Flood Inundation Mapping Survey

Flood Inundation Mapping Survey

Step 1 of 5

20%

INFORMED CONSENT(REQUIRED)

☐ **I consent to participating in this research study and focus group.**

Informed Consent to Participate in Research
Information to consider before taking part in research that has no more than minimal risk.

Title of Research Study: Making FIMs Work for Multiple Users: Understanding the Value and Function of Flood Inundation Mapping to Support Decision Support
Principal and Co-Investigators: Rachel Hogan Carr,

Dr. Kathryn Semmens, Keri Maxfield
Institution/Department or Division: The Nurture Nature Center
Address: 518 Northampton St, Easton, PA 18042
Telephone #: 610-253-4432

Researchers at the Nurture Nature Center (NNC) study the communication, utility, and design of National Weather Service forecast products. Our goal is to understand and improve the information you need to protect yourself when severe weather is possible. To do this, we need the help of volunteers who are willing to take part in research.

Why is this research being done?
The purpose of this research is to help the National Weather Service develop processes and products that meet the needs of those who need to take protective action for an impending severe event. By doing this research, we hope to learn what products you use, how useful you find the various products, what helps you make your decisions, and how the information affects your understanding and decisions.

Why am I being invited to take part in this research?
You are being invited to take part in this research because of the weather risks that exist in your community or field of work. Your responses will help us develop products to better meet your needs. The decision to take part in this research is yours to make.

Who will know that I took part in this research and learn personal information about me?

We will not request any information that could identify you personally. No one will be able to match your consent form to the survey results. Once the research is completed, we will keep the results for three (3) years and then will dispose of everything in a secure manner. Anonymized data will be used to inform research findings which will be shared through a white paper report share with the National Weather Service and on our social science website and in a peer-reviewed academic journal article.

Please confirm you are consenting to participating in this research.
All responses to this information collection are voluntary and anonymous. Send comments regarding this information collection to the Nurture Nature Center at: 518 Northampton Street, Easton, PA 18042, Attn: Rachel Hogan Carr, Executive Director, rhogan@nurturenature.org or Kathryn Semmens, Science Director, ksemmens@nurturenature.org

Email(Required)

Region where you are located(Required)

Arkansas

If you picked Other please describe

What is your current position?(Required)

This survey shows revised Flood Inundation Mapping products originally developed by the National Weather Service. NNC conducted focus groups in 2024 about FIM

products in Texas and Mid-Atlantic areas with residential and professional audiences. The survey and focus group discussion findings from those sessions informed the potential changes to the products shown here. We request your feedback on these proposed revisions in this short survey. We highly value your feedback and greatly appreciate you taking the time to answer these questions. First, briefly describe your current flooding risk/situation (i.e. are you in a flood-prone community, do you make flood-related decisions as part of your job, etc.)(Required)

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Flood Inundation Mapping Survey

