

Introduction to FAST



FAST - Flood Assessment System for TxDOT

TxDOT Road and Bridge Flood Forecast System

Select an environment below to open FAST products for statewide district review.

Production

Operational production links for statewide district access.

- Live Map
- Live Dashboard
- Lookback
- Historic

Development

Development and diagnostic tools for live, lookback, and historic runs.

- Live
- Lookback
- Historic

Training

Training environment for guided practice and onboarding.

- Training Exercises
- Training Materials

<https://bridges.txdot.kisters.cloud>

How do I access FAST?

Production
Operational production links for statewide district access.

[Live Map](#)

[Live Dashboard](#)

[Lookback](#)

[Historic](#)

FAST - Flood Assessment System for TxDOT

TxDOT Road and Bridge Flood Forecast System

An emergency response tool that helps TxDOT proactively plan for and respond to flood threats.

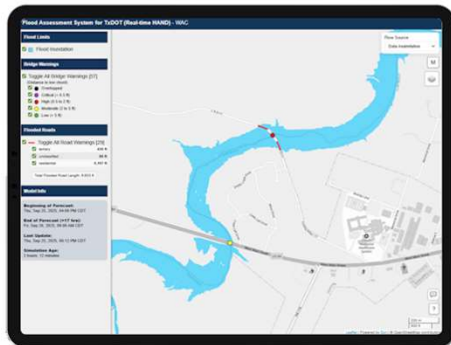
-- Realtime Status Dashboard --

-- Last Revised 2025.09.05 --

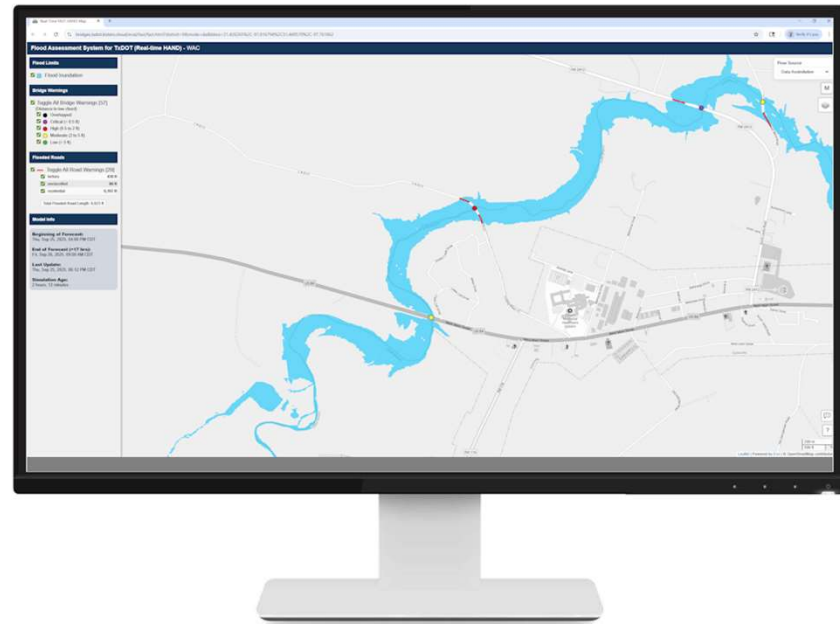
Search:

Dist Number	Abbreviation	Name	Last Update	Bridge Warnings	Road Warnings	Map Link
0	TEX	Texas (Entire State)	0h 58m	407	821	View Map
1	PAR	Paris	0h 0m	2	1	View Map
2	FTW	Fort Worth	1h 0m	16	33	View Map
3	WFS	Wichita Falls	1h 0m	16	92	View Map
4	AMA	Amarillo	0h 0m	1	1	View Map
5	LBB	Lubbock	1h 0m	1	1	View Map
6	ODA	Odessa	1h 0m	1	1	View Map
7	SJT	San Angelo	0h 59m	48	126	View Map
8	ABL	Abilene	0h 59m	56	300	View Map
9	WAC	Waco	1h 0m	18	1	View Map

Devices:



Note: TxDOT staff must not use mobile applications while driving. Always focus on the road and follow all state and agency safety regulations



Navigate the dashboard:

- 1 All columns are sortable
- 2 How long since flood information was updated
- 3 Count of bridge warnings and road warnings impacted by forecasted flooding
- 4 Type to search
- 5 Click to view given row's map

FAST - Flood Assessment System for TxDOT

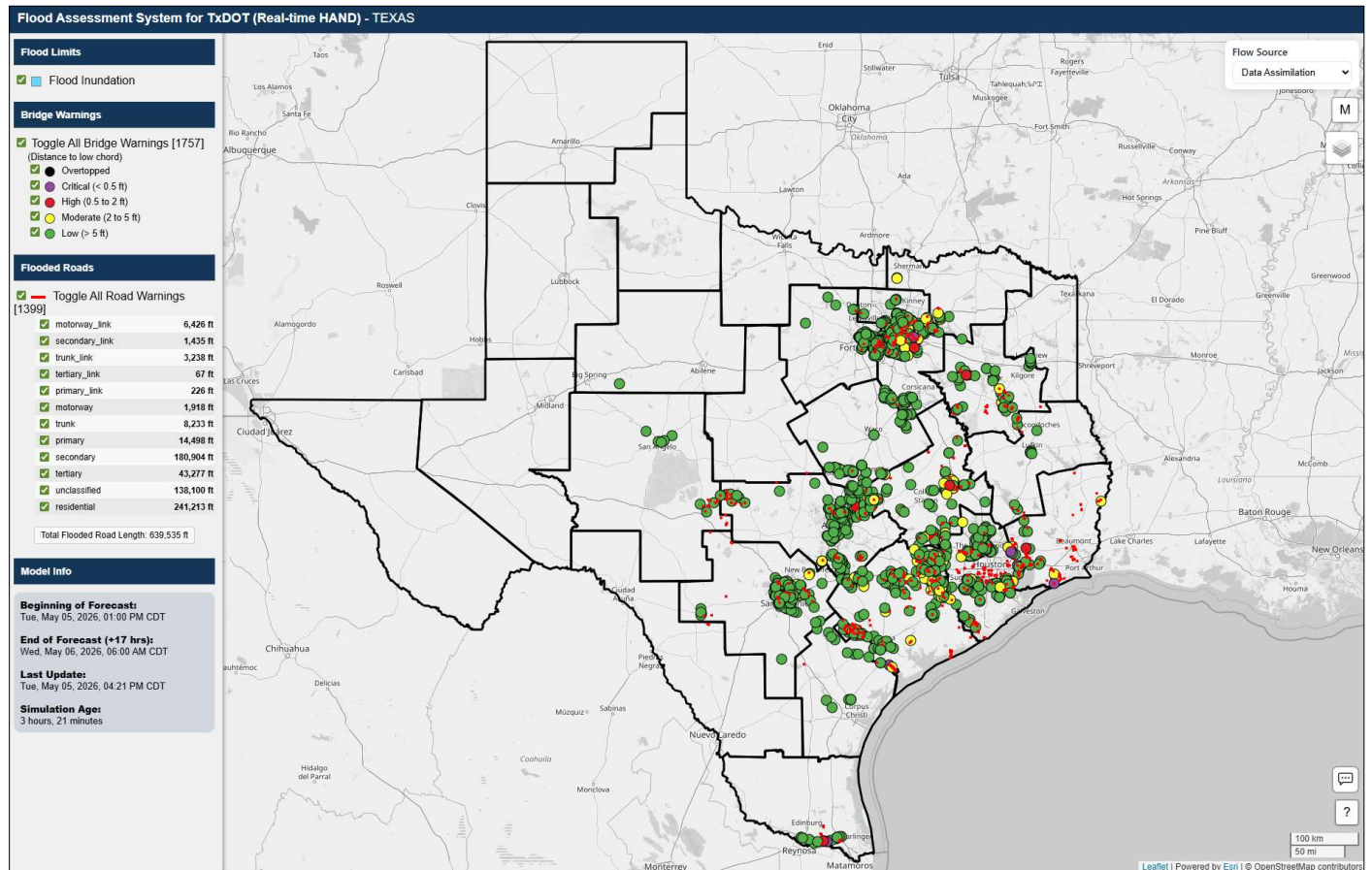
TxDOT Road and Bridge Flood Forecast System

