1

Presenters

Primary Presenter:

Jacob Levine, Environmental Specialist, Office of Housing, Jacob.Levine@hud.gov

Supporting Presenters:

Sara Jensen, Senior Environmental Specialist, Office of Housing, Sara.Jensen@hud.gov

Holly Ravesloot, Program Analyst, Office of Housing, Holly.D.Ravesloot@hud.gov

2

Questions

Please put questions in the Q&A box or in the chat

We will address those related to defining the FFRMS floodplain today

We will respond to other questions outside of this webinar.

3

Federal Flood Risk Management Standard (FFRMS) Background

- FFRMS Executive Order to all Federal Agencies
- From 1980-2023, U.S. had 44 flood disasters with damages exceeding $1 billion
- From 1996-2019, 99 percent of U.S. counties impacted by a flooding event
- Bloomberg analyzed Helene flood damage in four cities and found much of the flood damage was outside of FEMA's Special Flood Hazard Areas (SFHA):
  - Tampa FL, 34%
  - Augusta GA, 51%
  - Valdosta, GA, 83%
  - Greenville, SC, 76%
- HUD wants to support housing that is safe and resilient for the long term

Flooding in downtown Marshall during the weekend after Helene. (Photo courtesy Old Marshall Jail Hotel)

4

HUD Federal Flood Risk Management Standard (FFRMS) Rule

Key Changes:

- **Redefines the floodplain for all project types**:
  - Regulates to an expanded FFRMS Floodplain instead of the 100-year Floodplain/ SFHA to account for increased flood risk over time
  - Will increase the number of HUD actions that require compliance with Part 55 regulations
- **Increases the required elevation for new construction and substantially improved structures** (rehab costing 50% of market value)
- **Strengthens public notice and clarifies flood insurance requirements** to increase awareness of flood risk to renters and homeowners
- **Incorporates flexibilities in allowing HUD assistance** for specific properties in floodways when specific criteria are met

5

HUD Guidance on FFRMS Rule

- Overview and Guidance on FFRMS rule https://www.hudexchange.info/programs/environmental-review/floodplain-management/
- Two Webinars on the FFRMS rule https://www.hudexchange.info/news/ffrms-final-rule-webinar-series/
- Updated Floodplain Management WISER module Web-Based Instructional System for Environmental Review (WISER) - HUD Exchange
- FAQs https://www.hudexchange.info/environmental-review/faqs/#?topic=FFRMS&id=54391A9F-ABC8-411A-84645B23CC205054

6

Agenda

Today's training will cover how to define the FFRMS floodplain using the Climate Informed Science Approach (CISA), 0.2 percent annual chance floodplain, and Freeboard Value Approach methods for Housing programs.

7

Disclaimers

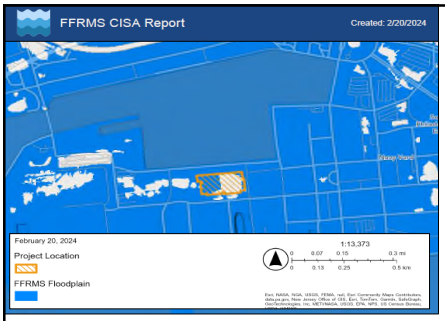
- Intro-level floodplain knowledge required
- These instructions cover a 'typical' floodplain analysis
- Unique circumstances, like levee-protected areas or shallow sheet flow zones, will be covered in Part 2 on Nov. 4

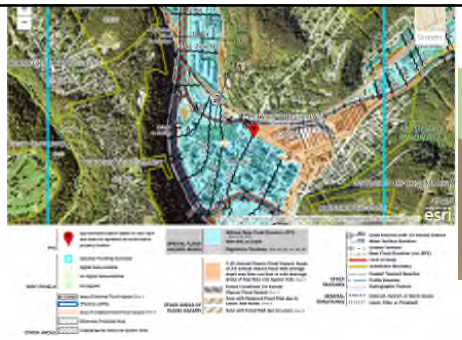
8

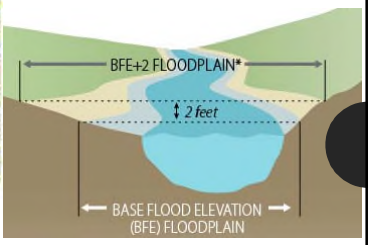
The Challenge

- HUD's regulatory floodplain has expanded from the previous 100-year floodplain/500-year floodplain for critical actions
- Before, reviewers could just check the FEMA FIRM Maps
- Now, defining the floodplain may require checking multiple sources and/or new technical skills
- Reviewers will also need to know the flood elevation, not just the floodplain boundaries

9





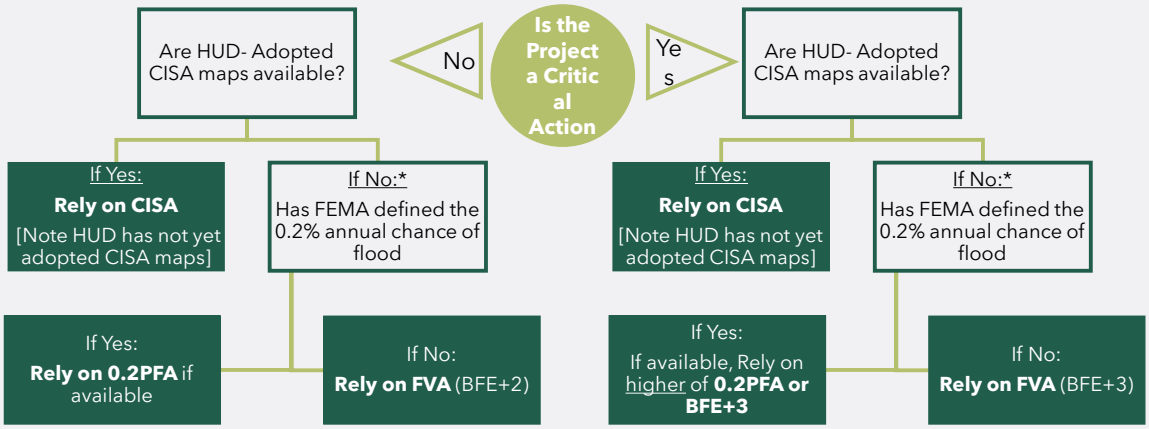


Three Ways to Define the Floodplain (see 55.7)

- The Climate Informed Science Approach (CISA): modeling on projected sea level rise incorporated into flood risk mapping
- 0.2 Percent Floodplain Approach: Use the 500-year floodplain instead of the 100-year floodplain
- Freeboard Value Approach (FVA): two feet, or three feet for critical actions, added to the 100-year flood elevation, floodplain extends to that new elevation

10

Identifying the FFRMS Floodplain

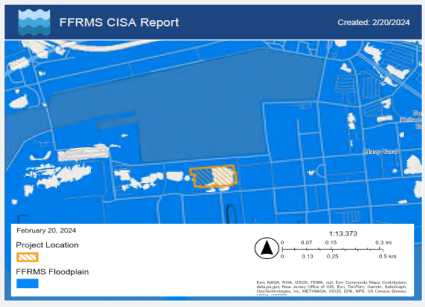


*HUD/REs and applicants may elect to use Federal CISA data prior to HUD adoption or state and local CISA data if it meets the requirements at 55.7(f) and is not lower than the lower of 0.2PFA or FVA.

11

Climate Informed Science Approach (CISA)

- HUD has not formally adopted a CISA resource yet
- Once HUD adopts, CISA will be the required floodplain where it is available
- Before HUD adopts, CISA may be used optionally if the flood elevation is not lower than the lower of the two other methods
- Can check for Federal CISA using the Federal Flood Standard Support Tool
- State and local CISA data may be used optionally
  - *Must be incorporated into State/local regs*
  - *Flood elevation must not be lower than other methods*



