The New Floodplain Interactive Map and Nebraska Real-time Flood Forecasting (NeRFF)

Elijah Kaufman, CFM
NeDNR Floodplain Management
State NFIP Coordinator

Erin Wendt, CFM
NeDNR Floodplain Management
Outreach Coordinator

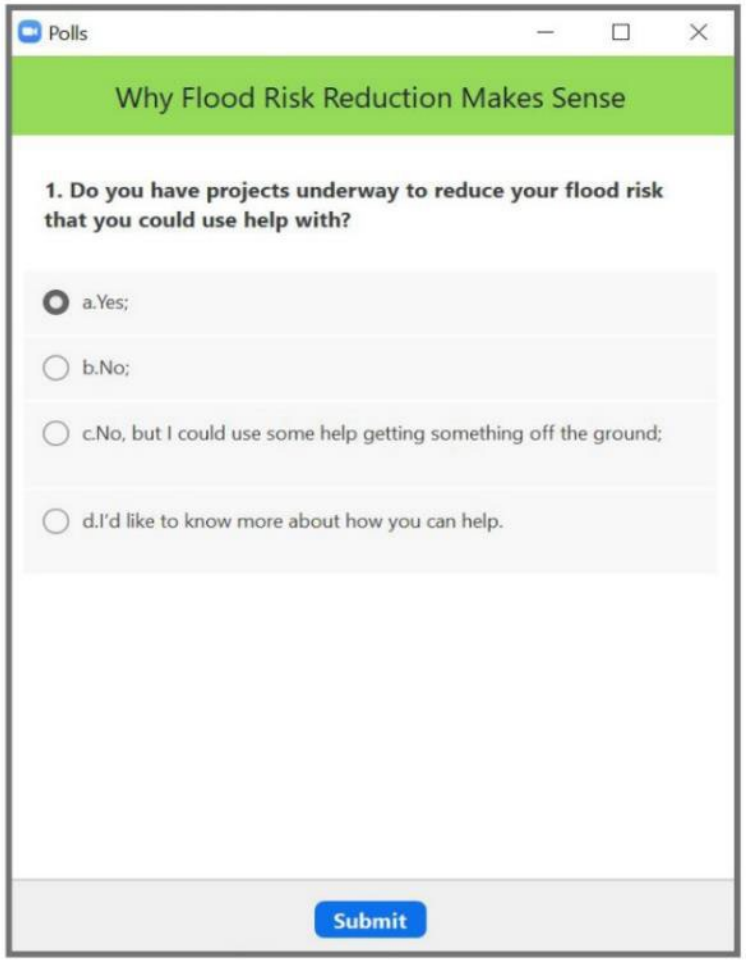
NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT

Rules of the Road

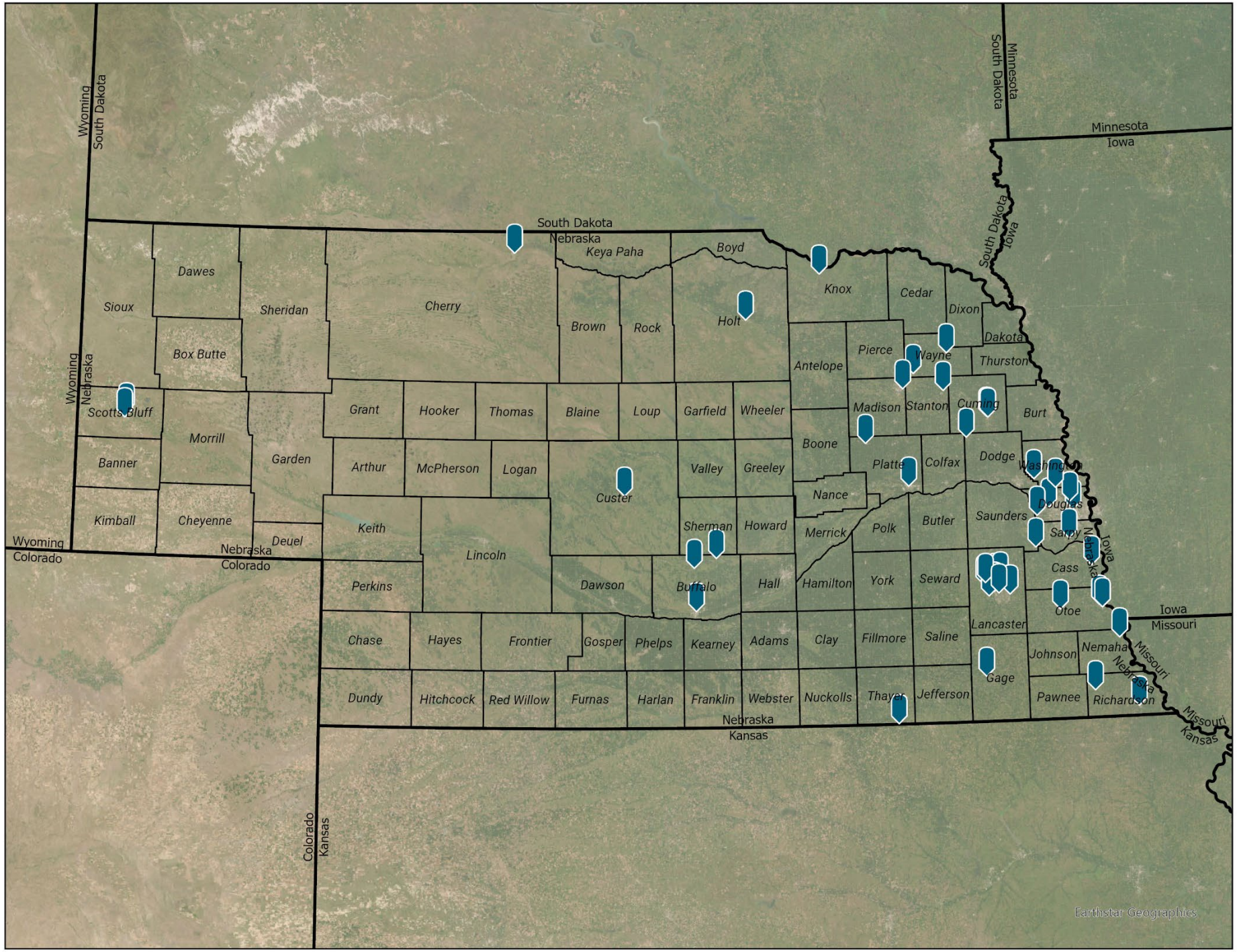
- Attendees will be muted during the presentation
- Use the chat to ask questions during the presentation; we will pause for questions at various points
- If you want to share your video, please do
- For technical difficulties, send a private chat to Michele York or email michele.york@nebraska.gov
- We will be recording this class for those unable to attend today

Poll Questions

- Total of 3 poll questions. Your answers are anonymous
- If you are a Certified Floodplain Manager (CFM) or a Nebraska Municipality Treasurer requesting Continuing Education Credit (CEC) today, you must answer **all** poll questions. We will report only full participation
- Only the person registered and logged into Zoom will receive credit. If multiple people are viewing the presentation together, you will each need to log into Zoom using your unique link and answer the poll questions separately to receive credit



Thank you for joining us!



The New Floodplain Interactive Map and Nebraska Real-time Flood Forecasting (NeRFF)

Elijah Kaufman, CFM
NeDNR Floodplain Management
State NFIP Coordinator

Erin Wendt, CFM
NeDNR Floodplain Management
Outreach Coordinator

NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT

Agenda

01 The New Interactive Map

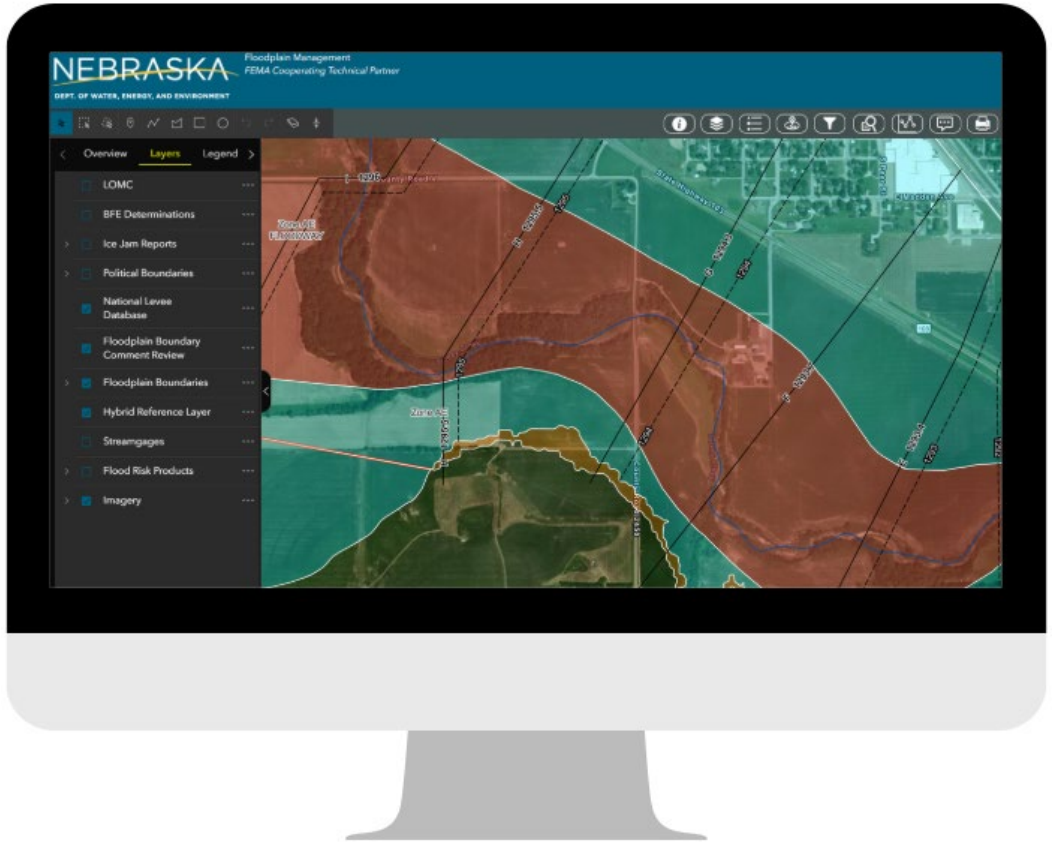
02 Managing Layers

03 Available Tools

04 Introducing NeRFF

05 Using NeRFF

06 Future Plans for NeRFF

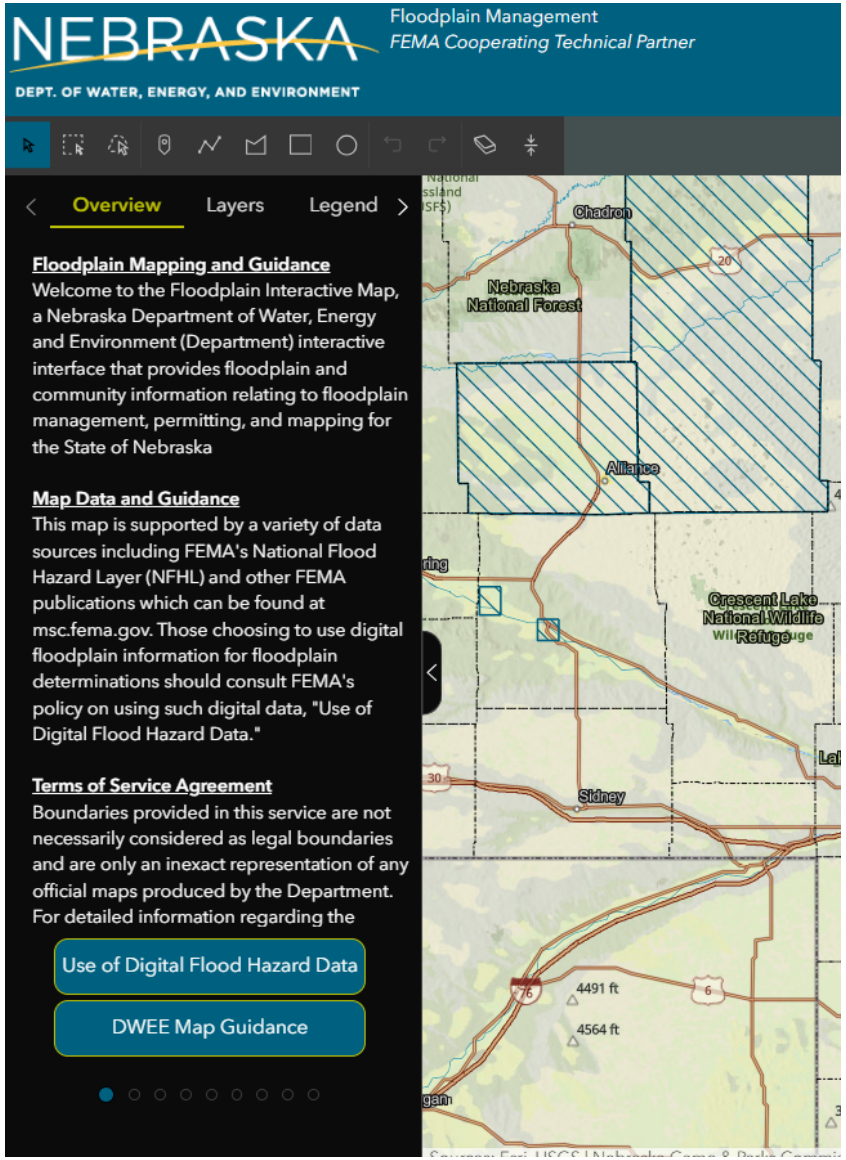


The New Interactive Map

- Now available on our interactive map webpage: https://dnr.nebraska.gov/floodplain/interactive-maps
- Combines faster load times with better functionality
  - Layers are maintained and stored in-house
  - More consistent connectivity

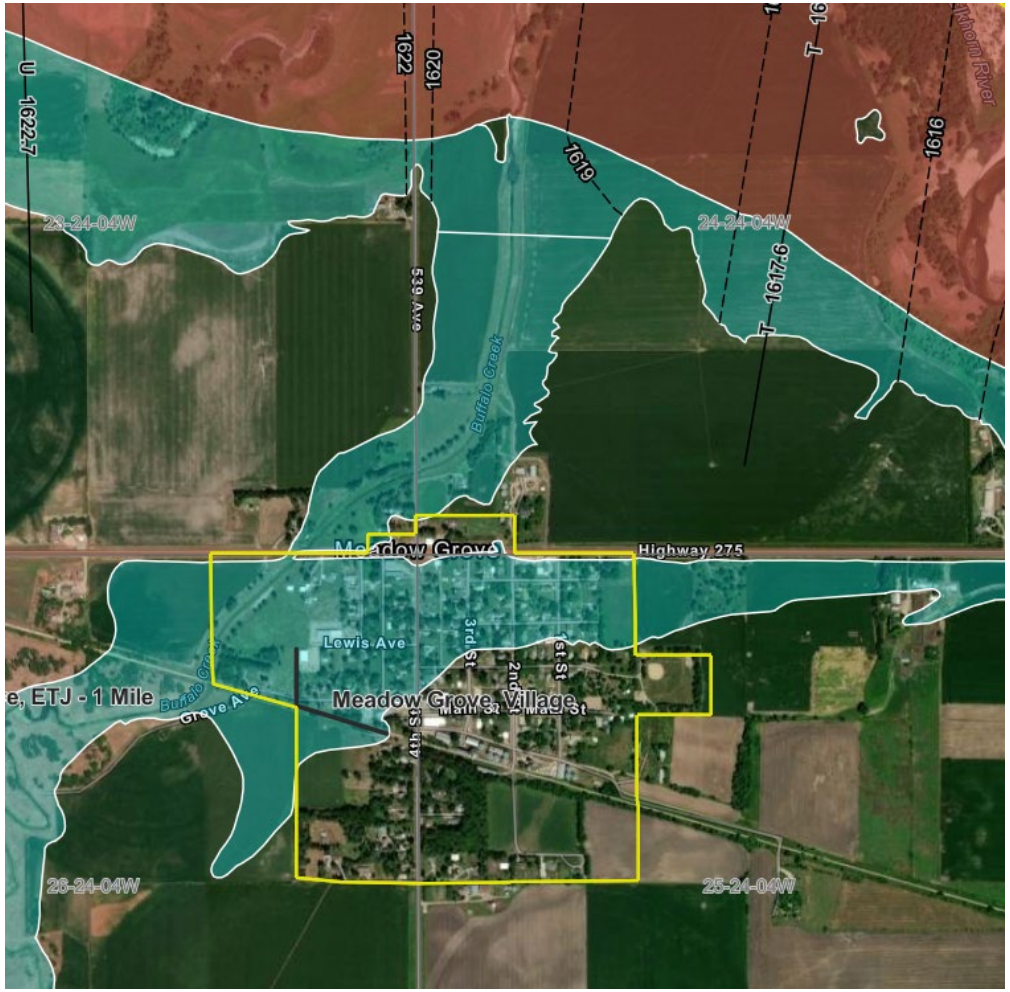
The New Interactive Map

- What changed?
  - Splash page with disclaimers no longer appears when opening the map
  - Layers, legend, and map guidance on the left, rather than the right
  - Tool bar is at the top left, rather than the top right
  - When using the search bar, you need to select from the drop down in order to zoom to the location

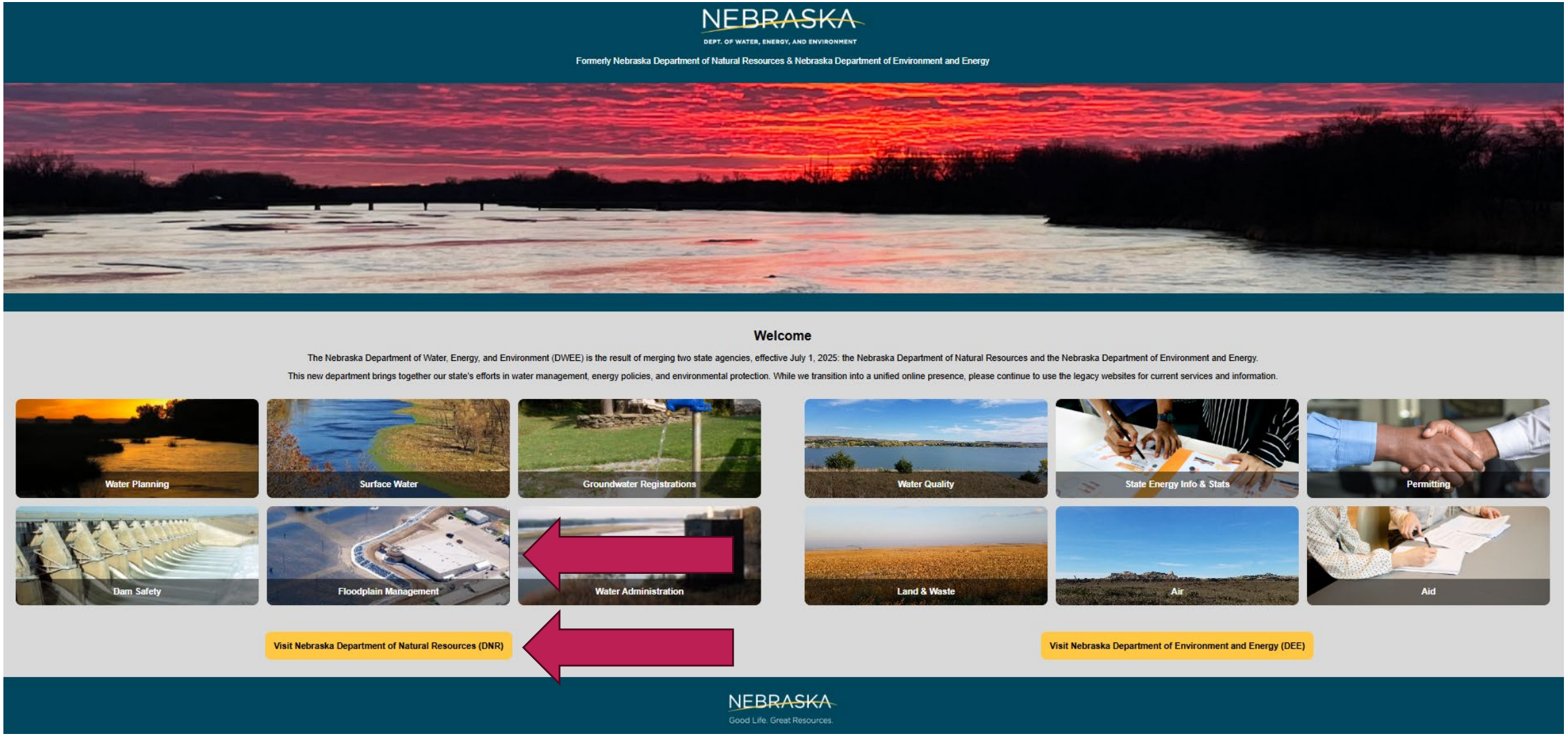


The New Interactive Map

- What hasn't changed?
  - Floodplain layers and symbology
  - BFE request process
  - LOMC layer
  - Drawing and print functions