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Search:

Dist Number	Abbreviation	Name	Last Update	Bridge Warnings	Road Warnings	Map Link
0	TEX	Texas (Entire State)	0h 22m	1931	1569	View Map
1	PAR	Paris	0h 30m	13	7	View Map
2	FTW	Fort Worth	0h 29m	167	64	View Map
3	WFS	Wichita Falls	0h 30m	1	1	View Map
4	AMA	Amarillo	0h 29m	1	1	View Map
5	LBB	Lubbock	0h 29m	1	1	View Map

Statewide Map

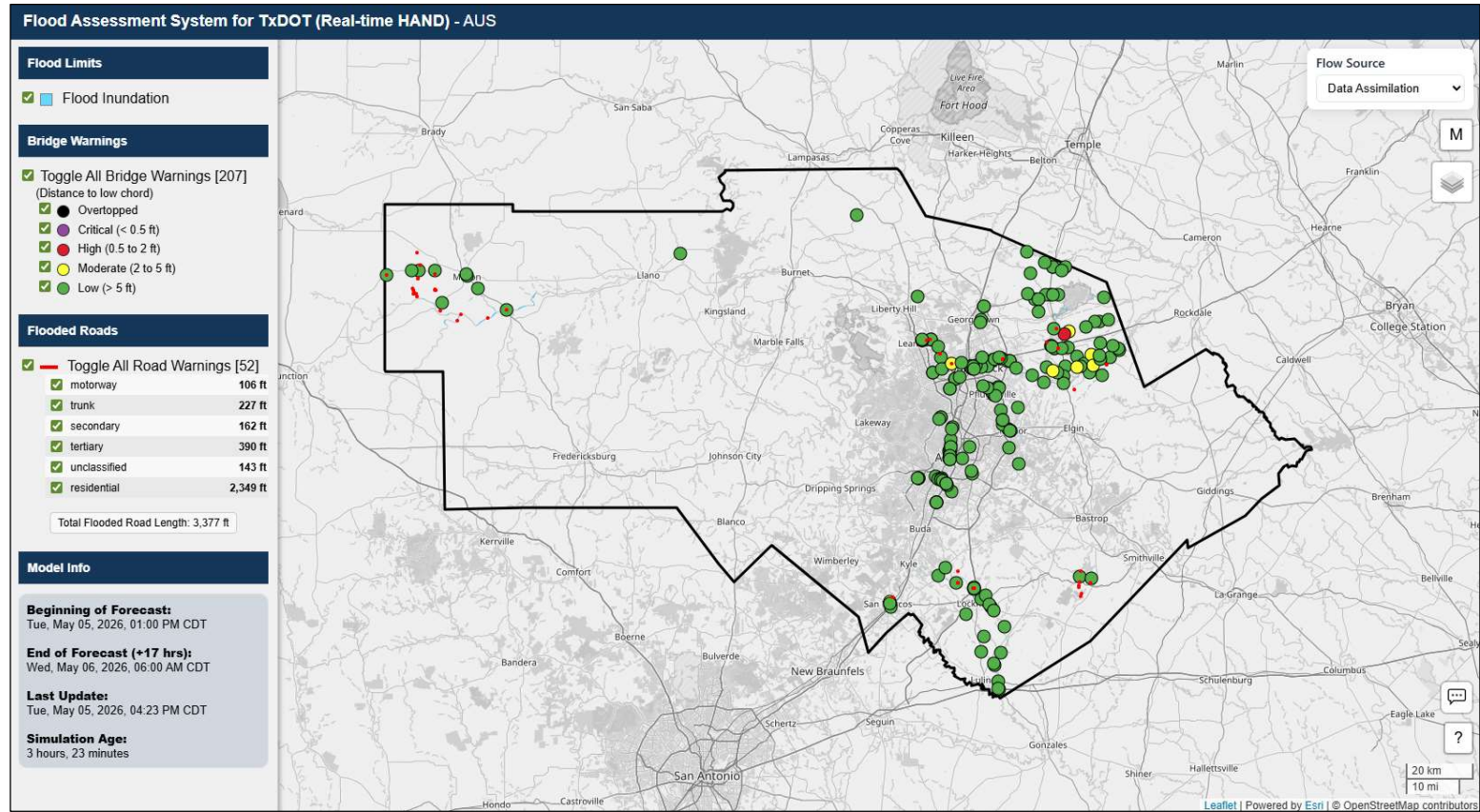


Flood Assessment System for TxDOT (FAST)



Texas Department of Transportation

My district's map



Flood Assessment System for TxDOT (FAST)

Map Options:

1 Flood layers with toggles

Flood Limits

- Flood Inundation

Bridge Warnings

- Toggle All Bridge Warnings [207] (Distance to low chord)
- Overtopped
- Critical (< 0.5 ft)
- High (0.5 to 2 ft)
- Moderate (2 to 5 ft)
- Low (> 5 ft)

