1997-2014 Update to *FAA Historical Chronology: Civil Aviation and the Federal Government, 1926-1996* (Washington, DC: Federal Aviation Administration, 1998)

1997

January 2, 1997: The Federal Aviation Administration (FAA) issued an airworthiness directive requiring operators to adopt procedures enabling the flight crew to reestablish control of a Boeing 737 experiencing an uncommanded yaw or roll – the phenomenon believed to have brought down USAir Flight 427 at Pittsburgh, Pennsylvania, in 1994. Pilots were told to lower the nose of their aircraft, maximize power, and not attempt to maintain assigned altitudes. (See August 22, 1996; January 15, 1997.)

January 6, 1997: Illinois Governor Jim Edgar and Chicago Mayor Richard Daley announced a compromise under which the city would reopen Meigs Field and operate the airport for five years. After that, Chicago would be free to close the airport. (See September 30, 1996.)

January 6, 1997: FAA announced the appointment of William Albee as aircraft noise ombudsman, a new position mandated by the Federal Aviation Reauthorization Act of 1996 (Public Law 104-264). (See September 30, 1996; October 28, 1998.)

January 7, 1997: Dredging resumed in the search for clues in the TWA Flight 800 crash. The operation had been suspended in mid-December 1996. (See July 17, 1996; May 4, 1997.)

January 9, 1997: A Comair Embraer 120 stalled in snowy weather and crashed 18 miles short of Detroit [Michigan] Metropolitan Airport, killing all 29 aboard. (See May 12, 1997; August 27, 1998.)

January 14, 1997: In a conference sponsored by the White House Commission on Aviation Safety and Security and held in Washington, DC, at George Washington University, airline executives called upon the Clinton Administration to privatize key functions of FAA and to install a nonprofit, airline-organized cooperative that would manage security issues. Participants recommended funding these changes with user fees instead of the, then-current, ticket tax. (See July 17, 1996; February 12, 1997.)

January 15, 1997: FAA issued a fact sheet announcing plans for a two-year evaluation, beginning in 1999, of new air traffic management concepts and technologies for application in Alaska and Hawaii. The goal of this Ha-laska free flight demonstration project was to show that existing technologies could support the "free flight" concept. (See April 16, 1998.)

January 15, 1997: As part of the continuing review stemming from the accidents near Colorado Springs (1991) and Pittsburgh (1994), Vice President Al Gore announced FAA would require operators to retrofit existing Boeing 737 rudder control systems with four newly developed components. (See January 2, 1997; March 14, 1997.)

January 15, 1997: FAA praised the Department of Defense for making its global digital terrain elevation database available for civil aviation use, stating that this action would help prevent a danger known as controlled flight into terrain. (See March 29, 1996.)

January 16, 1997: FAA announced that the new Display Channel Complex Rehost (DCCR) computer system began operations, ten months ahead of schedule, at the Chicago Air Route Traffic Control Center. (See April 1, 1996.)

January 21, 1997: FAA issued an airworthiness directive requiring operators to re-inspect and repair wiring leading to fuel tank booster pumps numbers 1 and 4 in the inboard main fuel tanks of 747 airplanes produced prior to 1980. The inspections had to be completed by May 20, 1997. (See November 26, 1997.)

January 29, 1997: FAA selected Raytheon to build the Integrated Terminal Weather System (ITWS) and to install and maintain it at 34 sites covering 45 airports. ITWS would combine sensor and radar data from FAA and National Weather Service and present predictions on potentially hazardous weather to air traffic control personnel via easily-understood graphics and text. (See May 23, 1994.)

January 29, 1997: FAA announced steps to provide the following aviation safety data to the public: beginning February 1, press releases on all new enforcement actions that sought civil penalties of $50,000 or greater; effective, February 28, an Internet page providing safety information, including some data previously available only through Freedom of Information Act requests, to consumers; and by March 31, addition of a public education portion to the Internet page to help travelers better understand the aviation safety record and safety systems.

January 29, 1997: A federal judge in Colorado selected the auditorium at FAA's Mike Monroney Aeronautical Center to host the families of victims of the Oklahoma City federal building bombing who wanted to watch a close-circuit broadcast of the criminal trials.

February 1, 1997: Barry L. Valentine followed Linda Hall Daschle as acting FAA Administrator, effective at midnight. Monte Belger continued as acting deputy administrator. (See November 9, 1996; December 19, 1997; August 4, 1999.)

February 5, 1997: A series of incidents and developments began involving U.S. Air Force (USAF) and U.S. commercial aircraft. Two USAF F-16 fighter jets reportedly were involved that day in a near midair collision with a Nation’s Air Express 727 off the New Jersey coast. *February 7*, an American Eagle pilot reported that four Air Force jet fighters came close to his aircraft off the coast of Maryland; the Air Force temporarily halted all training operations off the East Coast as a precaution; the FAA asked controllers at three

air route traffic control centers and the military controllers at the Virginia Capes station to review procedures regarding the military areas off the East Coast. *February 10*, two more, relatively minor, incidents became known and the USAF widened the suspension to include the Gulf of Mexico. *February 11*, the training resumed after the USAF informed pilots on the dangers of close encounters with airliners. *February 19*, the media reported that the USAF had concluded that although the pilot in the Nations Air incident had broken no rules, in the future, its pilots would query controllers before intercepting unknown aircraft detected in flight. *February 26*, the Navy stated that a military controller's failure to follow proper procedures had caused the Nations Air incident.

February 6, 1997: Invision Technologies announced installation of the first two CTX 5000 SP explosives detection systems at Chicago O'Hare and New York Kennedy airports. (See December 23, 1996; February 12, 1997; May 6, 1997.)

February 12, 1997: In compliance with Executive Order 13015, the White House Commission on Aviation Safety and Security (Gore Commission) released its final report to President Clinton. Its recommendations included: reducing the aviation fatal accident rate by a factor of five within ten years, requiring installation of enhanced Ground Proximity Warning Systems on all civil and military passenger aircraft (see November 6, 1996), expanding the aging aircraft program to cover non-structural systems, passing legislation to protect employees who report safety/security violations, ending the exemption of passengers younger than age two from restraint systems, and requiring smoke detectors in the cargo holds of all passenger aircraft. Air traffic control recommendations included: national airspace system (NAS) modernization by 2005, stronger leadership in global positioning system (GPS) implementation, requiring NAS users to fund its development and operation, and identifying the frequency spectrum needed for air traffic control. Security recommendations included: federal funding for a major security improvement, new FAA standards for baggage matching and passenger profile screening, U.S. Post Office examination of all packages over one pound, and a U.S. proposal for the International Civil Aviation Organization (ICAO) to begin verifying international security compliance. The commission also recommended measures designed to improve response to aviation disasters. Responding to the Gore Commission report, FAA and the National Aeronautics and Space Administration (NASA) announced a joint initiative, in partnership with the Department of Defense and industry, to reduce aircraft accident rates five-fold within ten years. (See January 14, 1997; January 15, 1997; February 6, 1997; December 15, 1997.)

February 15, 1997: President Clinton used his powers under the Railway Labor Act to stop a strike by American Airlines pilots a few minutes after it began. An emergency board was established to try to find an acceptable compromise during a 60 day cooling-off period. *March 19*, American and the Allied Pilots Association stated they had reached a tentative agreement on a new contract. *April 4*, the union's board voted in favor of the contract, which included higher pay than previously offered. *May 5*, union members voted to approve the new five-year contract.

February 17, 1997: Rodney E. Slater became Secretary of Transportation. Outgoing Department Of Transportation Secretary Federico Peña was designated to be Secretary of Energy, but this appointment had not yet been confirmed. (See December 20, 1996.)

February 18, 1997: The Jacksonville Air Route Traffic Control Center (ARTCC) became the last of 21 centers to implement the Voice Switching and Control System (VSCS). *May 21*, the FAA formally dedicated the VSCS. (See June 30, 1995; August 27, 2012.)

February 19, 1997: FAA and National Weather service launched an experimental aviation digital data service, via the Internet, to provide weather information to the aviation community.

February 21, 1997: FAA and Interior Department announced a delay in implementing aspects of a rule, announced on December 31, 1996, on flights over the Grand Canyon. Most of the rule's provisions would be implemented as planned on May 1, 1997; however, a restructuring of the park airspace and air routes would not be implemented until January 1998. (See May 12, 1997.)

February 27, 1997: Department of Transportation and the Department of Defense announced an agreement to provide a second frequency for its global positioning system (GPS), and guarantee uninterrupted availability of the L2 frequency for civil users in the interim. The development of a second frequency was consistent with a recommendation by the Gore Commission. (See March 29, 1996; March 30, 1998.)

February 28, 1997: President Clinton signed legislation reinstating certain aviation taxes from March 6 through September 30. Included were the 10 percent airline ticket tax, 6.25 percent domestic air freight tax, an international departure tax of $6 per ticket, and excise charges on non-commercial aviation fuel. The law also gave the Treasury Department authority to transfer aviation tax revenue to the Aviation Trust Fund.

February 28, 1997: FAA released an independent 90-day assessment, as mandated by the Federal Aviation Reauthorization Act of 1996 (Public Law 104-264), to assess the scope of its financial needs through 2002. The assessment, performed by the Coopers & Lybrand consulting firm, concluded that the FAA had no system to account for its costs, and that FAA managers generally could not manage money properly. This assessment was similar to other studies that concluded that FAA needed to institute a fundamental change in the way it made decisions, and that those who funded the agency, as well as those who used its services, had to afford it greater flexibility in how it did business. In response, FAA stated that the report showed the need for reform to bridge the gap, over the next six years, between its projected responsibilities and its anticipated resources. (See September 30, 1996.)

March 5, 1997: Department of Transportation Secretary Slater announced that U.S. airlines had recorded a third straight year of strong growth. The announcement followed release of the FAA annual commercial aviation forecast.

March 13, 1997: FAA announced that it had installed two new systems, the telecommunications processor and the interim situation display, at the New York and Oakland Air Route Traffic Control Centers (ARTCC). These installations would benefit flights over the Pacific and Caribbean.

March 14, 1997: FAA formally accepted, ahead of schedule, the Display System Replacement (DSR) system. (See April 27, 1995; January 20, 1999.)

March 14, 1997: FAA published two proposed airworthiness directives requiring retrofit of Boeing 737 rudder components. (See January 15, 1997; January 13, 1999.)

March 19, 1997: FAA published a rulemaking proposal to update and clarify regulations regarding the licensing of commercial space launches. (See November 15, 1995; May 22, 1997.)

March 20, 1997: FAA published an interim final rule establishing fees, effective May 19, 1997, for providing air traffic and related services to aircraft that overfly the United States but do not land or takeoff from U.S. territory. (See May 19, 1997.)

March 21, 1997: FAA announced that, with 33 of 39 commuter air carriers now in compliance, the aviation industry had successfully implemented the commuter rule. Adopted by the government in December 1995, the rule required airlines operating aircraft with 10 to 30 seats to meet the same, or equivalent, safety standards as the major airlines. (See December 14, 1995.)

March 27, 1997: Although a section of a wing flap fell off of Delta Boeing 767 near Dallas, the plane landed with no passenger or crew injuries. *April 2*, FAA ordered inspections of flaps for all 767s with at least 25,000 hours or 10,000 flights.

March 27, 1997: FAA initiated phase 1 of Reduced Vertical Separation Minima (RVSM) procedures in the North Atlantic. Reducing separation from 2,000 to 1,000 had huge implications for capacity and fuel efficiency in oceanic operations. This was the first reduction of separation over the Atlantic in 40 years. (See April 9, 1997.)

April 1, 1997: A groundbreaking ceremony for the world's first full-scale airport pavement test facility took place at the FAA William J. Hughes Technical Center. FAA and Boeing partnered to create the facility. (See May 20, 1996; April 12, 1999.)

April 3, 1997: Unofficial reports began circulating that the Clinton Administration would nominate Acting Highway Administrator Jane Garvey for the post of FAA Administrator and George Donohue, currently FAA associate administrator for research and acquisitions, as her deputy. (See June 11, 1997.)

April 5, 1997: The new Washington National air traffic control tower began operating. Rising 201 feet, the state-of-the-art facility was 114 feet taller than the tower that had

been in use since the airport's opening in 1941. Department of Transportation Secretary Slater dedicated the new tower on May 12, 1997.

April 7, 1997: In response to North Korea's opening of its airspace to routine international flights, the U.S. government lifted its prohibition on paying overflight fees to North Korea. *April 24* the FAA cited such factors as North Korea's military rules of engagement as justification, however, for publishing a special federal aviation regulation (SFAR) prohibiting certain U.S. flights in the area.

April 9, 1997: FAA established requirements, effective this date, affecting the operations of U.S.-registered aircraft in designated Reduced Vertical Separation Minima (RVSM) airspace. This designation referred to airspace between flight level (FL) 290 and FL 410 – in which a minimum of 1,000 feet separation, rather than the 2,000 foot minimum separation generally required above FL 290, was to be maintained between aircraft. These regulations required operators and their aircraft to be properly qualified and equipped – as well as to obtain approvals certifying these conditions – to conduct flight operations while separated by 1,000 feet. RVSM was to be applied only in designated areas, and the first such area was to include certain flight levels in the North Atlantic minimum navigation performance specifications airspace. (See March 27, 1997; February 24, 2000.)

April 15, 1997: The tail of a German-made BK-117 helicopter reportedly broke off in flight, causing the aircraft to crash into New York's East river, killing one occupant and injuring two. *April 25*, FAA issued an airworthiness directive requiring operators of certain models of helicopters manufactured by Eurocopter Deutschland GmbH to inspect the tail booms for cracks before the craft would be permitted to fly. *April 26*, FAA grounded all 132 of the BK-117s in the United States pending checks for cracks in certain key components.

April 22, 1997: FAA published a proposal to accept applications, beginning December 1, for participation in an airport privatization pilot program established by the Federal Aviation Reauthorization Act of 1996 (Public Law 104-264).

April 23, 1997: FAA issued an airworthiness directive requiring visual inspections to detect stress and replace any faulty ball bearings in GE90 engines on five Boeing 777s. The directive followed ball bearing failures on two British 777s.

April 24, 1997: FAA unveiled its inflight aircraft icing plan, based on recommendations from international experts. The plan was the final phase of a three-phase program that FAA had announced in 1994. (See October 31, 1994.)

April 28, 1997: FAA selected Hughes Information Technology Systems, a unit of Hughes Aircraft Company, as its integration-services contractor to support the National Airspace System Infrastructure Management System (NIMS) program. The contract was estimated to be worth $100 million over seven years. (See June 15, 1998.)

May 2, 1997: FAA announced the $12.2 million purchase of additional trace detection security equipment for use at the nation's busiest airports. (See February 12, 1997; September 25, 1998.)

May 4, 1997: FBI Director Louis Freeh announced that the evidence in the TWA Flight 800 crash pointed to mechanical failure and emphasized the need to bring the investigation to a close. (See January 7, 1997; December 8, 1997.)

May 6, 1997: Airlines began a two-week test of matching bags with passengers at selected airports nationwide. (See February 6, 1997; February 12, 1997; May 17, 1997.)

May 12, 1997: FAA announced its selection of the FAA/NASA Joint University Program for Air Transportation to receive the first Excellence in Aviation Research award.

May 12, 1997: FAA proposed an airworthiness directive requiring ice detector systems on Embraer 120 aircraft. (See January 9, 1997.)

May 12, 1997: FAA proposed converting two flight-free zones over the Grand Canyon into new flight corridors. The agency stated that one of these was to be an "incentive corridor" for quieter aircraft, and the other was intended to address Native American concerns by preventing overflights of their cultural properties and sacred sites. (See February 21, 1997; May 19, 1997.)

May 14, 1997: FAA awarded a contract worth up to $250 million for computer support services to the Department of Agriculture's National Information Technology Center. The center would establish the Integrated Computing Environment - Mainframe and Networking (ICE-MAN) system, a follow-on to the computer resource nucleus contract. *May 20*, due to questions raised by industry about this controversial government-to-government award, the FAA associate administrator for research and acquisitions suspended work on the ICE-MAN contract. FAA's ICE-MAN acquisition team and Office of Management and Budget (OMB) officials reviewed the original contract, and determined that the program met OMB's A-76 guidelines. *June 10*, FAA lifted the suspension on the contract and formally announced resumption on June 20, 1997. Agriculture delayed resumption of work until the deadline for appeals had passed.

May 14, 1997: FAA issued an airworthiness directive requiring operators to check an engine fire switch override button on Boeing 777s.

May 14, 1997: The Air Transport Association stated that its members would begin installing fire suppression systems in cargo holds of passenger planes. The first of these might be installed in the last quarter of 1997, and the program would take five years to complete its work. FAA reportedly proposed to require the action within three years. (See November 14, 1996; June 10, 1997.)

May 17, 1997: As part of the aircraft hardening program, FAA and British aviation authorities set off four simultaneous explosions in the cargo hold of an old Boeing 747 at Leicester, England. (See May 6, 1997; May 4, 1998.)

May 19, 1997: Under an interim final rule, FAA began collecting fees for overflight services, as scheduled – having, on the previous Friday, turned down requests from the International Air Transportation Association and the Air Transportation Association of Canada for a 90 day delay. A U.S. Court of Appeals decision in January 1998 determined that FAA's calculation of fees was inconsistent with the statute and prohibited the collection of the fees. (See March 20, 1997; June 5, 2000.)

May 19, 1997: Department of Transportation and Interior Department established a National Park Overflights Working Group to develop a plan to ensure preservation of natural quiet in the parks. The group would exist for 100 days after the date of its initial meeting, scheduled for May 20-21, 1997. Its membership included representatives of the aviation industry, parks, and conservation groups. (See May 12, 1997.)

May 21, 1997: To allow commercial airlines to benefit from technological improvements, FAA published a rule permitting commercial aircraft to activate their autopilot at less than 500 feet above ground level during takeoff and climb. Such actions, however, would have to be authorized by the FAA Administrator and would have to be performed as required in the performing carrier’s operating specifications.

May 22, 1997: FAA issued its second privately-operated spaceport license to Spaceport Florida for the Cape Canaveral Spaceport. (See March 19, 1997; December 19, 1997.)

May 28, 1997: The National Civil Aviation Review Commission, led by Norman Mineta, held the first of two public hearings regarding the financing of certain FAA services. Seventeen organizations testified. *September 25*, the commission made its "Preliminary Finance Report” available to the public. *October 28*, a second, and final, public hearing was held. *December 11*, Mineta issued the commission's final report, "Avoiding Aviation Gridlock and Reducing the Accident Rate: A Consensus for Change," which noted that airline passengers were doomed to massive airport congestion and more dangerous skies unless FAA received a radical overhaul. The 21-member panel called on lawmakers and the White House to improve FAA management and finances. It urged a partial privatization of the agency and steps to shield aviation regulation from partisan budget battles. The proposed reforms would let the FAA beef up funding for the air traffic control system and airports to accommodate a rise in air traffic. (See September 30, 1996.)

