

3.0 FEMIS GIS Migration and Configuration

This section provides the instructions to migrate (upgrade) and configure the FEMIS GIS to v1.5. This process can occur without overwriting any customization that has been done for your EOC.

For each FEMIS server at the site, determine to which one of the following two groups the server belongs.

Group 1: the server contains FEMIS v1.4.6 files.

Perform a full FEMIS server upgrade to v1.4.7.2 for all servers in Group 1. These servers will now be in Group 2.

Group 2: the server contains FEMIS v1.4.7.2 GIS files.

Using the steps in Section 2.1.1, Migrating User Defined Polygons in v1.4.7.2 to v1.5, verify the v1.4.7.2 shape files on a FEMIS PC for existing user-defined polygon themes have been completed and the files have been saved. They should have been saved to `M:\kpoly`. These shape files will later be used to convert the polygon shape data to the v1.5 database format and store the data in the FEMIS v1.5 database.

3.1 Migrating the FEMIS GIS from v1.4.7.2 to 1.5

The FEMIS Setup program will not be able to install the FEMIS v1.5 GIS files to the PCs until all appropriate steps of the GIS upgrade have been completed. The initial steps of the GIS upgrade must be performed from a PC with FEMIS v1.4.7.2 installed. The upgraded files will be written to the server.

Note: If possible, the GIS migration process should be performed on a PC on which the GIS has not been customized.

3.1.1 Opening the GIS Utilities

To load and save the GIS utilities, complete the following steps:

1. Map `I:` drive on the PC to the server `/home/femis/` directory. Connect to the drive as the user `femis`.
2. Open the v1.5 GIS Utilities on the PC by double clicking on the `I:\GIS\FEMISGIS_UTILITIES.APR`. If you have previously opened the `femisgis_utilities` on this PC, open it in the directory where the FEMIS GIS is installed on the PC (e.g., `C:\femis\gis\<site code>`).

3. Click `OK` to close the warning message regarding the GIS version.
4. If prompted to replace an existing file, select the `femisgis_utilities.apr`. This should be located in the directory where the FEMIS GIS is installed on the PC (e.g., `C:\femis\gis\<site code>`).
5. Click `OK` on message of successful loading of the GIS themes.
6. Select the `Onpost EOC Code` at the database login window, and click `OK`.
7. Login at the `ODBC Login` prompt with the database user name (`<Application Schema>a`) and password. Click `OK`.

3.1.2 Upgrading the CSEPP Zone Theme

Note: The following steps may encounter file permission restrictions on destination files placed on the UNIX server. Adjust permissions accordingly on the UNIX file server to allow file placement to occur.

To upgrade the CSEPP zone theme, the `femisgis_utilities.apr` should be open from the completing Section 3.1.1, Opening the GIS Utilities. Complete the following steps at one EOC:

1. Select `Upgrade` → `Upgrade CSEPP Zones`.
2. Select the zone theme name if the zone theme was not pre-selected in the `Enter Zone Filename` prompt. The zone theme name for each of the v1.4.7.2 sites are as follows:

Alabama:
`anad_ez.shp`

Maryland:
`eca_ez.shp`

Oregon/Washington:
`umcd_ez.shp`

Utah:
`tead_ez.shp`

3. Verify the table is populated with new fields. The zone theme table will be updated with data from the FEMIS database and the zone theme table fields will be rebuilt. After the database has been queried, and the zone theme table is updated, the new table should open. The table should be populated with the following fields: `Shape`, `Zone_id`, `Zone`, `Type`, `Par_pad`, `Risk_area`, `Objectname`, `Objectttype`, `Objectid`, and `Population`. A record should exist in the table for each zone.

Note: If the table is not completely populated, replace the theme with a copy from a PC. Examine the original theme to make sure that the table is populated with the following fields: `Shape`, `Zone_id`, `Zone`, `Type`, `Par_pad`, `Risk_area`, `Objectname`, `Objecttype`, and `Objectid`. A record should exist in the table for each zone. If it does not, then either this is not the original zone theme or it was corrupted.

4. Copy the three theme files `.shp`, `.shx`, and `.dbf` from the `i:\gis\\zone` to `i:\gis\upgraded_zones\zone` subdirectory. You may have to create the subdirectory. These files will be copied to the other EOCs in Section 3.2, Copying v1.5 GIS Files to Other Servers.

