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A newsletter from Lighthouse Consulting, LLC
Keeping you off the rocks

New Underwriting Tools

"Big Data" has made its presence felt in primary insurance. Vendors are using geo-spatial data sets to provide location level hazard information to assist underwriters in selection and pricing. Their focus is on cat perils and we will review a number of them in subsequent issues. This issue will review the flood tools.

The Old Way

Simply obtain the flood zone based on the address of the location. The address is geo-coded and a zone value is returned. Simple, but not accurate. Why not? Because addresses geo-code at the "mailbox", not at the actual center of the building.

A Better Way

By using a function called "offset" the geo-coding can be set back from the street level by a user-defined distance, so the center of the building is accurately geo-coded. Better, but geo-coding is a small point on a map. Suppose there is a more hazardous flood zone near the building? After all, floods can't read flood maps; they don't know they have to stay within their boundaries.

A Better, Better Way

By using a function called radial search the user can do a sweep around the geo-coded point to see if there are other flood zones nearby, typically 500' to 1,000' feet away. That is good, but suppose there are topographical features that increase the hazard? For example, suppose the land is flat, thus increasing the possibility of a flood exceeding its zone?

A Better, Better, Better Way

Some vendors use topographical data to derive a numerical score that indicates the degree of increased hazard. One vendor uses a scale of 10-50, with 50 being the most hazardous. For example a building may be in a low hazard "C" zone but may have a high topographical hazard score of 50. Other vendors supply mapping tools with elevation details that allow the underwriters to graphically view the topography.

The Way of the Future?

The above tools identify hazard levels and underwriters use them to set their flood limits. The tools do not provide loss estimates or pricing. That is left to underwriting judgment, and frankly most companies do not price for the peril. Recently AIR introduced a probabilistic inland flooding model. Like its wind and earthquake cousins it should provide both loss expectancies and AAL's. Many companies are having a look at it.

What about Aggregation?

Up to now the discussion has been on location level analysis. How would a company know that they may have multiple locations across different accounts subject to the same flood event? Some are working on it but it is not an easy task.

Don't forget the workflow

Location level analysis is time consuming; even more so if the underwriter has to look at maps, find elevations levels, topography, etc. Integrated workstations are very valuable but very rare. Most companies will use web reports, spreadsheets, or other ad hoc tools. Investment in system integration is the sign of a solid underwriting company.