

WeatherBill White Label

A Complete Technology Solution for
Weather Insurance & Weather Derivatives Products

March 2009

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INTRODUCTION

As business owners confront new climate and economic challenges, they need new financial solutions to protect profits and stabilize revenues. Weather coverage is a financial solution used alongside traditional risk management and insurance products to more completely protect the bottom line of weather-sensitive businesses.

WeatherBill is the first service to provide affordable and easy-to-use customizable weather coverage for the millions of businesses and consumers impacted by the weather. WeatherBill sells weather coverage directly through insurance agents and brokers, industry specialists (such as agribusiness vendors), and via a direct sales force to businesses of all types and sizes.


The WeatherBill White Label platform enables any third party to offer weather coverage to their clients, written on their paper, and using their distribution channels. It is an innovative end-to-end technology platform for pricing, transacting, settling, and managing weather risk. WeatherBill White Label creates new revenue streams and growth opportunities for insurance companies and weather derivative dealers, allowing them to leverage WeatherBill's technology to offer fully automated, customizable weather coverage to their clients.

WeatherBill White Label partners primarily include insurance companies and weather derivative dealers, but financial services providers, energy and agricultural commodity dealers, and even specialty vendors in energy, sports, leisure, events, promotions, and public works industries can now offer weather coverage using WeatherBill White Label.

MARKET OPPORTUNITY

Weather coverage is an important supplement to traditional risk management tools. It is designed to cover unprotected risk specifically attributable to weather, allowing more efficiently priced coverage for financial loss caused by understood and defined weather risks. The U.S. Dept of Commerce estimates that more than \$3 trillion of the U.S. GDP is impacted by unexpected weather each year in the U.S. alone. Eighty percent of businesses around the world are impacted by weather, influencing price volatility, volume fluctuations, and revenues, according to the Weather Risk Management Association (WRMA).

It's not just large storms that cause financial damage. Sixty percent of total global weather-related losses are caused by small weather events, not catastrophes, according to Evan Mills, a scientist in Berkeley Lab's Environmental Energy Technologies Division. For example, frost causes more economic loss in the U.S. than any other natural hazard including earthquakes, floods, droughts, hurricanes and tornados, according to R.L. Snyder at the University of California, Davis.

A blue bracket-shaped graphic framing the text on the right.

60% of total weather-related losses around the world are caused by small weather events, as opposed to headline-catching catastrophes.

As the frequency of these unseasonable and unpredictable weather events increases, the opportunity for weather coverage is growing. A WRMA survey in June 2008 reports that the annual number of weather coverage transactions increased more than 35%. Experts believe climate change is making some businesses weather-sensitive for the first time while making previously sensitive businesses even more susceptible to the impact of unexpected weather.

Now businesses large and small in weather-sensitive industries can do something about the weather and White Label partners can offer weather coverage products with their brand, paper, and risk capacity. The following examples highlight how some businesses are already using WeatherBill weather coverage to protect against weather-related financial loss.

Agriculture

Although many weather-related risks in Agriculture are covered by the Federal Crop Insurance Program, many growers are not eligible for coverage and many simply choose not to participate. In addition, the Federal Crop Insurance Program limits coverage dates, deductibles, crops, and perils, leaving many growers without access to coverage. Growers and crop insurance providers across the country are increasingly turning to parametric weather coverage for yield and cost risks, especially those created by non-catastrophic weather events like drought, frost or heat waves. The flexibility of weather coverage has attracted growers that historically have been ineligible for crop insurance, including specialty crop producers, double-croppers, early planters, growers with no actual production history numbers, growers that want to cover deductible risks on crops that are covered by crop insurance, and other agribusinesses, such as packers, processors, and grain elevators.

Case Study: Drought Coverage for Grain Elevators

During the spring of 2009 an elevator in Southeast Texas built a new facility to manage 1.5 million bushels of grain sorghum. They bought weather coverage due to concern that there may not be any grain produced by local growers to fill the elevator. Texas was in the middle of a multi-month drought and, with the planting period for grain sorghum near deadline, the elevator was starting to see growers switch to planting cotton instead of grain sorghum, due to the low rainfall levels. Thus, with revenue dramatically at risk, the elevator purchased weather coverage that paid out if average rainfall for the remainder of the season was below the level needed to assure an adequate grain sorghum harvest.

