWSEO test support personnel will provide perspectives on any changes that might affect working conditions at NWS operational field sites.

*The NWSEO test support personnel is a voting member of the TRG.*

**Regional HazCollect Focal Points** – The Regional HazCollect Points provide liaison between WFOs and WSH. Regional Focal Points will participate in meetings of the TRG, review plans and interim reports during the OT&E, coordinate issues, classify any problems identified during the OT&E, and work to resolve any problems discovered during tests.

*The Regional Focal Points are voting members of the TRG (one vote per region).*

**OT&E Site Focal Points** – The OT&E Site Focal Points will plan and coordinate OT&E activities with their respective Regional Focal Point and site staff members. However, the site Meteorologist in Charge (MIC) will still approve all decisions required during the OT&E including if and when to start the field testing, and ensure the OT&E site staff support as required. **The OT&E site MIC retains all management responsibility for the site including whether to continue with the OT&E.**

Additionally, the OT&E Site Focal Points will:

- Provide operational feedback to the OT&E Director during field testing
- Verify CRS and NWR operations
- Create and submit TTRs for problems found during the OT&E
- Attend and provide input in all the scheduled TRG meetings.
- Complete and return the HazCollect questionnaire (see **Attachment J**) to the OT&E Director upon completion of the OT&E.

*The OT&E Site Focal Points will consolidate their vote with their corresponding regional office focal point.*

**Emergency Managers** – For each selected OT&E site, the designated EM(s) will:

- Participate in the HazCollect OT&E testing with assistance from OT&E test team.
- Provide input during OT&E at TRG conference calls.
- Complete and return questionnaire to OT&E Director (see **Attachment K**) upon completion of the OT&E.
- Generate the daily test Administrative messages (ADR) (OPTIONAL)

*The Emergency Managers personnel will consolidate their vote with their corresponding local weather forecast office.*

### 3.0 Test Conduct

The OT&E starts on **February 17, 2010**. The HazCollect system will now reside in the NWSTG. The ‘fallback’ HazCollect system will reside at the backup TG (BTG) at the Mt. Weather, VA facility. The OT&E site locally-based EM(s) will already have valid DMIS accounts, belong to appropriate COGs at different levels, and have access to the DMIS user interface client software or third-party vendor software (OPEN API-compliant).

During the OT&E, each emergency manager, and OT&E site point of contact will be responsible for providing verification and for performing specific test procedural duties. **The OT&E site MIC retains control over the operations of the OT&E site including whether to halt or postpone the OT&E during severe weather conditions.**

The OT&E test team will schedule all of the tests requiring mode changes on **Tuesdays from 13Z to 17Z UTC**. Messages may not be properly disseminated during this time and so all OT&E EMs (**active members**) and authorized HazCollect users (**passive members**) will be notified prior to the start of these tests. If the scheduled tests are finished earlier, the OT&E test team will notify users, and revert the HazCollect mode back to **Active** mode. The Tuesday test days are appropriately scheduled to achieve timely restoration response, if needed, during regular work week. System downtime problems will be documented as problem reports outlined in Section 3.6.

When new HazCollect users are authorized, OS51 (Herb White 713-0090 x146, POC) will send the ASCII file of new authorized HazCollect COG information to the IOC POC and to the OT&E test team to keep the IOC and FOC systems operationally current and to test capability of FOC system.

For the duration of the OT&E, and prior to the start of OT&E tests that would involve the switching of the HazCollect mode from the default **Active** to either Test or Training, the OT&E test team will notify, via email:

- a. All OT&E EMs and authorized HazCollect users (active and passive).
- b. The DMIS help desk at Stennis ([sdcemoc@dhs.gov](mailto:sdcemoc@dhs.gov) , 866-972-3662).
- c. The DMIS/DM-OPEN Systems Support Team ([DMSystems@eyestreet.com](mailto:DMSystems@eyestreet.com) , 888-252-2085 x3060).

The email notification will remind active and passive HazCollect users and DMIS help desk of a block of time wherein testing will be performed. The users will be advised to revert back to their manual methods of incident reporting during these blocks of test time. The notification will also warn users that any NWEM messages attempted to be sent via HazCollect during these test time may result in non-dissemination.

The TG staff will issue NWS administrative messages notifying NWS users of each change in status of the HazCollect system, e.g., unavailable to Emergency Managers and return to service. This notification method is addressed in the NWS HazCollect O&M System Support In IOC Era, Version 2.2, dated 28-April-2009

When new HazCollect users are authorized or contact information changes, OS51 (Herb White 713-0090 x146, POC) will send updated lists of authorized HazCollect users to the OT&E test team so all registered users are properly notified prior to OT&E mode-switching tests.

**If an actual non-weather emergency occurs**, emergency managers are encouraged to use the DMIS client or their third-party vendor client software (OPEN API compliant). This action will send the alert and at the same time, test the capability and stability of the DMIS client or demonstrate their third-party vendor software OPEN API compliance. Additionally, the DMIS software will allow the EMs to create and distribute incident and emergency information to the other COGS that are allowed to receive the emergency message.

If the NWEM message fails dissemination via HazCollect or during pre-planned OT&E test activities, EMs should revert back to use their previous process of sending NWEMs to the WFO (e.g., phone messages and/or faxes to WFO) as a backup method.

**To promote usability and track repeated dissemination**, EMs are encouraged to create and disseminate daily test ADR NWEMs (no more than once per day) for the duration of the OT&E, on weekdays, barring any emergency, workload, or schedule restrictions. **This is only an optional activity and should not be performed on Tuesdays (for the duration of the OT&E) when mode switching test activities will be performed by the OT&E test team. If performed, the ADR product must be used, together with the test message verbiage included in Attachment E.**

**For all disseminated test messages during the OT&E (those NOT involving actual emergencies)**, the headline and body of the NWEM message text should always be prefaced and completed with **TEST** phrases to remind weather radio listeners of the test nature of the broadcasted messages. For the same scenarios, the EMs are instructed to only use the approved text contents from the test procedures and to refrain from using critical watch and warnings text descriptions when composing the message contents.

For EMs using the DMIS client software, the following setup used for the test ADR NWEM messages is listed in **Attachment E**. The list of values shown in **Attachment E** is intended to actually disseminate a test ADR NWEM for broadcast by the local WFO. If the intended test does not require dissemination, the **Status** (CAP Status) field should be set to **'Test'**. Other than during actual HazCollect mode testing where the mode could be changed, the HazCollect mode would always be set to **'Active'**. See **Attachment F** for the different NWEM dissemination per selected modes and CAP status values.

During the OT&E, the test team will be verifying the end-to-end dissemination of the NWEM messages, including tests of national message(s). Additionally, NWEM messages will be also verified for correction and update/cancel handling.

The HazCollect failover and recovery processing will also be performed during the OT&E. The failover and recovery processing will include failovers within HazCollect TG 595 processors in the TG and failovers between TG and the 'fallback' HazCollect at the BTG. These tests will verify generated test messages are transmitted and received during failover scenarios, with no messages lost and/or corrupted.

HazCollect modes (Active, Training, and Test) will be validated for functionality. The modes will be verified for proper dissemination and/or non-dissemination depending on selected mode and DMIS status value. The NWEM dissemination processing matrix, including all HazCollect modes and DMIS CAP status, is described in **Attachment F**. **39 Attachment D** lists all the test sequences

and their corresponding descriptions, including the server modes for each test performed. The actual test start dates and times are displayed in **Attachment I**.

Additionally, specified log files from the HazCollect Server, NCF, AWIPS, etc. may be collected, during the duration of the OT&E, for use by the Product Acquisition Monitoring System (PAMS) for verifying message transmission start and end times. PAMS is a tool developed by OPS24 to quantify the effectiveness of the AWIPS communication networks in delivering messages from NCF to CRS, via AWIPS.

