



Prepared by/for:
**Modeling, Mapping, and
Consequences**

Appendix 3.1.3

ProjectWise File Storage FY2023 MMC CWMS National Implementation

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Executive Summary

This document should be used to direct the CWMS team lead, modeling team members, and district staff on how to use ProjectWise for sharing and storing files during the development of CWMS watershed models. Once the project is complete and turned over to the district, it is the responsibility of the CWMS team lead to clean up the ProjectWise folders. This document should be referenced when performing that task.

SECTION 1

Storing Files on ProjectWise

This section will guide the Corps Water Management System (CWMS) team lead, team members, and district staff on how to use ProjectWise to store files and share information during the development phase of the project.

1.1 **CAVI FOLDER**

The CAVI folder should be used to store and share files related to the CAVI watershed development. During model development, when the team reaches a milestone, the CAVI team member should compress and upload the CAVI watershed to the appropriate sub-folder for review. Any other associated files can be uploaded to these sub-folders if they are needed during the review.

1.2 **FIA FOLDER**

The *FIA* folder should be used to store and share files related to the Hydrologic Engineering Center-Flood Impact Analysis (HEC-FIA) model. During model development, when the team reaches a milestone, the HEC-FIA modeler should compress and upload the HEC-FIA model to the appropriate sub-folder for review. Any other associated files can be uploaded to these sub-folders if they are needed during the review.

1.3 **G/S FOLDER**

The CWMS mapping team member is primarily responsible for the content of these folders. Other team members can upload and store files to these sub-folders as directed in Section 1.3.1 through Section 1.3.8.

1.3.1 **ArcGIS Maps Folder**

All pre-model ArcGIS map documents (*.mxd files) should be uploaded to this folder.

1.3.2 **DEMs Folder**

All digital elevation models (DEMs) used for the production of the CWMS models should be compressed and uploaded to this folder. A text document should also be uploaded that explains the differences between the DEMs (source, cell size, year collected, etc.) and which models they were used for so future users can understand the differences. All DEMs should be reviewed by the CWMS mapping technical lead prior to upload.

1.3.3 **GeoHMS Folder**

This folder should be used by the Hydrologic Modeling System (HEC-HMS) modeler to store any and all output from the Geographic Hydrologic Modeling System (HEC-GeoHMS) process during model development.

Within the *GeoHMS* folder is a *Final* folder where all of the information from the *Layers* folder should be compressed and uploaded. The *Layers* folder contains all of the final rasters and the geodatabase containing all of the final layers generated by HEC-GeoHMS.

1.3.4 **GeoRAS Folder**

The geodatabase containing all of the final layers generated by HEC-GeoRAS should be compressed and uploaded to this folder.

1.3.5 Google Folder

This folder can be used to save and share any files associated with Google Earth (*.kml or *.kmz) that may be generated during the production of the CWMS models.

1.3.6 Projections Folder

This folder is pre-loaded with an ESRI projection file (*.prj) that should be used by the team to ensure all shapefiles and rasters created are in the correct MMC CWMS standard projection.

1.3.7 Shapefiles Folder

This folder will contain any and all shapefiles related to the development of the CWMS models. All files within this location are considered reviewed and ready for production use. Any modifications to files should be reviewed by the CWMS mapping technical lead prior to upload.

1.3.7.1 CWMS Folder

This folder will contain primary model layers such as the stream centerline, banklines, study area polygon, and vertical datum conversion points. These files are typically generated by the CWMS mapping team member, but could be developed in conjunction with district staff if files already exist for the watershed.

1.3.7.2 District Folder

This folder will contain any shapefiles that the district supplies in support of the layers in the CWMS folder, explained in section 1.3.7.1.

1.3.7.3 MMC Folder

This folder will contain any shapefiles produced by the CWMS mapping team member that will be utilized by other MMC programs, such as the Top of Dam inundation polygon.

1.3.7.4 National Layers Folder

This folder will contain standardized national datasets clipped to the study basin area of interest. Layers could include cities, counties, hydrologic unit code (HUC) boundaries, soil data, and other relevant data.

1.3.8 Working Folder

This folder will be used by the CWMS mapping team member during the pre-model GIS phase of the project to develop all of the necessary model layers. Files in this folder are considered un-reviewed and not suitable for production use. The CWMS mapping technical lead will review all layers and upon approval will transfer to the appropriate folders listed in sections 1.3.1 through 1.3.7.

1.4 HMS FOLDER

The HMS folder should be used to store and share files related to the HEC-HMS model. During model development, when the team reaches a milestone, the HEC-HMS modeler should compress and upload the HEC-HMS model to the appropriate sub-folder for review. Any other associated files can be uploaded to these sub-folders if they are needed during the review.