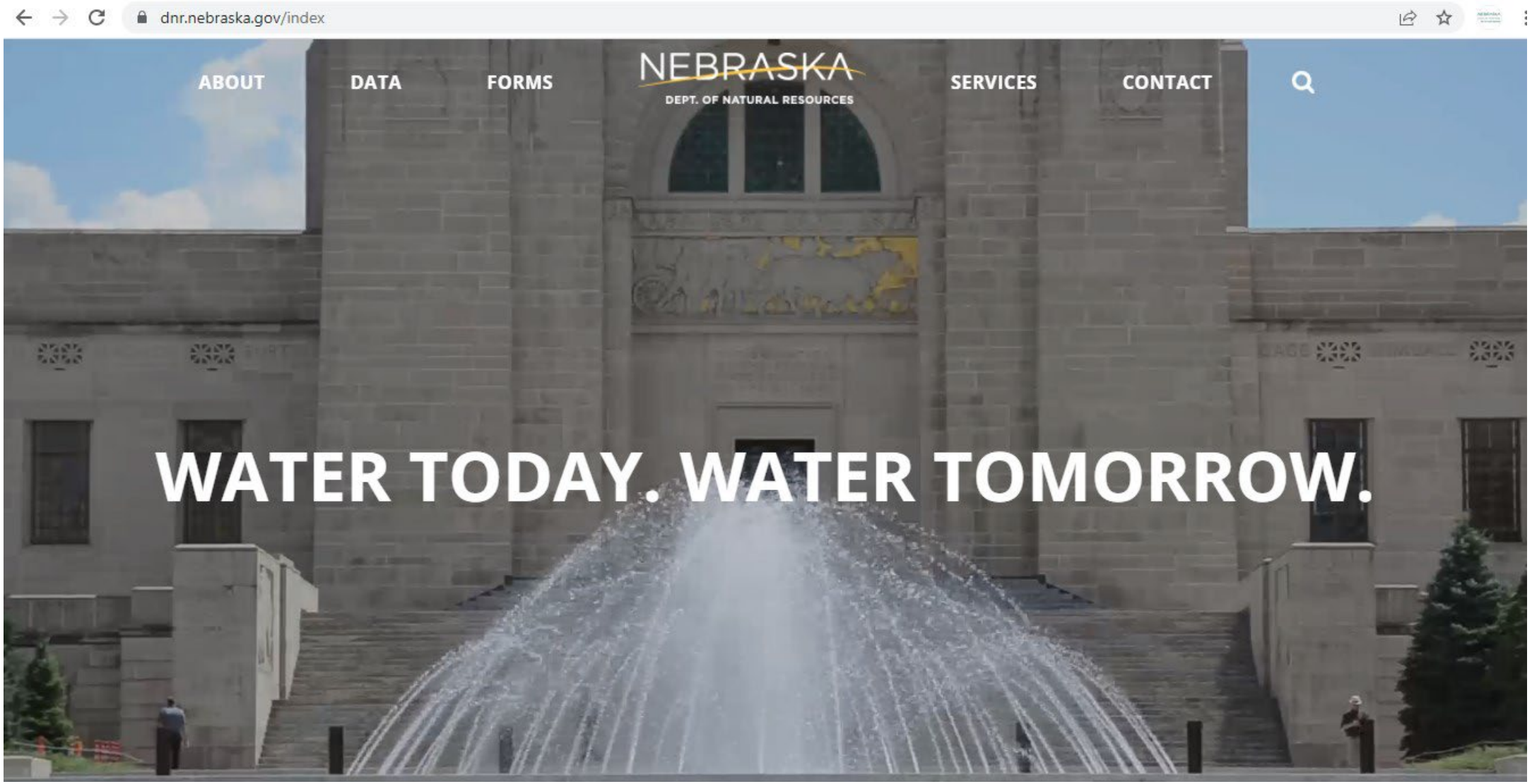


Navigating the DWEE Website



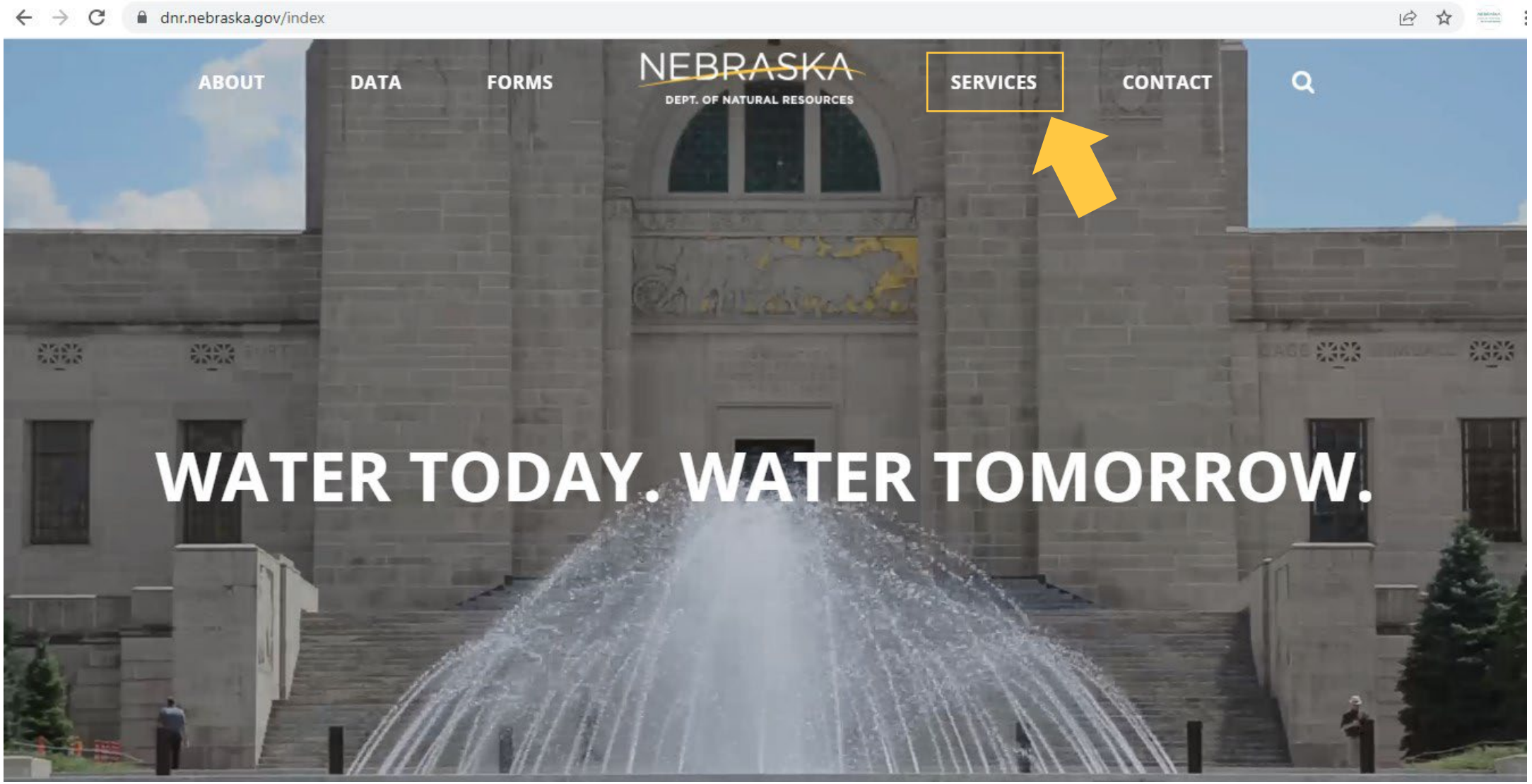
https://dwee.nebraska.gov/

Navigating the Website

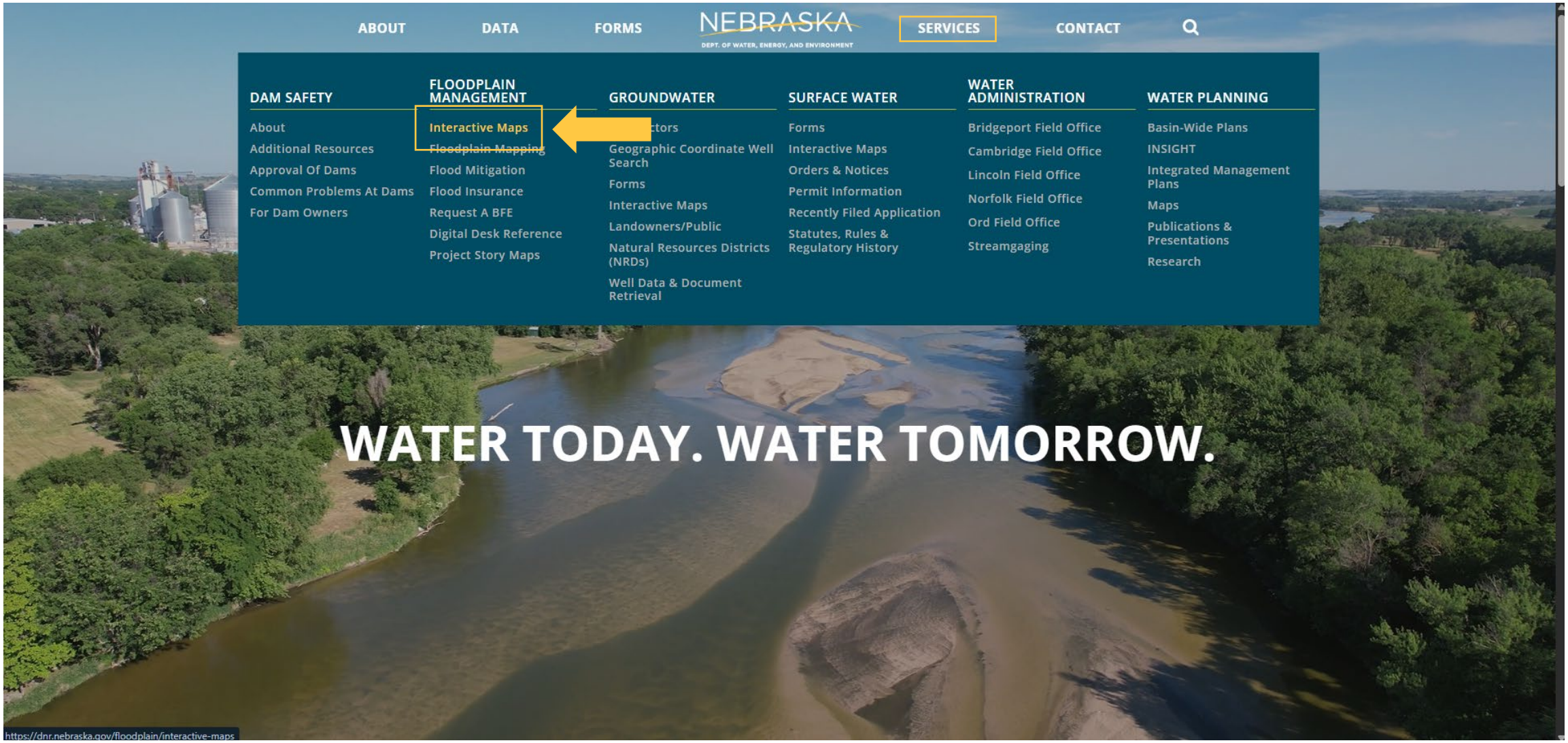


https://dnr.nebraska.gov/

Navigating the Website



Navigating the NeDNR Website



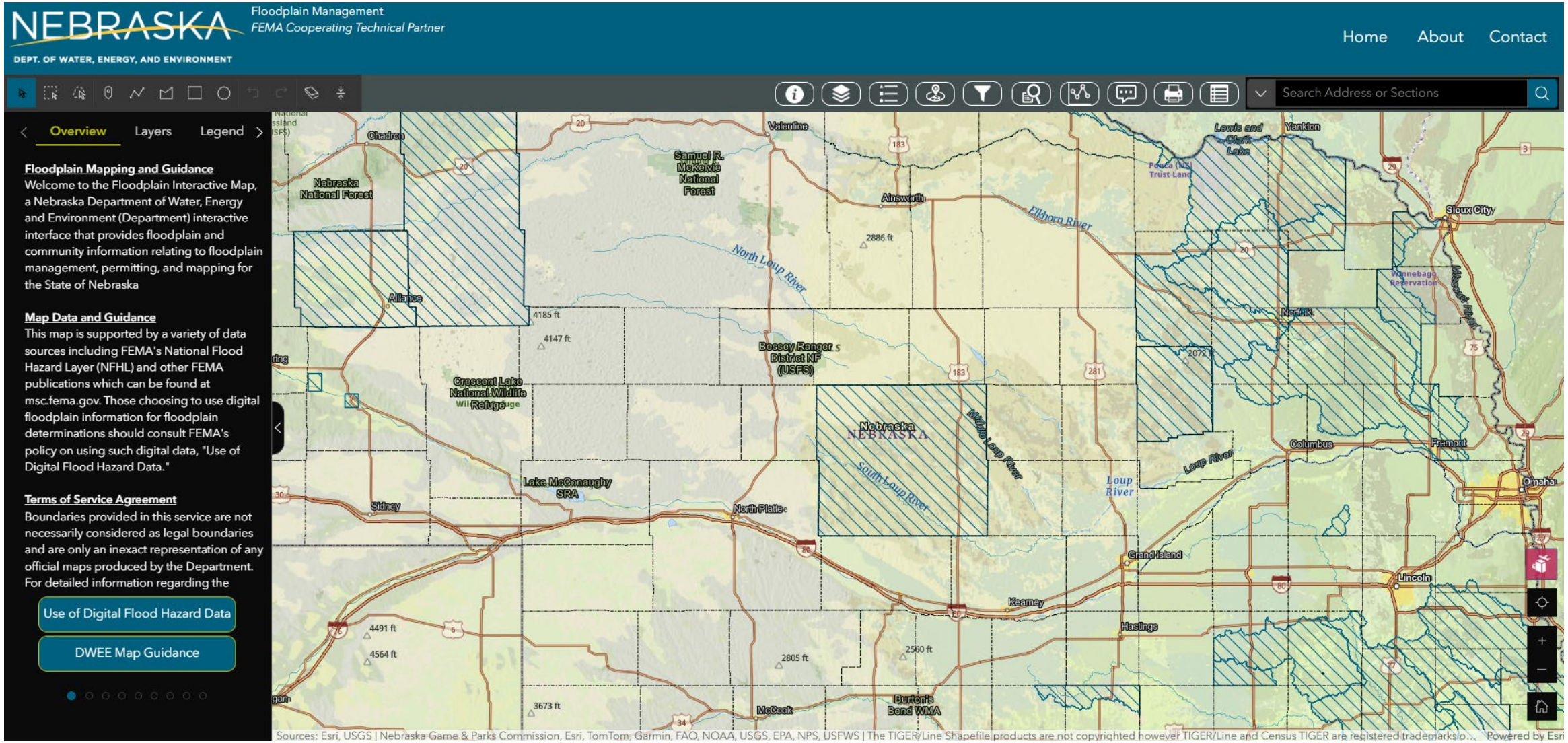
Navigating the Website

Floodplain Interactive Map

Use this map to view FEMA's digital flood hazard data and community information relating to floodplain management.

NEW Floodplain Interactive Map

A new interactive map is available for testing and will launch in mid-May. Use this map in place of our existing interactive map to get ready for the change.


NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT
Floodplain Management
FEMA Cooperating Technical Partner
Home
About
Contact
Search Address or Sections
Overview
Layers
Legend
Floodplain Mapping and Guidance
Welcome to the Floodplain Interactive Map, a Nebraska Department of Water, Energy and Environment (Department) interactive interface that provides floodplain and community information relating to floodplain management, permitting, and mapping for the State of Nebraska
Map Data and Guidance
This map is supported by a variety of data sources including FEMA's National Flood Hazard Layer (NFHL) and other FEMA publications which can be found at msc.fema.gov. Those choosing to use digital floodplain information for floodplain determinations should consult FEMA's policy on using such digital data, "Use of Digital Flood Hazard Data."
Terms of Service Agreement
Boundaries provided in this service are not necessarily considered as legal boundaries and are only an inexact representation of any official maps produced by the Department. For detailed information regarding the
Use of Digital Flood Hazard Data
DWEE Map Guidance
Chadron
Nebraska National Forest
Valentine
Samuel R. McKelvie National Forest
Ainsworth
Elkhorn River
North Loup River
2886 ft
Alliance
4185 ft
4147 ft
Bessey Ranger District NF (USFS)
Crescent Lake National Wildlife Refuge
Nebraska
NEBRASKA
Middle Loup River
South Loup River
Loup River
Lake McConaughy SRA
Sidney
North Platte
Grand Island
Kearney
Hastings
Lincoln
Columbus
Fremont
Omaha
Sioux City
Yankton
Lewis and Clark Lake
Norfolk
Winnebago Reservation
Missouri River
4491 ft
4564 ft
2805 ft
2560 ft
3673 ft
McCook
Burton's Bend WMA
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS | The TIGER/Line Shapefile products are not copyrighted however TIGER/Line and Census TIGER are registered trademarks o...
Powered by Esri

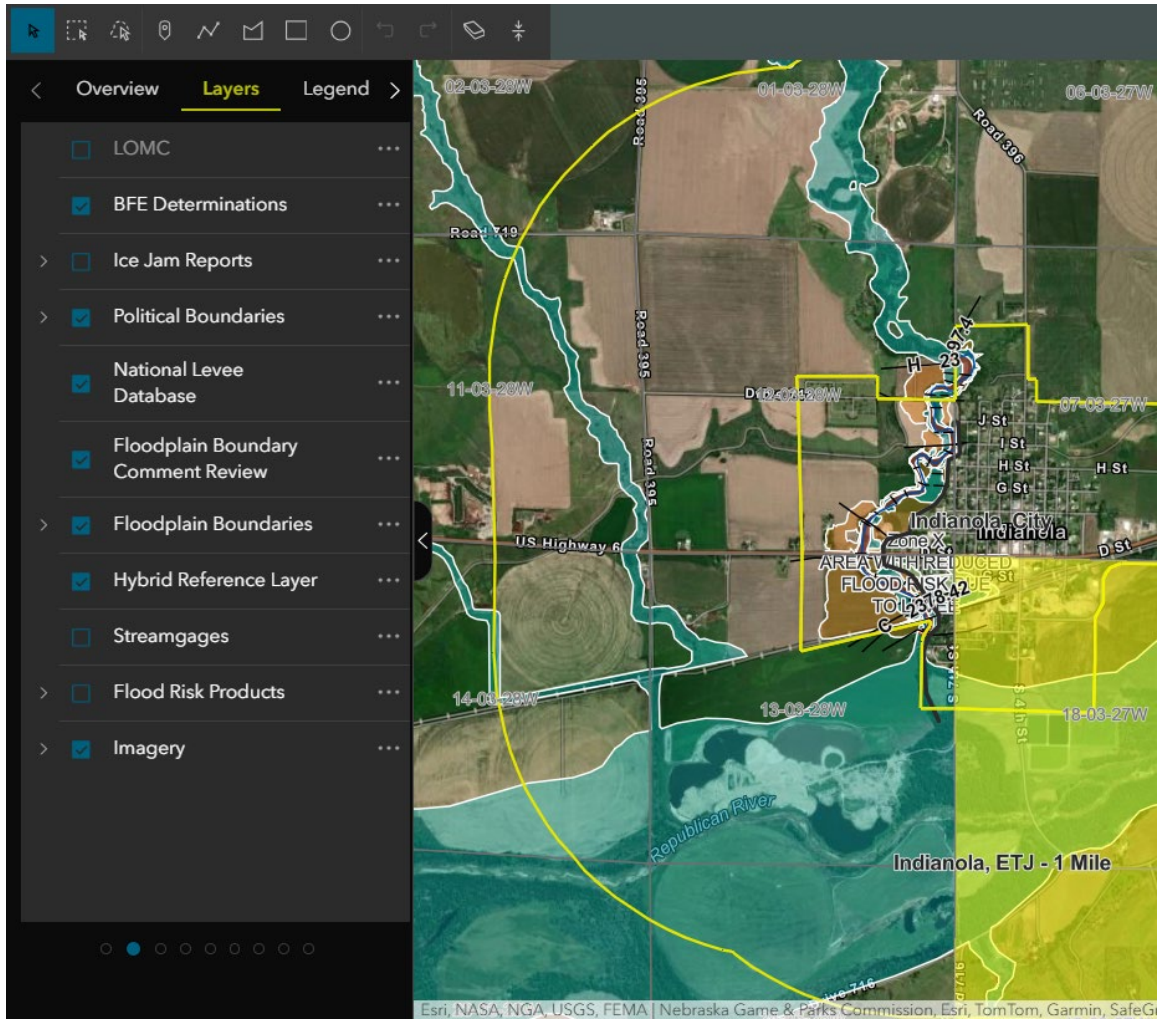
Managing Layers

NEBRASKA

DEPT. OF WATER, ENERGY, AND ENVIRONMENT

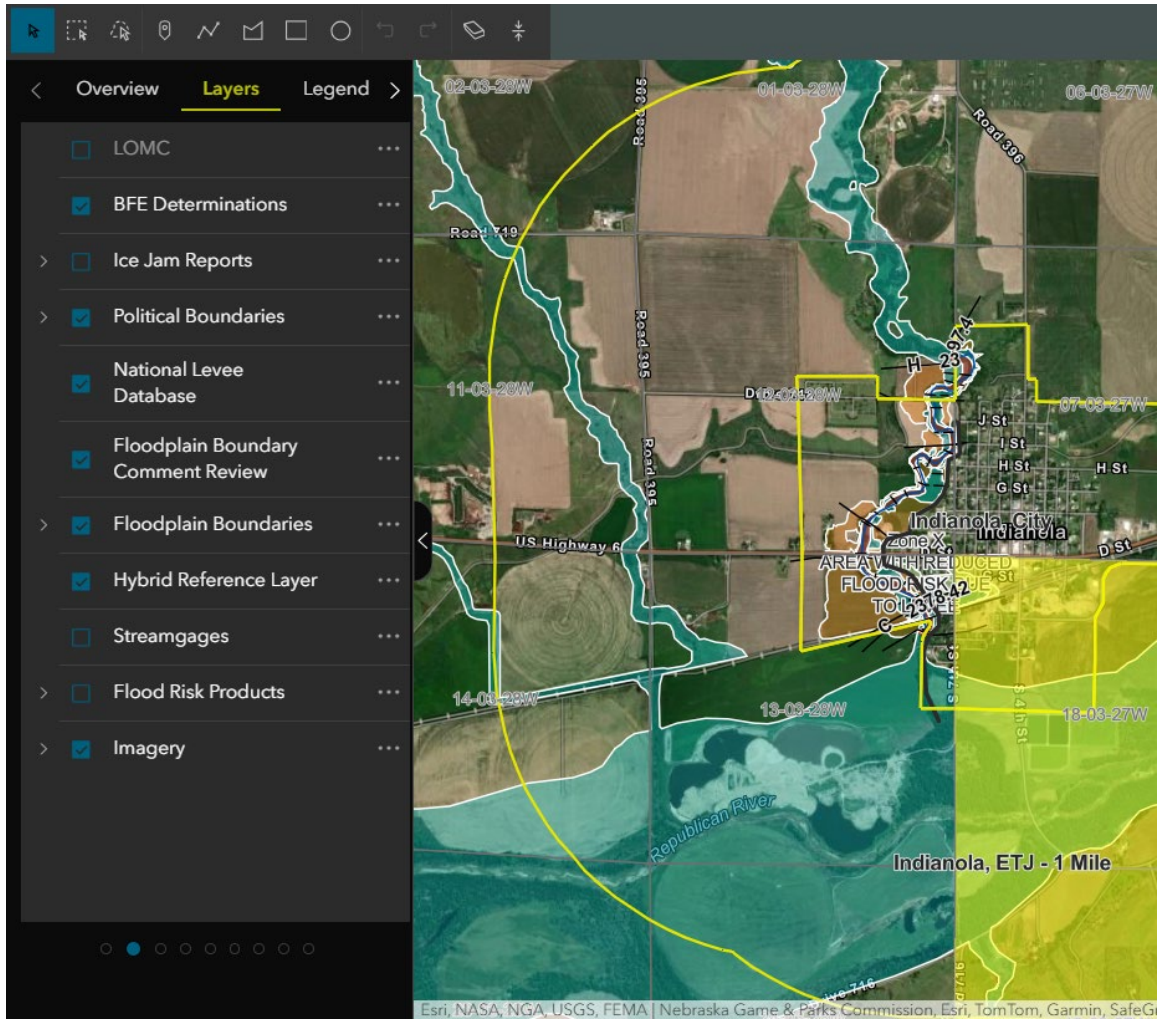
Managing Layers

- Default layers include:
  - BFE Determinations
  - Political Boundaries
  - National Levee Database
  - Floodplain Boundary Comment Review
  - Floodplain Boundaries
    - NFHL
    - Flood Awareness Areas
  - Hybrid Reference Layer
  - Imagery



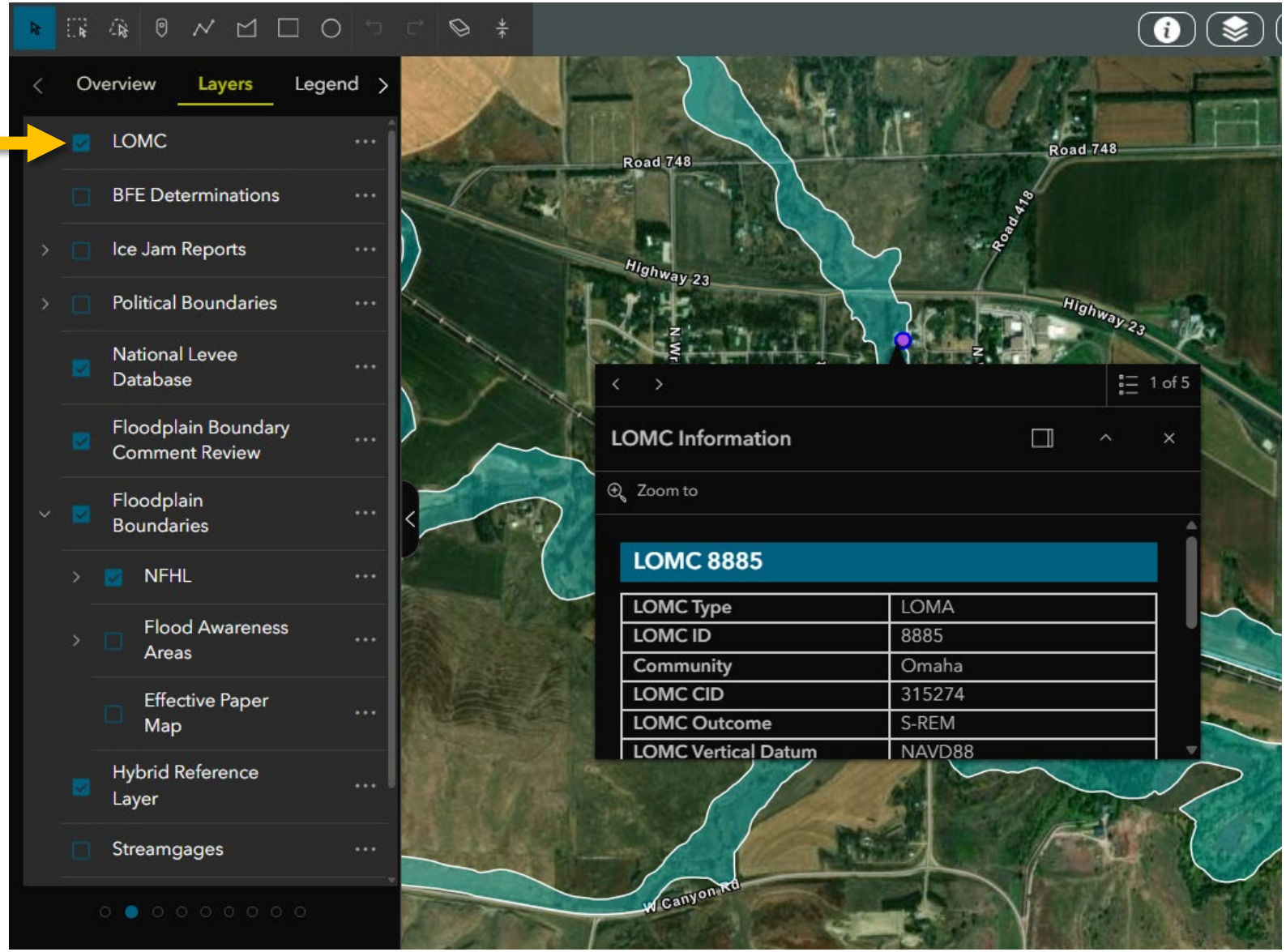
Managing Layers

- Sometimes this is too much information shown at once
- Layers can easily be turned off or on by checking or unchecking the box in the Layers Menu



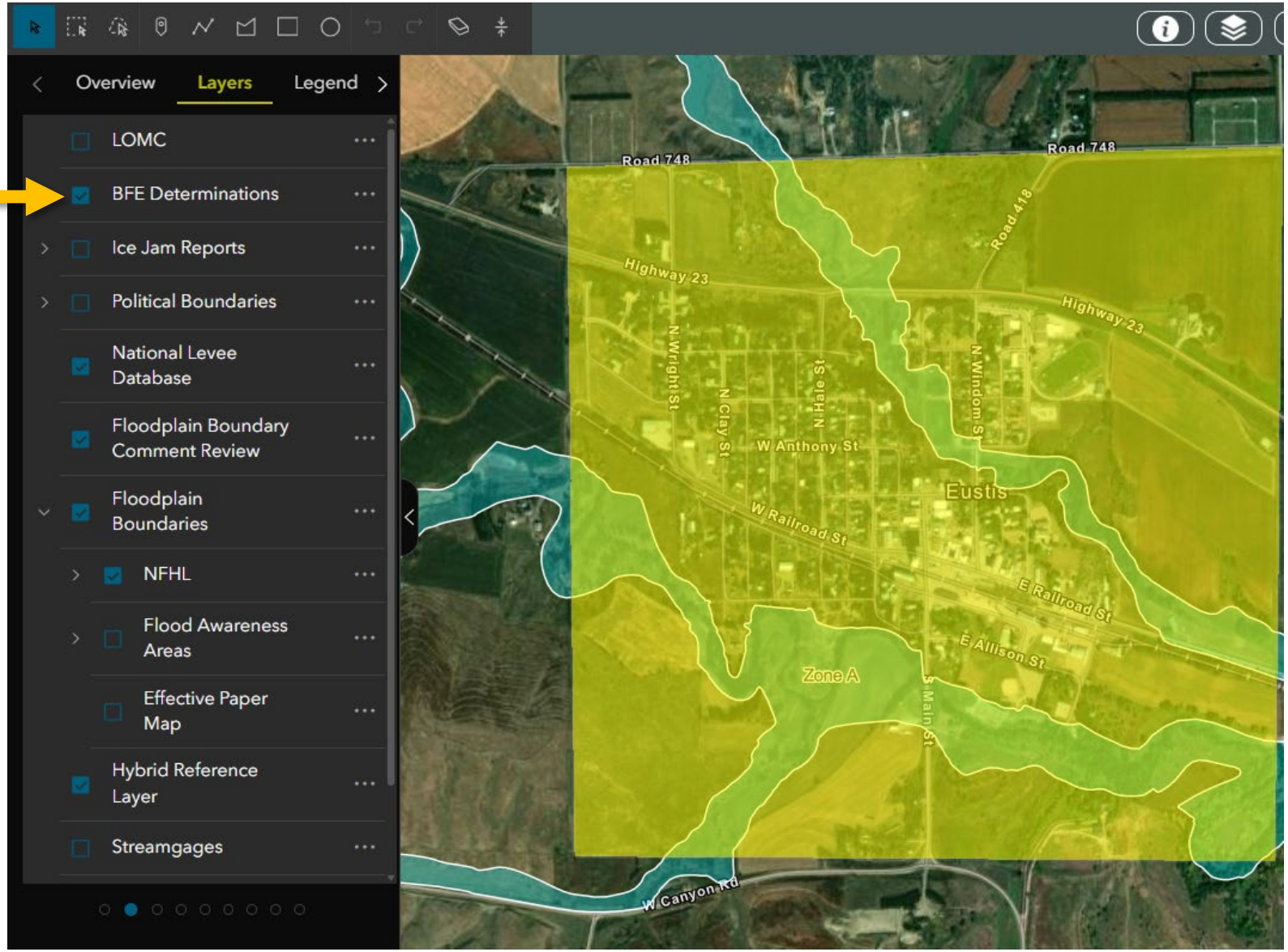
LOMC

Point layer showing all LOMAs or LOMR-Fs present in the community. Shown as purple dots that can be selected to learn more.



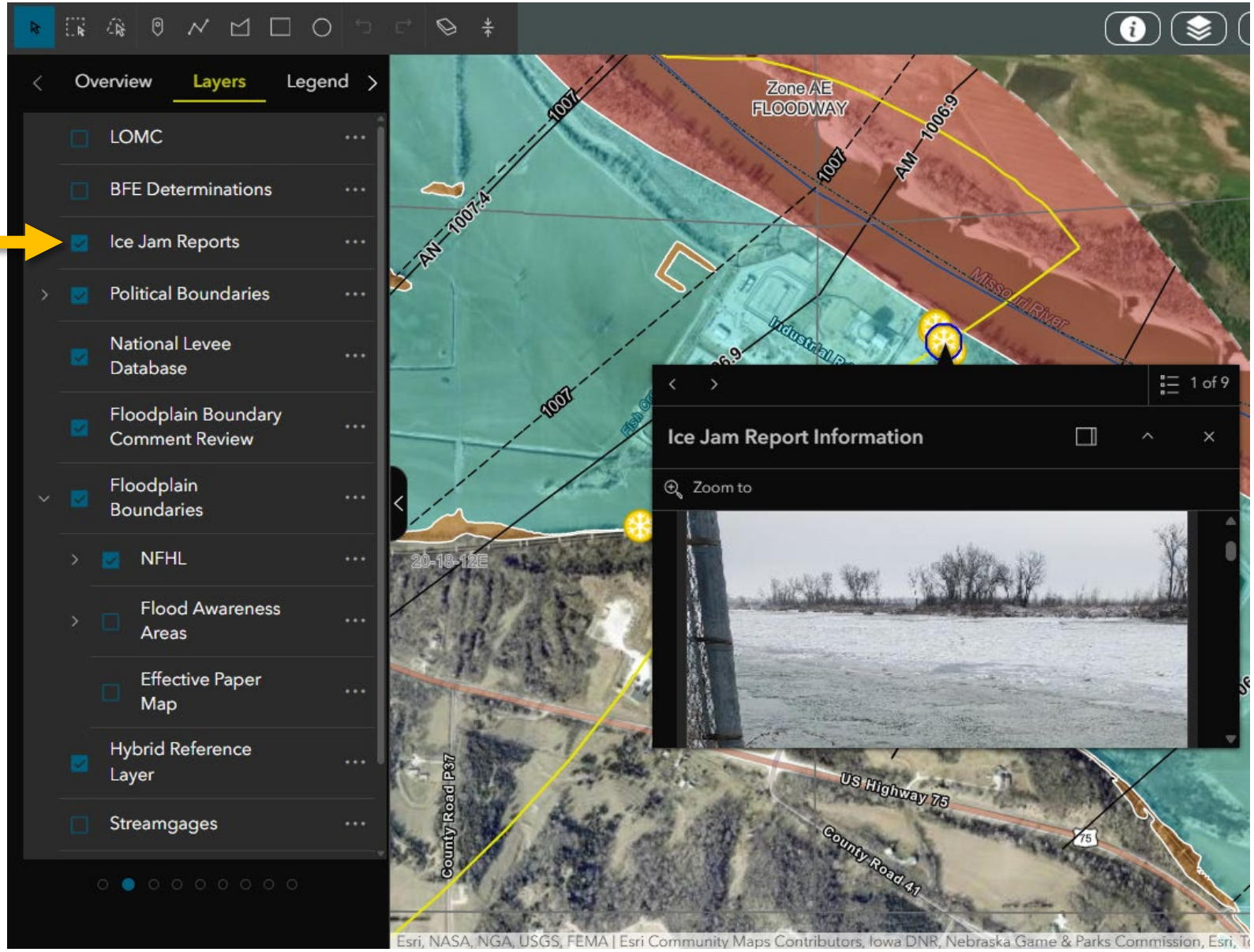
BFE Determinations

PLSS Sections that have a Valid Base Flood Elevation (BFE) Determination will be highlighted in yellow. This layer toggles those highlighted sections on and off.



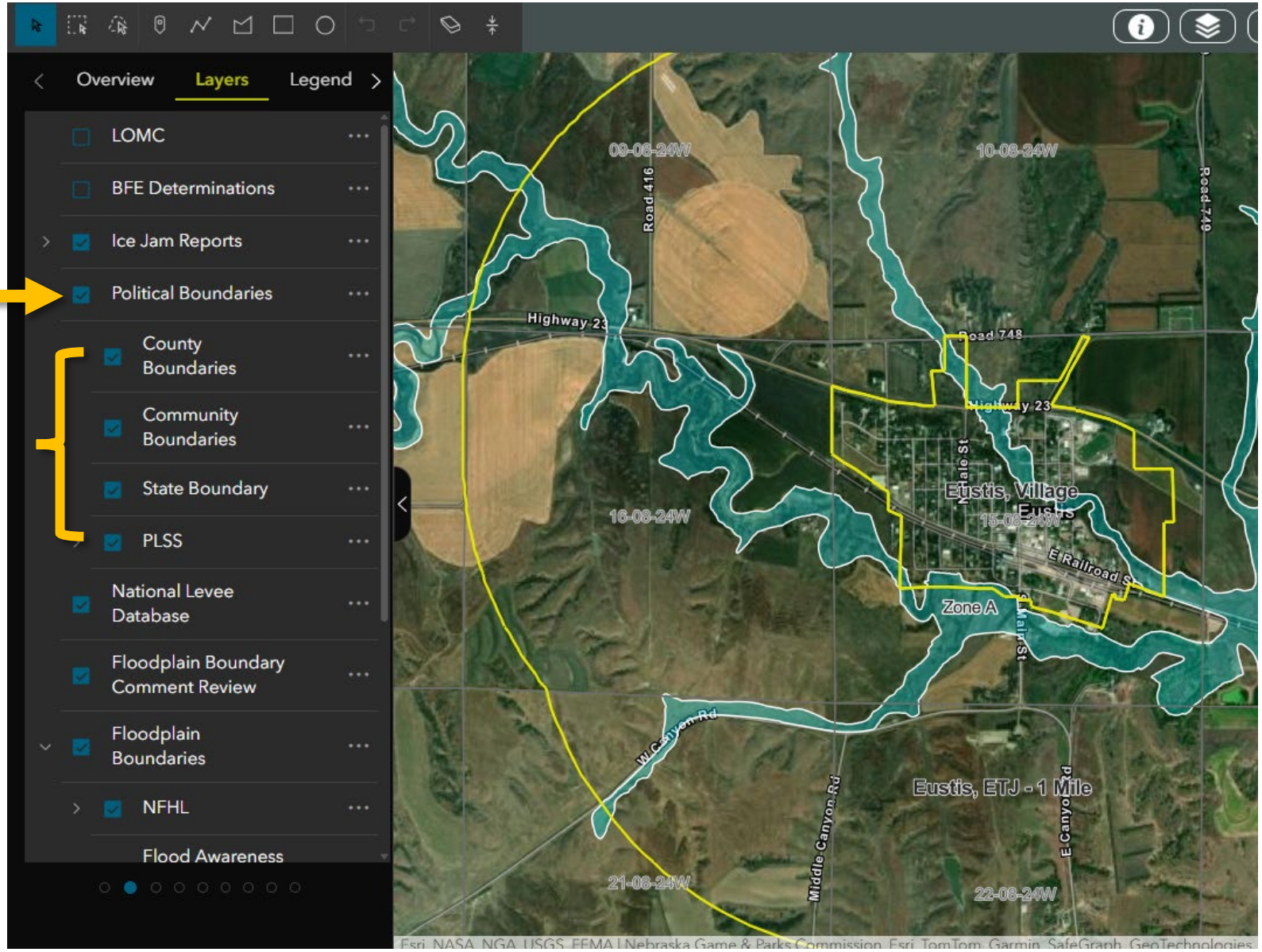
Ice Jam Reports

Use this layer to view recent reports made by certified users of our ice jam reporting page. Reports will appear as a snowflake icon, and will display information about waterflow at the location.