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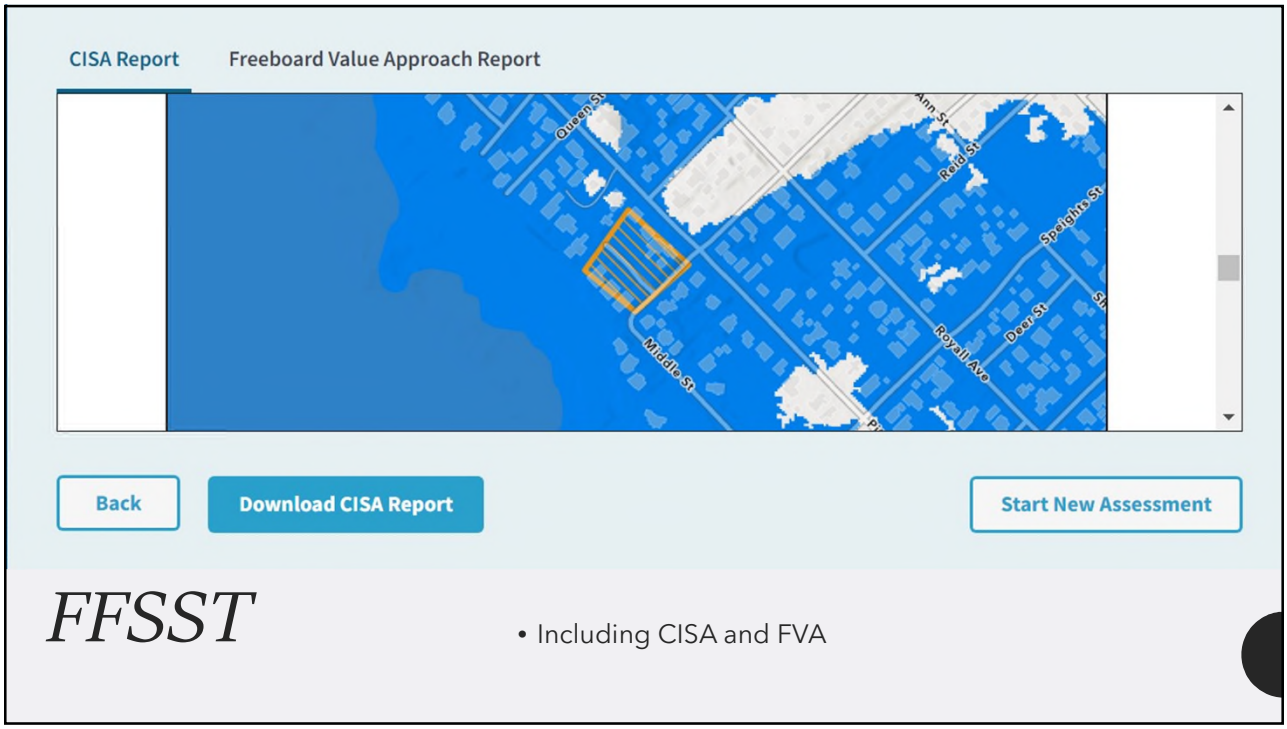
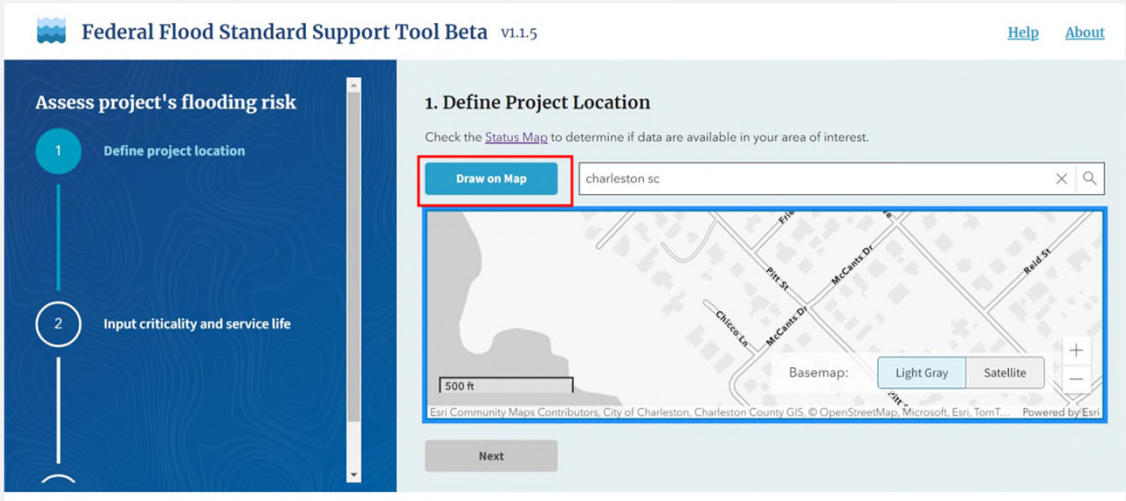


FFSST

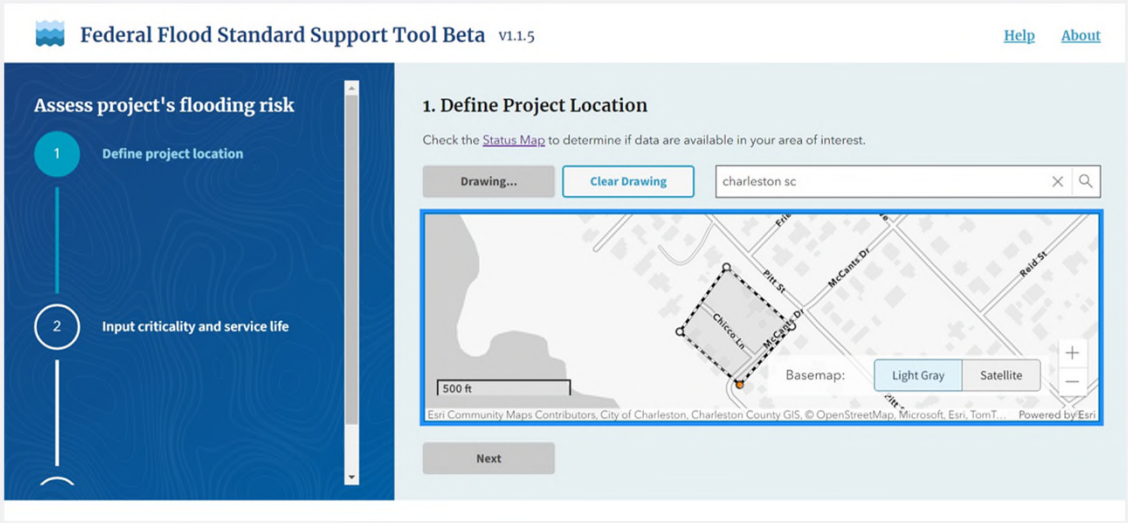
- Including CISA and FVA

13



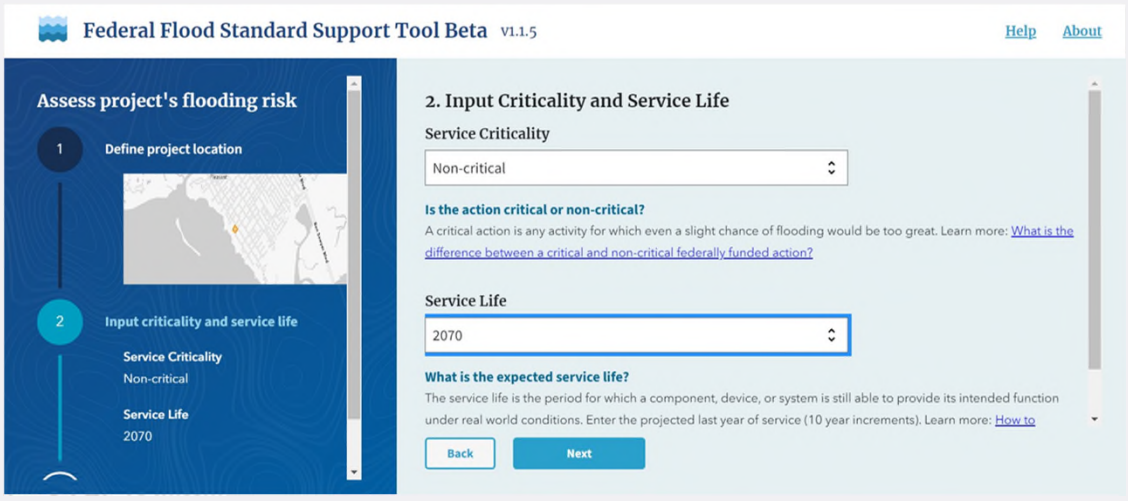
Use the search bar to navigate to the project location, and then click 'Draw on Map'.

14



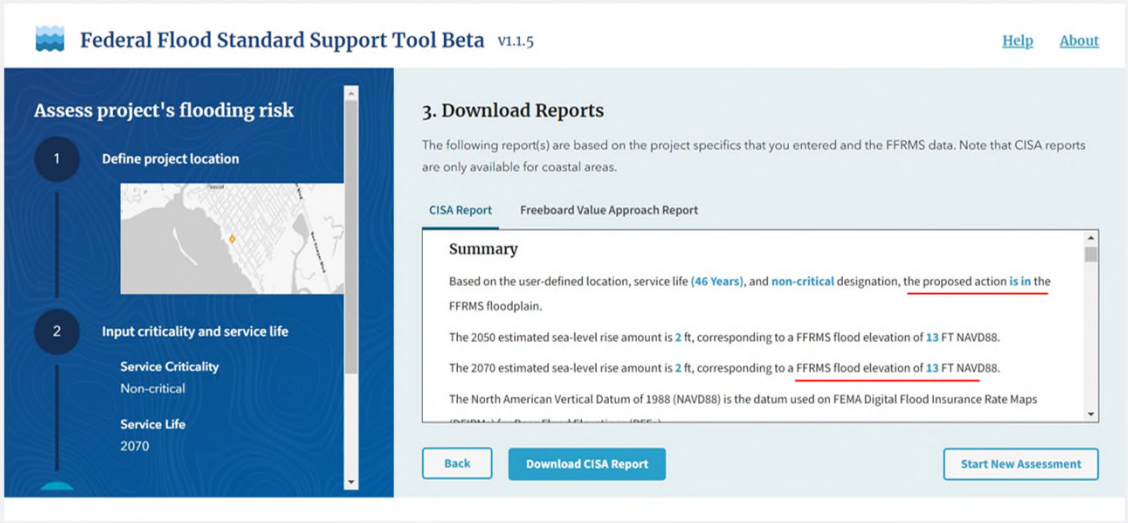
Outline the project parcel boundaries by clicking on each corner. Double-click on the last corner to finalize the boundaries.

