Turbulence Impact Mitigation Workshop 2

Speaker Biographies

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Steve Abelman

Federal Aviation Administration (FAA)

Steve Abelman manages the Aviation Weather Research Team within the FAA's Aviation Weather Division. Aviation Weather Research Team sponsored activities include the Aviation Weather Research Program (AWRP) and the Weather Technology in the Cockpit (WTIC) portfolio. Steve is also coordinating efforts to improve and streamline the process for transition of weather research to operations and is leading FAA efforts on a multi-agency initiative to coordinate and consolidate weather research initiatives for NextGen.

Prior to his transition to the FAA in February of 2011, Steve was the "contents" lead for National Weather Service (NWS) NextGen activities. Steve was the NWS lead for development of the 4-D Weather Functional Requirements for NextGen Air Traffic Management and lead outreach activities to promote NextGen within the NWS.

Steve worked for 4 years as the Manager of Aviation Training and Standards for Weathernews in Norman, Oklahoma. Steve also worked for American Airlines as a shift meteorologist and training coordinator for nearly 15 years.

Edward L. Bolton Jr.

Federal Aviation Administration
Assistant Administrator for NextGen

Edward L. Bolton Jr. is the Assistant Administrator for NextGen at the Federal Aviation Administration. The Office of NextGen (ANG) is responsible for leading the transformation of the National Airspace System. Bolton leads a federal workforce of more than 900 employees, and manages the $1 billion annual budget of the Next Generation Air Transportation System.

Bolton joined the FAA in September 2013 after a career with the U.S. Air Force, most recently with the rank of Major General and the position of Deputy Assistant Secretary for Budget in the Office of the Assistant Secretary for Financial Management and Comptroller. He led a team of financial managers responsible for the Air Force's $110 billion annual budget.

He served as Commander of the 45th Space Wing and Director of the Eastern Range at Patrick Air Force Base in Florida, where he oversaw a $5 billion budget and 24 successful spacelift, shuttle, test and range missions. He commanded the 30th Range Squadron and the 30th Operations Group at Vandenberg Air Force Base in California. A level III program manager, he also commanded the Satellite and Launch Control Wing and the Launch and Range Systems Wing.

Bolton served as the Deputy Director for Systems Integration and Engineering as well as the Principal Deputy to the Chief Operating Office at the National Reconnaissance Office (NRO). He established policy for space, cyber and information operations and oversaw development of a cyber career field as Director of Space and Cyber Operations in Washington, D.C.

His staff received numerous awards under his leadership, and his individual awards included the NRO Leadership Award for 2008 and the NRO Gold Medal in 2009.

Bolton began his Air Force career as an enlisted cost and management analyst. He was commissioned in 1983 after completing a Bachelor of Science degree in electrical engineering from the University of New Mexico and graduating from Officer Training School. He also holds a Master of Science in systems management from the University of Southern California, Los Angeles and Master of Science in national security strategy from the National War College, Fort Lesley J. McNair, among other distinctions.

Captain Mark Bradley

Delta Air Lines

Captain Mark Bradley currently serves as Chief Technical Pilot, Industry Activities for Delta Air Lines. His duties entail developing and executing equipage projects within Delta. Future airspace initiatives are an important factor in all aspects of his responsibilities, and include implementation of specific technology to enable weather in the flight deck. He works with other Technical Pilots, Engineers, and subject matter experts. Captain Bradley also provides strategic recommendations to senior leaders for aircraft system development and aircraft equipage.

Captain Bradley currently serves as the industry Chairman of the FAA Performance Based Aviation Rulemaking Committee (PARC), which provides recommendations to AVS-1 related to NextGen and associated policies and criteria. He also participates in several RTCA and FAA industry forums and committees. He has previously served as industry co-Chairman of the RTCA ADS-B work group and was a Senior Flight Instructor for the 757,767, and 777 aircraft. During that time, he was an FAA Aircrew Program Designee. Captain Bradley also holds FAA ratings on the B757, B767, B777, DC-9 (MD-88), and L-188.