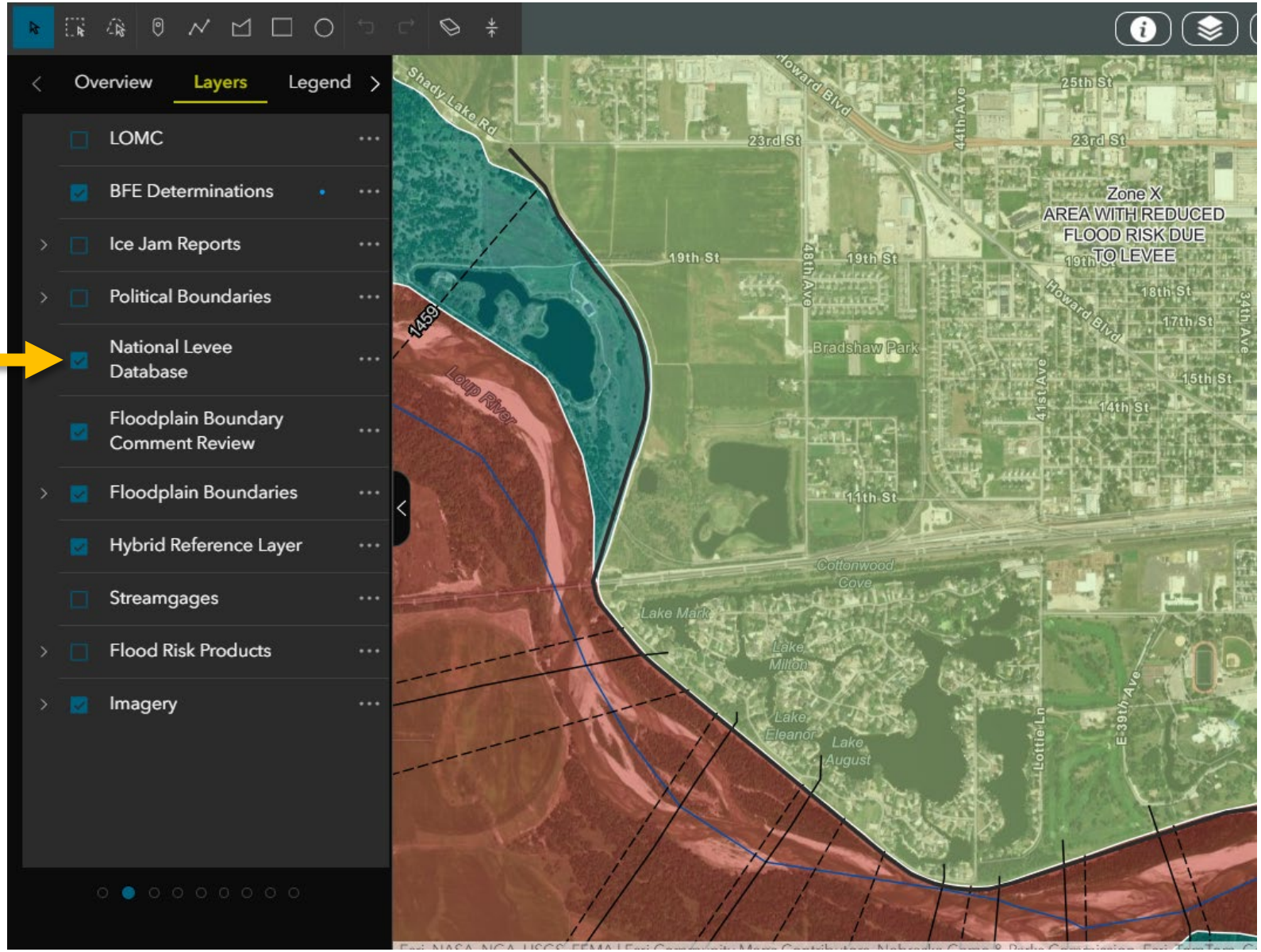
Political Boundaries

This layer shows community boundaries, including city limits and Extra Territorial Jurisdictions (ETJs). You can now toggle off PLSS and County Boundaries.



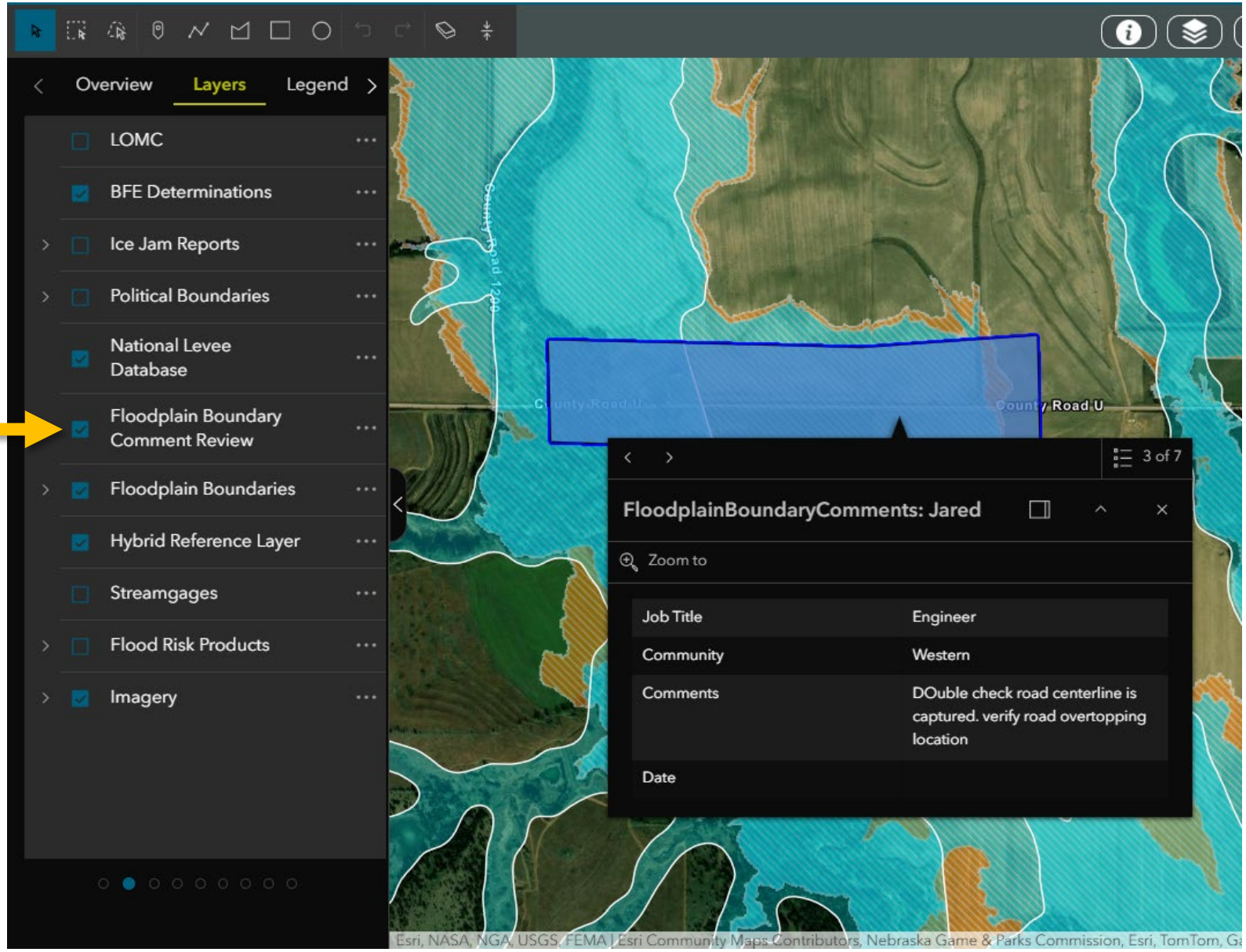
National Levee Database

This layer shows nationally accredited levee systems. Levees are indicated by the dark gray line, typically along a watercourse.



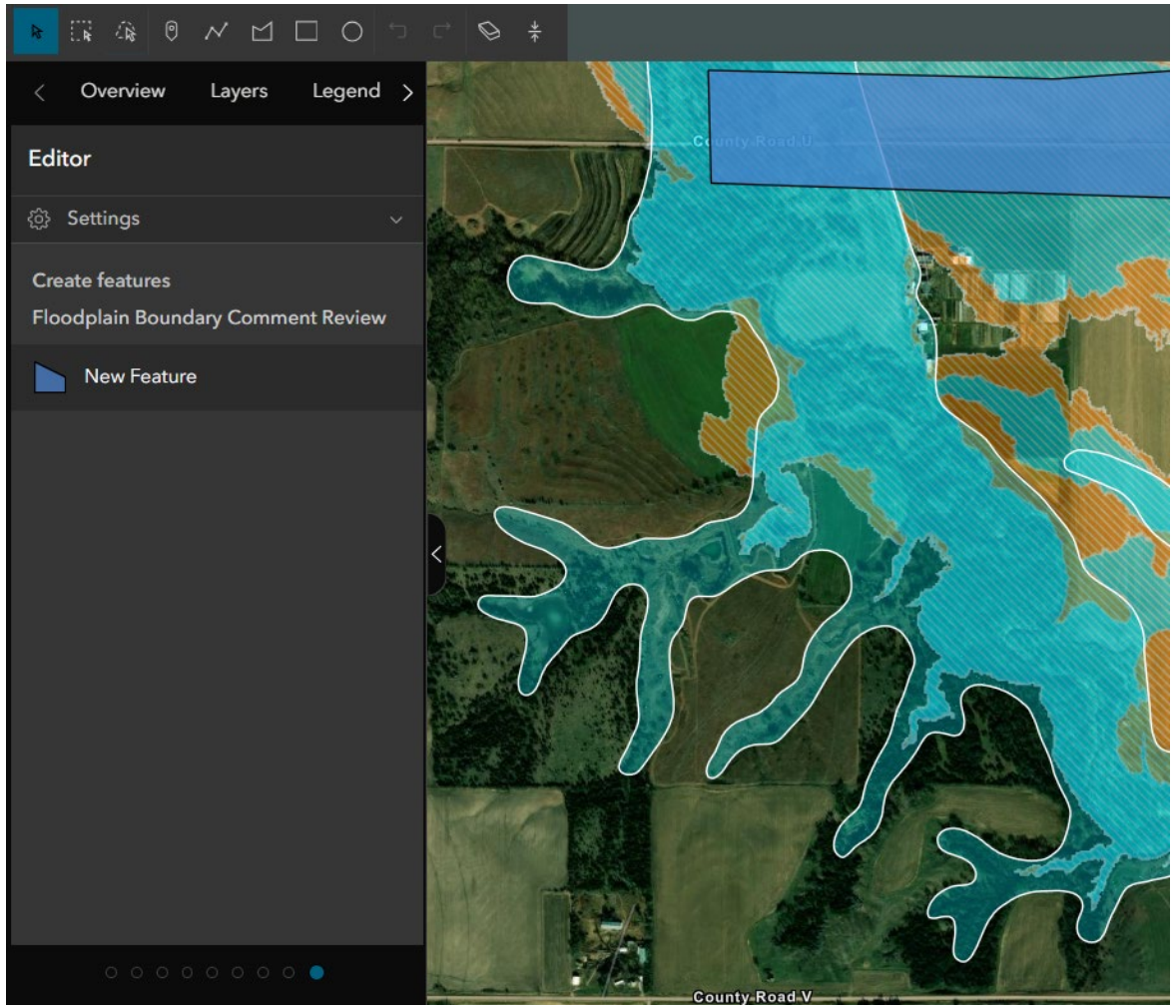
Floodplain Boundary Comment Review

This layer is used for comments provided by users during the preliminary stages of a FEMA funded floodplain mapping project.



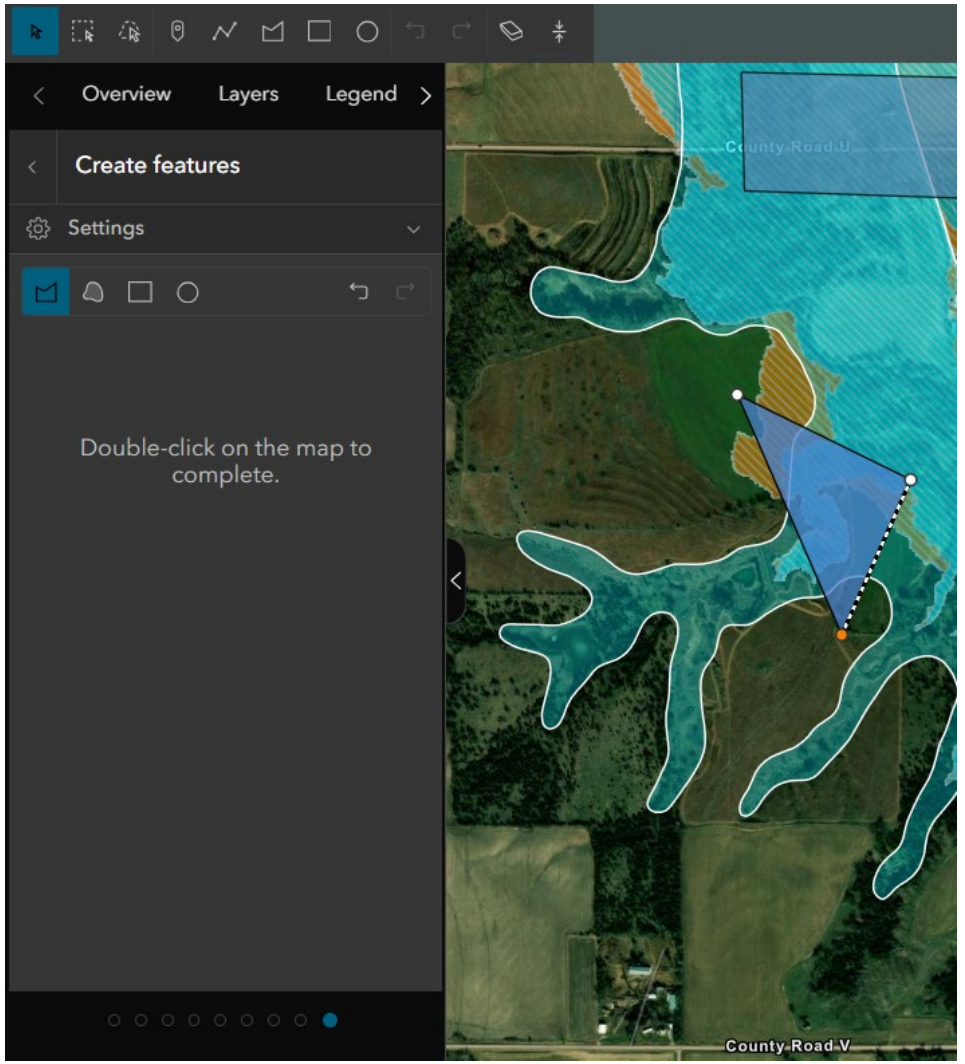
Creating a Boundary Comment

1. Turn on the “Floodplain Boundary Comment Review” layer
2. Click the  icon next to the search bar
3. Select “New Feature” from the menu on the left side of your screen



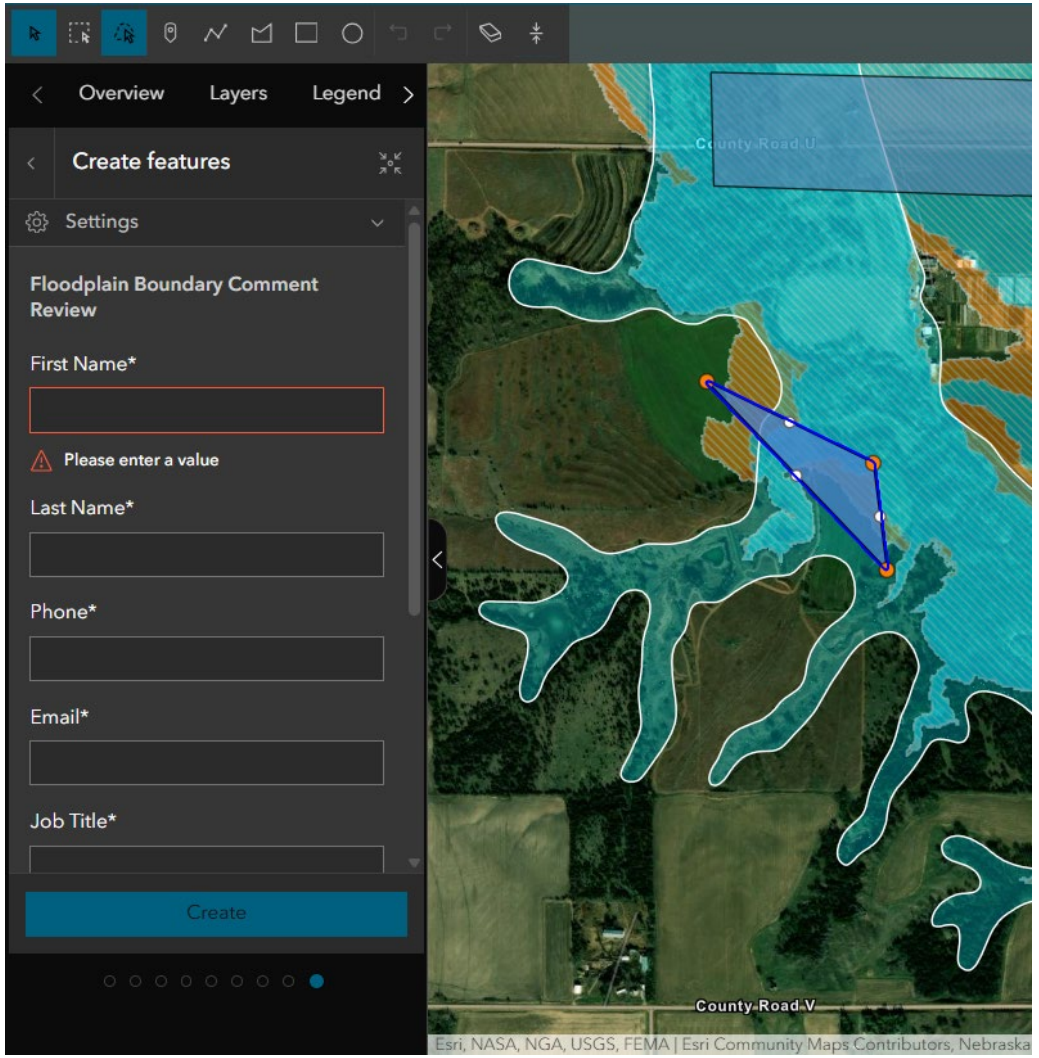
Creating a Boundary Comment

1. Turn on the “Floodplain Boundary Comment Review” layer
2. Click the  icon next to the search bar
3. Select “New Feature” from the menu on the left side of your screen
4. Draw a shape around the area you would like to comment on, double-click to finish drawing



Creating a Boundary Comment

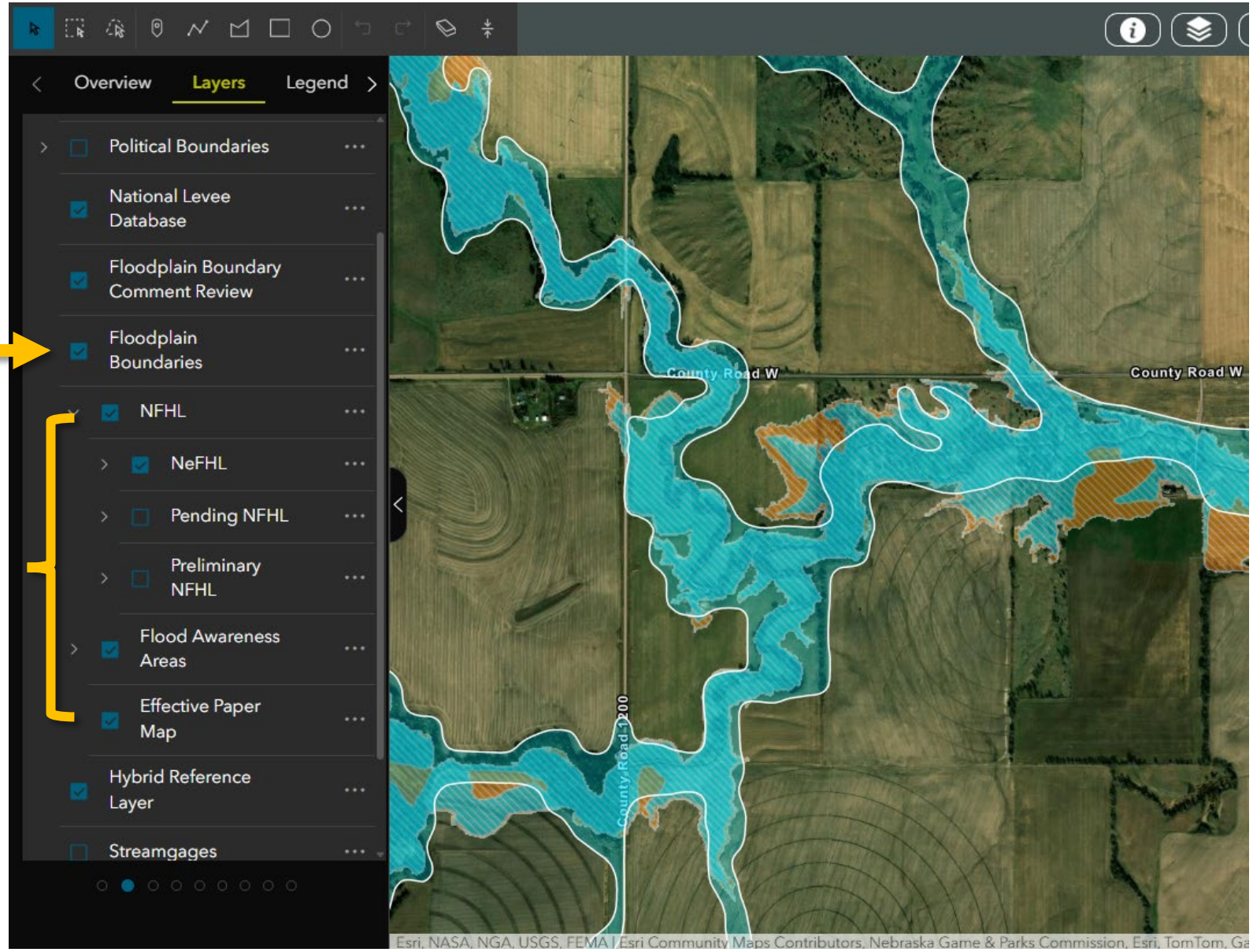
1. Turn on the “Floodplain Boundary Comment Review” layer
2. Click the  icon next to the search bar
3. Select “New Feature” from the menu on the left side of your screen
4. Draw a shape around the area you would like to comment on, double-click to finish drawing
5. Enter the required information, and click “Create”



Floodplain Boundaries

This layer includes:

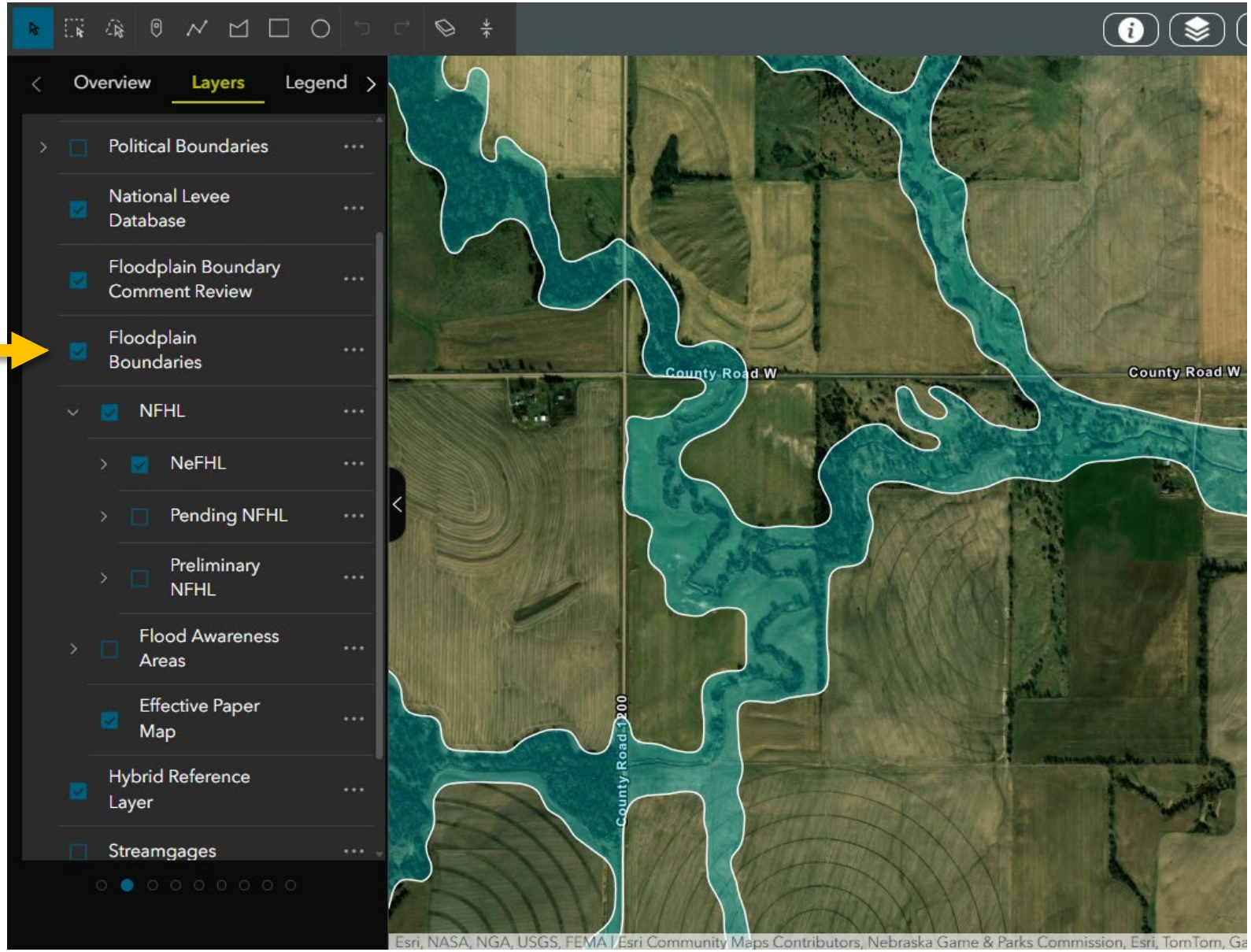
- ❑ NFHL
  - ❑ The regulatory floodplain (NeFHL)
  - ❑ Pending NFHL
  - ❑ Preliminary NFHL
- ❑ Flood Awareness Areas
- ❑ Effective Paper Map



Floodplain Boundaries

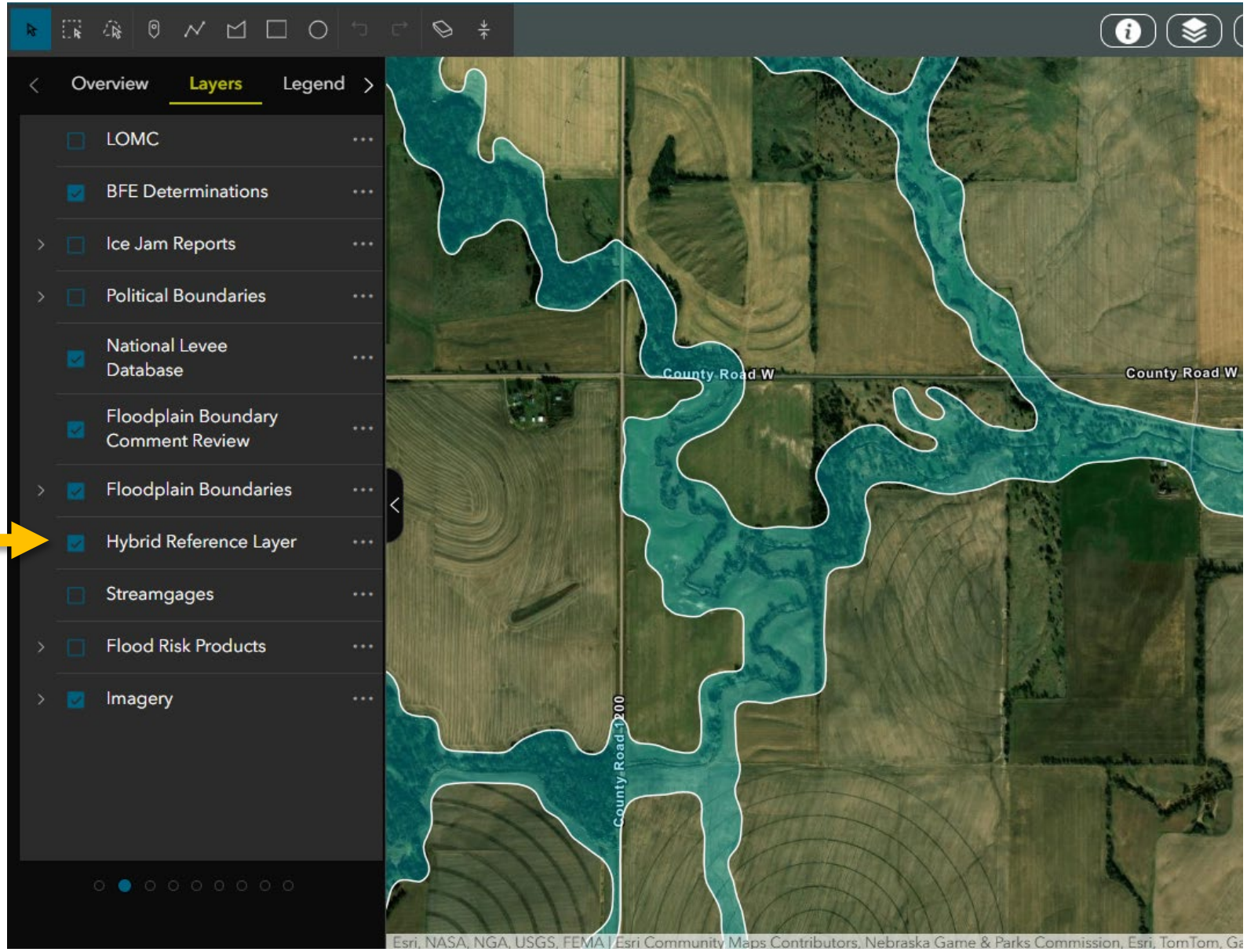
To view only regulatory boundaries, select the NeFHL and Effective Paper Map:

- ❑ NFHL
  - ❑ The regulatory floodplain (NeFHL)
  - ~~❑ Pending NFHL~~
  - ~~❑ Preliminary NFHL~~
- ~~❑ Flood Awareness Areas~~
- ❑ Effective Paper Map



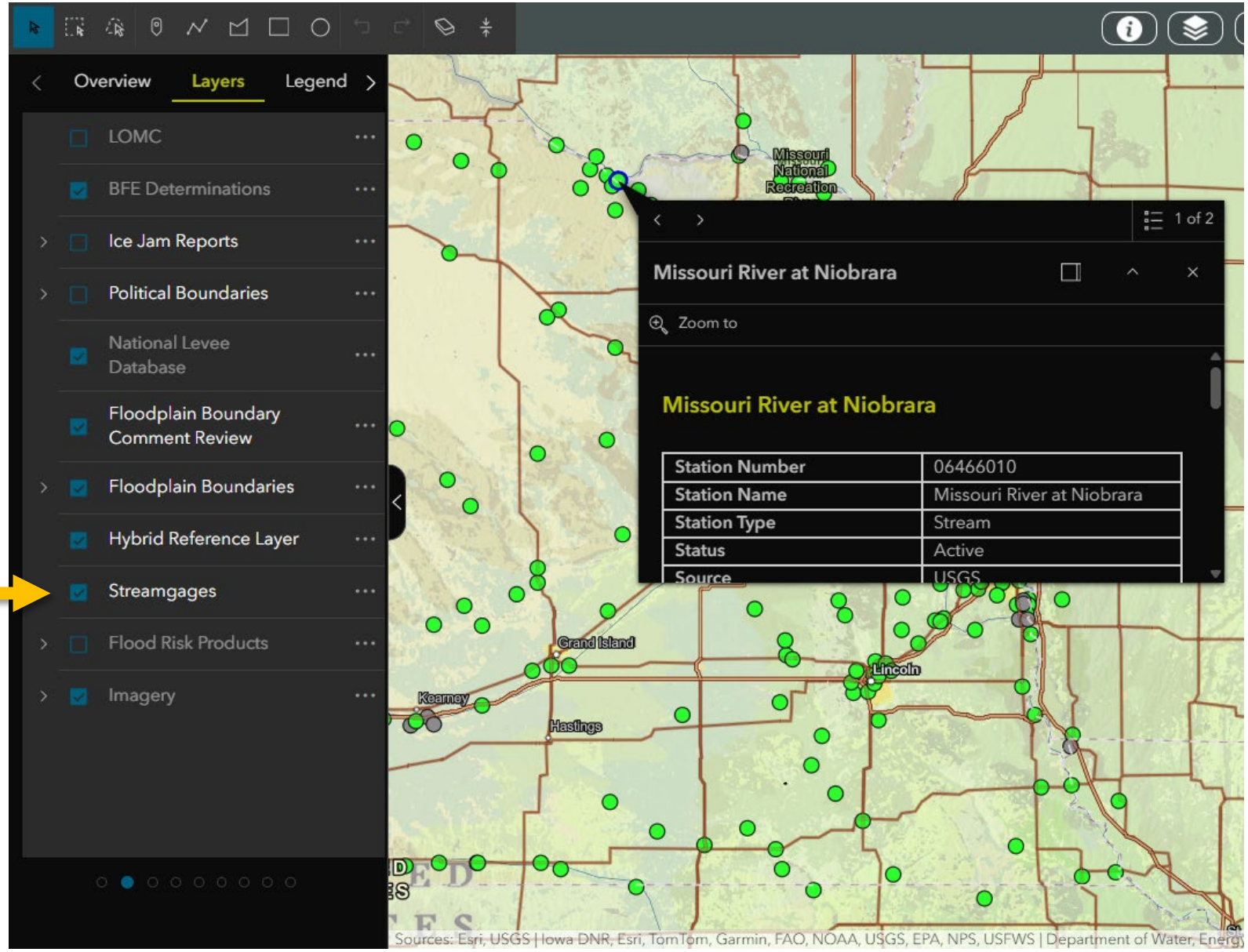
Hybrid Reference Layer

Displays a detailed overlay reference with road names, community labels, water features, landmarks, railways, etc.



