

National Business Aviation Administration (NBAA)
Friends/Partners in Aviation Weather Forum (FPAW)

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BIOGRAPHIES OF SPEAKERS AND PANELIST

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Mark J. Andrews
Joint Planning and Development Office (JPDO)

Mark J. Andrews attended and graduated from Waterford Township (Michigan) High School in the spring of 1975. In the fall, he attended the University of Michigan, where he graduated with a Bachelor's of Science in Atmospheric and Oceanic Science in 1979.

After finishing college he was admitted into the Officer Training School, Medina Annex, Lackland Air Force Base, where he was commissioned a Second Lieutenant in the Air Force.

Mark's first assignment was to Air Force Global Weather Central, Offutt AFB, Nebraska, where he was assigned as Officer In Charge, CONUS Severe Weather Warning section. There he was responsible for providing advance severe weather warning advisories to over 500 CONUS locations.

Promoted to First Lieutenant in 1981, and then finishing out a 3 year tour, his next assignment took him to Hickam AFB, Hawaii, in 1982, where he served as the lead CINCPACAF weather briefer and operations planner. While serving a three year tour there Mark was promoted to Captain in 1983. Upon the conclusion of this tour in 1985 he was competitively selected to attend the Air Force Institute of Technology Masters program at the Florida State University, where he graduated summa cum laude in 1987 with a Masters Degree in Meteorology, with special emphasis in satellite remote sensing.

Mark was then picked to move to Wright-Patterson AFB, Ohio, where he served as Staff Meteorologist, and supporting Special Access Required (SAR) programs from 1987 to 1991. There he acted as environmental lead engineer for over 15 separate SAR programs, to include the B-2 bomber, the F-117A and F-22 fighters, the Advanced Cruise Missile, and the Tri-Service Standoff Attack Missile. In 1989 he was selected as the Air Force's Outstanding Staff Meteorologist (Bud Long Award), and the Air Force's top climatologist (Air Force Zimmerman Award). Mark was also promoted to Major while at Wright-Patterson AFB in 1991.

Based on his SAR background, Mark was then selected to become Commander, Detachment 8, Air Weather Service, at Tonopah Test Range, Nevada, where he oversaw weather support to the 37th Fighter Wing (3 F-117A fighter squadrons) and the closure of the facility from 1991 to 1992.

After the successful closure, Mark was assigned to the Air Staff (Pentagon) in 1992, where he served a four year tour as the Air Force weather lead for Defense Meteorological Satellite Program (DMSP). Mark was selected to represent the Department of Defense in the formation of the Tri-Agency Convergence Transition Team (TACTT), which laid the ground work and supporting Memorandum of Agreements between the Secretaries of Commerce, State, and Defense for the merging of the civilian and defense polar-orbiting meteorological satellite programs. Mark was awarded the Vice-President's "Hammer" Award in 1996, for his work in overcoming agency concerns and saving an estimated 2 billion dollars by combining both programs. Mark was promoted to the rank of Lieutenant Colonel upon his departure from the Pentagon during May, 1996.

Mark was then selected to become Director of the Joint Typhoon Warning Center (JTWC),

which provides tropical cyclone advisories and warnings to all U.S. Defense and State Department assets for an area encompassing over 53 million square miles (roughly 70%) of the ocean's surface. Under his command, the JTWC was recognized by the Director of the National Hurricane Center and the National Weather Service for shattering historical records for warning accuracy in 1997. The JTWC was also selected as PACAF's weather unit of the year-1997.

Mark concluded his military career serving as the Commander of the 3rd Weather Squadron, Fort Hood, Texas. In his role as the Staff Weather Officer to the Army's III Corps Commander, Mark's squadron provided support to two Army divisions. Mark was inducted into the Army's "Knowlton" Society, for excellence in supporting the Army's intelligence missions.

Upon retirement from the Air Force, Mark was hired by NOAA's National Weather Service in 2000 to serve as the aviation services chief and NOAA's Aviation Weather Program Manager, a position served in for four years prior to his selection to represent the Department of Commerce as the weather IPT lead.

While in the Service, Mark was awarded the Defense Meritorious Service Medal, the Meritorious Service Medal with one oak leaf cluster, the Air Force Commendation Medal with one oak leaf cluster, the Army Commendation Medal, the Air Force Achievement Medal, the National Defense Medal, and the Humanitarian Service Medal with one device.

Mark Andrews married the former Bella (Dina) C. Kandarakis, of Tallahassee, Florida, in 1987.

Debi Bacon

Federal Aviation Administration (FAA)

Ms. Bacon currently facilitates the Aviation Weather Technology Transfer (AWTT) process in the Air Traffic Organization, Operations Planning, Systems Engineering, NAS Weather Policy and Requirements Group. AWTT was created to move aviation weather products through the research and development path to operational use by users such as air traffic controllers, pilots, dispatchers and meteorologists. Ms. Bacon has previously worked as an air traffic control specialist in FAA (flight service and terminal) and the U.S. Army (terminal).

Ms. Bacon has a Bachelor's degree in Business Administration from University of Maryland and a Master's in Public Affairs from Parkville College, Parkville, MO.

Jim Block

DTN/Meteorlogix

Jim Block has spent his entire professional career in the private sector. He received a B.S. (1977) and M.S. (1979) in Meteorology from the University of Wisconsin-Madison. After working as forecaster providing radio broadcasts, and as an aviation forecaster for Republic Airlines, he joined Kavouras Inc. (now DTN/Meteorlogix). He was one of two people who started Meteorlogix's Meteorological Operations department; designed and

helped to develop the Meteorlogix weather database, and now serves as Chief Meteorologist for all of the DTN divisions, including the management and marketing of weather content and services for DTN's 100,000 business clients.

He has been an active member of the AMS for his entire career, and holds the Radio Seal of Approval from the Society. In 1989 he was named a Certified Consulting Meteorologist (CCM), and in 2000 was elected to the Board of Directors of the National Council of Industrial Meteorologists (NCIM). In 2002, he served as president of NCIM. He currently chairs the Board for Private Sector Meteorologists, and has served on this board since 2002. He has served on numerous working groups with the National Weather Service, working to make the private side of the public-private partnership function. He has served as part of the US delegation to World Meteorological Organization (WMO) Executive Council meeting in 2003. He has made numerous presentations at various AMS conferences, including many presentations on the private sector side of the weather enterprise.

