

Test Case Hydrobase
for
Contract DG133W-05-CQ-1067
Advanced Weather Interactive Processing System (AWIPS)
Operations & Maintenance

AWP.TE.SWCTR/TO10-0009

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Change History

Revision	Date	Affected Pages	Explanation of Change
Draft	21 Nov. 2008	ALL	Initial Draft
1	15 Jan. 2009	ALL	Result of NWS comments and PDT.
2	6 Feb. 2009	3	Result of DT

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1.0 SCOPE

See TO10 Software Test Plan.

2.0 APPLICABLE DOCUMENTS

2.1 Source Documents

- None.

2.2 Reference Documents

- Legacy NWS Test Cases: Baseline_Hydrobase (OB8.3); Baseline_Hydrobase_OB8.1; Hydrologic Database; Check_Out_4.4.1_Hydrobase_OB8.1.
- Software Test Plan for the Advanced Weather Interactive Processing System Project, Contract #DG133W-05-CQ-1067, January 2009.
- The Silver Spring NWS AWIPS 1 test bed application.
- Rational RequisitePro.

3.0 TEST CASE DESCRIPTION

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.

3.1 Assumptions, Constraints, and Preconditions

- TO10 software has been installed successfully.
- CAVE and EDEX are running.
- Data has been ingested.
- Actions, Results, and Requirements highlighted in yellow indicate requirements and/or capabilities to be included in the scope of future task orders. They are included here for purposes of continuity and traceability with the original AWIPS I test case documents.

3.2 Recommended Hardware

See TO10 Software Test Plan.

3.3 Test Inputs

Section 4.0 contains the test procedures for this test case. Sections 2.2 – 2.9 of the TO10 Software Test Plan contain general test inputs applicable to all TO10 test cases. Grayed out test step(s) indicate functionality not yet delivered.

3.4 Test Outputs

The results outlined in section 4.0 are met.

4.0 TEST SCENARIO

Step #	Action	Result	Pass/Fail
1.	In CAVE, Mouse Button (MB) 1 click on the Perspectives icon and select 'Hydro' from the dropdown menu if available. If not available, select 'Other...'. Then select 'Hydro' from the Open Perspective dialog.	The Hydro Perspective displays in CAVE.	
2.	Under the 'HydroApps' menu, select the 'Launch Hydrobase...' option.	The HydroBase window opens, listing all of the forecast points in the site-specific database for the WFO.	
3.	From the 'Sort By' option, select each of the following options in succession: 'Station' 'Name' 'State, County'	The list is sorted according to the criteria selected.	
4.	Search for a station (e.g., BLUC1) by using the Search box in the lower right side of the panel.	As each letter is added, the search is further defined.	
5.	Select 'Add Location' from the Location menu.	The Add Location window opens with a template to add new locations. The Add Location window is on the Geophysical Page option.	
6.	Add a new location named 'AWIP2'. See Appendix (end of document) image 1 for input.	None.	
7.	Select 'Apply' and 'OK'.	The new location is added to the listing of forecast points in the HydroBase window.	
8.	Select 'Modify Location' from the Location menu. <i>[See App. A, Fig. 1.]</i>	The Modify Location window opens with the data just entered.	
9.	Select Cancel.	Window closes.	
10.	Select Contacts from the Location menu.	The Contacts window opens.	
11.	MB1 click on New. Add the Contact and Phone information shown in Appendix image 2. Then MB1 click on 'Apply'.	Contacts are added. NOTE: Select New before each entry and Apply after each entry.	
12.	Select Ok to close the window.	Window closes.	
13.	Reopen the window by selecting Contacts from the Location menu to verify that the information was added. Then select 'Close'. <i>[See App. A, Fig. 2.]</i>	Contacts are there. The window closes.	
14.	From the River Gage menu, select 'River Gage'.	The River Gage window opens.	