May 28, 1997: FAA sent a letter to Raytheon indicating its concern about delays in the Standard Terminal Automation Replacement System (STARS) project. FAA proposed to elevate STARS software development to high risk status because of delays in meeting project milestones. (See September 16, 1996; September 11, 1997.)

May 30, 1997: FAA grounded the MD-900 Explorer helicopter until further notice following the discovery of a broken adjustable collective drive link during a McDonnell-Douglas post-flight inspection on May 8.

May 30, 1997: FAA selected the firm of Booz-Allen & Hamilton to perform a congressionally-mandated review of the agency's new acquisition system. (See April 1, 1996.)

June 10, 1997: FAA issued a notice of proposed rulemaking (NPRM) that would require the installation of fire detection and suppression systems in the sealed cargo holds of all commercial aircraft. The airline industry would have three years from the time the rule became final to meet the new standards. According to the agency, the new rule would affect approximately 3,000 passenger aircraft and another 300 cargo planes. Most long-range passenger aircraft, such as the new Boeing 777 jetliners, already met the new standard. (See May 14, 1997; February 12, 1998.)

June 11, 1997: President Clinton announced his intention to nominate Jane Garvey as FAA Administrator and George Donohue as her deputy. (See April 3, 1997; July 31, 1997; February 9, 1998.)

July 1, 1997: The National Transportation Safety Board (NTSB), reporting on a commuter plane collision in which most passengers survived the impact but died in a subsequent fire, recommended that FAA find ways to fund fire and rescue protection at small airports served by small planes. NTSB said the collision of a United Express Beechcraft 1900 with a private twin-engine Beechcraft King Air at Quincy, Illinois, on November 19 took place because the pilots of the King Air failed to monitor properly a common radio frequency on which the United Express pilot repeatedly reported her position and intention to land. Although finding the King Air crew primarily responsible, NTSB presented a list of other safety issues, including a radio transmission by a novice pilot that probably confused the United Express crew, the inability of surviving passengers to open jammed emergency exits, and a lack of fire and rescue capability at Quincy.

July 3, 1997: The Federal Trade Commission decided not to block the merger between the Boeing Company and McDonnell Douglas Corporation. The newly strengthened Boeing would control two-thirds of the world's airplane market. *August 1*, the two companies formally merged. (See December 15, 1996.)

July 19, 1997: A Cessna 172 and Beech Bonanza mid-air collision near Chicago's Meigs field killed all seven onboard the two aircraft. The accident resulted in a safety review of FAA's contract tower program.

July 31, 1997: The U.S. Senate confirmed Jane Garvey as FAA Administrator. *August 4*, Garvey was sworn in as the 14th FAA Administrator, the first to be appointed to a five-year term. (See June 11, 1997.)

August 6, 1997: A South Korean Boeing 747 jetliner crashed in rugged jungle terrain while attempting to make an early-morning landing on the South Pacific island of Guam, killing more than 200 people. At least 35 of those aboard survived the fiery crash. The crash occurred as Korean Air Flight 801 approached Won Pat International Airport in darkness and heavy rain with 254 passengers and crew aboard.

August 7, 1997: FineAir Flight 101, a DC-8, crashed on takeoff from Miami after improperly secured cargo slid. The excess weight in the rear portion of the aircraft caused a severe aft center of gravity condition, rendering the crew unable to lower the aircraft's nose. The airplane stalled, crashed into a field, and slid across busy 72nd Avenue into a strip-mall parking lot.

August 14, 1997: The Eighth U.S. Circuit Court of Appeals in St. Louis dismissed a standing protest by Wilcox Electric against FAA for having awarded the then-$500 million Wide Area Augmentation System (WAAS) contract to Hughes. FAA had terminated the Wilcox contract on April 26, 1996, claiming Wilcox, the original prime contractor, had failed to live up to provisions of the contract. FAA subsequently awarded Hughes Aircraft a sole-source award for WAAS development. (See March 29, 1996; September 23, 1997.)

August 18, 1997: A final rule requiring that digital flight data recorders (black box) collect more information went into effect. The number of specific areas of flight information, called data parameters, increased to 88 for newly manufactured aircraft and increased from 11 to 17 or 18 for older aircraft. (See July 16, 1996; May 3, 1999.)

August 19, 1997: The National Transportation Safety Board (NTSB) ruled that all parties, including FAA, executive boardrooms, and the "shop room floor," shared some culpability for the crash of ValuJet Flight 592. The aircraft probably would not have crashed into the Florida Everglades on May 11, 1996, if FAA had followed a decade-old recommendation to require fire detection and suppression systems in aircraft cargo holds. NTSB also listed as "probable causes" the failure of the maintenance contractor SabreTech to properly "prepare, package, identify and track" hazardous oxygen generators that were improperly placed in the cargo hold, and ValuJet's failure to oversee SabreTech. In addition, NTSB said FAA's failure to adequately monitor ValuJet's maintenance program and its maintenance contractors, the failure to respond adequately to prior oxygen generator fires, and the airline's failure to train its employees about handling hazardous material also contributed to the causes of the tragedy. (See May 11, 1996.)

August 25, 1997: FAA awarded Harris Corporation a contract to replace the current system by which flight service stations provide crucial information such as emergency assistance and weather briefings to pilots. Under the Operational and Supportability Implementation System (OASIS) program contract – valued at more than $110 million, including options – Harris would provide flight planning and weather information to general aviation pilots nationwide. FAA planned to modernize up to 61 flight service stations over the next ten years. (See July 1, 2002.)

September 11, 1997: Representative Connie Morella, chair of the House Science Subcommittee on Technology, met with the administrator to discuss installing the Standard Terminal Automation Replacement System (STARS) in the Washington National terminal radar control (TRACON) facility. FAA committed to making a decision in four to six weeks on whether it would be possible to deploy an interim solution at a selected few major terminal facilities, like National, that would provide STARS hardware operating in tandem with existing software. This would provide controllers an improved operational capability, including color displays, until the STARS software was ready to meet mission requirements. The schedule called for STARS to be ready for initial operation at National in September 2000. (See May 28, 1997; October 30, 1997.)

September 22, 1997: Bombardier Aerospace announced that FAA had granted final certification of Learjet's pioneering Model 45, the world's first business jet designed and manufactured entirely by computer. The aircraft was Learjet's first all-new jet in 30 years and its third aircraft to be certified since the company was acquired by Bombardier Inc., in 1990.

September 23, 1997: FAA sponsored a demonstration flight into Tijuana International Airport showing the benefits of the Wide Area Augmentation System. The agency called this the first big step toward establishing a seamless air navigation system across North America. (See August 14, 1997; October 1, 1997.)

September 23, 1997: FAA announced the selection of a team of universities to serve as the FAA Center of Excellence for Airworthiness Assurance. (See October 1992; January 28, 2004.)

October 1, 1997: Testifying before the U.S. House of Representatives Subcommittee on Aviation, Committee on Transportation and Infrastructure, Department of Transportation Inspector General Kenneth Mead criticized FAA management of the Wide Area Augmentation System (WAAS) program. He stated, "We found that FAA did not use a consistent method for cost estimating. An April 1994 cost benefit analysis for WAAS reflected an estimated total life-cycle cost through the year 2014 at $1.4 billion. Program documentation in July 1997, reflects an estimate of total life-cycle costs for WAAS, through the year 2016, at over $2.4 billion. Our analysis of this showed that FAA has been slow to fully recognize all life-cycle costs of systems . . . In our opinion, FAA’s efforts to include life-cycle cost estimates for all satellite related systems and supporting activities will establish an understanding of the financial requirements and greatly facilitate decision making. Once established, these projected life-cycle costs should be integrated into FAA’s plan to ensure effective transition to the new technologies." (See September 23, 1997; October 20-22, 1997.)

October 1, 1997: FAA implemented a new cost accounting system, with research and acquisitions personnel at Washington, DC, headquarters serving as a pilot for the system. The labor distribution module of the system was a key component of the effort.

October 6, 1997: The FAA commissioned the first precision runway monitor at Minneapolis/St. Paul International Airport. The system permits simultaneous independent instrument landing system (ILS) approaches to parallel runways spaced less than 4,300 feet apart.

October 14, 1997: John Denver, a licensed pilot who had a home near Monterey, California, was killed when his fiberglass plane crashed about 100 yards offshore shortly after having taken off at Monterey Airport.

October 20-22, 1997: FAA and Italy's Ente Nationale Di Assistenza Al Volo conducted flights at Ciampino Airport near Rome to test the capabilities of the Wide Area Augmentation System to function in European airspace. A FAA Boeing 727 used signals from both the U.S. national Satellite Test Bed and Italy's Mediterranean Test Bed to complete the test flights. (See October 1, 1997; October 15, 1998.)

October 22, 1997: FAA began collecting fees, effective this date, for the production of certification-related services pertaining to aeronautical products manufactured or assembled outside the United States.

October 29, 1997: The Task Force on Assistance to Families of Aviation Disasters, co-chaired by Secretary of Transportation Rodney Slater and NTSB Chairman James Hall, issued 61 recommendations to ensure that the families of the victims of aviation disasters receive prompt and compassionate assistance.

October 30, 1997: National Air Traffic Controllers Association (NATCA) President Michael McNally told the U.S. House of Representatives Subcommittee on Aviation, Committee on Transportation and Infrastructure that "NATCA has made it very clear to FAA that there are problems with the Standard Terminal Automation Replacement System (STARS) that must be rectified before it can be a workable product within the terminal environment." At the urging of Representative Frank Wolf (R-VA), the FAA agreed to bring in MITRE and work with the Department of Transportation Inspector General in an attempt to resolve the dispute with NATCA over STARS. Wolf asked the FAA to report by December 15 on progress in resolving cost, delay, and human factors issues. (See September 11, 1997; April 26, 1999.)

November 20, 1997: FAA awarded a four-year contract to Lockheed Martin with a potential value of up to $1 billion, to modernize the air traffic control system. The initial four-year National Airspace System Implementation Support contract (NISC II) contract was worth approximately $350 million with as many as three two-year extension options. Under the terms of the NISC II contract, Lockheed Martin would supply engineering, planning, automation, environmental analysis, and other services to the FAA.

November 26, 1997: FAA proposed two airworthiness directives asking airlines to find and fix potential ignition sources in or near the central fuel tanks of Boeing 747 aircraft. (See January 21, 1997; December 12, 1997.)

November 27, 1997: Department of Transportation Inspector General Kenneth Mead issued a report in which he stated that some FAA inspectors assigned to check airplane maintenance and electrical systems had not been trained. Mead found some employees took no training courses before they joined the agency or after they were hired. And, workers who had been trained may not have taken additional courses to learn about changes in the systems they were inspecting.

December 8, 1997: The National Transportation Safety Board began hearings on TWA Flight 800 in Baltimore, Maryland. (See May 4, 1997.)

December 12, 1997: FAA issued an airworthiness directive expanding the inspection and replacement of the Teflon wire coating used in the stainless steel wire conduits on Boeing 747 fuel boost pumps and the pumps used in jettisoning fuel. The AD immediately superseded the December 23, 1996, AD requiring inspections and replacements for Boeing 747 airplanes that used aluminum conduits. (See November 26, 1997; December 19, 1997.)

December 15, 1997: FAA and the Air Transport Association announced a new partnership to eliminate controlled flight into terrain (CFIT). Air Transportation Association member airlines would voluntarily equip 4,300 of their aircraft with advanced terrain awareness warning systems, such as the enhanced ground proximity warning system. Installation of the system was expected to be substantially complete during 2003. (See February 12, 1997; March 29, 2000.)

December 16, 1997: President Clinton signed into law the Foreign Air Carrier Family Support Act requiring foreign carriers to file a plan by June 15, 1998, addressing the needs of families of victims of an aviation disaster in the United States.

December 19, 1997: Top FAA and National Transportation Safety Board officials, often at odds over aviation safety issues, agreed to move forward aggressively with plans to make Boeing 747 fuel tanks safer. The agreement between FAA Administrator Jane Garvey and NTSB Chairman Jim Hall followed board hearings on the crash of Trans World Airlines Flight 800 off the coast of Long Island on July 17, 1996, which killed 230 people. Investigators determined that the plane's center fuel tank exploded and split the plane apart, but did not yet know what sparked the explosion. (See December 12, 1997; April 7, 1998.)

December 19, 1997: Barry Valentine stepped down as FAA deputy administrator (acting) and retired from the agency. (See February 1, 1997.)

December 19, 1997: FAA issued a launch site operators license to Virginia Commercial Space Flight Authority to operate a space launch facility at Wallops Island, Virginia. (See May 22, 1997; February 10-11, 1998.)

December 28, 1997: A powerful blast of air turbulence sent a United Airlines jumbo jet with 393 people aboard into a sudden 1,000-foot drop over the Pacific Ocean, killing one

passenger and injuring 110 others. The Boeing 747 (United Flight 826) was about 1,100 miles east of Japan after leaving Tokyo for Honolulu when it encountered the turbulence. December 31, 1997: During Calendar Year 1997 public agencies collected $1.2 billion in Passenger Facility Charge (PFC) revenue.

1998

January 8, 1998: FAA ordered immediate visual inspection of the tail sections of 211 late-model Boeing 737s after investigators determined that a crash in Indonesia might have been the result of missing fasteners in the tail. Within the 24 hours prior to issuing this order, the agency had checked horizontal stabilizers on aircraft being built or prepared for delivery at Boeing's Renton, Washington, factory. No major problems were noted, but the inspectors found a loose fastener on one in-service aircraft. All U.S. carriers with 737s manufactured after September 20, 1995, in their fleets were therefore required to inspect the horizontal stabilizer portion of the tail section within 24 hours, or five flight segments, for missing fasteners.

February 6, 1998: President Clinton signed legislation into law renaming Washington National Airport the Ronald Reagan Washington National Airport.

February 9, 1998: George Donohue, FAA associate administrator for research and acquisitions withdrew his nomination to be the FAA deputy administrator and informed Department of Transportation Secretary Rodney Slater that he planned to leave the agency. (See June 11, 1997.)

February 10-11, 1998: FAA held its first Commercial Space Transportation Forecast Conference. (See December 19, 1997; April 21, 1998.)

February 11, 1998: President Clinton signed into law the FAA Research, Engineering, and Development Authorization Act of 1998 (Public Law 105-155). The bill mandated FAA establish a program to fund undergraduate and technical colleges, including Historically Black Colleges and Universities and Hispanic Serving Institutions, to perform research on subjects of relevance to FAA. The legislation also required the agency to assess immediately the extent of the risk to its operations that could be identified up until the year 2000 and to develop contingency plans to reduce or avoid the risk introduced by faulty systems that could not be fully corrected before the target year.

February 12, 1998: Department of Transportation issued a rule mandating that, beginning the upcoming fall, airlines must collect the full names of all passengers traveling on international flights and be prepared to make a passenger manifest available within three hours of a crash. The rule was one of several Department of Transportation actions issued on the first anniversary of the publication of the White House Commission on Aviation Safety and Security report.

February 12, 1998: FAA issued a final rule requiring fire detection and suppression systems in aircraft cargo compartments. (See June 10, 1997; March 19, 2001.)

March 30, 1998: Vice President Al Gore announced that two new civilian global positioning system (GPS) signals would be provided by the U.S. free of charge. The announcement fulfilled a pledge made by the Department of Defense and Department of Transportation in March 1997 to reach a decision on a second civil frequency within a year. (See February 27, 1997; June 3, 1998.)

April 7, 1998: Federal aviation investigators probing the explosion of TWA Flight 800 urged inspections of the wiring in fuel monitoring systems of hundreds of Boeing 747s and possibly other Boeing jets. In a letter to FAA Administrator Jane Garvey, National Transportation Safety Board Chairman Jim Hall noted that his organization had found damaged wiring on the "fuel quantity indication systems" of the crashed aircraft and three other 747s. While not directly linking them with the explosion of Flight 800's fuel tank, the letter described the conditions as "potentially hazardous." Also, sources close to the investigation said the letter was not intended to indicate that the board was any closer to determining the cause of the fuel tank's violent explosion. The problems with the 747 fuel systems had been revealed earlier, and had been discussed at hearings on the crash held the previous year in Baltimore. (See December 19, 1997; May 10, 1998.)

April 14, 1998: The Clinton Administration unveiled its Safer Skies initiative, an aviation safety agenda consistent with one announced earlier by the aviation industry. Designed to reduce the commercial aviation accident rate by 80 percent over the next decade, the initiative included mandatory equipment and training to prevent pilots from flying mechanically fit aircraft into the ground or water. It also contained programs to encourage cabin safety. Safer Skies concentrated FAA resources on the most prevalent causes of aircraft accidents and used special teams of technical experts to identify the leading causes of aviation disasters and recommend safety advances.

April 15, 1998: FAA leased the Atlantic City International Airport to the South Jersey Transportation Authority. FAA and the authority signed a 50-year lease and cooperative agreement transferring 2,000 acres of land, including airport runway and taxiway systems.

April 16, 1998: RTCA's Free Flight Steering Committee recommended that, through a core capability limited deployment process to be undertaken through 2002, FAA should adopt its proposed free flight program to implement six technologies at selected air route air traffic control centers. The technologies included: Traffic Management Advisory (TMA), Passive Final Approach Space Tool (pFAST), User Request Evaluation Tool (URET), Collaborative Decision Making (CDM), Controller-Pilot Datalink Communications (CPDLC), and Surface Movement Advisor (SMA). (See January 15, 1997; September 30, 1999; February 4, 2000; March 30, 2000.)

April 21, 1998: FAA published a final rule on licensing requirements for the launch of expendable vehicles from federal sites. (See February 10-11, 1998; August 26, 1998.)

May 4, 1998: FAA announced plans to introduce computer-based training for security screening personnel at the nation's busiest airports. The training was a module in the Screener Proficiency Evaluation and Reporting System (SPEARS) being developed by the agency to select, train, evaluate, and monitor the performance of employees who operated the X-ray screening checkpoints. FAA awarded Safe Passage International an $11 million contract on this date to install the SPEARS computer-based training workstations and train instructors to use it at up to 60 airports. (See May 17, 1997; August 21, 1998.)

May 10, 1998: FAA ordered all older Boeing 737s temporarily grounded until mechanics inspected high-voltage fuel tank wiring for problems that could cause a fire or explosion. FAA gave airlines seven days to complete the inspections. The action came after United Airlines mechanics found evidence of electrical arcing on wiring removed from another 737. Thomas McSweeny, FAA director of aircraft certification, stated that nearly every one of the first 13 aircraft inspected prior to the order exhibited some level of chafing on the insulation that separated the wiring from the metal conduits carrying the wiring through the fuel tank to fuel pumps. *May 14*, FAA expanded the order to include somewhat newer 737 planes and added a set of wires exempted from the original inspection. In some cases, when mechanics performed inspections of newer planes already in the shop for major repairs, they found chafed high-voltage wires. (See April 7, 1998; July 23, 1998.)

May 13, 1998: FAA unveiled a new, data-driven air carrier inspection program called the Air Transport Oversight System (ATOS) to enable FAA inspectors to spot safety trends and catch problems before they could lead to an incident or accident. (See October 1, 1998.)