Captain Joseph D. Burns
United Airlines

Captain Joseph D. Burns is the Managing Director of Flight Standards and Technology for United Airlines. At United, he previously held positions as Director – Flight Ops Technology, Manager – Automation Systems/MIS, Pilot Instructor on both the A320/319 and B-727 fleets, had chaired several A319 integration committees, served as the ALPA LEC Safety Chairman, and has flown A-320/319, B-737, and B-727 in line operations for UA. He is currently flying Captain on the A319/320. He is type-rated in A320, A319, B-727, DHC-8, BE-1900 and BE300 aircraft.

Previous to United, Joe was the Director of Operations and Chief Pilot for USAir Express/Stateswest Airlines, a BAE-146 Pilot for USAir, B-727 Instructor and Pilot for Braniff Airlines, and Metroliner Pilot for Air Midwest.

He is currently on the Board of Directors for Optical Detection Systems, AirDat LLC, and is the Chairman/CEO of ATNSI. Additionally he is Chairman of the ATA Airline Operations Committee, Vice-Chairman of the Airborne Internet Consortium, and United's member to the ATA – Air Traffic Control Council.

His engineering experience includes President of Inertia Technology, developing AWOS and Flight Sensor Systems, Chief Pilot and systems engineer for Coffeen, Fricke, and Associates (Lenexa, KS), Chief Systems Engineer for Ericsson, Inc.'s Fiber Optic Network Communications Division (Overland Park, KS), and Engineering Manager for Sprint's Telenet/Uninet Division.

He holds an M.B.A. in Management from Miami Universities School of Business and a B.S. in Aeronautics/Aeronautical Engineering from Miami University. Joe also holds multiple patents in Communications, Security, and Sensor Technology.

Steve Caisse
Airline Dispatchers Federation

Mr. Caisse, a Flight Superintendent at the Delta Air Lines' Operations Control Center has just completed 28 years of service with the Atlanta, Georgia based airline. At Delta, Caisse has served in a variety of technical, operations, passenger service, marketing and management positions during his career.

Mr. Caisse has been a member of the Airline Dispatchers Federation for 16 years. During that period, Caisse served as ADF's Director of Information Technologies, Director of Safety, Executive Vice-President and ADF National President 1998-1999. He also created and functioned as webmaster of the popular ADF Website at www.dispatcher.org.

Bruce Carmichael
National Center for Atmospheric Research (NCAR)

Dr. Carmichael holds a M.S. from Northwestern University in Applied Mathematics and a Ph.D. from the University of Maryland in Computer Science. He has 30 years of experience spanning a number of activities including university teaching, commercial research, government service, consulting, and academic research. His past 18 years have been involved with the aviation industry in automation of maintenance processes, air traffic control, and weather information. He has been involved in system engineering of improved FAA systems to deliver weather information to users. For the past seven years he has been at the National Center for Atmospheric Research, where he has acted as the Program Manager for FAA Programs. These programs are working to improve weather information for pilots, dispatchers, and controllers, particularly related to the hazards of thunderstorms, turbulence, and icing. Dr. Carmichael is also an active commercial instrument-rated pilot.

Mike Cetinich
Jeppesen

Mr. Cetinich has been employed with Jeppesen since 1983, first as part of Lockheed DataPlan, and with Jeppesen since 1989 when Jeppesen acquired Lockheed DataPlan. Mike is currently the Product Manager for Weather and NOTAM Services at Jeppesen, a position he has held since 2000. Mike has P&L responsibility as well as strategic and tactical planning and product development for the Weather and NOTAM product lines. Prior to Mike's current responsibilities, he was the Manager of Meteorology Operations from 1991 to 2000, responsible for the day to day operations as well as product development in this role. Mike was a software developer for the Meteorology department, maintaining and developing software for the production environment from 1986 to 1991. Initially, Mike was an Aviation Forecaster from 1983 to 1986.

Mike received a B.S. in Meteorology from San Jose State University in 1982, and attended graduate school at San Jose State University working towards a M.S. in Meteorology from 1982 to 1985. Mike has been a member of the American Meteorological Society (AMS) since 1983, and has authored papers that have appeared in the Bulletin of the AMS. Mike has also served on various RTCA, IATA and ICAO weather committees, and has given

presentations at numerous industry meetings, including the AMS Annual Meeting, ICAO Safety Seminar, IATA Weather Committee Meeting, NASA ICNS Conference, NBAA and IOC Conventions, EAA Air Venture Annual meetings, and Civil Air Patrol meetings. Mike was a student pilot from 1981-1983. Mike also recently traveled to Antarctica to study the weather and flight operations for the National Science Foundation.

Dave Clark
MIT Lincoln Laboratory

Dave is a technical staff member in the Weather Sensing Group at MIT Lincoln Laboratory. He received degrees in meteorology from the University of Lowell (B.S., 1981) and MIT (S.M., 1983). He worked at Raytheon Company on the Next Generation Weather Radar system (WSR-88D) prior to joining Lincoln Laboratory in 1987. His early work within the Weather Sensing Group was associated with hazardous wind shear detection, making contributions to the Terminal Doppler Weather Radar (TDWR), Low Level Wind Shear Alert System (LLWAS), and the Integrated Terminal Weather System (ITWS). He now serves as the lead of the Terminal Ceiling & Visibility Product Development Team within the FAA's Aviation Weather Research Program. He also serves as a technical lead for development of a runway crosswind prediction algorithm in support of the FAA/NASA Wake Turbulence Mitigation for Departures (WTMD) system. Dave is a member of the American Meteorological Society.

Rick Curtis
Southwest Airlines

Rick has been at Southwest Airlines for nine years and works in the Flight Dispatch. He graduated with a B.S. in Meteorology from Lyndon State College. He concentrates on weather product development, managing weather information, weather instruction, and weather strategic planning efforts at Southwest Airlines. Rick earned his FAA Dispatch License in 2001. Past experience includes Account Management and Product Development at Sonalysts Inc. of Waterford, CT, Director of Weather Services at Surface Systems Inc. (SSI) of St. Louis, MO, and various technical and marketing positions at WSI Corporation. While at SSI, Rick led a team of meteorologists' focused on forecasting efforts relating to airport operations and highway maintenance activities. Rick is a member of both the American Meteorological Society and the National Weather Association.

