

GARRETT BRADFORD

GISP

Principal & GIS Consultant

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Current Responsibility

Garrett Bradford directs the Geographic Information Systems (GIS) work for the Property and Casualty Practice in Milliman's San Francisco office and manages the Milliman PinPoint product. He joined the firm in 2010.

Professional Work Experience

Garrett manages and produces GIS data for visualization, analysis, underwriting, and rating.

His expertise includes:

- Spatial analysis for catastrophe modeling
- Construction of custom territories and other GIS datasets for rating and underwriting
- Development and implementation of geospatial capabilities
- Use of third-party GIS data
- Cartographic production and graphic design

Garrett is an expert in data visualization and produces maps and charts that enable insurers to understand their data across a range of geographic scales so they can make sound business decisions. Through the use of GIS and mapping at every step of an analysis, Garrett helps clients identify unique spatial patterns that can drive pricing and underwriting strategies.

Garrett has many years of experience with third-party GIS data from a variety of sources such as the United States Geological Survey, the National Oceanic and Atmospheric Administration, the Florida Geological Survey, and the United States Census. When combined with insurance data, these GIS resources enhance Milliman's predictive modeling capabilities. With GIS datasets that describe the physical drivers of catastrophe risk, our clients are able to incorporate granular rating and underwriting rules. Third-party demographic and exposure data allow insurers to drill down on target marketing areas and identify drivers of non-catastrophe losses.

Garrett helps our clients adopt new geospatial capabilities by both providing access to custom location-based services and training them to develop and manage their own geospatial services. Garrett develops and manages Milliman PinPoint, a cloud-based service where a single property location returns any number of custom geographic attributes. Example outputs from PinPoint include rating territory, census geographies, distance-to-coast, distance-to-river, elevation, and relative elevation. Whether using PinPoint or in-house systems, Garrett's expertise allows our clients the flexibility to use their own, custom GIS datasets in pricing and underwriting.

Professional Designations

Certified GIS Professional (GISP)

Education

- BA, Geography, University of California, Berkeley
- MS, Geographic Information Science, San Francisco State University

Presentations and Publications

Garrett has frequently prepared the data visualization components of actuarial presentations and articles. He has given presentations on the use of GIS, third-party data, and data visualization in addition to developing hands-on GIS training workshops. Garrett has also published articles and given presentations on the use of GIS in studies of surface roughness length and the influence of the built environment on ground-level wind speeds.