Case Study: Early Freeze Coverage for Crops

A late start to planting can cause crops in Mankato, Minnesota to mature slowly, leaving much of the soybean and corn crop at risk if the first hard freeze occurs before early October. Several growers in the region purchased weather coverage with a declining payout structure for an early freeze. For example, the coverage would payout \$250,000 if a freeze happened before September 10, with declining payouts per day, down to \$10,000 if the freeze happened around October 3rd. This coverage cost \$6,750 in 2008.

Outdoor Event Coverage

Weather coverage protects outdoor event profits from rain, snow, excess cold or heat that can lower attendance, merchandise, and concession revenue. Hourly coverage is available at thousands of locations, allowing for coverage that matches event hours.

Case Study: Rainfall Coverage

Bruno Event Team, an Alabama-based sports marketing and event management company, was charged with managing the PGA Tour's BMW Championship at Bellerive Country Club in St. Louis, Missouri in 2008.

Bruno Event Team created coverage from September 4th, 2008 to September 7th, 2008 that would pay if total daily rainfall reached 0.25" or more. The coverage cost \$63,000 with a potential total payout of \$750,000.

Hurricane Gustav hit on September 4th and the first round of the BMW Championship was rained out. More than three inches of rain fell, making it the wettest day in the history of the tournament. The coverage was automatically settled for \$150,000 the day after the coverage period ended. Bruno Event Team received their payout in five business days without any hassle.

Snow & Ice Removal

Snow and ice removal in North America is a \$2 billion+ industry, according to the U.S. Environmental Protection Agency. Snow and ice removal service providers, public works agencies, and municipalities are aware that their revenue (or budget) can fluctuate from year to year because of volatile, unpredictable weather. Weather coverage has grown in popularity given new economic and climate challenges. Weather coverage can help grow and protect snow and ice removal service provider profits regardless of snowfall and can help protect public works agency and municipality budgets.

Coverage Example: Extreme Snowfall Coverage

The Buffalo, NY Airport has a seasonal budget of \$100,000 for snow removal, regardless of snow levels. The airport estimates their service will cost \$100,000 if the seasonal snowfall reaches 56 inches, with each additional inch costing \$5,000. The airport creates and purchases weather coverage for \$2,500 that pays \$5,000 per inch above the 56-inch threshold, covering the costs of any additional service.

Consumer Travel

Travel insurance companies can now supplement their travel insurance offerings with weather insurance, offering consumers peace of mind that bad weather won't ruin the value of their vacation. Unlike travel insurance, weather insurance doesn't cover physical property loss or medical expenses. Weather coverage reimburses travelers a specified amount for every day of rain, or a full refund on their total vacation cost if half of the days are "rainy". This coverage ensures vacation quality by guaranteeing good weather and works as a sound supplement to traditional travel insurance or trip cancellation coverage.

Case Study: Thomas Cook Group Canada Rain Check

Thomas Cook Group Canada offers a rained-out vacation product called Rain Check, powered by WeatherBill. The weather coverage product costs \$39.95 per traveler and pays the consumer the full value of their vacation package if half or more of the days of the vacation register 0.5" or more of rainfall, at the traveler's destination airport. This ensures that travelers can enjoy their outdoor or beachside vacation, or get a full refund on the price of their vacation. Thomas Cook agents receive a commission on each Rain Check sold, ensuring maximum uptake of the product.

PARAMETRIC WEATHER COVERAGE

Payout Based on Weather, Not Loss

While typical property and casualty insurance pays claims based on assessed losses, parametric weather coverage pays out based solely on observed weather conditions. This parameter-based structure allows fully automated settlement based on observed weather conditions, without a need to adjust for, or measure, losses. Defined weather triggers dramatically reduce underwriting costs, including the margins typically required for basis risk, moral hazard risk, and claims adjustment and administration. These savings can improve underwriting margins or be passed on as savings to clients.