15



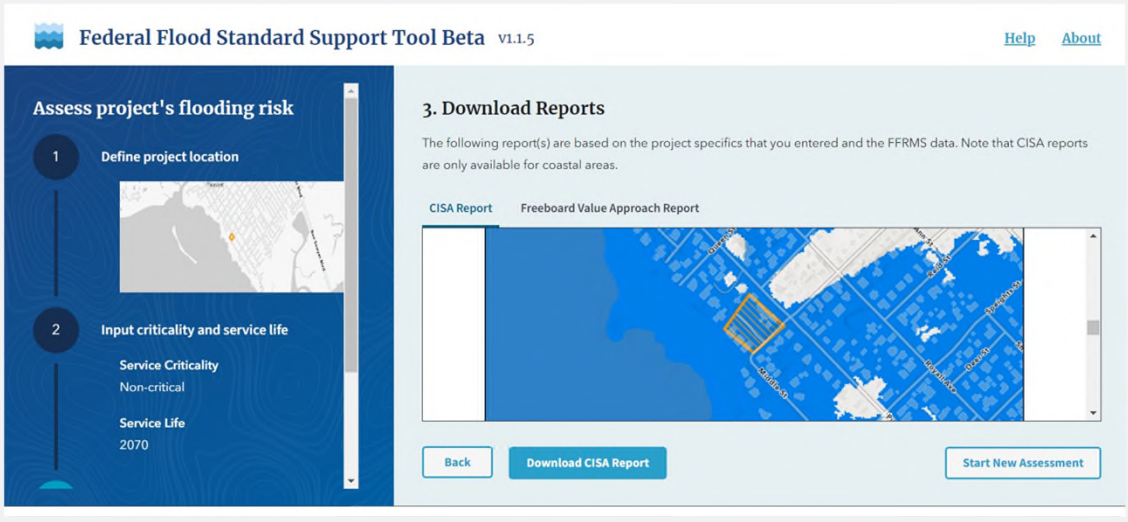
Select critical or non-critical, and select the service life based the length of the mortgage, rounding up to the later decade.

16



If CISA is available, the tool will provide CISA and FVA reports with a floodplain determination and elevation. If CISA is not available, the tool will provide only a report on FVA. If neither is available, the tool will provide a No Data Exists report.

17



The report will show a map with the project boundaries and the floodplain boundaries. Dark blue is in the FFRMS floodplain based on CISA.

18

Note:

The following instructions skip over CISA.

After HUD adopts a CISA resource, these instructions will be updated.

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Determining FFRMS for Non-Critical Actions

1. Locate the project in FEMA's Map Service Center or National Flood Hazard Layer.
2. Check for nearby floodplains
3. SFHA is still part of the floodplain.
4. Compare site to 500-year floodplain, or 500-year elevation in Flood Insurance Study
5. If no 500-year data, find the BFE and add two feet. Compare project site to new elevation.

If the site includes the FFRMS floodplain, the 8-step or 5-step decision making process is required. New construction and substantial improvement require elevation or floodproofing to the FFRMS elevation.

Review might conclude at any point starting with Step 2.

20

Determining FFRMS for Critical Actions

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6. The FFRMS floodplain is the larger of Steps 4 or 5

If the site includes the FFRMS floodplain, the 8-step or 5-step decision making process is required. New construction and substantial improvement require elevation or floodproofing to the FFRMS elevation.

Review might conclude at Step 2, or will proceed through Step 6.

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Critical Actions

- *__Critical actions__ are defined at 24 CFR 55.2 and are "any activity for which even a slight chance of flooding would be too great" including those that "Are likely to contain occupants who may not be sufficiently mobile to avoid loss of life or injury during flood or storm events, *e.g.,* persons who reside in hospitals, nursing homes, convalescent homes, intermediate care facilities, board and care facilities, and retirement service centers. Housing for independent living for the elderly is not considered a critical action."

22

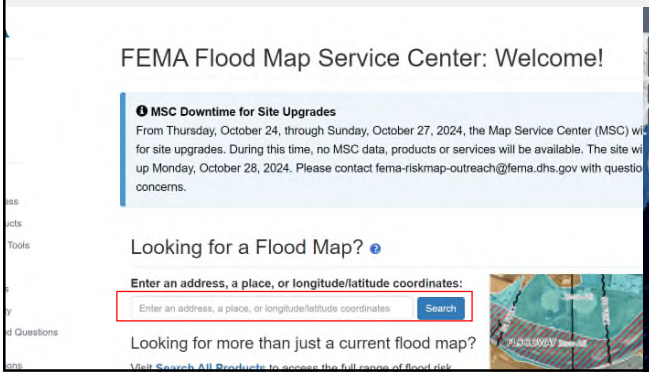
1. Locate the project in FEMA's Map Service Center or National Flood Hazard Layer.

Tips:

For new construction projects where the address might not be in these databases, use an adjacent address or lat/long.

The Map Service Center gives easy access to Flood Insurance Studies and preliminary FIRMs

The National Flood Hazard Layer is easier to zoom and pan for an analysis of a larger area, and includes a distance measure tool



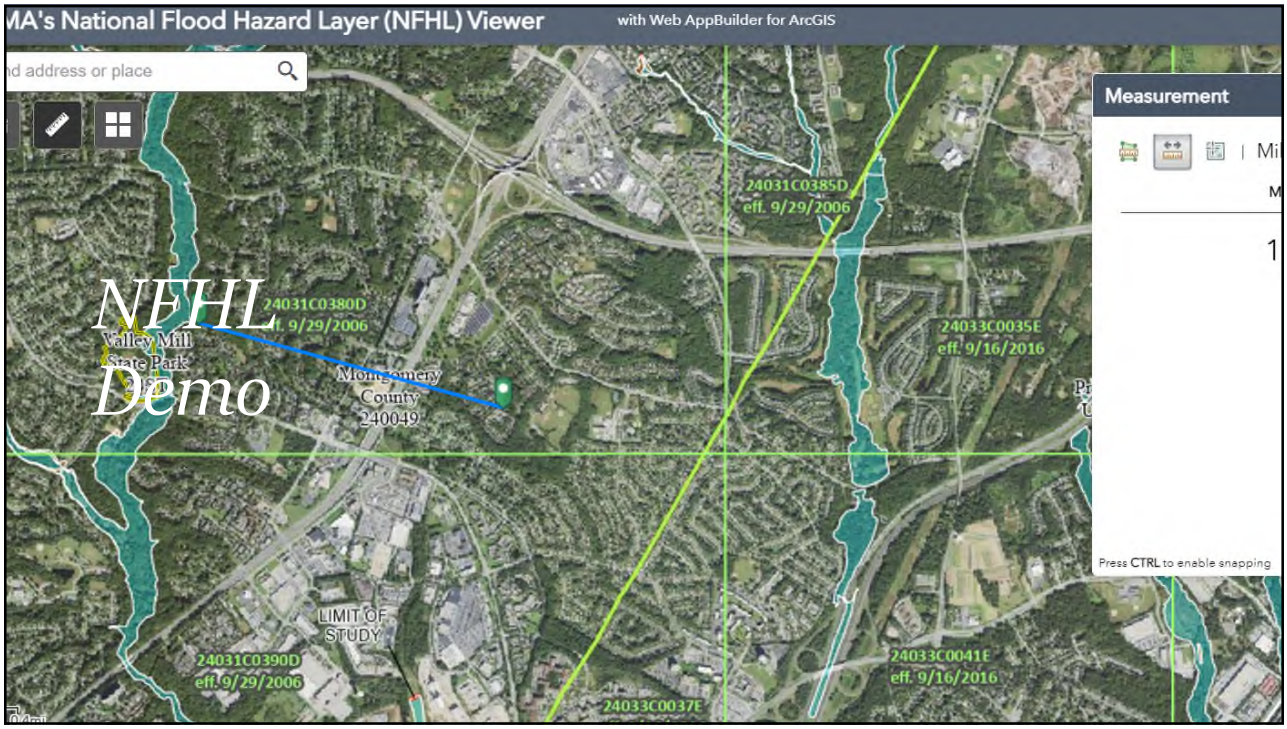
23

2. Check for nearby floodplains

- Check the FIRM panel for the project site
- If near the edge of panel, check adjacent panel(s)
- No nearby floodplains conclude review*

