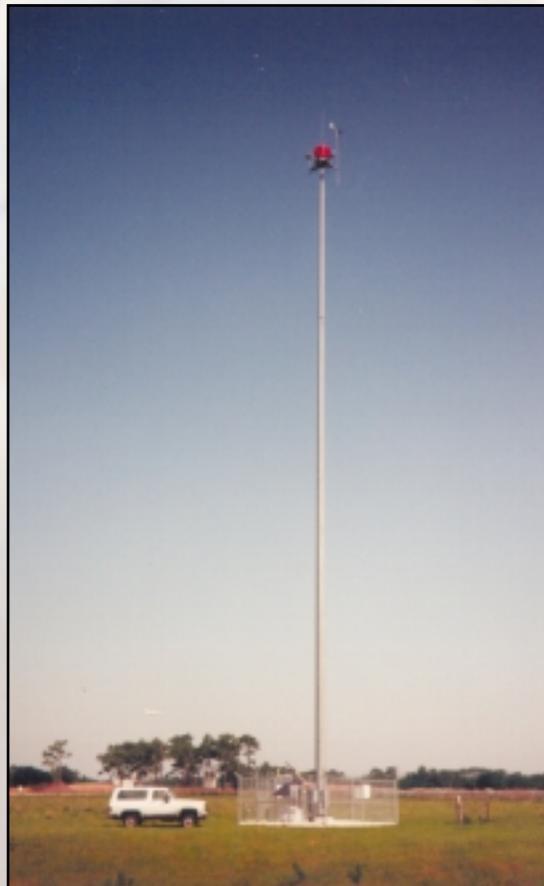


FAA William J. Hughes Technical Center

Low Level Windshear Alert System – Relocation/Sustainment (LLWAS-RS)

The Low Level Windshear Alert System (LLWAS) measures wind speed and direction at remote sensor station sites situated around the airport terminal.

Currently, each airport may have as few as 6 or as many as 32 remote stations. The remote sensor data received is transmitted to a master station, which generates warnings when windshear or microburst conditions are detected. Current wind data and warnings are displayed for approach controllers in the Terminal Radar Approach Control Facility (TRACON) and for ground controllers in the Air Traffic Control Tower (ATCT).



LLWAS-RS Anemometer/Pole



Microburst - extremely dangerous for aircraft.

Photo provided by NOAA

Air Traffic Controllers (ATCs) relay the LLWAS runway specific alerts to pilots via voice radio communication. LLWAS alerts assist pilots during critical times when they must determine whether to attempt to land or take off in hazardous weather conditions.

BACKGROUND

The Low Level Windshear Alert System Relocation/Sustainment (LLWAS-RS) is intended to upgrade the current LLWAS at 40 LLWAS-2 operating sites and 4 support sites, to last another 20 years.

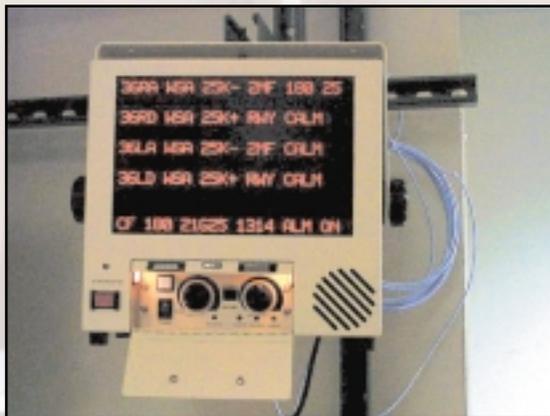
Safety



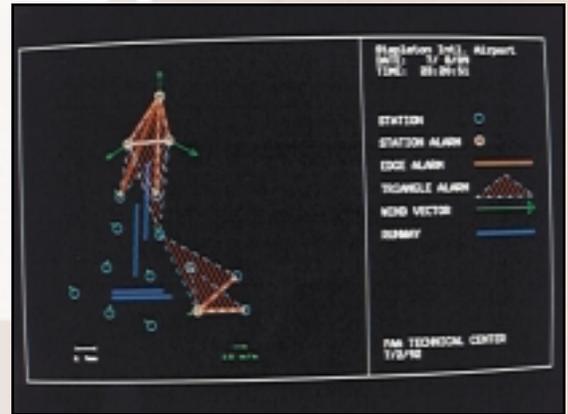
The LLWAS-RS program is divided into two efforts: pole relocation and system sustainment. The program began in response to the National Transportation Safety Board (NTSB) investigation of the aircraft accident at Charlotte, NC, in 1994. From that accident, a determination was made that LLWAS must regain and retain its original capability. Due to increased obstructions around remote station wind sensors and equipment obsolescence, the capability has been lost over the years.

ACCOMPLISHMENTS

- Preliminary ultrasonic wind sensor testing at Los Angeles International Airport, Los Angeles, CA (May 1997).
- Contract award (August 1998).
- Post Award Conference (September 1998)
- System Design Review (November 1998)
- Preliminary Design Review (January 1999)
- Critical Design Review (April 1999)



LLWAS Display



Output from LLWAS Accident Investigation Tool

FUTURE WORK

The Weather Branch will provide government support for the following activities:

- Conduct a Test Readiness Review (June 2000)
- Participate in the Development Test and Evaluation (July 2000)
- Conduct Operational Test and Evaluation at the FAA William J. Hughes Technical Center (WJHTC) (September 2000)
- Conduct On-Site OT&E in Fort Myers, FL (November 2000)

For additional information regarding the Low Level Windshear Alert System – Relocation/Sustainment program, please contact:

Communication/Navigation/Surveillance Engineering and Test Division - Weather Branch

Federal Aviation Administration
William J. Hughes Technical Center
Atlantic City International Airport, NJ 08405

Phone: (609) 485-5308
Fax: (609) 485-4035
<http://www.tc.faa.gov>

Safety