Prior to working for Delta, Captain Bradley served 12 years as a Naval Aviator, flying the Lockheed P-3C Orion, T-44 Pegasus, and T-34C Turbo Mentor. He is a 1981 Graduate of the U.S. Naval Academy, with a BS in Resources Management and Technology.

Larry B. Cornman

National Center for Atmospheric Research

Larry Cornman is a Project Scientist at the National Center for Atmospheric Research. His educational background includes undergraduate degrees in Mathematics and Physics from the University of California and a graduate degree in Physics from the University of Colorado. He started working at NCAR in 1983 in support of the FAA's Low Level Windshear Alert System (LLWAS). From 1983 to 1990, Larry was involved in the development of the Phase II and Phase III LLWAS algorithms and the Terminal Doppler Weather Radar (TDWR) algorithms. In 1989, he developed the TDWR/LLWAS Integration algorithms, for which he holds numerous U.S. and International patents.

Since 1990, Larry's research focus has been on atmospheric turbulence. He has developed turbulence detection algorithms for remote sensors including ground-based and airborne Doppler radars, lidars and wind profilers; as well as developing a methodology for making *in situ* measurements of turbulence from commercial aircraft. Larry also has a significant amount of expertise in the aerodynamic impact of wind fields on aircraft, as well in the development of signal and image processing algorithms. He holds four U.S. patents in these areas. He has twice been the recipient of an Aviation Week and Space Technology magazine *Laurel Award*, a recipient of a NASA *Turning Goals into Reality* award, and was named to the 2003 *Scientific American 50* list as *Research Leader in Aerospace*.

Rick Curtis

Southwest Airlines

Rick has been at Southwest Airlines for over fifteen years and serves as Chief Meteorologist for the Southwest Airlines Operations Coordination Center. He graduated with a B.S. in Meteorology from Lyndon State College. He concentrates on strategic weather forecasting, weather information integration into operational planning, weather instruction, and weather related strategic planning efforts at Southwest Airlines.

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 of Andover, MA. While at SSI, Rick led a team of meteorologists' focused on forecasting efforts relating to airport operations and highway maintenance activities.

Rick was a 2005 recipient the Southwest Airlines President's Award. In 2011 he received the American Meteorological Society Award for Outstanding Contribution to the Advance of Applied Meteorology. In early 2013 Rick and the Southwest Airlines Meteorology Team won the "Heroes of the Heart" Award, which is the highest employee nominated recognition award at Southwest Airlines. Rick is a member of both the American Meteorological Society and the National Weather Association.

Donald Eick

National Transportation Safety Board

Mr. Donald Eick is a Senior Meteorologist in the Office of Aviation Safety in the Operational Factors Division (AS-30), of the National Transportation Safety Board (NTSB) where he provides technical weather analysis and documentation for accident investigations in all modes of transportation. He has over 39 years of experience in aviation weather and has been with the NTSB since 1998. During that time has been involved in hundreds of general aviation, regional, majors, and international air carrier accident investigations. He has also been featured in several documentaries on weather related air craft accident. Mr. Eick was formerly with Trans World Airlines for 14 years, where he started as an instructor in flight operations teaching meteorology, regulations, and flight procedures in their Kansas City training center. He was promoted to the position of head of meteorology at TWA's Operational Control Center located at JFK International Airport in New York, where he was responsible for providing worldwide weather support to operational control and flight dispatch, and assisted in the daily operation of the airline. He received numerous awards and has been recognized for his outstanding performance and achievements in aviation weather support.

Mr. Eick has also an extensive aviation weather training background and provides instruction at the NTSB's Basic Accident Investigation Courses (BAIC) in the aviation and marine divisions, rotorcraft and Military accident investigation programs. He has also taught at other Safety stand-downs, Oshkosh, and Sun n Fun safety programs, and other specialized training programs previously at several air carriers, corporate flight departments, military air wings, and training institutes such as at Flight Safety International and Pan Am Training Institute in meteorology, flight dispatch, and safety.