*How far to look depends on topography

24



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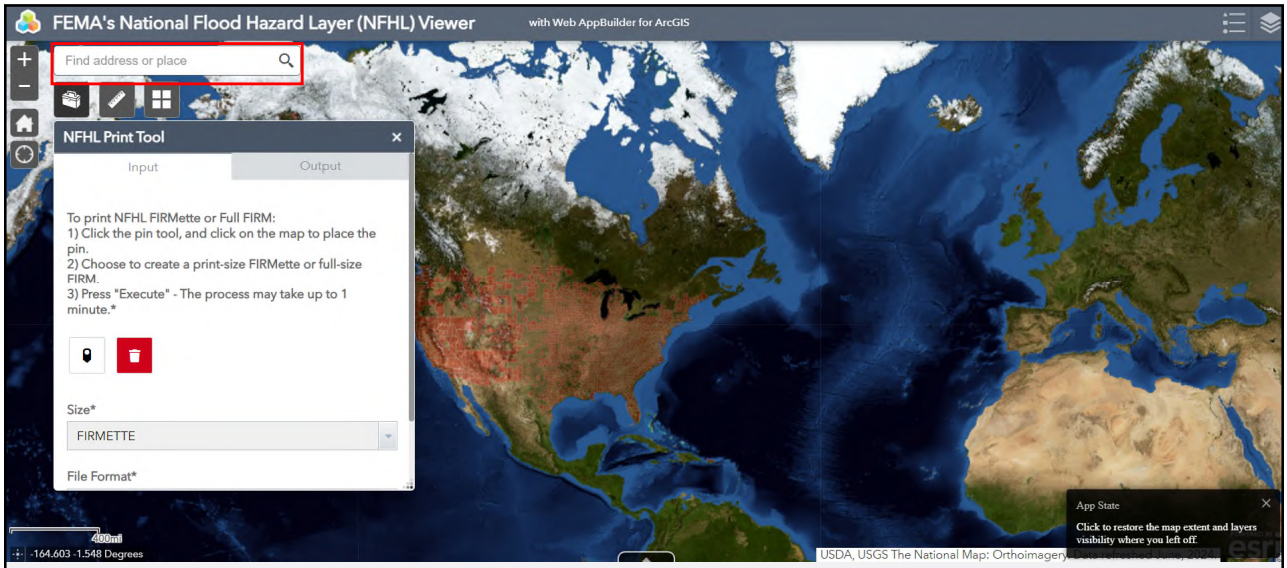
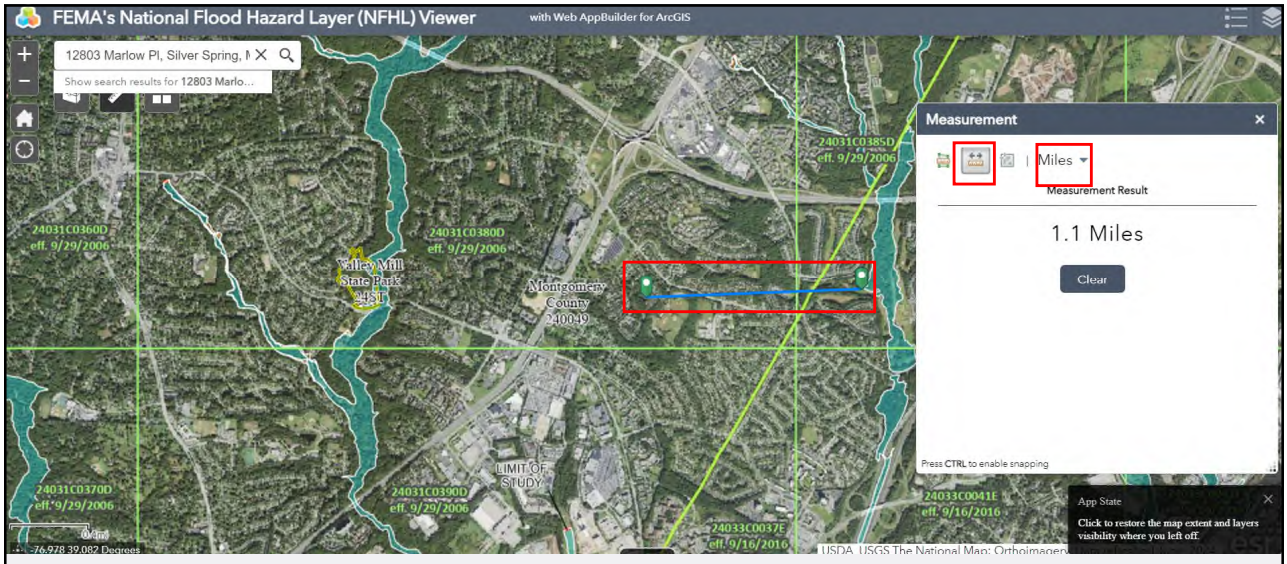


Enter the project address or lat/long in the search bar.

26

Zoom out to a useful map scale and select the measurement tool.

27



In the Measure tool, select the line measure and the desired unit. Click a starting point and double-click an ending point. If no floodplains are within a reasonable distance based on topography, then conclude the review.

28

Determining FFRMS for Non-Critical Actions

1. Locate the project in FEMA's Map Service Center or National Flood Hazard Layer.
2. Check for nearby floodplains
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4. **Compare site to 500-year floodplain, or 500-year elevation in Flood Insurance Study**
5. If no 500-year data, find the BFE and add two feet. Compare project site to new elevation.

If the site includes the FFRMS floodplain, the 8-step or 5-step decision making process is required. New construction and substantial improvement require elevation or floodproofing to the FFRMS elevation.

Review might conclude at any point starting with Step 2.

29

Determining FFRMS for Critical Actions

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Review might conclude at Step 2, or will proceed through Step 6.

30

3. The SFHA is in the FFRMS.

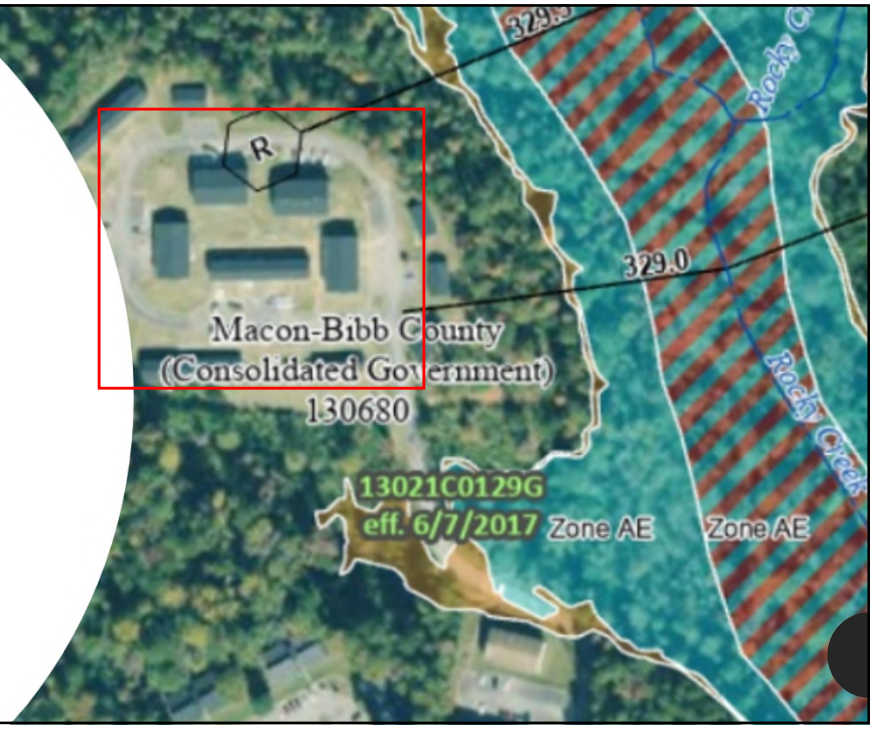
The FFRMS elevation is determined using the 500-year flood elevation if available in the Flood Insurance Study, or the Freeboard Value Approach otherwise.