Ernie Dash
Raytheon (FAA FISDL Support)

Ernie is an aviation meteorologist with 44 years experience supporting the Air Force for 27 years and now the FAA for 17 years. He's originally from Illinois and has a Bachelor's Degree in Engineering Administration from Millikin University in Decatur, Illinois. The Air Force then offered him the opportunity to become a meteorologist and sent him to Texas A&M. Later on, he got a Master's in System's Engineering from the University of Southern California.

While in the Air Force, he became a satellite meteorologist and among many assignments was the program manager for the Air Force tactical terminals for receiving direct readout of the Defense Meteorological Satellite Program. He also participated in the initial drafting of Air Force requirements for a ground Doppler weather radar system which ultimately became the Tri-Agency (DOD, DOC, and DOT) NEXRAD program. Ernie retired in 1989 as the Commander of the 5th Weather Wing at Langley Air Force Base in Hampton, Virginia; and has stayed in the area as a resident of York County, Virginia.

In 1989, Ernie began providing contract support to the FAA FIS Data Link program. One of his initial tasks was to draft the requirements and demonstrate the operational concepts for an uplink-only broadcast service. Through that task, he co-edited publication of the RTCA document DO-232, *Operations Concepts for Data Link Applications of Flight Information Services*, March 14, 1996.

Ernie is with Raytheon Technical Services Company and supports the FAA FIS Data Link (FISDL) program office.

Thomas H. Fahey, III
Northwest Airlines, Inc.

Tom Fahey holds an MS degree in Meteorology from the University of Wisconsin. Tom is currently employed as Manager Meteorology at Northwest Airlines (NWA) and also contracts independently as a meteorology consultant.

Fahey Meteorological Consulting

- Development and Presentation of Aviation Meteorology Training Modules
- Forensic Meteorology
- NWA
- Forecaster: Producing weather products (1977-1990)
- Product Development: Developing forecast procedures (1988-1990)
- Union President: Negotiating & representing the Meteorology Union (1982-1988)
- Management: Directing the weather offices (1990-Current)

NWA has a long tradition of over 35 years providing forecasts of turbulence and wind shear using the copyrighted Turbulence Plot (TP) System. Tom has both conducted and supervised projects that resulted in new and/or improved methods for producing and distributing both turbulence and wind shear information. Tom also initiated and oversaw development of a 2nd set of products focused on operations at NWA's hub airports. Most recently Tom has expanded NWA weather services via contracts with other airlines and is now covering a large amount of the department's annual expenses with revenue.

Recent aviation industry recognition and activities include:

- Feb 2000, Recipient of Air Transport World's Technology Management Award
- Feb 2001, Recipient of Aviation Week & Space Technology's Aviation Laurels Award for his role in the development of the Collaborative Convective Forecast Product (CCFP).
- Author of a number of articles in professional journals

Effective Nov 2005 Tom was appointed the Industry Chair of the Weather Work Group, a joint Government, Industry & Research community effort to address primarily Air Traffic Management weather related issues as well as other weather issues of concern to Air Transportation Association (ATA) member airlines . Tom is also currently serving as an Operational Forecasting representative for the Editorial Board of the American Meteorological Society.

Paul C. Fiduccia
Small Aircraft Manufacturers Association (SAMA)

Paul Fiduccia is President of the Small Aircraft Manufacturers Association (SAMA), the national trade association representing the leading producers of experimental, kit-built aircraft and new-design certified small aircraft. SAMA also represents manufacturers of engines, propellers, avionics, and other components and services for small aircraft that are flown for personal and business use. SAMA's goal is to "expand the market for small aircraft" by supporting efforts to make their operation safer, more reliable, easier to operate, and more affordable.

Mr. Fiduccia holds various leadership positions in FAA, NASA and industry programs that support SAMA's goal, including the FAA Safer Skies Initiative General Aviation Weather teams, and various FAA and NASA research advisory and review committees. He is currently the Chair of the Weather Products Change Work Group and the Aviation Digital Data Service Steering Committee.

He holds a Mechanical Engineering degree from Purdue University and worked as an R&D engineer. He also has a law degree from Georgetown University, and before founding SAMA in 1990, he was a partner in a national law firm where he specialized in federal relations. Mr. Fiduccia is an airplane owner and an active pilot for more than 35 years, with commercial, instrument, multi-engine, and sea plane ratings.

Fred L. Gibbs
Lockheed-Martin Information Technology

EDUCATION

B.S. in business Management and Communication, Adelphi University, Long Island, NY 1985
 Minor in Psychology
 22 courses under the FAA's extended learning program, 1976 – 1999
 USDA extended learning courses in business management, 1992 - 1994

EXPERIENCE

President, The ARC Group, Aviation Research & Consulting Co, Flagstaff, AZ
 Subject Matter Expert (SME), Lockheed Martin AFSS Program, 2005 to present
 Subject Matter Expert (SME), Raytheon AFSS Program, 2003 - 2005
 Subject Matter Expert (SME), FAA Flight Standards Division, 2002 - 2003
 Subject Matter Expert (SME), DME Corp, AFSS VCS Program, 2001 - 2002
 Subject Matter Expert (SME), DYNCORP, AFSS Projects, 2000 - 2001

Manager, Aviation Weather Standards – FAA Headquarters, Washington, DC – retired 12/31/1999

IPT Lead for Airborne Weather Systems – FAA Headquarters Washington, DC
Team Leader/Facilitator/FAA representative to ICAO/South America working Group (GREPECAS)

Manager, Airspace & Obstruction Evaluation Branch – FAA Headquarters Washington, DC

Manager, Air Traffic Publications Branch – FAA Headquarters Washington, DC

Manager, Flight Service Procedures Branch – FAA Headquarters Washington, DC

Manager, Systems Requirements Branch – Eastern Region, New York, NY

Manager, Millville Automated Flight Service Station – Eastern Region, New York, NY

AFSS Consolidation Program Manager – Eastern Region, New York, NY

Operations Specialist, Operations Branch – Eastern Region, New York, NY

Assistant Facility Manager, Philadelphia Flight Service Station, Philadelphia, PA

Team Supervisor/Training Officer, Poughkeepsie Flight Service Station, Poughkeepsie, NY

FAA Academy Flight Service Instructor, Oklahoma City, OK

Flight Service Specialist in Williamsport, PA, Harrisburg, PA, and Millville, NJ

EMPLOYMENT HISTORY

Federal Aviation Administration, U. S Government, 1971-1999.