Flooded Roads

- Toggle All Road Warnings [52]
- motorway 106 ft
- trunk 227 ft
- secondary 162 ft
- tertiary 390 ft
- unclassified 143 ft
- residential 2,349 ft

Total Flooded Road Length: 3,377 ft

2 Flood forecast model information

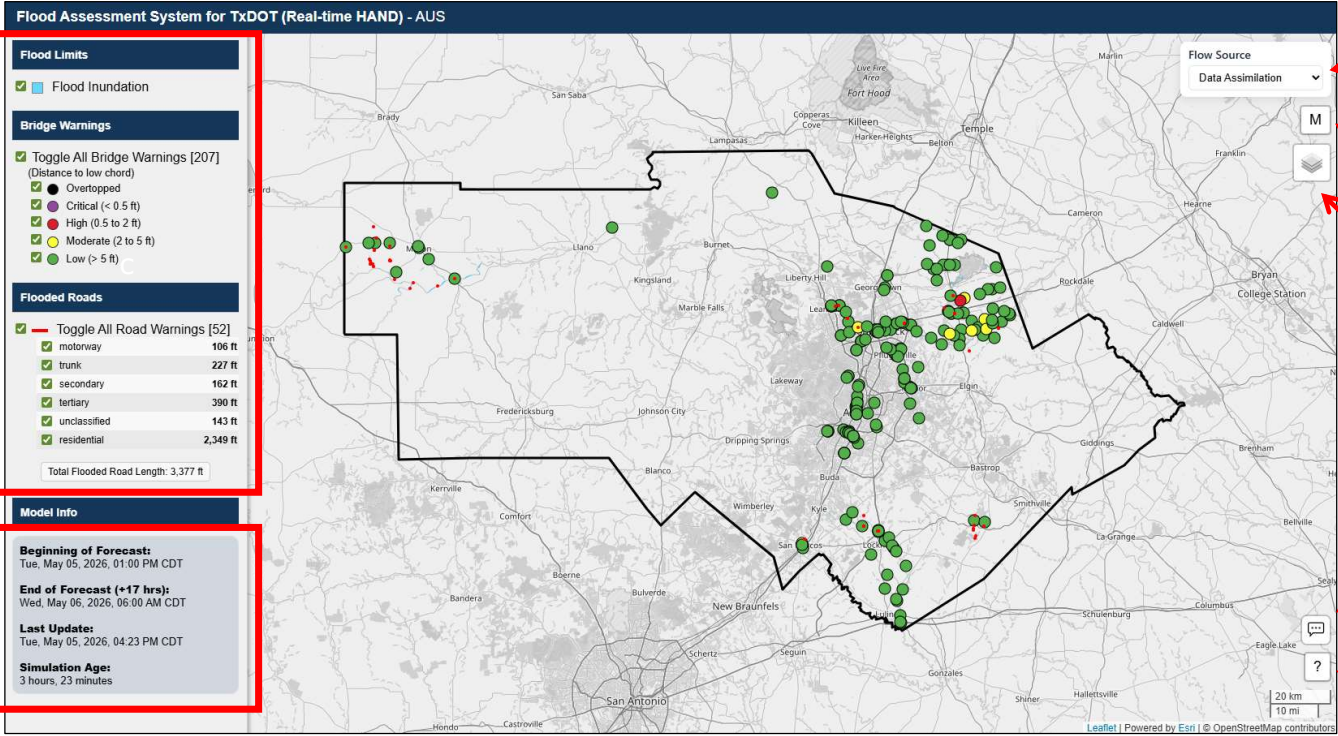
Model Info

Beginning of Forecast:
Tue, May 05, 2026, 01:00 PM CDT

End of Forecast (+17 hrs):
Wed, May 06, 2026, 06:00 AM CDT

Last Update:
Tue, May 05, 2026, 04:23 PM CDT

Simulation Age:
3 hours, 23 minutes



3 Select source of forecasted flows

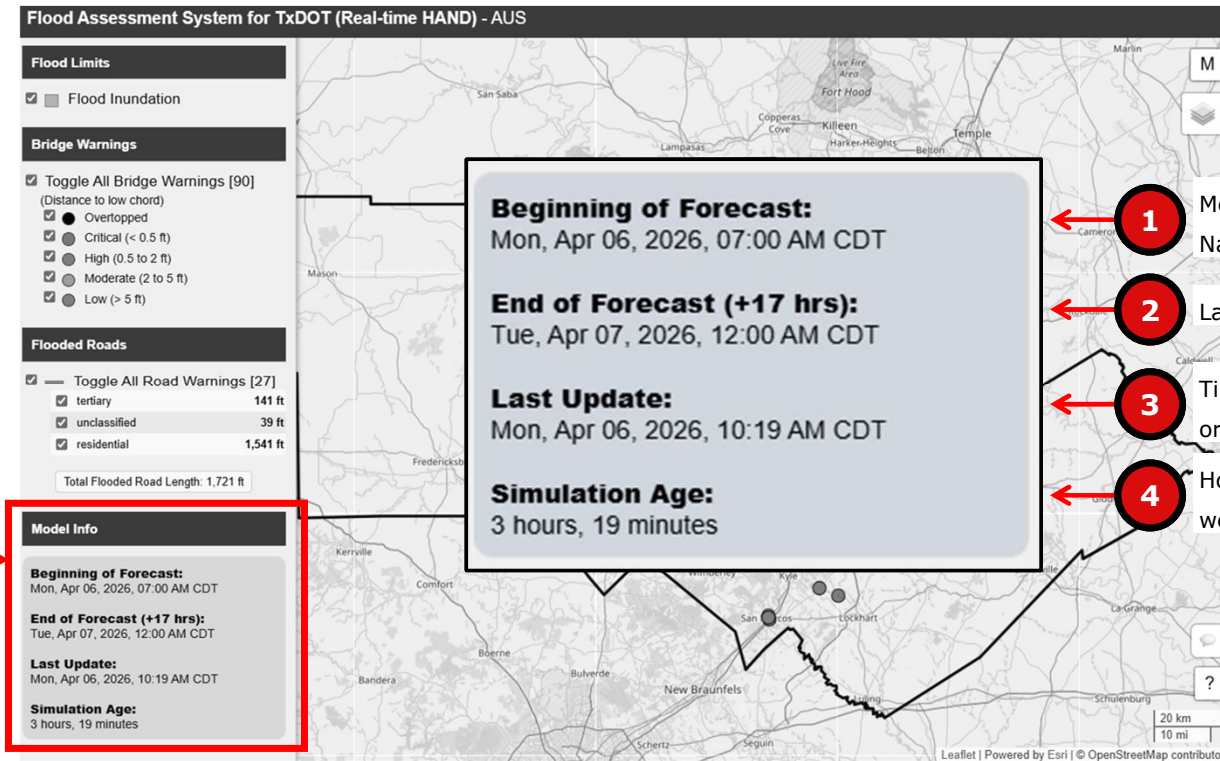
4 Toggle menu 'sidebar' on/off

5 Basemap and Overlay map options

6 Provide user feedback

7 Disclaimer Pop up

Model Info:



Flood Assessment System for TxDOT (Real-time HAND) - AUS

Flood Limits

- Flood Inundation

Bridge Warnings

- Toggle All Bridge Warnings [90] (Distance to low chord)
 - Overtopped
 - Critical (< 0.5 ft)
 - High (0.5 to 2 ft)
 - Moderate (2 to 5 ft)
 - Low (> 5 ft)

Flooded Roads

- Toggle All Road Warnings [27]
 - tertiary 141 ft
 - unclassified 39 ft
 - residential 1,541 ft

Total Flooded Road Length: 1,721 ft

Model Info

- Beginning of Forecast:** Mon, Apr 06, 2026, 07:00 AM CDT
- End of Forecast (+17 hrs):** Tue, Apr 07, 2026, 12:00 AM CDT
- Last Update:** Mon, Apr 06, 2026, 10:19 AM CDT
- Simulation Age:** 3 hours, 19 minutes

Flood forecast model information

- 1 Most current flood forecast provided by National Weather Service
- 2 Last hour in that forecast
- 3 Time when this FAST webpage was loaded or refreshed
- 4 How old the forecasted data are in this webpage

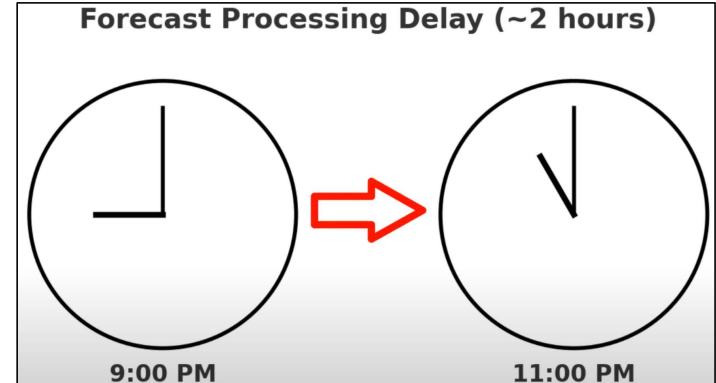
Why are the forecasts old:

The National Water Model forecasts run on supercomputers and need time to gather, process, and check huge amounts of weather and river data, so the forecast results are usually available about 2+ hours after the current time.

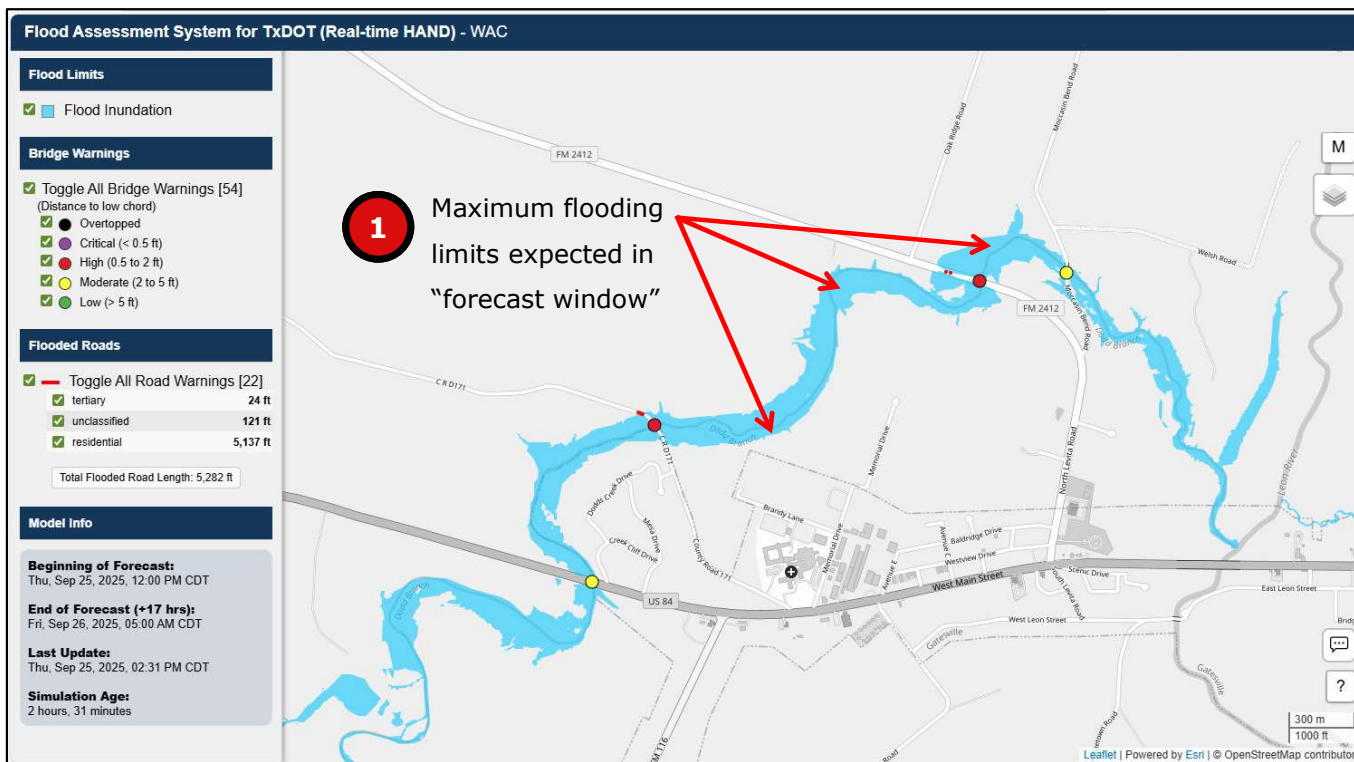
Beginning of Forecast: Mon, Apr 06, 2026, 07:00 AM CDT
End of Forecast (+17 hrs): Tue, Apr 07, 2026, 12:00 AM CDT
Last Update: Mon, Apr 06, 2026, 10:19 AM CDT
Simulation Age: 3 hours, 19 minutes

4

How old the forecasted data are in this webpage



Flood Limits Warnings:



Flood Assessment System for TxDOT (FAST)

What are these warnings:

FAST warnings point out the **highest river levels** that could happen at each location in the **next 18 hours**. If a FAST warning shows up, it means that spot could see flooding during that forecast window.