Step #	Action	Result	Pass/Fail
15.	With the 'Page' option set to 'Geophysical', add information to this window from Appendix image 3.	See Appendix image 3. NOTE: Application may crash if the Date of Rating field is left blank with the Page option set to Additional Info (DR #19887).	
16.	Select 'Apply' and 'OK' to close the window.	The data is added and window closes.	
17.	Select 'River Gage' under the River Gage menu to reopen it. Verify that the information was added. [See App. A, Fig. 3.]	The data is verifies as saved on the system.	
18.	Select 'Cancel'.	The window closes.	
19.	From the 'River Gage' menu, select 'Crest History' to display the Crest History window.	The window opens.	
20.	MB1 click 'New'. Add information to this window from Appendix Image 4 and Image 5. Then MB1 click on 'Apply'.	See Appendix Image 4 and Image 5. NOTE: Select 'New' before each entry and 'Apply' after each entry.	
21.	Select 'OK' to close the window.	Information is saved and the window closes.	
22.	Select 'Crest History' from the 'River Gage' menu to verify that the information was added. Then select 'Cancel'. [See App. A, Figures 4 and 5.]	The data is verified as saved and the window closes.	
23.	From the 'Location' menu, select 'County/Zone UGC'.	The County/Zone UGC window opens. This window contains counties affected for the forecast point plus all of the available counties in the area.	
24.	Add information to this window by selecting the county names in the 'Available' section and selecting the 'Add' button.	The data is added.	
25.	Select 'Apply' and 'OK' to close the window.	The data saved and the window closes.	
26.	Select 'County/Zone UGC' from the 'Location' menu to reopen the window. Verify that the information was added.	The data is verified as saved.	
27.	Select 'Cancel'.	The window closes.	
28.	Ensure a Station is selected (select 'River Gage' from the 'River Gage' menu and highlight a station. Close the window.). Select 'Flood Category' from the 'River Gage' menu.	The Flood Category window opens, showing definitions of the following flood types: Major, Moderate, and Minor for the station selected.	
29.	Add information to this window from Appendix image 6.	The data is added.	
30.	Select 'OK' to apply and close the window.	The data is saved and the window closes.	
31.	Select 'Crest History' from the 'River Gage' menu. [See App. A, Figure 6.]	The flood stage categories are depicted as colored lines (See Image 7 in the Appendix for an example).	
32.	Select 'Close'.	The window closes.	

Step #	Action	Result	Pass/Fail
33.	From the 'River Gage' menu, select the 'Impact Statement' option. [See App. A, Fig. 8.]	The Impact Statement window opens with the following types of information: Impact Value, Impact PE, Begin, End, and Tendency.	
34.	MB1 click on 'New'. Add information to this window from Appendix image 8. Then MB1 click on 'Apply'.	The data is added. NOTE: Select 'New' before each entry and 'Apply' after each entry.	
35.	Select 'OK' to close the window.	The data is saved and the window closes.	
36.	Select 'Impact Statement' from the 'River Gage' menu to verify that the data were added. Then select 'Cancel'. [See App. A, Fig. 8.]	The data is verified as saved and the window closes.	
37.	Select a Reservoir in the Hydrologic Database. BDBC1 is an example of a reservoir on TBDW, WINC3 on TBW3. Other systems will have other stations selected.	The station is selected. Note: Point Data Control on Hydroview may be used to locate other reservoirs.	
38.	Select 'Reservoir' from the 'Reservoir' menu.	The Reservoir window opens with information on the selected reservoir.	
39.	Select 'Cancel'.	The window closes.	
40.	From the 'Setup' on the menu bar option (right side of menu bar, next to Help), select the 'Reference Fields' option.	The Reference Fields window opens containing a 'Fields' option and 'Add', 'Update', and 'Delete' buttons.	
41.	Select 'OK' from the Reference Fields window.	The window closes.	
42.	Select 'AWIP2' from the HydroBase window.	'AWIP2' is selected.	
43.	Select 'Rating Curve' from the 'River Gage' menu.	The Rating Curve window opens. Verify that flood stage is a red line and the record flood stage is a blue line.	
44.	Select 'Close'.	The window closes.	
45.	Select 'Flood Report' from the 'Reports' menu.	The Flood Report window opens with a flood report for the Area of Responsibility.	
46.	Select 'Last 12 Months' from the 'Reporting Period' option.	A graphic history of flooding displays.	
47.	Select 'Close' from the Flood Report window.	The window closes.	
48.	Select 'AWIP2' from the listing of forecast points, and select 'Ingest Filter' from the 'Data Ingest' menu.	The Data Ingest Filter window opens.	