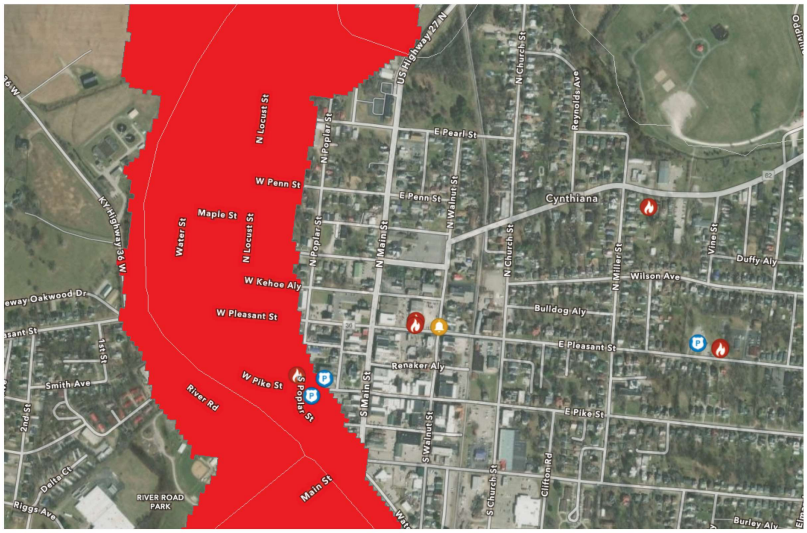
Flood Inundation Mapping Survey

Step 2 of 5

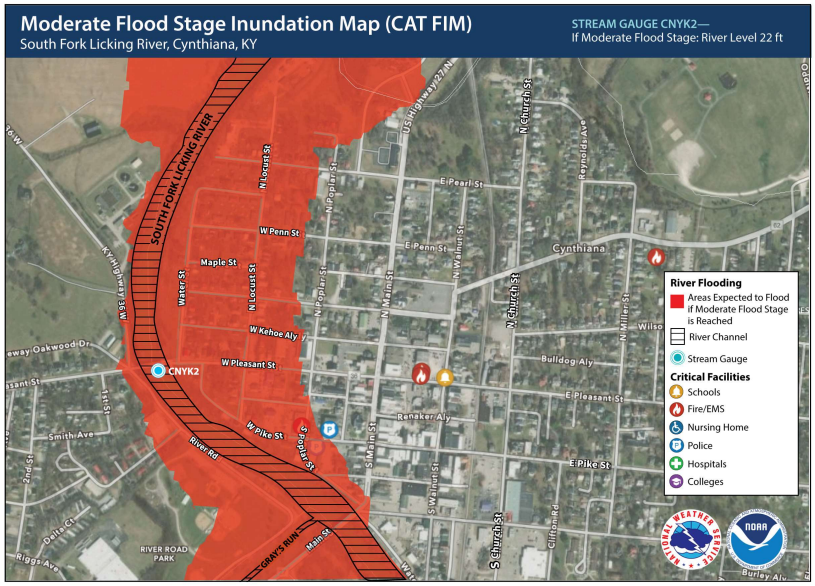
40%

Below we show several variations of the Categorical Flood Inundation Map or CatFIM. These maps are not based on a current or future forecast, but rather show the expected flood extent if the river were to reach official NWS flood stage category thresholds (Action, Minor, Moderate, Major and Record), typically shown on hydrographs. Please review all maps and answer the questions below.

This is the original CatFIM product provided by NWS.

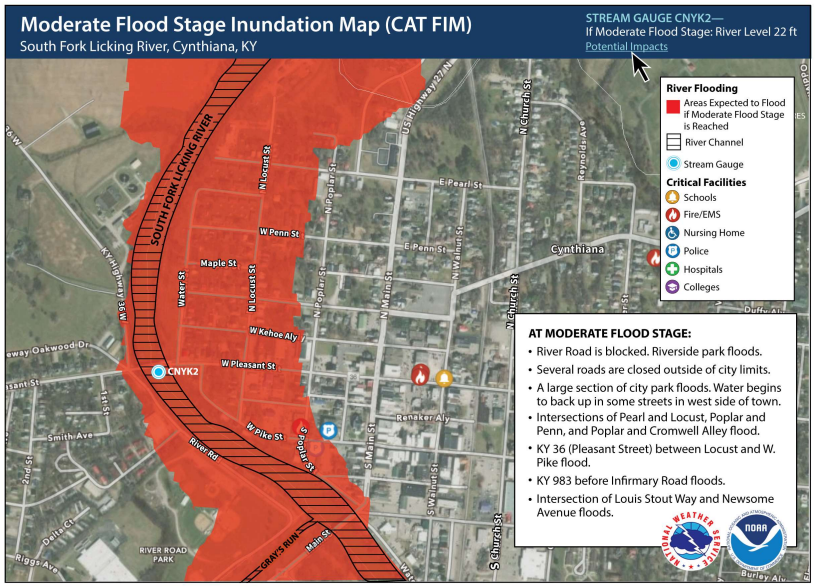


This is a revised map (revised map 1) that has added title, location, stream gauge, moderate flood stage river level at gauge, legend and logos. Moderate flood area is transparent so you can see the roads and facilities underneath. River channel boundaries at bank full are marked and the river is named on the map.