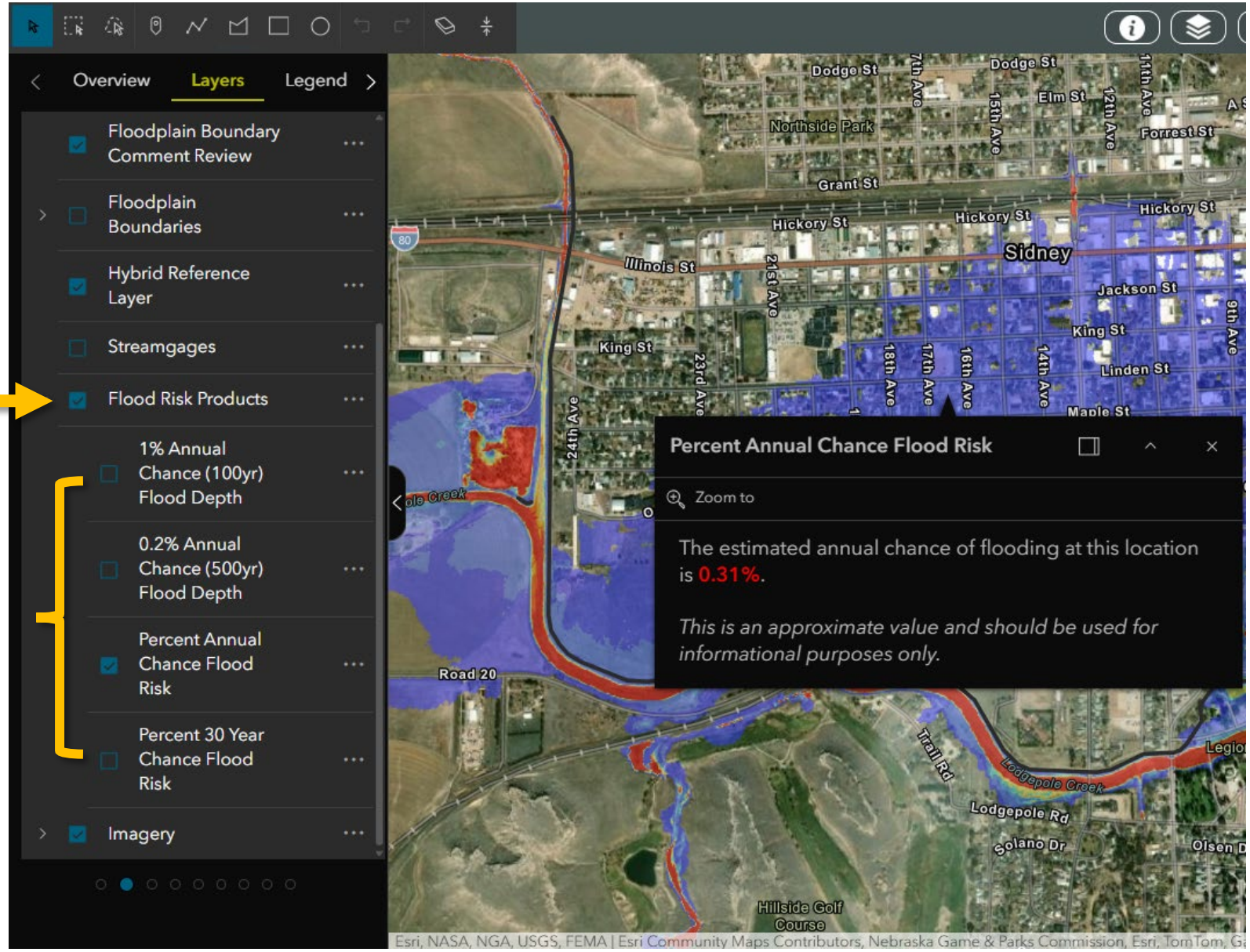
Streamgages

Point layer showing all active streamgages for Nebraska. Colors will coordinate with the current flood stage. Clicking on a gage will open a window displaying the most current data for the watercourse at the gage site.



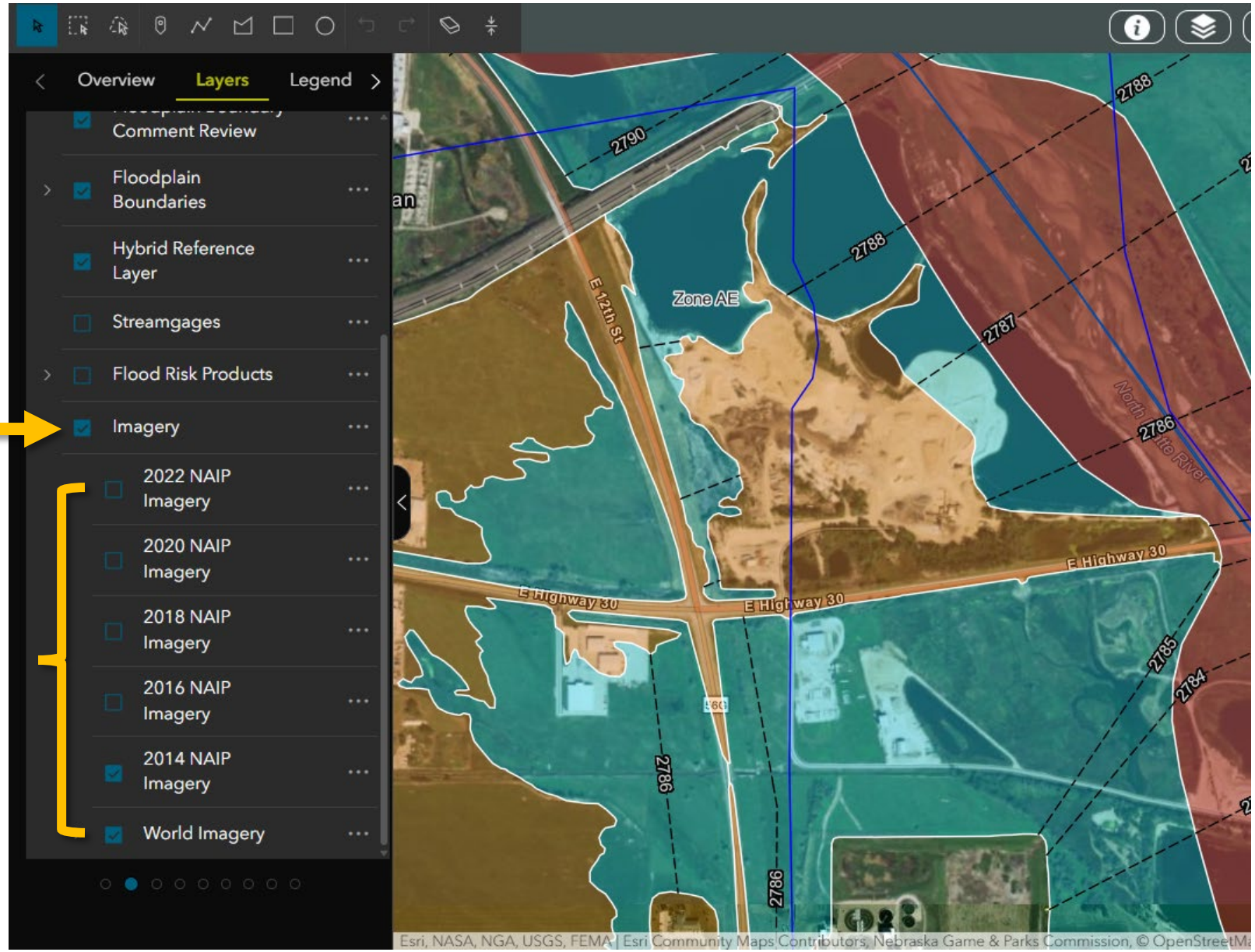
Flood Risk Products

Layer displaying additional flood risk information beyond the regulatory data. Data includes depth “grids” and percent annual chance layers that allow you to click on any location to find site specific flood risk information.



Imagery

Toggle between different aerial imagery using this layer.



Available Tools

NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT

Available Tools

- All tools can be found along the top bar. These include:
  - Selecting Tools
  - Drawing Tools
  - Legend
  - Streamgage camera filter
  - Elevation Profile
  - Floodplain Bounday Review Comments
  - Print Map View
  - Attribute Table

Available Tools

Selecting Tools

- Select Feature: Use this to select features and read information
- Select by Rectangle: Use this to select all features within a rectangle
- Select by Lasso: Select features within a custom drawn polygon

Available Tools

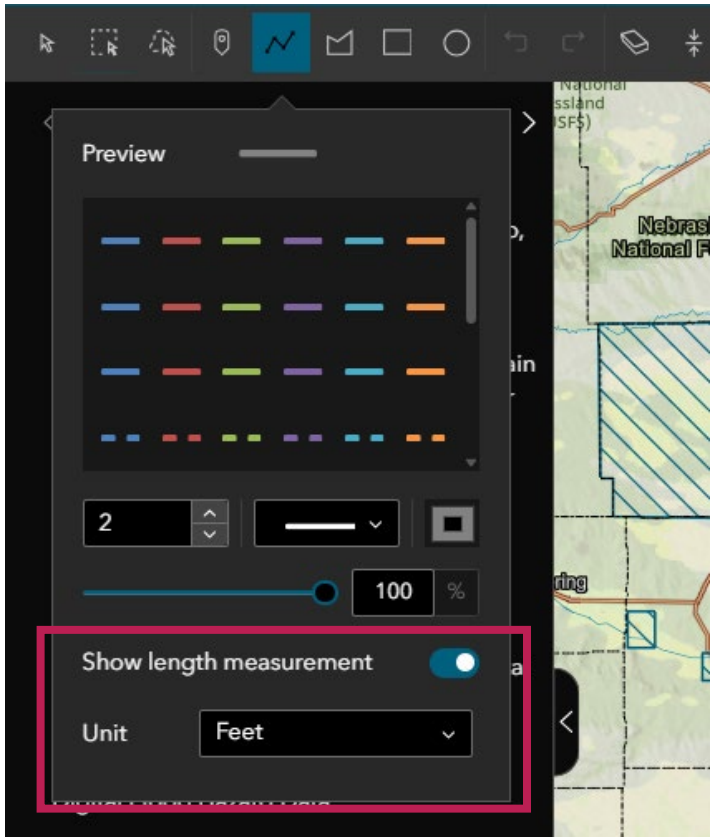
Drawing Tools

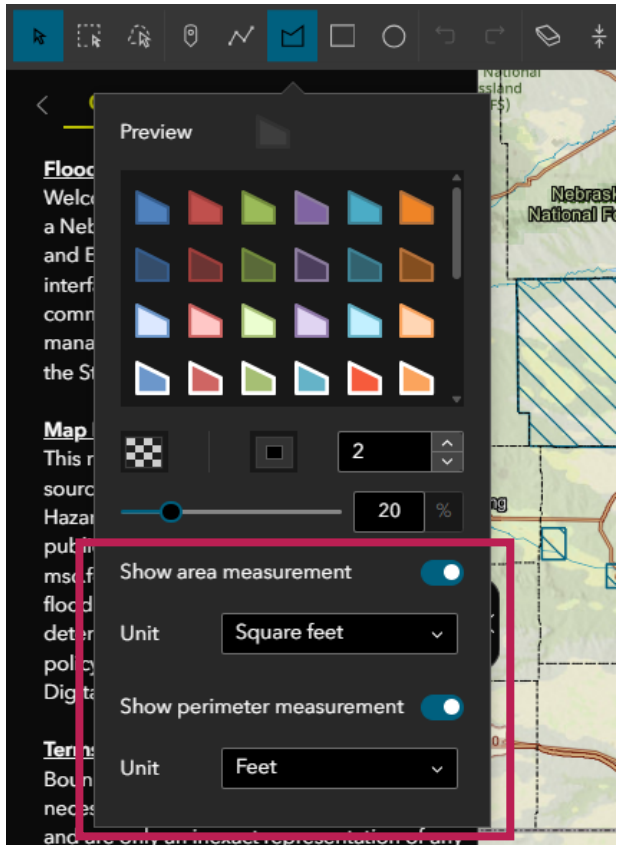
- Draw a Point: Place points on the map
- Draw a Polyline: Draw a custom line on the map
- Draw a Polygon: Draw a custom shape on the map
- Draw a Rectangle: Draw a rectangle on the map
- Draw a Circle: Draw a circle on the map
- Undo, redo, erase, and “collapse” the drawing window

Available Tools

Making Measurements

- When drawing any shape, toggle the “show length/area/perimeter measurement” button
- Select the preferred unit of measurement





Available Tools

Other Tools

- Application Overview: Returns to the disclaimer information
- Map Layers: Opens layer selection
- Legend: Opens the general map legend
- NeFHL Legend: Opens the floodplain boundary legend
- Streamgage Camera Filter: Filters only streamgages with live camera feed

Available Tools

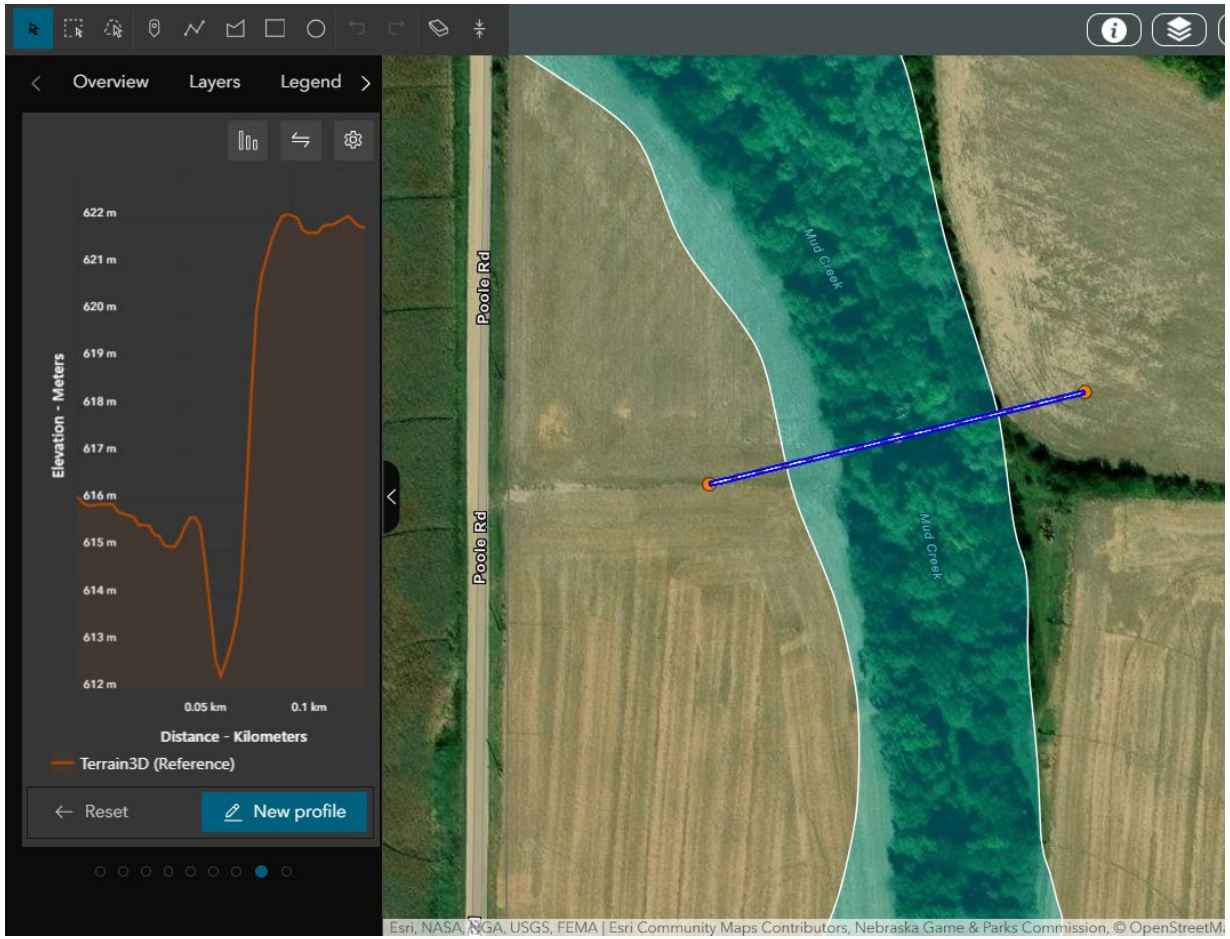
Other Tools

- Popular Searches: Search for your community by name
- Elevation Profile: Allows users to view elevation information along a profile
- Floodplain Boundary Comments: Opens commenting tool
- Print Map View: Opens the printer tool to print the current or custom view
- Attributes: Opens the attribute tables for available layers

Available Tools

Using the Elevation Profile tool 

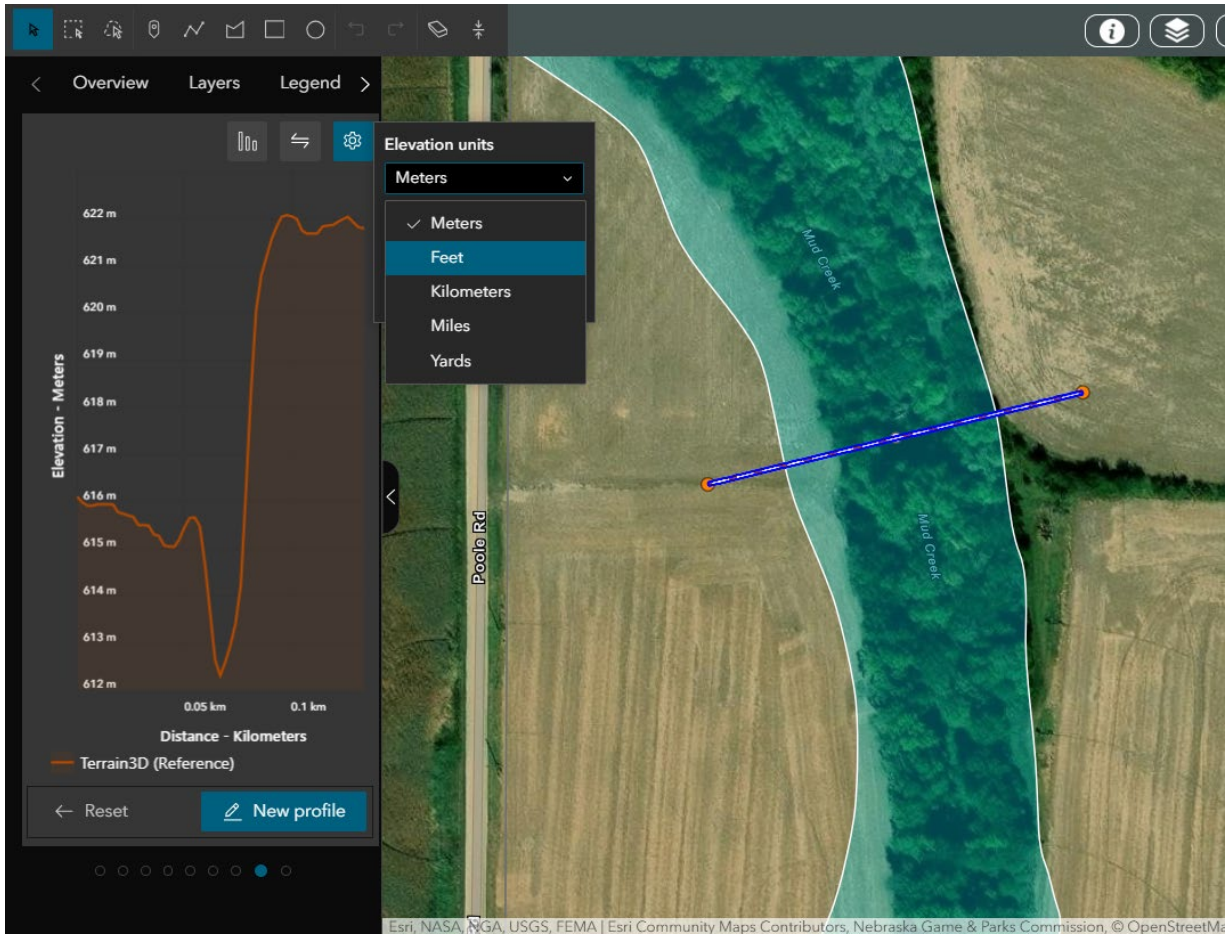
1. Read the disclaimer
2. Click “Draw”
3. Draw a line across the area you need elevations for, and double-click to finish drawing



Available Tools

Using the Elevation Profile tool 

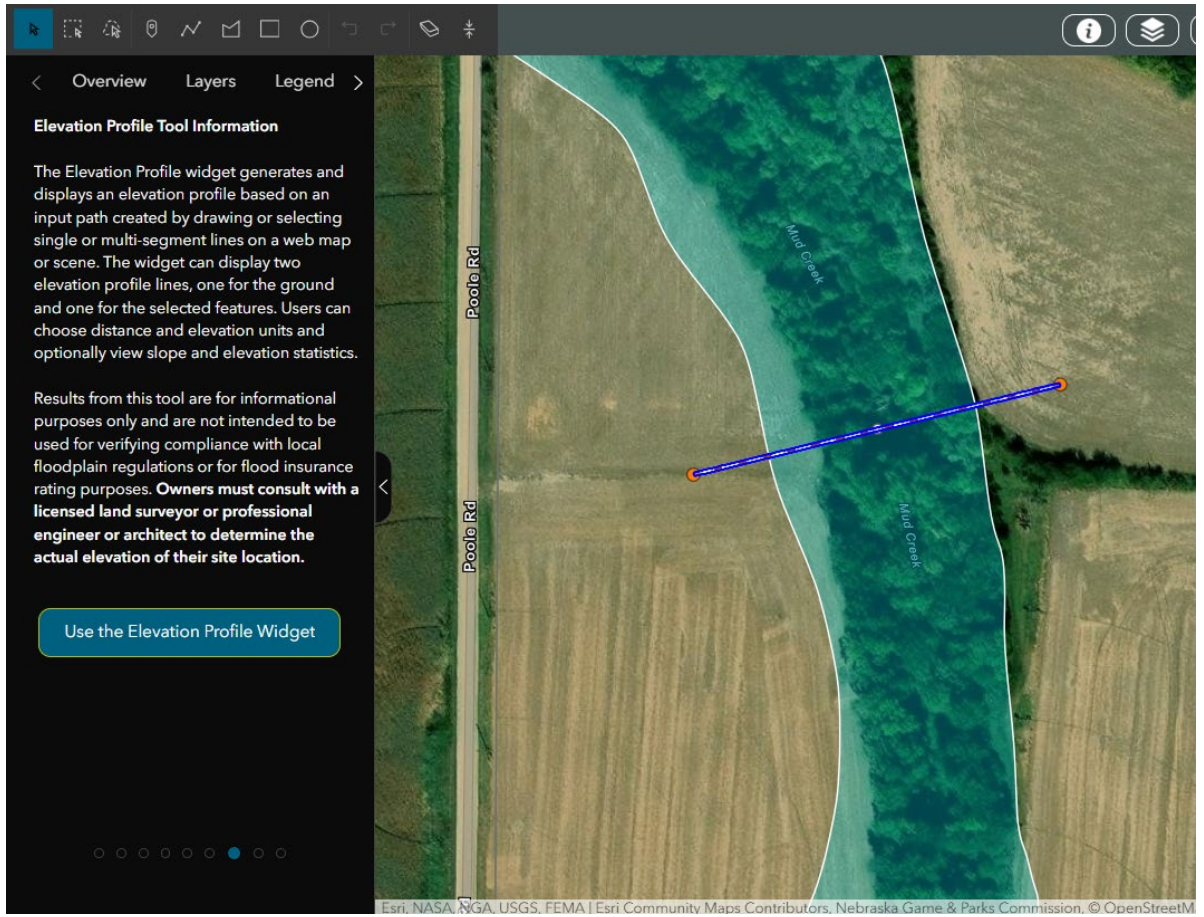
1. Read the disclaimer
2. Click “Draw”
3. Draw a line across the area you need elevations for, and double-click to finish drawing
4. Change units by clicking the  icon and using the drop downs



Available Tools

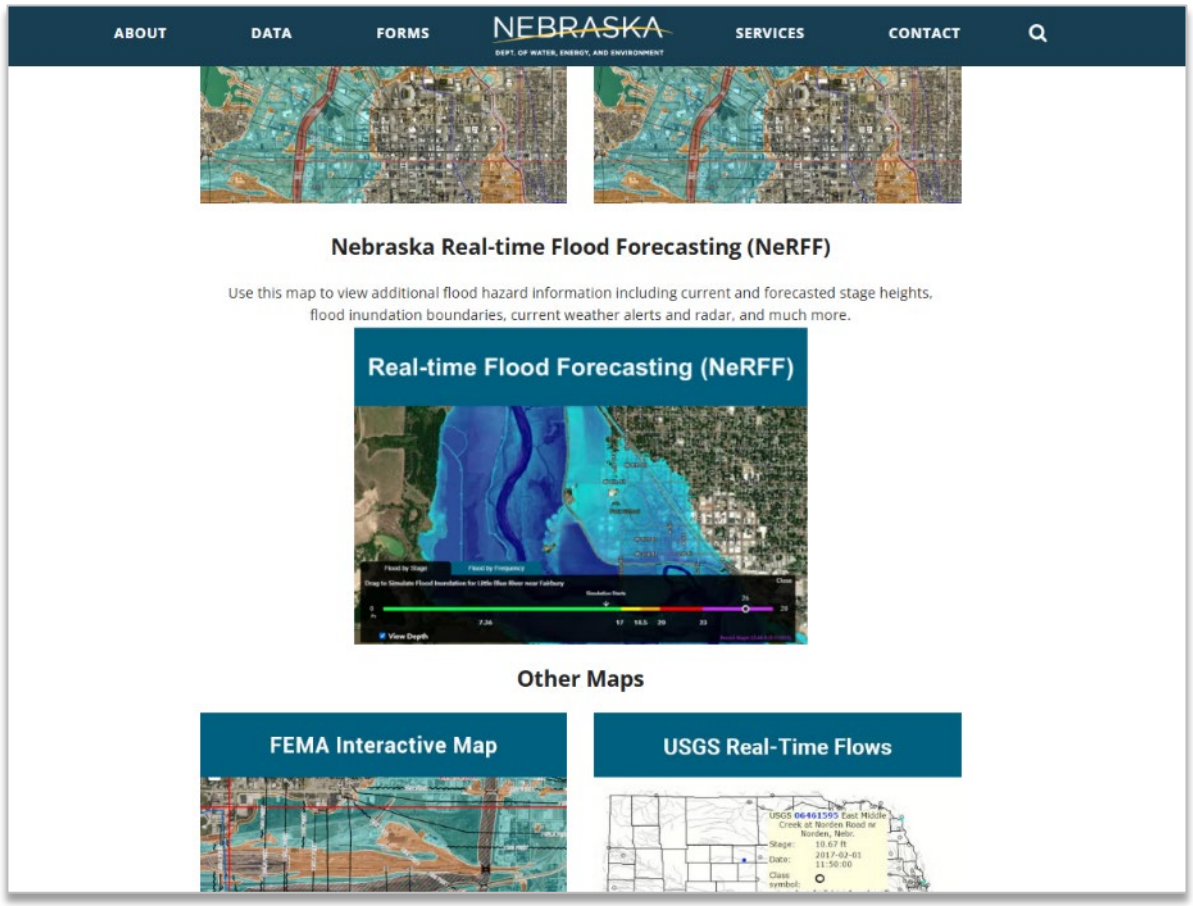
Using the Elevation Profile tool 

- This tool is for information purposes only, and cannot replace surveyed elevations for permitting, LOMC, or proof of compliance
- The full disclaimer can be read when you first click on the tool