1.5 MAPPING FOLDER

The CWMS mapping team member is responsible for uploading the majority of files in this location.

1.5.1 ArcGIS Maps Folder

All post-model ArcGIS map documents (*.mxd) that are related to mapping output from the CWMS models should be uploaded to this folder.

1.5.2 GIS_Data Folder

This folder is used to store all layers used in the production of sample inundation maps.

1.5.3 PDF_Maps Folder

All sample inundation maps generated for the basin, saved in .pdf format, should be uploaded to this folder.

1.6 RAS FOLDER

The RAS folder should be used to store and share files related to the HEC-RAS model. During model development, when the team reaches a milestone, the HEC-RAS modeler should compress and upload the HEC-RAS model to the appropriate sub-folder for review. Any other associated files can be uploaded to these sub-folders if they are needed during the review.

1.7 REFERENCE MATERIAL FOLDER

All files supplied by the district should be uploaded to the folders listed in this section. It is the primary responsibility of the CWMS team lead to ensure the files are uploaded to the appropriate sub-folders when provided by the district.

1.7.1 District Data Folder

All data supplied by the district should be uploaded to this folder. This includes, but is not limited to, observed gage data, previous study reports, design memoranda, bathymetric surveys, high water mark surveys, bridge surveys or plans, and flood imagery. If the file sizes are large, the data should be compressed and then uploaded to this folder.

1.7.2 District Models Folder

All existing models supplied by the district should be compressed and uploaded to this folder.

1.7.3 Manuals Folder

All water control manuals (WCMS) supplied by the district should be uploaded to this folder. It is the CWMS team lead's responsibility to ensure that manuals for all USACE projects within the basin are uploaded to this folder.

1.8 REPORTS FOLDER

All documentation written by the modelers during the model development phase of the project should be uploaded to these folders. It is the responsibility of the CWMS team lead to verify that everything has been uploaded and is in the correct location.

1.8.1 CAVI Folder

All documentation provided by the CAVI team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

1.8.2 FIA Folder

All documentation provided by the HEC-FIA team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

1.8.3 Final Folder

Any draft copies of the CWMS final report should be uploaded to this folder.

1.8.4 HEMP Folder

Any draft copies of the Hydrologic Engineering Management Plan (HEMP) should be uploaded to this folder. After the team, district staff, and HEC point of contact have reviewed the document, the document should be saved as a PDF and then signed by the necessary team members. The signed copy of the HEMP should then be uploaded. Any changes to the HEMP during the project can be made to the Word document; a new signed PDF does not need to be created.

1.8.5 HMS Folder

All documentation provided by the HEC-HMS team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

1.8.6 RAS Folder

All documentation provided by the HEC-RAS team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

1.8.7 ResSim Folder

All documentation provided by the HEC-ResSim team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

1.9 RESSIM FOLDER

The *ResSim* folder should be used to store and share files related to the HEC-ResSim model. During model development, when the team reaches a milestone, the HEC-ResSim modeler should compress and upload the HEC-ResSim model to the appropriate sub-folder for review. Any other associated files can be uploaded to these sub-folders if they are needed during the review.

1.10 REVIEWS FOLDER

All review documentation should be stored in this folder during the model development phase of the project.

1.11 TEMP FOLDER

This folder can be used by the team and district staff at the CWMS team lead's discretion. Any information that needs to be shared internally between the team members or between the team and district can be uploaded to this location.

SECTION 2

ProjectWise Cleanup

After the product delivery meeting occurs, the CWMS team lead is responsible for cleaning up the files and folders on ProjectWise. A detailed explanation of steps to follow is listed in this section of the report.

2.1 **CAVI/FOLDER**

The final CAVI watershed folders shall be compressed and uploaded to the *Final* folder. All other folders and files shall be deleted.

2.2 **FIA FOLDER**

The final clean HEC-FIA model shall be compressed and uploaded to the *Final* folder. A second copy of the HEC-FIA model containing all historical data used for calibration should be zipped and uploaded to the folder. Files should be named so they are easily recognizable. All other folders and files shall be deleted.

2.3 **GIS FOLDER**

The CWMS mapping team member is primarily responsible for the content of these folders. Nothing should be moved or deleted without their approval.

2.3.1 **ArcGIS Maps Folder**

All pre-model ArcGIS map documents (*.mxd files) should be uploaded to this folder.

2.3.2 **DEMs Folder**

The CWMS team lead, along with the modelers and mapping team member, should verify that all of the DEMs used during the model development are compressed and uploaded and that the documentation is correct.

2.3.3 **GeoHMS Folder**

The CWMS team lead and the HEC-HMS modeler are responsible for cleanup of this folder.