May 15, 1998: FAA commissioned the country’s 34th Terminal Doppler Weather Radar (TDWR) at Newark International Airport. It also commissioned an airport surveillance radar (ASR-9) there. The ASR-9 replaced the ASR-7 at Newark, providing a clearer picture of weather and aircraft than the older system.

June 2, 1998: The Department of Transportation Inspector General issued a report saying that, despite the fact that adverse weather conditions had caused or contributed to nearly 25 percent of aviation accidents in the last decade, FAA still had failed to provide leadership in aviation weather programs.

June 3, 1998: Department of Transportation Secretary Slater announced the award of a contract to Advanced Management Technologies, Inc., to provide expertise in the adaptation of the global positioning system (GPS) to civil aviation needs. The contract was worth $27 million over three years, with four one-year options that could bring the full potential contract value up to $62 million. Under the contract, the company would provide technical engineering and program management support for current and future satellite and satellite augmentation systems for FAA. (See March 30, 1998; January 29, 1999.)

June 5, 1998: FAA ordered the retraining of 10,000 air traffic controllers nationwide. Two specific incidents and a general increase in controller errors nationwide prompted this action. An April 3 incident had not been revealed to the public, but shortly before the order was released, an Air Canada Airbus A320 jet, taking off from La Guardia, flew directly over a US Airways DC-9 jet as it broke off a landing. The two passenger jets came as close as 20 feet from colliding and the incident was widely reported. The agency ordered mandatory proficiency training for controllers working in airport towers handling takeoffs and landings.

June 5, 1998: Effective on this day, a FAA reorganization (see October 1, 1996; January 2001) took place that:

- Abolished two offices
  - The Office of the Associate Administrator for Administration
  - The Office of Business Information and Consultation
- Established four offices
  - Assistant Administrator for Financial Services/CFO
  - Assistant Administrator for Financial Services/Director of Budget
  - Assistant Administrator for Human Resource Management
  - Assistant Administrator for Region/Center Operations
  - Moved two offices
  - Office of Flight Oversight became Flight Standards Service under the Office of the Administrator for Regulation and Certification
  - Moved the Washington Flight Program Office (Hangar Six) became the Aviation Systems Standards Office within the Airway Facilities organization
- Transferred the duties of two offices
  - The duties of the Freedom of Information Act Office were assumed within the Office of the Assistant Administrator for Region/Center Operations
  - The duties of the Headquarters Facilities Management Office were assumed within the Office of Acquisitions under the Associate Administrator for Research and Acquisitions

June 15, 1998: Department of Transportation Secretary Slater and National Air Traffic Controllers Association President Michael McNally announced a new labor agreement between FAA and NATCA. *September 9,* NATCA members voted to approve the new contract. *August 28,* FAA and NATCA formally signed the new five-year pact in which a federal labor union negotiated wages, for the first time, with a government agency. (See January 7, 2003.)

June 15, 1998: FAA completed construction of NAS infrastructure management System (NIMS) facility located in Reston, Virginia. The facility was used to evaluate human factors, validate various commercial-off-the-shelf products and interfaces that comprise NIMS, and to develop, verify, and refine initial operational procedures. (See April 28, 1997.)

June 16, 1998: The National Transportation Safety Board reported that the probable cause of the crash of Fine Air Flight 101 onto a Miami street the previous summer was a

combination of the actions of an inexperienced crew and the effects of an improperly loaded cargo. Federal investigators said that both the airline and FAA shared responsibility for failing to correct numerous safety problems. NTSB further chose this crash to address broader problems in FAA oversight of all airlines, drawing parallels to the 1996 fatal crash, also attributed to hazardous cargo, of a ValuJet DC-9. Several NTSB members suggested FAA should clean house at its flight standards office in Miami, the headquarters for five major all-cargo companies. NTSB's official report on the cargo crash said the Miami office knew of deficiencies in Fine Air's operations, but did not correct them.

June 17, 1998: FAA unveiled a step in its congressionally authorized personnel reform efforts – a test of a new compensation plan for about 1,200 agency employees. The new plan replaced the traditional grade and step base pay method with a structure of pay bands whose value was determined by comparison with similar jobs in government and private industry. The program linked compensation with performance. (See April 1, 1996.)

June 1998: FAA established a formal safety risk management policy through Order 8040.4. The new policy provided for a formal, but flexible, approach for managing safety risks associated with high consequence decisions.

July 23, 1998: FAA proposed new measures to reduce potential ignition sources in Boeing 747 center wing tanks. The proposed airworthiness would require operators of Boeing 747 aircraft registered in the U.S. to take the following actions:

- Inspect the center fuel tank to detect damage, disbonding or incorrect installation of wiring and components.
- Test to ensure the electrical bonding of center fuel tank components to the aircraft's structure is within limits, reworking it if necessary.
- On certain 747s, measure the insulation resistance of the fuel quantity indication system (FQIS) to ensure that it is within limits. Also on certain aircraft, operators would have to replace FQIS components with new hardware, and replace silver-plated FQIS wires with new nickel-plated wiring.
- In certain airplanes, install a flame arrestor into the inlet line of the scavenge pumps of the center fuel tank.

Under the proposed rule, replacement of the FQIS components and wiring would have to be done within 24 months, or 20 years from the date the plane was built, which ever would be later. All other actions would have to be accomplished within 24 months. The rule would require operators to report inspection results to Boeing within ten days. (See May 10, 1998; August 11, 1998.)

July 1998: FAA's new Sexual Harassment Accountability Board began operations. The Board had responsibility for providing timely response to complaints while making senior officials accountable for their workplace environments. (See July 2000.)

August 11, 1998: The National Transportation Safety Board urged mandatory inspections of the fuel-pump control shaft on about one-third of all commercial jet aircraft engines – including those in most Boeing 727s and 737s and McDonnell Douglas DC-9s and MD-80s. Several incidents – including one on September 6, 1997, in which a Boeing 737 was destroyed on takeoff from Najran, Saudi Arabia, as well as a Delta Airlines in-flight problem – prompted the letter from NTSB Chairman Jim Hall to FAA Administrator Jane Garvey. In the Saudi incident, the crew noticed a control panel light indicating that the right engine's exhaust was dangerously hot. When the pilot tried to throttle back, the engine remained at a high power level, the board said. (See July 23, 1998; September 21, 1998.)

August 21, 1998: Law enforcement and transportation officials in the U.S. capital adopted tighter security measures, stepping up patrols at tourist attractions, at federal buildings and in the 95-mile subway system. Military installations across the region also increased security, causing backups at some bases as military police conducted stricter-than-normal identification checks at gates. FAA announced that officers and bomb-sniffing dogs would conduct more sweeps at U.S. airports and increase scrutiny of passengers. Security personnel were instructed to use hand-held devices to screen randomly passengers for traces of explosives. The District of Columbia Metropolitan Police Department, the U.S. Park Police, and the U.S. Capitol Police all increased patrols in key areas of the District and ordered officers to be more aware of their surroundings. The agencies declined to say how many more officers were on patrol. (See May 4, 1998; September 25, 1998.)

August 21, 1998: FAA issued a NPRM that would ban, in certain air carrier operations, the transportation of devices designed to generate oxygen chemically. This ban would include older devices that have been charged and discharged as well as newly manufactured devices that have yet to be charged. (See December 30, 1996.)

August 21, 1998: FAA issued Advisory Circular 150/5220-22, Engineered Materials, which contained standards for the planning, design, and installation of engineered materials arresting systems (EMAS) in runway safety areas. FAA and Engineered Arresting Systems Corp. (ESCO), a division of Zodiac Aerospace, developed EMAS, under a cooperative research and development agreement. EMAS, which consists of a layer of crushed concrete positioned at the end of runways, slows and stops aircraft in runway overruns. John F. Kennedy International Airport installed the first EMAS in 1998. (See May 8, 1999.)

August 26, 1998: FAA published a final rule in the *Federal Register* implementing financial responsibility and insurance coverage requirements for space launch activities it regulated. This action codified practices required under the Federal Government's commercial space launch licensing procedures. The new regulations required a launch licensee to obtain insurance or otherwise to demonstrate financial responsibility to protect itself, the customer, the U.S. Government, and contractors and subcontractors of against claims for third-party losses and federal property damage resulting from the licensed launch activities. The agency would set insurance requirements according to a risk-based

determination of the maximum probable loss that might result from the licensed activities. Launch participants, whether from industry or government, were required to enter into reciprocal waivers of claims in which each party agreed to absorb certain losses it might sustain as a result of the licensed activity. In addition, subject to the funds being appropriated, the U.S. Government agreed to pay successful third-party claims in excess of the required insurance, up to $1.5 billion s adjusted for inflation. The final rule was effective 60 days after publication in the *Federal Register* to allow those subject to the rule to change existing practices covered by it, although the rule did not substantially change those practices previously carried out through license orders. (See April 21, 1998; September 8, 1998.)

August 27, 1998: The National Transportation Safety Board attributed the deaths of 29 people killed in a Comair commuter plane crash in a field near Detroit in the winter of 1997 to FAA's failure to heed decades of information about the effect of icing on aircraft performance. NTSB also said that Comair and its pilots contributed to the crash, and that the crew must share some responsibility for operating in poor weather conditions at a speed too low to provide a margin of safety. (See January 9, 1997.)

September 2, 1998: A Swissair jumbo jet en route from John F. Kennedy International Airport in New York to Geneva with 228 people on board crashed off the southern coast of Nova Scotia late at night while trying to make an emergency landing. Canadian aviation officials said the three-engine McDonnell Douglas MD-11 had been diverted to Halifax International Airport, which lies about ten miles to the north of the Nova Scotian capital, after its flight crew reported smoke in the cockpit or passenger cabin about two hours after take-off. (See November 12, 1998.)

September 8, 1998: The 100th commercial space launch licensed by the U.S. took off from Vandenberg Air Force Base. (See August 26, 1998; September 24, 1998.)

September 24, 1998: FAA issued a space launch site operator's license to the Alaska Aerospace Development Corp. The license allowed commercial rocket launches on the southern tip of Kodiak Island. Alaska joined California, Florida, and Virginia as states with FAA-licensed state or commercially operated space launch facilities. It was, however, the first spaceport not co-located with a federally operated launch range. FAA earlier issued commercial space launch site licenses for the operation of spaceports on leased property at Vandenberg Air Force Base, California; Cape Canaveral Air Station, Florida; and at NASA's Wallops Flight Facility, Wallops Island, Virginia. (See September 8, 1998; March 15, 1999.)

September 24, 1998: FAA awarded a $14.2 million dollar contract to Northrop Grumman Corporation to develop equipment that would provide warnings to air traffic controllers and pilots of hazardous wind shear and microburst events. Called the Weather Systems Processor (WSP), it would forecast the arrival of wind gust fronts and tracks storm motion, providing a complete picture of current and projected hazardous weather conditions which might impact runway and airport usage. Intended be used in conjunction with Airport Surveillance Radar Model-9, WSP would be a low cost

detection system suitable for installation at medium and high air traffic density airports. Its functional capability would be similar to that provided by Terminal Doppler Weather Radar, a legacy system which FAA was then deploying at 45 major airports subject to heavy thunderstorm activity. (See April 25, 2001.)

September 25, 1998: FAA announced the implementation of a final rule requiring employment background investigations and criminal history checks for airport security checkpoint screeners and screener supervisors. This new rule responded to the mandate in the Federal Aviation Reauthorization Act of 1996 and was additionally recommended by the White House Commission on Aviation Safety and Security. The rule also required airport operators and air carriers to audit employment history investigations. (See August 21, 1998; November 20, 1998.)

September 28, 1998: FAA ordered airlines to inspect, within 60 days, fuel boost pump wiring on Boeing 737-100 through -500 series aircraft with 20,000 to 30,000 flight hours. The directive also required the addition of a layer of Teflon sleeving to protect the fuel pump wires. (See August 21, 1998; October 1, 1998.)

September 30, 1998: FAA announced a $932,613 contract to Sensis Corporation, to develop an identification system for transponder-equipped aircraft operating on airport taxiways and runways. The airport target identification system would give airport controllers detailed information about aircraft and vehicles operating on the ground, including position, speed, and aircraft identification.

October 1, 1998: FAA, which had launched its original aging aircraft program after an Aloha jetliner lost a chunk of its roof in 1988, announced a companion program, the aging transport non-structural systems plan, to help ensure that aircraft systems, such as those for wiring and fuel, did not fail as they grew older. The program, which grew out of the investigation of the in-flight explosion of Trans World Airlines Flight 800 that killed 230 people in 1996, included stepped-up inspections of wiring, a long-term research program, and a model-by-model assessment of each aircraft type together with other items. (See October 28, 1991; September 28, 1998; December 3, 1998; August 16, 2001.)

October 1, 1998: FAA implemented the Air Transport Oversight System, an air carrier oversight process that advocated a systems approach to FAA certification and surveillance oversight. The new process would combine system safety techniques with risk management principles to ensure that air carriers had built safety considerations into their operating systems. (See May 13, 1998; April 8, 2002.)

October 8, 1998: FAA, with assistance from the Helicopter Safety Advisory Conference (HSAC), implemented the world's first Instrument Flight Rules (IFR) Grid System in the Gulf of Mexico. FAA designed this navigational route structure, completely independent of ground-based navigation aids (NAVAIDs), to facilitate helicopter IFR operations to offshore destinations. The Grid System was defined by over 300 offshore waypoints located 20 minutes apart (latitude and longitude). These waypoints have five-letter identifiers systematically based so that operators and controllers can visualize the relative

location. To simplify flight planning inflight data input and navigation, these waypoints were integrated into the computer database within the GPS receivers. Both flight crews and controllers used the grid system, which assisted them by: allowing for more direct routing; reducing the manual workload that controllers performed to provide separation from other helicopters; and reducing delays.

October 9, 1998: FAA Administrator Jane Garvey and NASA Administrator Daniel Goldin signed an agreement that established a new partnership in pursuit of improved aviation safety, airspace system efficiency, and aircraft environmental concerns. The agreement created an executive board comprised of senior managers from both agencies who would monitor progress and ensure that complementary aviation and commercial space transportation goals were achieved through a coordinated planning effort.

October 14, 1998: FAA announced that within six months it would develop a new test specification for aircraft insulation that would contribute to increased fire safety. When available for use, this new test standard would be required for use in the manufacture of all applicable aircraft. The Civil Aviation Administration of China in 1996 strongly recommended new tests after a Chinese Eastern MD-11 fire in Beijing in 1995. (See August 11, 1999.)

October 15, 1998: A FAA Boeing 727 receiving signals from both U.S. and European satellite navigation networks performed successful flight tests at Iceland's Keflavik Airport. The aircraft performed a series of category I precision approaches to the runway using onboard equipment that received signals from the FAA national satellite test bed, a forerunner to WAAS, and the United Kingdom's Northern European Satellite Test Bed. (See October 20-22, 1997; December 9, 1998.)

October 28, 1998: FAA recommended that pilots not take impotence drugs within six hours of flying because it could affect their ability to distinguish between the blues and greens found in cockpit instrument and runway lights.

October 28, 1998: FAA officials told a public hearing in Rockville, Maryland, that, while a federal plan to consolidate four of their region's air traffic control facilities would lead to an overall reduction in airplane noise, it also might aggravate the problem for some local communities. Under the plan, FAA would close the separate terminal radar control (TRACON) facilities at Dulles International, Reagan National, and Baltimore-Washington International airports and Andrews Air Force Base and open an overall center in Loudoun County or Fauquier County. (See January 6, 1997; January 7, 1999.)

November 6, 1998: President Clinton dedicated the new Northwest Arkansas Regional Airport in Highfill, Arkansas. He told the audience his administration was working to make the national aviation system better able to handle the anticipated 50-percent increase in global air travel in the coming seven years. He added that FAA and other agencies were working together "… to convert our air traffic control system to satellite technology, to change the way we inspect older aircraft, and most important over the long run, to combat terrorism with new equipment, new agents, and new methods."

November 12, 1998: Reacting to concerns raised by the September 2 crash of Swissair Flight 111, FAA ordered airlines to inspect two lighting dimmer switches that could overheat and emit smoke when installed in the cockpits of McDonnell Douglas MD-11 aircraft. McDonnell Douglas had issued a service bulletin three years before recommending replacement of the switches. One of the problems reported by the crew of Flight 111 before it crashed was smoke in the cockpit. (See September 2, 1998; December 9, 1998.)

November 20, 1998: FAA proposed to require foreign air carriers flying to and from the United States to implement security measures identical to those required of U.S. air carriers serving the same airports. (See September 25, 1998; November 23, 1998.)

November 23, 1998: FAA certified the eXaminer 3DX 6000 system manufactured by L-3 Communications as the second explosives detection system to meet the agency's certification requirements. (See November 20, 1998; March 31, 1999.)

December 3, 1998: In an emergency airworthiness directive, FAA ordered all Boeing 747 operators to carry more fuel in the center wing tank to ensure that the pumps are immersed in fuel when they are operating. (See October 1, 1998; March 3, 1999.)

December 9, 1998: FAA issued an airworthiness directive ordering inspection and possible replacement of electrical wiring above the forward passenger doors of McDonnell Douglas MD-11 aircraft. The order required a one-time visual inspection within ten days to detect problems such as nicks, fraying or chafing in the wiring above the left and right forward passenger doors. As part of the inquiry into the Swissair 111 crash off Nova Scotia in September, FAA learned that damaged electrical wires were found near the forward passenger doors of an MD-11 during regularly scheduled heavy maintenance. Further examination showed that, when the doors were raised to the open position, sliding panels above the doors moved inward and could have chafed the electrical wiring in those areas. The condition, if not fixed, might have led to an electrical fire in the passenger cabin. (See November 12, 1998; January 28, 1999.)

December 9, 1998: FAA and Chile's Director General of Civil Aeronautics completed the first test flights in Chile demonstrating the capabilities and benefits of the Wide Area Augmentation System installation at the Arturo Merino Benitez International Airport. (See October 15, 1998; January 5, 1999.)

December 15, 1998: Department of Transportation Secretary Slater announced that all flights of all U.S. carriers, both domestic and international, were now to be completely smoke-free. (See May 7, 1996.)

December 16, 1998: FAA issued a notice to airmen advising all civil aircraft operators that hostilities had begun in the airspace over Iraq and might also occur in the airspace over nearby nations and waters in the Arabian Peninsula, including the Persian Gulf and

the Red Sea. FAA advised that operators flying in the area should strictly comply with aircraft identification procedures and monitor international emergency frequencies.

December 17, 1998: FAA's small airplane directorate issued the first U.S. type certificate for a Russian type design, clearing the way for import into the United States. The type certificate was issued at a ceremony at the Ilyushin plant attended by senior Russian officials and by U.S. Ambassador James Collins. An all-metal, two-seat propeller-driven aircraft powered by a single 210 HP Teledyne Continental Motors IO-360ES engine with a Hartzell propeller, the Ilyushin IL-103 was issued Certificate Number A45CE. It was certified in the utility category.

December 21, 1998: FAA Administrator Jane Garvey announced a new streamlined administrative action process that would reduce paperwork and shorten the time it took to resolve certain violations that did not pose a serious threat to aviation safety. At that time, it was taking an average of 75 days to resolve an administrative violation. Under the new program, FAA hoped to cut that delay to as little as seven days in some cases. Inspectors could use the new process to deal with alleged violations that did not require extensive investigation. (See July 15, 1999.)