The forecasts are updated every hour with a completely new 18 hour look ahead.

Forecast Window

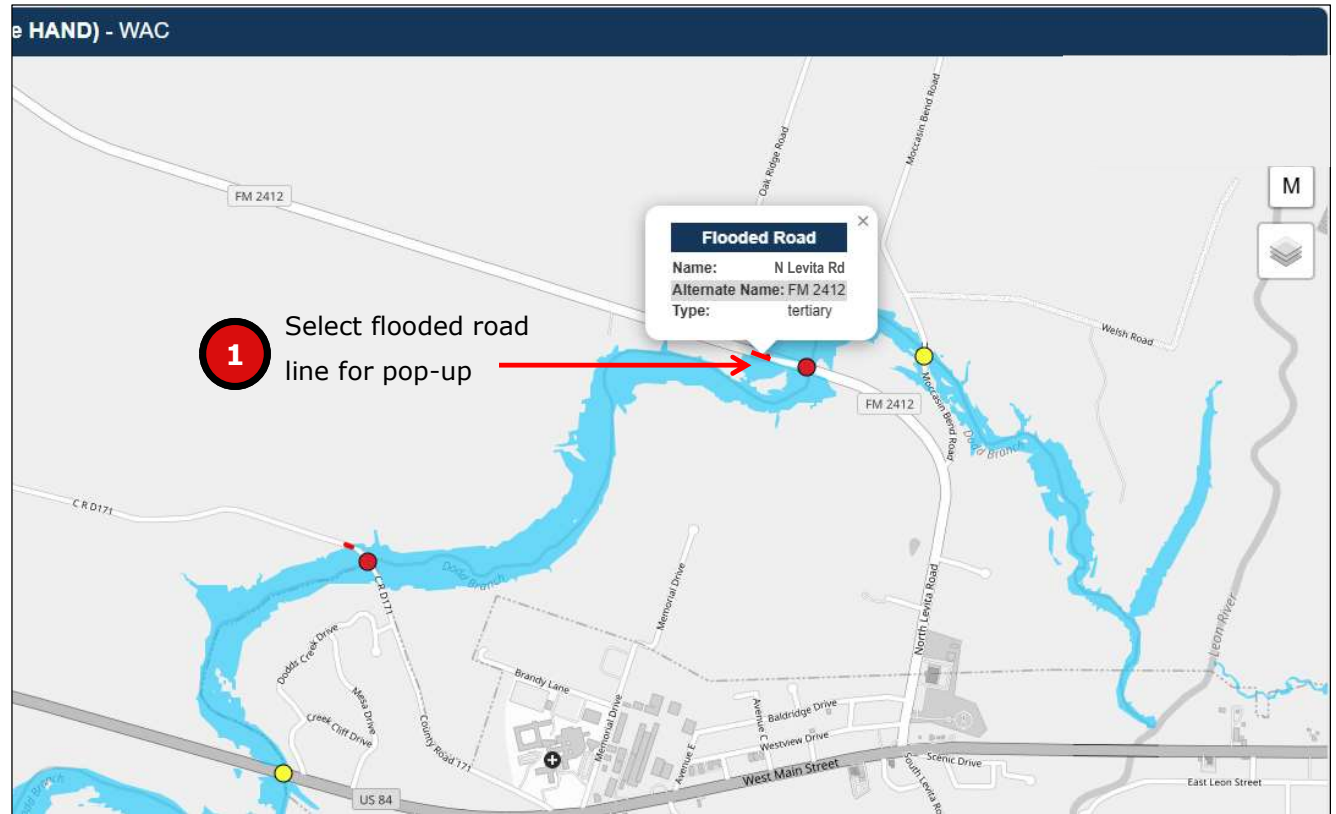
Beginning of Forecast: Thu, Sep 25, 2025, 12:00 PM CDT
End of Forecast (+17 hrs): Fri, Sep 26, 2025, 05:00 AM CDT
Last Update: Thu, Sep 25, 2025, 02:31 PM CDT
Simulation Age: 2 hours, 31 minutes

← Most current flood forecast provided by National Weather Service

← Last hour in that forecast



Road Warnings:



Flood Assessment System for TxDOT (FAST)

Bridge Warnings:

Flood Assessment System for TxDOT (Real-time HAND) - WAC

Flood Limits

Flood Inundation

Bridge Warnings

Toggle All Bridge Warnings [54]
(Distance to low chord)

- Overtopped
- Critical (< 0.5 ft)
- High (0.5 to 2 ft)
- Moderate (2 to 5 ft)
- Low (> 5 ft)

Flooded Roads

Toggle All Road Warnings [22]

- tertiary 24 ft
- unclassified 121 ft
- residential 5,137 ft

Total Flooded Road Length: 5,282 ft

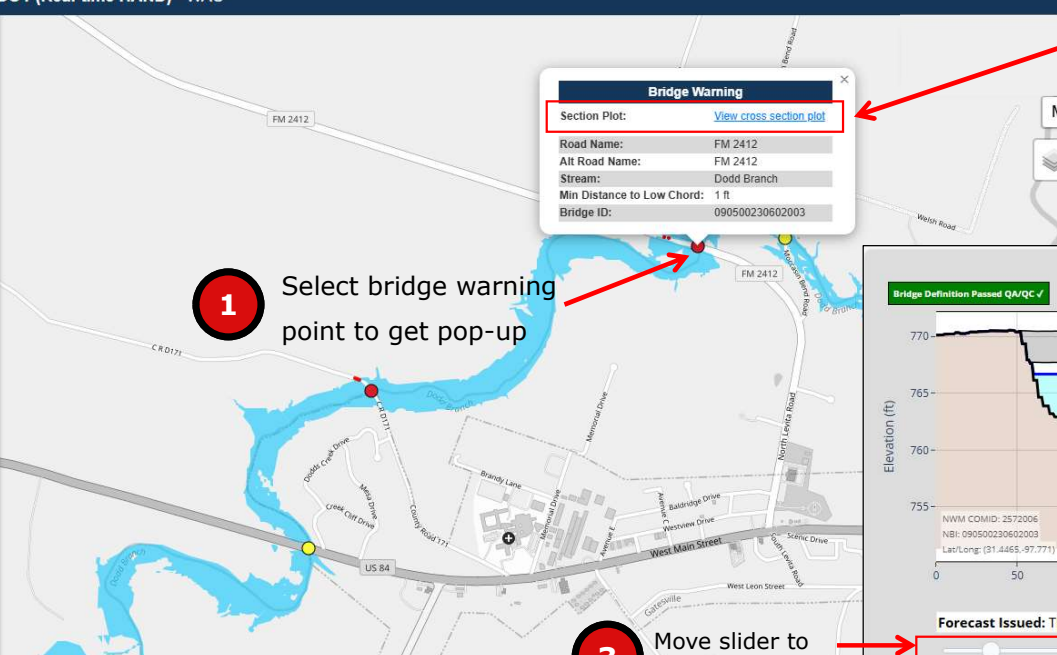
Model Info

Beginning of Forecast:
Thu, Sep 25, 2025, 12:00 PM CDT

End of Forecast (+17 hrs):
Fri, Sep 26, 2025, 05:00 AM CDT

Last Update:
Thu, Sep 25, 2025, 02:31 PM CDT

Simulation Age:
2 hours, 31 minutes



Bridge Warning

Section Plot: [View cross section plot](#)

