AIR Web Services Release Notes
October 2020

AIR has updated the following web services for Touchstone 2020:

- AIR Hazard Analysis Service
- Loss Analysis Service
- The underlying U.S. street address geocoding data, which is used by both the loss and hazard service for the United States.

AIR Hazard Analysis Service

AIR has updated the data underlying the following hazard profile parameters for locations in the United States:

Flood Profile

- FEMA BaseFloodElevation: Specifies the elevation of surface water in feet resulting from a flood that has a 1% chance of being equaled or exceeded in a given year.
- FloodZoneFEMA: Specifies the Federal Emergency Management Agency (FEMA) flood zone category.
- AIR Flood Data:
  - AIRFloodZone: All return types of AIRFloodZone (that is, 100-year, 250-year, and 500-year) have been updated.
  - AIRFlood100YR: Distance to 100-year AIR flood plain.
  - AIRFlood500YR: Distance to 500-year AIR flood plain.

Earthquake Profile

- AIR Liquefaction: Specifies the likelihood of liquefaction for a given location.
- Landslide: For locations in California, indicates whether the property is in a landslide zone.

AIR obtained the data from third-party agencies such as FEMA, the National Landslide Hazards Program, and the California Department of Conservation. The agencies regularly update their data sets as they use increasingly better technologies and work with communities to understand the local changes that impact the likelihood of potential hazards.

AIR Loss Analysis Service

AIR Hurricane Model for the United States

AIR has incorporated the changes made to the AIR Hurricane Model for the United States for Touchstone in the Loss Analysis Service. This model has been updated to include risk associated with precipitation flood due to hurricanes. Highlights include:

- The ability to analyze on-and-off flood plain risk has been added. Both on- and off-flood plain risk will be included by default for all AIR Hurricane Model for the United States web service loss requests.
- The new precipitation flood sub-peril is a licensed option and is off (excluded) by default. Modeled losses can now include hurricane-induced precipitation flood losses for all events in the stochastic catalog if this new sub-peril is licensed.
  - The approach to modeling precipitation flood is consistent with the update to the AIR Inland Flood Model for the United States.
  - When licensed, to include precipitation flood losses in any U.S. hurricane loss analysis, the appropriate peril code (PPH) must be used in the exposure and the sub-peril must be explicitly included in the loss analysis request.
    - PWH+PSH+PPH, or
    - PWA+PPH
- Revisions were made to the vulnerability module of the storm surge peril to remain consistent with improvements to overall flood modeling during this update. These revisions include:
  - The vulnerability of light metal constructed buildings (construction code 152) has been revised.
  - Other miscellaneous minor enhancements.
- Enhancements to secondary risk characteristics:
  - Full support of flood secondary risk characteristics in the precipitation flood sub-peril.
  - Addition of new/modified secondary characteristics for both storm surge and precipitation flood:
    - FIRM Compliance
    - Custom Flood Zone
    - Service Equipment Protection
    - Wet Flood-Proofing
- Updates to industry losses used for demand surge calculations; losses were developed using the most recent Industry Exposure Database.

Note

- The wind peril was not revised in this AIR Hurricane Model for the United States update; however, due to updates to storm surge vulnerability and industry losses used in demand surge calculations, users may see small changes in wind losses.
- Note that 100k event sets for the updated model will not be available in this release. Support will be provided in an upcoming service pack.

AIR Inland Flood Model for the United States

AIR has incorporated the changes made to the AIR Inland Flood Model for the United States for Touchstone into the Loss Analysis Service. Changes include:

- Addition of the ability to analyze on- and off-flood plain risk. Both on- and off-plain risk is included by default for all U.S. inland flood web service loss requests.
- Allowing the loss web service to use peril code PFL (Inland Flood) to return loss results for AIR Inland Flood Model for the United States. The model now includes a new, non-hurricane-induced precipitation flood component. One AAL is returned.
- Other AIR Inland Flood Model for the United States updates include:
  - A 10-meter resolution Digital Terrain Model (DTM) covering the contiguous United States.
  - Incorporation of expanded flood defense information.
- Addition of new/modified secondary characteristics for precipitation flood:
  - FIRM Compliance
  - Custom Flood Zone
  - Service Equipment Protection
  - Wet Flood-proofing

Other Loss Service updates

- Improvements to the secondary risk characteristics available for web service loss requests. The new/modified loss request secondary risk elements include:
  - FIRMCompliance
  - CustomFloodZone
  - ServiceEquipmentProtection
  - WetFloodProofing
  - FloorArea
  - IBHSFortified
  - BasementLevelCount
  - BasementFinishType
  - ContentVulnerability
  - RoofHailImpactResistance
- New Min-Max Deductible Policy
  - The loss service now supports a new min-max policy deductible algorithm that was designed to better address the needs of more complex commercial policies. The updated algorithm more accurately represents the order of application of location limits and sublimits with all deductibles in the policy. Location limits are applied after location deductibles, and sub-limit terms are applied before the policy min-max deductible. Then the conditional location deductibles or policy deductible scenario is selected, and this scenario becomes the final insurance policy gross loss.
  - This new min-max policy deductible logic is used by default in the loss web service. If comparing with Touchstone 2020 loss results, verify that the new min-max policy deductible logic is being used.

For more information, refer to the following material available on the AIR Client Portal:

- AIR Hazard Analysis Service User Guide
- AIR Loss Analysis Service User Guide
- Touchstone Release Notes
- AIR Hurricane Model for the United States
- AIR Inland Flood Model for the United States
- Touchstone Exposure Data Validation Reference.

Known Issues

AIR has identified the following known issues:

Hazard Analysis Service

- In terrorism profiles, the nearest target and distance to the nearest target values can differ from the corresponding values in Touchstone. AIR has observed differences of .01–.09 miles for the distance value.

Loss Analysis Service

- If an exact address or latitude and longitude pair for an exposure is not provided, then the service may return different loss results than returns. The difference occurs because Touchstone filters out some perils from loss analyses on low-resolution location data and the service does not filter them out.
- For return periods (RP) with small losses, the service does not return RP data.

Notes on Address Service

- If only country and subarea information are supplied for a location, the services cannot geocode the location. The error occurs because subareas are not unique across countries. For example, two states may include the same county.
- For service requests address section elements:
  - Either a street address or latitude/longitude data must be provided.
  - If the component of the street address is unknown, then leave that element empty. AIR does not recommend using x or other default values for unknown address elements.
  - If the latitude or longitude for the location is unknown, then leave that element empty. Do not use 0 for these latitude and longitude elements.