1999

January 5, 1999: FAA announced it would revise the implementation schedule for the Wide Area Augmentation System to allow more time to complete development of a critical software safety package that would monitor, correct, and verify the performance of the system. FAA rescheduled the original July 1999 commissioning date for phase 1 of WAAS to September 2000. (See December 9, 1998; January 29, 1999; April 6-9, 1999.)

January 7, 1999: FAA announced the selection of Vint Hill Farms Station, a former military intelligence base in Fauquier County, Virginia, as the site for a $93 million consolidated air-traffic control facility. FAA officials said the move would put controllers handling planes approaching, Dulles International, Reagan National, and Baltimore-Washington International airports, and Andrews Air Force Base under one roof to improve air safety and streamline costs. (See October 28, 1998; March 6, 2000.)

January 11, 1999: FAA issued final airworthiness directives calling for operators to limit the payloads of Boeing 727 aircraft. The orders placed restrictions on 727s converted from passenger to all-cargo operations until the floor structures were reinforced or they were re-qualified to carry higher payloads. FAA expressed concern that converted aircraft had design features, including under-strength cargo floors, did not meet FAA certification safety requirements for cargo carriers. The ADs required operators either to reduce payloads to 3,000 pounds per container or to adhere to interim operational limitations that would permit them to carry individual containers of up to 4,800 pounds. Operators had 90 days from the effective date to make the appropriate revisions to the airplane flight manuals, supplements to them, and airplane weight and balance supplements. If individual operators failed to complete modifications within 28 months, their allowed payloads would be permanently reduced to 3,000 per container.

January 13, 1999: FAA proposed mandatory tests for potential cracks in valves in some 737 rudder power control units (PCUs). The NPRM entailed an airworthiness directive that would apply to all Boeing 737-100 through -500 series aircraft. This AD was proposed in response to the PCU supplier's discovery of cracks in a component of a valve assembly. In addition, cracks had been found by operators before they installed valves in their aircraft. The proposed rule would order operators to perform tests on their PCUs to detect cracks in a joint in the servo valve that regulates the intake of hydraulic fluid to the PCU. Analysis had shown that a single crack in one leg of the component was not in itself an unsafe condition. A crack in both legs, however, could have caused the component to break apart and jam the valve assembly. If a crack were found during the test process, the AD required the operator to replace the defective valve with a modified valve. (See March 14, 1997; May 3, 1999.)

January 20, 1999: Department of Transportation Secretary Rodney Slater and FAA Administrator Jane Garvey dedicated a new, first-of-its-kind air traffic control system, the Display System Replacement, at the air route traffic control center in Auburn, Washington. The DSR replaced equipment that had been in service for 20 to 30 years with upgraded displays, and computer hardware and software. (See March 14, 1997; July 14, 2000.)

January 28, 1999: FAA ordered inspections of wiring and insulation in the cockpit and cabin on the entire U.S. commercial fleet of McDonnell Douglas MD-11s. The Airworthiness Directive was under development even prior to the January 11 recommendation of the National Transportation Safety Board on MD-11 wiring. It also followed discussions with the Canadian Transportation Safety Board and NTSB, which resulted in a December 22, 1998, Canadian Transportation Safety Board safety advisory letter suggesting a closer look at the wiring in the MD-11 fleet. Several MD-11s were examined as part of the Swissair accident investigation. Based on the wiring discrepancies found, the directive required U.S. operators to perform the inspections, and make any necessary repairs, within 60 days and report findings to the FAA. (See December 9, 1998; April 20, 1999.)

January 29, 1999: FAA announced findings that, with some anticipated improvements, an augmented global positioning system (GPS) could serve safely and reliably as the only navigation system installed in aircraft and the only navigation system provided by the FAA. The findings were taken from an independent assessment of GPS capabilities conducted by the Johns Hopkins Applied Physics Laboratory for the FAA, Aircraft Owners and Pilots Association, and the Air Transport Association. Features of the Wide Area Augmentation System (WAAS) and the Local Area Augmentation System (LAAS), both under development, were expected to provide the improved accuracy, integrity, and availability of the GPS signal referred to in the findings. (See June 3, 1998; January 5, 1999; April 2, 1999; April 6-9, 1999.)

February 3, 1999: Department of Transportation Secretary Rodney Slater announced that the Clinton Administration would propose legislation to promote competition at large

airline hubs dominated by one airline. The draft legislation would state that before they could raise passenger fees, the operators of such facilities would be required to explain how they intended to promote competition. The bill would also include a proposal to charge fees for use of the air traffic systems and would require a "performance based-organization" to be created to provide for air traffic control within FAA. Aspects of these proposals proved controversial and ran into stiff opposition in Congress and in portions of the aviation community. (See April 5, 2000.)

February 9, 1999: Working in partnership with the aviation industry, FAA announced it had reached an agreement with pilots and airlines regarding procedures affecting the conduct of land and hold short operations (LAHSO). The agreement dealt with runway surface and weather minima, training, visual aids, landing distance, and rejected landings. Highlights included:

- Air carriers would conduct LAHSO only on dry runways until such time as the manufacturers had provided actual demonstrated landing distance figures on wet runways for the aircraft in question.
- FAA would issue a flight standards handbook bulletin specifying that before an air carrier could conduct LAHSO, it must provide a pilot training program for the LAHSO procedure.
- Use of LAHSO would not be authorized on a runway lacking electronic or visual vertical guidance (i.e., an improved LAHSO lighting configuration).
- For each type of aircraft with LAHSO, the runway landing length would be the greater of the simultaneous operations on intersecting runway category length or FAA approved aircraft flight manual distance plus 1000 feet.

To ensure that the appropriate level of safety was maintained, only LAHSO configurations which did not require a rejected landing instruction, or for which a rejected landing instruction was published, were to be used by air carrier aircraft. (See July 14, 2000.)

March 3, 1999: In an airworthiness directive to go into effect March 18, FAA ordered operators of certain Boeing 737-100, -200, -300, -400 and -500 aircraft to inspect and correct any chafing of float switch wiring found in the center fuel tank. The float switch, powered by direct current, automatically closed the fueling valve to prevent the fuel tank from being overfilled. Chafed wiring associated with this device, however, could have provided an ignition source inside the tank. The agency required that each aircraft’s float switch be removed or deactivated and inspected for evidence of chafing – such as electrical arcing or worn insulation – either within 30 days of the AD effective date, or before the aircraft could accumulate 30,000 total flight hours. Under the terms of the AD, operators might install protective Teflon sleeving and wiring, allowing reuse of the float switch, or they might install a new float switch with the necessary Teflon sleeved wiring. Alternatively, operators might deactivate the float switch and paint a "caution" sign adjacent to the aircraft-fueling panel to indicate a mandatory reduction of the maximum fuel capacity with associated modified fueling procedures to minimize the possibility of fuel spills. (See December 3, 1998, October 28, 1999.)

March 8, 1999: FAA released the National Airspace System plan, version 4.0. The update extended the agency's modernization strategy through 2015.

March 11, 1999: Department of Transportation Secretary Rodney Slater and FAA Administrator Jane Garvey dedicated the newest FAA air traffic control computer system in a ceremony at the New York Air Route Traffic Control Center. They dedicated the Host and Oceanic Computer System Replacement, known as HOCSR, a key component of the NAS infrastructure modernization program and FAA's Year 2000 (Y2K) compliance effort. The new system was more than four times faster and orders of magnitude more reliable than its predecessor – while occupying only an eighth of the floor space of the system it replaced. The New York Center's HOCSR, the first in the nation, went online February 24. (See September 30, 1999).

March 15, 1999: FAA announced it had issued a launch license to a Boeing-led international consortium to conduct a first-of-its-kind demonstration space launch, targeted for March 2, from a sea-going platform in the mid-Pacific. The 40 percent Boeing-owned partnership would use a Ukrainian-built Zenit booster rocket and a Russian-built upper stage in the demonstration. The launch platform, a converted self-propelled oil drilling platform, would be accompanied to the launch site by an assembly and command ship designed and built by Kvaerner Maritime of Norway, another partner in the undertaking. (See September 24, 1998; April 21, 1999.)

March 31, 1999: FAA announced plans to purchase more than 150 additional security devices for the nation's airports, continuing to implement a recommendation by the White House Commission on Aviation Safety and Security. The purchase of 21 FAA-certified explosives detection systems and 135 trace explosives detection devices added to the multi-year deployment of innovative security equipment. Purchases to date included 95 FAA-certified explosives detection systems, 20 automated dual-energy X-ray machines, two quadrapole resonance devices, and 462 trace explosives detection devices. The trace explosives detectors were being deployed primarily at airport security checkpoints for screening carry-on bags. The other machines were bulk explosives detectors used to examine checked baggage. (See November 23, 1998; April 15, 1999.)

April 1, 1999: President Clinton signed Public Law 106-6, Interim Federal Aviation Administration Authorization Act.

April 2, 1999: FAA announced an agreement to join with Raytheon Systems, and Honeywell Inc. in the development of the Local Area Augmentation System. Raytheon and Honeywell would provide funding for the development, and FAA would provide the LAAS specifications and expertise on development and certification. (See January 29, 1999; August 13, 1999.)

April 6-9, 1999: Raytheon completed the first of three major system integration milestones for WAAS. Called stability build, the test showed the ability of the Wide Area Augmentation System (WAAS) to provide augmentation to the U.S. global positioning system (GPS) system. During the test, the system operated continuously for 72 hours

using WAAS ground and space components. In monitoring the test, Raytheon and FAA examined data from several locations, including Denver, Oklahoma City, and Dayton. The next system integration milestone, the Full Functionality Build, would be followed by the performance build, the final software build designed to show that the system was ready to enter formal system testing. (See January 5, 1999; August 24, 2000.)

April 12, 1999: FAA commissioned the National Airport Pavement Test Facility. (See April 1, 1997.)

April 15, 1999: FAA proposed a rule to strengthen security of checked baggage in the domestic aviation system. The proposal would require airlines to apply additional security to the checked baggage of some passengers. The rule directed the use of automated screening procedures, but provided options for airlines that choose to apply additional security to all passengers. The Computer Assisted Passenger Screening program (CAPS) would replace manual programs. CAPS used data from existing airline reservation systems to select baggage randomly or through preprogrammed criteria. The proposed rule would require CAPS for scheduled operations on any aircraft with 61 seats or more. (See March 31, 1999; November 2, 1999.)

April 20, 1999: FAA ordered operators of 45 McDonnell Douglas MD-11s registered in the U.S. to verify the installation of a wire harness support bracket and clamp in the lower center cargo compartment. A missing bracket and clamp could have caused a wire bundle to contact the insulation blanket and rub against the fuselage frame, producing a possible fire source. The Emergency Airworthiness Directive affected MD-11s equipped with a 72-inch cargo door. MD-11s with a 104-inch cargo door had a different wire bundle configuration. Operators of the affected aircraft were required to perform inspections, verify the installation of the bracket and clamp, and repair any damaged wires within five days. All findings had to be reported to the FAA within ten days after completion of the inspections. (See January 28, 1999; September 29, 1999.)

April 21, 1999: Following industry review of applicable safety guidelines, FAA issued a notice of proposed rulemaking for reusable launch vehicle and reentry licensing regulation and continued to work with industry to develop a regulatory program to address public safety issues. (See March 15, 1999; June 21, 1999.)

April 26, 1999: FAA ordered operators to inspect for and correct possible fatigue cracks in the aft pressure bulkheads located near the tails of certain Boeing 737 aircraft. Stemming from reports of fatigue cracks on these components in some Boeing 737-200 models, the airworthiness directive applied to Boeing 737-100 through -500 aircraft. In some cases, to comply with the AD, operators had to perform a low-frequency eddy current inspection from the rear of the pressure bulkhead. In other instances, visual inspections from the front of the bulkhead were deemed sufficient.

April 26, 1999: FAA, the National Air Traffic Controllers Association (NATCA), and Professional Airways Systems Specialists (PASS) jointly announced a revised implementation plan for the Standard Terminal Automation Replacement System

(STARS). The plan focused on developing the full STARS as soon as possible while simultaneously meeting short-term requirements for controller displays at a small number of FAA facilities. Under the revised plan, the first STARS would go into the terminal radar control (TRACON) facilities in Syracuse, New York, and El Paso, Texas. Initially, these sites would receive the early display configuration of STARS. In parallel, development would continue on the full STARS, which would include a new computer system. Once STARS had the capability to handle the needs of higher-level facilities, it would be deployed throughout the country. (See October 30, 1997; August 3, 1999.)

May 3, 1999: FAA, responding to pressure from federal safety officials, announced that it would require a major upgrade of aircraft flight data recorders and cockpit voice recorders to provide better information after accidents. In particular, the FAA would require new on-board sensors to determine movements of the Boeing 737 rudder, which had been listed as the probable cause of two crashes. Administrator Jane Garvey revealed these plans during a panel discussion at a National Transportation Safety Board symposium on flight recorders in which NTSB Chairman Jim Hall had criticized the FAA for not responding quickly enough to his agency's recommendations. (See August 18, 1997; January 13, 1999; January 8, 2000; September 14, 2000.)

May 6, 1999: FAA announced that it had reached an agreement with the National Air Traffic Controllers Association to tighten the rules for its liaison and familiarization training program. This program authorized agency employees to sit in the cockpit during commercial flights, listen to air traffic control communications, and observe pilot procedures. The program was intended to promote better understanding of the pressures facing flight crews.

May 8, 1999: The engineered materials arresting system installed at New York's John F. Kennedy International Airport successfully stopped a Saab 340 commuter aircraft that overran the runway. (See August 21, 1998; May 30, 2003.)

May 22, 1999: FAA ordered inspections on more than 1,000 Boeing 727 jetliners registered in the United States. A FAA spokesman said that the emergency airworthiness directive was sent after mechanics found severe wear on wires and holes in the tubing on two 727 cargo jets. Signs of electric sparking around the wires also were discovered. "This condition, if not corrected, could result in ignition of fuel vapors in a fuel tank, and a fuel tank explosion," read the FAA's telegram to 727 operators. *May 24*, FAA ordered operators of Boeing 727 aircraft to inspect, and if necessary replace, electrical wires running through fuel tanks. The agency previously announced it would follow its May 22 order for Boeing 727 fuel tank leak checks with a more comprehensive order for wiring inspections. The airworthiness directive required that operators remove and inspect wire bundles carried in conduits (tubes) through 727 fuel tanks. If chafing were found, the wires had to be replaced. The AD also required that all the wires be wrapped with an additional protective layer of Teflon. This had to be done immediately if the Teflon wrapping was available, otherwise at the next scheduled maintenance check. (See August 16, 2001.)

May 24, 1999: FAA released to industry a new computer tool designed to reduce the disk failure rate in turbine-powered jet engines. The computer tool complemented the actions announced earlier by FAA Administrator Jane Garvey that required enhanced inspections of engine fan disks to detect cracks that were potential precursors to uncontained disk failures. The disk design and life management tool, called "design assessment of reliability with inspection," allowed engine manufacturers to improve disk structural integrity. Engine manufacturers could run the code, along with their other design systems, on a computer workstation, to comply with the FAA's a planned advisory circular on disk life management.

May 28, 1999: FAA and Professional Airways Systems Specialists (PASS), representing approximately 7,600 employees, announced they had agreed to resume negotiations with the help of a mediator. (See January 11, 2000.)

June 3, 1999: A twin-engine McDonnell Douglas MD-80 carrying 139 passengers and six crew members, crashed at Little Rock National Airport as violent thunderstorms and winds swept through the region. Survivors said the plane swerved out of control almost immediately after making contact, slid off the end of the 7,200-foot runway at a high speed, and crashed into a steel tower. (See October 23, 2001.)

June 14, 1999: The media reported that some FAA lawyers planned to join a union. When Congress released FAA from many civil service rules, it had said that unionized workers could bargain with management over salaries. It also had given FAA the option of lowering salaries of unorganized workers via a core compensation plan. Air traffic controllers, who already were unionized, were the first FAA employees to bargain for salaries.

June 16, 1999: FAA proposed to revise and strengthen federal rules for maintenance performed at domestic and foreign repair stations. The proposed new regulation would ensure that certified repair stations were held responsible for all maintenance work that was outsourced to contractors. (See March 28, 2005.)

June 21, 1999: Effective this date, FAA amended its commercial space transportation licensing regulations. The changes provided applicants and licensees' greater specificity and clarity regarding the scope of a license, and codified and amended licensing requirements and criteria. (See April 21, 1999; November 9, 1999.)

July 10, 1999: FAA and an industry group conducted the first large-scale test of Automatic Dependent Surveillance — Broadcast (ADS-B), a technology designed to enhance safety by giving pilots and air traffic controllers more information about aircraft locations. Done in partnership with the Cargo Airline Association (CAA), the Wilmington, Ohio, tests evaluated how well ADS-B could help pilots be more aware of aircraft in their vicinity. Using an aircraft's global positioning system (GPS) sensor, ADS-B equipment would send very accurate position information, along with speed and identification data, to other similarly equipped planes and ADS-B ground receiving stations. During the test, participating flight crews monitored aircraft in their area using a

special cockpit display. Air traffic control facilities received combined radar and ADS-B target information for evaluation. Ground receiving stations in Wilmington and Louisville, Kentucky, provided coverage throughout the 500-square-mile test area. Approximately 25 planes participated. This ADS-B operational evaluation was the first in a series of tests planned for the next three years under the FAA's Safe Flight-21 program. (See October 26-28, 2000.)

July 13, 1999: Former FAA Administrator Donald Engen died in the crash of a glider fitted with a small motor. A distinguished U.S. Navy and test pilot who retired as a vice admiral, Engen was 75.

July 15, 1999: FAA announced a new streamlined administrative action process to deal with violations that did not warrant serious legal enforcement action or pose a serious threat to aviation safety. This new way to resolve minor violations officially commenced on August 30. Using the new process, an inspector would discuss the problem with the alleged violator, fill out a data entry form with all pertinent information, return to the office to check the person's history, enter the information in a database, and mail an automated warning notice to the individual. This person would still have an opportunity to provide additional information for the FAA's consideration. Previously, all administrative actions had involved a burdensome process that often entailed multiple letters of investigation and extensive files. (See December 21, 1998.)

July 16, 1999: John F. Kennedy, Jr., his wife Carolyn Bessette Kennedy, and her sister, Lauren Bessette, were killed when their small aircraft crashed into the Atlantic Ocean. Kennedy, a relatively inexperienced pilot, was flying the Piper Saratoga, a moderately complex plane that he bought the previous April. He took off without incident just after 8:30 p.m. from Essex County Airport in Fairfield, New Jersey. *July 6, 2000*, the National Transportation Safety Board released its final report on the crash and stated the probable cause of the accident was "The pilot's failure to maintain control of the airplane during a descent over water at night, which was a result of spatial disorientation. Factors in the accident were haze and the dark night."

