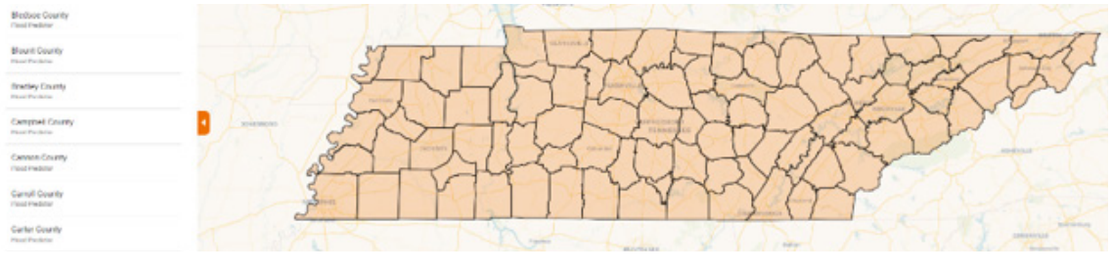
Call to Action: Contact your state legislators to request funding for Flood Predictor

TN Plan Flood Predictor Dashboard



How to Access TN Plan Flood Predictor

Flood Predictor is embedded within TNPlan, a platform initially developed for TNECD with funding from a HUD resiliency grant supporting six counties in West Tennessee. Stantec later expanded it statewide, making this technology available to every county in Tennessee. It offers 100- and 500-year flash flood interval assessments, along with the ability to simulate various rainfall and runoff scenarios.

While outreach and training have been conducted, the success of this initiative depends on statewide leadership support. With Stantec's contract running through September 2025, we are committed to giving your communities the time and information needed to be prepared.

TN Department of Economic & Community Development

Advancing Flood Preparedness Full Web Portal Access

Take action now by scanning the QR code to request full access to the web portal.

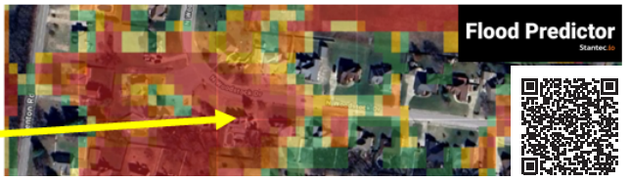
As floods become more frequent and severe, accurate prediction tools are essential for community resilience. Flood Predictor addresses this need by forecasting flood likelihood, extent, and severity—empowering communities to prepare and respond effectively. Traditional models offer precision but are slow and expensive, while digital methods often overlook critical local factors. Flood Predictor bridges this gap by combining 30,000+ hours of engineered flood modeling with real-time data, providing both accuracy and efficiency. This data-driven framework integrates physics-based hydraulic models, statistical simulations, and machine learning to deliver rapid, reliable predictions.

Scan the QR code to watch the **Stantec and BBC StoryWorks: AI-driven flood modeling and its impact on flood prediction video**, and the importance of flood predicting.

Flood Predictor's strength lies in its speed—generating predictive data that closely aligns with engineering models, aiding in disaster preparedness and planning. It is particularly valuable in areas with limited historical data, where it can forecast flash floods and provide life-saving insights. By integrating these insights flood risk data becomes more accessible, enabling informed decision-making at a fraction of the time and cost of traditional engineering methods. With Flood Predictor, TNECD can advance flood resilience across the state where such resources have historically been scarce.

2/15/25 - 2/16/25 - Flash Flood Event Clarksville - Montgomery County, TN | Flood Predictor Flash Flood Simulation - 6.28" Run-off Probability

Facts	Stantec's Flood Predictor Performance
February 14, 2025, 4.7 inches of rainfall forecast on already saturated soil conditions	Flood Predictor output demonstrated high correlation to flooded areas throughout Tennessee
February 15-16, 2025, 6.28 inches of rainfall observed, NWS	**Preventative measures that Flood Predictor can provide insights to:** 1. Communication with residents 2. Identify structures and homes at risk 3. Inform potential road closures and safe routes 4. Safeguard critical infrastructure and emergency response resources (like YAIPAK) for the community
Most of downtown and residential area impacted by flooding, including one Clarksville family, without Flood Insurance, devastated by the event. *Denise Culver Interview linked below.*	
Many impacted were not in the FEMA Special Flood Hazard Area (SFHA) and therefore did not have flood insurance. TN residents are unaware of their true risk. *Neighborhood below is not mapped in the SFHA.*	



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