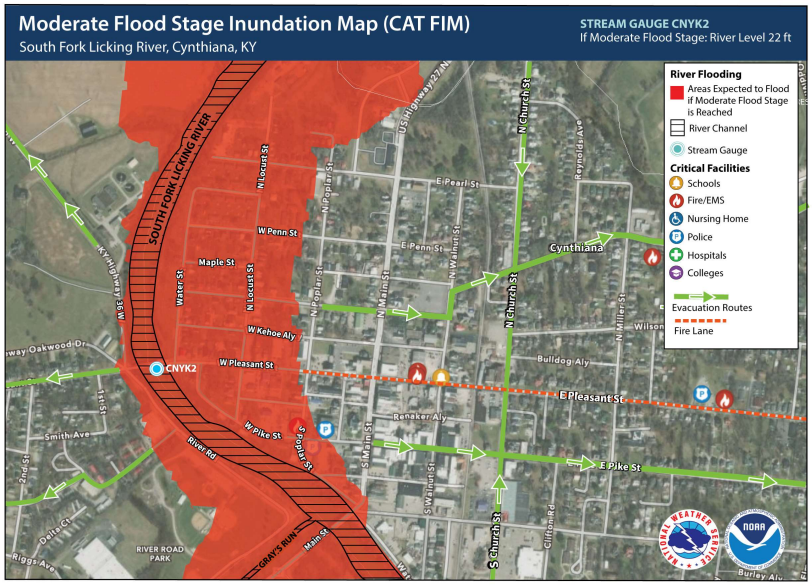


This same revised map (revised map 2) shows a popup box of potential impacts that are localized at that shown flood

stage.

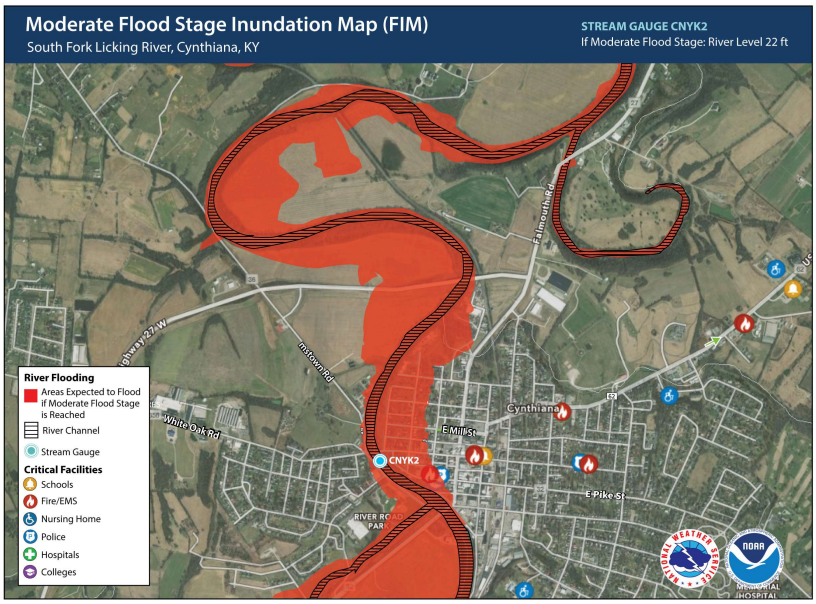


This is a revised map (revised map 3) that shows how it might be combined with other useful information like predetermined evacuation routes and fire lanes.



This is a zoomed out version of the original map.

This is a revised zoomed out map (revised map 4) with added title, location, stream gauge, moderate flood stage river level at gauge, legend and logos. Moderate flood area is transparent so you can see the roads and facilities underneath. River channel boundaries at bank full are marked.



WE HAVE SHOWN YOU SEVERAL POSSIBLE VERSIONS OF HOW CATFIM MAPS COULD WORK. YOU WILL HAVE A CHANCE TO DISCUSS DETAILS OF THE VARIATIONS BELOW. FIRST, PLEASE RATE THE OVERALL USEFULNESS OF FLOOD INUNDATION MAPS THAT CORRELATE TO FLOOD STAGE CATEGORIES (CATFIM PRODUCT) TO YOUR DECISION-MAKING.(REQUIRED)

- ○ **Extremely useful**
- ○ **Somewhat useful**
- ○ **Slightly useful**
- ○ **Neither useful nor unuseful**
- ○ **Not at all useful**

CatFIM show flood extent aligned with official flood stage NWS categories. Does the term CatFIM work for this purpose or is there some other term that would work better?(Required)

Which elements of these maps (including use of color, labels and other features) do you find helpful? Please provide specifics if possible and which map you are referring to.(Required)

Which elements of these maps (including use of color, labels and other features) do you find confusing? Please provide specifics if possible and which map you are referring to.(Required)

How would you use this information? (e.g. use it for my own information, share within organization, share with partners, trigger certain actions, etc.)(Required)

Is there anything missing or something you would change to improve the CatFIM?(Required)

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Flood Inundation Mapping Survey