August 3, 1999: The early display capability, or EDC, version of the Standard Terminal Automation Replacement System (STARS) entered its operational test and evaluation. The tests were scheduled to run through October 4. If STARS passed this series of tests, it would enter an initial operational capability phase at El Paso, Texas, in December 1999 and at Syracuse in January 2000. (See April 26, 1999; December 20, 1999.)

August 4, 1999: Due to provisions in legislation passed the previous year by the Congress, Monte Belger returned to his position as FAA associate administrator for air traffic services. The legislation, called the Vacancies Reform Act, was designed to limit the amount of time an executive in any federal agency might act in a position requiring Presidential appointment and confirmation by the Senate. The FAA Administrator had no plans to name another executive as acting deputy pending nomination by the White House of a candidate for the position. Monte Belger, however, still continued to perform significant management functions, because, under agency procedures, in the absence of a

confirmed candidate, the associate administrator for air traffic services assumed the deputy administrator's duties. The air traffic services organization continued to be managed by Steve Brown, as deputy associate administrator. (See February 1, 1997; November 8, 1999.)

August 5, 1999: An agreement by major U.S. airlines to assess the safety of their foreign partners represented a major step in a long-term trend toward exporting U.S. aviation safety standards around the globe. The assessments took place as part of a growing worldwide arrangement among airlines called "code sharing," in which U.S. airlines shared flight numbers with foreign airlines. (See December 5-7, 1999.)

August 11, 1999: FAA Administrator Jane Garvey ordered operators of 699 aircraft to replace insulation blankets covered with metalized Mylar within four years. FAA also strongly encouraged operators to accomplish the insulation replacement during the earliest practical maintenance check. The announcement followed eight months of extensive testing in support of the development of a new test standard for aircraft insulation. (See October 14, 1998; May 25, 2000.)

August 12, 1999: FAA agreed to take a series of steps to reduce air traffic control delays. In particular, FAA would strengthen the decision-making authority of its Command Center, allowing the Herndon, Virginia, facility to assert more authority over large portions of a network of air traffic control centers around the country.

August 13, 1999: FAA, UPS, and ATA conducted flight tests of the FAA prototype Local Area Augmentation System (LAAS) system at the FAA William J. Hughes Technical Center. Researchers studied the benefits of integrating a pseudolite into the existing LAAS prototype. A pseudolite is a ground component, installed at an airport that appears to an aircraft's navigation system to be the equivalent of a global positioning system (GPS) satellite. (See April 2, 1999; May 1, 2003.)

September 29, 1999: FAA banned installation of in-flight entertainment systems on all McDonnell Douglas MD-11 aircraft registered in the U.S. An agency review concluded that incompatibilities between the electrical power switching technologies of the entertainment systems and the design concept of the MD-11 airplane limited a flight crew's ability to respond to a smoke or fumes emergency. (See April 20, 1999.)

September 30, 1999: With the installation at the Honolulu Air Route Traffic Control Center, FAA completed installation of Host and Oceanic Computer System Replacement (HOCSR) systems at all 23 of its air traffic and oceanic centers. The availability of HOCSR completed the network that would provide the main computer and processor that produced and processed information on aircraft movements throughout domestic and oceanic airspace. The improved technology was more than four times faster and more reliable than its predecessor, while occupying only an eighth of the floor space of the systems it replaced. (See March 11, 1999.)

September 30, 1999: FAA announced it had chosen Lockheed Martin Air Traffic Management to continue development and deployment of the User Request Evaluation Tool (URET). Also called a conflict probe, the URET software gives controllers a strategic 20-minute look ahead to detect potential conflicts when considering pilots' requests for altitude and route changes. The system would be deployed and available to controllers in late 2001 and through 2002. (See April 16, 1998; December 2001.)

October 6, 1999: FAA selected the Societe Internationale Telecommunications Aeronautiques to provide standing data link communications services (the Future Air Navigation System, also known as FANS) to the Oakland, New York, and Alaska Air Route Traffic Control Centers. Previously, the FAA paid for data link communications services on a per message basis.

October 9, 1999: President Clinton signed the Department of Transportation and Related Agencies Appropriations Act of 2000. At the signing, however, he noted that he was "concerned about the funding level provided in the bill for FAA operations and capital programs. For example, the bill provides $144 million less than my request for FAA operations. This reduction will slow hiring for safety and security positions and postpone implementation of needed efficiency and management improvements. The bill also constrains funding for the modernization of the air traffic control system, including needed modernization and improvement of the Global Positioning System. These reductions may increase air travel delays and ill-position the FAA to meet the growing challenges of the future."

October 26, 1999: A Learjet, without a pilot in control, flew for almost four hours from Orlando, Florida, to a swampy grassland in South Dakota. The Learjet was shadowed by USAF and Air National Guard jet fighters, whose pilots reported that the aircraft's windows were frosted over, suggesting that it had lost pressurization. USAF pilots also reported that the Learjet meandered from as low as 22,000 feet to as high as 51,000 feet, but never strayed from a northwest heading. Pentagon officials said the military began its pursuit of the aircraft at 10:08 a.m., when two Air Force F-16 fighters from Tyndall Air Force Base in Florida on a routine training mission were asked by FAA to intercept it. The F-16s did not reach the Learjet, but an USAF F-15 fighter from Eglin Air Force Base in Florida got within sight of the aircraft and stayed with it from 11:09 a.m. to 11:44 a.m., when the military fighter was diverted to St. Louis for fuel. Fifteen minutes later, four Air National Guard F-16s and a KC-135 tanker from Tulsa were ordered to try to catch up with the Learjet, but got only within 100 miles. Two other Air National Guard F-16s from Fargo, North Dakota, intercepted the Learjet at 12:54 p.m., reporting that the aircraft's windows were fogged with ice and that no flight control movement could be seen. At 1:14 p.m., the F-16s reported that the Learjet was beginning to spiral toward the ground. Professional golfer Payne Stewart was killed in the crash.

October 28, 1999: Building on information gathered since the in-flight explosion of TWA Flight 800 three years before, FAA proposed a mandatory design review of fuel tanks on more than 90 percent of U.S. commercial aircraft fleet. One of the largest such orders ever contemplated, the proposal covered a total of about 6,000 aircraft – applying to all

commercial aircraft, whether driven by jet power or propellers, that carry 30 or more passengers. The impact of the FAA proposal, if adopted, was expected to be felt worldwide. (See March 3, 1999; February 22, 2000.)

October 31, 1999: Egypt Air Flight 900 crashed and killed all 217 onboard. The voice and data recorders from the aircraft revealed that, just before the tragedy, one of the pilots, apparently alone in the cockpit, turned off the autopilot and then uttered a short prayer. The cockpit voice recorder tape also contained sounds similar to a door opening and closing more than once, sources said. This evidence led investigators to question whether one of the pilots left the cockpit, which would have given the other pilot the opportunity to take some action that could have led to the crash. (See March 21, 2002.)

November 2, 1999: FAA announced it had awarded a contract worth up to $75 million to L-3 Communications to purchase up to 60 of its explosives detection systems. L-3 Communications was the second manufacturer to offer a system that met the FAA's rigorous certification standards. Under the contract, FAA could purchase up to 60 eXaminer 3DX 6000 explosives detection systems over three years. (See April 15, 1999; December 21, 1999.)

November 8, 1999: President Clinton announced his intention to nominate Monte Belger to be FAA deputy administrator. He submitted Belger's name to the Senate for confirmation on November 10. (See August 4, 2000; August 2, 2002.)

November 9, 1999: FAA announced that it had signed a memorandum of understanding with NASA concerning the future of space transportation research activities, especially the development of reusable launch vehicle technology. (See June 21, 1999; October 19, 2000; June 18, 2012.)

December 3, 1999: Runway 8/26 opened at Philadelphia International Airport.

December 5-7, 1999: Department of Transportation Secretary Rodney Slater hosted the Aviation in the 21st Century–Beyond Open Skies “ministerial” in the same hotel where, fifty-five years before, the 1944 Chicago Convention on International Civil Aviation produced recommendations for practices and procedures that had thereafter guided world aviation. This new ministerial, attended by more than 900 persons from ninety-three nations, explored challenges and opportunities in the aviation system of the 21st century. On the last day of the conference, Slater announced FAA would require airlines to conduct safety assessments of their foreign airline partners. U.S. agencies, would not, however, directly assess the safety of any foreign airline, even if U.S. passengers were flying that carrier on a code-share ticket. (See August 5, 1999.)

December 8, 1999: FAA issued an AD ordering inspection of backup generators on Boeing 777-200 and -300 airplanes and requiring their operators to replace, within 14 days, any found to have sheared shafts.

December 19, 1999: FAA informed U.S. carriers that reserve rest requirements for pilots must be fully implemented. The decision to no longer offer exceptions to the policy was welcomed by the Air Line Pilots Association, who said that U.S. carriers have known about the requirement since June 1998 and had no excuse for asking for further extensions. A spokesperson for the union also said that it would be unfair to airlines already implementing the reserve rest requirement, as well as the public, if non-conforming airlines were granted exceptions. The reserve rest rule stipulated that airlines must give pilots who are reserve duty at least nine hours rest before placing the on reserve or “on call” status.

December 20, 1999: FAA started controlling arriving and departing air traffic in El Paso, Texas, with the new Standard Terminal Automation Replacement System (STARS) air traffic controller workstations. This was the first component to become operational as part of a phased strategy to deploy this state-of-the-art, full-service system nationwide. Controllers and technicians at this West Texas TRACON successfully integrated the new workstations, featuring high-resolution color monitors, with the existing automation system. (See August 3, 1999; January 12, 2000.)

December 21, 1999: Security at the nation's airports was tightened in response to the arrest, the previous week, of a man allegedly trying to smuggle explosives into the United States. FAA announced it would make more use of devices that check airline passengers for trace amounts of explosives. Also, more bomb-sniffing dogs and uniformed police would begin patrolling airports, both inside and outside. The measures came amid concern about the possibility of acts of terrorism in the United States and abroad during the holidays. (See November 2, 1999; January 5, 2000.)

December 21, 1999: FAA made the Surface Movement Advisor (SMA) available to the Dallas-Ft. Worth, Chicago O'Hare, Newark, and Teterboro airports ten days ahead of schedule. SMA would provide aircraft arrival information to airline ramp towers and operation centers. The scope of this information included aircraft identification and position in terminal airspace, details that could be used to compute estimated time to touchdown in order to better manage gates and other ground operations. Staff at Northwest Airlines additionally estimated that the enhanced situational awareness they received through SMA allowed them to avoid three to five costly diversions per week at Detroit Metropolitan airport.

December 31, 1999: The U.S. air traffic control system successfully rolled over to January 1, 2000, with no disruptions to service.

2000

January 4, 2000: A Government Accountability Office (GAO) report issued this day revealed FAA had failed to conduct security checks on dozens of foreign nationals hired to fix Y2K problems in sensitive computer systems used for air traffic control. GAO said FAA had violated its own security policy by allowing foreign employees, who had not received background checks and were working for the agency’s contractors, to be

involved in repairing 15 of 153 critical computer systems. The House Science Committee had asked GAO to investigate how much FAA relied on foreign nationals for Y2K preparedness. FAA announced it was taking immediate steps to implement all of the GAO recommendations.

January 5, 2000: FAA proposed a rule that would require agency certification of companies hired by the airlines to perform security screening at airports. The rule would set standards for companies providing security screening, strengthen training and testing standards for screeners, and impose more stringent experience and training requirements on screening company managers and instructors. (See December 21, 1999; May 19, 2000.)

January 8, 2000: The National Transportation Safety Board recommended that all turbine-powered aircraft then exempt from flight recorder rules be required to be equipped with crash-protected video recorders. Under NTSB's recommendation, the requirement would first affect planes that carry passengers for hire and would take effect within five years of adoption of a technical standard order covering the devices by FAA. The NTSB recommendation followed adoption of its final report on the October 8, 1997, crash of a Scenic Airlines Cessna 208B in Montrose, Colorado. All nine persons aboard. The pilot and eight employees of the U.S. Department of Interior's Bureau of Reclamation, died in this tragedy. According to the report, while flying the aircraft at nearly its maximum gross weight and aft center of gravity, in nearly full to full instrument flight conditions, the pilot had apparently failed to maintain sufficient airspeed. Without access to a crash-protected video recorder, the board could not determine exactly why the pilot had allowed the aircraft to fly too slowly. The most likely factors contributing to the accident, however, were the pilot’s improper in-flight planning, his faulty decision-making, and his failure to use proper stall/spin recovery techniques. (See May 3, 1999; August 18, 2003.)

January 10, 2000: FAA and Wildlife Services of the U.S. Department of Agriculture announced publication of a manual to help combat wildlife hazards at airports. The manual, the first of its kind in the United States, was the culmination of years of research, airport site visits, and training conducted by the two agencies. The manual contained information designed to assist airport personnel in addressing airport wildlife hazard issues and enhancing aviation safety.

January 11, 2000: FAA announced that, after more than one year of negotiations and several months of mediation through the Federal Mediation and Conciliation Service, it had signed a tentative five-year labor agreement with the Professional Airways Systems Specialists. Union employees ratified the contract in early May. (See May 28, 1999.)

January 12, 2000: FAA achieved initial operating capability on its second EDC of the Standard Terminal Automation Replacement System (STARS) at the Syracuse, New York, TRACON. *January 28*, FAA Administrator Jane Garvey formally dedicated the new system at Syracuse. (See December 20, 1999; May 9, 2002.)

January 14, 2000: The White House unveiled a new FAA program to give airline pilots and mechanics a no-penalty way to report safety-related incidents and problems. The Aviation Safety Action Program (ASAP), patterned after a successful American Airlines program begun in 1996, encouraged pilots and mechanics to volunteer information that could help prevent accidents. In return, FAA and the airlines promised not to take action against pilots and mechanics in most cases. (See June 15, 2009.)

January 31, 2000: Alaska Air Flight 261, a Boeing MD-83, crashed into the ocean off Point Magu, California, killing all 88 on board. Before the plane suddenly dived 17,900 feet into the water, the crew had reported a stabilizer jammed in a position that pushed the aircraft downward. (See February 10, 2000.) *December 10, 2002*, the National Transportation Safety Board determined that the probable cause of this accident was the loss of airplane pitch control resulting from in-flight failure of the horizontal stabilizer trim system jackscrew assembly's acme nut thread. The component failed because of excessive wear resulting from Alaska Airlines' insufficient lubrication of the jackscrew assembly. Contributing to the accident were the carrier’s extended lubrication and end play check intervals, and FAA's approval of these intervals.

February 4, 2000: FAA awarded a multi-million-dollar contract to Computer Sciences Corp. to begin the software development and implementation of the Controller-Pilot Data Link Communications project (CPDLC). Designed to provide more efficient, automated communications between controller and pilot, and CPDLC would reduce operational errors resulting from misunderstood voice communications. FAA planned to deploy the prototype system at the Miami Air Route Traffic Control Center in June 2003 with national deployment beginning six months later at the other 19 air route traffic control centers. (See April 16, 1998; October 7, 2002.)

February 10, 2000: FAA ordered an immediate inspection of the entire fleet of single-aisle planes built by McDonnell Douglas after inspectors found two Alaska Airlines aircraft with damage in the tail section similar to that found in the wreckage of Alaska Airlines Flight 261. The airworthiness directive required a visual inspection of the jackscrew assembly of the horizontal stabilizer within three days and a more sophisticated examination within 30 days. Sources close to the investigation of the fatal crash reported that there was preliminary evidence of extreme wear on parts of the stabilizer control system in the tail of the MD-83 aircraft that plunged into the Pacific near Los Angeles on January 31. (See January 31, 2000; March 17, 2000.)

February 22, 2000: After the German airline Lufthansa found cracked copper lines and ordered Boeing 747s in its fleet grounded briefly for inspections, FAA announced plans to order an inspection of the engine fire suppression system on Boeing 747-400s registered in the United States. (See October 28, 1999; April 27, 2001.)

February 23, 2000: FAA Administrator Jane Garvey accepted a report from the Fractional Ownership Aviation Rulemaking Committee, chartered in October 1999, outlining their views on the best ways to improve oversight of aircraft owned by multiple entities. (See November 17, 2003.)

February 24, 2000: Effective this date, FAA added Pacific oceanic areas to the airspace where the principles of Reduced Vertical Separation Minima could be applied. Previously, RVSM was only used in North Atlantic minimum navigation performance specifications airspace. The introduction of RVSM procedures in Pacific oceanic airspace made more fuel- and time-efficient flight levels and tracks available to operators. (See April 9, 1997; December 10, 2001.)

February 2000: The Department of Transportation and the Department of Defense jointly released the 1999 Federal Radionavigation Plan, which included provisions for two additional global positioning system (GPS) signals for civil use and a revised schedule for making the transition to GPS. (See March 26, 2002.)

March 5, 2000: Southwest Airlines Flight 1455, a Boeing 737-300, overran the departure end of Runway 8 after landing at Burbank-Glendale-Pasadena Airport, Burbank, California. The airplane touched down at approximately 182 knots. About 20 seconds later, at approximately 32 knots, the airplane collided with a metal blast fence and an airport perimeter wall. The airplane came to rest on a city street near a gas station beyond the airport property. Of the 142 persons on board, two sustained serious injuries; 41 passengers and the captain sustained minor injuries; and 94 passengers, three flight attendants, and the first officer sustained no injuries. The airplane sustained extensive damage and some internal damage to the passenger cabin. *June 26, 2002,* the National Transportation Safety Board determined that the strongest probable cause of the accident was the flight crew's excessive airspeed and flight path angle during the approach and landing. NTSB also noted that the crew had failed to abort the approach when stabilized approach criteria were not met. Contributing to the accident was the air traffic controller's positioning of the airplane, which was too high, too fast, and too close to the runway threshold. As a result, no safe options existed for the flight crew other than a go-around maneuver. Despite all of these factors, however, NTSB concluded that, had the accident flight crew applied maximum manual brakes immediately upon touchdown, the airplane would likely have stopped before impacting the blast fence. (See March 14, 2000.)

March 6, 2000: FAA broke ground for a new regional air traffic control center on a 33-acre site in Vint Hill, Fauquier County, Virginia, that would replace the radar monitoring facilities at Baltimore-Washington International, Dulles International, Reagan Washington National, and Andrews Air Force Base. The new TRACON would guide aircraft within about a 75-mile radius of Washington, DC. (See January 7, 1999; December 14, 2002.)

March 10, 2000: President Clinton, along with Department of Transportation Secretary Rodney Slater, announced FAA and the aviation industry were launching a new effort to improve the flow of air traffic during severe weather. The Spring/Summer 2000 severe-weather plan slated to begin March 12 and to be fully phased in on April 1, would maximize the use of available air space, improve communications between FAA and the airline industry, and expand the use of new technology to help reduce weather-related

delays. At that time, the president also charged FAA to develop, in 45 days, a broader plan for reform of the air traffic control system.

March 13, 2000: FAA received a clean audit from the Department of Transportation Inspector General for fiscal year 1999, marking the first time FAA achieved approval of its financial statements since the audits began in fiscal year 1992. The report presented an unqualified or "clean" opinion on the full set of FAA financial statements.