Production Supervisor, Baker chemical Co, Phillipsburg, NJ 1968-1971.

Quality Control Technician, Reigal Paper Corp, Milford, NJ, 1966-1968.

Parts Cataloger/Technical writer, Butler Publications, Los Angeles, CA, 1964-1966

United States Air Force, Hydraulics/Pneumatic/Liquid fuels specialist, 1961-1963

Steve Green

NASA Ames Research Center

Steven Green, an instrument-rated pilot, received his M.S. degree in Aeronautics & Astronautics from Stanford University in 1988. He joined NASA Ames Research Center in 1985 to pursue research in Air Traffic Management automation. As one of the four “founders” of the Center TRACON Automation System (CTAS), he led the development and field testing of the CTAS En route Descent Advisor for which he was awarded NASA’s Exceptional Engineering Achievement Medal for innovation. Mr. Green pioneered air-ground integration concepts for CTAS-FMS integration and 4D trajectory negotiation in the late 1980’s and went on to co-chair RTCA SC-194 Working Group 2 for FMS-ATM-AOC Integration. He led NASA’s en route automation research efforts from 1998-2004, and during that time, developed and evaluated the concept for Regional Metering — enhancements to CTAS to enable tactical time-based metering across the NAS. Mr. Green initiated NASA’s cross-cutting research in Common Capabilities for 4D trajectory prediction, and is currently the U.S. Chair for the US/Europe Action Plan 16 team for Common Trajectory Prediction. Mr. Green also initiated, and currently leads) NASA’s efforts to integrate weather information with decision support automation, and serves as the Government co-chair of the JPDO Weather IPT’s ATM-Weather Integration team.

B. Hooper Harris
Federal Aviation Administration (FAA)

Mr. Harris is the manager of AFS-250, the Commuter, On Demand and Training Center Branch of the Federal Aviation Administration (FAA), a position he has held since late 2005. AFS-250 is the component of the Air Transportation Division responsible for FAA policy concerning the certification and surveillance of part 135 operators and part 142 training centers. Before this assignment, Mr. Harris served as the manager of the Commercial Operations branch, AFS-820, in the General Aviation and Commercial Division, and the manager of AFS-410, the Flight Operations Branch, in the Flight Technologies and Procedures Division. These branches are responsible for professional general aviation activities (agricultural, helicopter external load, and corporate aircraft operations) and instrument flight operations policy and standards, respectively. Prior to his service as a manager, Mr. Harris was a staff specialist in AFS-410 from 1998 through 2001. As a specialist, he was primarily involved aviation weather, helicopter IFR, area navigation (RNAV), required navigation performance (RNP) and low visibility operations issues.

Before coming to Washington in 1998, Mr. Harris served the FAA as an Operations Inspector in the Orlando, Florida Flight Standards District Office for 12 years. His work there included airman and operator certification, inspection, and surveillance as well as accident, incident, and enforcement investigation.

Prior to the FAA, he worked in the civil aviation industry as a corporate pilot, air taxi pilot and flight instructor, including over four years as an instructor for FlightSafety International on the Jetprop and Turbo Commander series airplanes. He also served as a designated pilot examiner.

Mr. Harris holds Airline Transport Pilot qualifications in both airplanes and helicopters, including several type ratings in turbojet and turboprop airplanes, and rotorcraft. He is also qualified at the Commercial Pilot level in seaplanes and gliders, and holds Flight and Ground Instructor certificates as well. He has over 8500 hours as a pilot.

Mr. Harris was born and raised in New Orleans, Louisiana, and educated at Tulane University. He resides in Alexandria, Virginia. He and his wife, Ellen R. Harris, enjoy sailing the Chesapeake Bay aboard their sloop *Tabasco*, and raising two highly opinionated beagles.

Paul H. Herzegh, Ph.D.
National Center for Atmospheric Research (NCAR)

Dr. Herzegh serves as a Project Scientist within the Research Applications Laboratory of the National Center for Atmospheric Research in Boulder, Colorado. In this role he leads the FAA-sponsored National Ceiling and Visibility Project Development Team (PDT). Before joining RAL, Dr. Herzegh served four years as Manager of NCAR's Research Aviation Facility, and earlier roles as Manager of NCAR's Research Data Program and Associate Manager of NCAR's Field Observing Facility. Dr. Herzegh's research publications include topics on the cloud processes of winter storms and the use of polarimetric radar and aircraft in storm research. He received a Ph.D. in Atmospheric

Sciences from the University of Washington, and a B.S. in Geology from Case Western Reserve University.

Richard J. Heuwinkel
Federal Aviation Administration (FAA)

- Pilot
- 17 years in FAA
- 10 years in NOAA
- Present Position:
 - Manager, Aviation Weather Policy & Requirements
 - Operations Planning
 - Air Traffic Organization
 - FAA
- Principle Duties:
 - Develop FAA/Federal policies on aviation weather services to the NAS
 - Assess and document pilot, dispatcher, controller, and airport operator users' requirements for aviation weather services.
 - Manage the joint FAA/NWS process for approval of products for experimental and operational use.
 - Represent U.S. aviation weather interests to ICAO
 - Provide liaison between ATO and external stakeholders, especially NWS and industry
- Education:
 - Masters of Business Administration, Stanford University, 1974
 - Masters, Political Science and Economics, Iowa State University, 1967

Jim Jansen
Airline Dispatcher Federation

Jim Jansen is the Executive Vice-President of the Airline Dispatchers Federation, a non-profit, professional organization whose goal is promoting aviation safety and the Dispatch profession. Jim retired from American Airlines in 2005 after 39 years of service, the last 30 of which were spent in the Systems Operations Center as a Flight Dispatcher, ATC Coordinator and Operations Coordinator.