Mr. Eick earned Bachelor of Science degrees from Embry-Riddle Aeronautical University in Aeronautical Studies and from Florida State University in Meteorology. He holds a private pilot, aircraft dispatcher, and weather observer certificates, and has completed his commercial and instrument ratings.

Michael J. Emanuel

Federal Aviation Administration

Mr. Emanuel has been supporting the FAA in various capacities for nearly 15 years, currently as the project manager for Multifunction Phased Array Radar (MPAR) and Eddy Dissipation Rate (EDR) performance standardization. During his tenure with FAA, he has supported the solution implementation of several programs in the National Airspace System including the Standard Terminal Automation Replacement System (STARS), Low Level Windshear Alert System – Replacement Sustainment (LLWAS-RS), and the Automated Surface Observation System (ASOS) Controller Equipment Information Display System (ACE-IDS). He serves as a Contracting Officer's Representative on multiple contracts and Interagency Agreements. Mr. Emanuel was a principal developer on the Next Generation Radar (NEXRAD) Interface System (NEXIS), an FAA initiative to integrate improved weather data on the Micro-Enhanced Automation Radar Terminal System (MEARTS).

Along with industry accreditations including Microsoft Certified Professional (MCP), and Project Management Professional (PMP), Mr. Emanuel holds a B.S. in Information and Computer Science from the Richard Stockton College, and an M.E. in Systems Engineering from the Stevens Institute of Technology.

Tom Fahey

Delta Air Lines

Tom has an M.S. Meteorology degree from University Wisconsin, Madison and began his Aviation Meteorology career at Northwest Airlines in 1977. His responsibilities have included: forecasting, training, developing products & procedures as well as producing revenue via weather product sales. Tom has also worked as a consultant and is currently Manager Meteorology at Delta Air Lines in Atlanta where he practices servant leadership for a team of 25 forecasters who cover the entire world, using Delta's FAA approved Enhanced Weather Information System (EWINS).

Tammy Farrar

Federal Aviation Administration

Tammy Farrar is a Research Meteorologist with the FAA's NextGen Aviation Weather Division and is the Lead for the Aviation Weather Research Program's Turbulence project. She also leads the Airborne Observations project, working policy and requirements issues related to the acquisition and use of aircraft-based meteorological data. In this capacity, Ms. Farrar serves as an associate member of the World Meteorological Organization's Expert Team on Aircraft-based Observations. In addition, she is a member of RTCA Special Committee (SC)-206 (Aeronautical Information Services and Meteorological Data Link Services), SC-230 (Airborne Weather Detection Systems), and the Wake Vortex Tiger Team.

Ms. Farrar served for 11 years as a Weather Officer in the U.S. Air Force. Her positions included Special Projects Team Chief and Special Support Plans Officer at Air Force Global Weather Central in Omaha, Nebraska, and Wing Weather Officer for the 86th Tactical Fighter Wing and Command Briefer for the Commander in Chief, United States Air Forces Europe at Ramstein Air Base, Germany. Her military aviation weather experience includes staff and operational support to fighter and airlift units, exercise and special mission support, and accident investigation. Prior to joining the FAA, Ms. Farrar worked as an Editorial Assistant for the American Meteorological Society's (AMS) Journal of the Atmospheric Sciences.

Ms. Farrar holds a B.S. degree in Atmospheric Sciences with a minor in Physics from the University of Arizona, and a M.S. degree in Meteorology with an emphasis in Climatology from Florida State University. She has served as Chapter Officer for local AMS chapters and is a member of Chi Epsilon Pi, the Meteorology Honor Society. In addition, Ms. Farrar has completed over 30 hours of graduate level coursework in Secondary Science Education through the University of Maryland and George Mason University.