### 3.1 Test Sites

The selected HazCollect OT&E test sites and their corresponding starting and ending test dates, including their corresponding field office points of contacts and emergency managers are listed in **Attachment G**.

The OT&E will begin at each site per stated starting date. All testing and/or monitoring will end **March 26, 2008**.

### 3.2 Resource Requirements

The resource requirements, including software, hardware, and documentation, for the OT&E are listed in **Attachment H**.

### 3.3 Pre-OT&E Activities

Before the start of the OT&E, WSH and OT&E site personnel will be required to perform specified activities to ensure efficient and orderly conduct of the OT&E.

#### 3.3.1 National Weather Service Headquarters

WSH test personnel (and their contractor) will complete the following actions (including responsible organization in parenthesis) prior to commencement of the OT&E:

- a. Successfully perform and conclude the FOC HazCollect System Test (*OS&T/Prism*)
- b. Setup FOC and IOC HazCollect system with the latest database (*OS&T/Prism*)
- c. Perform FOC and IOC HazCollect system administration setup (*OS&T/Prism*)
- d. Demonstrate the process of FOC to IOC switchover, and then back to FOC prior to the start of OT&E. This provides a measure of confidence that our IOC system will provide a backup capability in the event of FOC failure (*OS&T/Prism*).
- e. Setup FOC and IOC HazCollect COG information for all authorized users including EMs in the FOC HazCollect system prior to the start of the OT&E (*OS&T/Prism*).
- f. Clean FOC HazCollect database and/or file directories of test messages/data (*OS&T/Prism*).
- g. Ensure the FOC HazCollect setup for the normal operation communications path is functional and available (e.g., User client->FOC HazCollect -> TG->NCF->AWIPS) (*OS&T/Prism/CIO*).
- h. Convene an OT&E Readiness Review meeting with WSH personnel, region focal points and their WFO sites, to decide if the HazCollect system is ready for the OT&E (*OPS24*).

- i. Prepare the PAMS to track log files for NWEM verification and tracking. (*OPS24*).
- j. Perform FOC and IOC HazCollect COG administration and setup, if necessary, for participating EM/users for the OT&E (*OS51*)
- k. Notify NWS dissemination infrastructure user community of the upcoming OT&E (*OS51*).
- l. Provide OT&E sites with sample message contents for each of the OT&E site local PNS messages (*OS51*).
- m. Prepare and distribute all documentation listed in **Attachment H**. (*as designated in Attachment*)

### 3.3.2 OT&E Sites

Prior to conducting the OT&E, the OT&E sites will complete the following actions:

- a. Ensure AWIPS, NWWS, and CRS systems are operational.
- b. Confirm the required documentation is available.
- c. Ensure the NWRWAVES formatter has been setup and configured.
- d. Ensure that the **afos2awips.txt** file contain all non-weather emergency products required for local NWS operations.
- e. Ensure that their CRS database is setup to schedule and broadcast the HazCollect NWEM products.
- f. Ensure any required local public information messages are disseminated prior to the start of the OT&E. These messages shall inform the public of the operational testing mode is being performed on the systems and any possible failure will be immediately mitigated and/or fixed.

### 3.3.3 Emergency Managers

Prior to conducting the OT&E, the participating emergency managers, in addition to being confirmed and authorized users for HazCollect, will complete the following actions:

- a. Install, if not already previously performed, the latest DMIS client software (Version 2.3.3).
- b. Able to use the DMIS client to use for generating and/or editing NWEM messages. Specific EMs will be expected to demonstrate their DMIS OPEN API-compliant software.

### 3.4 Test Readiness Review Meeting

The TRG Chair will convene a Test Readiness Review Meeting on **February 16, 2010**. The Test Readiness Review Meeting is held to confirm with the HazCollect Project Manager (OS&T) that the HazCollect system is ready to begin the OT&E and is turned over to OPS24 for testing. The prerequisites listed in Section 1.6.1 will be verified by the TRG for completion.

### 3.5 OT&E Tests

The planned OT&E tests will consist of test sequences listed in **Attachment D**. These tests are scheduled to be performed per test dates displayed in **Attachment I**. The actual test procedures (xls format) are located in the OPS24 shared directory:

**Share Drive: \OPS2\_D\OPS24\HazCollect\2010 – FOC OTE\Test Procedures\**

These tests will include end-to-end dissemination tests, failover tests, database verification, HazCollect mode tests, and demonstrating the DMIS OPEN API. Any other additional testing at the site, not specified in this OT&E Plan, will need to be discussed with the OT&E Director.

### 3.5.1 Installation

**There will be no software installation at the OT&E sites.** All required HazCollect application software will have already been installed and verified before the start of the OT&E. All EMs will have already downloaded and/or installed the latest DMIS client software (Version 2.3.3.) or their DMIS OPEN API compliant software.

At the start of the OT&E, the required software that will have already been pre-installed will include the following:

- FOC HazCollect server software (Version 1.0)
- DMIS client software (Version 2.3.3)
- CRS database/AWIPS setup

### 3.5.2 Test Conduct – OT&E Test Team

The OT&E test start dates will be staggered (see Attachment I) to accommodate as many test sites per available test resources and to verify outgoing data and minimize confusion as to who sent a NWEM.

*For selected test sites that have previously participated in HazCollect operational testing,* the test team will host a *GoToMeeting* teleconference to start the OT&E for the site. The test team will first verify that the requisite local PNS messages have been disseminated by the test sites prior to the start of the test. The test team will go over the test schedule and tests to be performed. Afterwards, the local EM servicing the test site will generate his test ADR message which will be disseminated end-to-end. The test ADR message will be verified via the AWIPS red banner, scheduled within CRS, and broadcasted over weather radio. The ADR SAME tone activation will be monitored both at the weather radios and at the EM local EAS receivers.

*For selected test sites that have NOT previously participated in HazCollect operational testing,* the OT&E test team may travel to their site to help the site understand how HazCollect will be used and help the site POCs and their local EM with the use of the DMIS client. The test site and their local EM will then proceed to perform the same end-to-end dissemination as the other previous test site participants.

At the end of each day, during OT&E testing at a particular WFO, the OT&E test team will verify the current HazCollect server mode is set to **Active** in the event an actual emergency does occur and the EMs need to disseminate their actual NWEMs over to NWS dissemination systems. Constant communication between resources, each staffing their respective verification point, will be needed. Phone bridges, including the use of *GoToMeeting* teleconferencing software, during testing can be employed to provide communication between resources.

The OT&E continues even as the OT&E test team leaves an OT&E site. **The HazCollect Server mode will remain in Active mode.**

**For the duration of the OT&E**, the EMs are *encouraged* to do the following activities:

1. **Perform actual non-weather emergency message creation as described in Section 3.0 in the event of an actual emergency.**
2. Report any problems found (see **Attachment B**).
3. Participate at the TRG conference call meetings every **Thursdays (2:00 PM EST)** for the duration of the OT&E.
4. Create daily test ADR NWEM messages (no more than once per day) on weekdays for the duration of the OT&E, using the DMIS or third-party client software which is OPEN API compliant. **[THIS IS OPTIONAL and should NOT be performed during the Tuesday testing days]**

**For the duration of the OT&E**, the OT&E site will continue to perform the following tasks:

1. Perform their normal WFO routine weekly tests.
2. Monitor any actual emergency and/or optional test ADR NWEM messages from the EM and report any problems found (see **Attachment B**).
3. Participate at the TRG conference call meetings every **Thursdays (2:00 PM EST)** for the duration of the OT&E.

