

WSI AVIATION FORECAST SERVICES

Trusted Around the Globe™



Translating Weather Into Operational Decisions and Savings

WSI has been serving the time critical weather needs of air carriers for nearly 30 years, during which time the company has earned a reputation as the most trusted and innovative aviation weather provider in the world. WSI's ability to blend the aviation and meteorological expertise of its staff with innovative technology has resulted in the most advanced aviation forecast services designed to benefit pilots, dispatchers, passengers and ultimately the shareholders.



WSI AVIATION FORECAST SERVICES - Advanced Forecasts for Terminal, En route, & Irregular Operations



Benefit from a world class aviation center equipped to help airlines increase safety, reduce costs, and improve on-time performance

WSI operates a proven 24/7/365 Aviation Weather Center to support the mission-critical operational needs of airlines and help them increase safety, reduce costs, and improve on-time performance. This world class operation employs over 20 experienced aviation meteorologists with an average of 10 years aviation experience. WSI provides advanced terminal, en route and irregular operations support to a growing number of domestic and international carriers. WSI services are FAA approved and meet the FAA guidelines for Enhanced Weather Information Services (EWINS).

Advanced Forecasts for Terminal, En route, & Irregular Operations

TERMINAL OPERATIONS

To help operators proactively plan operations and anticipate and minimize disruptive weather impacts on terminal operations, WSI offers a range of services.

- **WSI Hubcast™:** Provides precise hour-by-hour forecasts and alerting of critical parameters impacting capacity and demand and winter operations at key terminals. Today WSI produces WSI Hubcast forecasts at airports in Asia, Europe, and the U.S. including Alaska.
- **WSI Terminal Aerodrome Forecasts (TAFs):** Provides an added level of operational flexibility with TAFs issued on a scheduled or ad hoc basis, especially valuable when government forecasts are unavailable.
- **WSI Deicing Forecasts:** Provides forecasts of FAA and EUROCONTROL deicing hold over parameters at key airports to improve deicing planning and reduce related costs.
- **WSI Load Planning Forecasts:** Provides 3-hourly temperature forecasts critical for load planning at key airports.
- **Personalized Consultation:** Consult directly with experienced aviation meteorologists to improve confidence in critical terminal decisions.

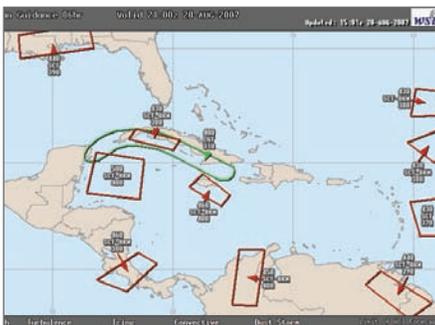


Minimize the impact of disruptive weather with WSI Hubcast™'s hour-by-hour forecasts and customizable alert thresholds

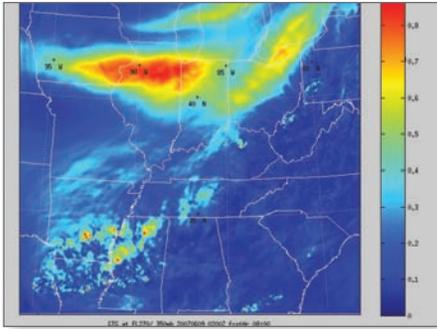
EN ROUTE OPERATIONS

To streamline and improve the effectiveness of route planning and en route safety, WSI continuously monitors and produces precise en route alerts and guidance for turbulence, convective activity, icing, volcanic ash, and dust storms.

- **WSI Flight Plan Guidance (FPGs):** Provides 12 hour forecast of global en route hazards for altitudes ranging from the surface to FL500 (50,000 ft), depending upon geographic area. FPGs are updated every 3 hours and as needed to ensure operators plan the most optimal and safe routes around hazards.
- **WSI SIGMETs:** When en route hazards exceed pre-set thresholds such as intensity or aerial coverage, WSI will issue a significant meteorological advisory or SIGMET. SIGMET guidance is provided graphically as well as in formatted text messages.



Plan the safest and most optimal routes around en route hazards with WSI's Flight Plan Guidance



WSI meteorologists have access to exceptional tools and WSI's high resolution model data to assist with forecasting turbulence and other disruptions

- **ETOPS Icing charts:** Provides potential icing at 10,000ft MSL for major oceanic routes to better assess ETOPS icing penalties.
- **MEL Consultations:** Dispatchers and Equipment Managers need to make frequent decisions on MEL restricted aircraft. WSI's aviation meteorologists have the tools and knowledge to assist in making the safest, most economical decisions for the effected flight.
- **Polar Operations:** WSI produces a variety of products and services to enable dispatchers to plan polar operations from block to block including a solar activity message, minimum temperature forecasts at arctic ETOPS alternates, and graphical fuel freeze forecasts, among others.

IRREGULAR OPERATIONS

For extraordinary weather situations which may force airlines into irregular operations, WSI offers several services.

Tropical Event Guidance

- **Tropical Alert Messages:** WSI issues tropical alert messages within one hour of government bulletins that provide WSI's forecast positions of maximum winds through the first 48 hours as well as WSI's forecast discussion.
- **Tropical Risk Table:** To assist decision makers in planning operations WSI creates a risk table describing the level of risk with respect to the strength of the cyclone and its proximity in reference to strategic airport locations.
- **Personalized Consultation:** Interact directly with WSI meteorologists on the expected ramifications of an approaching tropical cyclone at key airports.