Nebraska Real-Time Flood Forecasting

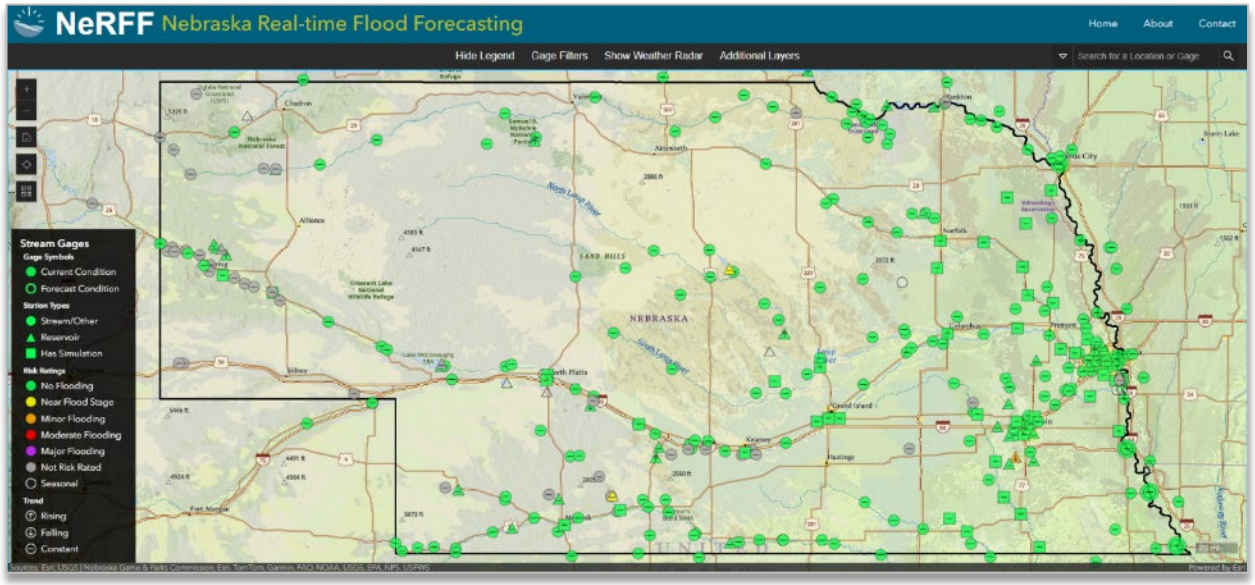
Nebraska Real-Time Flood Forecasting



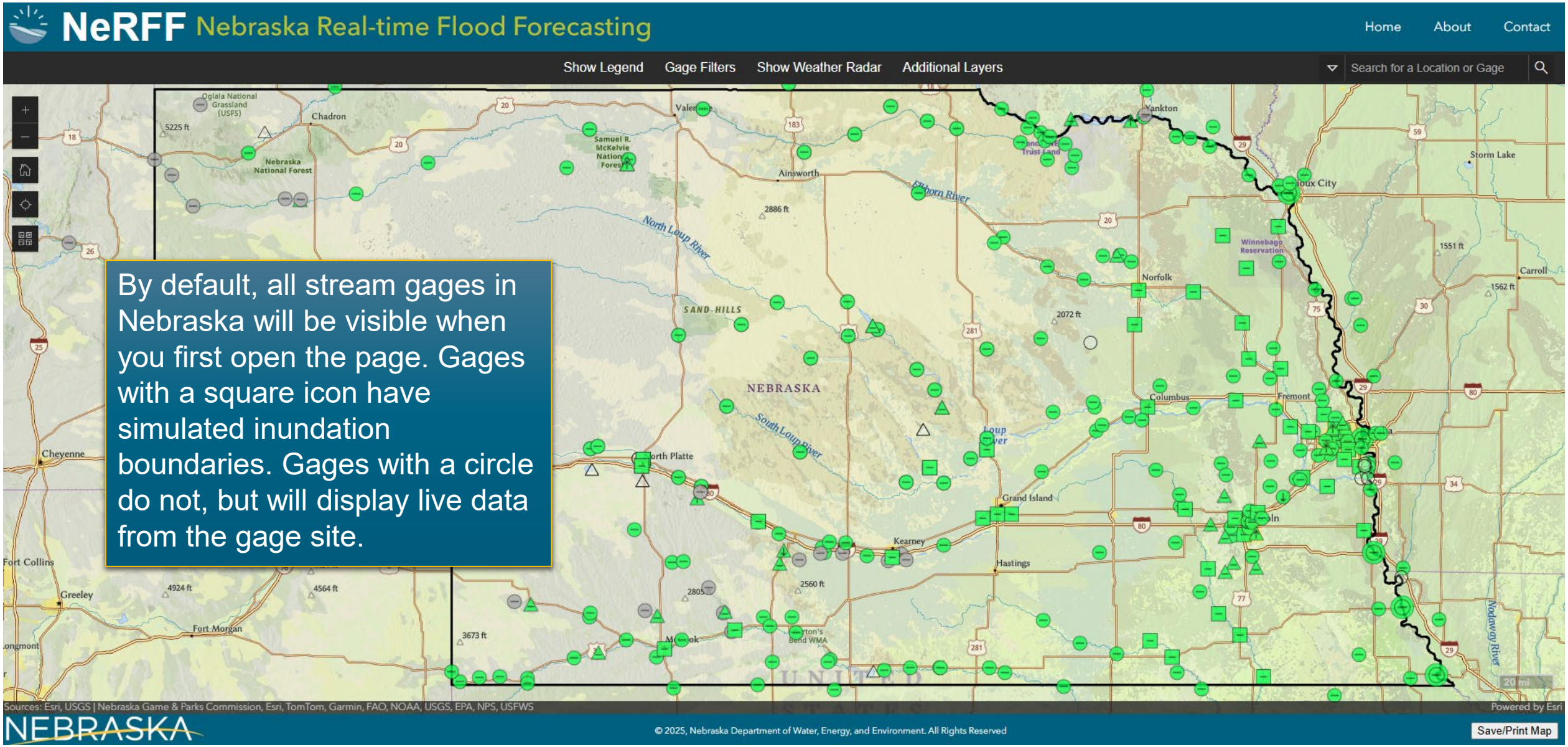
- Now available on our interactive map webpage: https://dnr.nebraska.gov/floodplain/interactive-maps
- NeDNR received requests for inundation boundaries during the 2019 Flood Event
  - We had accurate predictions for National Weather Service, but did not have the time to run inundation boundaries
  - After the flood, we decided we needed to prepare for the next event and have the data ready in advance

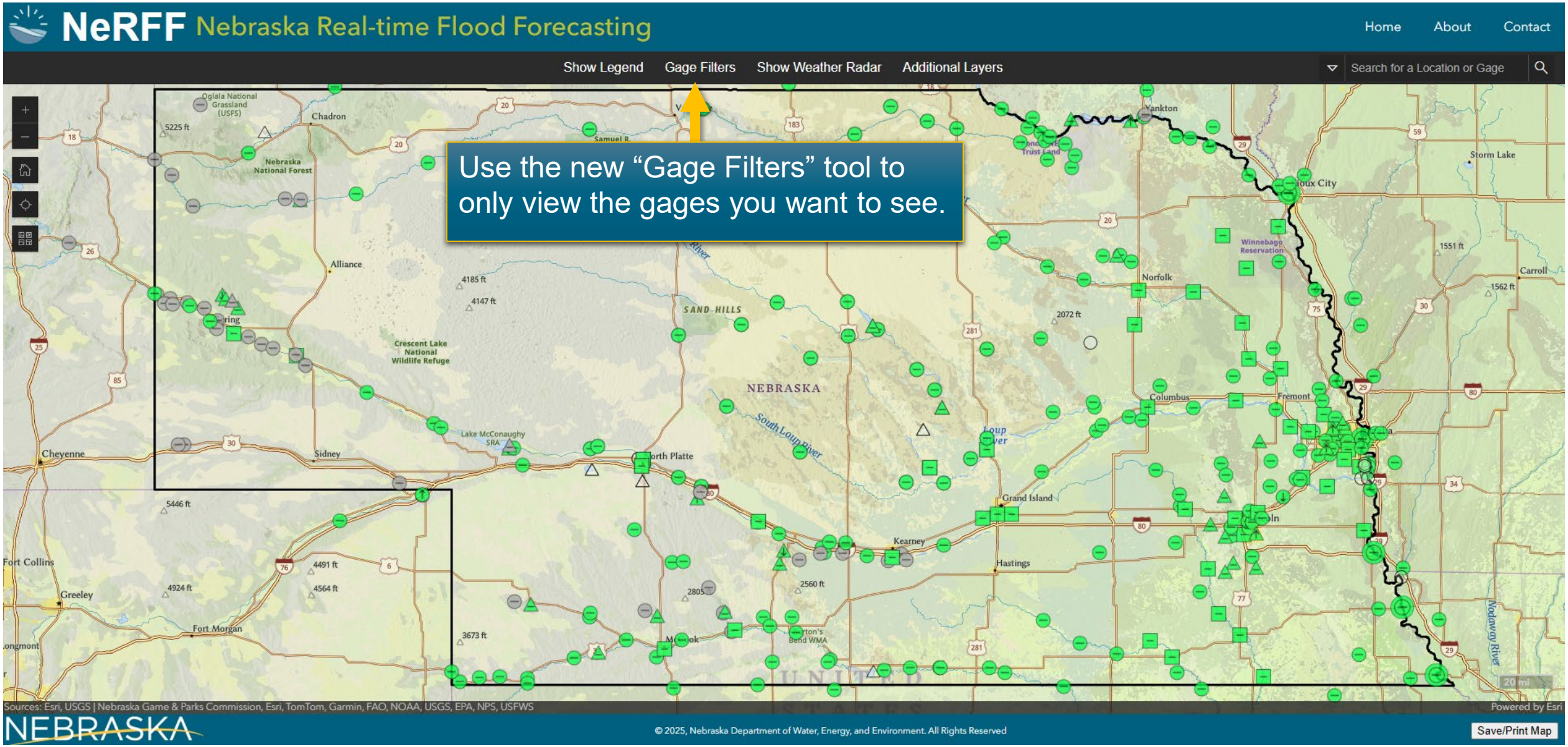
Nebraska Real-Time Flood Forecasting

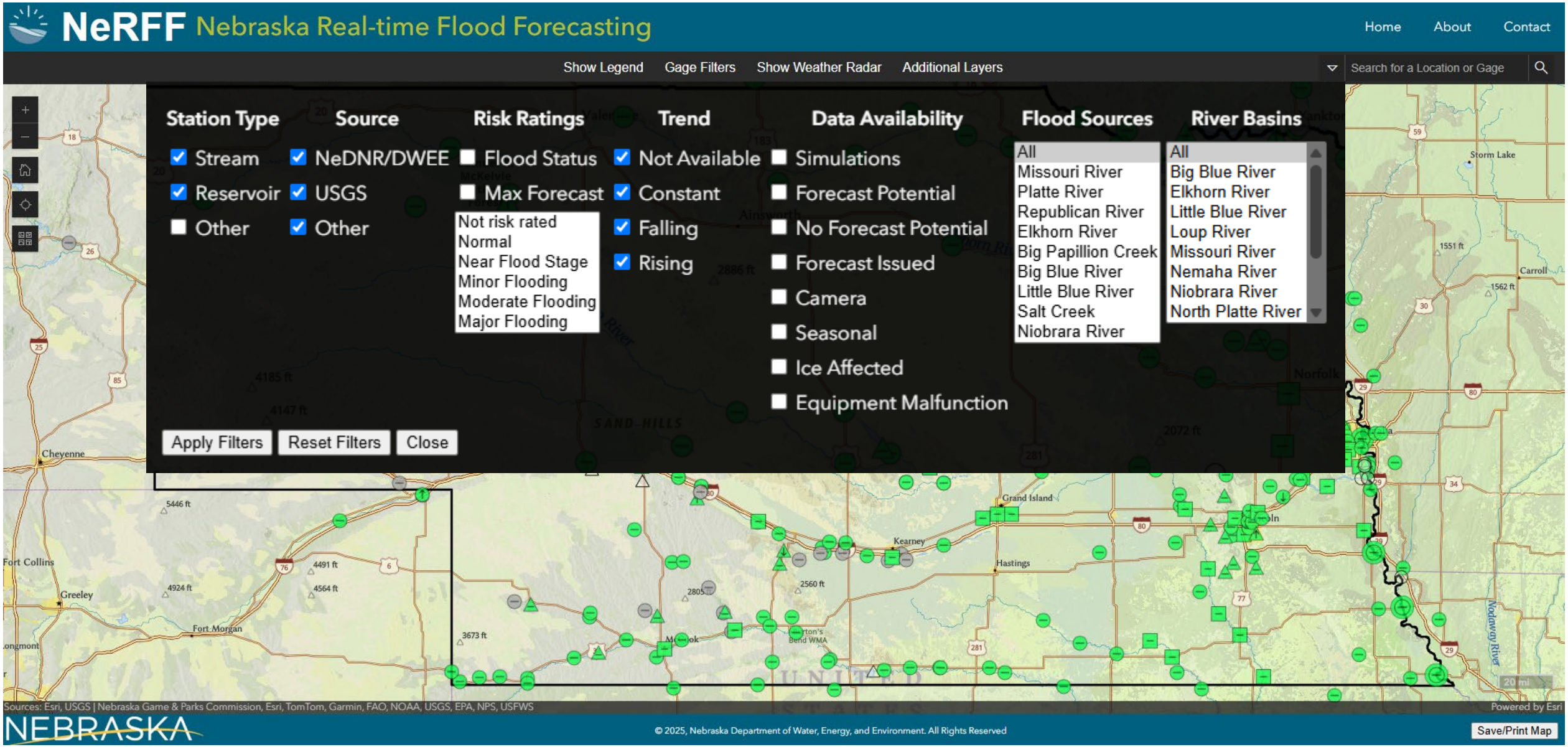
- Online flood inundation tool
  - Has pre-computed inundation boundaries for 54 communities with stream gages
  - Landing page highlights gage flood stages and forecasted stages
  - Also has radar, live camera feeds, watershed boundaries, and much more




NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Location or Gage
NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT
The Nebraska Real-time Flood Forecasting (NeRFF) Map is a tool being provided by the Nebraska Department of Water, Energy, and Environment (DWEE) and the Nebraska Emergency Management Agency, with funding from the Federal Emergency Management Agency and the State of Nebraska. The Map is intended to be used to provide flood hazard data to property owners and emergency managers prior to and during flooding events. The information provided does not supersede the Effective Special Flood Hazard Areas. The map is not intended to be used for the issuance of Floodplain Development Permitting, Insurance Rating, or obtaining Letters of Map Change. DWEE will continue to improve, add data to, and update the Map, therefore the appearance and functionality may change over time. Additionally, the Map utilizes data from many sources and may not perform if those source sites are down.
The following are a list of assumptions made during the modeling process. This is not an inclusive list.
Levees and levee closure structures were included in the analysis only if they were listed in the US Army Corps of Engineers' National Levee Database (NLD). No levee breach analyses were completed: levees were assumed to perform until overtopped.
Bridges and culverts were modeled unobstructed: ice Jams and debris collection were not considered.
Inundation boundaries were only developed for the listed stream: tributaries were not taken into account.
Lakes, ponds, and lagoons were assumed dry until overtopped.
The critical facilities layer is draft and subject to change at any time.
The models used to develop the inundation boundaries and depth grids were developed using the best available topographic, land use, and flood insurance study data, as well as best engineering practices at the time of their development. Any change to the topography or land use will impact the accuracy of the inundation boundaries. These are not regulatory models and were developed solely for informational purposes. Any use of these models or modifications beyond that are not recommended, but may be conducted based on the discretion of a licensed professional engineer. The Department of Water, Energy, and Environment makes no claims, representations, and warranties, express or implied, concerning the validity, the reliability, or the accuracy of the data and data products furnished by the Department. The Department of Water, Energy, and Environment assumes no liability for any errors, omissions, or inaccuracies in the information provided regardless of their cause, or for any decision made, action taken, or action not taken in reliance upon the information contained in these models. All models and reports are available from DWEE, upon request.
Click “Agree” to view the map.
Agree
Sources: Esri, USGS | Nebraska Ga
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

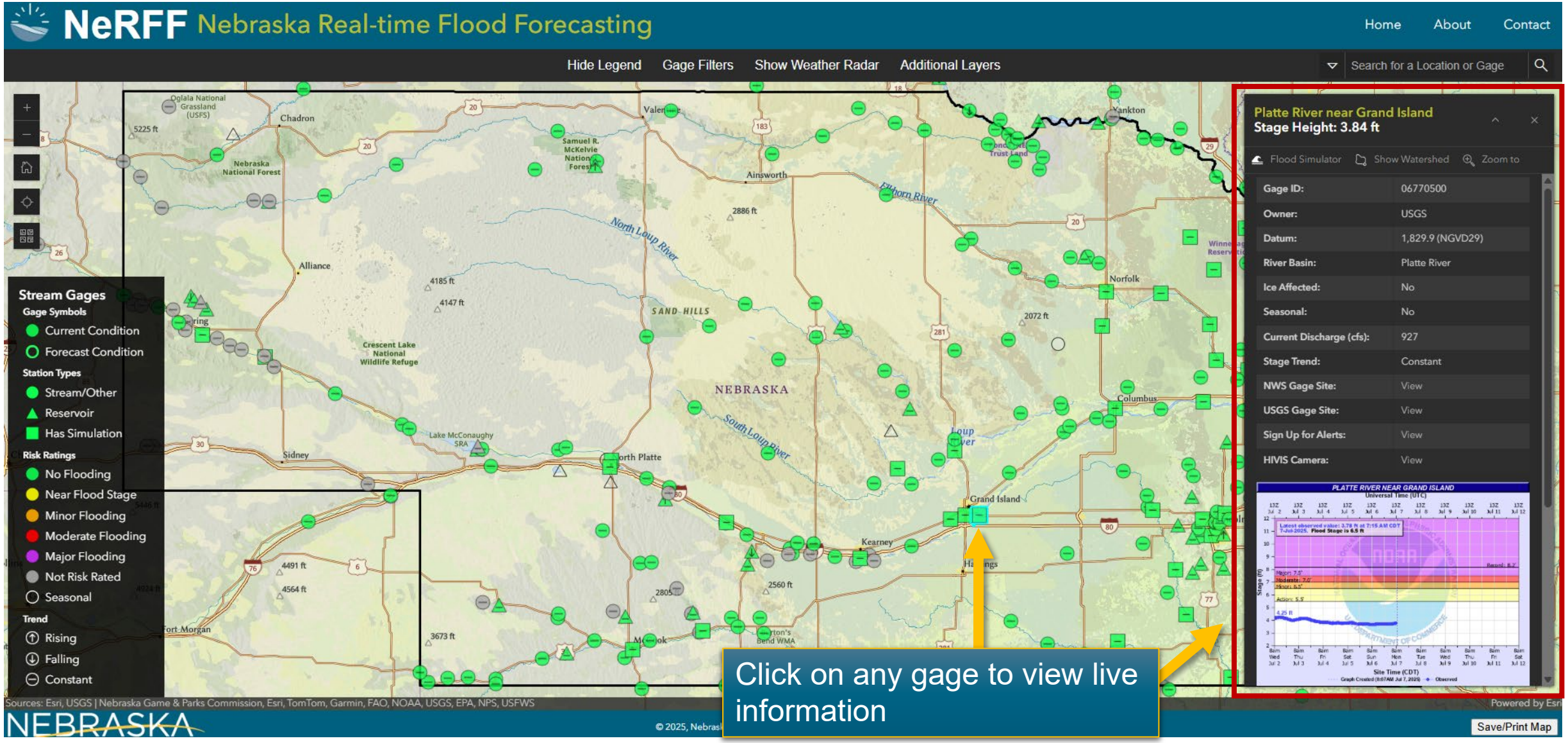

NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Show Weather Radar
Additional Layers
Search for a Location or Gage
By default, all stream gages in Nebraska will be visible when you first open the page. Gages with a square icon have simulated inundation boundaries. Gages with a circle do not, but will display live data from the gage site.
NEBRASKA
SAND-HILLS
North Loup River
South Loup River
Elkhorn River
Nodaway River
Chadron
Ainsworth
Norfolk
Columbus
Fremont
Grand Island
Kearney
Hastings
North Platte
Cheyenne
Fort Collins
Greeley
Fort Morgan
Yankton
Sioux City
Storm Lake
Carroll
Winnebago Reservation
Nebraska National Forest
Oglala National Grassland (USFS)
Samuel R. McKelvie National Forest
2886 ft
2072 ft
1562 ft
1551 ft
5225 ft
4924 ft
4564 ft
3673 ft
2805
2560 ft
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
Powered by Esri
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map


NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Show Weather Radar
Additional Layers
Search for a Location or Gage
Use the new “Gage Filters” tool to only view the gages you want to see.
NEBRASKA
SAND-HILLS
Alliance
Chadron
Nebraska National Forest
Crescent Lake National Wildlife Refuge
Lake McConaughy SRA
Cheyenne
Sidney
North Platte
Kearney
Grand Island
Hastings
Columbus
Fremont
Norfolk
Yankton
Sioux City
Storm Lake
Carroll
Winnebago Reservation
Fort Collins
Greeley
Fort Morgan
South Loup River
Niobrara River
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map


NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Show Weather Radar
Additional Layers
Search for a Location or Gage
Station Type
Stream
Reservoir
Other
Source
NeDNR/DWEE
USGS
Other
Risk Ratings
Flood Status
Max Forecast
Not risk rated
Normal
Near Flood Stage
Minor Flooding
Moderate Flooding
Major Flooding
Trend
Not Available
Constant
Falling
Rising
Data Availability
Simulations
Forecast Potential
No Forecast Potential
Forecast Issued
Camera
Seasonal
Ice Affected
Equipment Malfunction
Flood Sources
All
Missouri River
Platte River
Republican River
Elkhorn River
Big Papillion Creek
Big Blue River
Little Blue River
Salt Creek
Niobrara River
River Basins
All
Big Blue River
Elkhorn River
Little Blue River
Loup River
Missouri River
Nemaha River
Niobrara River
North Platte River
Apply Filters
Reset Filters
Close
Cheyenne
Fort Collins
Greeley
Fort Morgan
Kearney
Grand Island
Hastings
Storm Lake
Carroll
Norfolk
Nodaway River
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

Example:

- These filters would allow you to only see gages along the Elkhorn River that are rising and are at the moderate flood stage.


NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Hide Legend
Gage Filters
Show Weather Radar
Additional Layers
Search for a Location or Gage
Stream Gages
Gage Symbols
Current Condition
Forecast Condition
Station Types
Stream/Other
Reservoir
Has Simulation
Risk Ratings
No Flooding
Near Flood Stage
Minor Flooding
Moderate Flooding
Major Flooding
Not Risk Rated
Seasonal
Trend
Rising
Falling
Constant
Platte River near Grand Island
Stage Height: 3.84 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06770500
Owner: USGS
Datum: 1,829.9 (NGVD29)
River Basin: Platte River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 927
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
HIVIS Camera: View
PLATTE RIVER NEAR GRAND ISLAND
Universal Time (UTC)
Site Time (CDT)
Click on any gage to view live information
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
Powered by Esri
NEBRASKA
Save/Print Map

NeRFF Nebraska Real-time Flood Forecas

Home About Contact

Hide

Search for a Location or Gage

Stream Gages

Gage Symbols
- Current Condition
- Forecast Condition

Station Types
- Stream/Other
- Reservoir
- Has Simulation

Risk Ratings
- No Flooding
- Near Flood Stage
- Minor Flooding
- Moderate Flooding
- Major Flooding
- Not Risk Rated
- Seasonal

Trend
- Rising
- Falling
- Constant

Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS

NEBRASKA

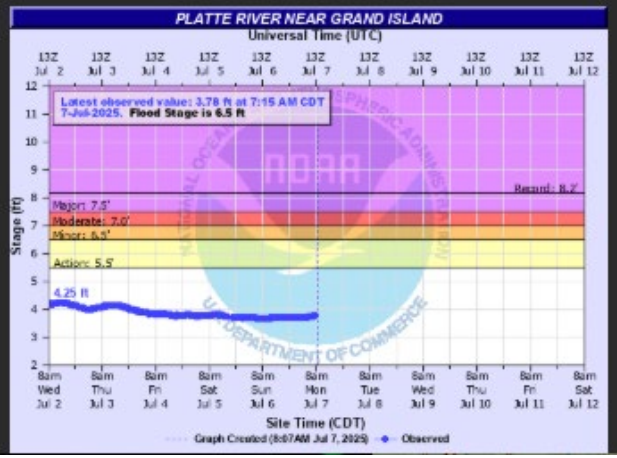
Powered by Esri

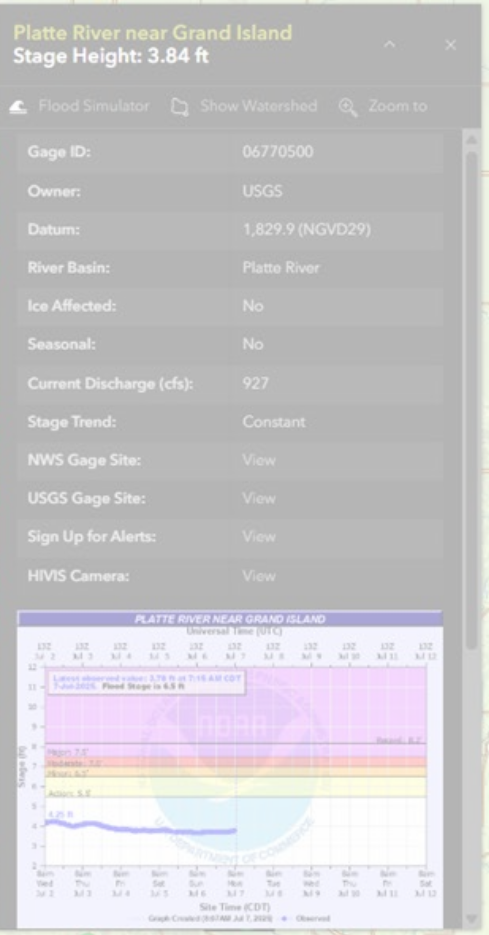
Save/Print Map

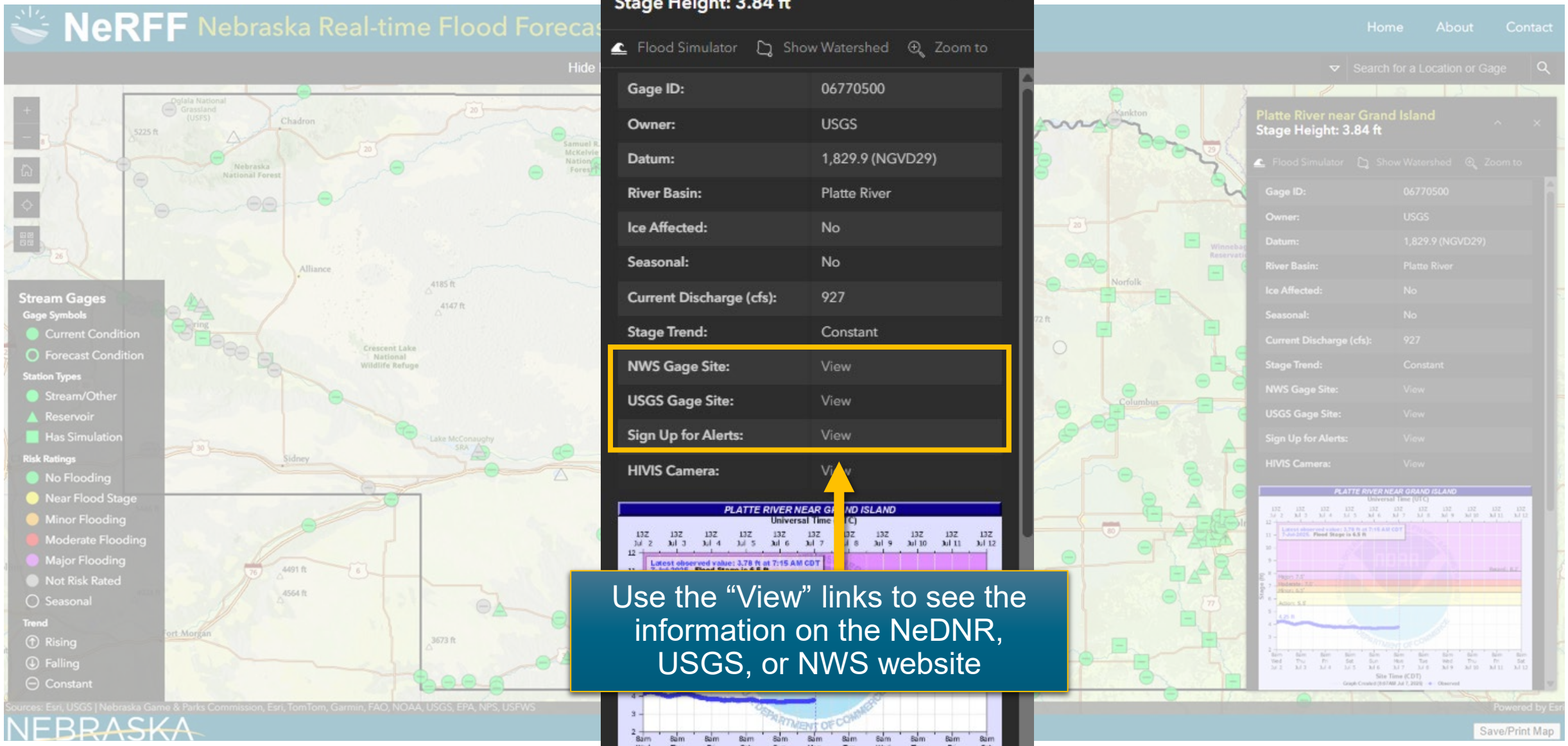
Platte River near Grand Island
Stage Height: 3.84 ft