**For the duration of the OT&E**, the OT&E test team will continue to perform the following tasks:

1. Host and coordinate scheduled and/or any emergency TRG meetings.
2. Perform tests per **Attachment D as scheduled in Attachment I**.
3. Monitor NWEM message traffic log files, using PAMS.
4. Participate at the TRG conference call meetings every **Thursdays (2:00 PM EST)** for the duration of the OT&E

Successful completion of the test procedures, especially the verification of the end-to-end NWEM dissemination, will involve active participation and coordination between the OT&E test team and the WSH test support personnel. The NWSTG Point of Contact (POC) will verify, upon request from the OT&E test team, for incoming messages and their subsequent transfers. The AWIPS and CRS POCs will monitor message storage, transmit (including by NWWS), scheduling, and broadcast via weather radios. Additionally, PAMS could track all disseminated NWEM messages to CRS, NWWS, and NWSTG for verification.

During the performance of the test procedures, the OT&E test team will first notify all OT&E EMs and registered users of HazCollect for the upcoming tests in the event of changing the default **Active** mode to some other value (Test, Training, etc) which will disallow full dissemination. These EMs and users will be advised to use their previous manual process. For any test procedures that would involve the changing of the HazCollect mode from the Active status, the OT&E Director will notify all test sites and all active and passive users so they can plan for mitigation in case of actual emergencies.

Any problems observed during the OT&E should be documented via the TTR Form (see **Attachment B**) and subsequently emailed to the OT&E Test Director. The OT&E Test Director will enter the test defects into the TestTrack Pro database and present the defects to the TRG for further

action. Additionally, specified log files from the HazCollect Server, NCF, AWIPS, etc. may be collected, during the duration of the OT&E, for use by the PAMS for verifying message transmission start and end times. PAMS is a tool developed by OPS24 to quantify the effectiveness of the AWIPS communication networks in delivering weather-related products from NCF to CRS, via AWIPS.

## 3.6 Test Reporting and Analysis

### 3.6.1 Reporting

OT&E site focal points will provide comments on the performance of their dissemination systems operations for any degradation. Additionally, the OT&E site focal points will also document any problems discovered during the OT&E by completing the attached Test Trouble Report Form, **Attachment B**.

The completed TTR form, together with any supporting documentation, should be submitted by email or fax message to the OT&E Director. The OT&E Director will collect the TTRs and add them to the TestTrack database. The OT&E Director will provide the TTRs to the TRG for adjudication (see **Section 2.1**).

### 3.6.2 Analysis

The OT&E Director will collect the TTRs, maintain the TestTrack database, and provide the TTRs to the TRG for adjudication (see Section 2.1). The database allows the assignment of an **Impact** and **Priority** for each TTR.

The **Impact** ranks the severity of the problem and can be assigned (in ascending severity):

**a. Impact 1 – Malfunction of required functionality, no workaround**

This impact describes a problem that severely impacts the HazCollect system operations and there are NO acceptable workarounds.

***ACTION:** The TRG recommends suspension of the test to the NWS HazCollect Project Manager. If suspended, the OT&E resumes when the HazCollect Project Manager approves a proposed corrective action. When an approved corrective action is implemented, regression testing may be required.*

**b. Impact 2 – Malfunction of required functionality with reasonable workaround**

This impact describes a problem that severely impacts the HazCollect system but has a reasonable workaround.

***ACTION:** The test continues with the current system using the acceptable workaround until a permanent fix is available. Once the NWS HazCollect Project Manager approves the fix, only those areas affected by the problem will be retested.*

c. **Impact 3 – Less critical; loss of minimum capability**

This impact describes a minor problem that does not significantly impact HazCollect system.

***ACTION:** The test continues with the current system; approved workarounds maybe implemented. Routine deficiencies are submitted by the TRG to the NWS HazCollect Project Manager for adjudication.*

d. **Impact 4 – Watch item**

This impact describes a random problem with potentially significant impact on HazCollect system.

***ACTION:** The TRG monitors test activities for recurrence of the problem; if recurrence is documented, the TRG will consider re-categorizing the problem.*

e. **Impact 5 – Minimum to no impact; nice to have**

This impact describes problems that have little to no impact to the HazCollect service operations. This impact will also include potential enhancements.

***ACTION:** The TRG will document the minor problem for tracking and future re-categorization. The TRG forwards the potential enhancement to the NWS HazCollect Project Manager for adjudication. The HazCollect Project Manager may then forward the potential enhancement as a Request for Change.*

The **Priority** addresses how the problem is to be resolved and can be assigned (in ascending severity):

Priority 1 – Need immediate fix

Priority 2 – Include in the next build *before initial deployment*

Priority 3 – Include in the next build *after deployment*

Priority 4 – Include in a future build

Priority 5 – Undetermined

**TTRs that are assigned Impact 1 mandate the immediate suspension of the OT&E.** The TRG will work to resolve problems identified during the OT&E.

### **3.7 Schedule**

The OT&E schedule is listed in **Attachment I**. Any changes to the schedule should be brought to the immediate attention of the OT&E Director. The OT&E Director will notify the members of the TRG of any required schedule changes and coordinate the timely completion of the OT&E.

### 3.8 Help during the OT&E

1. For all DMIS-client software problems, call the DMIS Help desk:

**DMIS Help Desk**

Phone: (866) 972-3662

[sdcemoc@dhs.gov](mailto:sdcemoc@dhs.gov)

2. If for any reason, during the OT&E testing, the FOC HazCollect system encounters major/critical failure resulting in inability to disseminate, the OT&E test team will notify the NWSSTG Tech Control requesting to immediately switch the system from FOC to IOC.

**NWSSTG Tech Control**

Phone: (301) 713-0902

Email: [toc.nwstg@noaa.gov](mailto:toc.nwstg@noaa.gov)

3. For all other questions regarding the HazCollect OT&E, call the OT&E test team:

**Bert Viloría, HazCollect OT&E Director**

Phone: (301) 713-0326 x131

Email: [Bert.Viloria@noaa.gov](mailto:Bert.Viloria@noaa.gov)

**Jae Lee, Test & Evaluation Branch**

Phone: (301) 713-0326 x158

Email: [Jae.Lee@noaa.gov](mailto:Jae.Lee@noaa.gov)

### 3.9 Post-OT&E Activities

#### 3.9.1 OT&E Questionnaires

The Site Focal Point will complete the site questionnaire, **Attachment J**, upon the conclusion of the OT&E. The Site Focal Point should coordinate the completion of the questionnaire with site management and other staff members.

Similarly, the participating Emergency Managers will complete their questionnaire, **Attachment K**, upon conclusion of the OT&E. The completed questionnaires, together with any additional comments, should be returned to the OT&E Director no later than **March 30, 2010**.

#### 3.9.2 OT&E Conduct Survey

An OT&E Conduct Survey (see **Attachment L**) will be distributed by OPS24 to the TRG. This survey will allow TRG members to rate the performance of OPS24 during the OT&E and provide recommendations on how to make the operational testing process better. While the completion of this survey is optional, it should be returned to the OT&E Director no later than **March 30, 2010**.

## 4.0 Test Recommendations and Report

The TRG Chair will convene a wrap-up meeting of the TRG on **April 1, 2010**, following the conclusion of the OT&E. The OT&E Director will review and present to the TRG, the activities conducted to date including a summary of TTRs found, other findings, and recommendations. The TRG will review the materials presented and vote to recommend whether to proceed with the national FOC deployment of HazCollect.

At the conclusion of the OT&E and per voting guidelines, the HazCollect system must meet the following criteria for national deployment:

- All TTRs assigned **Impact 1 or 2** must be resolved and closed.
- All problems resolved by an **operationally accepted** workaround must be properly documented.