March 14, 2000: FAA Administrator Jane Garvey announced new initiatives to enhance runway safety, including a series of workshops that would be held around the country to produce regional and local plans to reduce runway incursions. These workshops would be followed by a national summit. FAA also announced initiation of a program for pilots involved in such incidents to help determine the root causes of the events. (See March 5, 2000; June 14, 2000.)

March 17, 2000: The National Transportation Safety Board released its conclusions that the horizontal stabilizer jackscrew, which apparently played a key role in the January 31 crash of Alaska Airlines Flight 261, had no grease on the area that experienced the most friction during normal operation. In a brief statement, the NTSB did not comment on the meaning of the finding by its laboratory. Sources close to the investigation said the discovery was potentially significant, although more work had to be done to determine whether the area was dry before the crash that killed 88 people near Los Angeles or whether the grease was removed by the violent plunge into the Pacific. (See February 10, 2000.)

March 29, 2000: Effective this date, FAA required all airplanes with U.S. registry outfitted with six or more passenger seats also to be equipped with an FAA-approved terrain awareness and warning system (referred to as an enhanced ground proximity warning system). This announcement came in response to several accident investigations and studies that showed a need to increase the warning times and situational awareness of flight crews to decrease the risk of controlled flight into terrain accidents. (See December 15, 1997.)

March 30, 2000: Controllers at the Minneapolis Air Route Traffic Control Center started testing an advanced computer tool designed to help them direct more aircraft into airports during busy hours. The Traffic Management Advisor (TMA) would look at planes several hundred miles from selected airports as they approached from all directions. As the aircraft got closer, TMA would help controllers develop plans to handle the traffic effectively according to the spacing requirements for each airport. The new system was to be one half of FAA's Center-TRACON automation system. The other component – the passive final approach spacing tool – would be located at the agency’s terminal radar control (TRACON) facilities in Atlanta, Dallas/Fort Worth, Los Angeles, Minneapolis, and St. Louis. (See April 16, 1998.)

April 1, 2000: FAA ordered immediate inspections of 14 Boeing 717-200 airliners to check for potential electrical problems in their integrated standby instrument system

altitude displays. The AD required modification before further flight. The mandate followed reports of two instances of intermittent loss of altitude data on the captain and first officer's primary flight display and the altitude display. In both cases, the airspeed and attitude indication remained operational and the flights continued to their destinations without further incident.

April 5, 2000: President Clinton signed into law the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century, known more commonly as AIR-21. The bill contained new provisions to advance aviation safety and call for the appointment of a chief operating officer. The act also reauthorized the Airport Improvement Program (AIP) through FY 2003. AIR-21 instituted many changes to the AIP, including changed to funding levels, revised criteria for program eligibility, and expanded pilot programs. The authorized AIP funding level significantly increased in FY 2001 to a level of $3.2 billion, growing to $3.4 billion in FY 2003. This legislation also added two new PFC levels - $4 and $4.50, including new requirements. (See February 3, 1999; April 23, 2000; June 10, 2003.)

April 6, 2000: FAA awarded a contract worth up to $22 million to Airsys ATM, Inc., for the acquisition of up to 105 ILS configurations. The ILS, a primary landing system, provided vertical and lateral guidance to aircraft during the final approach and landing phases of flight.

April 10, 2000: FAA established a permanent mentor protégé program designed to broaden the agency's contractor base by encouraging prime contractors to mentor socially and economically disadvantaged small businesses. In April 1997, the agency had implemented a pilot program that successfully enhanced the capabilities of small businesses to work on high-tech FAA contracts and subcontracts. The permanent program would further invite FAA prime contractors and subcontractors to assist or partner with small socially and economically disadvantaged businesses, historically black colleges and universities, minority institutions, and women-owned small businesses.

April 10, 2000: FAA announced that the International Civil Aviation Organization had found that the agency met safety oversight standards for international aviation in a first-ever audit conducted June 1999.

April 23, 2000: Approximately 6,500 FAA employees transferred into a new market- and performance-based compensation system closely linked to the strategic goals of the agency. The new core compensation plan replaced the general schedule grade levels with twelve pay bands linked to market pay levels. An executive compensation system became effective on the same date for senior executives. (See April 5, 2000; December 7, 2000.)

May 1, 2000: FAA announced it had begun use of electronic air/ground communication services for aircraft operating over the Atlantic Ocean. The same system had been operating for aircraft flying over Pacific Ocean airspace for more than a year. FAA's New York Air Route Traffic Control Center had begun initial operations, in March, of the multi-sector oceanic data link system – technology that provided a means for air traffic

controllers to have two-way electronic communications with aircraft equipped with data link. This system eliminated the need for voice communication between data link-equipped aircraft and air traffic controllers, improving the reliability and timeliness of message delivery. In conjunction with aircraft equipped with the future air navigation system – an international standard for avionics that are compliant with oceanic data link) – the system provided a means to check automatically pending clearances for conflicts while allowing the flight crews to load flight clearances they had received into the aircraft's flight management system.

May 16, 2000: FAA announced it had recently completed the final installation and acceptance of innovative air surveillance radar technology that would enhance air safety through improved position information and weather detection. The air route surveillance radar (ARSR-4) replaced obsolete radar with long-range, three-dimensional radar providing aircraft position information to FAA, USAF, Navy, and Customs Service. The new technology could detect a one-square-meter object out to 250 nautical miles, a 50 nautical mile increase over previous long-range radar models. The ARSR-4 also provided weather data to both FAA and National Weather Service. The program consisted of 43 operational systems deployed around the periphery of the continental United States as well as in Guam, Hawaii, and Guantanamo Bay, Cuba. The 44th system was used for support at the FAA Academy at the Mike Monroney Aeronautical Center in Oklahoma City. The twelve-year FAA/Department of Defense (DoD) ARSR-4 program began with a contract award in 1988 to Northrop Grumman. FAA commissioned the first system April 1996 in Tamiami, Florida. Total program costs were $800 million, half of which DoD paid.

May 18, 2000: FAA ordered 120 Boeing 767 aircraft to undergo emergency inspections after airline mechanics found damaged bolts in the engine pylons of one of the planes. Under the directive, airlines had five to ten days to complete the inspections.

May 19, 2000: FAA announced grant awards to three companies totaling about $8.6 million to develop explosives detectors. The new systems would be used to scan checked baggage at smaller air carrier stations that did not need the high baggage-processing rate of current systems. The grants provided $7.5 million to InVision Technologies Inc., of Newark, California; $757,432 to L-3 Communications of New York City; and $313,309 to PerkinElmer Inc., of Wellesley, Massachusetts; for the delivery of prototypes within 15 months. The grant project was designed to expedite the development of low-cost certified explosives detection systems. (See January 5, 2000; July 19, 2000.)

May 24, 2000: FAA issued a notice of proposed rulemaking that would require air carrier operators have automated external defibrillators aboard large, passenger-carrying aircraft and to augment required emergency medical kits. It would affect those operations for which at least one flight attendant was required and, if adopted, would require instruction on the use of the equipment. (See April 12, 2001.)

May 25, 2000: FAA issued final rules ordering operators of 719 Boeing MD-80, MD-88, MD-90, DC-10, and MD-11 aircraft to replace insulation blankets covered with metalized

Mylar. The agency had proposed the rules in August 1999 to minimize the risk of fire spreading aboard these types of aircraft. The airworthiness directives required operators to determine whether their planes had metalized Mylar-covered insulation materials, if so to note where they were located, and to replace them with new insulation blankets within five years. Replacement materials had to meet FAA's new flame propagation standard, which was based on an American Society for Testing and Materials flammability standard. (See August 11, 1999; September 8, 2000.)

May 25, 2000: FAA told air traffic controllers nationwide to review emergency procedures after a US Airways flight with a dying passenger was delayed in making an emergency landing in Baltimore, Maryland. A US Airways spokesman said the airline followed all on-board procedures, including the use of a heart defibrillator, and that three passengers who were nurses volunteered to help. Sources close to an investigation of the incident said that the 50-year-old woman did not respond to the emergency treatment, and that the delayed landing probably was not a factor in her death.

May 30, 2000: FAA published in the *Federal Register* a final rule modifying Part 158 to incorporate changes mandated by the Wendell H. Ford Aviation Investment and Reform Act of the 21st Century, including adding $4.00 and $4.50 Passenger Facility Charge (PFC) levels.

May 31, 2000: FAA announced the start of operational use of a new tool designed to help reduce delays at major airports in the northeastern part of the U.S. Installation of the departure spacing program (DSP). Achieving this start-up was one of the first milestones in the spring 2000 initiative, announced in March by President Clinton and Department of Transportation Secretary Rodney Slater. A coordination and planning tool, DSP used pertinent air traffic information from airports equipped with the system, along with other information from filed flight plans, to space departing aircraft more evenly. This innovation allowed the best use of existing capacity, expediting the flow of air traffic while minimizing delays. The tool had been in use at LaGuardia, Kennedy, Newark, and Philadelphia airport towers and in TRACONS in the New York area since April 2000.

June 2, 2000: Department of Transportation issued a rule prohibiting smoking on all scheduled passenger flights by U.S. airlines and on scheduled passenger flights of foreign carriers into and out of the U.S.

June 5, 2000: FAA announced aircraft operators would be required to pay fees for air traffic control services provided to aircraft that operated in U.S. airspace, but did not take off or land in the United States. Unlike other aircraft operations, these overflights had not been paying for the FAA air traffic control services they received. The authority to charge fees to aircraft conducting U.S. overflights was contained in the Federal Aviation Reauthorization Act of 1996. The agency issued an interim final rule in 1997, but a U.S. Court of Appeals decision in January 1998 determined that FAA's calculation of fees was inconsistent with the statute. Under the new rule, fees would be based on the distance flown through airspace under U.S. control. Overflights would be charged at the rate of $37.43 per 100 nautical miles in the en route environment, and $20.16 per 100 nautical

miles in the oceanic environment. No charges would be assessed on military and civilian aircraft operated by the U.S. government or by a foreign government. In addition, users who incurred $250 or less in fees per month would not be charged for operations. (See May 19, 1997; August 1, 2000.)

June 9, 2000: FAA issued directives to the airports and air carriers that strengthened procedures for verifying the credentials of law enforcement officers who carried arms on board aircraft or into secure areas of airports.

June 14, 2000: The National Transportation Safety Board urged the installation of warning systems that would prevent runway incidents at all 382 airports handling regularly scheduled passenger flights. *June 26*, FAA announced it would buy a new ground surveillance system that would improve runway safety at 25 airports. The new airport surface detection equipment, called ASDE-X, would provide detailed coverage of runways and taxiways at an airport and also alert air traffic controllers in the tower to impending collisions. The new system provided similar data to the current ASDE-3 ground radar installed at 34 of the nation's busiest airports. Those airports would also have the Airport Movement Area Safety System (AMASS) in operation by late 2002. AMASS was a computer enhancement to the ASDE-3 radar that alerted controllers to an impending collision on or near the runway. ASDE-X offered the functions of ASDE-3 and AMASS at less-busy and complex airports and at lower cost. FAA planned to award a contract for production of ASDE-X in September. (See March 14, 2000; July 15, 2000; October 24, 2000.)

June 30, 2000: FAA proposed a rule to give the agency access to key safety data from every U.S. airline participating in the Flight Operational Quality Assurance (FOQA) program. FAA planned to use this information to identify aviation safety trends and target potential problems. Airlines collected data about everyday safety trends in their operations and would now be required to share the data with FAA. The agency would then use the data to identify industry-wide safety trends, allowing FAA and industry to target resources more effectively to correct potential safety problems. The information and insights provided by these programs could enhance line operational safety, training effectiveness, operational procedures, maintenance and engineering procedures, air traffic control procedures, and airport surface safety. Participation in FOQA was voluntary and programs had to be FAA-approved. The agency would not use FOQA data for enforcement purposes, except in egregious cases. (See June 25, 2001.)

July 14, 2000: Department of Transportation Secretary Rodney Slater and FAA Administrator Jane Garvey marked the completion of the effort to modernize the nation's air traffic control system by dedicating the 20th and final installation of new DSR hardware and supporting computers. The last system in the $1.05 billion FAA program to replace older computers and displays was dedicated at the Washington Air Route Traffic Control Center in Leesburg, Virginia. (See January 20, 1999.)

July 14, 2000: FAA announced an agreement among the airlines, airline pilot groups, and others in the aviation industry to continue land and hold short operations (LAHSO). As a

result, FAA said it would issue an order implementing changes to LAHSO. The order, which went into effect August 14, permitted expanded use of the procedure. LAHSO, an aviation procedure used since 1968, increased capacity at airports with intersecting runways by allowing aircraft to land and stop on long runways before an intersection with another runway. Stopping short allowed the air traffic controller to have another aircraft take off or land on the intersecting runway. LAHSO had been refined through years of operational experience and cooperation among FAA, airlines, pilots and controllers. (See February 19, 1999.)

July 15, 2000: FAA completed the first live flight demonstration of the Airport Movement Area Safety System (AMASS) at San Francisco International Airport. Two FAA aircraft – a Boeing 727 and Convair 580 – participated in the demonstration. AMASS gave controllers aural and visual alerts when aircraft on the airport surface were in danger of running into each other or other airport vehicles. AMASS, an enhancement to the basic airport surface detection radar called ASDE-3, was scheduled to be commissioned at 34 sites by the end of 2002. (See June 14, 2000; May 29, 2001.)

July 19, 2000: Department of Transportation Rodney Slater announced that FAA had awarded contracts to purchase additional certified explosives detection systems and trace explosives devices for the nation's airports, and would begin purchasing X-ray machines with new imaging software to improve screener performance. The Threat Image Projection (TIP) system projected digital images of hundreds of different guns, knives, and bombs onto the X-ray displays to test screeners' abilities to detect threat objects. TIP would project the images at random into real carry-on bags going through the X-ray or inside bag images created by TIP. When a screener hit the button to stop the suspect bag, TIP flashed a "congratulations" for detecting the threat and recorded the screener's performance. It also recorded missed threat images. (See May 19, 2000; July 27, 2000.)

July 27, 2000: For the first time, general aviation aircraft could obtain cockpit displays of digital weather graphics and text through a FAA-sponsored service called the flight information service data link. This service provided basic text weather information directly to general aviation pilots if the aircraft had the necessary avionics. Using a small display in the cockpit, flight crews could receive basic text messages, including aviation routine weather reports, special aviation reports, terminal area forecasts, significant meteorological information (SIGMET), convective SIGMETs, airman's meteorological information, pilot reports, and severe weather forecast alerts issued by FAA or the National Weather Service.

July 27, 2000: Armed with a gun, Aaron Amartei Commey tried to take hostages at John F. Kennedy International Airport on a National Airlines Boeing 757 headed for Las Vegas, Nevada. He demanded to be taken to Miami, Antarctica, or Argentina, and to speak to the Argentinean ambassador, Guillermo McGough. Negotiators from the FBI, New York's Port Authority, and the New York Police Department joined forces to persuade Commey to release the pilot and then the co- pilot. Passengers and crew had escaped from the plane when Commey was in the cockpit. Some of the 143 passengers aboard the flight to Las Vegas and Los Angeles exited by using an emergency chute that

flight attendants deployed. *July 29*, a federal magistrate charged Commey, who authorities said had been planning for months to take over a plane, with one count of air piracy and ordered him held for psychiatric evaluation. (See July 19, 2000; July 17, 2001.)

July 2000: FAA expanded the scope of its Accountability Board. In addition to dealing with allegations of sexual harassment, it would start to rule on allegations of harassment based on race, color, religion, gender, sexual orientation, national origin, age, or disability as well as other misconduct that might create a hostile work environment. (See July 1998.)

July 2000: FAA completed the Common ARTS (Automated Radar Terminal System) program with the commissioning of the Huntington, West Virginia, site. Common ARTS was now fully operational at all 133 ARTS IIE sites and five ARTS IIIE sites. Besides providing upgraded equipment, the other major benefit of the common ARTS program was that, regardless of location, it allowed all ARTS systems to share a common software baseline that could be adapted to the size and complexity of a facility. These innovations facilitated the standardization of procedures, training, and logistics support.

August 1, 2000: An interim final rule went into effect requiring aircraft operators to pay fees for air traffic control services provided to aircraft that operated in U.S. airspace, but did not take off or land in the United States. The Federal Aviation Reauthorization Act of 1996 provided FAA the authority to charge fees to aircraft conducting U.S. overflights. (See June 5, 2000; August 20, 2001.)

August 16, 2000: British Airways grounded its fleet of Concorde supersonic jetliners a month after an Air France Concorde crashed outside Paris, raising safety concerns about all of these planes. Air France suspended its Concorde flights immediately after this crash, the first in the Concorde's 24 years of commercial service, killed 113 people. British Airways, the only other airline that operated the jets, canceled flights for a day after the accident, but then resumed them, saying it had conducted thorough checks and was confident of the safety of its fleet of these aircraft. British Airways grounded its fleet again, however, after receiving formal word that French and British aviation regulators intended to revoke the certificates of airworthiness for all Concordes.

August 21, 2000: FAA issued an AD reducing the time required for previously ordered inspections of General Electric (GE) CF-6 engines. The high-pressure compressor in an aircraft engine compresses the incoming air and speeds it up before it enters the combustion chamber to mix with fuel. Cracking in this compressor could cause an uncontained engine failure. FAA had previously ordered operators of aircraft with CF-6 engines to begin inspections effective January 28, 2000. After analyzing an uncontained engine failure experienced by a Varig Brasil Airlines Boeing 767 on June 7, 2000, FAA decreased the time airlines had to complete their initial inspections.

August 24, 2000: After a successful 21-day stability test of the Wide Area Augmentation System signal in space, FAA declared the system immediately available for some

aviation and all non-aviation uses. WAAS improved the position signal to augment the Global Positioning System. The test demonstrated that the system could operate without interruption, providing a stable and reliable signal. The system delivered one to two meters horizontal accuracy and two to three meters vertical accuracy throughout the contiguous United States. Raytheon operated the system for FAA on a continuous basis, interrupting it only as necessary to upgrade or test the system. (April 6-9, 1999; April 10, 2001.)

August 25, 2000: FAA ordered an inspection of Boeing 767 aircraft to detect possible defects of the shear rivets on the elevator bellcrank assemblies attached to a hydraulic power control actuator at the rear of the plane. Failed shear rivets on two or more bellcrank assemblies could have produced abnormal elevator movements and affected control of the aircraft.

September 8, 2000: FAA issued a notice of proposed rulemaking that would incorporate a new flame propagation standard into regulations applicable to new transport category aircraft. Newly type certified airplanes and newly manufactured airplanes entering service three years after the effective date of the regulation would be required to comply. (See May 25, 2000; September 2, 2003.)

September 14, 2000: Following a year-long analysis, FAA announced a range of initiatives affecting the Boeing 737 rudder system. Near-term initiatives involved changes in operations and maintenance; however, long-term, FAA planned to initiate rulemaking to mandate the redesign of the entire system. (See May 3, 1999; October 26, 2000.)