Road Name: FM 2412

Alt Road Name: FM 2412

Stream: Dodd Branch

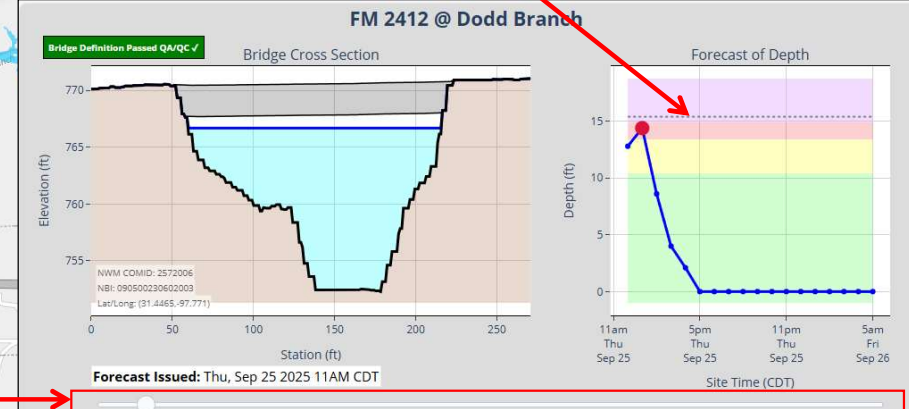
Min Distance to Low Chord: 1 ft

Bridge ID: 090500230602003

2 Click "View cross section plot" – open in a new browser tab

4 Forecasted stage (water surface) each hour on bridge

3 Move slider to animate forecast



FM 2412 @ Dodd Branch

Bridge Definition Passed QA/QC ✓

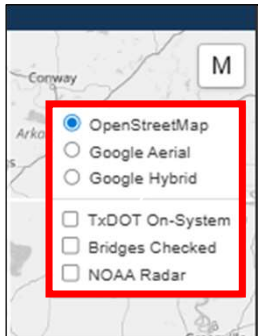
Bridge Cross Section

Forecast of Depth

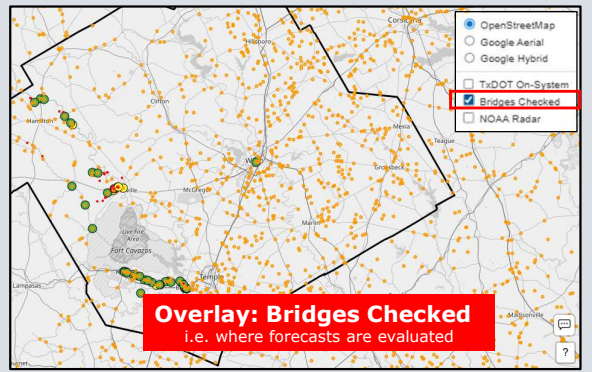
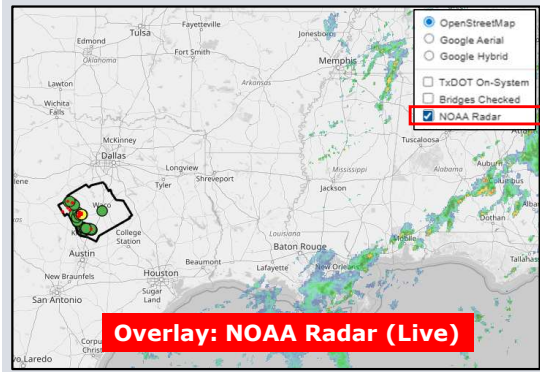
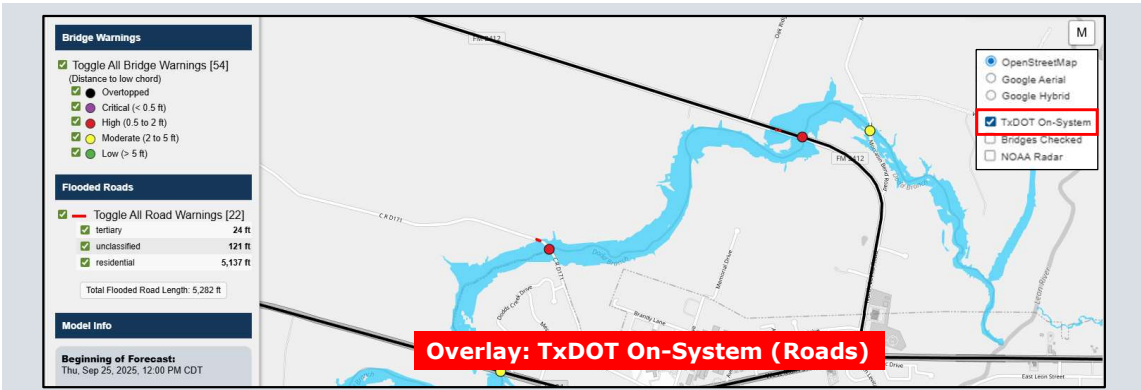
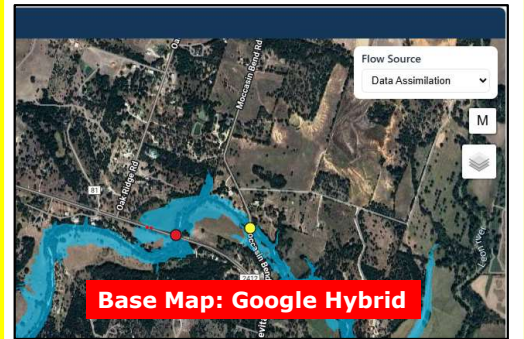
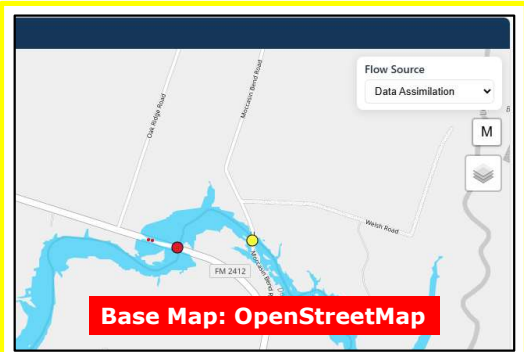
Forecast Issued: Thu, Sep 25 2025 11AM CDT