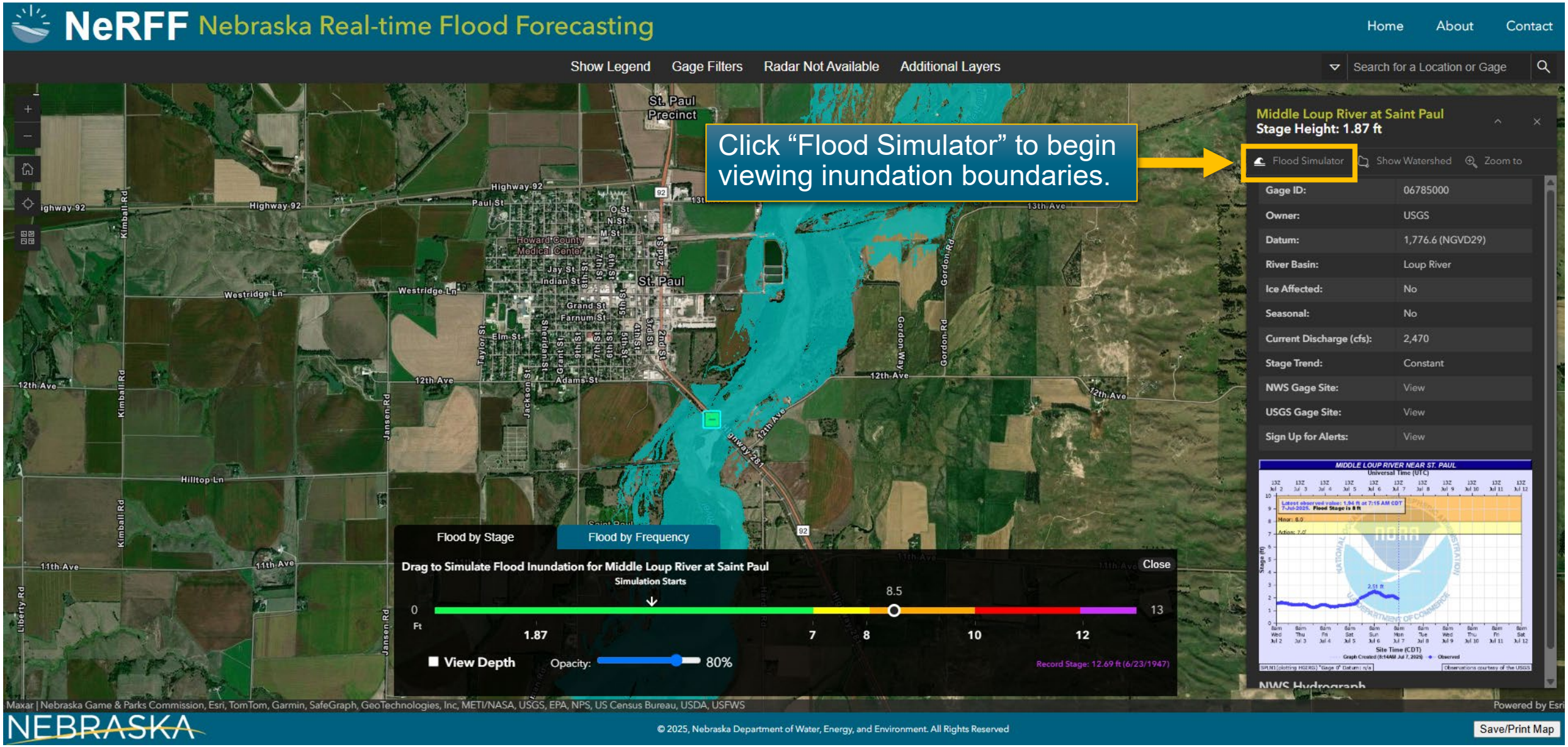
Flood Simulator | Show Watershed | Zoom to

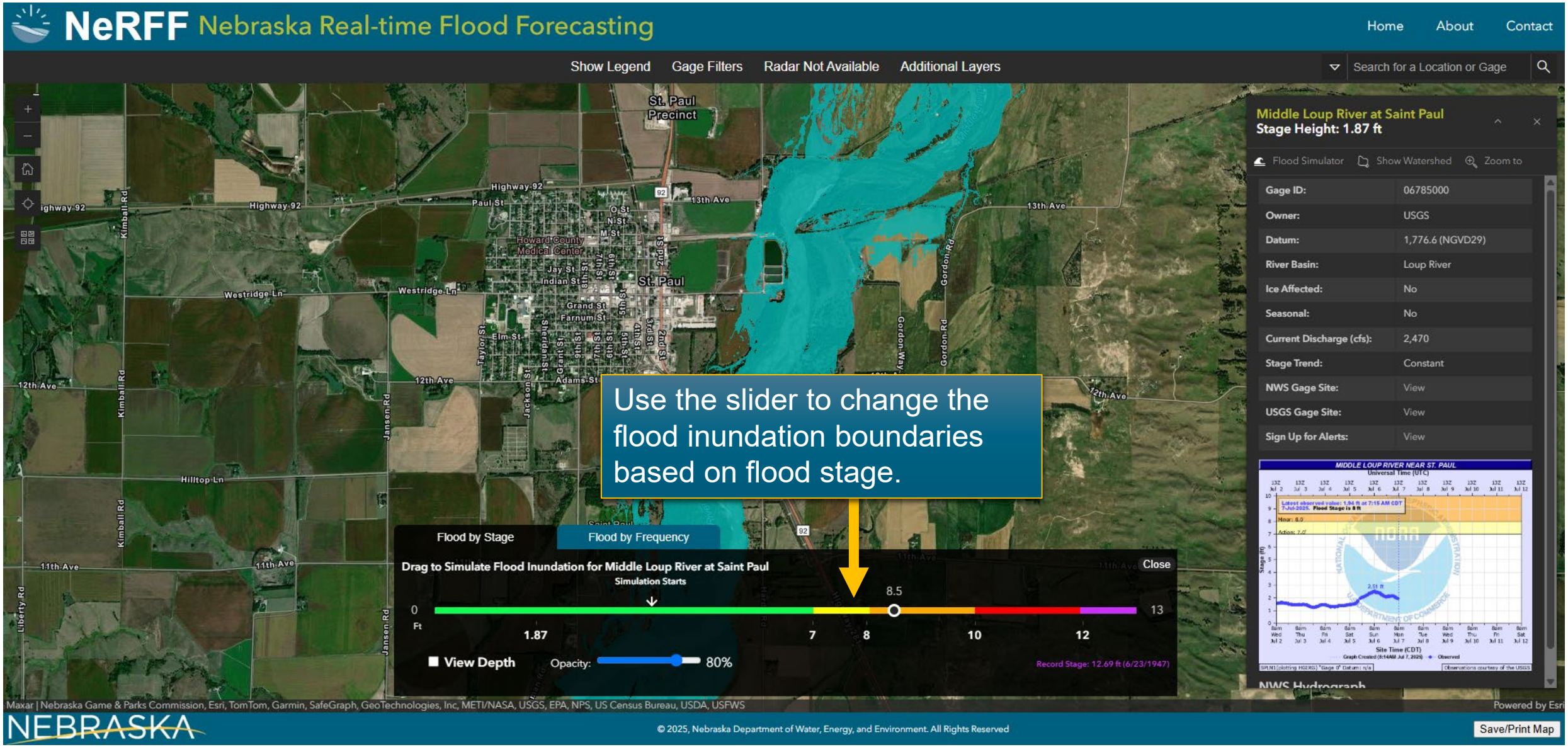
Gage ID:	06770500
Owner:	USGS
Datum:	1,829.9 (NGVD29)
River Basin:	Platte River
Ice Affected:	No
Seasonal:	No
Current Discharge (cfs):	927
Stage Trend:	Constant
NWS Gage Site:	View
USGS Gage Site:	View
Sign Up for Alerts:	View
HIVIS Camera:	View

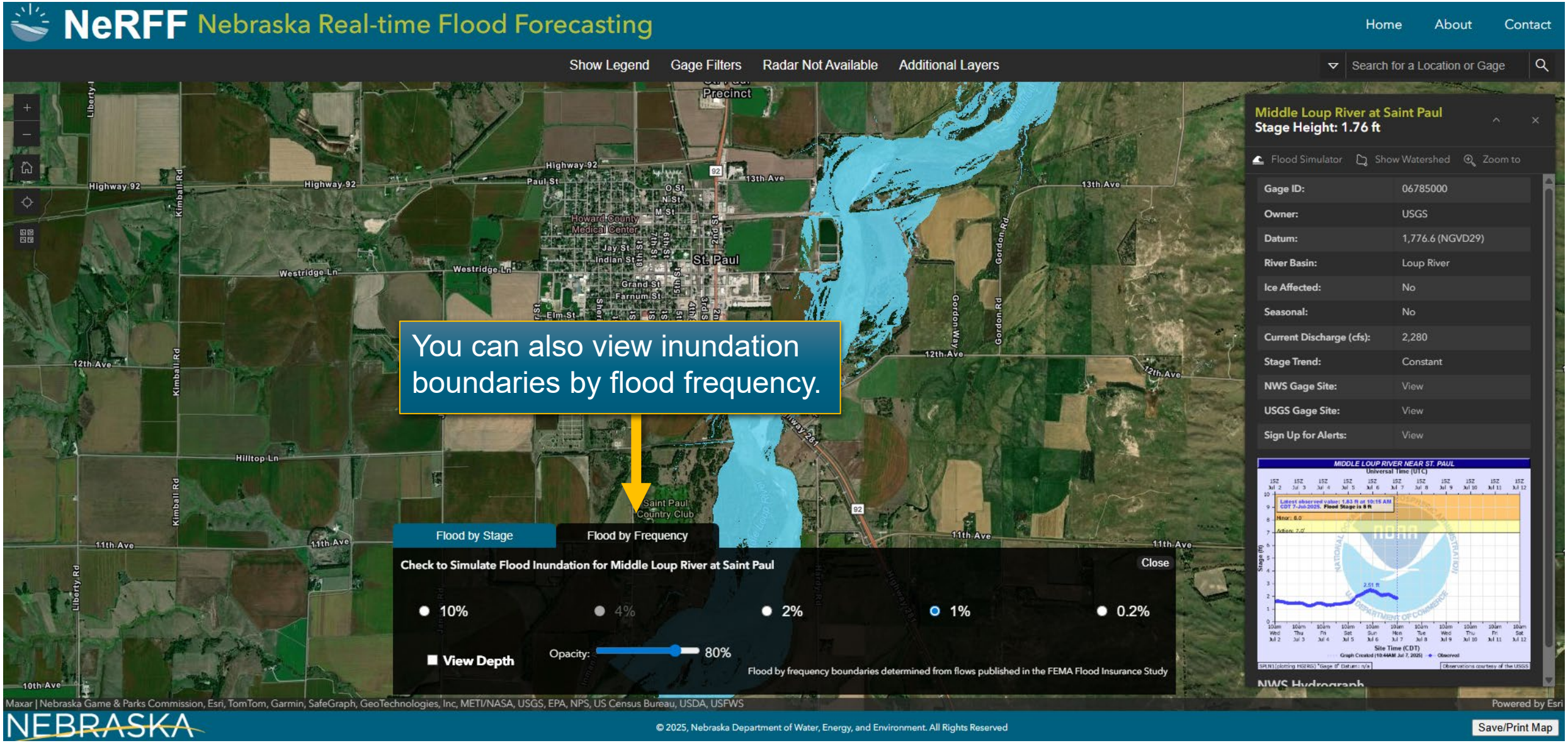


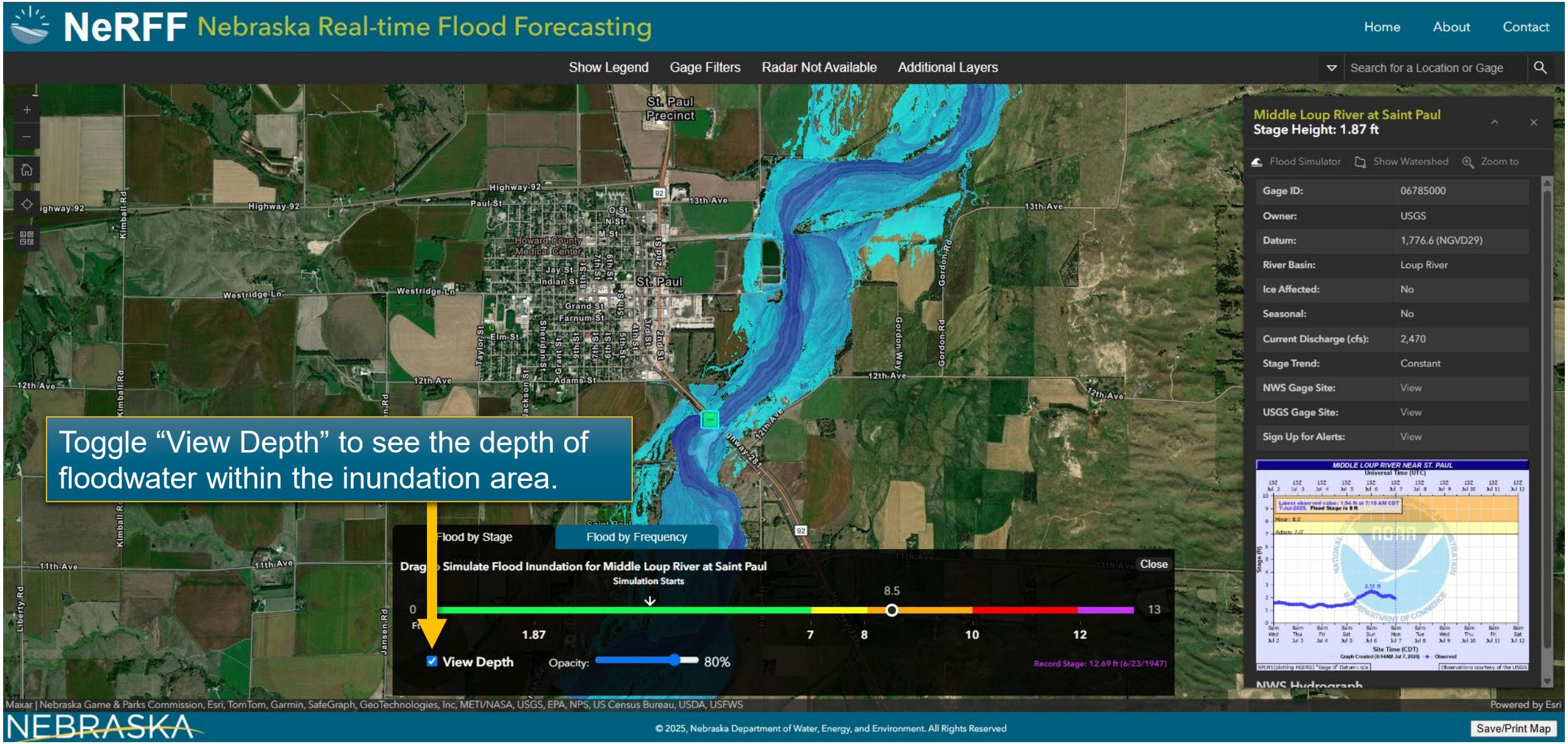


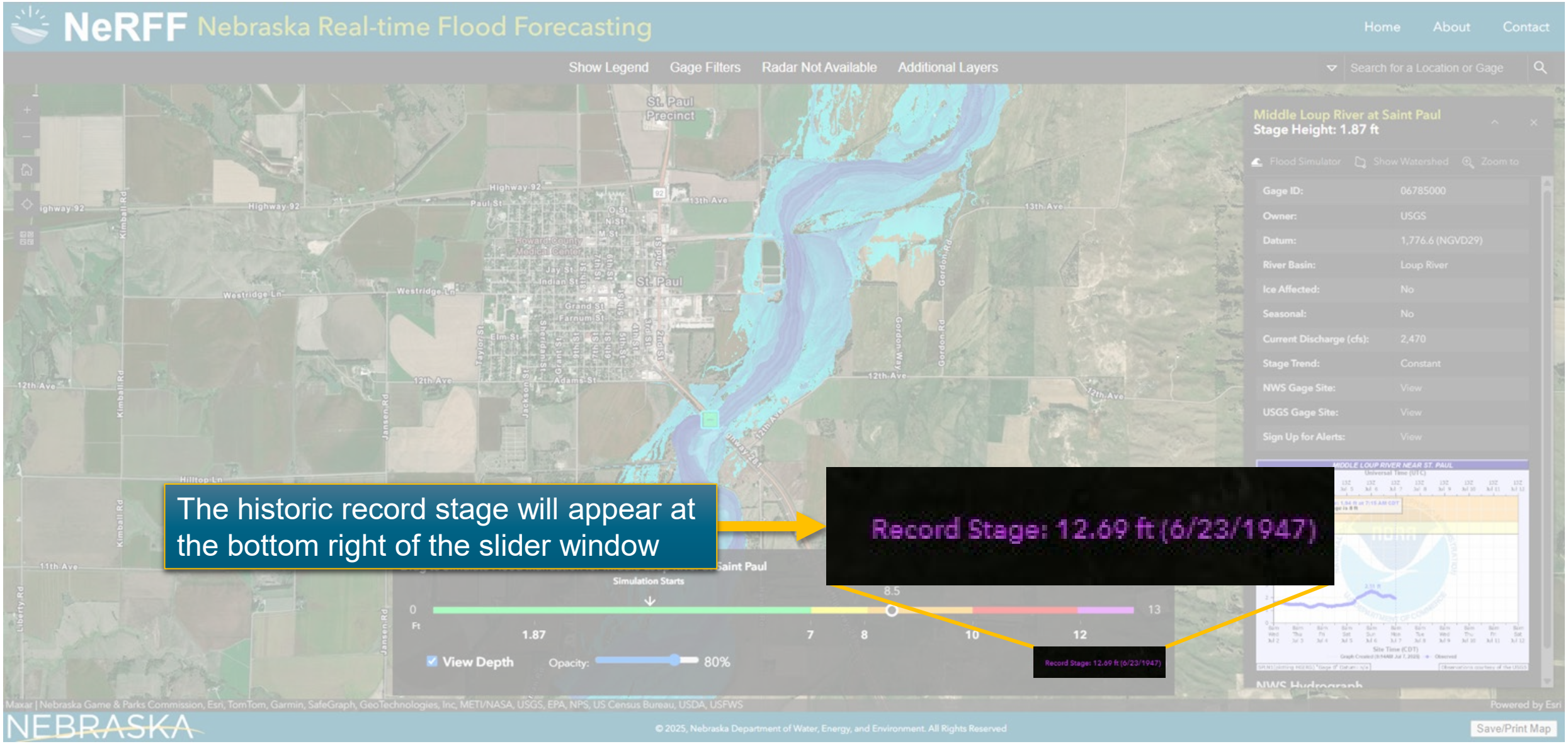

NeRFF Nebraska Real-time Flood Forecas
Home
About
Contact
Search for a Location or Gage
Stream Gages
Gage Symbols
Current Condition
Forecast Condition
Station Types
Stream/Other
Reservoir
Has Simulation
Risk Ratings
No Flooding
Near Flood Stage
Minor Flooding
Moderate Flooding
Major Flooding
Not Risk Rated
Seasonal
Trend
Rising
Falling
Constant
Platte River near Grand Island
Stage Height: 3.84 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06770500
Owner: USGS
Datum: 1,829.9 (NGVD29)
River Basin: Platte River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 927
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
HIVIS Camera:
Use the “View” links to see the information on the NeDNR, USGS, or NWS website
Save/Print Map

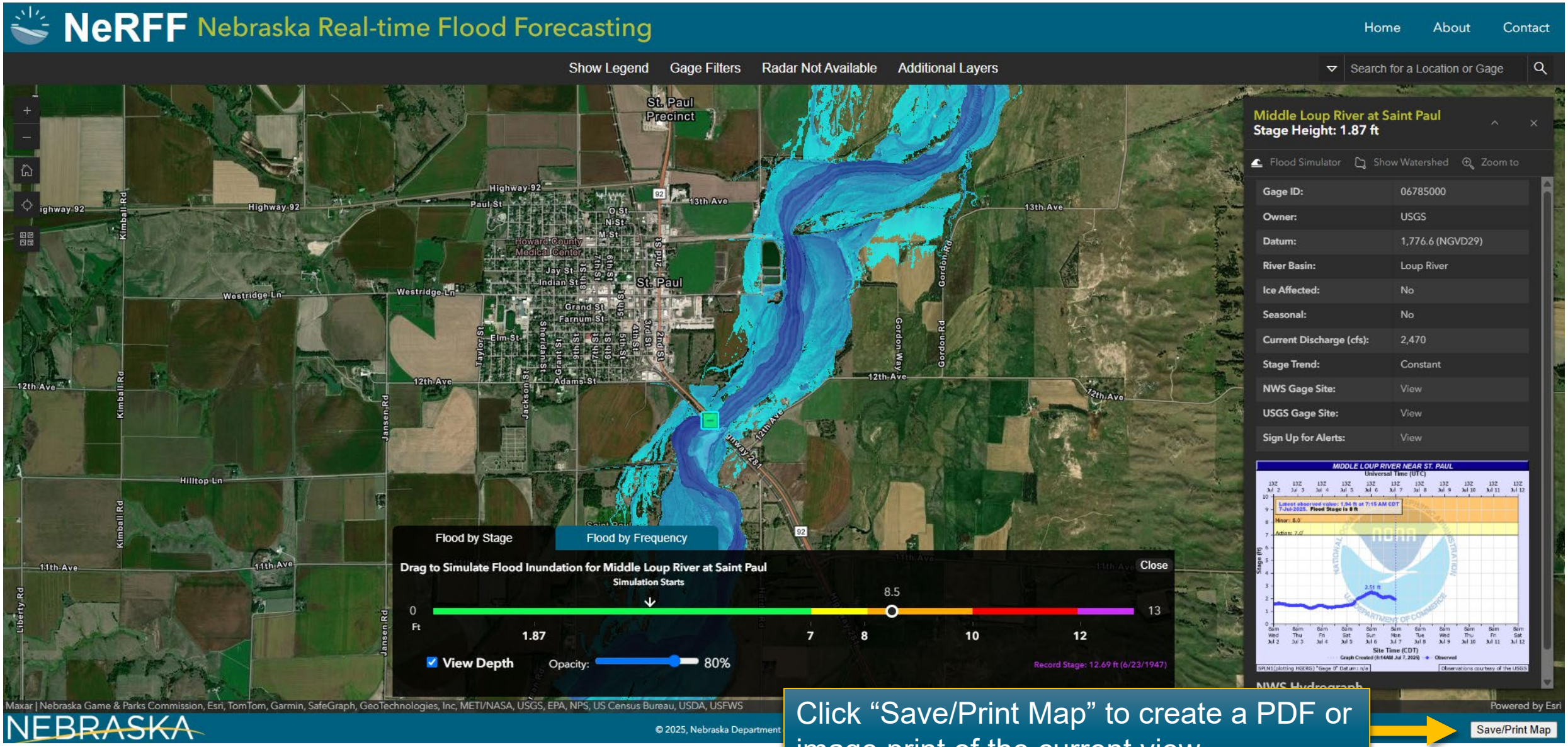

NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Radar Not Available
Additional Layers
Search for a Location or Gage
Click “Flood Simulator” to begin viewing inundation boundaries.
Middle Loup River at Saint Paul
Stage Height: 1.87 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,470
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
MIDDLE LOUP RIVER NEAR ST. PAUL
NWS Hydrograph
Flood by Stage
Flood by Frequency
Drag to Simulate Flood Inundation for Middle Loup River at Saint Paul
Simulation Starts
Close
0
Ft
1.87
7
8
8.5
10
12
13
View Depth
Opacity:
80%
Record Stage: 12.69 ft (6/23/1947)
St. Paul Precinct
St. Paul
Howard County Medical Center
Highway 92
Westridge Ln
12th Ave
11th Ave
Hilltop Ln
Kimball Rd
Jansen Rd
Liberty Rd
Gordon Rd
Gordon Way
Maxar | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map


NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Radar Not Available
Additional Layers
Search for a Location or Gage
Middle Loup River at Saint Paul
Stage Height: 1.87 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,470
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
MIDDLE LOUP RIVER NEAR ST. PAUL
NWS Hydrograph
Use the slider to change the flood inundation boundaries based on flood stage.
Flood by Stage
Flood by Frequency
Drag to Simulate Flood Inundation for Middle Loup River at Saint Paul
Simulation Starts
Close
0
Ft
1.87
7
8
8.5
10
12
13
View Depth
Opacity:
80%
Record Stage: 12.69 ft (6/23/1947)
St. Paul Precinct
St. Paul
Howard County Medical Center
Highway 92
Westridge Ln
12th Ave
11th Ave
Hilltop Ln
Kimball Rd
Jansen Rd
Liberty Rd
Maxar | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

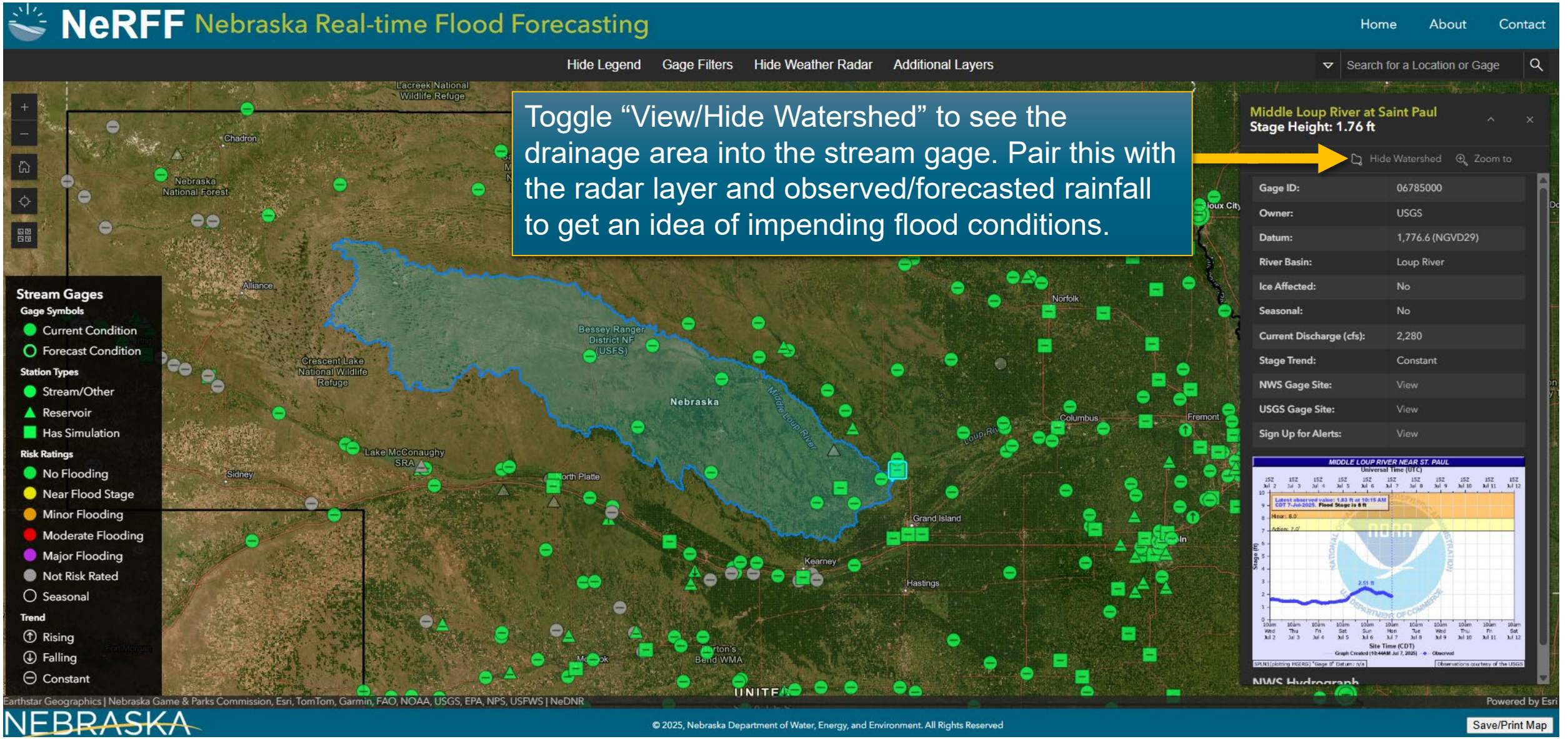

NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Radar Not Available
Additional Layers
Search for a Location or Gage
You can also view inundation boundaries by flood frequency.
Middle Loup River at Saint Paul
Stage Height: 1.76 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,280
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
MIDDLE LOUP RIVER NEAR ST. PAUL
NWS Hydrograph
Flood by Stage
Flood by Frequency
Check to Simulate Flood Inundation for Middle Loup River at Saint Paul
Close
10%
4%
2%
1%
0.2%
View Depth
Opacity: 80%
Flood by frequency boundaries determined from flows published in the FEMA Flood Insurance Study
Maxar | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