Step #	Action	Result	Pass/Fail
49.	Select 'New'. In the 'NEW Item' section, add the following: Location: AWIP2 Physical Element : HT Tailwater Elev Duration: Instantaneous (0) TypeSource: GOES (RG) Extremum: Null Character (Z) Also, toggle on the 'Master Switch' button.	The data is added.	
50.	Select 'Apply'.	'AWIP2' appears highlighted in the Ingest Filter Contents for Locations section.	
51.	Select 'OK'.	The window closes.	
52.	In the HydroBase window, select 'Station List Filter Options'.	The Station List Filter Options window opens.	
53.	Select an HSA under 'Filter by HAS'.	The item is selected.	
54.	Select 'Apply'.	The stations in the HydroBase window are filtered. Only stations in counties with the selected responsible WFO are shown. To redisplay all stations, select <shift><end>.	
55.	Select 'Ingest Filter' from the 'Data Ingest' menu.	The Data Ingest window opens. Verify that the data is displayed and can be selected.	
56.	Select 'Cancel'.	The window closes.	
57.	Select 'QC/Alert/Alarm Limits' from the 'Data Ingest' menu.	The QC/Alert/Alarm Limits window opens. Verify that the data is displayed and can be selected.	
58.	Select 'Cancel'.	The window closes.	
59.	Select 'Time Series Group Configuration' from the 'Setup' menu.	The Time Series Group Configuration window opens. Verify that the file is displayed and can be edited.	
60.	Select 'File' and 'Exit'.	The window closes.	
61.	Select 'Radar Locations' from the 'Setup' menu.	The Radar Locations window opens. Verify that the data is displayed and can be selected.	
62.	Select 'Close'.	The window closes.	
63.	Select 'RiverPro General Parameters' from the 'Setup' menu.	The RiverPro General Parameters window opens. Verify that the data is displayed and can be selected.	
64.	Select 'Close'.	The window closes.	
65.	Select 'RiverPro Forecast Groups/Points' from the 'Setup' menu.	The RiverPro Forecast Groups/Points window opens. Verify that the data is displayed and can be selected.	
66.	Select 'Close'.	The window closes.	
67.	Select 'Areal Definitions' from the 'Setup' menu.	The Areal Definitions window opens. Verify that the data is displayed.	

Step #	Action	Result	Pass/Fail
68.	Select 'OK'.	The window closes.	
69.	Select 'Vector Definitions' from the 'Setup' menu.	The Vector Definitions window opens. Verify that the data is displayed.	
70.	Select 'OK'.	The window closes.	
71.	Select 'Exit' from the 'File' menu of the HydroBase window.	The HydroBase window closes.	
	End of Test		

5.0 REQUIREMENTS VERIFICATION TRACEABILITY MATRIX (RVTM)

Number	Description	Test Step(s)
SYSR3103	The AWIPS system shall implement HydroBase dialogs in the Hydroview perspective.	1-71
SYSR3150	The AWIPS system shall implement the data sources/filters capability for the HydroBase interactive application.	48-54
SYSR3151	The AWIPS system shall implement the river gauge capability for the HydroBase interactive application.	14-18
SYSR3152	The AWIPS system shall implement the flood category/damage capability for the HydroBase interactive application.	28-30
SYSR3153	The AWIPS system shall implement the rating curve/time series groups capability for the HydroBase interactive application.	43-44, 59-60
SYSR3154	The AWIPS system shall implement the crest and low data history capability for the HydroBase interactive application.	19-22
SYSR3155	The AWIPS system shall implement the QC alert/alarm limits capability for the HydroBase interactive application.	57-58
SYSR3156	The AWIPS system shall implement the reports and impacts capability for the HydroBase interactive application.	33-36, 45-47
SYSR3157	The AWIPS system shall implement the map features/fields/radars capability for the HydroBase interactive application.	23-27, 61-62
SYSR3158	The AWIPS system shall implement the reference fields capability for the HydroBase interactive application.	40-42
SYSR3159	The AWIPS system shall implement the RiverPro controls capability for the HydroBase interactive application.	63-66
SYSR3160	The AWIPS system shall implement the area/vector capability for the HydroBase interactive application.	67-70

APPENDIX A. FIGURES

Figure 1. Step 8

Sequence	Contact	Phone
0	Will Leverenz	301-495-2210
0	Network Control Facility	301-713-9344

Figure 2. Step 13

Figure 3. Step 17

Stage	Flow	Date	Time
18.0 ACTION (0)			