Site Time (CDT)

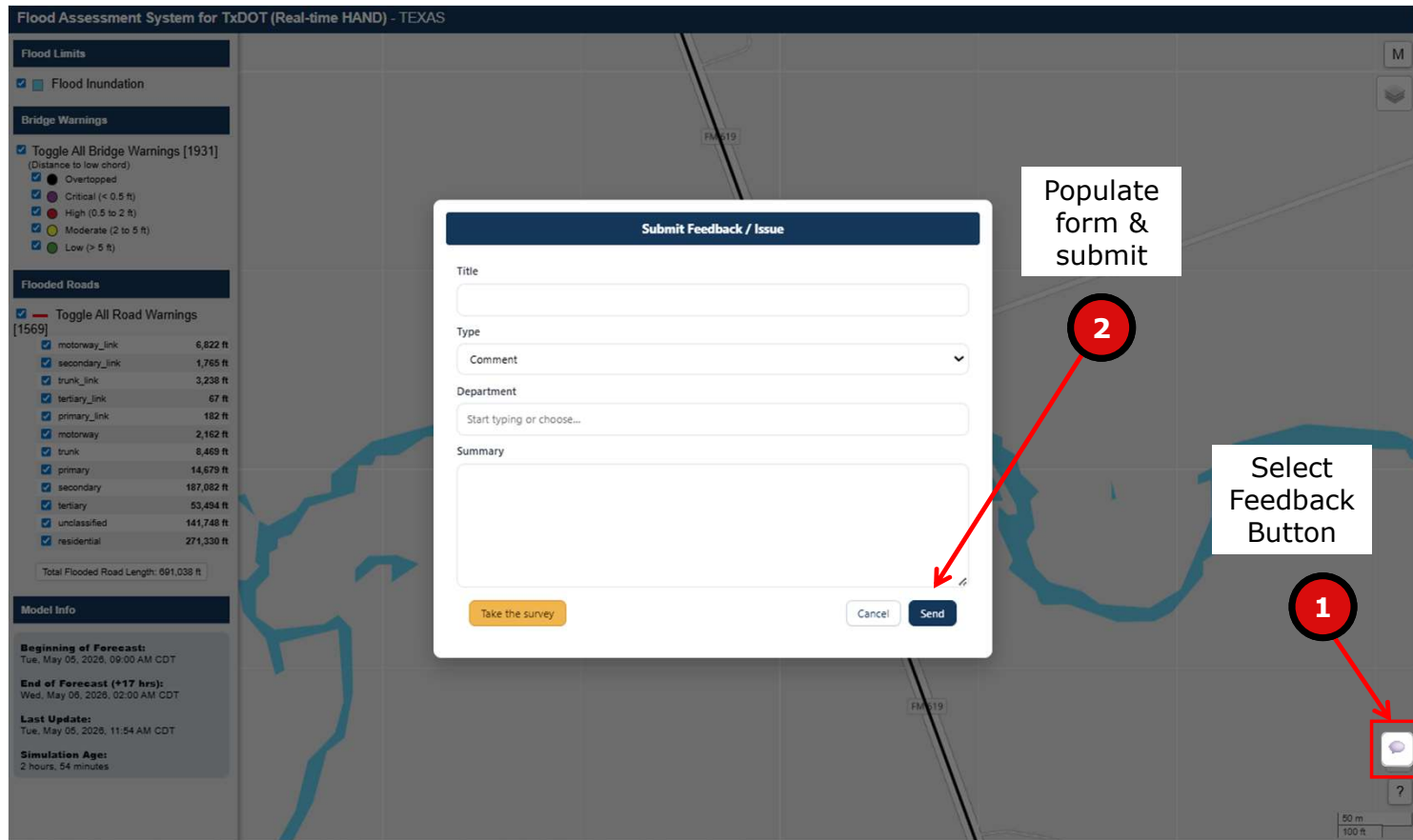
Base maps and overlays:



- OpenStreetMap
- Google Aerial
- Google Hybrid
- TxDOT On-System
- Bridges Checked
- NOAA Radar



Providing Feedback:



Flood Assessment System for TxDOT (Real-time HAND) - TEXAS

Flood Limits

- Flood Inundation

Bridge Warnings

- Toggle All Bridge Warnings [1931]
(Distance to low chord)
- Overtopped
- Critical (< 0.5 ft)
- High (0.5 to 2 ft)
- Moderate (2 to 5 ft)
- Low (> 5 ft)

Flooded Roads

- Toggle All Road Warnings [1569]
- motorway_link 6,822 ft
- secondary_link 1,765 ft
- trunk_link 3,238 ft
- tertiary_link 67 ft
- primary_link 182 ft
- motorway 2,162 ft
- trunk 8,469 ft
- primary 14,679 ft
- secondary 187,082 ft
- tertiary 53,494 ft
- unclassified 141,748 ft
- residential 271,330 ft

Total Flooded Road Length: 691,038 ft

Model Info

Beginning of Forecast:
Tue, May 05, 2026, 09:00 AM CDT

End of Forecast (+17 hrs):
Wed, May 06, 2026, 02:00 AM CDT

Last Update:
Tue, May 05, 2026, 11:54 AM CDT

Simulation Age:
2 hours, 54 minutes

Submit Feedback / Issue

Title

Type

Comment

Department

Start typing or choose...

Summary

Take the survey

Cancel Send

Populate form & submit

Select Feedback Button

Sample Feedback:

Submit Feedback / Issue

Title
Dodd Branch @ FM 2412

Type
Comment

Department
TxDOT Maintenance

Summary
Drove by this bridge and didn't see any flooding on either the road or bridge. The bridge warning was purple (near low chord) and the on-system road was showing a warning. We didn't see anything indicating a flood here.