Flood Inundation Mapping Survey

Step 3 of 5

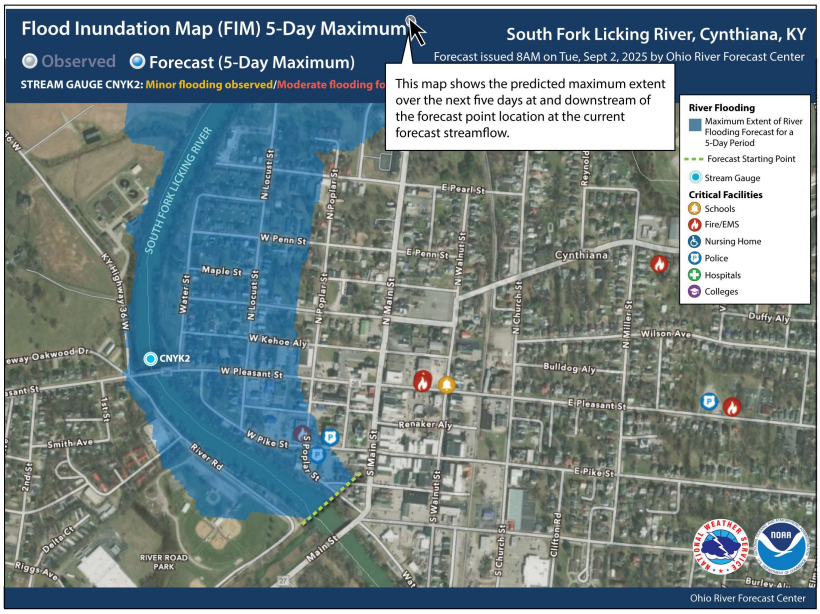
60%

Below we show several variations of the River Forecast Center FIM Map or RFC FIM. These maps show the predicted maximum extent downstream of the forecast point location at the current forecast streamflow. Please review all maps and answer the questions below.

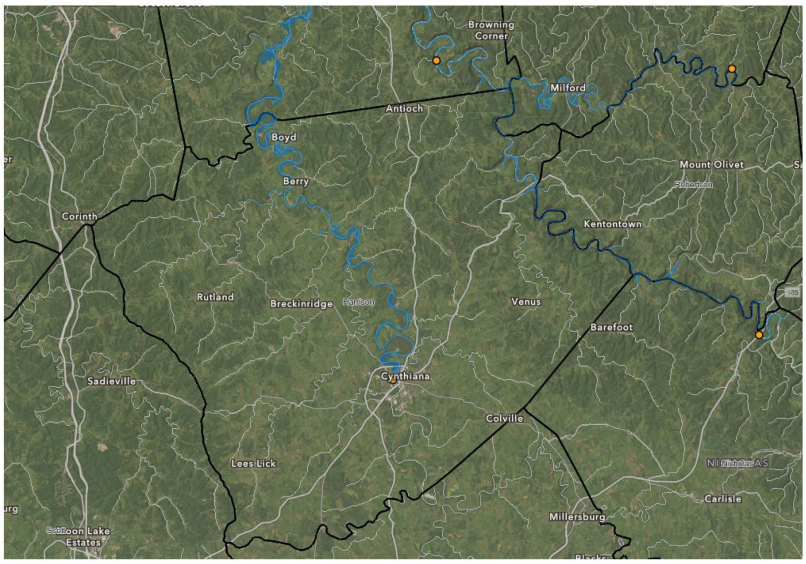
This is the original RFC FIM product provided by NWS.

This is a revised map (revised map 1) with added title and location, stream gauge, legend, logos, and river forecast center named on bottom. The forecast starting point is marked by a dashed green line. There is a button for Observed or Forecast and forecast issue date, along with a link to the hydrograph on the right.

This is the same revised map (revised map 2) showing the hover popup for more information.