His work with ADF has included presentations at NASA Safety Symposiums, FBI Airport training Conferences, U.S. State Department-Department of Transportation briefing to the government of China and as a member of the recent FAR 121 rewrite committee.

Jim is a member of the Friends and Partners in Aviation Weather group and has participated in several FAA Dispatch Inspector training courses in Oklahoma City. He recently completed a six month consulting contract at China Eastern Airlines in Shanghai, China.

Jim holds an Aircraft Dispatcher certificate, Commercial Pilot Certificate with instrument

and multi engine ratings, CFI and ground instructor certificates, and he has been a Designated Aircraft Dispatcher Examiner since 1992.

Kevin Morgan Mattison
Federal Aviation Admision

Kevin Mattison is the former Chairman of the FAA Weather Technical Community Representative Group. He was charged with coordinating, aircraft-centric, weather research initiatives for the display, transmission, and receipt of real-time weather information on the flight deck.

He is a member of the Headquarters, FAA, Associate Administrator for Aviation Safety's Aircraft-Certification Branch [AIR-130], responsible for developing requirements and new certification policy for communication, navigation, and surveillance systems. His current focus also includes Flight Information Services-Data Link, Automatic Dependent Surveillance-Broadcast, and Airborne Turbulence Detection Systems with flight deck display capability.

He joined the FAA four years ago after serving as an Embry-Riddle Aeronautical University, graduate and undergraduate Adjunct Meteorology Instructor for NASA and USAF personnel.

Kevin is a retired USAF Meteorologist and former Commander of the 3rd Air Force, 100 Operations Support Squadron, RAF Mildenhall, Weather Flight, in the United Kingdom [the largest US weather station in Europe].

He holds a Masters Degree in Meteorology from Texas A&M University and a Bachelors Degree in Mathematics, with Minors in Physics and Engineering, from Auburn University. Kevin attended high school in Hempstead, New York, where he graduated in the top 10% of his high school senior class with Varsity Letters in Track and Football.

Kevin is an accomplished, life-long athlete and is conversant in Japanese as well as Spanish. He is active in charitable and social efforts that include a recent food drive that provided a substantial donation for the National Capitol Area Food Bank.

Jack May
NOAA's National Weather Service

Jack May is the Director of NCEP's Aviation Weather Center, located in Kansas City, Missouri. The Aviation Weather Center, part of the National Weather Service's aviation services team, provides critical weather support to the aviation community. The AWC provides daily aviation weather products to commercial carriers, the Federal Aviation Administration and users in general aviation. The center also collaborates with national and international aviation organization, such as the Air Transport Association, the Aircraft Owners and Pilots Association and the International Civil Aviation Organization.

As Director of the center, Jack is charged with continuing the progress made in improving services to the commercial aviation industry and the general aviation community.

A native of Rome, N.Y., May began his career in meteorology as a part-time employee of Weather Corporation of America in St. Louis, while a student at Parks College of Aeronautical Technology. He received a Bachelor of Science degree in aeronautical meteorology in 1973 from Parks College. In 1997, May received a master's degree in public administration from Kansas University.

Jack is a 32 year veteran of the National Weather Service. His assignments include:

- 1974 Meteorologist Intern at Forecast Office in Albany, NY
- 1975 Meteorologist Intern at Forecast Office in Raleigh, NC
- 1977 Forecaster at Forecast Office at Portland, Maine
- 1978 Forecaster and Marine Program Leader at Forecast Office in Cleveland, OH. Temporary Assignment during 1979 and 1980 as one of three NWS forecasters supporting the Winter Olympic Games at Lake Placid.
- 1982 Regional AFOS system manager (Automated Field Operations and Services) at Eastern Region Headquarters.
- 1983 Deputy Meteorologist in Charge for Ohio (Cleveland)
- 1987 Meteorologist in Charge for Kansas (Topeka)
- 1991 Deputy Director for Central Region (Kansas City)
- 2001 Acting Director, Aviation Weather Center (Kansas City)
- 2002 Director, Aviation Weather Center

David Metzbower
Federal Aviation Administration (FAA)

A native of Baltimore, Maryland, Dave Metzbower obtained both his B.S. Business Management and Juris Doctor (Law) degrees from the University of Baltimore. Currently he serves as an Aviation Safety Inspector (ASI) in the Flight Operations Branch of the FAA's Flight Technologies and Procedures Division (AFS-410), Flight Standards Service. Coming from a private law practice, Mr. Metzbower joined FAA HQ. in 1987 as a Staff Attorney in the Operations Law Branch (Air Carrier) in the Office of the Chief Counsel. With an extensive aviation background, he joined the Flight Standards Service in 1992 as an ASI in the Air Transportation Division (AFS-200). He was selected to join the Flight Technologies and Procedures Division in 1998.

Mr. Metz bower's has over 30 years of aviation experience including civilian, military, and on-demand charter and has over 5,000 hours of flight time. He holds an Air Transport Pilot (ATP) Certificate for fixed-wing multi-engine and rotary-wing (helicopter) aircraft, several type ratings, and flight instructor certificates including instrument and multi-engine land aircraft. Dave is retired from the US Army and served as a U.S. Army pilot (Master Army Aviator) and aviation safety officer.

Mr. Metzbower lives with his wife of 39 years, Sharon, in Bel Air, Maryland. Their son, Craig, resides in Santa Barbara, CA.

Cecilia Miner
National Weather Service (NWS)

Cecilia Miner is Aviation Weather Planning Lead in the National Weather Service Office of Science and Technology. Cecilia provides scientific support to the NWS Aviation Services Branch, as well as to the FAA/NWS Aviation Weather Technology Transfer process. Prior to entering her current job, she worked as contract support to FAA weather interests, and she spent 22 years in the U.S. Air Force in aviation weather related positions. Cecilia is active in general aviation as a private pilot and is pursuing her instrument rating.

