Impact Forecasting:
Inland Flood Model for the U.S.

Inland flooding accounts for about two-thirds of all disaster declarations over the past fifty years in the United States. Impact Forecasting's enhanced U.S. Inland Flood model incorporates over ten years of research and development and leverages the latest data and modeling techniques to model over 2.3 million kilometers of river-based (fluvial) flooding and 1.9 million square kilometers of precipitation-based (pluvial) flooding.

Benefits

- The model provides a range of outputs including annual aggregate and probable maximum loss estimates for single risks and a portfolio of properties.

- It can be used to determine site elevations and flood inundation depths for all insured locations.

- Higher spatial resolution, better topography, a more detailed river network, and extensive validation delivers more precise flood risk quantification compared to previous model versions.

Innovation

- National Hydrography Data and river profiling tools better estimate river center-lines and hydraulic characteristics for determining inundation depth.

- Over 56,000 kilometers of levees included with the capability to estimate losses with and without flood defenses.

- High-resolution hydrodynamic distributed rainfall–runoff model for pluvial events.

- 110,000 stochastic events cover over 2.3 million kilometers of river-based (fluvial) flooding and over 1.9 million square kilometers of precipitation-based (pluvial) flooding.

- Enhanced flood plains based on new hydraulic analyses that incorporates 10-, 20-, 50-, 100-, 200-, 500-, and 1,000-year flood plain heights into loss reporting.

Transparent and customizable

All Impact Forecasting models run in our ELEMENTS loss calculation platform.

This enables insurers to incorporate their own view of risk and achieve more accurate results by customizing components based on loss history.

It delivers transparency, so every step of the calculation process is clearly defined and can be explained to stakeholders while helping to quantify uncertainty.
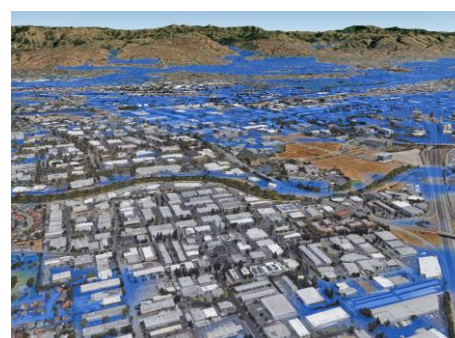
We're here to empower results:

Contact us to understand more about our transparent and customizable models.

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Three-dimensional extent for a 100-year flood for San Jose, California. *Source: Impact Forecasting*

AON

Empower Results®