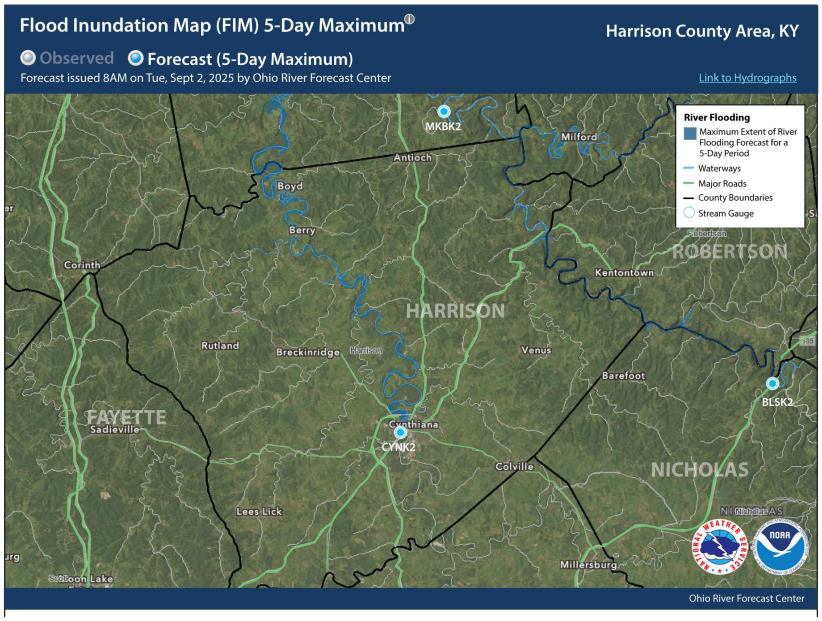


This is the original map zoomed out 2x.

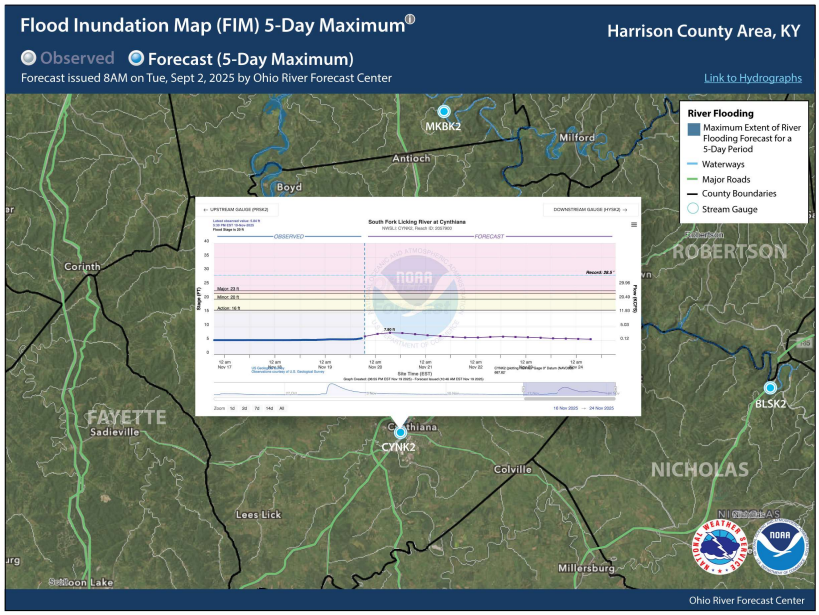


This is the revised map (revised map 3) zoomed out 2x with added title, general area name, major roads in green,

and marked stream gauges.



This is the same revised map (revised map 4) zoomed out 2x showing a hydrograph popup when hovering over individual gauges.



WE HAVE SHOWN YOU SEVERAL VERSIONS OF THE RFC FIM. YOU WILL HAVE A CHANCE TO DISCUSS DETAILS OF THE VARIATIONS BELOW. FIRST, PLEASE RATE THE OVERALL USEFULNESS OF THE RFC FIM TO YOUR DECISION-MAKING.(REQUIRED)

- ○ **Extremely useful**
- ○ **Somewhat useful**

- ○ Slightly useful
- ○ Neither useful nor unuseful
- ○ Not at all useful

Which elements of these maps (including use of color, labels and other features) do you find helpful? Please provide specifics if possible and which map you are referring to.(Required)

Which elements of these maps (including use of color, labels and other features) do you find confusing? Please provide specifics if possible and which map you are referring to.(Required)

How would you use this information? (e.g. use it for my own information, share within organization, share with

partners, trigger certain actions, etc.)(Required)

Is there anything missing or something you would change to improve the RFC FIM?(Required)

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Flood Inundation Mapping Survey