September 19, 2000: Department of Transportation announced the swearing in of the first seven members of the FAA Management Advisory Council. This body, established by the FAA Reauthorization Act of 1996, would provide advice and counsel to the FAA Administrator on policy, spending, funding, and regulatory matters affecting the aviation industry. It would consist of 18 members. The president would appoint ten members, representing aviation interests. Five members, appointed by the Department of Transportation Secretary, would serve as a subcommittee, with emphasis on air traffic services. There also would be one designee each from the Department of Transportation, the Department of Defense, and an air traffic services union. The first members included: J. Randolph Babbitt, former president of Air Line Pilots Association; Robert W. Baker, vice-chairman of AMR Corp.; Edward M. Bolen, president of General Aviation Manufacturers Association; Geoffrey T. Crowley, president and CEO of Air Wisconsin; Robert A. Davis, former Boeing vice president; Deborah Branson, private attorney; and Kendall W. Wilson, private financial analyst. Initially, advisory council members would serve from one- to three-year terms. Subsequent appointments would be for three years. (See September 30, 1996.)

September 20, 2000: FAA issued a press release apologizing for an incident on July 17 when passengers were inconvenienced because of actions of a small number of controllers in the Chicago terminal radar control (TRACON) facility. FAA proposed

penalties ranging from letters of reprimand to 30-day suspensions for 15 air traffic controllers in the facility following an investigation that indicated there was an intentional slowing of traffic into the Chicago area. Additionally, FAA announced that it would change the management team at the TRACON in Elgin, Illinois, to foster a new workplace environment. The investigation, conducted by FAA with the assistance of the Department of Transportation Inspector General revealed no safety related incidents during the period when traffic was slowed.

September 22, 2000: FAA announced that April 1, 2001, would be the earliest start date for new $4.00 and $4.50 passenger facility charge (PFC) levels. The April 1 date, however, did not preclude airports from immediately submitting PFC applications. The new PFC levels were authorized under the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century. Previously, the highest PFC was $3.00.

October 5, 2000: Runway 7R/25L opened at Phoenix Sky Harbor International Airport.

October 16, 2000: A Cessna 335, carrying Missouri Governor Mel Carnahan, his aide, and piloted by his son, crashed ten miles northwest of Hillsboro, Missouri. All three persons on the aircraft died in the crash.

October 19, 2000: FAA issued a final rule that established a specific licensing and safety requirement for operating a commercial space launch site, whether the site was located on or off a federal launch range. The regulation outlined who must obtain a commercial launch site operator's license, set application requirements, and delineated licensee responsibilities. The rule followed and built upon prior rulemakings that governed operation of reusable launch vehicles (RLVs) and reentry and recovery of RLVs and reentry vehicles, as well as a companion rule covering the financial responsibility requirements, such as insurance, for licensed reentry activities. As a set, the three rules completed the process of establishing FAA's regulatory oversight authorized by congressional legislation passed in 1998 that gave FAA responsibility for licensing and regulating reentry of returning space vehicles and reentry sites. Previously, the Commercial Space Launch Act had provided authority only over the launching of commercial launch vehicles, not their return to Earth. The expanded authority was needed to bring the return under the safety regulatory regime of FAA. (See November 9, 1999; November 28, 2000.)

October 24, 2000: FAA awarded a contract to Sensis Corporation to develop the Airport Surface Detection Equipment, version X (ASDE-X), a traffic management system that provides seamless coverage of the airport surface, as well as aircraft identification, to air traffic controllers. ASDE-X uses a combination of surface movement radar, transponder multilateration, and sensors to display aircraft position labeled with flight call-signs on air traffic control tower displays. (See June 14, 2000; February 29, 2004.)

October 26, 2000: FAA issued an airworthiness directive, mandating use of a simplified procedure in the event that the rudder of a Boeing 737 was to jam or become significantly restricted in its movement. (See September 14, 2000; November 13, 2001.)

October 26-28, 2000: In conjunction with the Cargo Airline Association, FAA tested the ability of Automatic Dependent Surveillance — Broadcast (ADS-B) and global positioning system (GPS) technologies to improve flight safety while increasing the capacity at hub airports in Louisville, Kentucky. ADS-B, a situational awareness tool, shares the controller's level of information with the pilot so the controller and pilot could work together to manage traffic more efficiently. (See July 10, 1999; January 1, 2001.)

November 28, 2000: FAA proposed a new process for obtaining a license to operate an expendable space launch vehicle. Through this rulemaking, FAA proposed to update and streamline its license application process for launches from U.S. territory or by U.S. citizens elsewhere. The agency planned to codify the safety requirements for launch operators regarding license requirements, criteria, and responsibilities to protect the public from the hazards of such launches. These safety requirements would apply to all licensed launches of expendable launch vehicles, whether from a federal launch site or a non-federal launch site. (See October 19, 2000; February 9, 2001.)

December 7, 2000: President Clinton announced three actions to reduce airline delays and improve air travel for America: the release of an executive order directing FAA to create a performance-based organization to focus solely on efficient operation of the air traffic control system; the appointment of a group of business and labor leaders from outside of the aviation industry to serve as a board of directors for this new organization; and a review of impediments to congestion pricing at airports. The president also called on Congress to reform the way air traffic control services were financed. (See April 23, 2000; June 10, 2003.)

December 12, 2000: FAA announced that a team of experts would conduct a one-year study of the safety processes used in certifying large transport airplanes, as well as FAA's support of continued airplane safety. The commercial airplane certification process study would include all of the safety processes used to design, build, and certify airplanes, as well as those involved in maintaining safety throughout operational service. Beginning in January 2001, the team would assess current safety processes and practices, and identify areas for improvement. Led by FAA, the team consisted of technical experts from the agency, NTSB, NASA, Department of Defense, foreign civil aviation authorities, industry, and academia.

2001

January 1, 2001: As part of FAA-industry Capstone partnership, FAA began the first use of ADS-B technology to track and service traffic near Bethel, Alaska – an area that had no radar coverage. The new system used ground-based transceivers to pick up transmissions from aircraft equipped with ADS-B. The information was then transmitted via phone line and satellite to the Anchorage Air Route Traffic Control Center, where it was displayed electronically to controllers. (See October 26-28, 2000; April 1, 2002.)

January 17, 2001: FAA and the National Air Traffic Controllers Association (NATCA) signed an understanding covering operational errors and operational deviations (OE/D). Under this agreement, failures to maintain 80 percent separation minima would be recorded as technical violations and maintained in the employee's training folder. FAA and NATCA would, however, immediately cancel the revocation or suspension of control tower operator licenses and facility ratings in addressing performance deficiencies. After twelve months, any information which could lead to the identification of an employee – whether causal or contributory to a technical violation – would be discarded. No controller would be decertified or forced to complete remedial training for a technical violation, and all controllers would have to attend refresher training annually. The agreement, which would be reviewed at six-month intervals, also called for quarterly meetings at the national level to address quality assurance. In addition, FAA and NATCA agreed to work together, no later than April 30, to develop and implement a classification system of OE/Ds based upon risk assessment.

January 20, 2001: George W. Bush became the forty-third President of the United States.

January 25, 2001: Former Member of Congress Norman Y. Mineta (D-CA) took the oath of office as the nation’s fourteenth Secretary of Transportation. The lone Democrat in George W. Bush’s cabinet, Mineta, age sixty-nine, had been Secretary of Commerce in the outgoing Clinton Administration, and was the first Asian Pacific American to hold this Cabinet-rank post. (See July 7, 2006.)

January 2001: FAA Administrator Jane Garvey established the terminal business service. The new organization consolidated funding, personnel, planning, and processes in a single organization to provide integrated terminal air traffic control capabilities. (See June 5, 1998; November 18, 2003.)

February 9, 2001: Effective this date, FAA amended the procedures for assessment and adjudication of civil penalties in space transportation. Previous regulations provided little guidance for the FAA in the prosecution of civil penalties. The new rules provided more detail on the procedures FAA must use to assess civil penalties and on the respondents' rights to adjudication. The rules also provided more detailed procedures to be used in the adjudication. (See November 28, 2000; April 3, 2002.)

March 19, 2001: FAA announced that U.S. airlines had complied with the deadline to retrofit commercial airplanes with both fire detection and suppression systems. Most wide-body passenger airplanes already had fire detection and suppression systems in inaccessible cargo compartments. FAA's February 1998, final rule required that the remainder of the passenger fleet be retrofitted within three years. In addition, approximately 300 all-cargo airplanes were required to have detection systems and means to shut off airflow to the cargo compartment. (See February 12, 1998.)

April 1, 2001: Thirty-one airports were the first to be permitted to begin collecting Passenger Facility Charges (PFC) at a $4.50 level. Since that date, an additional 259 airports have collected at a $4.50 PFC level.

April 10, 2001: FAA announced its agreement with recommendations in the Wide Area Augmentation System (WAAS) Independent Review Board (IRB) report issued earlier in the month. Chartered by the FAA, the IRB said its technical review showed that WAAS would actually work better than the FAA had previously estimated and, when fielded, would likely provide significant additional aviation safety. The board, which met from August to December of 2000, recommended that FAA remain fully committed to the evolution of WAAS, and concluded that national WAAS capability could be achieved with the FAA's renewed leadership, action, and commitment. It further stated that WAAS had enormous benefits for all global positioning system (GPS) users. (See August 24, 2000; July 11, 2003.)

April 12, 2001: FAA issued a rule, effective May 12, 2004, requiring air carrier operators to carry automated external defibrillators on large, passenger-carrying aircraft and augment currently required emergency medical kits. The new rule affected those air carrier operations for which at least one flight attendant was required and provided the option of treating serious medical events during flight time. (See May 24, 2000.)

April 25, 2001: FAA dedicated the first version of its Weather Systems Processor (WSP) at a ceremony held at Albuquerque International Sunport, a facility that had been closely tied to development of the system. The WSP was designed to provide information to controllers and pilots about potentially hazardous microburst and wind shear weather events. The system improved the management of air traffic in air space near the airport by forecasting gust front-induced wind shifts, detecting precipitation, and tracking storms. The new processor was deployed at airports that did not qualify for the more sophisticated Terminal Doppler Weather Radar (TDWR) or as interim measures at airports where TDWR was scheduled for deployment later. WSP went on line at four other sites at the same time as the Albuquerque dedication: Austin, Texas; Norfolk, Virginia; the FAA Academy (training); and the Technical Center (testing and support). (See September 24, 1998.)

April 27, 2001: FAA prohibited U.S. operators of Boeing 737 aircraft from running center wing tank fuel pumps unless the quantity of fuel exceeded a specified minimum level. The Airworthiness Directive was one of many FAA initiatives to enhance fuel tank safety. (See February 22, 2000; May 7, 2001.)

May 3, 2001: FAA began providing a new service that used wireless devices to inform the public of aviation delays. Travelers with access to with pagers, cell phones, or personal digital assistants (PDA), could subscribe and obtain real-time airport status information via e-mail.

May 7, 2001: FAA issued a rule that required airplane manufacturers and operators to change how airplane fuel tanks were designed, maintained and operated. The rule included a special federal aviation regulation (SFAR) to minimize the potential for failures that could cause ignition sources in fuel tanks on new and existing airplanes. It also included a regulation that, for the first time, mandated airplane design changes to

minimize the flammability of fuel tanks on new airplanes. Manufacturers had 18 months from June 6, the effective date of the rule, to conduct the safety reviews and develop required maintenance and inspection programs. Operators had 36 months from June 6 to incorporate a FAA-approved maintenance and inspection program into their operating procedures. (See April 27, 2001; June 6, 2001.)

May 23, 2001: FAA ordered operators of DC-9/MD-88 series and MD-90-30 series aircraft to inspect the wiring of small static port heaters for chafing, loose connections, and evidence of arcing, and to make necessary repairs. These heaters keep ice from forming on devices that measure air pressure. Operators had to determine if the surrounding insulation were covered with metalized Mylar (polyethyleneteraphthalate). If so, the Mylar had to be removed and/or replaced with Tedlar-covered insulation, or other appropriate action had to be taken. The airworthiness directive came in response to an incident that occurred on September 17, 1999, in which a Delta Air Lines MD-88 experienced a fire in the forward cargo compartment shortly after takeoff from Northern Kentucky International Airport in Covington, Kentucky.

May 24, 2001: FAA provided Congress a report on ways to expedite environmental reviews of runway projects, including establishing special teams of experts, reducing paperwork, and improving coordination between federal and local officials. The agency proposed strengthening environmental impact statement (EIS) teams by adding more FAA members, asking airport proprietors to contribute members, and putting more consultants on the teams. FAA also suggested increasing FAA environmental specialist and environmental attorney resources. FAA also planned to develop a reimbursable agreement for airports interested in paying for extra staff for expedited EIS reviews.

May 24, 2001: FAA announced it had selected a group headed by Lockheed Martin to undertake the Advanced Technologies and Oceanic Procedures (ATOP) project. Once installed, the new ATOP technology would give controllers the ability to reduce separation between aircraft on oceanic routes, and would give pilots greater flexibility to choose their own routes. (See June 30, 2004.)

May 29, 2001: FAA announced it would begin using an alert warning system at the country's 34 busiest airports to help prevent runway accidents. Already in use at San Francisco and Detroit, the Airport Movement Area Safety System (AMASS) provided air traffic controllers with visual and aural alerts of potential runway accidents caused by runway incursions. AMASS was an enhancement to the ASDE-3 (airport surface detection equipment) radar that processed surveillance data from the ASDE-3 and the terminal automation system. It then determined conflicts based on the position, velocity, and acceleration of airborne arrival aircraft with ground-based aircraft and vehicles. (See July 15, 2000; August 14, 2001.)

June 6, 2001: FAA required design approval holders of certain turbine-powered transport category airplanes, and of any subsequent modifications to those airplanes, to substantiate that the design of the fuel tank system precluded the existence of ignition sources within the airplane fuel tanks. The new rule also required the development and implementation

of maintenance and inspection instructions to assure fuel tank safety. For new type designs, the manufacturer had to identify safety-critical maintenance actions and incorporate a means either to minimize development of flammable vapors in fuel tanks or to prevent catastrophic damage if ignition did occur. These actions were based on accident investigations and adverse service experience, both of which had shown that unforeseen failure modes and lack of specific maintenance procedures on certain airplane fuel tank systems might result in degradation of design safety features intended to preclude ignition of vapors within the fuel tank. (See May 7, 2001; November 23, 2002.)

June 7, 2001: FAA unveiled a plan that addressed the growing gap between demand and capacity in the air transportation system. The plan integrated and aligned agency activities with those of the aviation industry and users of the system. The Operational Evolution Plan (OEP) focused on maintaining safety, increasing capacity, and managing delays. The plan identified specific tasks to be accomplished in the near-term (2001 and 2002), mid-term (2002 to 2004), and long-term (2005 to 2010). FAA and industry considered the OEP an evolving document that would be modified, particularly to incorporate new technologies as they emerged. (See June 2007.)

June 11, 2001: FAA awarded a $125 million dollar contract to Lockheed Martin Corp., to develop and field the En Route Communications Gateway (ECG). This new gateway for processing radar data would reduce system outages and thereby both increase safety margins and reduce maintenance requirements. ECG would replace the Peripheral Adapter Module Replacement Item (PAMRI) program. The system would be installed at twenty-one air route traffic control centers, the FAA Academy in Oklahoma City, and the William J. Hughes Technical Center in Atlantic City, New Jersey. The Seattle Air Route Traffic Control Center was the first site scheduled for installation of the new system. FAA expected the system to become operational in the summer of 2003. The last site would be fielded in mid-2005. (See December 7, 2005.)

June 25, 2001: FAA issued a final rule to protect from disclosure voluntarily provided information that aids the agency in improving safety and security. The rule particularly encouraged data sharing programs, such as Flight Operational Quality Assurance, which used state-of-the-art flight data recorder technology to collect and analyze data on routine flights. FAA had been using data collected in this fashion to identify industry-wide safety trends and to target more effectively resources and correct potential safety problems. The rule took effect on July 25. (See June 30, 2000; October 30, 2001.)

June 30, 2001: Mayor Richard Daley announced his proposal for reducing delays and congestion at O’Hare International Airport. Highlights of the proposal included the addition of one new runway and the relocation of three of the current seven runways. According to the city’s estimates, making these changes would reduce delays related to poor weather by 95 percent and overall delays by 79 percent.

July 11, 2001: In a report to Congress, FAA's new Management Advisory Council (MAC) concluded that the agency's rulemaking process was inefficient, lacked credibility, and unless fixed, would erode the safety, security, and efficiency of the

aviation system. The MAC, however, was only one of a number of groups that had recently faulted FAA's rulemaking process. GAO, the Aeronautical Repair Station Association, and organized labor echoed the MAC's findings. The MAC found that FAA took an average of five years to complete rules, and, at its current pace, would not be able to finish all of the rules currently being developed for 15 years. It also criticized FAA's cost/benefit analyses, inadequate staffing and management accountability within FAA, and inefficiencies in the Aviation Rulemaking Advisory Committee process. (See January 13, 2014.)

July 17, 2001: FAA released final rules on airport and aircraft security, as recommended by the White House Commission on Aviation Safety and Security following the 1996 crash of TWA 800. (See July 27, 2000; September 11, 2001.)

July 31, 2001: FAA awarded a contract to ITT Industries Aerospace/Communications Division, of Ft. Wayne, Indiana, to provide the agency with multi-mode VHF digital air-to-ground radios. The contract was for an initial $20.5 million and would be worth as much as $580 million if all options were exercised. ITT Industries partnered with Park Air Systems, Federal Data Corp., and Operational Technologies Services, Inc., to provide the equipment. This first building block of the Next Generation Air/Ground Communications (NEXCOM) system would, in phases, replace air traffic controllers' aging analog radios with digital radios. When completed, the entirely digital system would enhance the FAA's ability to meet expanding air traffic control communication demands. (See February 22, 2002.)

August 14, 2001: Representative John Mica (R-FL), chairman of the House aviation subcommittee, criticized FAA for delaying deployment of the airport movement area safety system (AMASS). Mica said the program was six years behind schedule. (See May 29, 2001.)

August 16, 2001: FAA unveiled a new initiative designed to enhance the continued safety of aircraft wiring systems from their design and installation through their retirement. FAA based its Enhanced Airworthiness Program for Airplane Systems (EAPAS) on results from an intensive data-gathering effort on aircraft wiring systems done in cooperation with industry. EAPAS combined a variety of near- and longer-term actions into a plan to increase awareness of wiring system degradation, implement improved procedures for wiring maintenance and design, and spread that information throughout the aviation community. FAA's overall aging transport non-structural systems program, an effort begun in October 1998, was an expansion of the agency's aging aircraft program. (See October 1, 1998; May 22, 1999; October 6, 2005.)