2.3.3.1 *Final* Folder

The CWMS team lead, along with the HEC-HMS modeler, should verify that the *Layers* folder containing all of the final rasters and the geodatabase containing all of the final layers generated by HEC-GeoHMS was compressed and uploaded to this folder.

2.3.4 **GeoRAS Folder**

The CWMS team lead, along with the HEC-RAS modeler, should verify that the geodatabase containing all of the final layers generated by HEC-GeoRAS was compressed and uploaded to this folder.

2.3.5 **Google Folder**

Any files associated with Google Earth (*.kml or *.kmz) that may be generated during the production of the CWMS models should be uploaded to this folder. If none were generated the folder can be left empty.

2.3.6 Projections Folder

This folder should contain the ESRI projection file (*.prj) that defines the MMC CWMS standard projection.

2.3.7 Shapefiles Folder

This folder will contain any and all shapefiles related to the development of the CWMS models. The CWMS mapping team member should verify that all required files have been uploaded to the correct folders.

2.3.8 Working Folder

This folder will be used by the CWMS mapping team member during the pre-model GIS phase of the project. It should be reviewed by the CWMS mapping team member and not by the CWMS team lead.

2.4 HMS FOLDER

The final HEC-HMS model shall be compressed and uploaded to the *Final* folder. A second copy of the HEC-HMS model containing all historical data used for calibration should be zipped and uploaded to the folder. Files should be named so they are easily recognizable. All other sub-folders and files shall be deleted.

2.5 MAPPING FOLDER

The CWMS mapping team member is responsible for the review of these folders.

2.5.1 ArcGIS Maps Folder

All post-model ArcGIS map documents (*.mxd) that are related to mapping output from the CWMS models should be uploaded to this folder.

2.5.2 GIS_Data Folder

All layers used in the production of sample inundation maps should be uploaded to this location.

2.5.3 PDF_Maps Folder

This folder should contain sample inundation maps, stored in .pdf format.

2.6 RAS FOLDER

The final HEC-RAS model shall be compressed and uploaded to the *Final* folder. A second copy of the HEC-RAS model containing all historical data used for calibration should be zipped and uploaded to the folder. Files should be named so they are easily recognizable. All other folders and files shall be deleted.

2.7 REFERENCE MATERIAL FOLDER

Any files provided by the district should not be deleted from this location.

2.7.1 District Data Folder

All data supplied by the district should be saved. The CWMS team lead should verify that all large files are compressed.

2.7.2 District Models Folder

The CWMS team lead should verify that all existing models provided by the district are compressed and uploaded to this folder. Do not delete any files from this location during the cleanup process.

2.7.3 Manuals Folder

The CWMS team lead should verify that WCMs for all reservoirs or structures located within the study basin are uploaded to this folder.

2.8 REPORTS FOLDER

The CWMS team lead should verify that all required reports and documentation related to the production of the CWMS models is uploaded to the correct folders, listed in sections 2.8.1 through 2.8.7.

2.8.1 CAVI Folder

All documentation provided by the CAVI team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

2.8.2 FIA Folder

All documentation provided by the HEC-FIA team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

2.8.3 Final Folder

The final copy of the CWMS final report in both Word and PDF formats should be uploaded to this folder. Any draft reports should be deleted.

2.8.4 HEMP Folder

The final signed copy of the HEMP should be uploaded to this folder in PDF format and any draft copies should be deleted. Any updated versions of the HEMP that were written during the project should remain in the folder.

2.8.5 HMS Folder

All documentation provided by the HEC-HMS team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

2.8.6 RAS Folder

All documentation provided by the HEC-RAS team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

2.8.7 ResSim Folder

All documentation provided by the HEC-ResSim team member regarding the development of the model should be uploaded to this folder, including any and all reports provided at review milestones.

2.9 RESSIM FOLDER

The final clean HEC-ResSim model shall be compressed and uploaded to the *Final* folder. A second copy of the HEC-ResSim model containing all historical data used for calibration should be zipped and uploaded to the folder. Files should be named so they are easily recognizable. All other folders and files shall be deleted.

2.10 REVIEWS FOLDER

If multiple copies of the review checklist spreadsheet exist, they should be combined into one copy and uploaded to this folder. All other review documentation can be included, but there should be only one copy of the review checklist at the end of the project. It is the responsibility of the CWMS team lead to accomplish this task.

2.11 TEMP FOLDER

Any files that were uploaded to this folder should be deleted. If any files are necessary, they should be moved to another folder that will remain after the cleanup process is complete. The folder should then be deleted once all files are removed. It is the responsibility of the CWMS team lead to accomplish this task.