Flood Inundation Mapping Survey

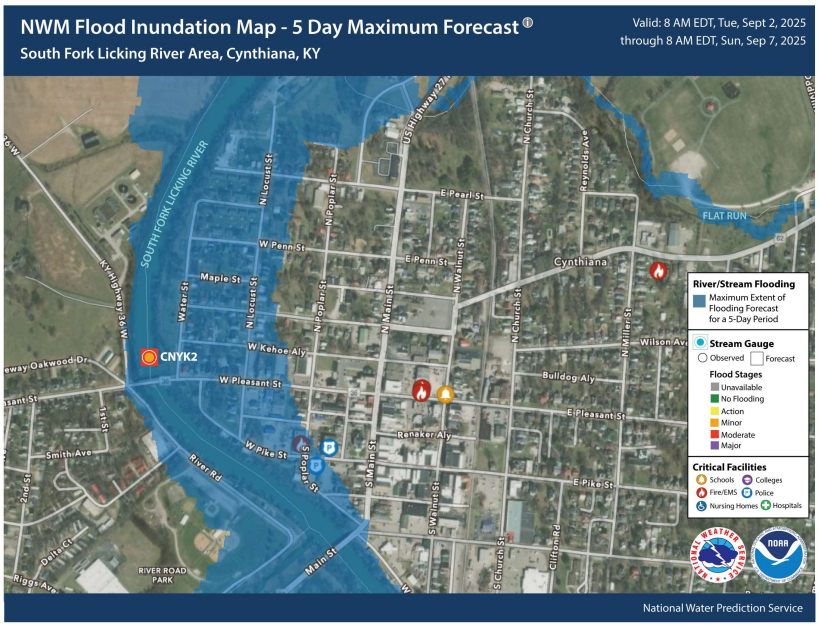
Step 4 of 5

80%

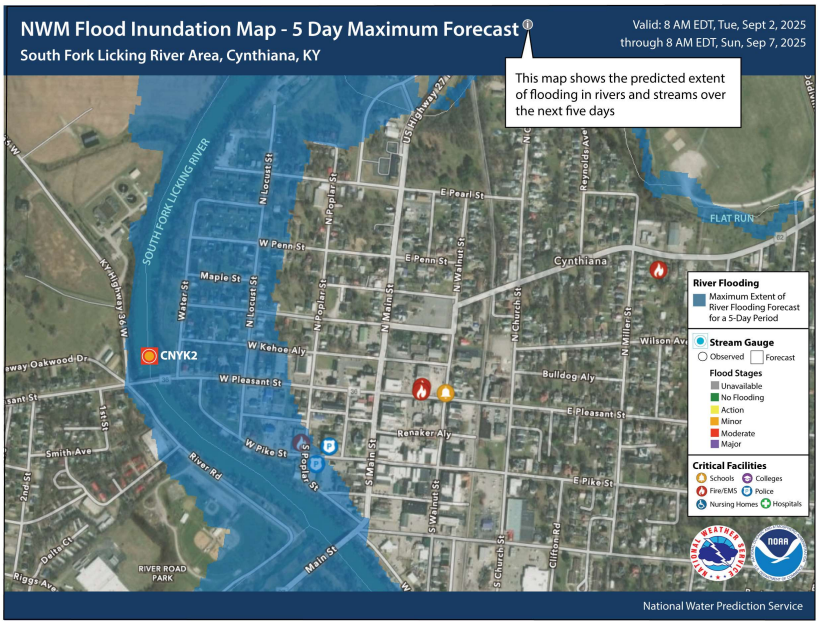
Below we show several variations of the National Water Model FIM map or NWM FIM. These maps are based on 5-day weather forecast for rivers and streams *not* covered by an RFC FIM and are only generated where the forecast indicates flows will exceed the high water threshold.
Please review all maps and answer the questions below.

This is the original NWM FIM map provided by NWS.

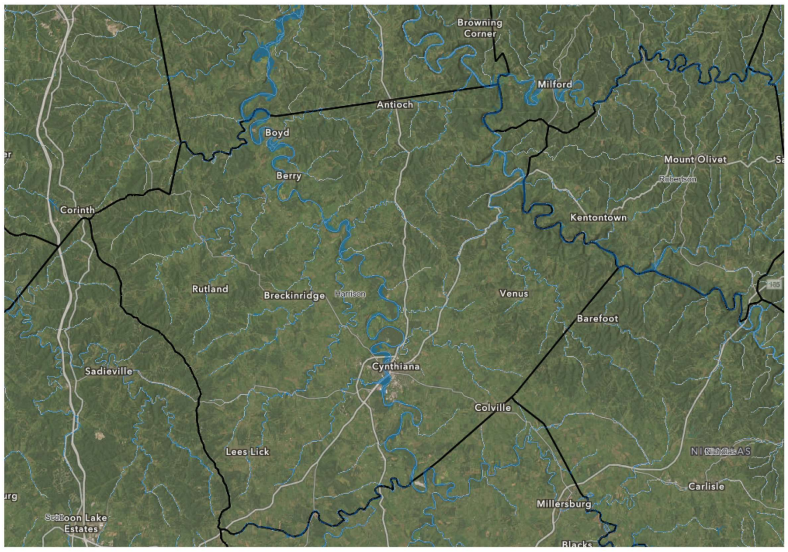
This is a revised map (revised map 1) with added title, legend and valid-through dates. Stream gauge is included in the title. Legend says “River and stream flooding” and river and tributaries are named.