Walter H. Mitchell
Harris Corporation

Mr. Mitchell currently serves as an Aviation Consultant for the Harris Corporation on weather and communications systems. Formerly of the Federal Aviation Administration where he served for 34 years, Mr. Mitchell retired as the Director, Air Traffic Plans and Requirements Service, ATR-1. He also served in other senior executive positions including operations, procedures, and planning and requirements. As a senior representative for the Air Traffic Service he presided on executive level committees such as: Major Acquisition Reviews, Acquisition Review Council, Acquisition Management Quality Management Board, Capital Investment Plan Executive Steering Committee, and RE & D Steering Committee. Mr. Mitchell also served as the Executive Director of the Air Traffic Procedures Advisory Committee (ATPAC) for 5 years.

Ray Moy
Federal Aviation Administration

Mr. Moy has over 20 years of engineering and major systems acquisition experience in both the private sector and the Federal Government. He was the FAA Team Lead for the Corridor Integrated Weather System (CIWS), the Technical Lead for the CIWS and Weather and Radar Processor (WARP) integrated acquisition investment analysis, and the functional lead for the security and interface design of the Integrated Terminal Weather System (ITWS). Prior to joining the FAA, Mr. Moy was employed by the National Weather Service in the modernization efforts for the Advanced Weather Interactive Processing System (AWIPS). He was the product team lead for the AWIPS - System Monitoring and Control capabilities. The results of his efforts led to the design and development of the AWIPS Network Control Facility (NCF). Mr. Moy recently joined the Air Traffic Organization, Operations Planning, NAS Weather Planning and Requirements Group. Mr. Moy has a Bachelor of Science in Electrical Engineering from Case Western Reserve University, Cleveland, Ohio and a Master of Science in Electrical Engineering from The Johns Hopkins University, Baltimore, MD. He is certified by the Project Management

Jerry C. Ostronic
Federal Aviation Administration

Current Assignment: Federal Aviation Administration
Flight Standards Service
Air Transportation Division
Washington DC

Focal Point: Aircraft De-icing Program
Airbus A380 Operational Implementation
Air Carrier Turbojet Landing Performance
FAA Representative to JAA OST

Former Positions: Captain and Instructor Pilot for major US Air Carrier
Aviation Consultant
Air Traffic Controller

Certificates/ Ratings: Airline Transport Pilot B737, DC-9, LR-Jet, IA-Jet, HS-125, BA-3100, EMB-120
Flight Engineer
Flight Instructor

Flight Experience: Approximately 18,000 hrs.

Education: Graduate Shepherds College

Paul Pellicano
Federal Aviation Administration (FAA)

Mr. Paul Pellicano received a B.S. in Aerospace Engineering from Polytechnic Institute of NY in 1981 and a M.S. in Aeronautics and Astronautics from Polytechnic Institute of NY in 1986. He is the icing specialist at the FAA's Small Airplane Directorate where he is responsible for regulations and policy for icing certification of part 23 airplanes, and icing related continued airworthiness issues. He also supports icing certification and engine icing certification projects for Aircraft Certification Offices and for foreign aircraft validation projects. He is supporting Transport Directorate rulemaking efforts for icing certification including Supercooled Large Droplet (SLD) icing. Prior to joining the FAA in 1998, he worked as a flight test engineer for 17 years in industry, working at Lockheed, Gulfstream, Northrop Grumman, and Fairchild Republic.

Bill Phaneuf
Air Lines Pilots Association (ALPA)

Supervisor for Airspace and Operations in the ALPA Engineering and Air Safety Department.

More than sixteen years with ALPA dealing with Aviation Weather and All Weather

Operations matters. Also responsible for Airport and Ground Environment issues. Prior to ALPA, served for three years as the Flight Safety Manager for United Air Lines.

Retired USAF Lt. Col. and Command Pilot. Commercial Pilot Instrument, Single Engine, and Multi-engine ratings 8,700 plus hours flying time.

Mark Phaneuf
AvMet Applications International

Mark Phaneuf is Vice President and Technical Lead at AvMet Applications International, a small consulting firm with expertise in aviation and aviation weather. AvMet provides its customers with in-depth, practical, technical, and operational expertise in a wide variety of areas including aviation, meteorology, weather systems, systems engineering, modeling and simulation. Mark has led many projects in support of AvMet's FAA customers in Weather Policy and Standards and Traffic Flow Management Weather Programs as well as the Collaborative Decision Making (CDM) group. He supports many ICAO working groups and RTCA working groups. Mark has over 23 years of aviation experience and holds a Bachelors degree in Aviation Management from The Ohio State University. He is a commercially licensed and instrument rated pilot, and a retired military flight crewmember with over 5000 hrs combined military and civilian time.

Dr. Marcia Politovich
National Center for Atmospheric Research (NCAR)

Project Scientist III and Deputy Director for Science, Aviation Applications Program, Research Applications Laboratory, National Center for Atmospheric Research

Education

Ph.D. Atmospheric Science	1986	University of Wyoming
M.S. Atmospheric Science	1978	University of Washington
B.S. Physics	1976	University of Arizona

Research and/or Professional Experience

As head of the InFlight Icing Product Development Team, Dr. Politovich leads in-flight icing research efforts under the FAA-sponsored Aviation Weather Research Program. In addition to coordinating activities under this program, her contributions include analyses of weather conditions leading to icing, development of a meteorology-based icing severity index, and the use of in situ and remote sensors to diagnose icing conditions. She served as Co-Operations Director for the four field efforts supporting basic atmospheric research for this program.

Dr. Politovich's educational background is in cloud physics. In summer 1976, she was an observer onboard the University of Washington's B-23 research aircraft as part of the High Plains Experiment, and the data collected in seeded and natural clouds formed the basis of her Master's thesis. At the University of Wyoming she worked as a Research Associate

and analyzed data sets from the Elk Mountain Observatory, both for evaluation of droplet and ice particle measuring instruments and for weather studies. She was Co-PI (with G. Vali) of the Wyoming Queen Air studies of convective clouds during CCOPE in 1981, and also worked on a project to characterize icing environments at altitudes <10,000 ft. AGL. In 1982 she returned to school to pursue the Ph.D. in Atmospheric Science; her dissertation examined the effect of turbulence on the broadening of droplet size distributions in cumuli.

