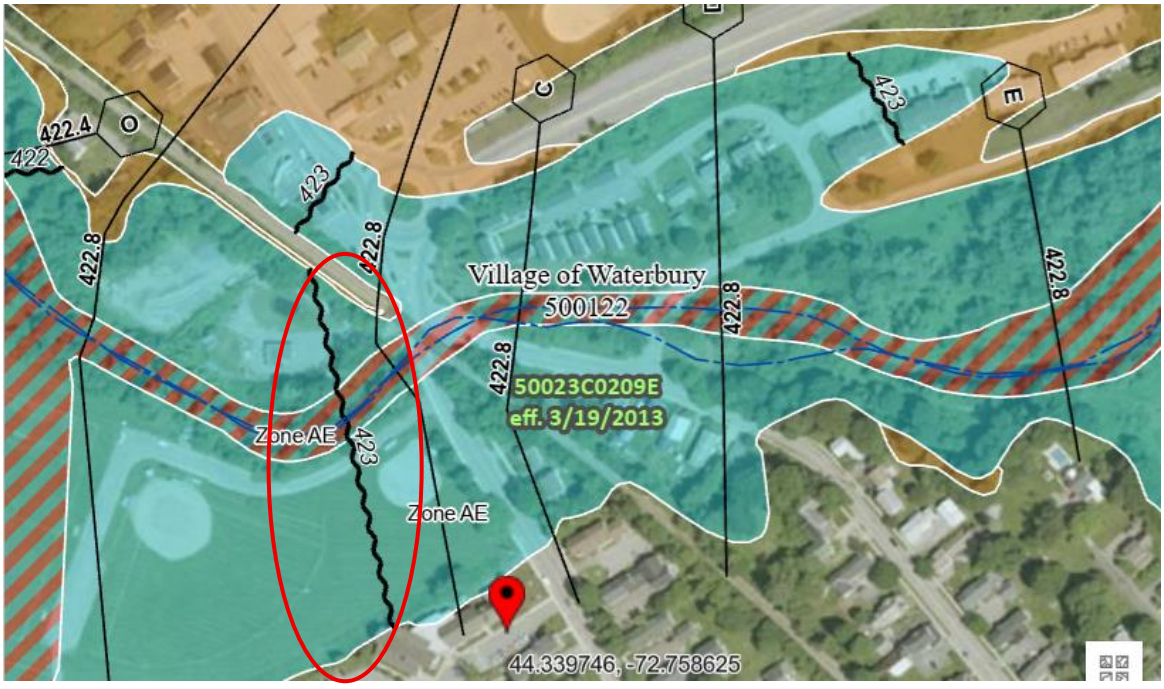
Approaches for Defining the Federal Flood Risk Management Standard (FFRMS) Floodplain

1. Determine FFRMS from 500-year floodplain

- Use the FEMA Map Service Center to find the Flood Insurance Rate Map (FIRM) for the project location and check for 500-year floodplains on the FIRM.
- If the project site is in the 500-year floodplain (orange shading on digitized and preliminary FIRMs, Zone B on some older maps) it is in the FFRMS.
- **If there is no 500-year floodplain at or adjacent to your site, or if it is not mapped, then continue to 2. Freeboard Value Approach.**

2. Determine FFRMS from Freeboard Value Approach (FVA)

- The freeboard method requires us to add 2 feet vertically to the 100 year BFE, and as far horizontally as the 2 foot vertical rise would extend. This is based on the ground surface elevation.
- If the floodplain is designated as AE, then FEMA has identified the BFE. See example below- the BFE in this case is 423 feet. To get the FFRMS elevation, add 2 feet to the BFE to get an elevation of 425 feet.

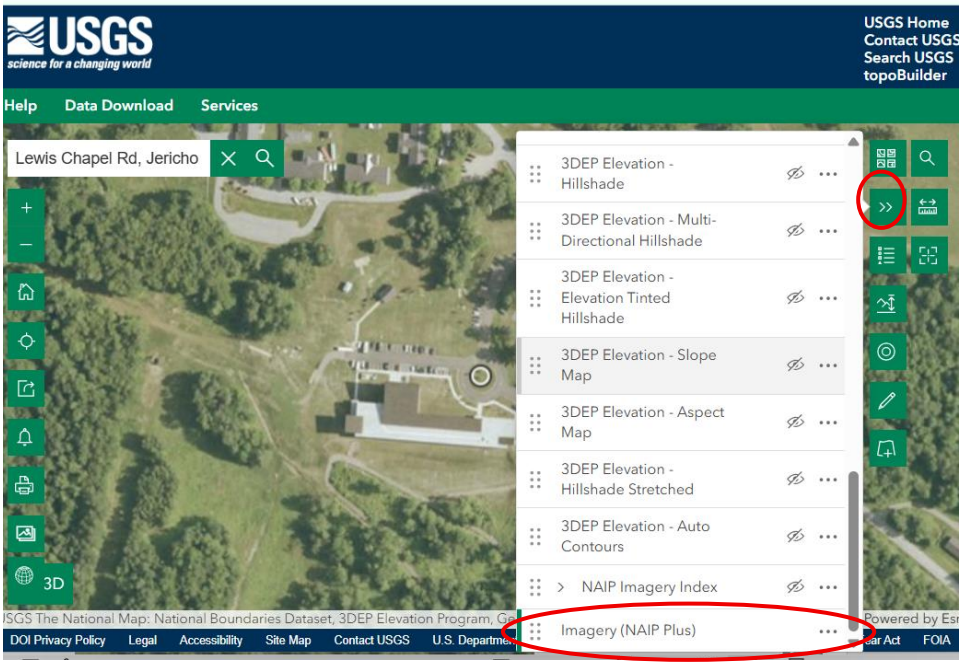


- Using topographic elevation from the assessed property site plans, if available, determine if the lowest elevation at the subject property is above or below the FFRMS. Your assessment is done and document your findings.
- **If site plans are not available, or elevation of the site is unknown, continue to 3. Create an Elevation Profile.**