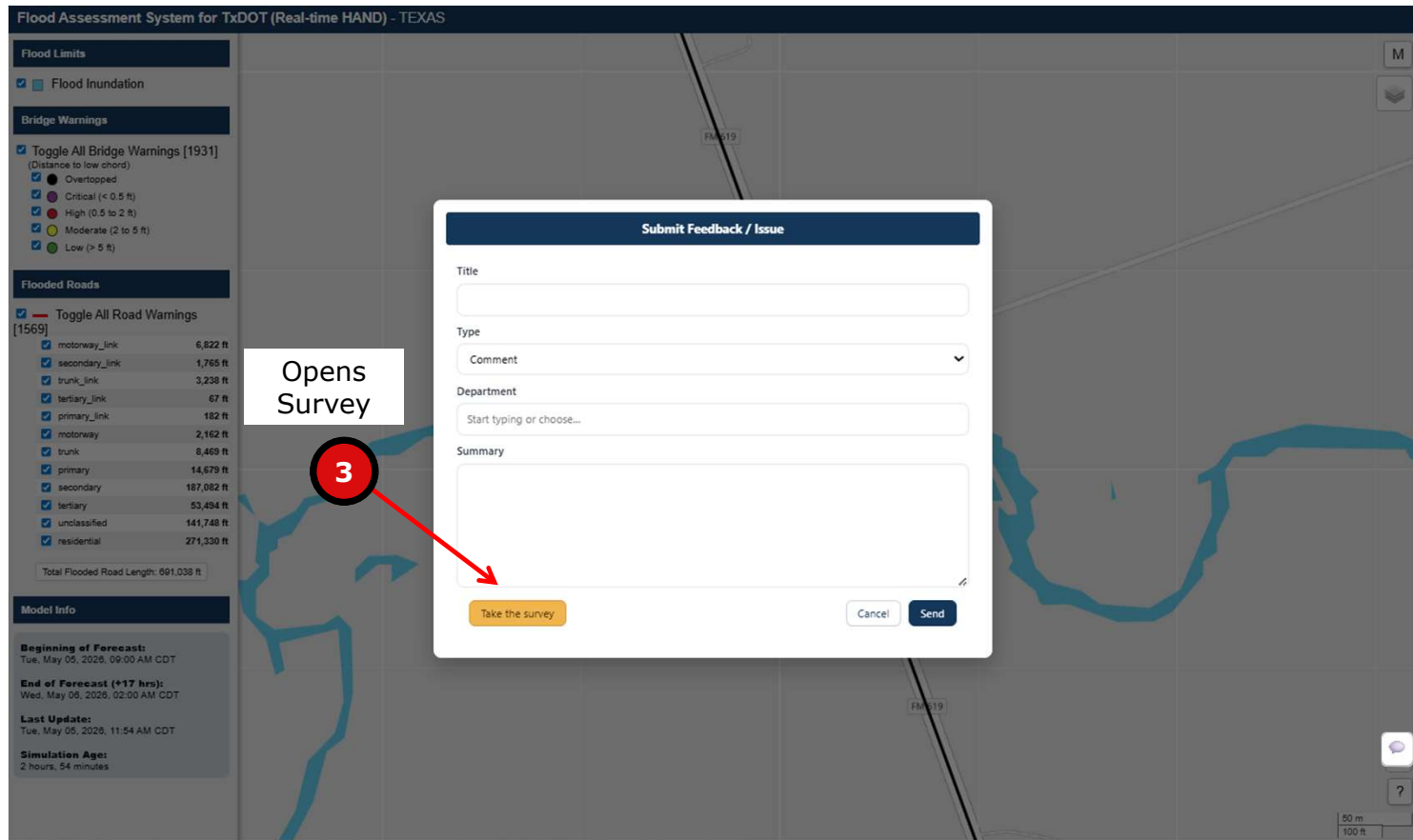
Take the survey Cancel Send

The system automatically records the map area you're viewing and the time you make your comment, so you don't need to enter these details—but you can if you want. Adding your username isn't required, but it's encouraged.

Types of Comments we are looking for:

- "forecast at this important bridge is missing"
- "flood inundation limits in this area seem too big"
- "roadway geometry is off"
- "I wish the system could do ..."
- "System failed to load / crashed"
- "I love / hate this tool"

Providing Feedback:



Flood Assessment System for TxDOT (Real-time HAND) - TEXAS

Flood Limits

- Flood Inundation

Bridge Warnings

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2 hours, 54 minutes

Submit Feedback / Issue

Title

Type

Comment

Department

Start typing or choose...

Summary

Take the survey

Cancel Send

Opens Survey

3

Sample Survey:

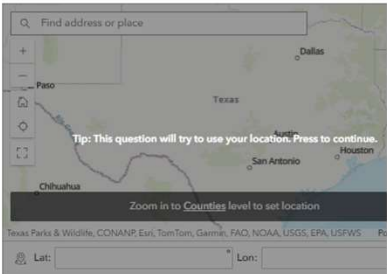
Flooded Bridge & Roadways

Purpose of survey is to collect photos and general information about field observations.
 Must select the **SUBMIT** button at **end of survey** to save your info. If you fail to do this, your data will be lost.

If needed, you can access the FAST website below:
[FAST](#)

Your Name*
 You can use your first name, last name, full name, or an abbreviation

Drop a Pin at Your Location*



Purpose is for the user to log additional information about a flooding location and add photos

Weather Conditions
 Select the definition that best describes the current weather conditions

- Preplanning / No Rain
- Start of Rain Event
- Mid-Rain Event
- Peak of Rain Event
- End of Rain Event
- Highwater Mark
- TEST Only (Not for Analysis)
- Other

FAST Prediction (Next 18 hours)
 If you are at a bridge FAST predictions, please select the 'color'

- Overtopped (Black)
- Critical (Purple)
- Red (High)
- Moderate (Yellow)
- Low (Green)
- Non FAST bridge (no color)

Photo 1
 Required

Drop image here or select image


Photo 2
 Optional

Drop image here or select image


Photo 3
 Optional

Drop image here or select image


Photo 4
 Optional

Drop image here or select image


Comments / Notes

1000

Submit

Hit SUBMIT to complete survey and record your information

How accurate is this system:

The FAST system provides **estimates** of river and flood conditions, but it isn't always exact. Its predictions are based on **weather forecasts** and other information, which can change, so actual river levels may end up higher or lower than the warning suggests.

The FAST forecast **updates every hour**, so warnings will change. A warning might appear one hour, disappear the next, and then come back later as the latest data changes.

Limitations:

Forecasted road and bridge flooding results are subject to limitations. Issues may include:

- (1) missing or misaligned roads, bridges, or streams
- (2) incomplete or outdated terrain data
- (3) simplified floodplain modeling assumptions
- (4) limited forecast range.

Forecasts may not capture backwater effects, local ponding, or flash flood timing. Results should be considered estimates and SHALL NOT be used as official guidance.

TxDOT Research Project: 0-7095-01

Project Duration: February 2024 – January 2027

Sponsor: Research and Technology Implementation Division (RTI)

Created by: Center for Water and the Environment (CWE) &
Center for Transportation Research (CTR)
University of Texas at Austin



Flood Assessment System for TxDOT