As stated in Section 2.1, this voting is based on a simple majority among the voting members. In the event of a tie, the TRG Chair will cast the deciding vote. Dissenting opinions will be recorded and reported in the test report

The OT&E Report will be prepared, by OPS24, upon completion of the OT&E. The OT&E Report provides a complete record of the OT&E including details and status of all OT&E TTRs, findings, and recommendations. The OT&E Report will be made available on the OPS24 website at:

[http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect\\_docs.htm](http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect_docs.htm)

## Attachment A – Non-Weather Emergency Message Products in HazCollect

| Event Code   | AWIPS Priority    | Event (Product) Name                       |
|--------------|-------------------|--|
| AVW          | Warning/Exclusive | Avalanche Warning                          |
| CDW          | Warning/Exclusive | Civil Danger Warning                       |
| CEM          | Warning/Exclusive | Civil Emergency Message                    |
| EQW          | Warning/Exclusive | Earthquake Warning                         |
| EVI          | Warning/Exclusive | Immediate Evacuation Warning               |
| FRW          | Warning/Exclusive | Fire Warning                               |
| HMW          | Warning/Exclusive | Hazardous Materials Warning                |
| LEW          | Warning/Exclusive | Law Enforcement Warning                    |
| NUW          | Warning/Exclusive | Nuclear Power Plant Warning                |
| RHW          | Warning/Exclusive | Radiological Hazard Warning                |
| SPW          | Warning/Exclusive | Shelter In Place Warning                   |
| VOW          | Warning/Exclusive | Volcano Warning                            |
| AVA          | Watch/High        | Avalanche Watch                            |
| CAE          | Watch/High        | Child Abduction Emergency                  |
| LAE          | Watch/High        | Local Area Emergency                       |
| TOE          | Watch/High        | 911 Telephone Outage Emergency             |
| ADR          | Other/General     | Administrative Message/Follow up Statement |
| DMO          | Configurable      | Practice/Demo Warning                      |
| <b>NIC*</b>  | Other/General     | National Information Center                |
| <b>NPT*</b>  | Configurable      | National Periodic Test                     |
| <b>RMT**</b> | Configurable      | Routine Monthly Test                       |
| <b>RWT**</b> | Configurable      | Routine Weekly Test                        |

\* Not yet defined and implemented in HazCollect at this time.

\*\* Not implemented in HazCollect at this time.

## Attachment B – HazCollect Test Trouble Report Form

| HazCollect OT&E TEST TROUBLE REPORT |  |                   |  |                   |
|-------------------------------------|--|-------------------|--|-------------------|
| <b>Title/Summary:</b>               |  |                   |  |                   |
| <b>Originator:</b>                  |  | <b>AWIPS:</b>     |  | <b>Phone</b><br>: |
| <b>Location:</b>                    |  | <b>Date/Time:</b> |  | <b>Email:</b>     |

| Priority   | Impact  | Subsystem/<br>Component | Frequency           |
|--|---|-------------------------|---------------------|
| 1. Need immediate fix                              | 1. Malfunction of required functionality;<br><b>NO workaround</b>         | Software                | Always              |
| 2. Include in next build before initial deployment | 2. Malfunction of required functionality;<br><b>Reasonable workaround</b> | Hardware                | Sometimes           |
| 3. Include in next build after deployment          | 3. Routine deficiency; loss of minimum capability                         | Documentation           | One-time occurrence |
| 4. Include in future build                         | 4. Watch Item   | Other                   | See description     |
| 5. Undetermined                                    | 5. Minimum to no impact; nice to have                                     | Unknown                 | Unknown             |
|  | 6. Undetermined   |                         |                     |

|                               |
|-------------------------------|
| <b>Problem Description:</b>   |
|                               |
| <b>Recommended Solution:</b>  |
|                               |
| <b>Authorizing Signature:</b> |
| <b>Date:</b>                  |

Please send an email to [Bert.Vloria@noaa.gov](mailto:Bert.Vloria@noaa.gov) or [Jae.Lee@noaa.gov](mailto:Jae.Lee@noaa.gov) with this form as an email attachment.

Call Bert Vloria at 301-713-0326 x131 or Jae Lee at 301-713-0326 x158 if you have any questions and/or comments.

## Attachment C – Test Review Group Members

| Name (Organization)                         | Function                                  | Phone                                      | Voting Member? |
|---|---|--|----------------|
| Jae Lee (OPS24)                             | Test Review Group Chair                   | (301) 713-0326 x160                        | YES *          |
| Bert Vilorio (OPS24)                        | OT&E Director                             | (301) 713-0326 x131                        | YES            |
| Steve Pritchett (OST11)                     | HazCollect Project Manager                | (301) 713-3557 x172                        |                |
| Asghar Noor (CIO13)                         | Chief, Telecommunications Software Branch | (301) 713-0882 x114                        |                |
| Mahnaz Dean (CIO12)                         | Chief, Operations Branch, TOC             | (301) 713-0864 x171                        |                |
| Herb White (OS51)                           | WSH Test Support                          | (301) 713-0090 x146                        |                |
| Arthur Kraus (OS51)                         | WSH Test Support                          | (301) 713-0090 x161                        |                |
| Susan Murphy (CIO12)                        | WSH Test Support                          | (301) 713-0864 x174                        |                |
| Kevin Conaty (CIO12)                        | WSH Test Support                          | (301) 713-0864 x170                        |                |
| Frances Yang (CIO13)                        | WSH Test Support                          | (301) 713-0877 x127                        |                |
| Walter Mussante (CIO13)                     | WSH Test Support                          | (301) 713-0877 x145                        |                |
| Odon Dario (CIO14)                          | WSH Test Support                          | (301) 713-0510 x172                        |                |
| Jeremiah Dewey (OST31)                      | Information Technology Security Officer   | (301) 713-1570 x127                        | YES            |
| Michael Dion                                | NWSEO Representative                      | (301) 713-1792 x142                        | YES            |
| John Koch (ER1)<br>John Guiney (ER1)        | Eastern Region Focal Points               | (631) 244-0104<br>(631) 244-0121           | YES            |
| Mike Mach (SR11)                            | Southern Region Focal Point               | (817) 978-1100 x108                        | YES            |
| Gregory Noonan (CR4)                        | Central Region Focal Point                | (816) 891-7734 x301                        | YES            |
| Craig Schmidt (WR1)<br>Jeffrey Lorens (WR1) | Western Region Focal Points               | (801) 524-4000 x266<br>(801) 524-4000 x265 | YES            |
| Jeffrey Osiensky (AR1)                      | Alaska Region Focal Point                 | (907) 271-5132                             | YES            |
| Bill Ward (PR)                              | Pacific Region Focal Point                | (808) 532-6415                             | YES            |
| Richard Kane (WFO PBZ WCM)                  | ER Site focal point                       | (412) 262-2170 x223                        | YES+           |
| Kerry Jones (WFO ABQ WCM)                   | SR Site focal point                       | (505) 244-9150 x223                        | YES+           |
| Ricky Shanklin (WFO PAH WCM)                | CR Site focal point                       | (270) 744-6440 x726                        | YES+           |
| Tom Evans (WFO MTR WCM)                     | WR Site focal point                       | (831) 656-1710 x223                        | YES+           |
| Kathy Hoxsie (WFO STO WCM)                  | WR Site focal point                       | (916) 979-3046 x223                        | YES+           |
| Sam Albanese (WFO AFC WCM)                  | AR Site focal point                       | (907) 266-5117                             | YES+           |

| <b>Name (Organization)</b>   | <b>Function</b>            | <b>Phone</b>         | <b>Voting Member?</b> |
|------------------------------|----------------------------|----------------------|-----------------------|
| Raymond Tanabe (WFO HFO WCM) | PR Site focal point        | (808) 973-5275       | YES+                  |
| John Nicklin                 | Mercer County, PA EM       | (724) 662-6100 x2441 | YES++                 |
| Joyce Purley                 | Santa Fe, NM EM            | (505) 955-6537       | YES++                 |
| Walter Atherton              | Daviess County, KY EM      | (270) 685-8448       | YES++                 |
| Katherine Hern               | Contra Costa County, CA EM | (925) 313-9635       | YES++                 |
| Rob Fitch                    | Anchorage, AK EM           | (907) 343-1404       | YES++                 |
| Tom Simon                    | State of Hawaii, HI EM     | (808) 733-4300 x541  | YES++                 |

\* TRG Chair only votes in the event of a tied vote.