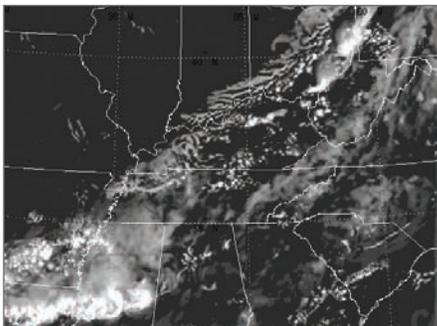
Gain a clearer picture of a tropical situation offshore and view data in areas that may typically be lacking with WSI's Pseudo Radar

Winter Storm Support

- **Personalized Consultation:** To gain early insight into the potential impacts of disruptive winter storms, interact directly with WSI meteorologists on snow and ice intensities, event timing, winds, temperatures, and confidence levels.

Convective Weather Events

- **Personalized Consultation:** Consult directly with WSI's meteorologists to determine the impact of convective weather on en route or TRACON sectors as well as airport flight and ground operations.

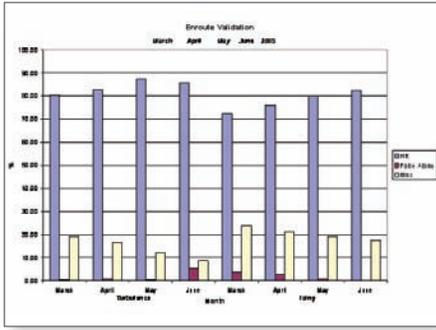


Consult with WSI's expert meteorologists prior to or during a convective weather event to better determine the impact on flight or ground operations

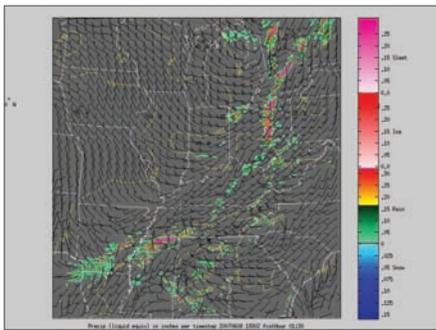
The WSI Difference

CONTINUOUS FORECAST IMPROVEMENT AND VALIDATION

WSI's forecast methodology combines the widest array of public and proprietary data with the latest automated forecasting technology to optimize the value added by our forecast team. WSI meteorologists receive real-time feedback on forecast performance and changing conditions that warrant action. WSI uses



Continuous investment in forecast improvement and validation results in the most accurate and relevant forecasts



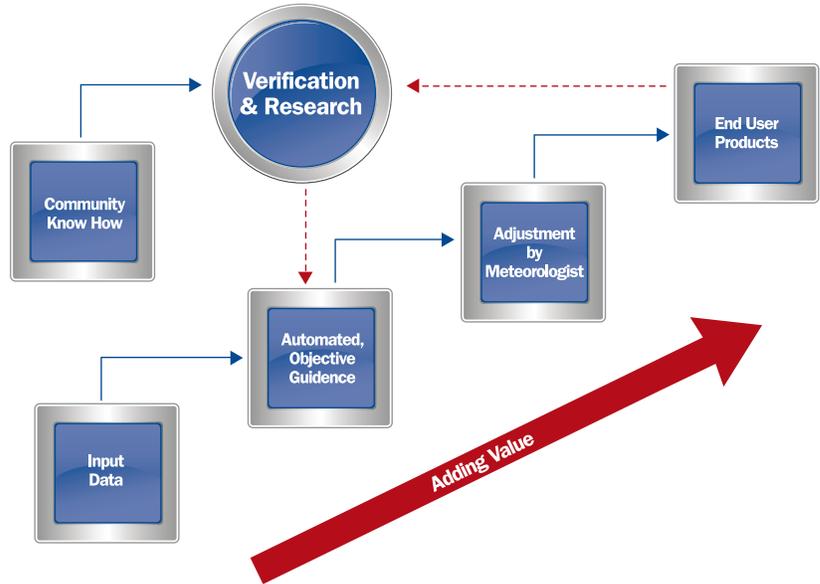
WSI's proprietary model was designed to supply meteorologists with the highest resolution data possible to aid in decision-making



WSI's 24x7x365 state of the art facility supports the mission-critical operational needs of airlines around the globe

a systematic forecast verification system to monitor and track forecast skill by location, time period, and parameter. WSI routinely reviews these results to identify and focus training and R&D on areas requiring improvement.

WSI Forecast Methodology



LEADING-EDGE R&D TEAM

WSI is actively engaged in the meteorological research community to identify emerging technology that can be leveraged towards improving flight operations and safety. WSI is investing considerable R&D resources to improve convective weather forecasting, severe storm detection and prediction, terminal area forecasting, and global forecasting, among others. These innovations are a key component of WSI's overall aviation weather program and a source for a number of current and future products to improve flight operations.

PROVEN PRODUCTS FOR AIRLINES

WSI FPGs, SIGMETs, and other value added forecasts are available via proven dispatch and crew products such as WSI Pilotbrief®, WSI Fusion™, and WSI Hubcast™. In addition, WSI can provide standard XML and WMO formats via diverse communication paths for delivery to existing enterprise systems.

For additional details on WSI Aviation Forecast Services and Products, please contact WSI at 800.USA.2FLY or visit www.wsi.com