This is the same revised map (revised map 2) showing the information popup.

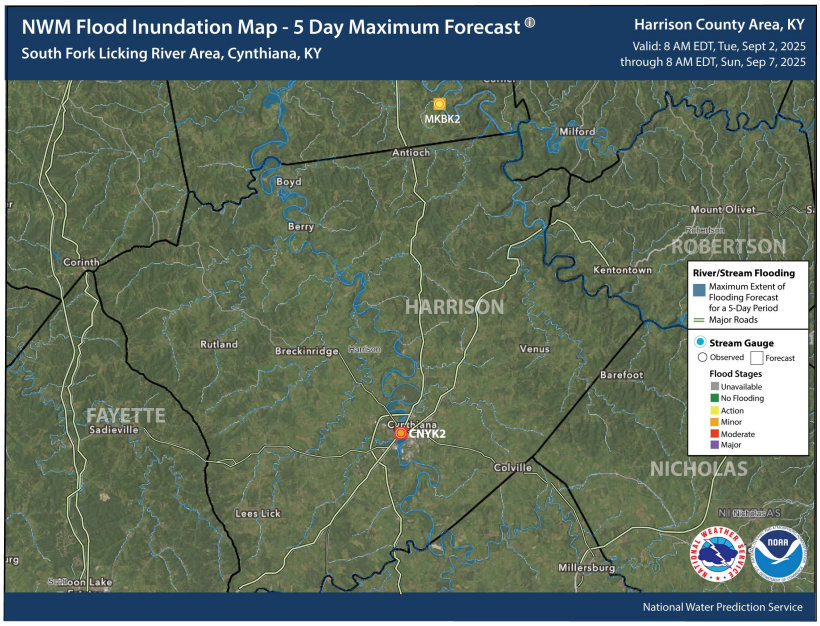


This is the original version of the map zoomed out 2x.



This is the revised map (revised map 3) zoomed out 2x showing more tributaries and streams, gauges, and major

roads highlighted.



WE HAVE SHOWN YOU SEVERAL VERSIONS OF THE NWM FIM. YOU WILL HAVE A CHANCE TO DISCUSS DETAILS OF THE VARIATIONS BELOW. FIRST, PLEASE RATE THE OVERALL USEFULNESS OF THE NWM FIM TO YOUR DECISION-MAKING.(REQUIRED)

- ○ Extremely useful
- ○ Somewhat useful
- ○ Slightly useful
- ○ Neither useful nor unuseful
- ○ Not at all useful

Which elements of these maps (including use of color, labels and other features) do you find helpful? Please provide specifics if possible and which map you are referring to.(Required)

Which elements of these maps (including use of color, labels and other features) do you find confusing? Please provide specifics if possible and which map you are referring to.(Required)

How would you use this information? (e.g. use it for my own information, share within organization, share with partners, trigger certain actions, etc.)(Required)

Is there anything missing or something you would change to improve the NWM FIM?(Required)

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Step 5 of 5

100%

HOW WOULD YOU PREFER TO RECEIVE FIM PRODUCTS?

- [ ] Interactive map
- [ ] Static images
- [ ] Both
- [ ] Other (please explain)

Please explain your response to preference for receiving FIM products.(Required)

Is there anything else you would like to share regarding the usefulness of FIM products to your decision-making? (Required)

What other information would be helpful to your decision-making related to flooding impacts?(Required)

Thank you for completing this survey!

Previous Submit

Nurture Nature Center
518 Northampton Street
Easton, PA 18042
Phone: (610) 253-4432
Fax: (610) 253-1486
www.nurturenaturecenter.org

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