

5.2 TO10

5.2.1 Table of Test Cases

Table 5-2 lists all TO10 test cases, and cross-references each case to the paragraph in this subsection that describes the test case.

Table 5-2. TO10 Test Cases

STP Paragraph Number	Test
5.2.2.1.1	AvnFPS TAF
5.2.2.1.2	AvnFPS View Current TAF
5.2.2.2.1	Text Products (ac010)
5.2.2.3.1	Derived Parameters-Gridded 2.0
5.2.2.4.1	WarnGen 2.0
5.2.2.5.1	Basic GHG Monitor
5.2.2.6.1	Text Display Edit 2.0
5.2.2.7.1	Hydroview
5.2.2.7.2	Hydrobase
5.2.2.7.3	Site Specific
5.2.2.7.4	River Monitor
5.2.2.7.5	Timeseries
5.2.2.7.6	RiverPro
5.2.2.7.7	MPE
5.2.2.8.1	Skew-T 2.0
5.2.2.9.1	Guardian
5.2.2.10.1	Radar Graphics and Text Products
5.2.2.11.1	uEngine Command Line Interface
5.2.2.11.2	TextDB Command Line Interface
5.2.2.11.3	Handle OUPCommand Line Interface
5.2.2.11.4	Subscription Capability
5.2.2.12.1	Hydro Configuration Controls
5.2.2.13.1	SOA Plug-Ins 3.0
5.2.2.14.1	Stability 3.0
5.2.2.15.1	Rate of Change Checker

Table 5-3 is provided to assist in mapping capabilities identified in the TO10 proposal with test cases listed in Table 5-2.

Table 5-3. Cross-Reference of Test Cases to TO10 Proposal

	Task Order		Test Case	
	TO*	Notes	Para.	Notes
OHD "COMMON"				
Data Ingest Operations:				
SBN Data Collection	10		See Note 1.	By inference through testing HydroBase, TimeSeries, Hydroview applications
WAN Hydrologic Data Collection	11	Not part of TO10. Included here for reference only.		
ORPG Product Data Decoding	10			Begin Design - no tests; advanced development demo
SHEF Product Data Decoding	10		See Note 1.	Reuse TO9 Plug-In test case
Metar Data Decoding/Encoding	10		See Note 2.	TimeSeries or Plug-In
QPE Mosaicking (WFO)	10		5.2.2.7.1	Baseline Hydro Transmit RFC Bias
FFG Mosaicking (WFO)	10		5.2.2.7.1	Baseline Hydro WHFS Hydroview
Gage Precipitation Data Processing	10		5.2.2.7.7	MPE
Rate of Change Checker	10		5.2.2.15.1	Rate of Change Checker
WHFS Interactive Operations:				
DamCrest (Data completeness)	11	Not part of TO10. Included here for reference only.		
HydroBase (Hydro Perspective)	10		5.2.2.7.2	Hydrobase
HydroView ("")	10		5.2.2.7.1	Hydroview
SiteSpecific ("")	10		5.2.2.7.3	Site Specific
RiverMonitor ("")	10		5.2.2.7.4	River Monitor
HydroGen (Integrated)	10		See Note 2.	Generates XML hydrographs from IHFS by CRON.
TimeSeries Heavy ("")	10	Light Timeseries will be eliminated.	5.2.2.7.5	Timeseries
RiverPro ("")	10		5.2.2.7.6	RiverPro
Hydro Configuration Controls	10		5.2.2.12.1	Hydro token files managed by localization.

	Task Order		Test Case	
	TO*	Notes	Para.	Notes
WHFS Automated Operations:				
Point Data Retrieval (MAPPER)	10		5.2.2.7.1	Part of Hydroview
AlertAlarm Support	10		5.2.2.7.4	RiverMon
Site-Specific Support (Partial T10)	10+11	Not planned for completion in TO10; TO10 testing will extend only through delivered capability.	See Note 2.	Review with data ingest operations
Site-Specific program, data assimilation	10+11	OB9 enhancement. Not planned for completion in TO10; TO10 testing will extend only through delivered capability.	See Note 2.	Review with data ingest operations
Flood Archiver	10		See Note 2.	TBD
DatabasePurger	10		See Note 2.	TBD
FilePurger	10		See Note 2.	TBD
Miscellaneous Utilities	10+11	Not planned for completion in TO10; TO10 testing will extend only through delivered capability.	See Note 2.	TBD
Precipitation Processing Operations:				
Multi-Sensor Precipitation Estimation (MPE) Configuration	10		5.2.2.7.7	MPE
MPE/DQC Configuration	10		5.2.2.7.7	MPE
MPE/P3 Configuration	10		5.2.2.7.7	MPE
MPE_Fieldgen	10		5.2.2.7.7	MPE
MPE/DQC	10		5.2.2.7.7	MPE
MPE Interactive Editor	10		5.2.2.7.7	MPE
Hi-Resolution Precipitation Estimator (Radar Base support FFMP)	11	Not part of TO10. Included here for reference only.		