3.1.3 Upgrading the General Hazard Zone Theme

Note: The following steps may encounter file permission restrictions on destination files placed on the UNIX server. Adjust permissions accordingly on the UNIX file server to allow file placement to occur.

To upgrade the General Hazard (county) zone theme, the `femisgis_utilities.apr` should be open from the completing Section 3.1.1, Opening the GIS Utilities. Complete the following steps at one EOC:

1. Select `Upgrade General Hazard Zones` from the `Upgrade` menu.
2. Select the general hazard zone theme (county) name in the boundaries directory, if it was not pre-selected in the `Enter Zone Filename` prompt and click `OK`. The general hazard zone theme name for each of the v1.4.7.2 sites are as follows:

Alabama:
`anad_sc.shp`

Maryland:
`eca_cb.dbf`

Oregon/Washington:
`umcd_sc.shp`

Utah:
`tead_sc.dbf`

3. Click `Yes` to overwrite existing file.
4. Verify the table is populated with new fields. The General Hazard zone theme table will be updated with data from the FEMIS database, and the General Hazard zone theme table fields will be rebuilt. After the database has been queried, and the General Hazard zone theme table is

updated, the new table should open. The table should be populated with the following fields: Shape, Zone_id, Zone, Type, Par_pad, Risk_area, Objectname, Objectttype, Objectid, and Population. A record should exist in the table for each general hazard zone.

Note: If the table is not completely populated, replace the theme with a copy from a PC. Examine the theme to make sure that the table is populated with the following fields: Shape, Zone_id, Zone, Type, Par_pad, Risk_area, Objectname, Objectttype, and Objectid. A record should exist in the table for each zone. If it does not, then either this is not the original general hazard zone theme or it was corrupted.

5. Copy the three theme files .shp, .shx, and .dbf from the i:\gis\\boundaries to i:\gis\upgraded_zones\boundaries subdirectory. You may have to create the subdirectory. These files will be copied to the other EOCs in Section 3.2, Copying v1.5 GIS Files to Other Servers.

3.1.4 Installing FEMIS v1.5 on One PC

To install FEMIS v1.5 and the GIS on this PC only, complete Sections 4.1, Installing the PC COTS, 4.2, Configuring the FEMIS Setup Program, and 4.3, Installing the FEMIS Client Software.

3.1.5 Migrating the ViewMarks to the Database

The ViewMark migration uses an excessive amount of memory on the PC especially where custom ViewMarks have been created. A PC should be selected for performing this operation that has lots of memory (256 MB or greater). The virtual memory should also be increased to avoid low virtual memory errors (1 GB).

To migrate ViewMarks to the database, complete the following steps at each EOC:

1. Map or verify the m:\ drive is mapped to the server where the EOC normally connects (\\<server\user).
2. Open FEMIS, and log in as a user with full GIS privileges.
3. Select *Operations Mode*, and click *OK*. **Do not open the GIS.** If the GIS opens, close it.
4. Open the *femisgis_utilities.apr* located in the directory where the FEMIS GIS is installed on the PC (e.g., C:\femis\gis\). Select the EOC and enter its application user name (<eoc code>a) and password for which you are performing the upgrade.

Note: If you are using a PC on which you have not previously opened the `femisgis_utilities.apr`, the file will not exist. Perform the steps in Section 3.1.1, Opening the GIS Utilities, to open the copy from the server, only connect as stated in this step (not necessarily the depot).

5. Select `Upgrade → Migrate ViewMarks to DB`. This may take some time for all of the ViewMarks to process. The application can have a status of not responding in the task manager but do not end it.

If errors are reported, check the `<gis drive letter>\femis\gis\<site code>\errorlog.txt` file for ViewMark migration errors. Complete the following steps to migrate the ViewMarks that generated errors.

1. Use the FEMIS v1.4.7.2 PC to open FEMIS, and log in as a user whose ViewMark failed to migrate.
2. Open the GIS.
3. Open the ViewMark that failed for that user.
4. Right-click on the `View`, and select `Save Graphics`.
5. Save the graphics to a graphic file the same name as the ViewMark in the `M:\<username>` directory. Enter the ViewMark name as the description. Click `Yes` to proceed.
6. Select `Edit → Delete All Graphics`.
7. Select `ViewMark → Save as Private`.
8. Enter the ViewMark name. Overwrite the existing ViewMark.
9. Repeat Steps 1-8 for each user's ViewMarks that failed to migrate.
10. Repeat the initial migrating Steps 1-5 at the beginning of this section.