+ WFO focal points will consolidate their vote with their regional focal points

++ Site local emergency managers will consolidate their votes with their local weather forecast offices.

## Attachment D – OT&E Test Sequence and Description

| Test # | Procedure # | Description  | HazCollect Server Mode | DMIS CAP status             | Disseminated? / How many?   |
|--------|-------------|--|------------------------|-----------------------------|---|
| 1      | 110         | This test will verify NWEM message generation using different areas for local and <b>NATIONAL</b> messages using only the ADR product.   | Active                 | Actual                      | YES / 1 ADR per site @ start date and all states during National Test     |
| 2      | 200         | This test will verify the EM authentication into HazCollect within <b>5 seconds</b> .  | Active                 | Actual                      | NO  |
| 3      | 230         | This test will verify the transmission of NWEM message to dissemination systems <b>within 2 minutes</b> of submission from multiple EM interfaces.   | Active                 | Actual                      | YES / at least 2 ADR  |
| 4      | 300         | This test will verify that the <b>HazCollect Active Operations</b> mode is operational using the DMIS client Status = <b>Actual, System, Exercise, and Test</b> .                                    | Active                 | Actual System Exercise Test | NO for System & Test<br>YES for Actual & Exercise / 2 ADR                 |
| 5      | 310         | This test will verify that the <b>HazCollect Test Operations</b> mode is operational using the DMIS ' <b>Actual</b> ' CAP status. Will verify <b>Corrected, Update/Cancel</b> functionalities.       | Test                   | Actual                      | NO  |
| 6      | 320         | This test will verify that the <b>HazCollect Test Operations</b> mode is operational for the DMIS CAP status of <b>System, Exercise, and Test</b> .  | Test                   | Test Exercise System        | YES for Test,<br>NO for Exercise, System / No actual msg (filtered at TG) |
| 7      | 330         | This test will verify that the <b>HazCollect Training Operations</b> mode is operational for CAP status <b>System, Exercise, and Test</b> .  | Training               | Actual System Exercise Test | NO  |
| 8      | 500         | This test will verify the HazCollect failover is functional within the TG at Silver Spring, MD and between the TG and the BTG at Mt Weather, WV.   | Test                   | Test                        | NO (filtered at TG)   |
| 9      | 600         | This test will verify the HazCollect database functionality (Add, Modify, Delete records).   | Test                   | Test                        | NO (filtered at TG)   |
| 10     | 700         | This test will demonstrate that the CAP message from a DMIS OPEN API compliant third-party vendor client is transmitted through HazCollect server and disseminated out to designated listening area. | Active                 | Actual                      | YES / 1 ADR   |

## Attachment E – Sample DMIS NWEM Field Values

| DMIS Client Field   | Value  |
|---------------------|--|
| <b>Name:</b>        | <some meaningful name>   |
| <b>*Status:</b>     | Actual   |
| <b>Scope:</b>       | Public   |
| <b>Type:</b>        | Alert  |
| <b>Event:</b>       | Administrative Message   |
| <b>Headline:</b>    | THIS MESSAGE IS FOR TEST PURPOSES ONLY.  |
| <b>Description:</b> | <p>THIS IS A TEST MESSAGE. THIS IS A TEST OF THE CAPABILITY TO RELAY EMERGENCY MESSAGES FROM NON-NATIONAL WEATHER SERVICE SOURCES USING DEPARTMENT OF HOMELAND SECURITY AND NWS SYSTEMS. THIS TEST MESSAGE MAY BE RELAYED BY EMERGENCY ALERT SYSTEM PARTICIPATING STATIONS IN ACCORDANCE WITH LOCAL AND STATE EAS PLANS.</p> <p>THIS IS A TEST MESSAGE. DO NOT TAKE ACTION BASED ON THIS TEST MESSAGE.</p> |
| <b>Duration:</b>    | 30 minutes   |
| <b>Urgency:</b>     | Immediate  |
| <b>Severity:</b>    | Severe   |
| <b>Certainty:</b>   | Unknown  |
| <b>Language:</b>    | ENGLISH  |
| <b>Category:</b>    | Other  |
| <b>Areas:</b>       | <select areas>   |

\* If the HazCollect mode is **Active** and **DMIS Status** is *Actual*, the message is disseminated.

\* If the HazCollect mode is **Active** and **DMIS Status** is *Test*, the message is not disseminated.

## Attachment F – HazCollect Modes

| HazCollect Mode | DMIS CAP Status | NWEM Disseminated? | OT&E Test Procedure/<br>Event Code Used |
|-----------------|-----------------|--------------------|---|
| <b>Active</b>   | <b>Actual</b>   | <b>Yes</b>         | Test Procedure #300 / ADR               |
|                 | System          | No                 |   |
|                 | <b>Exercise</b> | <b>Yes</b>         |   |
|                 | Test            | No                 |   |
| <b>Training</b> | Actual          | No                 | Test Procedure #330 / ADR               |
|                 | System          | No                 |   |
|                 | Exercise        | No                 |   |
|                 | Test            | No                 |   |
| <b>Test</b>     | Actual          | No                 | Test Procedures #320 /<br>ADR           |
|                 | System          | No                 |   |
|                 | Exercise        | No                 |   |
|                 | <b>Test</b>     | <b>Yes</b>         |   |

The HazCollect server is capable of being switched into three different operational modes:

1. The **Active Mode** is the normal mode when the system is operationally functioning. This mode allows the EM to enter active operational mode providing all functionality and performance necessary for the EM to disseminate emergency messages whenever required.
2. The **Training Mode** is used to replicate EM user functionality of creating NWEM messages while inhibiting the routing and dissemination of any data from the HazCollect server to the NWS infrastructure. There will be no NWEM dissemination using this HazCollect server mode.
3. The **Test Mode** provides the capability for system administrators to place elements of the system in test mode to verify proper operation, communication, and performance without jeopardizing alert dissemination functions.