	Task Order		Test Case	
	TO*	Notes	Para.	Notes
Hi-Resolution Precipitation Nowcaster (HPN)	?	Not part of TO10. TO not yet assigned. May be TO11 R1 or subsequent point release prior to Deployment.		
Miscellaneous Utilities	10+11	Not planned for completion in TO10; TO10 testing will extend only through delivered capability.	See Note 2.	
Data Storage Objects:				
Integrated Hydrologic Forecast System (IHFS) PostGres database	10		See Note 1.	HydroBase, TimeSeries, Hydroview by implication
DamCrest PostGres database	11	Not part of TO10. Included here shown here for reference only.		
Precipitation Processing File System	10		See Note 1.	HydroBase, TimeSeries, Hydroview by implication
Application Configuration File System (misc. file that programs need)	10		See Note 2.	Part of Localization
Bias Transfer program (OB8.3)	11	Not part of TO10. Included here for reference only.		
RFC Only				
RAX	11	Not part of TO10. Included here for reference only. Eventual implementation includes baseline database, access programs and SHEF posting.		

	Task Order		Test Case	
	TO*	Notes	Para.	Notes
HDB	11	Not part of TO10, shown here for reference only. Eventual implementation includes baseline database and access application		
IDMA - Interactive Double Mass Analysis calibration tool	11	Not part of TO10 (due to dependency on HDB), shown here for reference only		
Logistical Measures/Forecast services	10	Embedded in Hydroview perspective and reengineered hydrobase	See Note 2.	Part of Hydroview and Hydrobase gui's.
XDAT	10	No "ofstofs utility necessary	See Note 2.	Part of Hydroview and Hydrobase gui's.
XNAV	10	Access to the fs5files database will NOT be provided by Raytheon for XNAV (or any other application)	See Note 2.	Part of Hydroview and Hydrobase gui's.
ens_pre	11	Not part of TO10 (due to dependency on climate). Included here for reference only.		
Send_RFC outbound data communications	11	Not part of TO10. Included here for reference only.		
NON-HYDRO WORK ITEMS				
General alerting (Guardian) with workstation and GFE status.	10		5.2.2.9.1	Guardian

	Task Order		Test Case	
	TO*	Notes	Para.	Notes
Begin design / modifications to the radar comms manager to feed ORPG (Open Radar Product Generator) data to AWIPS II (completion planned for TO11).	10			Begin Design - no tests
Radar graphics and text products.	10		5.2.2.10.1	Radar Graphics and Text Products
Secondary level of derived parameters.	10		5.2.2.3.1	Derived Parameters-Gridded
WarnGen, GHG (Gridded Hazard Generator), and product life cycle (assumes workstation test mode is adequate for testing).	10		5.2.2.5.1	Basic GHG Monitor
			5.2.2.4.1	WarnGen 2.0
Text formatter and hazards products.	10		5.2.2.2.1	Text Products (ac010)
Command line Interfaces (uEngine, TextDB, handleOUP).	10		5.2.2.11.1	uEngine Command Line Interface
			5.2.2.11.2	TextDB & HandleOUP Command Line Interface
Subscription Capability Enhancement (Triggers replacement)	10	Not in proposal.	5.2.2.11.3	Subscription Capability
AvnFPS Follow-up	10	Not in proposal.	5.2.2.1.1	AvnFPS TAF
			5.2.2.1.2	AvnFPS View Current TAF
Skew-T Follow-up	10	Not in proposal.	5.2.2.8.1	Skew-T 2.0
Stability	10	Not in proposal.	5.2.2.13.1	Stability 3.0
Regression	8	Not in proposal.	5.2.2.6.1	Text Display Edit 2.0
<p><i>Note 1: Verify by inference from running other tests using ingested data, i.e., database is populated correctly, therefore ingest worked.</i></p> <p><i>Note 2: Will be included as steps with a shown Test Case or added as a new Test Case with Draft Test Procedures delivery.</i></p> <p><i>* Capabilities shown for Task Orders other than TO10 are for reference only.</i></p>				