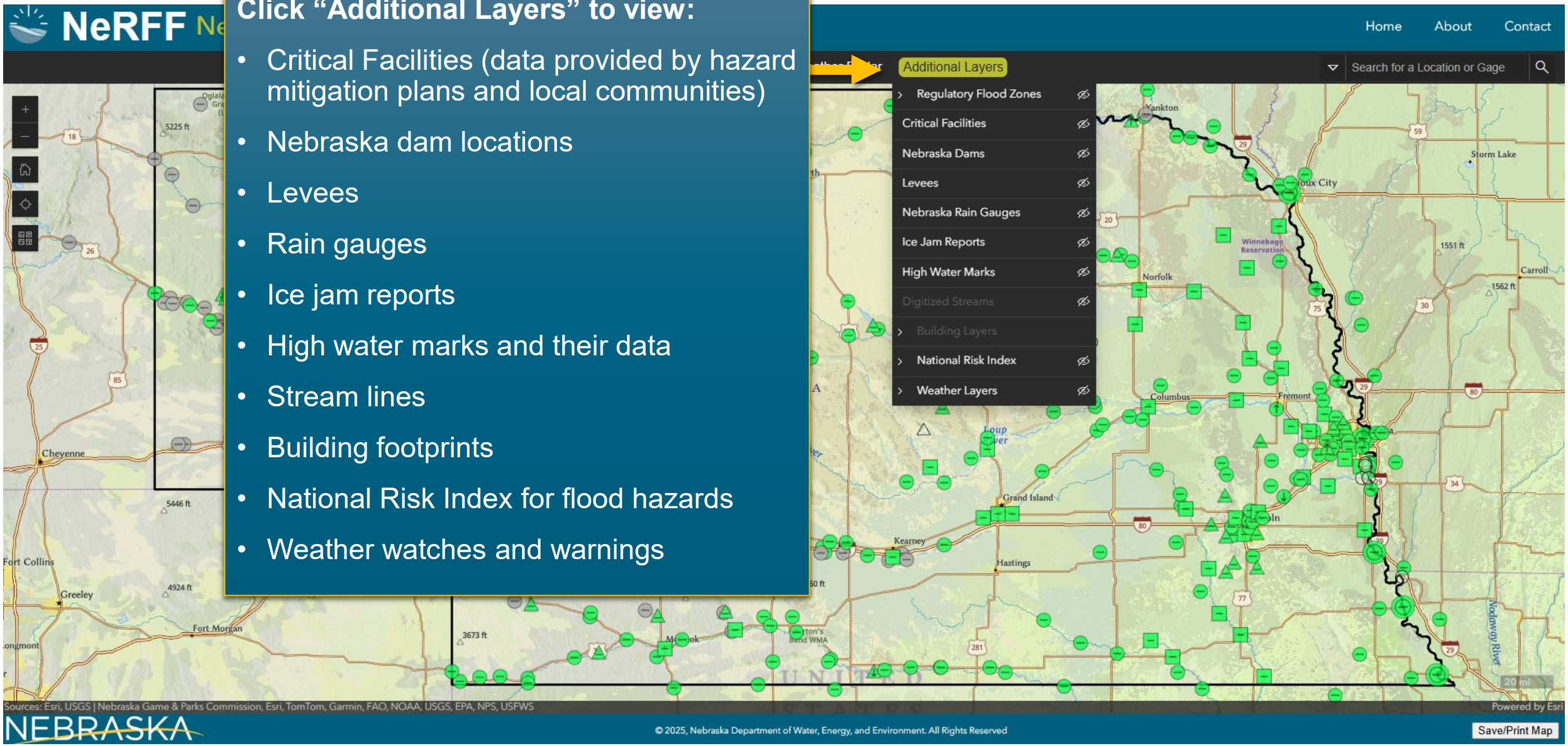

NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Radar Not Available
Additional Layers
Search for a Location or Gage
Middle Loup River at Saint Paul
Stage Height: 1.87 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,470
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
MIDDLE LOUP RIVER NEAR ST. PAUL
Toggle “View Depth” to see the depth of floodwater within the inundation area.
Flood by Stage
Flood by Frequency
Simulate Flood Inundation for Middle Loup River at Saint Paul
Simulation Starts
Close
0
13
8.5
1.87
7
8
10
12
View Depth
Opacity:
80%
Record Stage: 12.69 ft (6/23/1947)
St. Paul Precinct
St. Paul
Howard County Medical Center
Highway 92
Westridge Ln
12th Ave
11th Ave
13th Ave
Kimball Rd
Gordon Rd
Gordon Way
Liberty Rd
Jansen Rd
Maxar | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map


NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Show Legend
Gage Filters
Radar Not Available
Additional Layers
Search for a Location or Gage
Middle Loup River at Saint Paul
Stage Height: 1.87 ft
Flood Simulator
Show Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,470
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
The historic record stage will appear at the bottom right of the slider window
Record Stage: 12.69 ft (6/23/1947)
Simulation Starts
0
Ft
1.87
7
8
8.5
10
12
13
View Depth
Opacity:
80%
Record Stage: 12.69 ft (6/23/1947)
Maxar | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

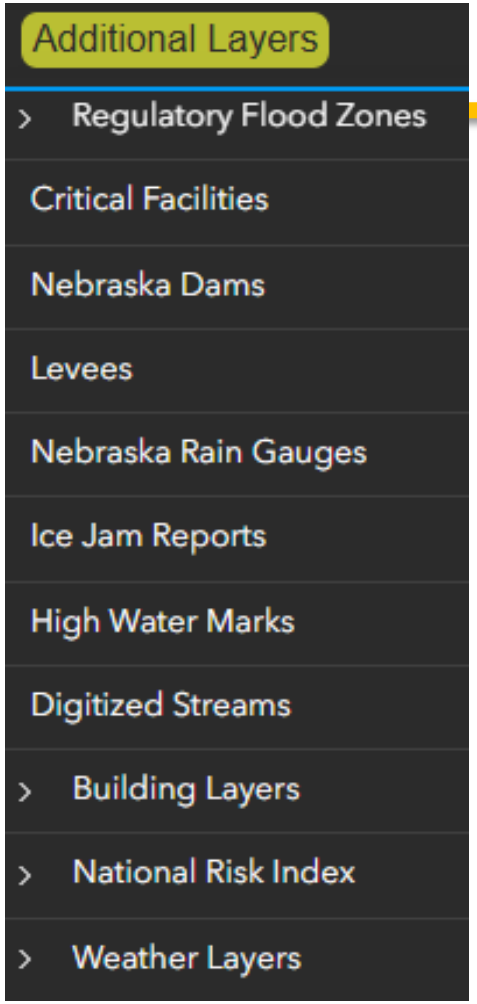


Click “Save/Print Map” to create a PDF or image print of the current view.

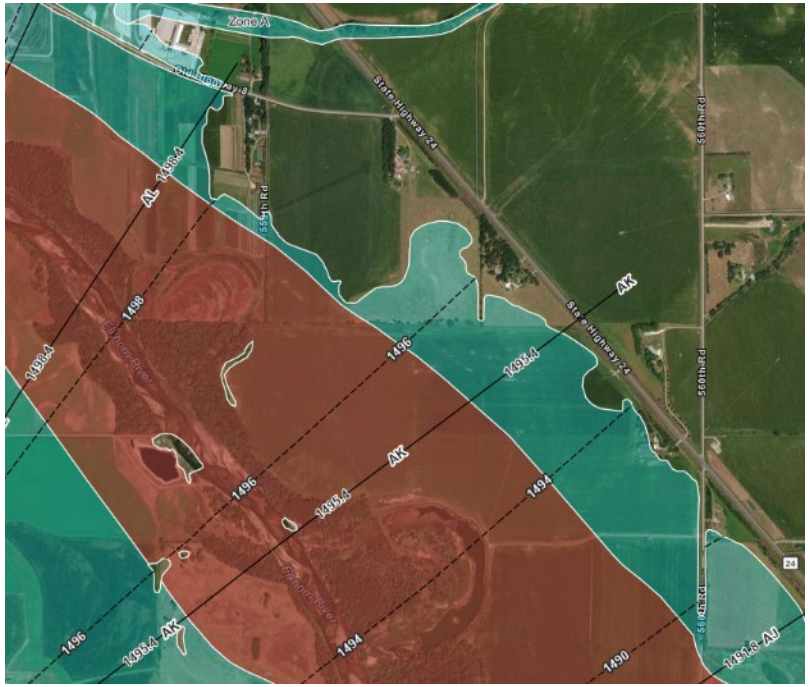

NeRFF Nebraska Real-time Flood Forecasting
Home
About
Contact
Hide Legend
Gage Filters
Hide Weather Radar
Additional Layers
Search for a Location or Gage
Toggle “View/Hide Watershed” to see the drainage area into the stream gage. Pair this with the radar layer and observed/forecasted rainfall to get an idea of impending flood conditions.
Middle Loup River at Saint Paul
Stage Height: 1.76 ft
Hide Watershed
Zoom to
Gage ID: 06785000
Owner: USGS
Datum: 1,776.6 (NGVD29)
River Basin: Loup River
Ice Affected: No
Seasonal: No
Current Discharge (cfs): 2,280
Stage Trend: Constant
NWS Gage Site: View
USGS Gage Site: View
Sign Up for Alerts: View
MIDDLE LOUP RIVER NEAR ST. PAUL
Universal Time (UTC)
Site Time (CDT)
NWS Hydrograph
Stream Gages
Gage Symbols
Current Condition
Forecast Condition
Station Types
Stream/Other
Reservoir
Has Simulation
Risk Ratings
No Flooding
Near Flood Stage
Minor Flooding
Moderate Flooding
Major Flooding
Not Risk Rated
Seasonal
Trend
Rising
Falling
Constant
Lacreek National Wildlife Refuge
Chadron
Nebraska National Forest
Alliance
Crescent Lake National Wildlife Refuge
Bessey Ranger District NF (USFS)
Nebraska
Middle Loup River
Lake McConaughy SRA
Sidney
North Platte
Kearney
Grand Island
Hastings
Norfolk
Columbus
Fremont
Burton's Bend WMA
Earthstar Geographics | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS | NeDNR
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

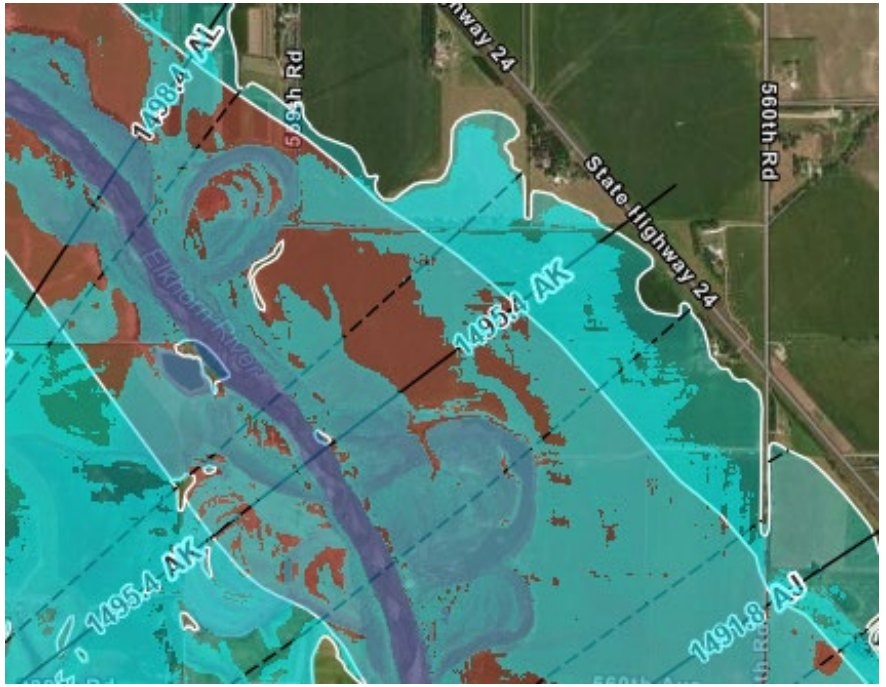

NeRFF
Home
About
Contact
Additional Layers
Search for a Location or Gage
Regulatory Flood Zones
Critical Facilities
Nebraska Dams
Levees
Nebraska Rain Gauges
Ice Jam Reports
High Water Marks
Digitized Streams
Building Layers
National Risk Index
Weather Layers
Click “Additional Layers” to view:
• Critical Facilities (data provided by hazard mitigation plans and local communities)
• Nebraska dam locations
• Levees
• Rain gauges
• Ice jam reports
• High water marks and their data
• Stream lines
• Building footprints
• National Risk Index for flood hazards
• Weather watches and warnings
Sources: Esri, USGS | Nebraska Game & Parks Commission, Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, NPS, USFWS
Powered by Esri
NEBRASKA
© 2025, Nebraska Department of Water, Energy, and Environment. All Rights Reserved
Save/Print Map

Additional Layers

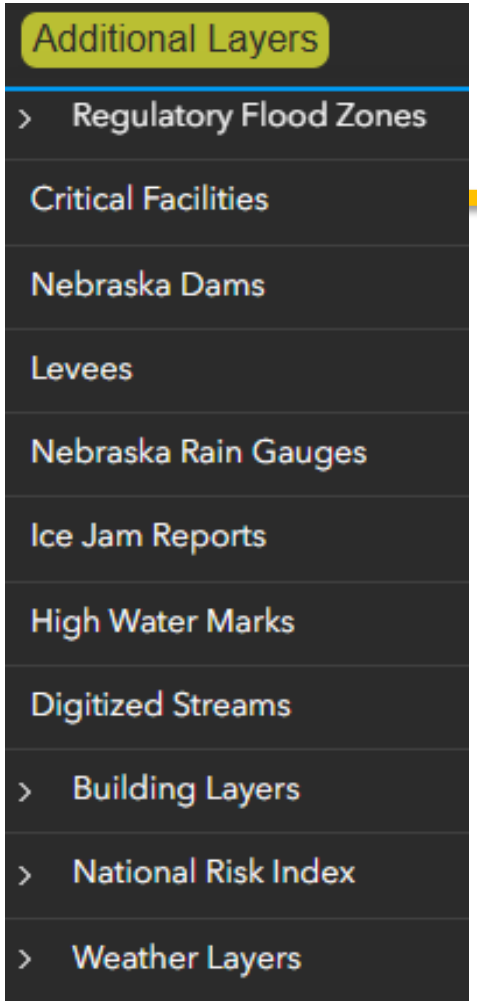


Regulatory Flood Zones – View regulatory flood hazard areas, similar to the interactive floodplain map. These can be activated with inundation boundaries to compare.



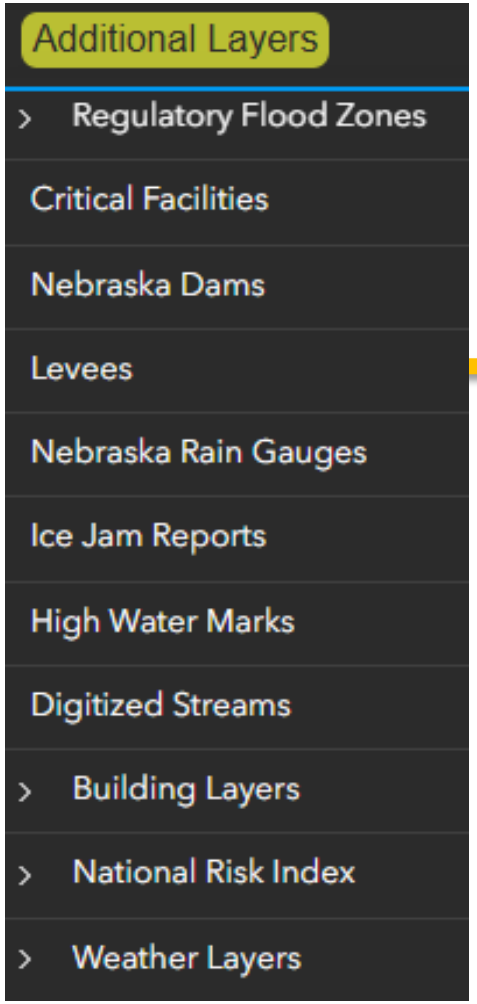


Additional Layers

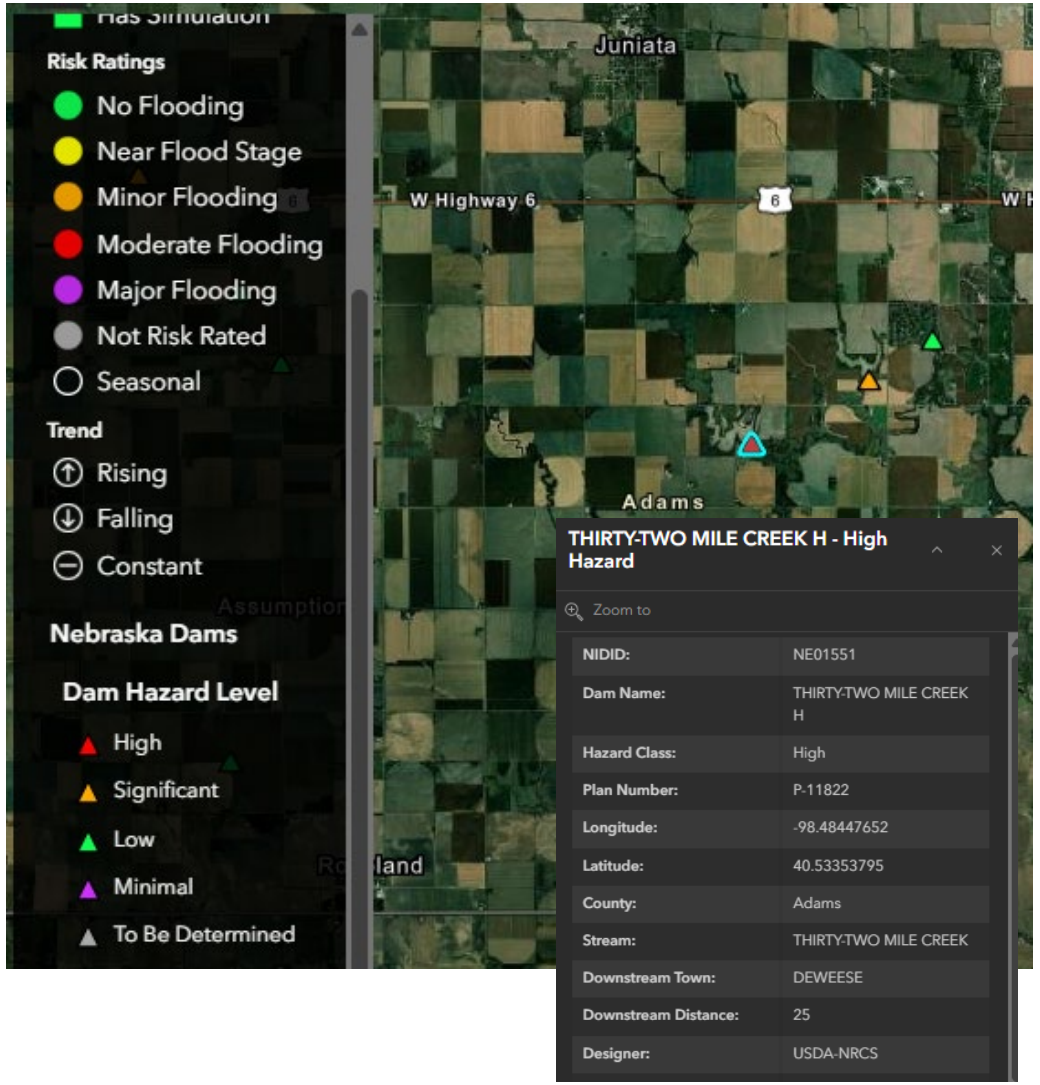


Critical Facilities – Displays the location of critical facilities identified in local hazard mitigation plans or by emergency management offices

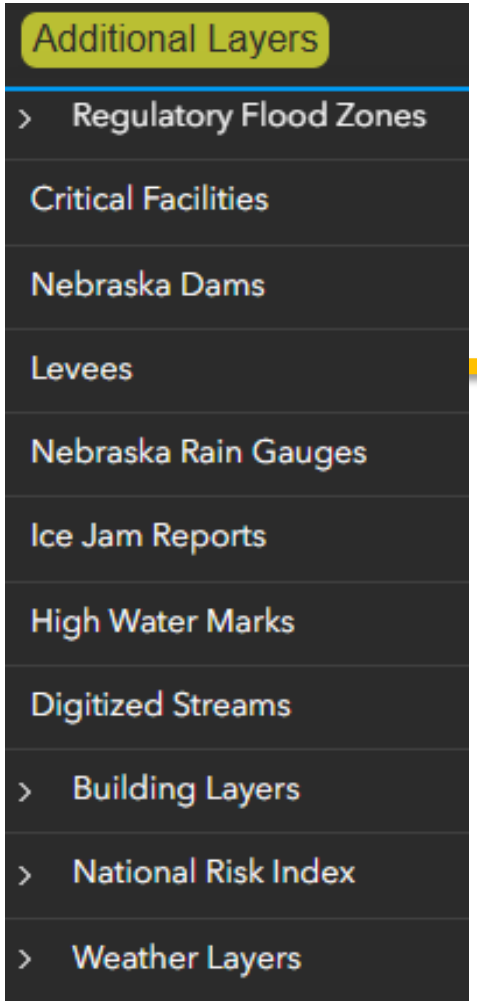
Additional Layers



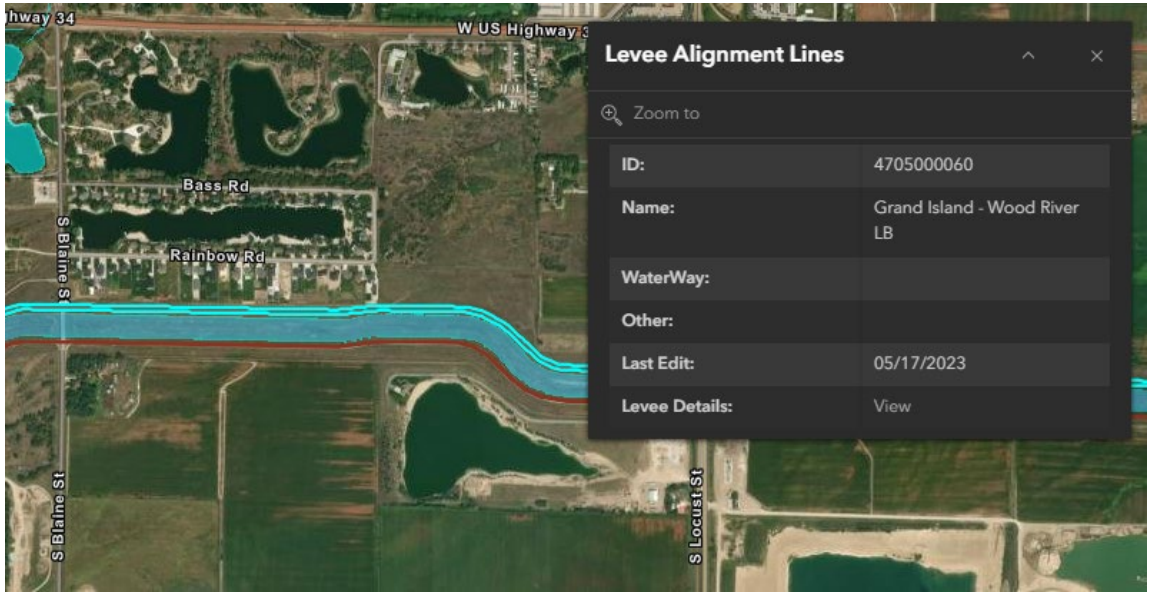
Nebraska Dams – Displays Nebraska registered dams and their hazard level. Click any point to view more information. Data from the Dam Safety Division.



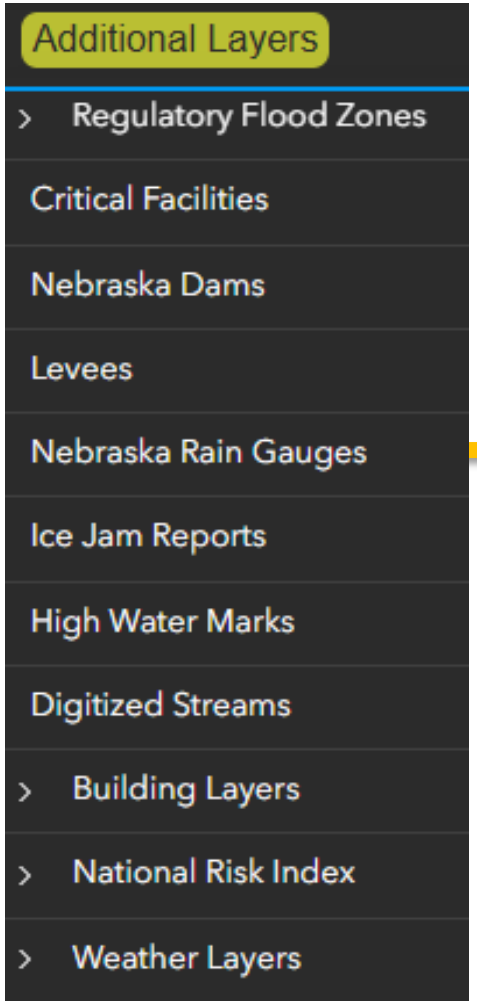
Additional Layers



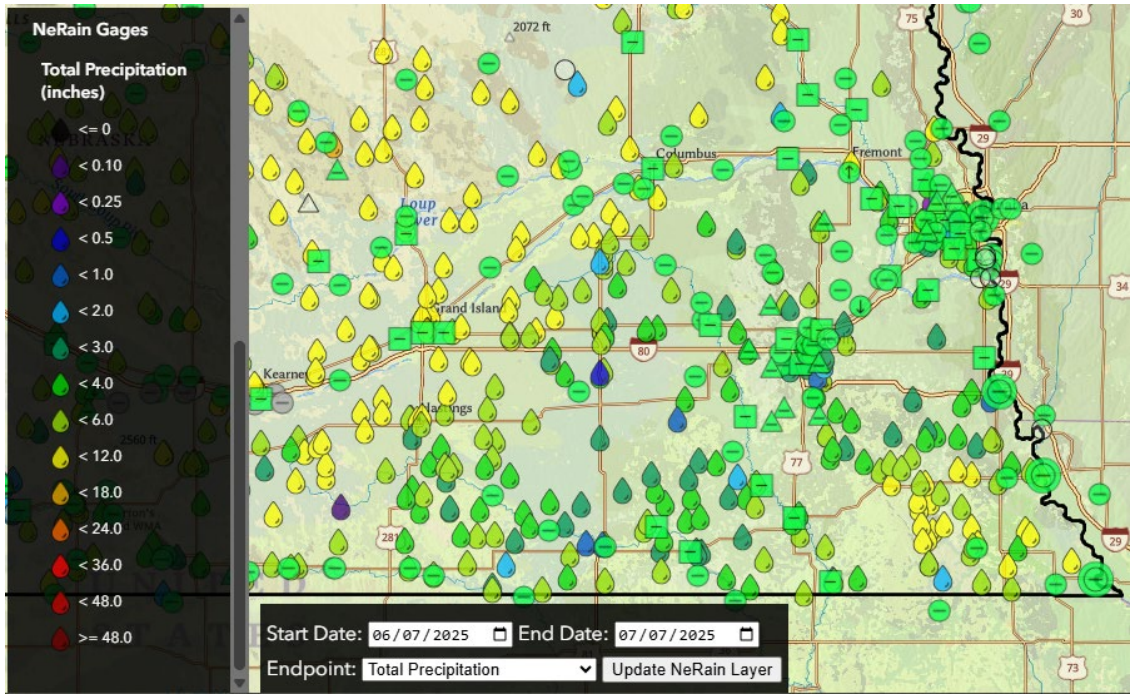
Levees – Accredited levees from the National Levee Database



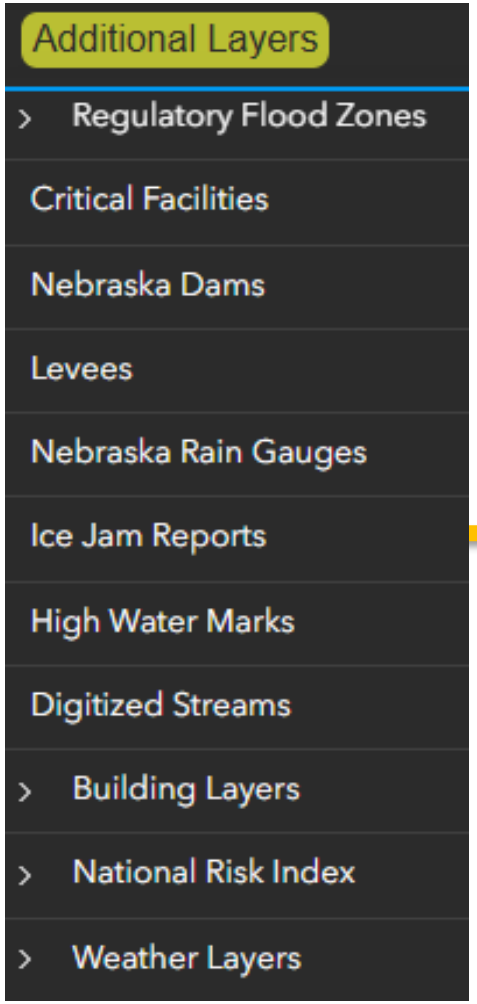
Additional Layers



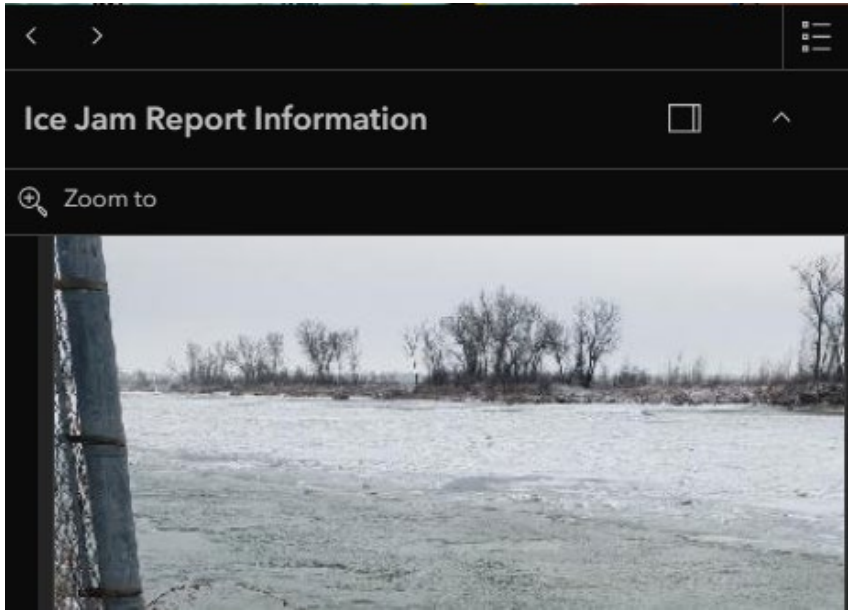
Nebraska Rain Gauges - View data from the NeRAIN rain gage system. Use the filters in the bottom left to adjust the range for data.