Christopher A. Hart

Acting Chairman, National Transportation Safety Board

Member Christopher A. Hart was sworn in as a Member of the National Transportation Safety Board on August 12, 2009, and designated by the President for a 2-year term as Vice Chairman of the Board on August 18, 2009. In August 2013, President Obama nominated him for a second term as Board Member and after Senate confirmation of his nomination, the President, in October 2013, designated him for a third term as Vice Chairman. He has served as Acting NTSB Chairman since April 26, 2014 and in July 2014 was nominated by the President to serve as Chairman of the NTSB.
Hart joined the Board after a long career in transportation safety, including a previous term as a Member of the NTSB. Immediately before returning to the Board in 2009, Member Hart was Deputy Director for Air Traffic Safety Oversight at the Federal Aviation Administration. He was previously the FAA Assistant Administrator for System Safety.

He served as a Member of the NTSB from 1990 to 1993. After leaving the Board, he served as Deputy Administrator of the National Highway Traffic Safety Administration, before moving to the FAA in 1995.

From 1973 until joining the Board in 1990, Member Hart held a series of legal positions, mostly in the private sector. He holds a law degree from Harvard University and Master's and Bachelor's degrees in Aerospace Engineering from Princeton University. He is a member of the District of Columbia Bar and the Lawyer-Pilots Bar Association.

Hart is a licensed pilot with commercial, multi-engine, and instrument ratings.

Hart's family has a tradition of accomplishment in the field of transportation. His great uncle, James Herman Banning, was the first African-American to receive a pilot's license issued by the U.S. Government in 1926.

His 2 year appointment as Vice Chairman will end 10/20/15.

His 5 year term as a Member will end 12/31/17.

Stephanie Klipfel

Delta Air Lines

Stephanie Klipfel is supervisor of the Meteorology Department at Delta Air Lines. Stephanie graduated from the University of Kansas in 1999. After graduation, she became a meteorologist at Meteorlogix in Burnsville, Minnesota. She moved to Atlanta, Georgia in 2002 to work as an Aviation Meteorologist at Delta Air Lines, Inc. In 2005, Stephanie became supervisor of the department and began representing Delta at industry and scientific conferences. Stephanie is an active member of the Atlanta Metropolitan Chapter of the American Meteorological Society and National Weather Association and served as chapter vice president and president 2006-2008.

Candace K. Kolander

Association of Flight Attendants-CWA

Candace K. Kolander is the Coordinator for the Air Safety, Health and Security Department at the Washington, DC office of the Association of Flight Attendants-CWA (AFA). As such, she works with the Director to accomplish the research, regulatory and training mission of the department by providing services to the AFA membership, International Officers and its Board of Directors. She is also one of the contacts in the department who deals with security issues. Ms. Kolander is the liaison between the safety chairs at the carriers and the International AFA office. She also reviews and comments on proposed regulatory changes, advisory circulars and handbook changes. She also responds to AFA member carrier aviation accidents as well as provides the training and assistance to AFA participants in National Transportation Safety Board (NTSB) accident investigations. The AFA represents nearly 50,000 flight attendants at 19 airlines.

She currently serves as the chair of the Cabin Group at the Aviation InfoShare meetings. She continues her work with voluntary reporting systems as an industry advocate member for the NASA ASRS (National Aeronautics and Space Administration - Aviation Safety Reporting System) representing US flight attendants. She is the flight attendant representative on the industry Master Minimum Equipment List (MMEL) Subcommittee.

Ms. Kolander is a current member on the Federal Aviation Administration's (FAA) Air Carrier Training Aviation Rulemaking Committee (ARC). Other training initiatives included work with the International Civil Aviation Organization (ICAO) on revising the ICAO training manual for cabin crew; work on the FAA's ARC tasked with re-writing the training regulations for crewmembers in the US. The FAA documents were not finalized. She has served as a member of the Aviation Security Advisory Committee (ASAC) and worked on the re-writing of the Common Strategy after the events of 9/11 and on multiple RTCA working groups. She currently represents US and International Flight Attendants on another ICAO Cabin Safety Group tasked with reviewing ICAO guidance on multiple cabin issues related to unruly passengers, infant safety, and expanded use of Portable Electronic Devices (PED).

In addition to these larger committees, she has worked on other smaller industry working groups to represent flight attendants, as example, crewmember fatigue and aircraft design.