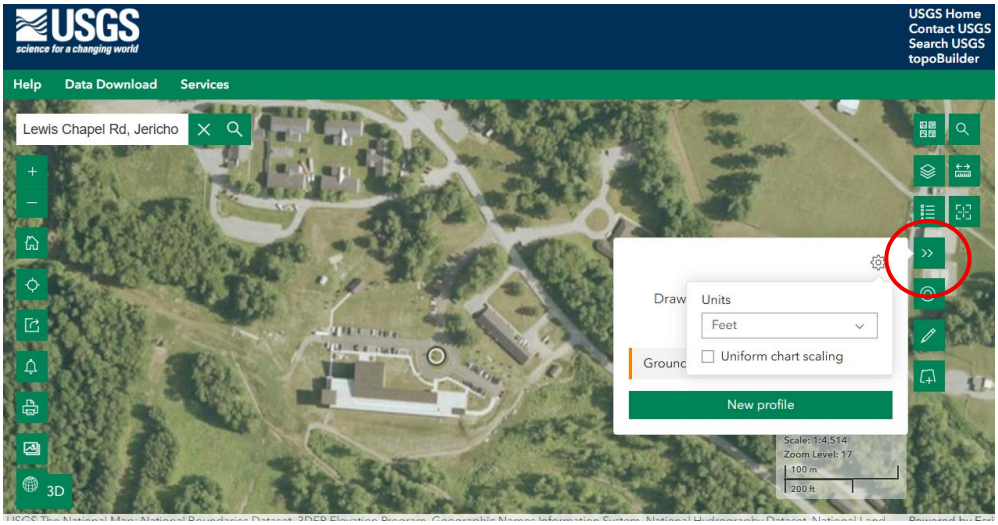
3. Create Elevation Profile to find the elevation of the base flood elevation and/or the elevation of the assessed property

- If elevations are not shown on the assessed property site plans but you know the BFE, or if the floodplain is designated as zone A, and FEMA has not designated a BFE, we need to figure elevations out ourselves. The following map shows what Zone A without BFE looks like.

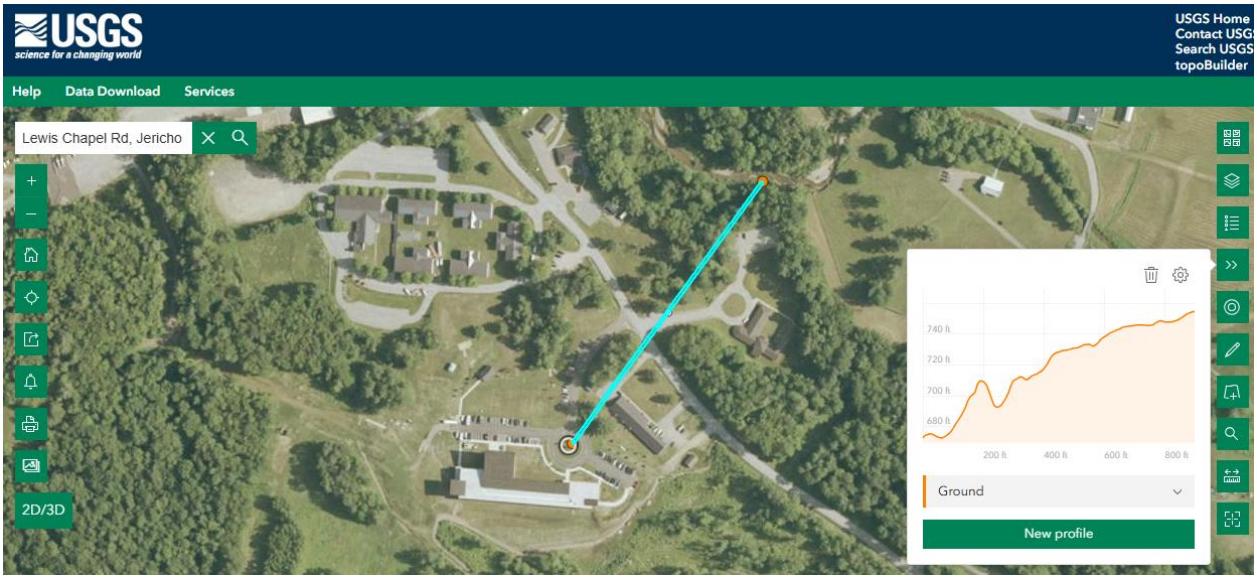
- **Find an area on the flood map that is at the edge of the floodplain, and which is easily identifiable on other satellite images**. In the map above, the property being assessed is in red, and the red X is a location at the edge of the floodplain. Remember the location of the red X, as we will later find this same location on a satellite image from the USGS National Map.
- Open the USGS National Map: https://apps.nationalmap.gov/viewer/
- Navigate to the property being assessed. The default basemap only allows you to zoom in so far, and it is not always easy to navigate at this zoomed out scale.
- Change the background to a layer that is more zoomable. Select layers and scroll to the very last option (Imagery NAIP Plus)



- Now we need to use the profile tool. Select the profile tool (red arrow) and select feet for measurement (red circle).



Start the profile tool at the point where we determined the floodplain existed based on the FIRM, and end at the assessed building or project site. The profile tool will tell you the elevation at the edge of the floodplain (627 feet in this case) and the elevation of the building.



- **The FFRMS can be calculated by adding 2 feet to the base flood elevation. 627 feet + 2 feet = 679 feet. Clearly the assessed building is well above the FFRMS floodplain.**
- Document your findings in the ER!