In addition to leading icing research, she is also lead scientist on the Juneau Turbulence Project, which is deploying an operational turbulence warning system for the Juneau Airport. In this role she coordinates research into causes of terrain-induced turbulence, and helps insure the warnings are meteorologically consistent. Finally, she serves as Deputy Director of the Aviation Applications Program at NCAR's Research Applications Laboratory, working to insure that the products developed for various sponsors are based on high-quality and highly-regarded science.

Dr. Politovich is a Councilor of the American Meteorological Society and member of the AIAA Atmospheric and Space Environment Committee.

Tom Powers
American Airlines

I have work with American Airlines for the past 21 years. During this time with American I have served as an aircraft mechanic, maintenance training instructor, fuel engineering specialist and within the past 7 years have served as a deice engineering specialist.

My job requires that I belong to the Society of Automotive Engineers (SAE) G-12 Aircraft Ground Deicing committee and work with the Fluids, Methods, Hold Over Time, Future Deicing Technology and Ice Detection sub-committees.

I hold FAA certificates for Private Pilot issued in 1981 and Aircraft Mechanic with Airframe and Power Plant ratings issued in 1984.

Warren Qualley
Weathernews

Warren Qualley is the Director of Aviation Services for Weathernews Americas and has been in that position since May 2003. He has over 28 years of aviation meteorology experience. Prior to his relocation to Norman, Oklahoma, Qualley was Manager of Weather Services for American Airlines. He chairs the International Air Transport Association's Meteorological Task Force and is involved in many industry activities, including the Next Generation Air Transportation System's Weather Integrated Product Team. He has been an invited speaker at many conferences and frequently gives talks to classes at the University of Oklahoma's School of Meteorology and its Aviation department. Locally, Qualley is both a member of the Board of Directors of the Norman Chamber of Commerce and co-chair of the Chamber's Weather Committee. In addition to industry affairs, Qualley's work at Weathernews involves assistance to the Sales team as well as the coordination of research and development work.

Paul Railsback
Airline Transport Association (ATA)

Paul Railsback, Director of Operations for the Airline Transport Association spent thirty-five years with American Airlines as a pilot and held numerous flight operations management positions including Managing Director of Flight Operations Technical, Manager of Flight Training and DC10, 747 Fleet Manager. He also was active in managing international operations and training. Mr. Railsback previously served as a pilot with the United States Marine Corps. He is a graduate of Southern Methodist University and has an MS in International Business from the University of Texas.

Roy Rasmussen
National Center for Atmospheric Research (NCAR)

Roy Rasmussen received a Masters and PhD from the University of California, Los Angeles in Atmospheric Sciences in 1980 and 1982, respectively, specializing in cloud physics. He is now at the National Center for Atmospheric Research (NCAR), where he is currently the FAA Winter Weather Research Product Development Team lead and alternate lead of the Convective Weather Product Development Team. He led the FAA funded effort to develop the Weather Support to Deicing Decision Making (WSDDM) winter weather nowcasting system that is currently being deployed commercially at a number of U.S. airports and was awarded the Government Technology Leadership award in Nov. 1999. He is currently involved with the design and development of a new Consolidated Storm Product that integrates both winter and summer storm products. He has five patents and over 40 peer reviewed journal papers. His paper on the relationship between snowfall rate and visibility won the NCAR paper of the year in December 2000.

Robert M. Ruiz
Federal Aviation Administration (FAA)

Mr. Ruiz recently joined the FAA, Flight Standards Service AFS-430 as a Federal Employee. Prior to this, he supported Flight Standards, AFS-410 Flight Operations on the AVS Weather Program for almost 3 years as a contractor and served as the AVS, Safety Program Manager for his contracting firm.

Mr. Ruiz also worked for American Airlines for over 6 years, as a Sr. Flight Operations Technical Analyst and as a Sr. Accident Investigator and Flight Safety Liaison for Latin America and the Caribbean.

Mr. Ruiz is a certified Project Management Professional, and holds an MBA from Embry Riddle Aeronautical University and a B.S. Degree in Aerospace Engineering from the University of Maryland.

Mr. Ruiz also holds a commercial pilot rating.

*Bob Sharman**National Center for Atmospheric Research (NCAR)*

Robert Sharman is a project scientist at the Research Applications Laboratory (RAL), National Center for Atmospheric Research (NCAR) in Boulder, CO. At NCAR/RAL, Dr. Sharman is heavily involved in aviation turbulence research programs, and is currently the lead for the FAA's Aviation Weather Research Program (AWRP) Turbulence Product Development Team (PDT). This team is responsible for developing an automated upper- and mid-level turbulence prediction system (Graphical Turbulence Guidance, GTG) that is operational through NOAA's ADDS (Aviation Digital Data Service) website. He also leads a team working on turbulence characterization under sponsorship from NASA's ASAP, concentrating on using high resolution fluid dynamical numerical simulations to better define the turbulence structures associated with severe turbulence encounters by aircraft.

He holds a BS and MS in Engineering and a PhD in Atmospheric Science, all from UCLA. His research interests include turbulence characterization and prediction for aviation hazard applications. He continues to concentrate on the prediction of topographically generated gravity waves (lee waves), and their breakdown into turbulence. He is also involved in the characterization of stable and urban boundary layers using high resolution measurements and CFD simulations; and in sound propagation and ducting studies using ray tracing and spectral techniques.

*Laurence Vigeant-Langlois**WSI Corporation*

Laurence Vigeant-Langlois, PhD, is a Product Manager with WSI Corporation. As such, she leads the development of WSI InFlight, WSI's satellite broadcast cockpit datalink weather solution. Laurence is also a soaring instructor and commercial pilot with Part 135 Learjet experience. Her academic education includes SM and PhD from MIT in Aeronautics and Astronautics with a focus on aviation humans and automation issues and a B.Eng from McGill University.

*Clinton Wallace**NOAA/National Weather Service/National Centers for Environmental Prediction
Aviation Weather Center*

Clinton Wallace has served as the Chief of the NOAA Aviation Weather Center's (AWC) Aviation Support Branch (ASB) in Kansas City, Missouri since 2003. Prior to this he was an ASB Research and Development Meteorologist at the AWC from 1998-2003. The ASB ensures timely availability of state-of-the-art data, hardware, communications, software, science, and training support so the AWC can efficiently produce and disseminate the best and most accurate aviation weather products and services possible to all customers. He was awarded with an individual NOAA Administrator's Award in 2003 for the design and implementation of the AWC's IT infrastructure.

