

# Everything You Need to Know about the PCS Catastrophe Loss Index

Since 1949, the property/casualty insurance industry has relied on catastrophe loss estimates from PCS® and its predecessor organizations to set catastrophe reserves and optimize the deployment of adjusters. Our mission has grown to include reinsurance, insurance-linked securities (ILS), and other forms of risk transfer. For more than 20 years, PCS has been a trusted source of North American natural catastrophe data for the ILS market.

Whether you're looking to improve how you respond to catastrophe events or are involved in the ILS sector, understanding how PCS develops loss estimates will help you make better decisions for your business.

## About PCS

The PCS team consists of nine people located across the United States. PCS is part of the Verisk Insurance Solutions – Claims organization, which also includes ISO Claims Solutions and Xactware. Verisk Analytics became the parent company of ISO as part of the company's initial public offering in 2009. Throughout that transition, the PCS mission of identifying catastrophes and developing loss estimates remained unchanged. Our process has evolved over its nearly 70-year history, thanks to industry and technology developments, but it remains essentially the same.

## What PCS covers

Although insurers, reinsurers, ILS investors, and financial services professionals around the world use PCS estimates, we currently provide estimates for the United States (including the U.S. Virgin Islands and Puerto Rico), Canada (added in 2009), and Turkey (added in 2015). However, we've examined other regions over the past decade and continue to evaluate opportunities for further international expansion.

PCS covers catastrophes resulting from a wide range of natural and man-made perils, including:

- hurricane
- tropical storm
- tornado
- snow
- ice
- wind
- freezing
- earthquake
- hail
- fire
- volcanic eruption
- explosion
- civil disorder
- utility disruption

PCS includes flood losses in our catastrophe estimates in some specific cases. We don't include flood losses that the National Flood Insurance Program (NFIP) covers or losses that fall under the "write your own" program. But we do include flood damage to vehicles that fall under comprehensive auto policies and commercial property policies.

## How PCS develops catastrophe estimates

The PCS loss estimate process begins with the designation of a catastrophe event. When PCS believes that an event is likely to cause more than US\$25 million in damage in the United States and affect a significant number of policyholders and insurers, we assign a catastrophe number, and the event becomes a “PCS identified catastrophe.” In Canada, the threshold is C\$25 million; and in Turkey, it’s TRY30 million.

PCS estimates include covered losses from personal property, vehicle, and commercial property policies. Those policies cover real property, contents, time element losses (for example, business interruption and additional living expenses), vehicles, boats, and property under certain inland marine and specialty policies. We also typically include paid amounts to insureds by state windpools, joint underwriting associations, and certain other residual market mechanisms.

For each catastrophe, we issue at least one catastrophe bulletin, which includes claim counts and catastrophe loss estimates for each category (that is, personal property, vehicle, and commercial property), as well as total claim counts and insured loss estimates for the event. Additionally, the bulletins include an industrywide estimate for loss adjustment expenses (LAE), although we don’t include that number in the loss estimates by line or overall. PCS calculates all loss estimates and LAE based on submissions from insurers affected by the catastrophe. Those insurers report their actual losses and catastrophe reserves.

To arrive at the estimates, PCS takes into account coverage limits, coinsurance, deductible clauses, and other factors that could affect eligibility for insurance coverage. However, we don’t include uninsured property damage of any kind (including publicly owned property and utilities), losses involving agriculture, losses involving aircraft, and certain specialty lines (such as ocean marine and offshore drilling/energy). As mentioned above, we count flood losses only in certain cases. Further, we don’t include reinsurance, as it merely offsets covered cedent losses. That’s also the case for collateralized reinsurance, industry loss warranties (ILWs), and catastrophe bonds.

To obtain the data necessary to determine a catastrophe loss estimate, PCS surveys primary insurers affected by the catastrophe. We contact insurers with business in affected states. We supplement that with information from other sources, including reinsurers, news reports, regulatory filings, brokers, agents, and other catastrophe insurance market stakeholders.

We survey as many insurers as possible with U.S., Canadian, or Turkish exposure; that includes carriers outside North America. For each state, we talk to affected insurers—regardless of whether they’re PCS, ISO, or Verisk Analytics customers—to gather insured loss data and claim counts for vehicle, personal property, and commercial property claims.

Based on the data we receive, we develop an industrywide estimate for each affected state. Factors that we consider include:

- actual losses that insurers report
- catastrophe reserves that insurers set
- insurer market share by state
- information on insured losses from insurer announcements, news stories, regulatory filings, and conversations with industry stakeholders (for example, brokers, agents, and reinsurers)

Our goal is to get data from at least 70 percent (by premium volume) of every state affected by a catastrophe event.

Using that information, along with the professional experience and judgment of the PCS team, we compile the results for personal property and vehicle lines and develop an estimate that reflects 100 percent of the market for each affected state (for both loss amount and claim count).

Commercial property does not lend itself to the same approach all the time, given that the losses tend to be both infrequent and quite large. Determining the size of those losses often requires input from a number of professional services providers, for example, accountants and attorneys. Rather than calculate an estimate based on factors such as market share, which is not possible, we add commercial property losses to the state-by-state industrywide estimates for personal property and vehicle, without making adjustments for market share and other factors.

### Hypothetical industrywide catastrophe loss estimates

Loss type	Reported losses (from various sources)	Number of claims reported	Market share reported to PCS	Estimate based on 100% of the industry
Personal property	\$1 billion	40,000	80%	\$1.25 billion
Vehicle	\$500 million	67,000	85%	\$588 million
Commercial property	\$1.3 billion	6,002	58%	\$1.6 billion
Total industry				\$3.4 billion

Source: PCS

Based on the conclusions of the PCS team, we publish a preliminary estimate of the catastrophe through the subscription-based ISONet® platform. Although PCS estimates for the largest catastrophes do find their way into the public domain, it's important to remember that they're the property of PCS and that PCS publishes estimates exclusively for the benefit of our customers, who invest their resources into the service to advance their own businesses.