5.2.2 System Level Test Cases

System Level Test Cases will be executed during TO10 DT. Government-provided test procedures or test cases used in previous TOs will be used to the fullest extent possible in testing the Hydro, WarnGen, Text Workstation, Derived Parameters, Guardian, AvnFPS, GFE, and GHG applications and capabilities. Changes made to the Government-provided test procedures will be annotated in the test case. Each test case will contain a requirements traceability matrix.

5.2.2.1 AvnFPS

The following test cases for AvnFPS are similar to those tests completed in TO9. Additional functionality has been introduced in TO10 and therefore will be retested with the updated procedures. Those test procedures that are not executed in the test cases (either because they do not apply or because not all the functionality is available) will be marked accordingly.

5.2.2.1.1 AvnFPS TAF

Test Objective: This test case verifies that the TAF functionality is working properly with or without the transmit privilege.

Related Test Cases:

- None.

5.2.2.1.2 AvnFPS View Current TAF

Test Objective: This test case verifies that the user is able to view current Terminal Aerodrome Forecasts (TAF) and the Meteorological Aviation Report (METAR) in the viewer mode for a particular site. The test case also verifies that when viewing All METARs, the order of observations is grouped by site, then issuance time.

Related Test Cases:

- None.

5.2.2.2 Graphical Forecast Editor (GFE)

The following test case for the GFE is similar to the test completed in TO9. Additional functionality has been introduced in TO10 and therefore will be retested with the updated procedures. Those test procedures that are not executed in the test cases (either because they do not apply or because not all the functionality is available) will be marked accordingly.

5.2.2.2.1 Text Products (ac010)

Test Objective: This test case demonstrates the capability of the Text Products functionality contained in GFE. Products include the Area Forecast Discussion (AFD); Area Forecast Matrices (AFM); Coded Cities Forecast (CCF); Fire Weather Forecast (FWF); Fire Weather Forecast Tabular (FWFTabular); Fire Weather Matrices (FWM); Point Forecast Matrices (PFM); Tabular State Forecast (SFT); Special Weather Statement (SPS); Hazardous Weather Outlook (Hazard_HWO); Non-Precipitation (Hazard_NPW); FireWx Watch/Warning (Hazard_RFW); Convective Watch (Hazard_WCN); and Winter Wx Product (Hazard_WSW).

Related Test Cases:

- Government-created Product Generation test cases tp001-tp031 (text products) and User Interface ui029-ui031, ui045 (Formatter Launcher).

5.2.2.3 Derived Parameters

The following test case for the Derived Parameters is similar to the test completed in TO9. Additional functionality has been introduced in TO10 and therefore will be tested with the updated procedures. **Note:** Only a subset of those derived parameters developed in TO10 will be tested.

5.2.2.3.1 Derived Parameters-Gridded 2.0

Test Objective: This test case demonstrates the display of derived parameters from gridded data developed as part of the TO10 tasking. Display of the parameters infers database storage is completed.

Related Test Cases:

- None.

5.2.2.4 WarnGen

The following test case for WarnGen extends the test completed in TO9. Additional warning capabilities have been introduced in TO10 and therefore will be tested with the updated procedures. Those test procedures that are not executed in the test cases (either because they do not apply or because not all the functionality is available) will be marked accordingly.

5.2.2.4.1 WarnGen 2.0

Test Objective: This test case demonstrates the extensions and WarnGen templates (including life cycle controls) for a Convective Flash Flood Warning, Extreme Wind Warning, Extreme Wind Warning SVS (Follow-up), Flash Flood with Svr Tstm, Flash Flood Statement, non-convective FFW (Dam Break), non-convective Flash Flood Statement, Areal Flood Warning, Areal Flood Warning Follow-up, Areal Flood Advisory, and Areal Flood Advisory Follow-up.

Related Test Cases:

- TO8 test case WarnGen_1.0_Final.
- TO9 test case WarnGen_2.0.
- WarnGen 1.0.

5.2.2.5 GHG Monitor

The following test case for GHG is similar to the test completed in TO9. Additional functionality has been introduced in TO10 and therefore will be retested with the updated procedures. Those test procedures that are not executed in the test cases (either because they do not apply or because not all the functionality is available) will be marked accordingly.

