## Importing FEMA FloodMap Shape Files Workflow

 Using your internet browser, navigate to <u>NFHL GIS Database</u> and the NFHL Viewer. Download the required GIS dataset by left clicking in the area of interest in the NFHL Viewer and selecting *Download county GIS data*.



A \*.zip file should appear at the bottom of your browser once the dataset is ready for saving. Save the \*.zip file to the project folder and extract all files in the dataset (*Right Click on \*.zip*  $\rightarrow$  *Extract all...*).

FEMA_FloodMap_Workflow > Portland_Example >						
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		410183_20191006 (	(1)	5/4/2023 3:16 PM	File folder	
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Note that once downloaded and extracted, there should be 4 different file types for each shape file:

- a) DBF (required) stores feature attributes using a limited set of data types.
- **b)** PRJ (optional) a file that contains the metadata associated with the shapefiles coordinate and projection system.
- c) SHP (required) contains the geometry for all features.
- **d)** SHX (required) index file that stores the index of the feature geometry.

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	^	Name	Date modified	
		S_STN_START.dbf	5/4/2023 3:16 PM	DBF File
	*	S_WTR_LN.dbf	5/4/2023 3:16 PM	DBF File
	*	S_XS.dbf	5/4/2023 3:16 PM	DBF File
	*	STUDY_INFO.dbf	5/4/2023 3:16 PM	DBF File
	*	S_BFE.prj	5/4/2023 3:16 PM	PRJ File
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		S_FLD_HAZ_AR.prj	5/4/2023 3:16 PM	PRJ File
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	*	S_LEVEE.prj	5/4/2023 3:16 PM	PRJ File
	*	S_LOMR.prj	5/4/2023 3:16 PM	PRJ File
	*	S_PLSS_AR.prj	5/4/2023 3:16 PM	PRJ File
alizations (\\s-salemgeom-1\7960only\ETA) (B:)	*	S_POL_AR.prj	5/4/2023 3:16 PM	PRJ File
		S_PROFIL_BASLN.prj	5/4/2023 3:16 PM	PRJ File
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egon Department of Transportation		S_GEN_STRUCT.shp	5/4/2023 3:16 PM	SHP File
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2. Create a new 2D DGN file and assign the same GEODETIC coordinate system as stated in the PRJ files of the GIS flood data set:



To attach the GEODETIC coordinate system in MicroStation:

- a) On the Drawing Ribbon, navigate to Utilities  $\rightarrow$  Geographic  $\rightarrow$  Coordinate System
- **b)** Expand the *Library* folder as well as the *Geographic (latitude, longitude)* folder and then expand the folder for *North America*.
- c) Select the appropriate geographic coordinate system (example data requires the *EPSG:4269-NAD83*) and then select OK.
- d) Change the Storage Units from Feet to Degrees when prompted.



3D ORD WORKFLOW SERIES



3. Attach the \*.shp files using the Reference Manager, Coincident-World

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	S_FLD_HAZ_	AR.shp	5/4/2023 3:16 PM	SHP F	
	S_FLD_HAZ_	LN.shp	5/4/2023 3:16 PM	SHP F	
Desktop	S_GEN_STRU	CT.shp	5/4/2023 3:16 PM	SHP F	
	S_LEVEE.shp		5/4/2023 3:16 PM	SHP F	
	S_LOMR.shp		5/4/2023 3:16 PM	SHP F	
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This PC	S_STN_STAR	ſ.shp	5/4/2023 3:16 PM	SHP	Coincident World
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	Files of type:	Shapefiles (*.shp)	~	Cancel	
	•	Save Relative Path		Options	

Note that when you use the linear measuring tool, the distance is measured in degrees.

## IMPORTING FEMA FLOODMAP SHAPE FILES INTO MICROSTATION

3D ORD WORKFLOW SERIES



4. Merge the shape file references into the Master using the Reference Manager and selecting all files, Right click → Merge Into Master and data click into your 2D default view.



5. This file is now ready to be reprojected into your project design file as a reference.

To check to make sure the shape files were attached correctly:

- 1. Create another 2D DGN and assign your project coordinate system or just assign Oregon State Plane North both should work.
- 2. Attach the shapefile DGN as a reference use "*Interactive*" mode and choose "*Geographic Reprojected*" from the Orientation window on the Reference Attachment dialog.

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Reference Attachme	nt Properties for\fema_floodmaps_portland_import.dgn 🛛 🗙 🛛				
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**3.** Use the measuring tool to check to see that both the scale of the shapefiles and measuring units are correct (*units should be in feet*)



4. Turn on the Bing Background map to see that the data aligns with the aerial.



**5.** You can turn on/off layers as desired. The GIS dataset maintains layer names; however, the data set does not maintain level symbology. You will need to edit linestyles as deemed appropriate.

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