In general, we publish the preliminary estimate approximately two weeks after a catastrophe. In some cases, however, the preliminary estimate may take longer, given insurer response to the catastrophe, the nature and complexity of the losses, and constraints on physical access to damaged property.

## Why does adjuster access to a catastrophe site matter?

Access to damaged property can vary by catastrophe and affected region. During Superstorm Sandy, for example, claim adjusters were unable to reach heavily affected areas in New Jersey for several weeks following the storm. Local police departments prevented access, opening the areas as late as November 17, 2012 (three weeks after the storm) and only to residents. Adjusters had to wait another week (in some cases longer). We've seen similar situations with the Fort McMurray wildfire in Canada and the terror attacks on Sirnak and Nusaybin in Turkey.

In some parts of the United States, access tends to be easier. Following Hurricane Andrew, insurance adjusters were able to reach the worst-hit areas just a few days after the storm, as law enforcement gave them access at the same time as residents.

And access is not always a function of law enforcement activity. In many cases, infrastructure may be damaged, preventing access to affected areas until sufficient repairs are complete, making access safe for adjusters and residents.

We publish a preliminary estimate for larger catastrophes to help insurers make any necessary changes to their catastrophe reserves and optimize the deployment of adjusters to serve their policyholders. For claims departments, catastrophe response represents an important opportunity to demonstrate a high level of service. And it can translate to future renewals and referrals, among other sales and marketing opportunities. As a result, PCS is committed to publishing a preliminary estimate for large events—even if it's still too early to ascertain the full effects of the catastrophe—to help the insurance industry respond to disasters in a way that supports long-term value creation as well as near-term customer service.

We recognize that larger events require more than one survey, particularly as affected insurers gain a clearer view of post-catastrophe claims activity. To address this, we have a resurvey process that helps the industry understand more fully, over time, the effects of large events, generally those with preliminary catastrophe loss estimates above \$250 million. We conduct resurveys every 60 days to arrive at the most accurate number possible. (In Canada and Turkey, PCS resurveys all catastrophe events.)

The resurvey process gives insurers an opportunity to report additional findings as they spend more time in catastrophe-affected areas. Their ongoing evaluation of insured losses for catastrophe-reserving purposes can evolve as adjusters gain access to more properties. As they refine their assumptions and estimates, PCS uses that information to revise estimates for the industry.

Additionally, the resurvey process captures more third-party information, which can provide further insight into large commercial losses. Since many of those losses require involvement of accountants, attorneys, and other professional services providers to help understand the nature and scope of the loss, it takes more time to determine the effects. When that information becomes available, PCS adds it to the loss estimate.

When two consecutive resurveys generate the same estimate for insured losses, PCS generally closes the estimate. In what becomes the final resurvey, we ask the insurers supplying data if they're receiving more claims or if they're comfortable with the numbers they've provided. When carriers indicate they're no longer receiving claims and their loss reports to PCS are effectively unchanged, it signals that all relevant available information has been absorbed into the process.

Because of this approach, there's no set duration for the process. PCS continues the resurvey until we've received all available information.

Catastrophes vary in the amount of time they take to estimate based on a variety of circumstances. Hurricane Irene, for example, was a significant hurricane, causing more than \$4 billion in insured losses. The size of the loss was due largely to the high insured values in the northeastern United States, where it caused the most damage. However, the extent of the damage, aside from the financial effects, didn't prevent adjusters from getting to affected areas and evaluating losses. As a result, it took only four months to reach a final estimate. Hurricane Katrina, on the other hand, required approximately 24 months, because the damage was substantial and it took more time for adjusters to reach some damage sites. Further, we left the estimate open longer than usual to allow for the potential results of class action litigation pending at the time.

## Who uses PCS catastrophe estimates?

Since 1949, insurers have used data from PCS for setting catastrophe reserves and improving the deployment of adjusters to catastrophe-affected areas. The estimates have also been useful for benchmarking exposure against other insurers. For example, consider those insurers with high auto market share in New York and New Jersey when Sandy hit; that event generated disproportionately high auto losses for a hurricane.

Over the past 60 years, other interested parties have adopted our data. Corporate risk managers, for example, use PCS data to understand the implications of a catastrophe, and reinsurers have begun to do the same.

The growth of the global insurance-linked securities market has opened a new use for PCS catastrophe loss estimates, as well as for the core data services we provide through the ISONet platform. In the ILS community, sponsors, investors, and intermediaries use PCS catastrophe loss estimates in triggers and to define collateral events. This sector also uses PCS data to analyze historical catastrophe losses, identify trends, and explore the implications for their books of business.


Given that PCS catastrophe loss estimates often wind up in the public domain despite the restrictions on their use, there are practical reasons for licensing the data. PCS can't guarantee the accuracy or reliability of its loss estimate data when users obtain it from other sources. Licensing the PCS data provides issuers, investors, and other stakeholders in the process with a greater measure of security.

Further, the media does not always cover the entire PCS resurvey process, and later catastrophe bulletins may not be available as easily as those issued earlier in the estimating process. In those cases, collateral events and settlement activities would be based on data that's no longer accurate, resulting in unfair outcomes for issuers and investors. As a PCS customer, you receive all bulletins as well as notification as to which bulletin is final. You also receive full access to the PCS team; they engage regularly with customers to discuss the estimate process, outcomes, and other factors that can influence the decisions that stakeholders make with their capital.

## Contact PCS

To learn more about PCS catastrophe loss estimates and activate your subscription, contact:

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