5.2.2.5.1 Basic GHG Monitor

Test Objective: The Government-provided test cases for the GHG, (gh001-gh009) were coalesced into a single GHG test case. This test case maintains the same name, number, sections, and content of the gh001 – gh009 test cases. GHG capability to be demonstrated includes preparing hazards, saving and loading configurations of the GHG monitor, display of vector views, resizing, zooming, map displays, text displays, and spreadsheet displays.

Related Test Cases

- gh001, Prepare the Hazards Data for the GHG Monitor Tests.
- gh002, Saving and Loading Configurations of the GHG Monitor.
- gh003, Using the Display Selector to view both the Map and Text Display Areas.
- gh004, Using the Pane Resizer and Scroll Bars to adjust and resize the Map/Text Display and the Spreadsheet Display Areas.
- gh005, Using the Zoom Features from the Map Pull-Down Menu on the Map and Text Display Area.
- gh006, To Display the Different Types of Maps from the Map Pull-Down Menu and Using the Show Label Feature on the Map and Text Display Area.
- gh007, Using the Map Display Area of the GHG Monitor to Query Hazards based on a Zone.
- gh008, Using the Text Display Area of the GHG Monitor.
- gh009, Using the Spreadsheet Display Area of the GHG Monitor.

5.2.2.6 Text Workstation

The test case for the Text Workstation that was completed in TO8 will be run as a regression test to illustrate the retrieval of live data.

5.2.2.6.1 Text Display Edit 2.0

Test Objective: This test case demonstrates the capability of CAVE to receive, recall, and display text products received via a live data feed. It also demonstrates the capability to edit text products.

Related Test Cases:

- Baseline TextDB.
- Text Display Edit 1.0.

5.2.2.7 Hydrologic Applications

5.2.2.7.1 Hydroview

Test Objective: The purpose of this Test Procedure is to test and verify the functionality found within the current version of the WHFS Hydrologic Data Viewer application known as Hydroview. Also demonstrated in this test case is the Point Data Control functionality. As new functionality is added to this application, these test procedures will be updated to contain the steps required to test this new functionality.

Related Test Cases:

- Baseline_HYDRO_WHFS_Hydroview.
- Baseline_HYDRO_WHFS_Hydroview_OB8.1.
- Baseline_HYDRO_PointData.Control.
- Checkout_4.4.2_Hydroview_OB8.1

5.2.2.7.2 Hydrobase

Test Objective: This test case demonstrates that AWIPS provides the capability to execute the WFO Hydrologic Forecast System (WHFS) Hydrologic Database Manager (HydroBaseMgr). Hydrobase allows a WFO to manage the IHFS database that supports hydrologic forecasting.

Related Test Cases:

- Baseline_Hydrobase.
- Baseline_Hydrobase_OB8.1.
- Hydrologic Database
- Check_Out_4.4.1_Hydrobase_OB8.1

5.2.2.7.3 Site Specific

Test Objective: This test case demonstrates that AWIPS provides the capability to execute the WHFS Site Specific Hydrologic Prediction software (SSHP). The SSHP software allows a WFO to run a simple hydrologic model for a single point.

Related Test Cases:

- Baseline_SSHP_OB8.1.
- Checkout_SSHP_OB8.1.

5.2.2.7.4 River Monitor

Test Objective: This test case demonstrates that the River Monitor Software can be utilized successfully. It also illustrates the Alert Alarm support.

Related Test Cases:

- Baseline_RiverMonitor.

5.2.2.7.5 Timeseries

Test Objective: This test case demonstrates that AWIPS provides the capability to execute the WHFS Hydro Time Series. The Hydro Time Series allows a WFO to monitor hydrologic points of interest by providing the interface to information necessary for daily hydrologic monitoring and forecasting. The Hydro Time Series also allows for the observation of X_Y plots, and tabular listing of stage data and precipitation data.

This test case also verifies, through the timeseries tool, the reengineering of the precipitation ingest and persistence from AWIPS I to AWIPS II.

Related Test Cases:

- Baseline_HydroTS.
- Baseline_HydroTS_OB8.1.
- Checkout_HydroTS_OB8.1.

5.2.2.7.6 RiverPro

Test Objective: This test case tests and verifies the functionality found within the current version of the WHFS RiverPro Product Formatter application known as RiverPro.