Figure 4. Step 22

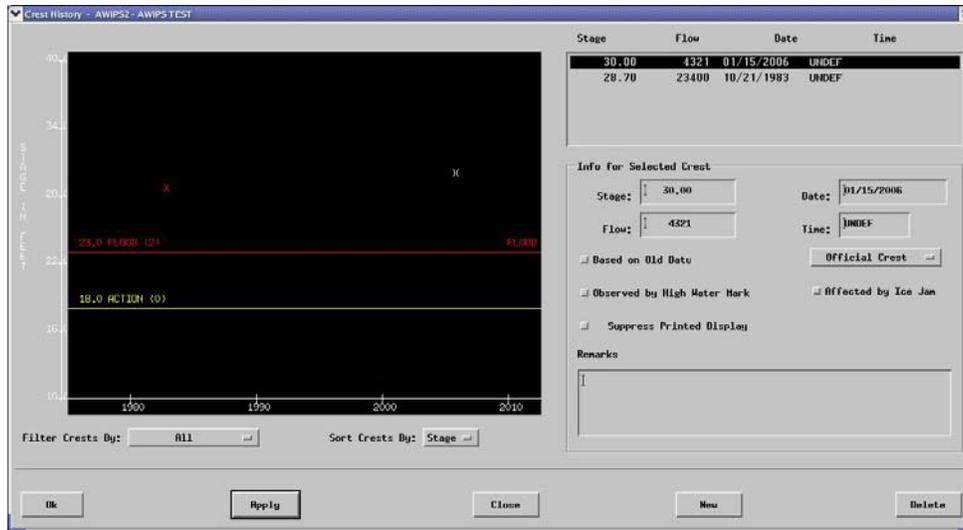


Figure 5. Step 22

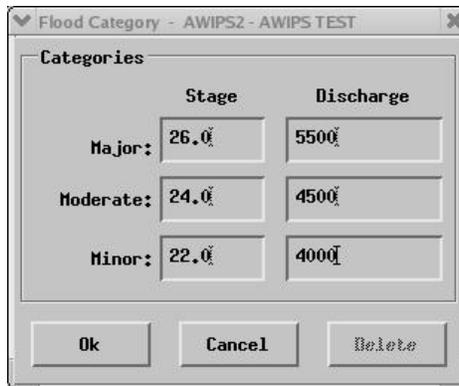


Figure 6. Step 31

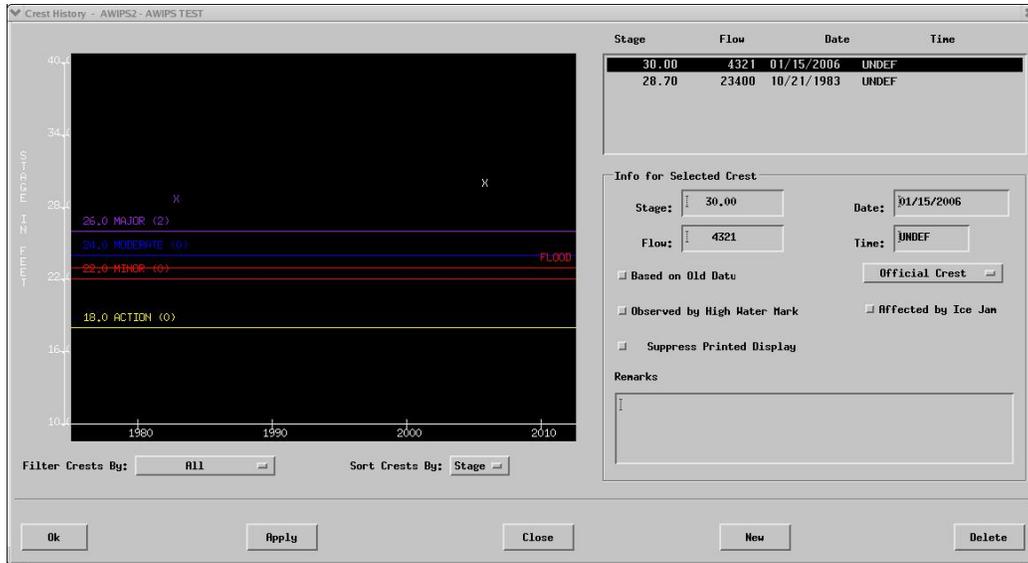


Figure 7. Step 31

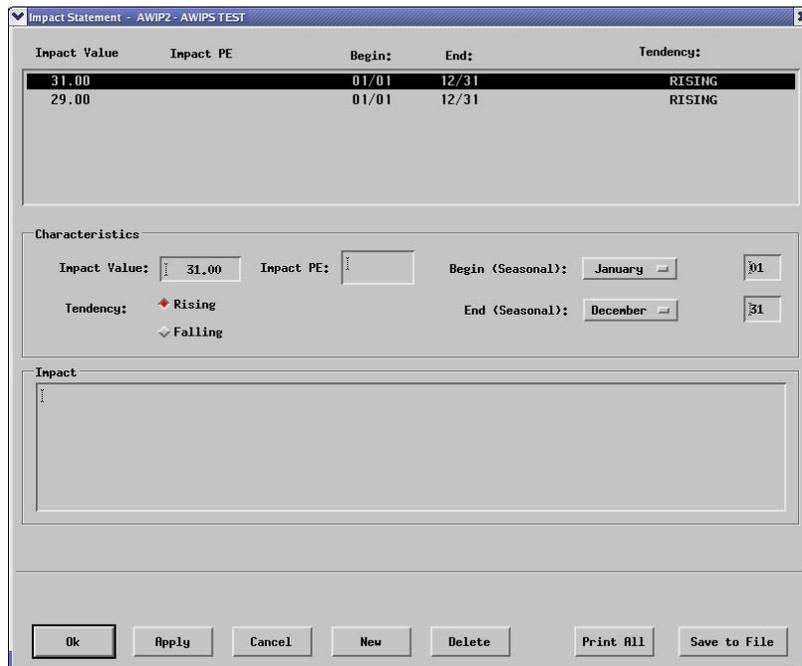


Figure 8. Step 33