CENTRAL REGION TECHNICAL ATTACHMENT 88-15

OVERLAYING CRH'S ZONE MAP BACKGROUND ON SWIS

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This paper covers the procedures necessary to transform CRH's zone map back-grounds to SWIS. The procedure is straight forward and should apply to every WSFO with a minimum amount of manipulation. Some of the procedures are the same as the process involved in transforming the hydrologic county map back-grounds to SWIS (see Central Region Technical Attachment 88-8), but is much easier. Some of that procedure will be repeated here for ease of use.

The zone map background was provided 1/29/88 in a dump file (GPH.DP) sent by CRH SSD for use with the CD1-4 SFD graphics.

For best results you should first work with your SWIS focal point to set the image center point for the SWIS sector you'll be working with. The default value is not good enough for our needs, especially for the northern states. To get a good approximation for the new center point, move the cursor to a known latitude and longitude near your state. You may want to use a point on your state boundary with a known latitude and longitude. Note the difference between the SWIS readout and what it should be. The difference will be the value you need to add or subtract from the center point in SWIS's latitude/longitude table. It is best to be in the full sector file since most routine AFOS displays will be on the full sector. Unfortunately, a common value will not be applicable to each state. This step should be done only when the satel-lite images are stable. You will not be able to get the readouts to match perfectly, but overlay a B03 image onto your EB2 or other sector to make sure it is "close enough." Final adjustments will be done using PMOD.

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TRANSFORMING THE MAP BACKGROUND

The map background GPHBZ3 sent by SSD is already compatible with B03 and is therefore ready to transform to SWIS - no rescaling is necessary. We may, however, need to adjust its position slightly so it appears just where it's supposed to. Start by storing GPHBZ3 into an available map background, in this example, B27. Also store it as a test graphic such as T08. For example,

    ST:GPHBZ3 NMCGPHB27
    ST:GPHBZ3 NMCGPHT08

Key your test graphic to the B03 background (i.e., KEY:T08 M=03).

On SWIS, select the full sector file you want (in this case, EB2).

Enter AFOS CONTROL Mode (press the AFOS CONTROL button on the SWIS console, then enter SWIS: on an ADM), then transform your test graphic to SWIS. Remember, the test graphic must be keyed to B03, or SWIS will not transform it correctly.

Now observe how close the zones overlay on your state. If your SWIS center point is adjusted properly, the zones should overlay very close. Now exit AFOS CONTROL and select the sub-sector file. If your SWIS is like our's, the zones on the sub-sector will be off and will have to be adjusted using PMOD. In our case the zones had to be shifted east and south.

To do the adjustment, set up a macro like our SWIST09.MC:

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HCOPY B27 SWIST09.PF
GENUTF XPLOT T09
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where B27 is the original zone map and T09 is keyed to background B03.

Now create the parameter text file, SWIST09.PF, using M:F/SWIST09.PF at an ADM. Enter the following numbers:

| | |
|---|---|
| x | IOFF |
| y | JOFF |
| 2048 | ICHRT |
| 1536 | JCHRT |
| 50 | ISCAL |
| 0 | ICANT |
| 0 | JCANT |
| 0 | NROT |
| 0 | JSTRIP |
| -1 | LDENS |
| 0 | ITLE |
| 0 | JTLE |

To move the zones east, substitute a negative number for x (IOFF).
To move the zones west, substitute a positive number for x (IOFF).
If no east-west movement is needed, use x = 0.

To move the zones north, substitute a negative number for y (JOFF).
To move the zones south, substitute a positive number for y (JOFF).
If no north-south movement is needed, use y = 0.

To shift our zones east and south, we used x = -25 and y = 15.

2

After running the macro and producing the graphic T09, enter AFOS CONTROL Mode and transform T09 to SWIS while viewing the desired sub-sector. The resulting graphic should overlay almost perfectly, though a few minor adjustments may still be necessary.

In most cases, these are the only numbers that will need to be adjusted, and changes will probably be small (on the order of 5 to 10 from the given example). Minor adjustments can be made in the rotation by experimenting with small values for ICANT or JCANT.

In this example, T08 will be used for full sector images and T09 will be used for sub-sector images. If all sector center points are adjusted well, the same graphics should be good for all sectors. Just transform the graphic again for each new sector.



3