Related Test Cases:

- Baseline_Riverpro.
- Baseline_Riverpro_OB8.1.
- Baseline_WANMHS_OB8.1.
- Baseline_RiverproNWRWAVES_OB8.1.
- Checkout_Riverpro-OB8.1.

5.2.2.7.7 MPE

Test Objective: This test case tests and verifies the functionality found within the WHFS MPE Data Viewer application known as MPE Editor. As new functionality is added to this application, these test procedures will be updated to contain the steps required to test this new functionality. The MPE FieldGen application is also demonstrated in this test case.

Related Test Cases:

- Baseline_HYDRO_WHFS_MPE_OB8.1.

5.2.2.8 Skew-T

The following test case for the Skew-T extends the test completed in TO8. Additional capabilities have been introduced in TO10 and therefore will be tested with the updated procedures.

5.2.2.8.1 Skew-T 2.0

Test Objective: This test case verifies that local and model Skew-T displays load and are editable. It also demonstrates the interface and function with the Meteo Library by inference.

Related Test Cases:

- Check_out_4.1.2_Skew-T_OB8.1.
- Skew-T 1.0.

5.2.2.9 Guardian**5.2.2.9.1 Guardian**

Test Objective: This test case demonstrates the capability of the AWIPS system to communicate with the end user via Guardian and the capability of the AWIPS system to allow the end user to configure communication messages with Guardian.

Related Test Cases:

- Baseline_Guardian_Basic_1.
- Baseline_Guardian_Config_2.

5.2.2.10 Radar Graphics and Text Products**5.2.2.10.1 Radar Graphics and Text Products**

Test Objective: This test case demonstrates a subset of radar graphics products from the Graphics submenu. It also verifies the display of radar text products within the Text Workstation.

Related Test Cases:

- None.

5.2.2.11 Command Line Interfaces**5.2.2.11.1 μ Engine Command Line Interface**

Test Objective: This test case demonstrates the ability to request data via command line scripts.

Related Test Cases:

- None.

5.2.2.11.2 TextDB Command Line Interface

Test Objective: This test case illustrates that the text database command line interface and options work in AWIPS II as they do in the legacy AWIPS I system, reading and writing data to the text database.

Related Test Cases:

- None.

5.2.2.11.3 HandleOUP Command Line Interface

Test Objective: This test case illustrates that the handleOUP command line interface and options work in AWIPS II as they do in the legacy AWIPS I system, for dissemination of Official User Products (OUP).

Related Test Cases:

- None.

5.2.2.11.4 Subscription Capability

Test Objective: This test case illustrates the subscription capability that replaced the database trigger capability via inspection of the file system and/or logs.

Related Test Cases:

- None.

5.2.2.12 Configuration Controls

5.2.2.12.1 Hydro Configuration Controls

Test Objective: This test case verifies the management of the Hydro token fields using localization.

Related Test Cases:

- None.

5.2.2.13 SOA Plug-Ins

5.2.2.13.1 SOA Plug-Ins 3.0

Test Objective: This test case will be used to test the additional Redbook products implemented during TO10 and the modifications made to the TAF plug-in to accommodate the change to the 30-hour TAF.

Related Test Cases:

- TO9 Test Case SOA Plug-Ins 2.0

5.2.2.14 Stability and Performance

5.2.2.14.1 Stability 3.0

Test Objective: This test case demonstrates the stability of the software by running continuously with a KOAX-filtered SBN live data flow while monitoring system resources for usage and log files for critical errors. This test case also involves running CAVE periodically, checking for retrieval of current data. The test case is verified at Raytheon's Omaha test site on the test hardware prior to or during PDT, and the test results are recorded in the PDT Report. Stability issues exposed during the test, if any, are analyzed, and required corrections are determined. Corrections that cannot be applied prior to Delivery Testing are reported. As is the case with other tests, critical defects that prevent testing and evaluation of TO10 delivery functionality will be corrected prior to acceptance of the delivery.

Related Test Cases

- Stability 1.0.
- Stability 2.0.

5.2.2.15 Rate of Change

5.2.2.15.1 Rate of Change Checker

Test Objective: This test case demonstrates that the Rate of Change (ROC) Checker successfully computes the rate of change for a specified time series of observational data. The ROC value is checked against three ROC thresholds: QC, alarm, and alert.

Related Test Cases

- None.