Inform the users whose ViewMarks failed to migrate where the graphics files can be found so they can copy these files locally or apply and resaved the ViewMark with fewer graphics.

3.1.6 Upgrading User Defined Polygons from v.1.4.7.2 to v.1.5

Note: If Section 3.1.4, Installing FEMIS v1.5 on One PC, **was not performed**, go to Section 4.0, to install FEMIS v1.5 and the GIS **on this PC only**.

To upgrade the user defined polygons from v.1.4.7.2 to v.1.5, complete the following steps at one EOC:

1. Copy the `m:\kpoly` directory (containing the shape files saved in Section 2.1, Migrating User Defined Polygons in v1.4.7.2 to v1.5) to the directory where the FEMIS GIS is installed on the PC (e.g., `C:\femis\gis\<site code>`). At the prompt asking whether to overwrite existing files, select `Yes to All`.
2. Open FEMIS. Log in as a user with full GIS privileges.
3. Select `Operations Mode`. Click `OK`. **Do not open the GIS.** If the GIS opens, close it.
4. Open the `femisgis_utilities.apr` located in the directory where the FEMIS GIS is installed on the PC (e.g., `C:\femis\gis\<site code>`).

Note: If you are using a PC on which you have not previously opened the `femisgis_utilities.apr`, the file will not exist. Perform the steps in Section 3.1.1, Opening the GIS Utilities, to open the copy from the server.

5. Select `Edit` → `Delete All Themes`, and click `Yes to All`.
6. Select the `Add Theme` button (plus sign on the button bar) from the icon bar.
7. Load all the polygons in the `kpoly\EO` directory you copied to the PC. You can load multiple themes by holding the shift button down.
8. Activate a single user defined polygon by selecting the legend in the GIS table of contents (the check box only lets you view the theme, it does not activate it). The user defined polygons are identified as `<sitecode> Flood Polygon` and `<sitecode> User Defined Polygon`. The theme name will appear to be raised when it is activated.
9. Select `Upgrade` → `Save Polygons to the DB`.
10. Click `OK` on the messages that follow.
11. Repeat Steps 7 and 8 for each user defined polygon theme loaded from `kpoly\EO`.
12. Activate the FEMIS Workbench window, and click the `Operations` button.
13. Select `Exercise Operations`.
14. Select an exercise from the drop-down list, and click `OK`.
15. Repeat Steps 5-13 for each exercise. For each exercise, load only the polygons from `kpoly\EO#`.

16. Close the GIS Utilities. Answer `NO` to Save Changes.
17. Open the GIS from FEMIS by clicking the `Map` button.
18. Select `Utility` → `Regenerate Map Layers` → `Regenerate Polygonal Map Layers on the Workbench`.
19. Click the `Operations` button.
20. Select `Exercise Operations`.
21. Select an exercise from the drop-down list. Click `OK`.
22. Select `Utility` → `Regenerate Map Layers` → `Regenerate Polygonal Map Layers on the Workbench`.
23. Repeat Steps 18-21 for all exercises for which user defined polygons are to be restored.

3.2 Copying v1.5 GIS Files to Other Servers

Copy the upgraded GIS files from the server on which you performed the first GIS migration/upgrade to all of the other servers.

1. Logon to a server that has not had General Hazard and CSEPP zone themes upgraded.
2. Move to the `gis zone` directory.

```
%cd /home/femis/gis/<site code>/ zone
```

3. Use `ftp` to transfer the upgraded files from the upgraded server.

```
%ftp <server name>  
Name: femis  
Password: <femis password>  
ftp> cd /home/femis/gis/upgraded_zones/zone  
ftp> bin  
ftp> mget *  
ftp> bye
```

where `<site code>` is your site code (lower case), such as `anad`.
`<server name>` is the host name of the server you are copying to.
The asterisk (`*`) is a literal asterisk for wild card expansion.

4. Move to the `gis zone` directory.

```
%cd /home/femis/gis/<site code>/ boundaries
```

5. Use ftp to transfer the upgraded files from the upgraded server.

```
%ftp <server name>  
Name: femis  
Password: <femis password>  
ftp> cd /home/femis/gis/upgraded_zones/boundaries  
ftp> bin  
ftp> mget *  
ftp> bye
```

6. Repeat Steps 1-4 for all of the servers.

3.3 Completing the Installation on This PC

Go to Section 4.4, Configuring the PC, to continue and complete the installation on this PC.