Weather coverage can be created for any measurable weather event, including rain, drought, heat, cold, or snow. Weather observations are typically recorded at weather stations operated by the government. Results are audited by independent third party data providers and delivered each day for settlement. If the weather specified in the contract triggers, payments are processed automatically – it's that simple.

No Manual Underwriting Required

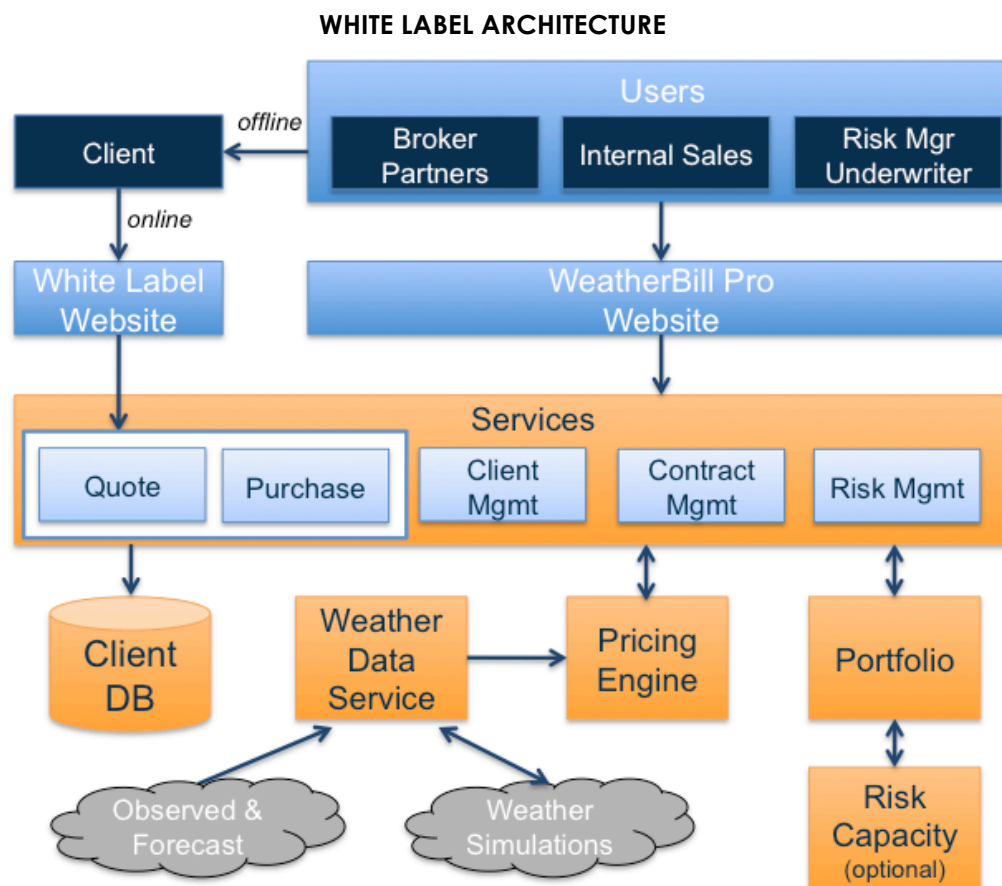
Since weather coverage pays out based solely on automated weather observations, pricing (rating) takes place automatically. This approach allows fully customized quotes to be completed and executed (bound) in minutes. Weather-sensitive businesses and individuals can buy coverage, regardless of the size of the risk or limit online, offline, or through brokers without waiting for rates and prices to be processed, increasing close rates and improving margins.

WHITE LABEL: HOW IT WORKS

WeatherBill White Label is an end-to-end platform that automates all of the processes associated with selling weather coverage. The platform includes several core components and services, as well as fully automated client, broker, and internal sales interface tools. A custom-branded White Label website allows self-service client transactions - clients quote coverage in minutes without ever leaving your site. Offline and sales assisted transactions are processed by internal sales team members and broker partners using WeatherBill Pro, a powerful web application with quoting, client, and contract management features.