31

4. Compare 500-year floodplain or elevation: Outside

Non-critical: conclude review

Critical: proceed to Step 5

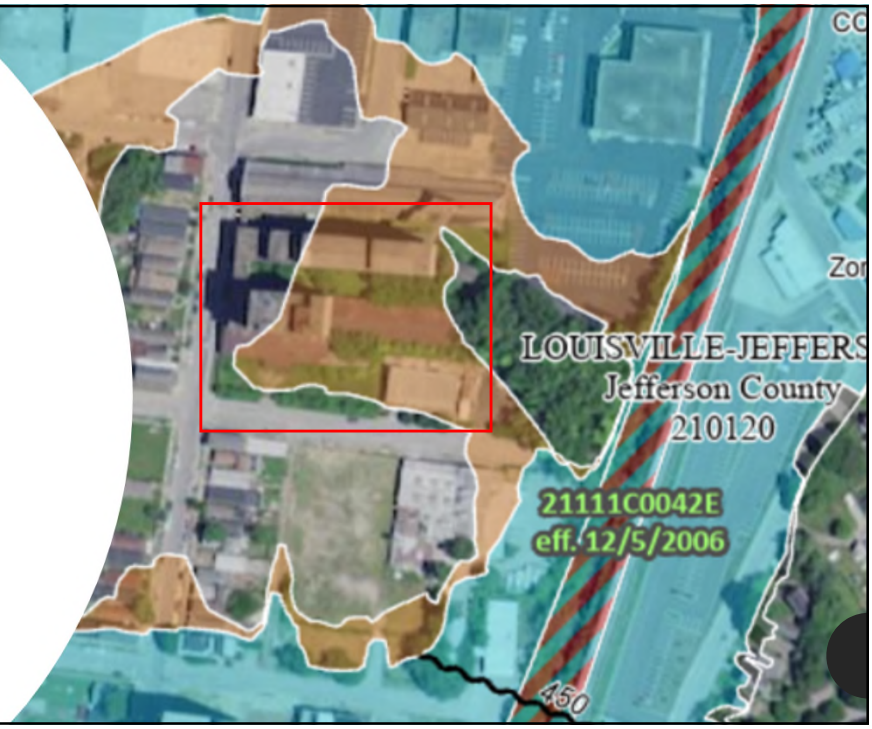


32

4. Compare t 500-year floodplain or elevation: Ins

All projects: 8-step required

Critical actions: continue to Step 5 first

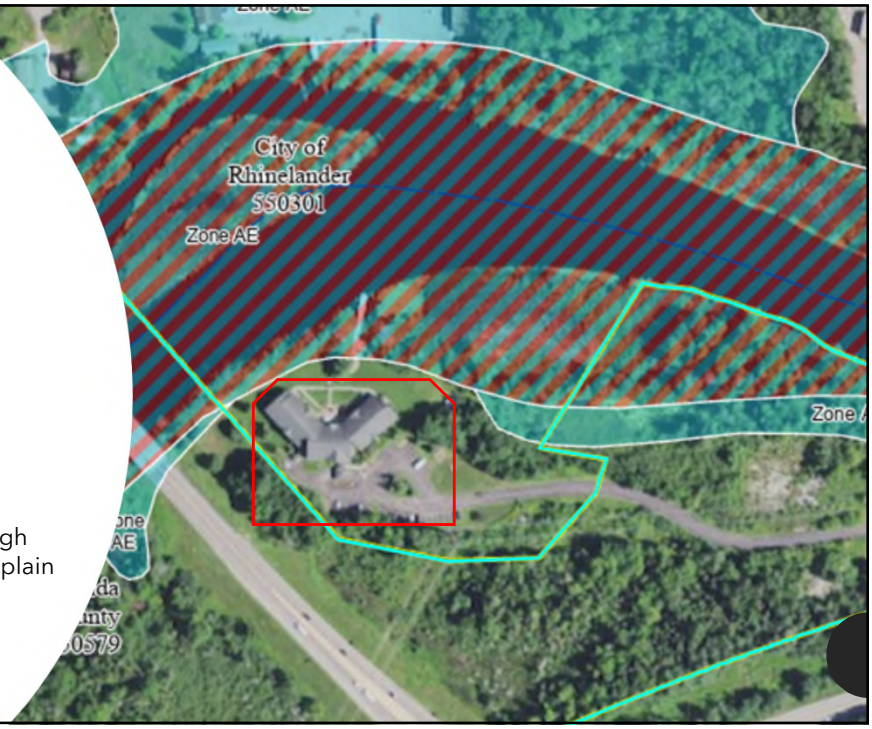


33

4. 500-ye floodplai not visibl

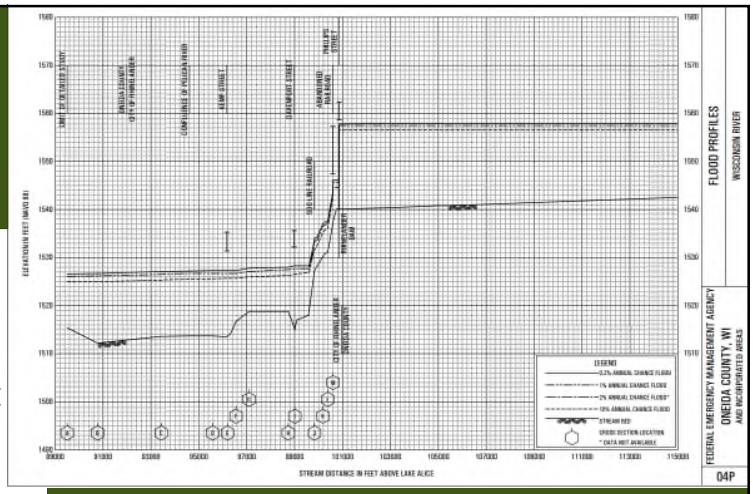
All projects: check for 500-year elevation in FIS

Or, option to skip to FVA, though this will produce a larger floodplain



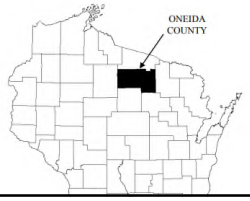
34

Check the FIS- More in Part 2, Nov. 4



ONEIDA COUNTY, WISCONSIN
AND INCORPORATED AREAS

Community Name	Community Number
LAC DU FLAMBEAU BAND OF LAKE SUPERIOR CHIPPEWA INDIANS	550629
ONEIDA COUNTY (UNINCORPORATED AREAS)	550579
RHINELANDER, CITY OF	550301



35

Determining FFRMS for Non-Critical Actions

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If the site includes the FFRMS floodplain, the 8-step or 5-step decision making process is required. New construction and substantial improvement require elevation or floodproofing to the FFRMS elevation.

Review might conclude at any point starting with Step 2.

36

Determining FFRMS for Critical Actions

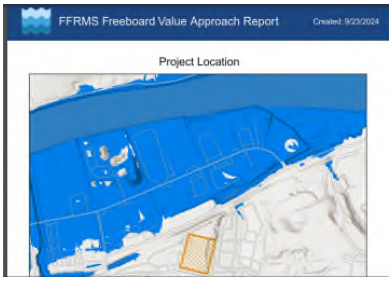
1. Locate the project in FEMA's Map Service Center or National Flood Hazard Layer.
2. Check for nearby floodplains
3. SFHA is still part of the floodplain.
4. *Compare site to 500-year floodplain, or 500-year elevation in Flood Insurance Study*
5. **Find the BFE and add three feet. Compare project site to new elevation.**
6. **The FFRMS floodplain is the larger of Steps 4 or 5**

If the site includes the FFRMS floodplain, the 8-step or 5-step decision making process is required. New construction and substantial improvement require elevation or floodproofing to the FFRMS elevation.

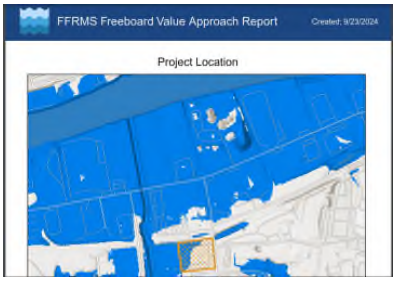
Review might conclude at Step 2, or will proceed through Step 6.