Ms. Kolander was a flight attendant for 22 years. While at her carrier she served in multiple union roles in addition to helping plan and teach flight attendant recurrent training.

Starr McGettigan

Federal Aviation Administration

Starr McGettigan is a senior Engineering Research Psychologist for the FAA's NextGen Aviation Weather Division. Ms. McGettigan, in her role as Project Manager for the Aviation Weather Demonstration & Evaluation Services project, was key in creating this new evaluation capability to assess both current NAS and emerging NextGen weather products. She has over 20 years of experience leading, designing, and conducting user-centered evaluations of weather systems and products for the National Airspace System. Ms. McGettigan is a member of the Collaborative Decision Making Weather Evaluation Team and the FAA's Human Factors Acquisition Working Group. Ms. McGettigan received her B.A from the State University of New York College at Geneseo and her M.A. from the University of Dayton.

Joseph J. Miceli Jr.

Airline Dispatch Federation (ADF)

Born and raised on the south side of Chicago, I'm currently President of the Airline Dispatchers Federation (ADF), a non-labor organization representing the professional interests of the dispatch profession. The ADF constituency is comprised of licensed FAR-121 aircraft dispatchers, operational control personnel from 103 aerospace companies including major airlines, express carriers, international members, private pilots, students, retirees, and other airline personnel. Prior to becoming president, I served as ADF Executive Vice President for 4 years aiding the president, collaborate with all parties insuring FAR-121 rules continue to evolve around our Aircraft Dispatchers and the PIC (Pilot in Command).

As part of NACSC Committee (NextGen Advisory Committee Sub Committee) I attend meetings regularly offering solutions along with other aviation professionals, those within our industry including the FAA.

Aside from ADF activities, I have been employed with United Airlines for the last 26 years with 25 years of operational experience, 21 years of dispatch experience in all facets of operations including ADI (Aircraft Dispatch Instructor), ATC Coordinator (working with the Command Center ATCSCC, collaborating and solving daily traffic initiatives for UAL throughout North America). domestic ops, North Pacific ops, South Pacific ops , Atlantic ops, South America ops, Middle East ops, CRAF (Civil Reserve Air Fleet), and AMC (USAF Air Mobility Command). Prior to dispatch I was a former ramp tower operator (ORD) and load planner. (ORD) Educated at a local Community College studying business management, I'm a private pilot who currently resides in the western suburbs.

Brian Pettegrew

National Weather Service

Brian Pettegrew is a Research and Development Meteorologist at the Aviation Weather Center. In this role he is tasked with not only overseeing the transition of AWRP funded projects to the AWC, but also to aid in operationally oriented research and development for both the AWC and the Aviation Weather Testbed. Prior to coming to the AWC, Brian worked as a forecast analyst for the QA PDT at ESRL/GSD in Boulder, CO.

Mike Robinson

AvMet Applications, Inc.

Mike Robinson is the Chief Technology Officer at AvMet Applications, Inc. His main research areas of interest include weather-air traffic management (ATM) translation and integration, weather-ATM functional task analysis, problem identification, and concept development, and weather-ATM decision support evaluation, metrics, and benefits assessments.

Over the past 10 years, Mike has been the project lead on 12 separate weather-ATM field evaluation campaigns and has spent over 500 hours in air traffic facilities observing and evaluating the operational decision-making environment during significant weather impact events. He has been the technical lead for evaluating the operational utility and/or user benefits for more than 10 separate aviation decision support capabilities.

Prior to joining AvMet, Mike worked as a technical staff scientist with MIT Lincoln Laboratory as well as a research analyst at the NASA Goddard Space Flight Center. Mike has a Master's Degree in Meteorology from Texas A&M University

Bob Sharman

National Center for Atmospheric Research (NCAR)

Dr. Robert Sharman has been a project scientist at the Research Applications Laboratory (RAL), National Center for Atmospheric Research (NCAR) in Boulder, CO since 1996. Since coming to NCAR/RAL, he has been 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. This team is responsible for developing an automated 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 free atmosphere turbulence characterization, concentrating on using high resolution fluid dynamical numerical simulations to better define the turbulence structures associated with severe turbulence encounters by aircraft.