WeatherBill White Label provides 5 key services:

1. Automated Pricing and Rating
2. Transaction and Order Management
3. Settlement and Claim Management
4. Reporting and Risk Management
5. Significant Risk Capacity



1. AUTOMATED PRICING AND RATING

WeatherBill White Label contains a powerful proprietary pricing engine, which uses billions of simulated weather data objects, probabilistic weather forecast feeds, and extensive climatological weather observations to determine the price for weather coverage. White Label partners can customize the pricing (rating) algorithm utilized by the real-time pricing engine, based on regulatory and risk management parameters. Weather simulations are generated for each coverage location and updated multiple times per day as new weather data and forecasts become available. They provide up-to-the-minute expected payout statistics, ensuring reliable, automated pricing for any weather risk, typically in less than one second.

The pricing engine is highly customizable, allowing pricing of virtually any weather risk. Pricing engine parameters and features include:

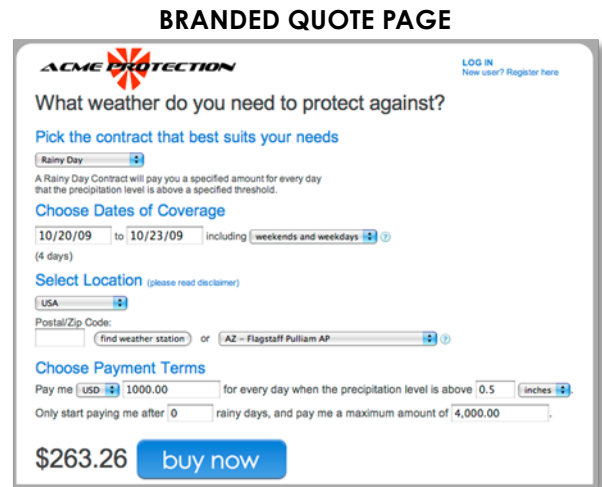
- **Measurement Location:** Thousands of global locations are supported.
- **Measurement Type:** Daily minimum temperature, daily maximum temperature, daily average temperature, precipitation, snowfall, hourly precipitation. Other observable weather conditions are easily supported, such as wind speed, solar radiation, and sky cover.
- **Coverage Period:** Ranges from several hours to several years in length. Support for coverage start dates as early as the next day.
- **Coverage Triggers:** Customizable, including digital daily values, seasonal averages, seasonal max/min, or any other payout structure to match the risk of the buyer.
- **Limits, Deductibles, and Minimums:** Completely customizable, with parameters set based on the needs of the White Label partner.

Coverage can be customized and priced in seconds, meeting the weather coverage needs of any buyer. White Label partners can create custom coverage types suited to their target market. Customers, or internal or external sales team members, can then customize parameters for specific types of coverage. Some coverage examples:

- **Rainy Event:** Get paid \$___ if it rains more than ___ hours on a specified date
- **Rainy Day:** Get paid \$___ for every day the rainfall is above ___ during specified date range
- **Seasonal Drought:** Get paid \$___ for every inch of rain below ___ during specified date range
- **Frost:** Get paid \$___ if the temperature drops below ___ at any point during specified date range
- **Low Snowfall:** Get paid \$___ for every inch of snowfall below ___ during specified date range

2. TRANSACTION PROCESSING AND ORDER MANAGEMENT

WeatherBill White Label includes a partner-branded quote and buy interface that can be embedded in partners' site for direct consumers. WeatherBill supports the site with full payment processing, including acceptance of major credit cards, checks, wire transfers, and transaction processing in USD, GBP, EUR, and CAD. This WeatherBill-hosted site allows clients to create online accounts and easily track previous quotes and purchased coverage, with easy access to weather data observations.



Alternatively, quotes can be provided via an automated pricing service. This allows partners to easily create internal sales tools, fully customized quote pages, or embeddable quoting tools with pre-set options to increase distribution across partner-managed websites.