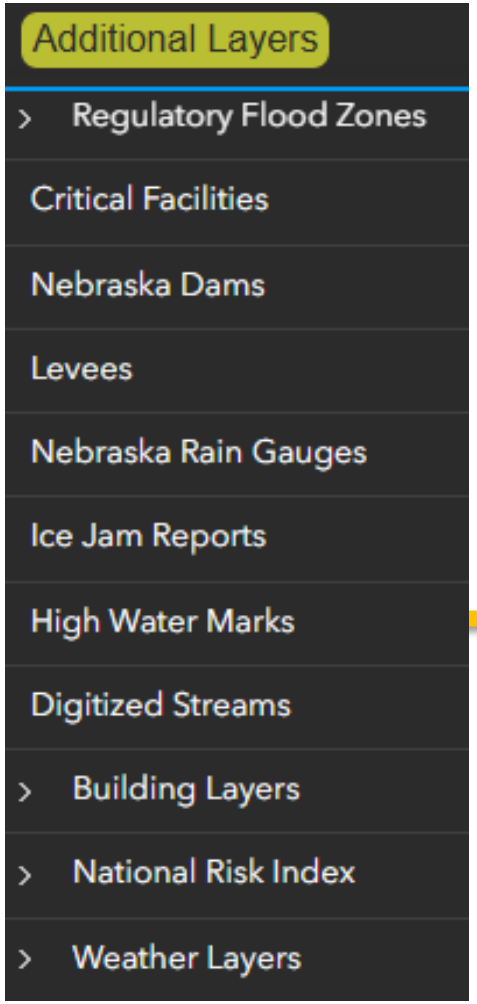
Additional Layers



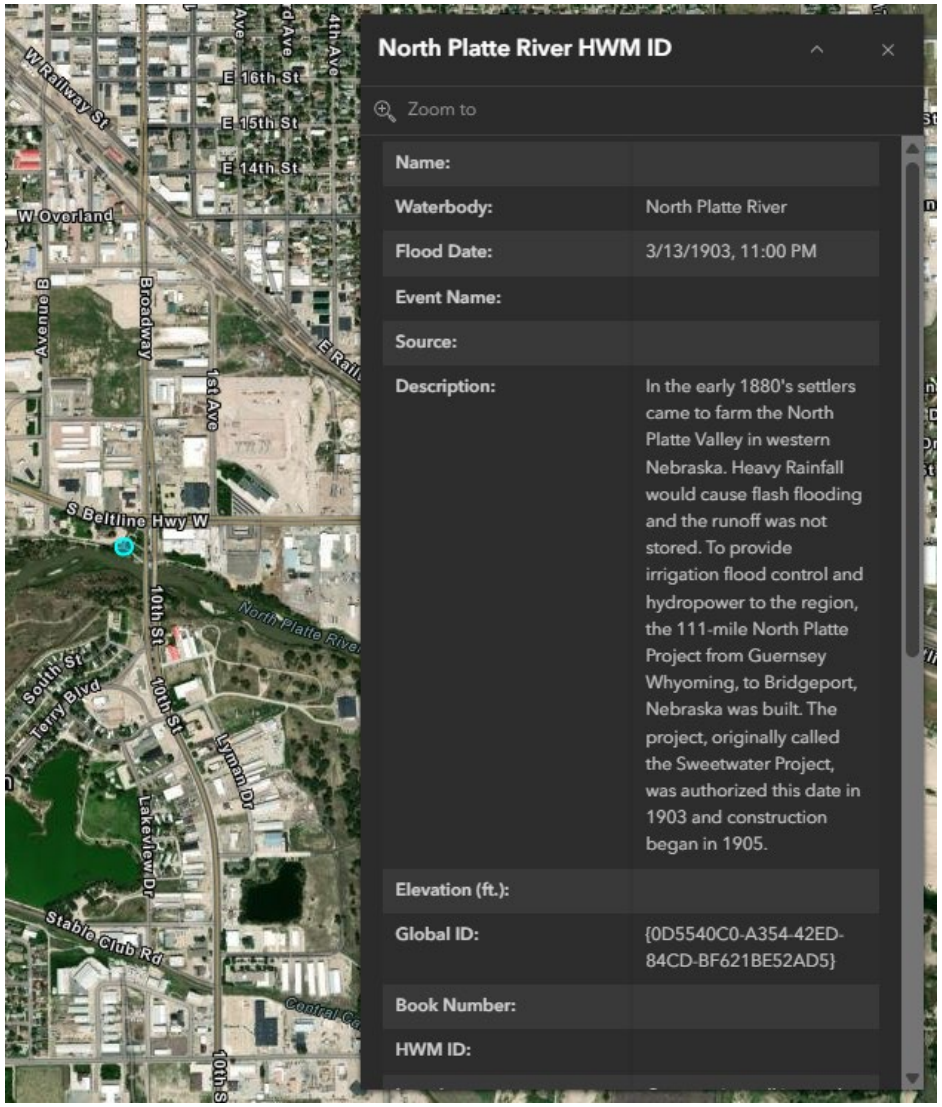
Ice Jam Reports - Use this layer to view recent reports made by certified users of our ice jam reporting page.



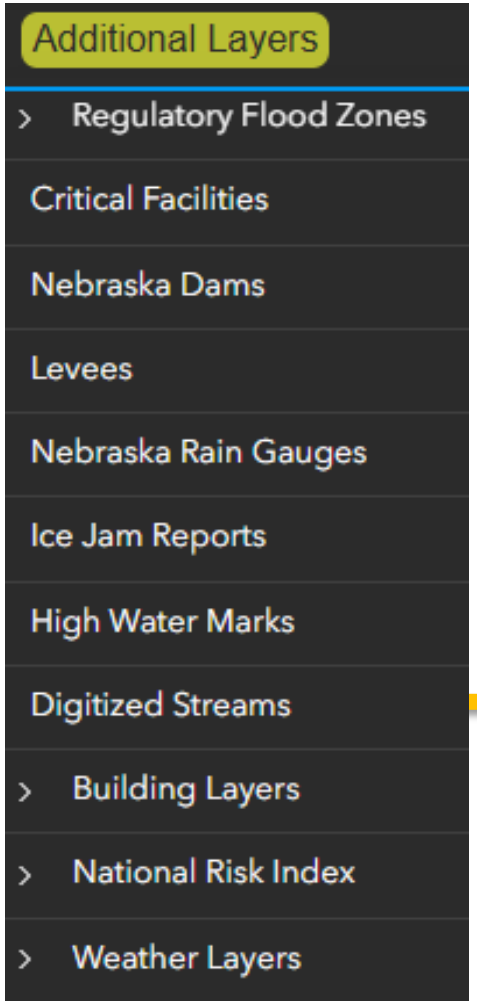
Additional Layers



High Water Marks – Data from recorded and reviewed historical high water marks. Shown as clusters when there are multiple in one location.

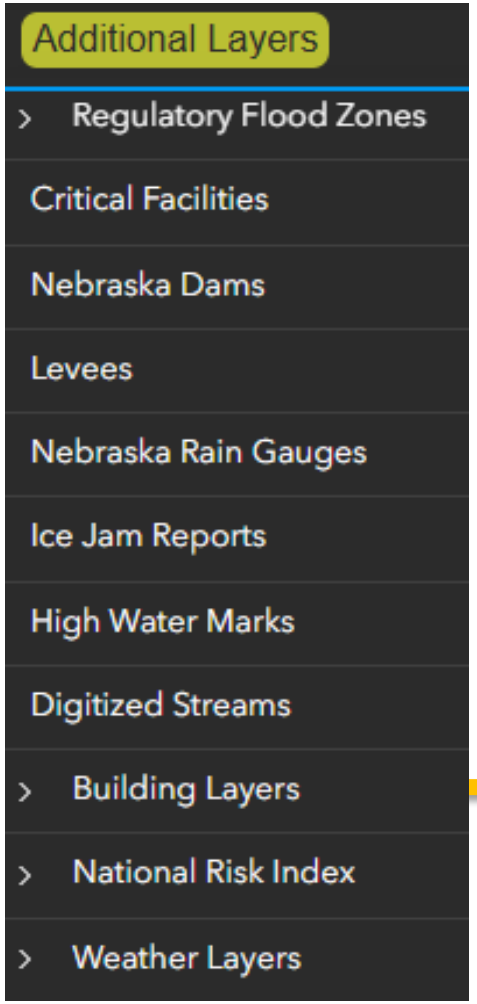


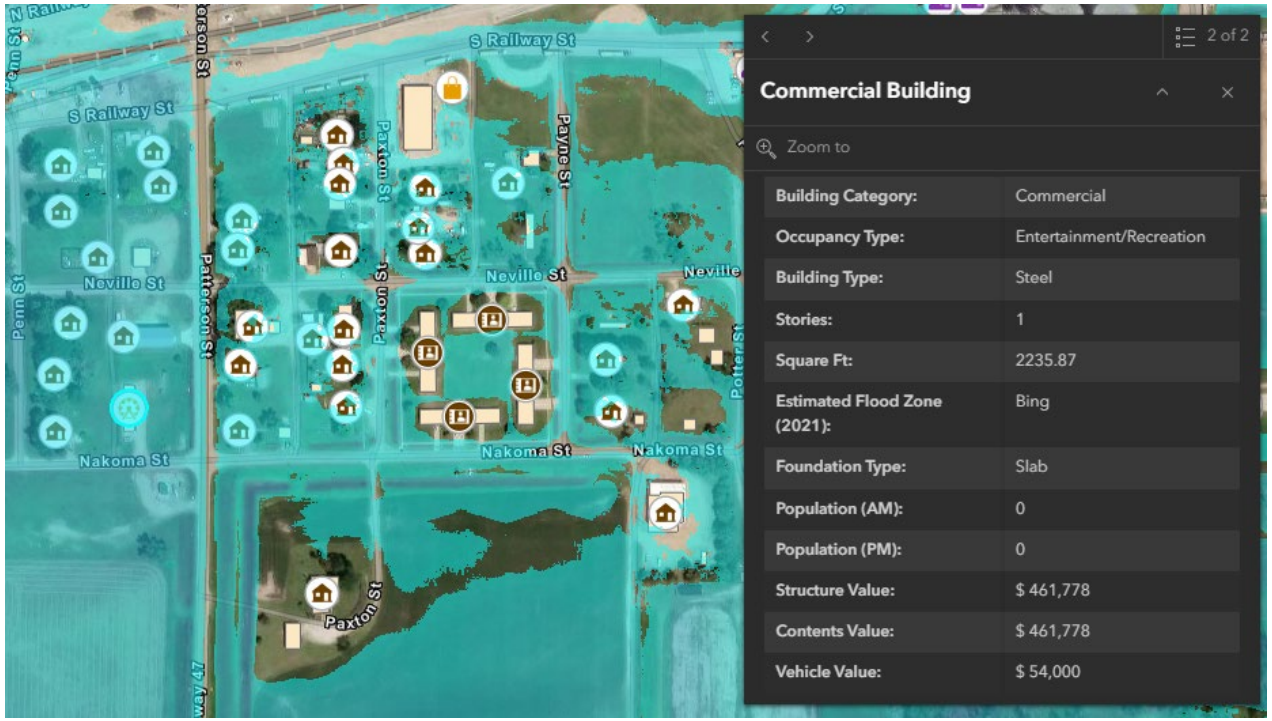
Additional Layers



Digitized Streams – Use this layer to view streambed locations along mapped streams. Data currently under maintenance, so no screenshot.

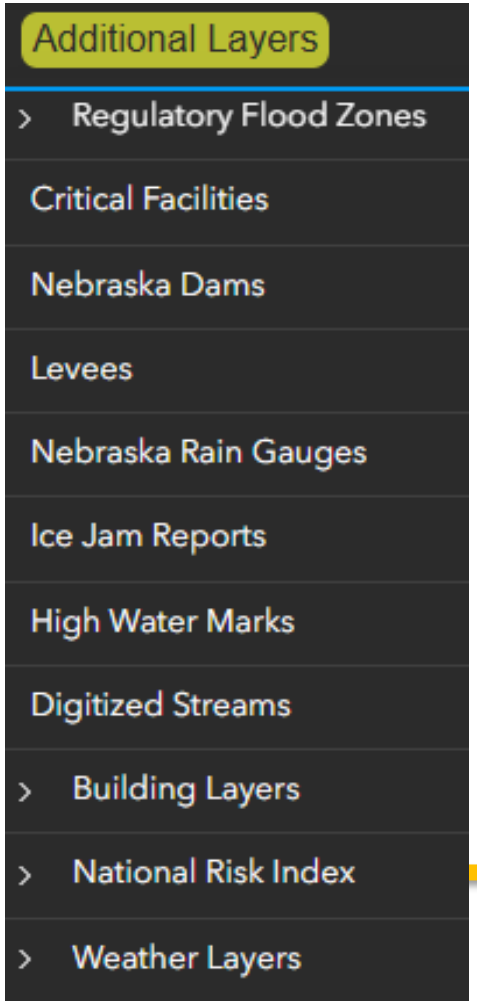
Additional Layers

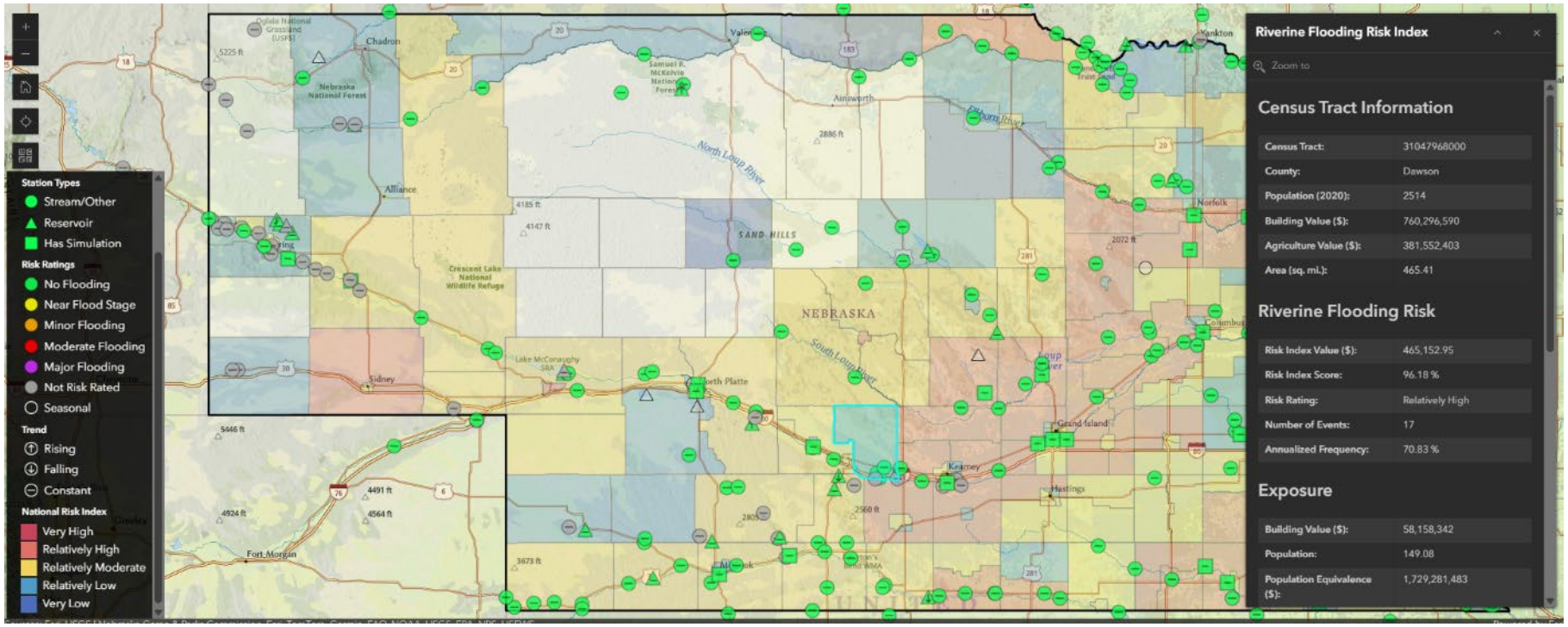




Building Layers – View building footprints and general structure information.

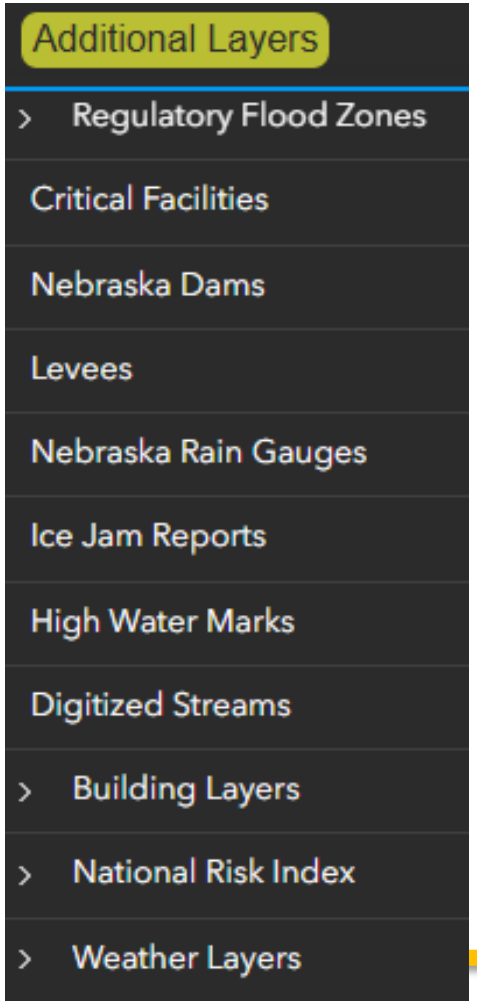
Additional Layers

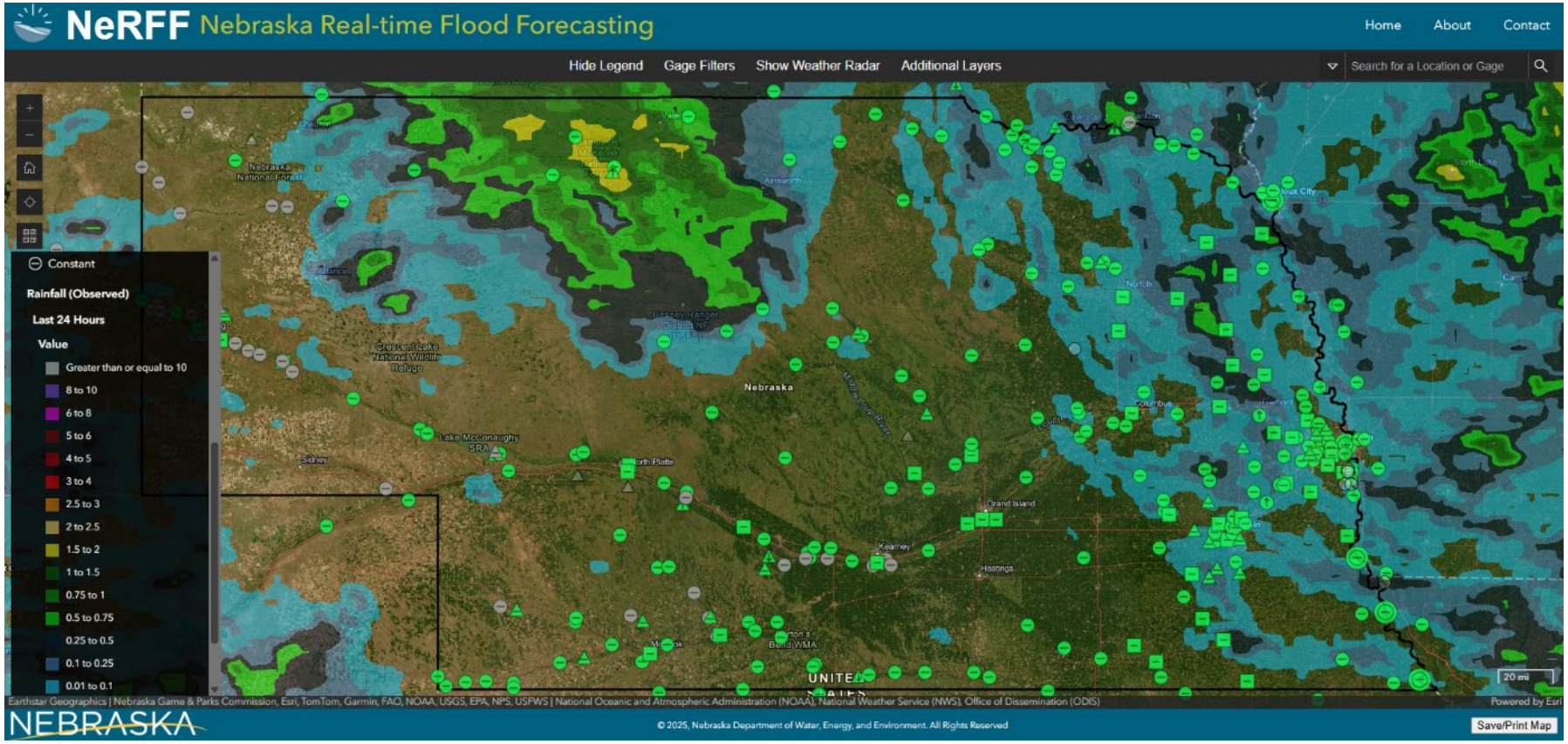




National Risk Index – Dataset and online tool to help illustrate the United States communities most at risk for 18 natural hazards. NeRFF displays riverine flood risk by census tract or county level.

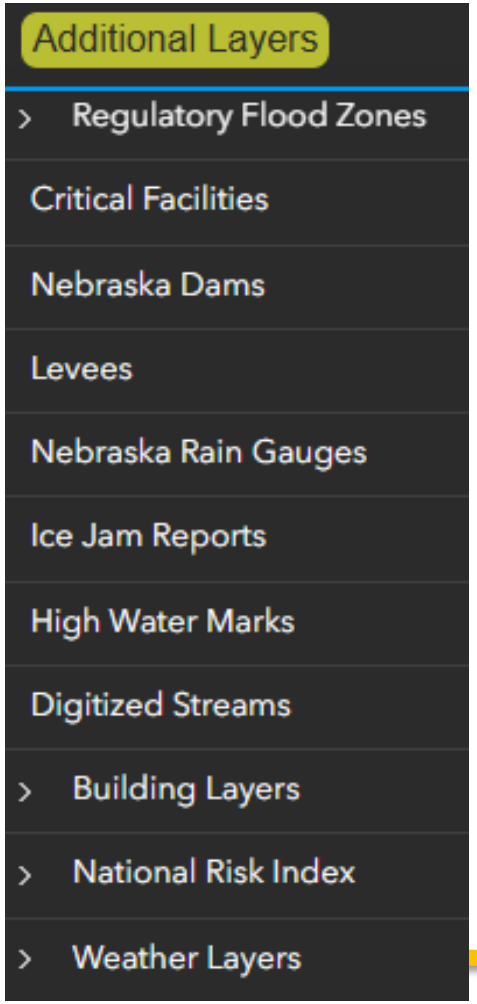
Additional Layers

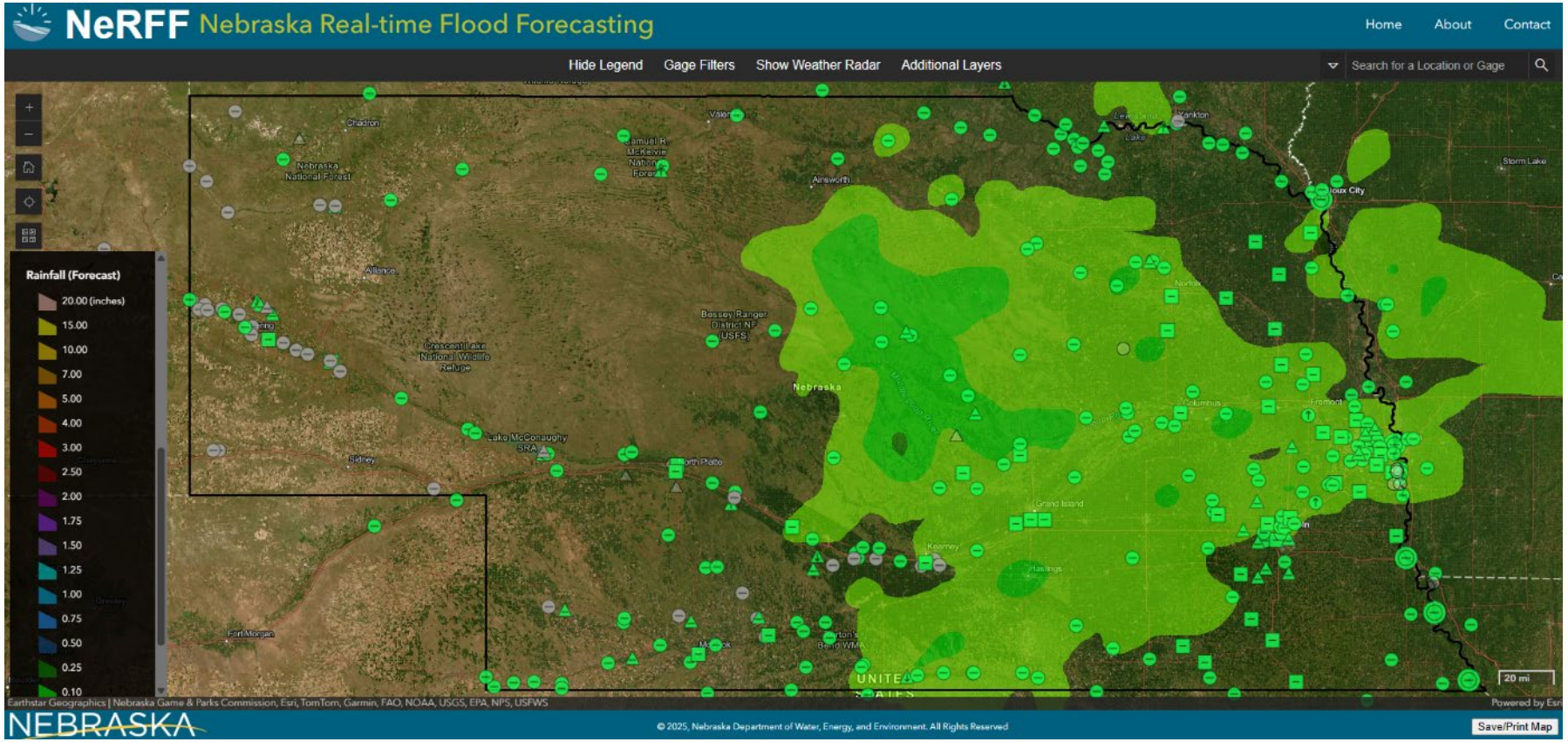




Weather Layers – View watches and warnings, 6 hour observed rainfall, and 6 hour forecasted rainfall

Additional Layers

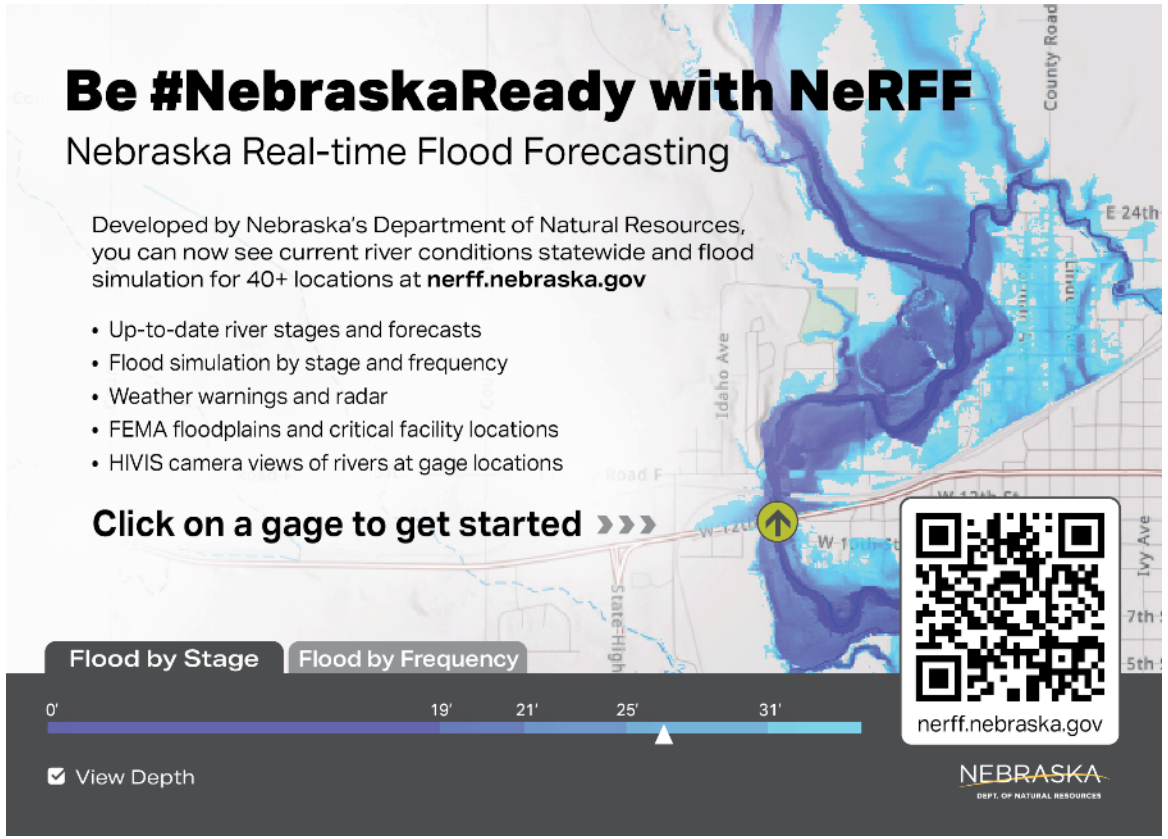




Weather Layers – View watches and warnings, 6 hour observed rainfall, and 6 hour forecasted rainfall

NeRFF Applications

- Imminent flooding
  - Evacuation zones
  - Emergency routes
  - Road closures
  - Emergency flood briefings
- Development planning
- Hazard mitigation planning
- Updated modeling for local officials
- Flood emergency tabletop exercises
- Outreach events



Future Plans for NeRFF

- Plan to add 2-3 sites per year
- Leverage the National Water Model to add ungaged sites
- Update critical facilities data
- Add damage assessment data for structures

Questions?

Elijah Kaufman, CFM
elijah.kaufman@nebraska.gov
402-471-0640

Anna Crist, CFM
anna.crist@nebraska.gov
402-471-0585

Jamie Reinke, PE, CFM
jamie.reinke@nebraska.gov
402-471-3957

Mercy Kipenda, CFM
mercy.kipenda@nebraska.gov
402-471-3947

Michele York
michele.york@nebraska.gov
402-471-1214

Erin Wendt, CFM
erin.wendt@nebraska.gov
402-471-0572

Isabella Bialas, CFM
isabella.bialas@nebraska.gov
402-471-3929

NEBRASKA
DEPT. OF WATER, ENERGY, AND ENVIRONMENT