- Clinton has been involved with a wide variety of latest aviation weather products and services.

- AWC program manager for Graphical Forecast for Aviation (GFA).
- Manages the operational implementation and production of
 - Aviation Digital Data Service (ADDS),
 - National Convective Weather Forecast (NCWF),
 - Current/Forecast Icing Potential (CIP/FIP), and
 - Graphical Turbulence Guidance (GTG).
- Manages the Joint Aviation Weather Testbed at the AWC.
- Alternate Lead for AWRP Aviation Forecasts Product Development Team (AF PDT)
- Clinton has contributed to the development of the Collaborative Convective Forecast Product (CCFP) since the first year of experimental production.

Prior to his service at the AWC he was a meteorologist at the Joint Agricultural Weather Facility in Washington, D.C. and scientist at the National Severe Storms Laboratory in Norman, OK. He earned a Master of Science in Meteorology from the University of Oklahoma on 1997 and Bachelor of Science in Engineering Physics and Mathematics from Northeastern State University in 1994.

Ron Westheimer
Universal Weather and Aviation, Inc.

After serving as a meteorologist in the U.S. Air Force, Ron joined Universal Weather and Aviation as a Staff Meteorologist in 1989. After two years at Universal's White Plains, New York office, Ron transferred to the Universal World Headquarters in Houston, Texas. He transitioned between several positions within the Meteorology Department before moving to his current position of Manager, Flight Planning & Meteorology Systems and Process Development in 2002. Ron's primary responsibilities are to oversee technology initiatives, design and manage new product development and coordinate research & development efforts, while improving forecast tools, processes and systems.

James H. Williams
Federal Aviation Administration (FAA)

In September of 2005, Mr. Williams was selected as the Director of Systems Engineering in the Operations Planning Service Unit which is a part of the Air Traffic Organization of the FAA. In this position he is responsible for the National Airspace System (NAS) Architecture, the interface standards for all NAS equipment, the Information Security Architecture, the NAS level operational concepts, and the MITRE Center for Advanced Aviation Systems Division work program. These activities taken together form the core of the coordination efforts needed to keep the National Airspace System moving forward into the future.

In February of 2004, Mr. Williams was assigned the responsibility of acting Director of a new organization called the Air Traffic Control Communications Services Directorate. Mr. Williams worked with a diverse management team to create an organization that could respond to the dynamic situation that faced the FAA communications infrastructure it's. This organization was formed as a part of the new Air Traffic Organization and is responsible for lifecycle management of all of the FAA's communication systems. This

includes all air to ground and ground operational communications as well as the administrative communication systems.

From March of 2000 to February of 2004, Mr. Williams led the FAA Communications Integrated Product Team (IPT). This team has the responsibility to develop, procure, and install all air/ground communications services for the FAA. Specific programs currently in process are: Voice Switching Modernization and Expansion, Voice Recorder Modernization, Air/Ground Voice System Sustainment and Expansion, and Next Generation Air/Ground Communications Services.

From October of 1998 to March of 2000, Mr. Williams held the position of Aeronautical Data Link Product Team Leader. This product team was a part of the FAA Communications IPT at that time. This Product Team is responsible for the design procurement, procurement, and fielding of the FAA's prototype Air/Ground Data Link Communications System. This system will allowed Air Traffic Controllers in Miami to communicate directly with pilots using text messages to replace many routine voice communications.

Prior to March of 1998, Mr. Williams held many positions in the FAA related to the regulation and certification of avionics systems. Mr. Williams was Manager of the Avionics Systems Branch in the Aircraft Engineering Division that is responsible for writing standards for all avionics installed in US civil aircraft. Prior to leading the branch, Mr. Williams was responsible for the development of the certification standards and guidance for all navigation systems used on US civil aircraft.

Before Mr. Williams came to FAA Headquarters, he worked in the Atlanta Aircraft Certification Office (ACO) as a systems engineer. His main work was in the approval of all avionics being installed in the Gulfstream G-IV airplane. Mr. Williams also participated in the revision to the RTCA standard for development of computer software used in avionics: "Software Considerations in Airborne Systems and Equipment Certification" RTCA/DO-178b.

Prior to Joining the Federal Aviation Administration, Mr. Williams worked for the Lockheed Georgia Company as a flight test engineer and a production liaison engineer for the C5, C-141, and C-130 programs. Mr. Williams also worked for the National Aeronautics and Space Administration (NASA) on the US Space Shuttle Program.

Dr. Marilyn M. Wolfson
MIT Lincoln Laboratory

Dr. Marilyn M. Wolfson holds the B.S. (honors) in Atmospheric and Oceanic Science from the University of Michigan and the S.M. from M.I.T., where she was named an Ida M. Green Fellow. She began work at Lincoln Laboratory in 1983 and later returned to M.I.T. as a Lincoln Staff Associate, graduating with the Ph.D. in 1990. She applied her thesis work in developing a real-time microburst prediction algorithm which is currently operational in the FAA's Integrated Terminal Weather System.

Marilyn began development of automated short-term convective weather forecasts for air

traffic management applications in 1996, as leader of the FAA Aviation Weather Research Program's Convective Weather Product Development Team. She has patented and licensed the technology needed to make accurate 1-2 hr forecasts, and has transferred this technology to FAA, having the pleasure of seeing it debut operationally in 2006. She served as senior staff for two years, and is now assistant leader of the Weather Sensing Group directing their weather research efforts. The group is currently interested in increasing the year-round accuracy of the forecast products, and increasing the lead time to 6 hrs and beyond. Understanding and anticipating the impact of the forecast on air traffic capacity and demand are important next steps in her group's research, as is the eventual coupling of the forecasts to automated aids to traffic flow management. Marilyn has received the American Meteorological Society Editor's Award for her work on the Monthly Weather Review journal, and in 2005 received the Lincoln Laboratory Technical Excellence award for her ongoing work in aviation weather.