

Joint Safety Implementation Team

Implementation Plan For WEATHER INFORMATION

DRAFT

Statement of Work:

To prevent fatal accidents and incidents resulting from inadequate aircraft deicing and anti-icing and runway and taxiway snow removal operations due to insufficient information on surface weather conditions, weather information providers should provide airport zone specific advanced detection and forecast products (e.g., Weather Support to De-icing Decision Making (WSDDM)) to operators, flight crews, and airport authorities for ground operations.

Lead Organization for Overall Safety Enhancement Coordination (LOOSEC):

Federal Aviation Administration (FAA)

Safety Enhancement (SE 137):

Provide airport zone specific advanced weather detection and forecast products (e.g., WSDDM) to operators, flight crews, and airport authorities for ground operations

Score: 2007-(x.x) 2020-(x.x) 100%-(x.x)

Outputs:

Output 1

- Improve and implement sensors to observe ground-level precipitation rates and atmospheric icing conditions to enhance determination of current conditions and forecasts of precipitation type and rates in different airport zones

Resources: FAA (including the National Center for Atmospheric Research (NCAR)) and Airport Authorities

Total government/industry resources: \$3,150,000

Timeline: 2007

- Improved WSDDM system with checktime and freezing drizzle detection
- ASOS algorithm for freezing drizzle
- Enhanced precipitation identifier.

Actions:

1. Demonstrate checktime and freezing drizzle detection capability at airports and to pilots. Based on feedback, improve product and make available to WSDM LLC for commercial deployment to airports and other locations. Also make available to the National Weather Service (NWS) and FAA.

Output 2

- Develop and implement forecasting of precipitation rates and icing conditions (e.g., WSDDM) to determine when runways should be cleared, increase awareness of holdover limitations, and improve de-icing/anti-icing operational timing decisions

Resources: FAA (including NCAR) and Airport Authorities

Total government/industry resources: \$1,050,000

Timeline: 2010

- WSDDM system with 12 hour snow and precipitation type forecast
- Tactical timeframe 15 minute increments out to 2 hours

Actions:

1. Demonstrate 12-hour snow and precipitation type forecast to airlines and airports. Based on feedback improve product and make available to WSDM LLC for commercial sales. Also make available to the National Weather Service (NWS) and FAA.

Output 3

- Develop and implement methods for rapid dissemination of real-time observations and forecasts (e.g., WSDDM) to airlines (snow desks and airline operations centers), airport operators, and air traffic control/traffic management.

Resources: FAA (including NCAR), NWS and Airport Authorities

Total government/industry resources: \$525,000

Timeline: 2010

Actions:

1. Work with the NWS to implement WSDDM products at WFOs.
2. Work with the FAA to implement WSDDM products on air traffic weather systems.

Potential Barriers:

- An insufficient number of airports purchase the WSDDM system

Possible Mitigation Strategies:

- Included in the 7-year plans as part of the FAA's Aviation Weather Research Program, Winter Weather Product Development Team
- Equip 18 of the 35 OEP airports with WSDDM system over several years

Relationship to Current Aviation Community Initiatives:

- Main aircraft deicing product developed by the Aviation community.
- Conducting support research related to ceiling and visibility forecasting.

Impact on Non-Part 121 or International Applications:

- Detection and forecasting of freezing/frozen precipitation is a safety issue applicable to all types of aircraft.