37

Conclusive



Need to Check Survey



5. FVA:

Using the FFSST

- Appropriate for screening
- Do not use FFSST for areas with levees, preliminary FIRMs, or without established BFEs
- Close calls require finding Base Flood Elevation and comparing to survey

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5. FVA:

Locating the Base Flood Elevation*

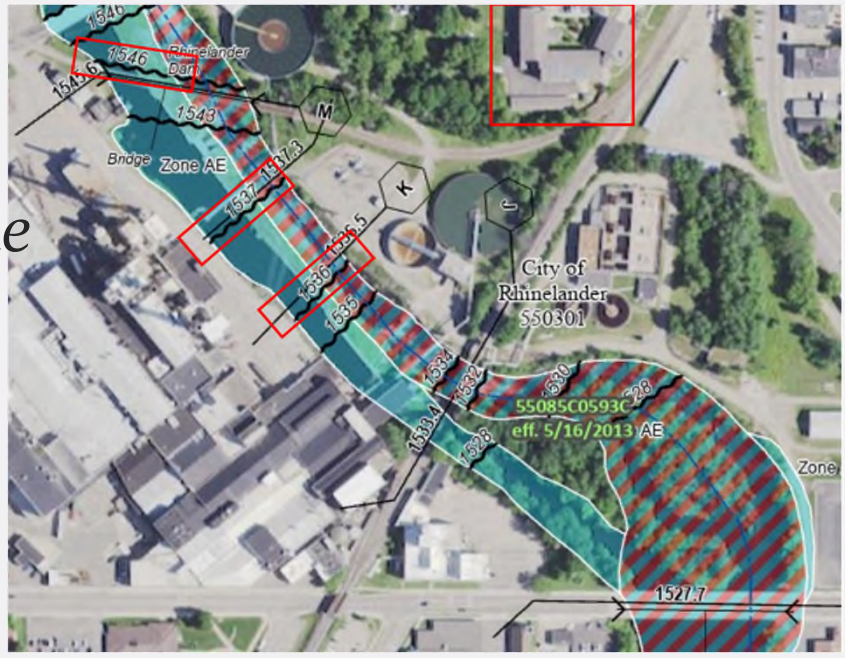
*Elevation above sea level, not above grade

39

5. FVA:

Locating the Base Flood Elevation*

*FIS may provide more precise BFE



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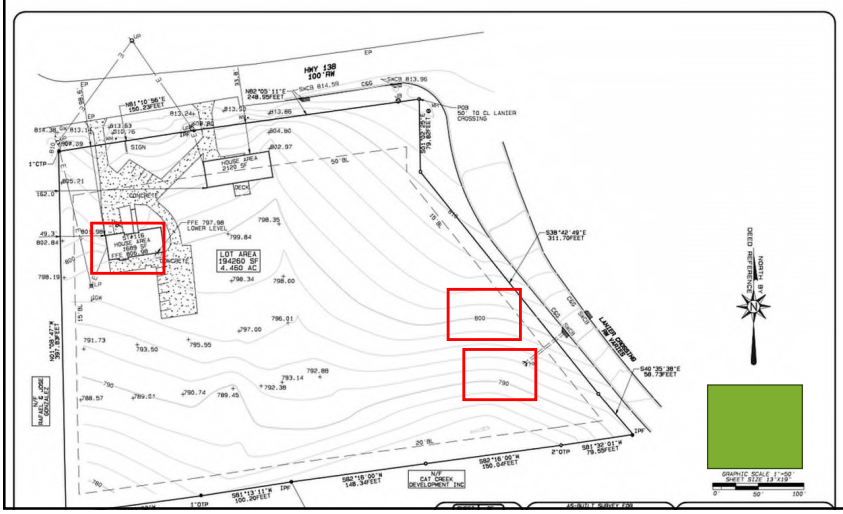
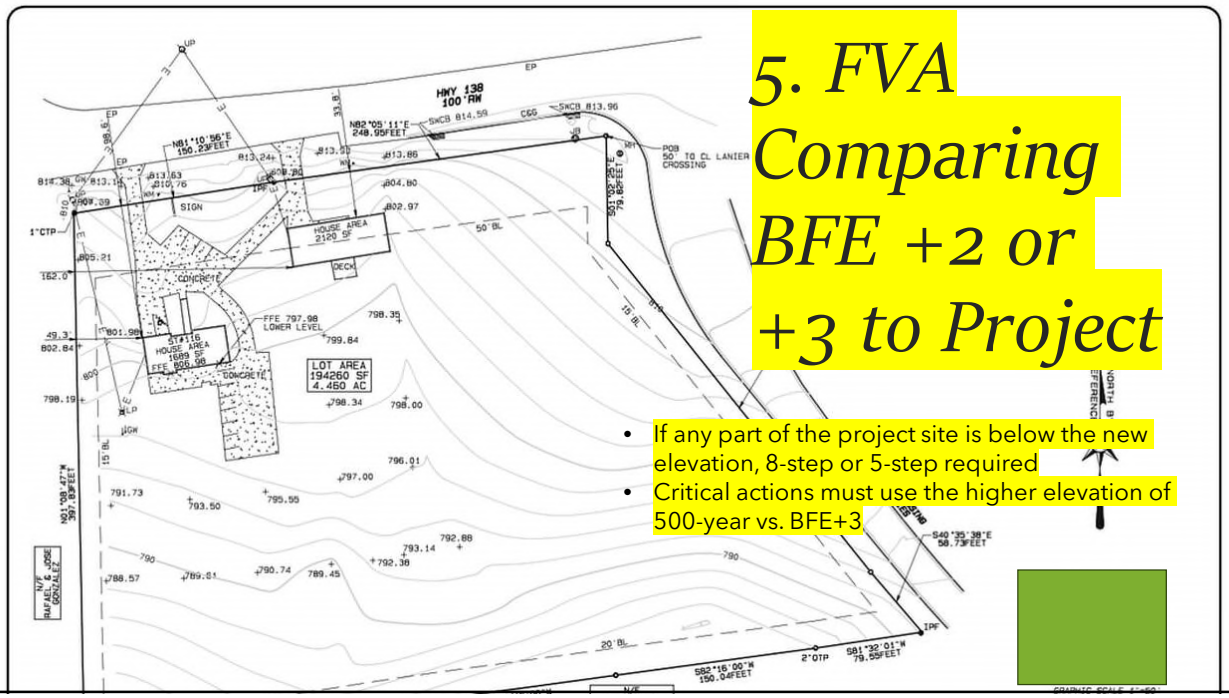
5. FVA: Comparing BFE +2 or +3 to Project



- Best practice is to compare to site elevations using ALTA survey or similar.
- HUD/REs can use topo maps like USGS National Map as evidence in clear cut cases, but close calls will need the survey

41

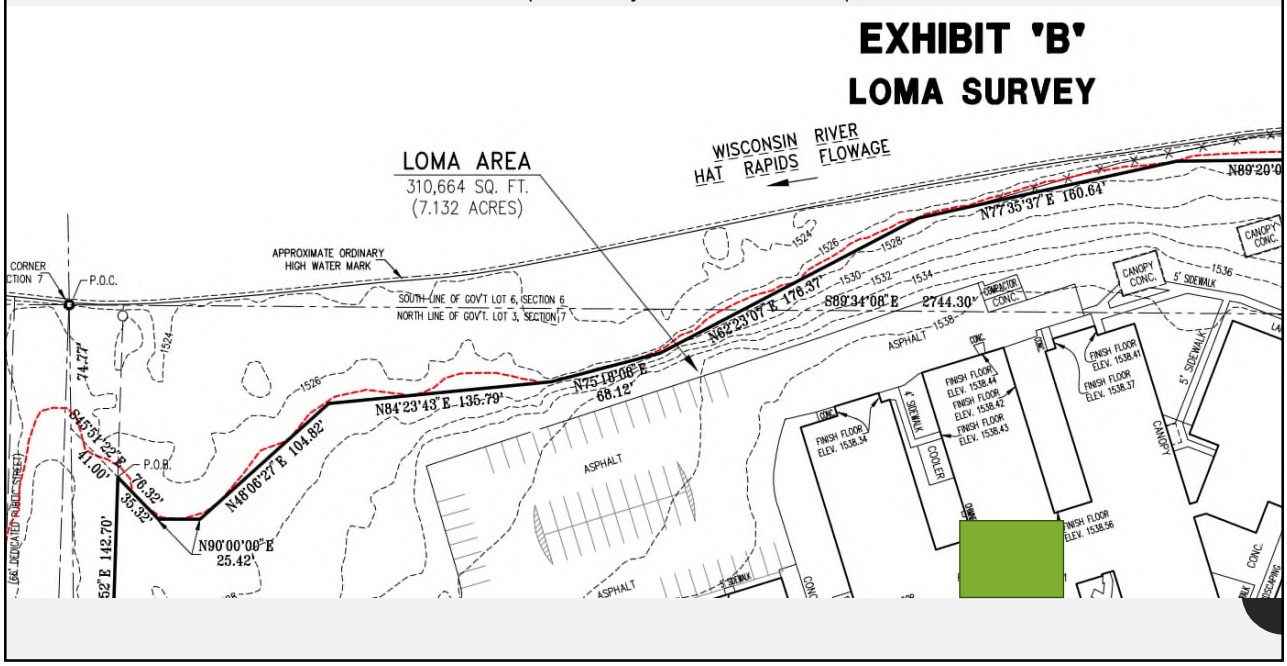


5. FVA Comparing BFE +2 or +3 to Project

- If any part of the project site is below the new elevation, 8-step or 5-step required
- Critical actions must use the higher elevation of 500-year vs. BFE+3

42

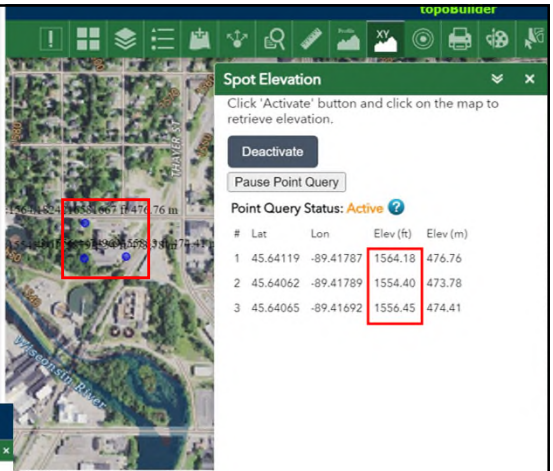
Note that LOMA/LOMR will not avoid 8-step, but may fulfill elevation requirements.