## Attachment G – HazCollect OT&E Test Sites

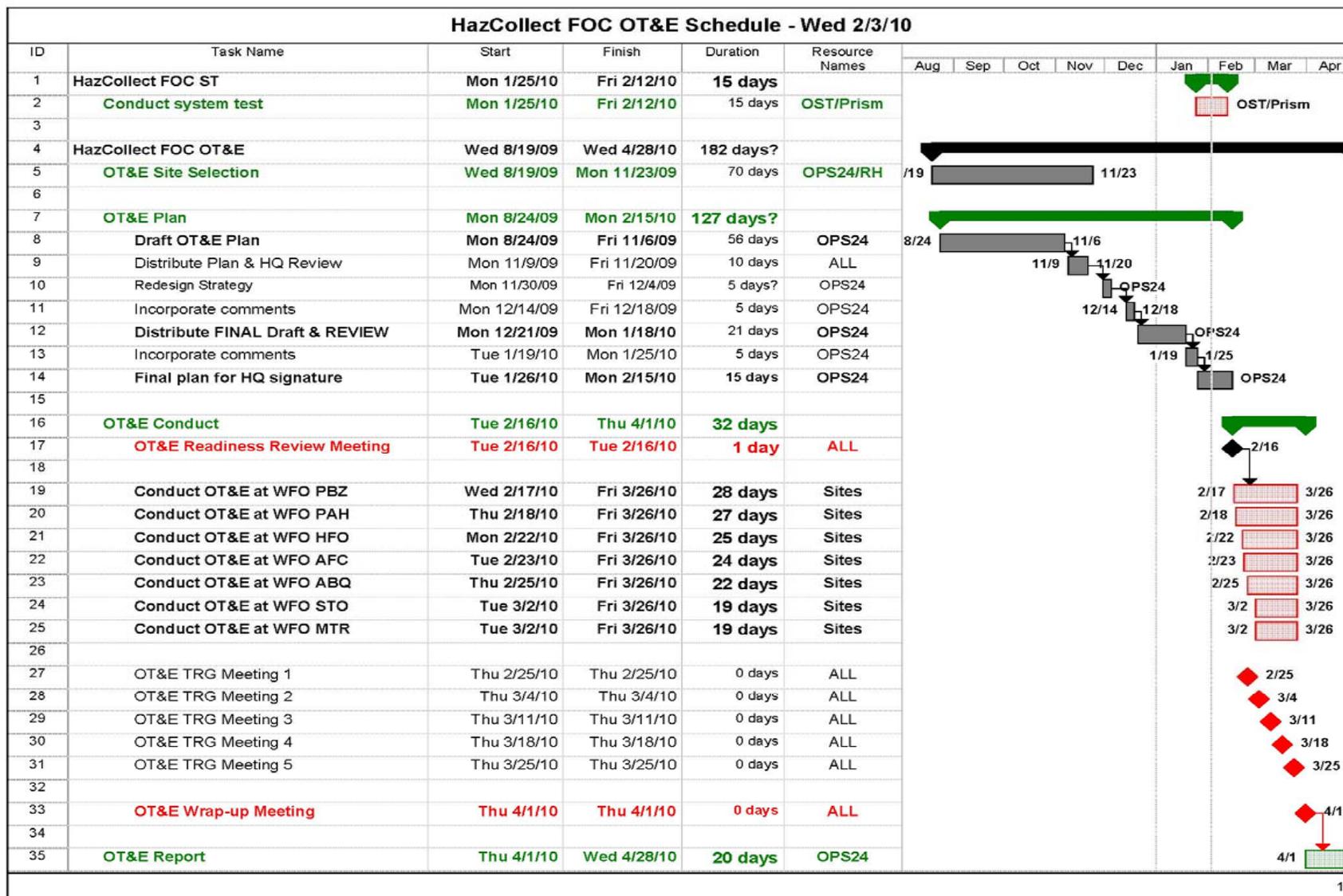
| Region   | Regional Focal Pts<br>* = alternate   | OAT sites (Site ID)  | MICs / POC(s)   | Emergency Manager(s)   | EM COGS / Scope  | Test Dates        |
|----------|---|--|---|--|--|-------------------|
| Eastern  | <p><b>John Koch</b><br/>(631) 244-0104<br/><a href="mailto:john.koch@noaa.gov">john.koch@noaa.gov</a></p> <p><b>John Guiney</b><br/>(631) 244-0121<br/><a href="mailto:john.guiney@noaa.gov">john.guiney@noaa.gov</a></p> | <p><b>WFO Pittsburgh (PBZ)</b><br/>192 Shafer Road<br/>Moon Township, PA 15108<br/>(412) 262-1591</p>          | <p><b>Richard Kane (WCM)</b><br/>(412) 262-2170 x223<br/><a href="mailto:richard.kane@noaa.gov">richard.kane@noaa.gov</a></p> <p><b>Joseph Palko</b><br/>(412) 262-2582 x235<br/><a href="mailto:joseph.palko@noaa.gov">joseph.palko@noaa.gov</a></p>   | <p><b>John Nicklin (EM)</b><br/>Deputy EMA Director,<br/>Mercer County, PA<br/>205 S. Erie St.<br/>Mercer, PA 161237<br/>(724) 662-6100 x2441<br/>(724) 685-1140 (Cell)<br/><a href="mailto:jnicklin@mcc.co.mercer.pa.us">jnicklin@mcc.co.mercer.pa.us</a></p> | <p><b>COG # 3016</b><br/><b>PA Mercer County</b><br/><b>Department of Public</b><br/><b>Safety</b></p> <p style="text-align: center;"><b>LOCAL</b></p> | 2/3/10 – 3/12/10  |
| Southern | <p><b>Mike Mach</b><br/>(817) 978-1100 x108<br/><a href="mailto:mike.mach@noaa.gov">mike.mach@noaa.gov</a></p>  | <p><b>WFO Albuquerque (ABQ)</b><br/>2341 Clark Carr Loop SE<br/>Albuquerque, NM 87106<br/>(505) 243-0702</p>   | <p><b>Shawn Bennett (MIC)</b><br/><a href="mailto:shawn.bennett@noaa.gov">shawn.bennett@noaa.gov</a><br/>(505) 244-9150 x222</p> <p><b>Kerry Jones (WCM)</b><br/><a href="mailto:Kerry.jones@noaa.gov">Kerry.jones@noaa.gov</a><br/>(505)244-9150 x223</p>  | <p><b>Joyce Purley</b><br/>Emergency Preparedness<br/>Coordinator<br/>PO Box 909<br/>Santa Fe, NM 87504<br/>(505) 955-6537<br/><a href="mailto:jwpurley@santafenm.gov">jwpurley@santafenm.gov</a></p>  | <p><b>COG # 30066</b><br/><b>NM City of Santa Fe</b><br/><b>OEM</b></p> <p style="text-align: center;"><b>LOCAL</b></p>                                | 2/11/10 – 3/12/10 |
| Central  | <p><b>Greg Noonan</b><br/>(816) 891-7734 x301<br/><a href="mailto:gregory.noonan@noaa.gov">gregory.noonan@noaa.gov</a></p>  | <p><b>WFO Paducah KY (PAH)</b><br/>8250 KY Highway 3520<br/>West Paducah, KY 42086-6440<br/>(270) 744-6440</p> | <p><b>Beverly Poole (MIC)</b><br/>(270)744-6440 x642<br/><a href="mailto:beverly.poole@noaa.gov">beverly.poole@noaa.gov</a></p> <p><b>Rick Shanklin (WCM)</b><br/>(270)744-6440 x726<br/><a href="mailto:ricky.shanklin@noaa.gov">ricky.shanklin@noaa.gov</a></p> <p><b>Deanna Lindstrom</b><br/>(270) 744-6440 x468<br/><a href="mailto:Deanna.Lindstrom@noaa.gov">Deanna.Lindstrom@noaa.gov</a></p> | <p><b>Walter Atherton</b><br/>Davies Co. KY EM<br/>Comms Supervisor<br/>212 St Anne Street Room 3<br/>Owensboro, KY 42301<br/>270.685.8448 Office/EOC<br/>270.929.4257 Cell<br/><a href="mailto:atherton@daviessky.org">atherton@daviessky.org</a></p>         | <p><b>COG # 2072</b><br/><b>KY Davies County EMA</b></p> <p style="text-align: center;"><b>LOCAL</b></p>   | 2/4/10 – 3/12/10  |

