Hazard Services Proficiency Practice

All of these proficiency checks should be practiced and verified in PRACTICE MODE.

Resources

- Hazard Services VLAB page - https://vlab.ncep.noaa.gov/web/hazard-services/hs-ref (available in AWIPS by opening Hazard Services, right click on the menu item, select "Reference On Product"
    - Job sheets available with specific instructions for completing tasks
    - Many reference materials
- Hazard Services training in the CLC. We should all have the "Hazard Services User Training" completed. If not, complete it ASAP.

---

1. **Open AWIPS in PRACTICE MODE. Open Hazard Services.**
    a. Close all existing CAVE sessions including text workstation.
    b. Applications > AWIPS Menu > AWIPS Startup Menu > Test Mode Control Program > Change Mode to **Practice (In House)**
    c. Start CAVE (Make sure CAVE has orange borders, otherwise you are NOT in practice mode). Load a D2D perspective for non-river product practice, and a Hydro Perspective for river product practice
    d. Open Hazard Services in D2D.

2. **Demonstrate ability to move the Hazard Services Console**
    a. Move it to mount in the CAVE side-by-side with the map
    b. Unmount the Hazard Services Console from the CAVE
    c. Mount the Hazard Services Console back in the CAVE window.

3. **Within the Hazard Services Console:**
    a. Display an "IBW Type" column
    b. Adjust the column widths to suit your display.
    c. Drag the time scale to show a different time and date.
    d. Expand the time scale so it only shows a 12 hour time frame.

4. **Issue an Areal Flood Advisory for a polygon that includes part of Otoe county and a small part of Cass county.**
    a. Create the polygon
    b. Select the correct product type
    c. Make other needed selections in the GUI
    d. Add an additional comment in the appropriate section of the Product Editor to state that "This is a TEST product".
    e. View the formatted product.

f. Issue the product **IN PRACTICE IN-HOUSE MODE**

5. **Issue a follow-up statement for your Areal Flood Advisory**
    a. Make the polygon smaller and remove the portion of Cass county.
    b. Add 30 minutes to the end time of the advisory
    c. Change the source to Trained Spotters
    d. Select “Minor Flooding Occurring”
    e. Specify a flood location of “the intersection of Test Rd and Test Ave”
    f. Issue the product **IN PRACTICE IN-HOUSE MODE**
    g. Verify that the appropriate polygon and end-time changes were made.

6. **Issue a correction for your Areal Flood Advisory**
    a. Select the event and create a correction product for the Areal Flood Advisory.
    b. Make a change to the wording or selections.
    c. Use the “Review Correction” button to do a direct comparison of your original and corrected products.
    d. Issue the product **IN PRACTICE IN-HOUSE MODE**

7. **Issue a Flash Flood Warning for the eastern half of Burt County following the Missouri River boundary. Do not include any other neighboring counties.**
    a. Create the polygon
    b. Select the correct product
    c. Click the checkbox to “Update Hazard Hatched Area”. Notice the minor changes in the polygon due to lat/long rounding. This is something to be aware of for minor adjustments to your initially-drawn polygon.
    d. Use the General IBW type and Doppler radar indicated
    e. Create the product and verify that the correct IBW tags exist.
    f. Issue the product **IN PRACTICE IN-HOUSE MODE**

8. **Issue a Flash Flood Statement for your existing warning.**
    a. Give the warning a “Considerable Flash Flooding” IBW tag
    b. Make it “Law Enforcement Reported”
    c. 1 to 3 inches of additional rain in the next 2 hours is expected.
    d. Create the product and verify that the correct IBW tags exist.
    e. Issue the product **IN PRACTICE IN-HOUSE MODE**

9. **Issue a Flash Flood Watch for southeast Nebraska using various polygon techniques.**
    a. First create the watch area by drawing a polygon.
    b. Propose the watch so you can (fake) collaborate with your neighboring offices.
    c. After collaborating (fake), you decide to add an extra vertex to the polygon and stretch the shape to make the polygon bigger.
    d. Add to the polygon using the AddTo Polygon tool

e. Remove an area from the polygon using the Remove Polygon Area tool.
f. Propose the watch with adjustments.
g. You realized that you don't like your polygon at all. Delete the event from the console.
h. Now create a Flash Flood Watch polygon for 7 counties in southeast Nebraska. Initially draw a polygon that includes Lancaster and Saline counties, but de-select them before issuing the watch.
i. Set the Flash Flood Watch to expire in 12 hours.
j. Propose the Flash Flood Watch.Edit the product to include a fake TEST basis for your watch issuance.
k. Issue the product **IN PRACTICE IN-HOUSE MODE**