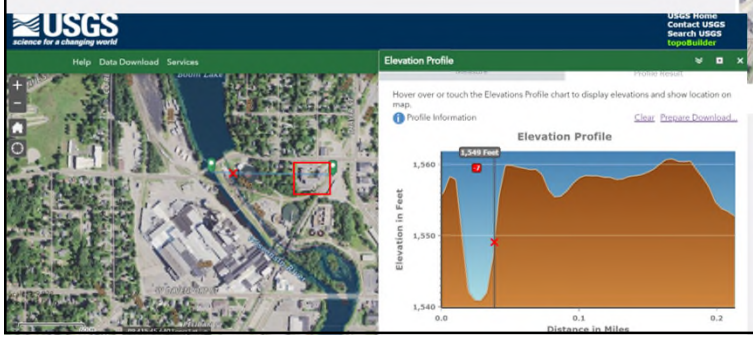


43

5. FVA Comparing BFE +2 or +3 to Project

Using USGS National Map tool





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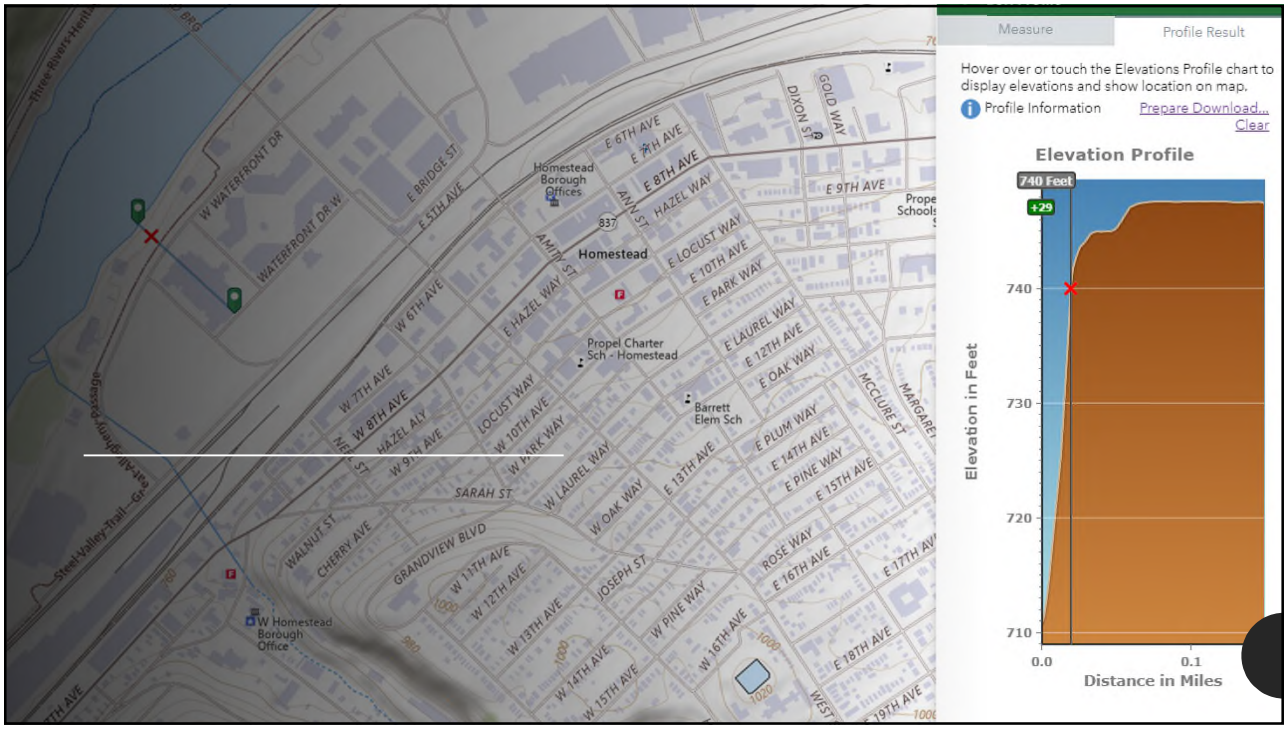

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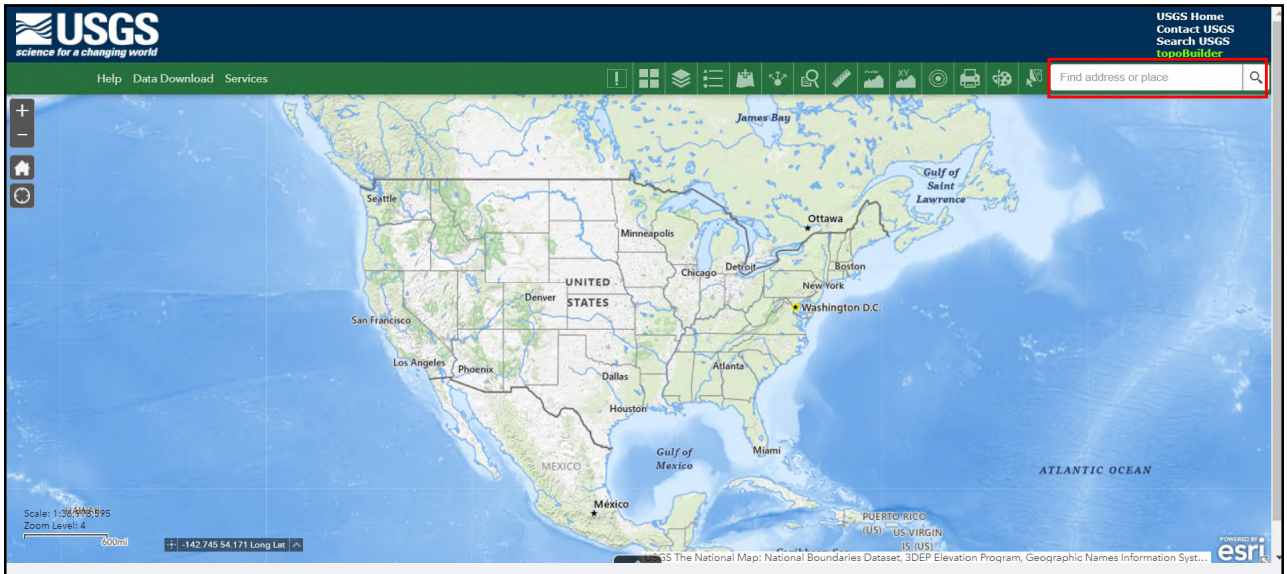
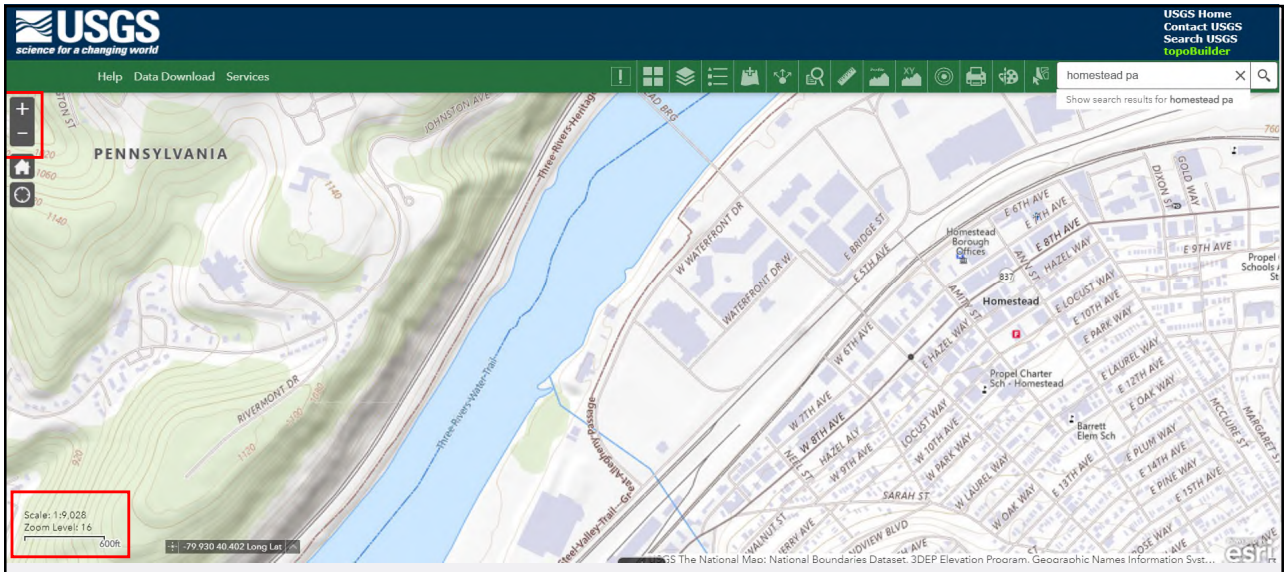