| Region  | Regional Focal Pts<br>* = alternate   | OAT sites (Site ID)   | MICs / POC(s)   | Emergency Manager(s)  | EM COGS / Scope  | Test Dates        |
|---------|---|---|---|---|--|-------------------|
| Western | <b>Jeffrey Lorens</b><br>(801) 524-4000 x265<br><a href="mailto:jeffrey.lorens@noaa.gov">jeffrey.lorens@noaa.gov</a><br><br><b>Craig Schmidt</b><br>(801) 524-4000 x266<br><a href="mailto:craig.schmidt@noaa.gov">craig.schmidt@noaa.gov</a> | <b>WFO San Francisco CA (MTR)</b><br><br>21 Grace Hopper Ave, Stop 5<br>Monterey, CA 93943-5505<br><br>(831) 656-1727 | <b>David Reynolds (MIC)</b><br>(831)656-1710 x222<br><a href="mailto:david.reynolds@noaa.gov">david.reynolds@noaa.gov</a><br><br><b>Tom Evans (WCM)</b><br><a href="mailto:tom.evans@noaa.gov">tom.evans@noaa.gov</a><br><br><b>Wayne Bailey (ESA)</b><br>(831)656-1710<br><a href="mailto:wayne.bailey@noaa.gov">wayne.bailey@noaa.gov</a> | <b>Katherine Hern</b><br>Contra Costa Office of the Sheriff<br>50 Glacier Drive<br>Martinez, CA 94553<br>(925) 313-9635<br><a href="mailto:khern@so.cccounty.us">khern@so.cccounty.us</a> | <b>COG # 4031</b><br><b>CA Contra Costa County CWS</b><br><br><b>LOCAL</b> | 2/16/10 – 3/12/10 |
|         |   | <b>WFO Sacramento CA (STO)</b><br>3310 El Camino Avenue<br>Sacramento, CA 95821<br>Tel: (916) 979-3045                | <b>Daniel Keeton (MIC)</b><br>(916) 979-3041 x222<br><a href="mailto:elizabeth.morse@noaa.gov">elizabeth.morse@noaa.gov</a><br><br><b>Kathy Hoxsie (WCM)</b><br>(916) 979-3046 x223<br><a href="mailto:kathryn.hoxsie@noaa.gov">kathryn.hoxsie@noaa.gov</a>   |   |  |                   |
| Alaska  | <b>Jeffrey Osiensky</b><br>(907) 271-5132<br><a href="mailto:jeffrey.osiensky@noaa.gov">jeffrey.osiensky@noaa.gov</a>   | <b>WFO Anchorage AK (AFC)</b><br>6930 Sand Lake Road<br>Anchorage, AK 99502-1845<br>(907) 266-5102                    | <b>Robert Hopkins (MIC)</b><br>(907) 266-5120<br><a href="mailto:bob.hopkins@noaa.gov">bob.hopkins@noaa.gov</a><br><br><b>Sam Albanese (WCM)</b><br>(907) 266-5117<br><a href="mailto:sam.albanese@noaa.gov">sam.albanese@noaa.gov</a>  | <b>Rob Fitch</b><br>Anchorage EOC<br>(907) 343-1404<br><a href="mailto:fitchra@muni.org">fitchra@muni.org</a>   | <b>COG # 10660</b><br><b>AK Anchorage OEM</b><br><br><b>LOCAL</b>          | 2/9/10 – 3/12/10  |
| Pacific | <b>Bill Ward</b><br>(808) 532-6415<br><a href="mailto:bill.ward@noaa.gov">bill.ward@noaa.gov</a>  | <b>WFO Honolulu, HI (HFO)</b><br>2525 Correa Rd, Suite 250<br>Honolulu, HI 96822<br>(808) 973-5286                    | <b>James Weyman (MIC)</b><br>808-973-5272<br><a href="mailto:james.weyman@noaa.gov">james.weyman@noaa.gov</a><br><br><b>Raymond Tanabe (WCM)</b><br>(808) 973-5275<br><a href="mailto:raymond.tanabe@noaa.gov">raymond.tanabe@noaa.gov</a>  | <b>Tom Simon</b><br>State of Hawaii Civil Defense Agency (808) 733-4300 x541<br><a href="mailto:tsimon@scd.hawaii.gov">tsimon@scd.hawaii.gov</a>  | <b>COG # 6552</b><br><b>HI State Civil Defense</b><br><br><b>STATE</b>     | 2/8/10 – 3/12/10  |

## Attachment H – HazCollect OT&E Resource Requirements

| Resource             | Description   |
|----------------------|---|
| <b>Hardware</b>      | Fully configured FOC and IOC HazCollect systems located in the Telecommunications Gateway at Silver Spring, MD. The fallback system will be located at the Backup Telecommunications Gateway (BTG) at Mt. Weather, VA.  |
| <b>Software</b>      | <ul style="list-style-type: none"> <li>a. FOC HazCollect Version 1.0</li> <li>b. FOC HazCollect Database Version 1.0 tables including:               <ul style="list-style-type: none"> <li>i. A2A (afos2awips file)</li> <li>ii. Broadcast types</li> <li>iii. Federal information processing standards (FIPS) to WFO</li> <li>iv. NWEM Message Categories</li> <li>v. State FIPS Codes</li> <li>vi. State zones and FIPS codes (correlation)</li> <li>vii. WFO</li> <li>viii. WMO Regions</li> <li>ix. NWEM Categories</li> </ul> </li> <li>c. DMIS client v2.3.3 or third-party DM OPEN API-compliant software.</li> </ul> |
| <b>Documentation</b> | <ul style="list-style-type: none"> <li>a. OT&amp;E Plan (OPS24)</li> <li>b. <i>Draft</i> HazCollect System Administration Manual (OS&amp;T)</li> <li>c. <i>Draft</i> HazCollect Version Description Document (OS&amp;T)</li> </ul> <p>The OT&amp;E Plan will be available on the OPS24 web site at:</p> <p style="text-align: center;"><a href="http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect_docs.htm">http://www.nws.noaa.gov/ops2/ops24/documents/hazcollect_docs.htm</a></p>  |

## Attachment I – Schedule



## February 2010

| Sunday              | Monday   | Tuesday  | Wednesday  | Thursday   | Friday  | Saturday |
|---------------------|--|--|--|--|---|----------|
| January 31          | February 1   | 2  | 3  | 4  | 5   | 6        |
|                     |  |  |  |  |   |          |
| 7                   | 8  | 9  | 10   | 11   | 12  | 13       |
|                     |  |  |  |  |   |          |
| 14                  | 15   | 16   | 17   | 18   | 19  | 20       |
|                     | <b>HOLIDAY<br/>President's Day</b>   | <b>2p EST Readiness<br/>Review Meeting</b><br><br>Local PNS – WFO PBZ  | <b>START OF OT&amp;E</b><br><br>Local PNS – WFO PAH<br><br><b>10a EST WFO PBZ Start<br/>Dissemination (110, Loc)</b> | <b>11a EST WFO PAH Start<br/>Dissemination (110, Loc)</b>  |   |          |
| 21                  | 22   | 23   |  24                              | 25   |  26 | 27       |
| Local PNS – WFO HFO | <b>2p WFO HFO Start<br/>DMIS OPEN API (700)</b><br><br>Local PNS – WFO AFC | <b>8a EST, Dissemination.<br/>(300, 310)</b><br><br><b>2p EST WFO AFC Start<br/>Dissemination (110, Loc)</b> | Local PNS – WFO ABQ  | <b>11a EST WFO ABQ Start<br/>Dissemination (110, Loc)</b><br>5-sec authentication<br>(200)<br>2-min dissemination<br>(230)<br><br><b>2p EST, TRG Meeting</b> |   |          |
| 28                  | March 1  | 2  | 3  | 4  | 5   | 6        |
|                     |  |  |  |  |   |          |