For offline or sales assisted transactions, WeatherBill Pro offers the ability to create and manage client accounts and quotes. WeatherBill Pro users maintain a list of clients they are managing in an easy-to-use interface. Once a quote has been created that meets the client's needs, it is assigned to the client and purchased. This can be performed completely offline, allowing your users to execute transactions utilizing existing processes and distribution channels.


WeatherBill Pro also allows an administrative user to see all sales and partner users, their clients, and coverage sold. Easy-to-use transaction reporting allows the administrative user to track sales activity and commissions.

3. SETTLEMENT AND CLAIM MANAGEMENT

Parametric weather coverage pays out specified values based solely on observed weather conditions. Thus, weather coverage can be settled automatically. WeatherBill White Label includes fully automated weather data observation processing and coverage settlement, minimizing the claims process. In fact, WeatherBill can automate the entire settlement and payment process, allowing customers to automatically receive payment due within days after the coverage period ends. WeatherBill White Label optionally provides email alerts to clients after the coverage period ends, alerting them of final weather observation values and settlement levels. Alternatively, insurers that require a claims process can use WeatherBill White Label to verify weather observations instantly, minimizing claims administration and loss adjustment costs.

A branded, contract settlement interface allows self-service clients to see weather observations applicable to their coverage, with clear indicators for weather triggers met and payments due. For manual claims administration, WeatherBill Pro provides simple settlement and client management tools to your sales and service users. Internal administrators and broker partners can receive daily settlement reports, identifying settled contracts and amounts paid. Administrative users have full visibility into the settlement levels for all contracts sold by any user within the system.

BRANDED SETTLEMENT INTERFACE



[home](#)
[contracts](#)
[accounts](#)
[risk management](#)

[employee1-test@weatherbill.com](#) | [Log Out](#)

Filter by account info [Reset all filters](#)

Client: Company: Agent: Agency:

Filter by contract params

Status: Measurement: Station: Include ACE contracts

Filter by date

Starts between and

Permalink | [Download results as CSV](#) (first 5000 results) Displaying Contracts 1 - 25 of 60 in total [« Previous](#) [1](#) [2](#) [3](#) [Next »](#)