Captain Robert P. "Rocky" Stone, Jr.

United Airlines

Captain Rocky Stone is the Chief Technical Pilot - Surveillance for United Airlines. Rocky currently flies as a Boeing 777 Captain. He has previous experience at United flying the B727, B737, B757, and B767. Prior to joining United, Rocky was an experimental test pilot in the US Air Force, with pilot assignments in the F-15, T-38, A-7, and F-4. Rocky earned his B.S. degree in Aeronautical Engineering from the Massachusetts Institute of Technology and a M.S. in Systems Management from the University of Southern California.

Rocky is the co-chair of RTCA Special Committee-186, responsible for developing technical and operational standards for Automatic Dependent Surveillance – Broadcast (ADS-B). Rocky is a member of the "ADS-B in" Aviation Rulemaking Committee (ARC), and co-chairs the operations working group of the ARC. Rocky is also co-chair of RTCA Special Committee-206 on Aeronautical Information Services (AIS) Data Link.

Matt Strahan

National Weather Service

Matt Strahan is the International Operations Chief at the Aviation Weather Center. In this role, he supervises the forecasters of the World Area Forecast Center, and also serves as the primary liaison between the WAFC's customers, its regulators and the development community that supports the WAFC. He also supervises the forecasters who issue SIGMETs for much of the north Pacific and north Atlantic.

In addition to this strong operational focus, he has served for the past four years as the principle science and operational adviser to the FAA from the National Weather Service on issues related to global aviation forecasts and warnings. In this role, he has helped the FAA and ICAO craft plans for the future of WAFS services and for SIGMET production.

Roger Sultan

Federal Aviation Association

Roger Sultan is a FAA Aviation Safety Inspector working at FAA Headquarters in Washington, DC. Roger currently manages aviation weather policy and ADS-B policy for Flight Standards, working in the Flight Technologies and Procedures Division (AFS-400). Roger has a B.S. in Aeronautical Science from Embry-Riddle Aeronautical University.

Prior to coming to the FAA, Roger flew B727, B737, and A320 aircraft for United Airlines. Other flying experience includes flying the DC-9 at TWA, the Jetstream 32 and Jetstream 41 at Trans States Airlines, and Cessna Citations for a part 135 operator. Roger continues to fly in general aviation, and can most often be found looking for a smooth ride somewhere above Virginia in a Piper Aztec.

Matthew Vogel

Federal Aviation Administration

Matt Vogel was named Frontline Supervisor of Area 3 in May 2011 at the FAA Cleveland Air Route Traffic Control Center, Oberlin, Ohio. He oversees daily operations in area 3 and works hard to build a culture where safety risk management and sector resource management concerns are his primary focus. On a routine basis, he works with Air Traffic Controllers, Traffic Management Coordinators, Meteorologists, and other areas and facilities to promote safety and enhance efficiency. In addition to these responsibilities, Matt has been successful as a training supervisor for three years, working to identify training needs of new personnel and mentor employee development.

Mr. Vogel started his career with Cleveland Center in 1998. He was an Air Traffic Controller for 13 years and volunteered as an On the Job Training Instructor (OJTI), and Controller in Charge (CIC). Prior to his employment with the FAA, Matt gained valuable experience working in a supervisory role and as a dispatcher for Transcontinental Airways, and American International Airways in Ypsilanti, MI. Responsibilities here included the management of domestic and international flights, creating flight plans through the analysis of weather and airport facilities to safely transport cargo on B-747, B727, and DC-8, L1011, and DC-9.

Matt attended Indiana State University where he received his Bachelor of Science in Professional Pilot Technology. He acquired his Dispatch License from ATI Academy Education Center, Minneapolis, MN and in 1997 he attended the MARC Air Traffic Control Program at MN Community & Technical School, Eden Prairie, MN.