## March 2010

| Sunday      | Monday                         | Tuesday   | Wednesday | Thursday                    | Friday                         | Saturday |
|-------------|--------------------------------|---|-----------|-----------------------------|--------------------------------|----------|
| February 28 | March 1                        | 2   | 3         | 4                           | 5                              | 6        |
|             | Local PNS – WFO STO<br>WFO MTR | 8a EST, Dissemination (320, 330)<br><br>2p EST WFO STO/MTR Start<br>DMIS OPEN API (700) |           | 2p EST, TRG Meeting         |                                |          |
| 7           | 8                              | 9   | 10        | 11                          | 12                             | 13       |
|             | National PNS – ALL WFO         | 2p EST, NATIONAL TEST (110)   |           | 2p EST, TRG Meeting         | 11a COG/user verify and upload |          |
| 14          | 15                             | 16  | 17        | 18                          | 19                             | 20       |
|             |                                |   |           | 2p EST, TRG Meeting         |                                |          |
| 21          | 22                             | 23  | 24        | 25                          | 26                             | 27       |
|             |                                | 8a EST, Failover (500),<br>DB Function (600)  |           | 2p EST, TRG Meeting         | <b>END OF OT&amp;E</b>         |          |
| 28          | 29                             | 30  | 31        | April 1                     | 2                              | 3        |
|             |                                |   |           | 2p EDT, OTE Wrap-Up Meeting |                                |          |

## Attachment J – HazCollect Site Questionnaire

(This survey is to be completed by the OT&E site at the end of OT&E, coordinating responses with the test site management and staff).

|                         |  |                       |  |
|-------------------------|--|-----------------------|--|
| <b>Test Site:</b>       |  | <b>Date:</b>          |  |
| <b>Name:</b>            |  | <b>Title:</b>         |  |
| <b>Test Start Date:</b> |  | <b>Test End Date:</b> |  |
| <b>AWIPS Build:</b>     |  |                       |  |

Respond to the statements below by checking the rating box that best describes your opinion according to the following code:

|  |  |   |   |   |                                     |
|--|--|---|---|---|-------------------------------------|
| <b>1</b><br><b>Excellent</b><br>Performed in a manner that could not be improved | <b>2</b><br><b>Good</b><br>Performed well, met field needs and offered some improvements | <b>3</b><br><b>Satisfactory</b><br>Performed in a manner that meets basic field needs | <b>4</b><br><b>Deficient</b><br>Performed in unsatisfactory manner, does not fully meet field needs, may be workarounds | <b>5</b><br><b>Unsatisfactory</b><br>Performed in a wholly unsatisfactory manner, does not meet field needs and negatively impacts field operations | <b>N/A</b><br><b>Does Not Apply</b> |
|--|--|---|---|---|-------------------------------------|

| Statement   | 1 | 2 | 3 | 4 | 5 | N/A |
|---|---|---|---|---|---|-----|
| HazCollect documentation, including any training materials, is adequate and accurate. |   |   |   |   |   |     |
| HazCollect NWEM dissemination under non-severe weather conditions.                    |   |   |   |   |   |     |
| HazCollect NWEM dissemination under severe weather conditions.                        |   |   |   |   |   |     |
| HazCollect effect on existing NWS infrastructure/dissemination systems                |   |   |   |   |   |     |
| HazCollect effect on WFO operators or forecasters workload.                           |   |   |   |   |   |     |
| HazCollect is suitable for general implementation.                                    |   |   |   |   |   |     |

Please comment on any item that received **a rating of 4 or 5**. Include any comments received concerning maintenance. You may provide other comments, as desired.

## Attachment K – HazCollect Emergency Manager Questionnaire

(This survey is to be completed by the Emergency Manager at the end of the OT&E).

|                         |  |                       |  |
|-------------------------|--|-----------------------|--|
| <b>Test Site:</b>       |  | <b>Date:</b>          |  |
| <b>Name:</b>            |  | <b>Title:</b>         |  |
| <b>Test Start Date:</b> |  | <b>Test End Date:</b> |  |
| <b>COG Name:</b>        |  |                       |  |

Respond to the statements below by checking the rating box that best describes your opinion according to the following code:

|  |  |   |   |   |                                     |
|--|--|---|---|---|-------------------------------------|
| <b>1</b><br><b>Excellent</b><br>Performed in a manner that could not be improved | <b>2</b><br><b>Good</b><br>Performed well, met field needs and offered some improvements | <b>3</b><br><b>Satisfactory</b><br>Performed in a manner that meets basic field needs | <b>4</b><br><b>Deficient</b><br>Performed in unsatisfactory manner, does not fully meet field needs, may be workarounds | <b>5</b><br><b>Unsatisfactory</b><br>Performed in a wholly unsatisfactory manner, does not meet field needs and negatively impacts field operations | <b>N/A</b><br><b>Does Not Apply</b> |
|--|--|---|---|---|-------------------------------------|

| Statement   | 1 | 2 | 3 | 4 | 5 | N/A |
|---|---|---|---|---|---|-----|
| DMIS documentation, including any training materials, is adequate and accurate. |   |   |   |   |   |     |
| HazCollect authentication and authorization processing.                         |   |   |   |   |   |     |
| DMIS software user interface ease of use.                                       |   |   |   |   |   |     |
| DMIS software dissemination of CAP formatted NWEM.                              |   |   |   |   |   |     |
| HazCollect alert response and/or any error notification back to DMIS.           |   |   |   |   |   |     |
| DMIS effect on emergency manager workload.                                      |   |   |   |   |   |     |
| DMIS software is suitable for general implementation.                           |   |   |   |   |   |     |
| DMIS OPEN API interoperability with HazCollect (if demonstrated)                |   |   |   |   |   |     |
| HazCollect is suitable for general implementation.                              |   |   |   |   |   |     |

Please comment on any item that received **a rating of 4 or 5**. Include any comments received concerning maintenance. You may provide other comments, as desired.

# Attachment L – OT&E Conduct Survey

Print Form



## Operational Test & Evaluation (OT&E) Conduct Survey

Name:  Date:

Title:

Organization:

**Thank you** for taking the OT&E Conduct Survey. This survey will rate the performance of the Test & Evaluation Branch (OPS24) during the OT&E. After completing the form, perform a 'Save As' and save the completed PDF form and send back via email to Bert.Viloria@noaa.gov.

Please rate your satisfaction level with each of the following statements.

- |                               |                                  |                              |
|-------------------------------|----------------------------------|------------------------------|
| 1 = <b>Very Satisfied</b>     | 3 = <b>Neutral</b>               | 5 = <b>Very Dissatisfied</b> |
| 2 = <b>Somewhat Satisfied</b> | 4 = <b>Somewhat Dissatisfied</b> | N/A = <b>Not Applicable</b>  |

### Test Conduct

|   | 1                     | 2                     | 3                     | 4                     | 5                     | N/A                   |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 1. Rate your satisfaction with the OT&E documentation (plans, minutes, etc.)          | <input type="radio"/> |
| 2. How satisfied are you with the notifications of changes in OT&E schedule (if any)? | <input type="radio"/> |
| 3. Rate the timeliness, coordination, and execution of the OT&E tests                 | <input type="radio"/> |
| 4. Rate your overall satisfaction with the OT&E.                                      | <input type="radio"/> |

### Test Team Support

|   |                       |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 5. How satisfied are you with the responsiveness of the OT&E test team support?   | <input type="radio"/> |
| 6. How satisfied are you with the OT&E test team expertise with the test process? | <input type="radio"/> |
| 7. Rate your overall satisfaction with the OT&E test team support.                | <input type="radio"/> |

### OT&E Process

|   |                       |                       |                       |                       |                       |                       |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 8. Rate the Test Trouble reporting process (test trouble forms, etc.)                             | <input type="radio"/> |
| 9. Rate the Test Review Group process (meetings, problem analysis and adjudication, voting, etc.) | <input type="radio"/> |

10. How can OPS24 improve the operational testing experience?

Test & Evaluation Branch (OPS24)  
 1325 East West Highway, Bldg SSMC-2, Silver Spring, MD 20910 Phone: 301-713-0326 Fax: 301-713-0912

[www.nws.noaa.gov/ops2/ops24/index.htm](http://www.nws.noaa.gov/ops2/ops24/index.htm)