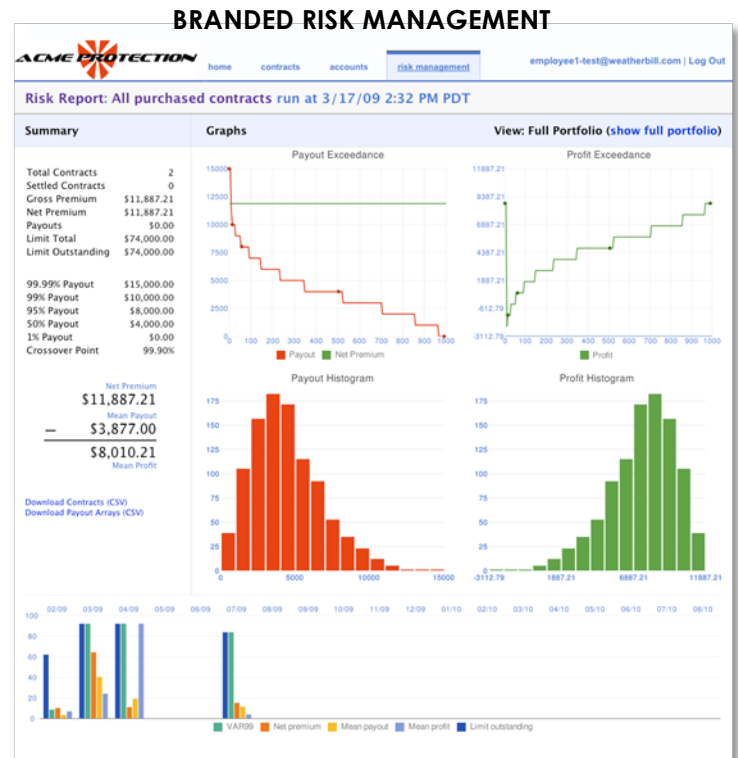
Contract ID	Status	Gross Price Vars »	Net Price	Payout	Profit	Weather Station IDs »	Measurement Details »	Tick	Strike	Cap	Quoted At ▾	Period (Start) (End)	Purchased On	Settled On
67	Purchased	\$1,315.13	\$1,315.13	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$10,000.00	0	\$10,000.00	3/5/09 3:59 PM PST	4/7/09	3/5/09	Unsettled
50	Purchased	\$6,977.73	\$6,977.73	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$10,000.00	0	\$10,000.00	3/5/09 3:58 PM PST	3/9/09	3/5/09	Unsettled
23	Expired	\$14,640.25	\$14,640.25	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$100,000.00	0	\$100,000.00	3/5/09 3:54 PM PST	4/22/09		Unsettled
84	Purchased	\$17,929.38	\$17,929.38	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$100,000.00	0	\$100,000.00	3/5/09 3:53 PM PST	7/16/09	3/5/09	Unsettled
50	Expired	\$1,792.94	\$1,792.94	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$10,000.00	0	\$10,000.00	3/5/09 3:53 PM PST	7/16/09		Unsettled
88	Purchased	\$69,777.30	\$69,777.30	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$100,000.00	0	\$100,000.00	3/5/09 3:53 PM PST	3/9/09	3/5/09	Unsettled
56	Expired	\$6,977.73	\$6,977.73	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$10,000.00	0	\$10,000.00	3/5/09 3:53 PM PST	3/9/09		Unsettled
45	Purchased	\$11,631.71	\$11,631.71	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$100,000.00	0	\$100,000.00	3/5/09 3:52 PM PST	3/9/09	3/5/09	Unsettled
26	Expired	\$4,723.73	\$4,723.73	\$0.00	\$0.00	Norfolk International Airport (Norfolk, VA)	Precipitation	\$10,000.00	0	\$10,000.00	3/5/09 3:10 PM PST	3/9/09		Unsettled

4. REPORTING AND RISK MANAGEMENT

It is critical that risk managers and underwriters have access to real-time risk data and analytical reports. WeatherBill White Label provides reporting and analytical risk management tools, powered by real-time weather observations, probabilistic forecasts, and weather simulations. These tools allow instant insight into simulated payout scenarios for any weather coverage underwritten in a portfolio or book of risk. Risk reports identify and analyze summary level data and provide detailed risk statistics for individual contracts, or an entire portfolio. These tools can be utilized for offline transactions, enabling real-time analytics for pricing and analysis prior to selling coverage.

5. SIGNIFICANT RISK CAPACITY

Insurance providers and derivatives dealers who want to offer weather coverage may not want to retain the associated risk of the portfolio generated. WeatherBill can provide significant risk capacity, via its relationship with Nephila Capital, one of the world’s largest weather risk and catastrophe reinsurance fund managers. Risk capacity relationships can be structured to allow for partial, or complete, risk transfer with White Label partners earning fees on premiums generated, or on the profits of retained risk.



ABOUT WEATHERBILL

WeatherBill is the first service to provide affordable and easy-to-use weather coverage that protects revenue and controls costs for the millions of businesses impacted by the weather. WeatherBill distributes weather coverage through insurance agents and brokers, industry specialists, and direct to businesses of all types and sizes.

WeatherBill's unique platform makes weather coverage accessible, affordable, and transparent. Users can customize, price, and buy coverage online or by phone in a matter of minutes at www.weatherbill.com. By streamlining customization, pricing, and transactions, WeatherBill can cost-effectively provide coverage for any size of weather risk, ranging from \$1 to \$100 million or more.

WeatherBill's risk capacity partner, Nephila Capital Ltd., is one of the world's largest and most respected weather risk and catastrophe reinsurance fund managers, with over \$2 billion in capital. In order to make sure that any payment due to clients is available, in full, at any time, Nephila collateralizes each contract WeatherBill sells with cash held in trust at the Bank of New York.