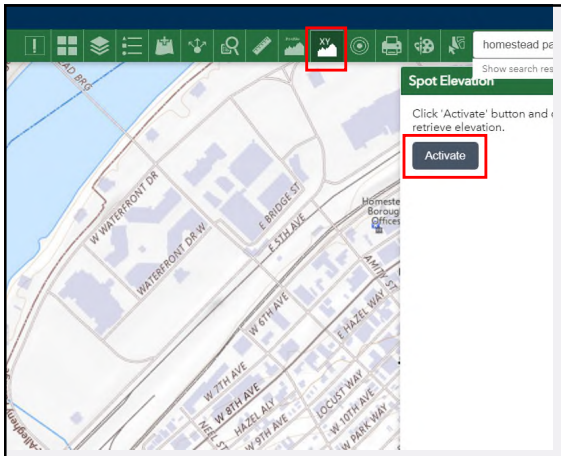
Enter the project address or lat/long in the search bar.

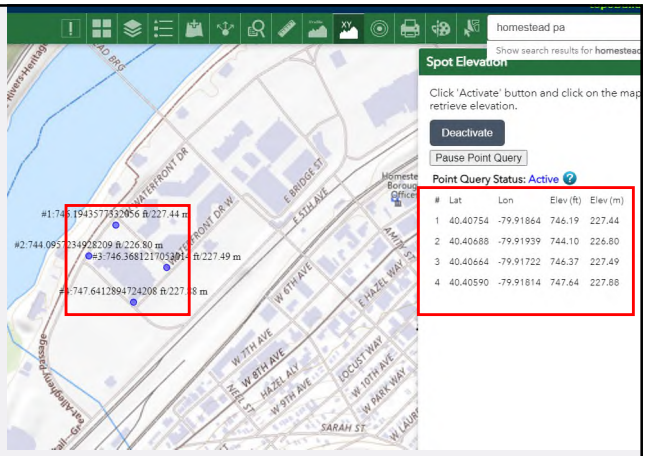
46



Most locations don't work at a closer zoom than Level 16. The default zoom for a specific address search will typically require the user to zoom out before seeing the map.

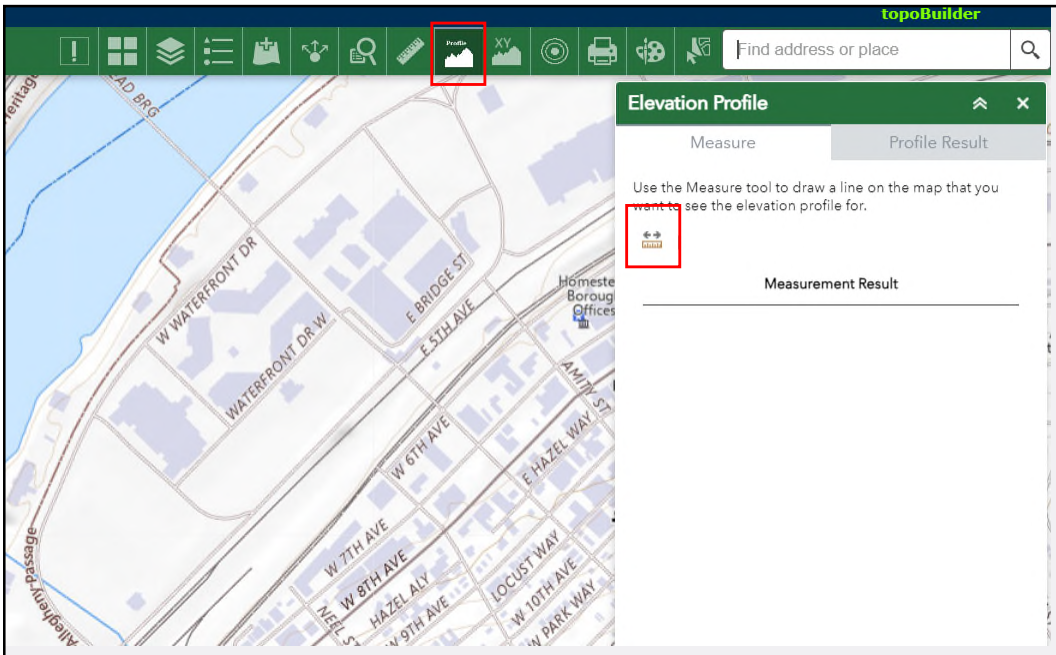
47





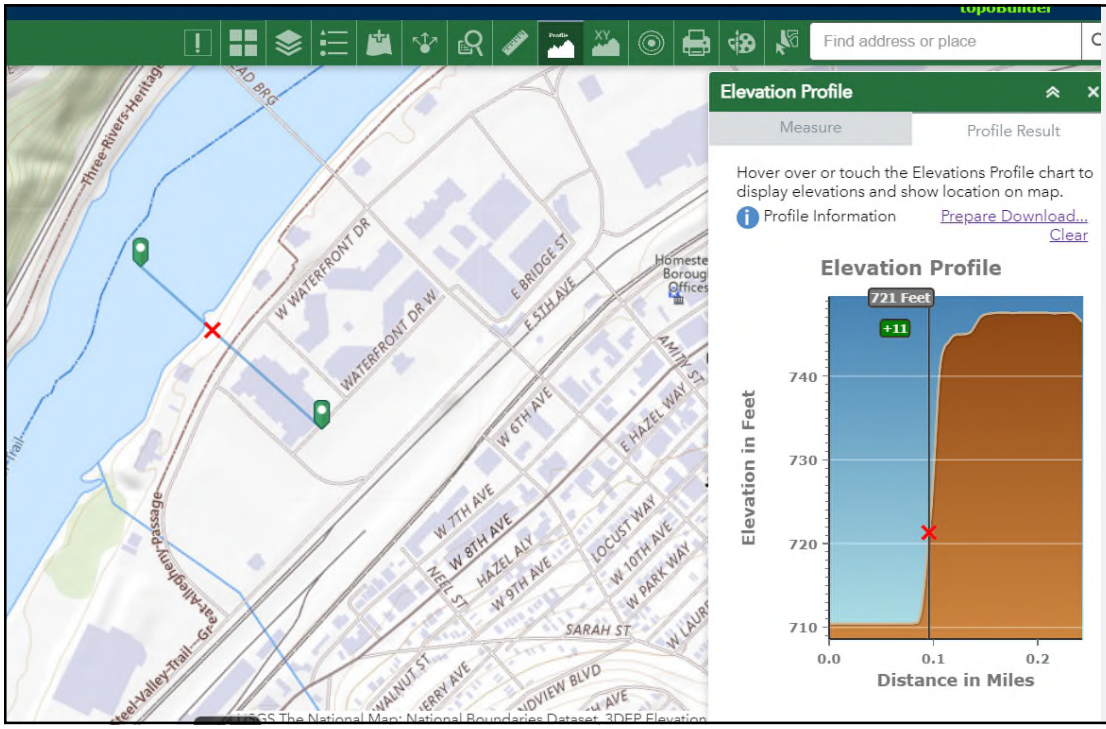
For elevation at specific points, select the Spot Elevation tool and click Activate. Click on the map to get elevations. You may need to adjust screen resolution or browser zoom to see the selection markers.

48



For elevation along a transect, select the Elevation Profile tool and then click the Measure button.

49



Click for the starting point of the profile and double-click for the endpoint. The profile chart is not to scale.

Hover your mouse over the chart to see the red X on the chart and map.

50

Questions

Please put questions in the Q&A box or in the chat

We will address those related to defining the FFRMS floodplain today

We will respond to other questions outside of this webinar.

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Online Tools Covered Today

- FEMA Map Service Center: https://msc.fema.gov/portal/home
- FEMA National Flood Hazard Layer Viewer: https://msc.fema.gov/nfhl
- USGS National Map: https://apps.nationalmap.gov/viewer/
- Federal Flood Standard Support Tool: https://floodstandard.climate.gov/tool

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