

HOW2 Find the Right HEC-RAS Model

If you are contacted by a local developer interested in locating engineering models to inform their development project, data available on the Estimated Base Flood Elevation Viewer can assist your community to provide this information.



A permit is required before construction or development begins within any Special Flood Hazard Area (SFHA). If FEMA has not defined the SFHA within a community, the community shall require permits for all proposed construction or other development in the community including the placement of manufactured homes, so that it may determine whether such construction or other development is proposed within flood-prone areas.

1

Always check current effective Flood Insurance Rate Maps (FIRMs) in the area of a project. If the project area intersects the 1% chance floodplain (Zone A, AE, AO, AH, V, VE) you may need to prepare review of the current (EXISTING) conditions to the post-project conditions. Effective, historic, preliminary and pending FIRMs may be accessed on FEMA's Map Service Center website at <https://msc.fema.gov> or the National Flood Hazard Layer Viewer at <https://msc.fema.gov/nfhl>.

For more information on how to request effective model information, check out FEMA's Engineering Library at: <https://go.usa.gov/xsGdv>.

Locate, access and download the Base Level Engineering model with the **Estimated Base Flood Elevation Viewer**, available free of charge, on-line at <https://webapps.usgs.gov/infrm/estBFE/>.

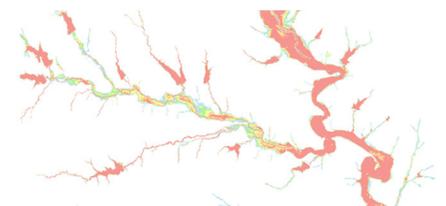
2

Look up your project site. Once you have accessed the site, review the DISCLAIMER, click **OK**. You will be greeted with a screen, select **View Base Level Engineering Data** from the three available options. On the left of the screen, click the **REPORT** tab enter the location, address or latitude/longitude of the project site. Locate your project area.



3

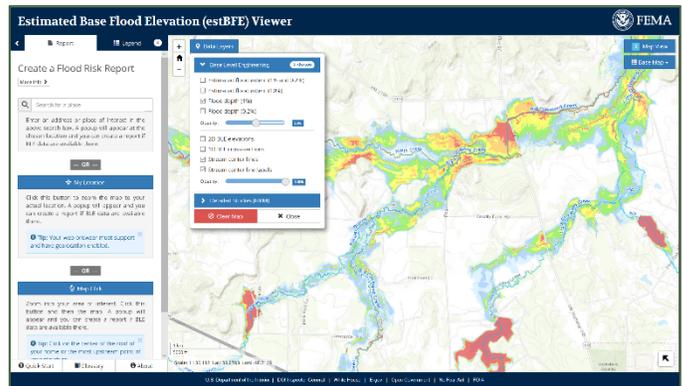
Access the Data Layers on the top left in the map area Turn the **Stream Center Lines** and **Stream Center Line Labels** by checking the box next to each item. Use the Zoom function to read the stream names that have been added to the map viewing area.



Note the stream name identified on the viewer screen in the vicinity of the area you have looked up (we will look for Big Cleveland Creek for this example).

4

Download the Model Files from the site. Within the open Data Layers menu, click on the arrow to open the **Downloadable Data (BLE)** information. Click the box next to **Downloadable Data Available**.

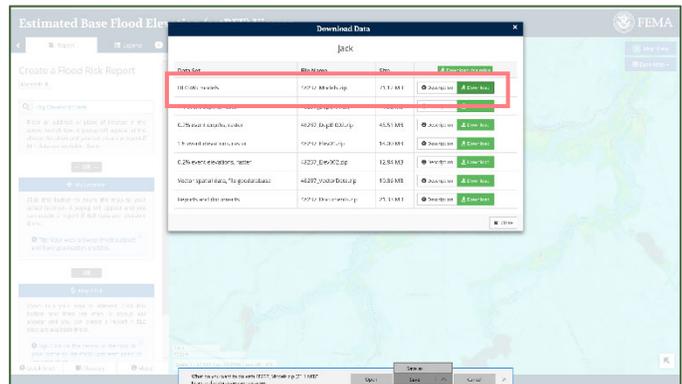


A teal color will be added to the viewing area and the mouse cursor will identify the Base Level Engineering study area your project is located. In our example, Big Cleveland Creek is in the Jack County, Texas study area.



Right-click your mouse and a list of downloadable items will be available. Click **DOWNLOAD** on the first item, **HEC RAS Models**.

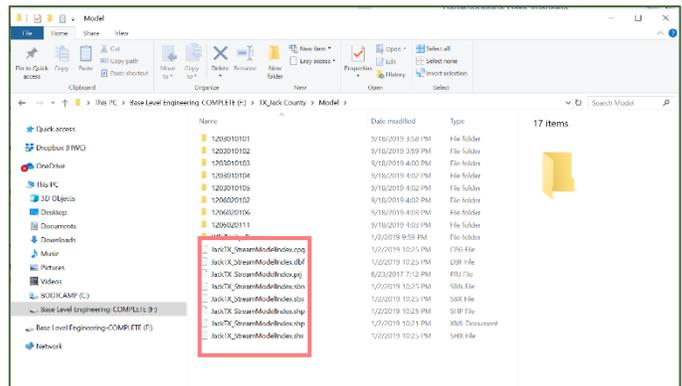
A dialogue box will open at the bottom of your screen. Choose **SAVE** and identify a folder where the Model files will be saved to your computer.



Once the download is complete, unzip the saved MODEL file and open the folder created.

5

Locate the Model of Interest Once the .zip file has been opened and all model items are accessible, use the **SEARCH** function on the right side of your folder window – type in the name of the stream(s) of interest and the files will be easily accessible.



In some study areas, like Jack County, FEMA's technical contractor has used a numbering system to file the models. In these study areas a Model Index File (shapefile) will provide your additional assistance in locating the correct model.

Load the shapefile and use the identify button (in GIS reader) to click on the streamline to learn the stream model number associated with the delivery area. Big Cleveland Creek is model 3908. Search the file for this number to locate the HEC-RAS model needed.

*A Model Index file is only available in BLE study areas that use a numbering system in the model folders. If you do not have access to a GIS system, please contact Diane.Howe@fema.dhs.gov for additional assistance in locating the correct model files for your project area.