10. **Use the Dam Flood Recommender to generate and create a non convective Flash Flood Watch for a dam break.**
    a. Run the Dam/Levee Flood recommender
    b. Choose the "Mud Creek 2A" in Gage county
    c. The cause should default to Dam or Levee Failure.
    d. Check the source default...choose a reasonable selection.
    e. Generate the product.
    f. Attempt to issue the product **IN PRACTICE IN-HOUSE MODE**
    g. At this point, you will not be allowed to issue this watch due to hazard conflicts. Also notice the Red X at the top of the product tabs in the Hazard Information window. Why is this? This is because you are issuing a dam-break Flash Flood Watch for an area (Gage county) that already has a Flash Flood Watch in effect. While this is a rare scenario, it demonstrates that some products can not overlap in time/space. In this situation, you would need to edit the existing Flash Flood Watch to include details about the potential dam break.
    h. Delete the Dam Break product from the console.
    i. Edit the existing flash flood watch to include some fake test dam info.
    j. Issue the product **IN PRACTICE IN-HOUSE MODE**

11. **Issue an Areal Flood Watch for northeast Nebraska using the Select By Area technique.**
    a. Select 5 counties in northeast Nebraska for your flood watch using the Select By Area tool.
    b. Create the Areal Flood Watch product.
    c. Edit the product to include a fake TEST basis for your watch issuance.
    d. Issue the product **IN PRACTICE IN-HOUSE MODE**

12. **Upgrade the Areal Flood Advisory to a Flash Flood Warning.** This is a common scenario when initially low-impact flooding becomes higher-impact. However, it is important to note that if you believe flooding will become high-impact at some point, you

should initially issue the Flash Flood Warning. There is no need to “ramp up”. A Flash Flood Warning is a predictive product and lead time is a goal.

a. Select the existing Areal Flood Advisory
b. Change the type to Flash Flood Warning.
c. Note that two product tabs are created. One for the advisory expiration and one for the warning issuance.
d. Choose an appropriate length of time. Choose appropriate settings for a scenario when an advisory is transitioning to a Flash Flood Warning.
e. Preview and again note the two separate tabs. Edit both products appropriately with test wording. Notice the actual text of the advisory expiration noting that it has been replaced by a Flash Flood Warning.
f. Issue the products **IN PRACTICE IN-HOUSE MODE**

13. **Transition the Flash Flood Warning to an Areal Flood Warning.** This is a common scenario when flooding is ongoing and will continue for a while, but the rapid rise of waters is over so the “Flash” flood should transition to an “Areal” flood.
    a. Select the existing Flash Flood Warning
    b. Change the type to Areal Flood Warning.
    c. Note that two product tabs are created. One for the FF.W expiration and one for the FA.W issuance.
    d. Choose an appropriate length of time. Choose appropriate settings for a scenario when Flash Flooding is transitioning to Areal Flooding.
    e. Preview and again note the two separate tabs. Edit both products appropriately with test wording. Notice the actual text of the Flash Flood expiration noting that it has been replaced by an Areal Flood Warning.
    f. Issue the products **IN PRACTICE IN-HOUSE MODE**

14. **Demonstrate ability to enter service backup mode for GID and DMX.** Do NOT issue any products in service backup at this time. Note differences in the HS Console product display.

RIVER FLOOD INSTRUCTIONS (read below before opening)

Notes: Thanks to Van for constructing the instructions and DJP for setting up test data!

- This involves initiating a fake test data point. After completion, you MUST complete the instructions to set this data point to “inactive”
- Do not complete this during a time frame when operations may be working with actual flood product issuance
- If you are not comfortable with these instructions, ask Brian B, Dave P, Van, or Scott for assistance and guidance.
- If you are not completing the River Flood portion at this time, skip to step 15 below.

15. Within the Hazard Services Console:

a. Sort the products by the length of time until expiration
b. Click and drag the red timeline triangle to view the evolution of products. Move the red triangle to 2 days from now.
c. Reset the time slider to focus on the current time (using the shortcut button)
d. Load the settings to display only non-river products.
e. Load the settings to display only river products.
f. Load the settings to display all hydrology products.

16. Cancel existing non-river flood products.

a. Select more than one product in the console
b. End the products.
c. Issue the cancelation products **IN PRACTICE IN-HOUSE MODE**

17. **Return AWIPS to OPERATIONAL MODE**

a. Close all existing CAVE sessions including text workstation.
b. Applications > AWIPS Menu > AWIPS Startup Menu > Test Mode Control Program > Change Mode to Operational