August 20, 2001: A final FAA rule, effective this date, lowered the overflight fees the agency charged carriers for air traffic and related services incurred by certain aircraft that transit U.S.-controlled airspace but neither take off from, nor land in, the United States. The new rule reduced the fees that had been established by an interim final rule that had gone into effect on August 1, 2000, and allowed FAA to continue to charge fees as required by law. FAA rulemaking efforts to impose statutorily required fees had been

repeatedly challenged in court. The most recent challenge had stemmed from an opinion of the U.S. Court of Appeals for the District of Columbia Circuit, issued on July 13, 2001, which stated: "Because FAA has failed to articulate the basis for its conclusions that ‘the unit costs of providing [air traffic control] services to overflights within each environment [are] identical to the unit costs of providing [air traffic control] services to all air traffic within each environment,’ we vacate the 2000 Rule and remand to the FAA for further proceedings consistent with this opinion." (See August 1, 2000; June 21, 2002.)

September 11, 2001: Nineteen radical Islamic extremists with the group al Qaeda penetrated security at three major airports, seized four U.S. domestic airliners, and turned them into missiles that destroyed the World Trade Center in New York City, and damaged the Pentagon in Arlington, Virginia, killing thousands. Passengers on one of the planes fought the hijackers causing the plane to crash in a Pennsylvania field, killing all on board. For the first time in history, FAA put a ground stop on all U.S. air traffic. Related details follow:

Eastern Standard Time

- 7:59 a.m.: American Airlines Flight 11, a Boeing 767 with 92 people on board, takes off from Boston Logan airport for Los Angeles.
- 8:14 a.m.: United Air Lines Flight 175, a Boeing 767 with 65 people on board, takes off from Boston Logan airport for Los Angeles.
- 8:20 a.m.: American Airlines Flight 77, a Boeing 757 with 64 people on board, takes off from Washington Dulles airport for Los Angeles.
- 8:38 a.m.: FAA notifies the North American Aerospace Defense Command’s (NORAD) Northeast Air Defense Sector about the suspected hijacking of American Flight 11.
- 8:42 a.m.: United Air Lines Flight 93, a Boeing 757 with 44 people on board, takes off from Newark airport for San Francisco.
- 8:46 a.m.: American Flight 11 crashes into the north tower of the World Trade Center.
- 9:03 a.m. (approx.): United Flight 175 crashes into the south tower of the World Trade Center.
- 9:04 a.m.: FAA's Boston Air Route Traffic Control Center stops all departures from airports in its jurisdiction (New England and eastern New York State).
- 9:06 a.m.: FAA bans takeoffs of all flights bound to or through the airspace of New York Center from airports in that air route traffic control center and the three adjacent air route traffic control centers – Boston, Cleveland and Washington. This is referred to as a first tier ground stop and covers the Northeast from North Carolina north and as far west as eastern Michigan.
- 9:08 a.m.: FAA bans all takeoffs nationwide for flights going to or through New York Center airspace.
- 9:15 a.m.: FAA (New York Center) notifies NORAD’s Northeast Air Defense Sector that United Airlines 175 was the second aircraft that crashed into the World Trade Center.

- 9:25 a.m.: FAA bans takeoffs of all civilian aircraft regardless of destination – a national ground stop.
- 9:37 a.m.: American Flight 77 crashes into the Pentagon.
- 9:45 a.m.: In the first unplanned shutdown of U. S. airspace, FAA orders all aircraft to land at the nearest airport as soon as practical. At this time, there were more than 4,500 aircraft in the air on instrument flight rules (IFR) flight plans.
- 10:03 a.m.: United Flight 93 crashes in Stony Creek Township, Pennsylvania.
- 10:39 a.m.: Reaffirming the earlier order, FAA issues a notice to airmen (NOTAM) that halts takeoffs and landings at all airports.
- 12:15 p.m.: The airspace over the 48 contiguous states is clear of all commercial and private flights.
- 2:30 p.m.: FAA announces there will be no U.S. air traffic until noon Eastern Standard Time Wednesday at the earliest. (See July 17, 2001; September 12, 2001.)

September 12, 2001: Department of Transportation Secretary Norman Mineta announced FAA would allow a limited reopening of the nation's commercial airspace system to allow flights diverted the day before to continue to their original destinations. The Secretary announced FAA was temporarily extending the ground stop order imposed the previous day, while it initiated additional security measures. Mineta said FAA would permit flights only in special limited circumstances. Flights diverted as a result of yesterday's ground stop would be allowed to continue to their original destination under vastly tightened security guidelines. Only passengers on the original flights would be allowed to re-board, and only after airports and airlines had implemented strict screening measures. Mineta said a variety of stepped-up security measures would be instituted at the airports once they re-opened. Those measures included:

- A thorough search and security check of all airplanes and airports before passengers were allowed to enter and board aircraft.
- Discontinuance of curbside check-in at the airport.
- Discontinuance of off-airport check-in.
- Only ticketed passengers would be allowed to proceed past airport screeners to catch their flights.
- Vehicles near airport terminals would be monitored more closely. (See September 11, 2001; September 14, 2001.)

September 14, 2001: Department of Transportation Secretary Norman Mineta approved restoration of the next phase of national air service, allowing certain general aviation flights back into the air effective at 4:00 p.m. General aviation was allowed to resume flights operating under Instrument Flight Rules, or IFR. Temporarily, however, general aviation flights would not be allowed to fly within 25 nautical miles of New York City and Washington, DC. Those restrictions would be kept in place until further notice as officials continued to assess the recovery situation in those cities over the near term. *September 19,* FAA lifted most restrictions of general aviation (Part 91) visual flight rules operations, or VFR, flights. VFR flights were now permitted for U.S. registered aircraft outside of enhanced Class B airspace, or airspace within a 30-mile radius of 30 major U.S. airports. FAA kept restrictions on the following flying activities (except in Hawaii):

civil aircraft VFR flight training operations; VFR operations for banner towing; news reporting; traffic watch; airship/blimps; and Part 91 sightseeing. AA also restricted flying of any kind within 3000 feet altitude and three nautical miles of major sporting events or large open-air gatherings of people, such as football and baseball stadiums, race tracks, and concerts. (See September 12, 2001; September 23, 2001.)

September 23, 2001: As a result of national security concerns, FAA, in conjunction with other federal agencies, issued a notice to airmen (NOTAM) banning Part 137 (agricultural/crop-duster flights) from operating. In addition, no aircraft capable of or equipped for agriculture operations could operate during the ban. (See September 14, 2001; September 27, 2001.)

September 27, 2001: In a speech at Chicago's O'Hare airport, President Bush announced three measures to enhance aviation safety and security. First, he would continue to expand the air marshal program and seek Congressional approval to make this expansion permanent. Second, he would ensure that, effective October 1, a fund of $500 million would be established to finance aircraft modifications to delay or deny access to the cockpit. Thirdly, he would work with Congress to put the Federal Government in charge of airport security and screening services. The president said that fully implementing the extensive security proposal might take four to six months. Meantime, to ensure that every airport has a strong security presence, he asked the governors of all 50 states to call up the National Guard – at the Federal Government's expense – to augment existing security staff at every commercial airport nationwide. FAA would provide the necessary training for the National Guard personnel. (See September 23, 2001; September 27, 2001.)

September 27, 2001: FAA announced it was launching a nationwide search for personnel to join the air marshal program. FAA was training agents from other federal agencies, including the Customs Service, the Secret Service, the Immigration and Naturalization Service, and the Bureau of Alcohol, Tobacco and Firearms. Already-experienced law enforcement officials were being schooled on handling warfare in a confined space aboard a jet. (See September 23, 2001; September 28, 2001.)

September 28, 2001: FAA alerted civilian pilots of their responsibility to avoid restricted airspace and the procedures to follow if intercepted, in light of a Department of Defense announcement that pilots near or in restricted or prohibited airspace faced a forced landing, or as a last resort, use of deadly force by military aircraft. New security decisions required that additional airspace be barred to civilian aircraft. FAA anticipated announcing new restricted and prohibited areas throughout the United States. This additional airspace would be over areas that require protection for national security reasons. New and current restricted and prohibited areas would be revised periodically. (See September 27, 2001; October 4, 2001.)

September 28, 2001: FAA announced it was seeking industry input on its new En Route Automation Modernization (ERAM) program, which would replace the existing en route air traffic control automation system and selected en route infrastructure. FAA planned to pursue the award of a single ERAM System contract. Services to be provided under the

contract included system engineering, system integration, system requirements analysis, system design/development, software design/development, system testing, infrastructure upgrades/enhancements, hardware and software replacements, system deployment, transition planning and support, training, maintenance, logistics support and life cycle support. FAA planned to incorporate any industry comments it deemed appropriate in the development of the final ERAM screening information request (SIR) #1 contract bid package planned for release in mid-October 2001. (See March 29, 2002.)

October 4, 2001: Reagan National Airport reopened for business, but under very tight security. Passengers had to undergo intense security screening and were limited to one carry-on bag and one personal item (a purse or briefcase). The first phase of the reopening included commercial flights by six airlines to the airports in Atlanta, Boston, Chicago O'Hare, Dallas/Ft. Worth, Minneapolis, Pittsburgh, New York (LaGuardia), and Newark. The six carriers were United, American, Delta, US Airways, Northwest, and Continental. (See September 28, 2001; October 13, 2001.)

October 13, 2001: Joint teams comprised of officials from FAA and Department of Transportation Inspector General began auditing background checks of Argenbright Security, Inc., employees at 13 U.S. airports. Recent FAA audits of Argenbright found background check violations at these airports. The action followed a petition filed by Assistant U.S. Attorney John Pease on Thursday, October 11, with the U.S. District Court in Philadelphia that ordered Argenbright officials to answer charges that they continued to violate a probation agreement regarding the hiring of screeners without first performing appropriate background checks or providing training. In the following weeks, separate FAA teams began auditing background checks of all U.S. airport security screeners, starting with those employed at the nation's 20 largest airports. The initial 13 airports were: Boston Logan International, Port Columbus International (Columbus, Ohio), Eastern Iowa (Cedar Rapids, Iowa), Dallas/Fort Worth International, Detroit Metro Wayne County, Las Vegas McCarran International, Los Angeles International, Nashville International, New York LaGuardia, Phoenix Sky Harbor International, Seattle-Tacoma International, Trenton-Mercer and Washington Dulles International. Future background checks would be audited to make sure screeners were properly hired according to FAA standards. (See October 4, 2001; October 18, 2001.)

October 18, 2001: Department of Transportation Secretary Norman Mineta announced that beginning the following Friday, October 26, flights at Reagan National Airport would be expanded to include 18 more cities, bringing to 26 the number of cities served by the airport after the president authorized its reopening. (See October 13, 2001; November 19, 2001.)

October 23, 2001: The National Transportation Safety Board issued its findings on the crash of an American Airlines MD-82 during landing at Little Rock airport in 1999. The Board determined the probable cause of the accident was the flight crew's failure to discontinue the approach when severe thunderstorms and their associated hazards to flight operations had moved into the airport area, and the flight crew's failure to ensure that the spoilers had extended after touchdown. Contributing to the accident was the

flight crew's impaired performance resulting from fatigue and the situational stress associated with the intent to land under the circumstances, continuation of the approach to a landing when the airline company's maximum crosswind component was exceeded, and use of reverse thrust greater than 1.3 engine pressure ratio after landing. The accident occurred on June 1, 1999, as the flight was arriving from Dallas/Fort Worth with 139 passengers and six crewmembers on board. The aircraft overran the runway, passed through a chain link fence, went down an embankment and collided with a structure supporting the runway lighting system. The captain and 10 passengers were killed; over 100 others were injured. As a result of the investigation, the Board made 22 new recommendations to FAA and two to the National Weather Service. (See June 3, 1999.)

October 30, 2001: FAA issued a rule that protected the data collected under airline FOQA programs from FAA enforcement action, except in criminal or deliberate cases. A FAA rule issued on June 25 protected voluntarily provided information from disclosure to encourage data-sharing programs such as Flight Operational Quality Assurance (FOQA). The rule responded to a mandate from Congress to protect information that aided in improving safety and security. It also responded to recommendations made by the 1997 National Civil Aviation Review Commission, chaired by Norman Mineta. November 30, effective this date, FAA codified enforcement protection for FOQA programs. The agency would not use an operator's FOQA data, or even aggregate FOQA data, in any enforcement action against the operator or its employees when the information was obtained from an FOQA program approved by the Administrator. Criminal or deliberate acts would not be protected by this ruling. The rule required air carriers participating in approved FOQA programs to submit aggregated FOQA data to the FAA for use in monitoring safety trends. (See June 25, 2001.)

November 12, 2001: American Airlines Flight 587 exploded over Queens, New York shortly taking off from John F. Kennedy International Airport. All 260 people aboard the plane and five people on the ground were killed. Some witnesses reported that a burning engine fell from the sky before the aircraft did, and others described a midair explosion. The wreckage fell in three places. One cylindrical piece, resembling an engine housing, fell onto a Texaco station, where it landed six feet from the fuel pumps. Most of the fuselage cratered into an intersection, sending columns of dense black smoke aloft over leaping flames. The third element, a wing section, plunged into Jamaica Bay. (See November 16, 2001.)

November 13, 2001: FAA published a proposal to mandate installation of a new, improved rudder control system in all Boeing 737 models within five years. The proposed airworthiness directive would require Boeing 737 operators to install a new rudder system, currently being developed by Boeing, and make any additional changes to the aircraft needed to accommodate the new system, within five years of the AD effective date. The new design would increase the overall safety of the 737 by simplifying the rudder system and eliminating a range of previously known failure possibilities. The redesign also would make it unnecessary to have existing flight crew operating procedures and associated training unique to the 737 rudder system. (See October 26, 2000; October 7, 2002.)

November 14, 2001: FAA commissioned the last Automated Surface Observing System (ASOS) at New Haven, Connecticut, five months ahead of schedule, marking the completion of a nationwide push to establish 569 baseline systems, which started in November 1993 in Montrose, Colorado. ASOS provided current weather information on critical weather parameters, such as sky condition and visibility, temperature and dew point, pressure, wind speed, and direction. It also identified precipitation and its accumulation, thunderstorm reporting, and freezing rain accumulation.

November 15, 2001: FAA and the National Oceanic and Atmospheric Administration made a new tool available to convey advanced storm information to pilots. The National Convective Weather Forecast (NCWF) product, designed and developed by the National Center for Atmospheric Research in Boulder, Colorado, and MIT Lincoln Laboratory, in Lexington, Massachusetts, provided pilots with a plotted map depicting the current location of convective hazards and where they would be an hour later. Pilots, federal aviation weather briefers, air traffic control specialists, and airline dispatchers who routinely made operational decisions associated with thunderstorm hazards routinely were turning to the NCWF for essential information.

November 16, 2001: FAA issued an emergency airworthiness directive mandating an inspection of the vertical stabilizers and rudders on all Airbus A-300 and A-310 aircraft. The inspections had to be completed within 15 days. In addition to the area where the structural failure in American 587 occurred, the inspections also were focused on the surrounding rudder components and attachment fittings. (See November 12, 2001.)

November 19, 2001: President George W. Bush signed into law the Aviation and Transportation Security Act (Public Law 107-71), which, among other things, called for the establishment of the Transportation Security Administration (TSA) in the Department of Transportation, to be responsible for security at airports. The act also broadened AIP eligibility to include costs for additional security-related activity required by law or the Secretary of Transportation. The period of eligibility for such projects was for FY 2002 and could include only those additional costs incurred from September 11, 2001, to September 30, 2002. *February 13, 2002*, TSA took over responsibility for aviation security from FAA. (See October 18, 2001; December 6, 2001.)

December 6, 2001: FAA required each airport operator and aircraft operator with a security program under part 107 or part 108, to conduct fingerprint-based criminal history record checks for individuals who had not already undergone such a check. The rule applied to those who either possess, or have applied for: unescorted access authority to the security identification display area of an airport; authority to authorize others to have unescorted access; and screening functions. (See November 19, 2001; December 20, 2001.)

December 10, 2001: FAA amended the list of airspace locations where Reduced Vertical Separation Minima (RVSM) could be applied to include the New York flight information region (FIR) portion of West Atlantic Route System airspace. RVSM procedures allowed

vertical separation to be reduced between aircraft at certain higher altitudes if the aircraft met stringent altimeter and auto-pilot performance requirements. The rule also required any aircraft equipped with the Traffic Alert and Collision Avoidance System, version II (TCAS II) flying in RVSM airspace to incorporate a version of TCAS II compatible with RVSM operations. (See February 24, 2000; May 10, 2002.)

December 11, 2001: Runway 4L/22R opened at Detroit Metropolitan Wayne County Airport.

December 20, 2001: FAA decreased the no fly zone around Reagan National Airport. As a result of the change, Suburban Airport in Anne Arundel County, Freeway Airport in Prince George's County and Maryland Airport in Charles County, Maryland reopened for normal operations. (See December 6, 2001; January 5, 2002.)

December 27, 2001: Four FAA facilities in the Eastern Region – the New York TRACON, the New York, and Washington Air Route Traffic Control Centers, and the Philadelphia tower – implemented what was called the “Newark Chokepoint Flip/Flop” project. This involved switching flight paths and eliminating a crossover pattern affecting hundreds of aircraft daily to increase capacity.

December 2001: The Kansas City Air Route Traffic Control Center began daily use of the User Request Evaluation Tool (URET). The tool enabled controllers to see traffic 20 minutes into the future and allowed them to safely assign and grant pilot requests for more direct and more fuel efficient routes. The prototypes at the Memphis and Indianapolis Air Route Traffic Control Centers had been shown to save the airlines $1.5 million per month based on an increase in direct routings of about 20 percent. (See September 30, 1999; January 26, 2002.)

2002

January 5, 2002: Fifteen-year-old Charles Bishop, a flight student, took off in a Cessna, leaving his instructor behind, and crashed the plane into the Bank of America Plaza in downtown Tampa, Florida. Bishop, the only fatality in the crash, ignored warnings from an intercepting Coast Guard helicopter to land. The crash rekindled the debate surrounding the security of general aviation, spurred another round of meetings among top security officials, and lead FAA to issue a Flight Standards Service notice proposing eleven recommendations for possible security enhancements around airports. The proposed enhancements included having separate ignition and door lock keys for aircraft, limiting student pilots' access to aircraft keys until they reached a specific point in the training curriculum, keeping student pilots under supervision of a flight instructor at all times, establishing positive identification of any student pilot before every flight lesson, and requiring a parent or legal guardian to co-sign enrollment applications for students who were not legal adults. Other recommendations called for aircraft owners to take appropriate steps to secure unattended aircraft. (See December 20, 2001; January 15, 2002.)

January 15, 2002: Effective this date, FAA mandated new standards to protect cockpits from intruders and the effects of small arms fire or fragmentation devices, such as grenades. The Aviation and Transportation Security Act authorized the FAA to issue the final rule, which required operators of more than 6,000 airplanes to install reinforced doors by April 9, 2003. The agency also issued a special federal aviation regulation (SFAR) requiring operators to install temporary internal locking devices within 45 days on all passenger airplanes and on airplanes equipped with cargo cockpit doors. *October 17*, FAA issued a series of SFARs that authorized short-term door reinforcement by providing airlines and cargo operators with temporary relief from certain FAA standards. The major U.S. airlines voluntarily installed short-term fixes to the cockpit doors of 4,000 aircraft in 32 days. The SFAR stated that a long-term fix that meets FAA requirements must be installed within 18 months. (See January 5, 2002; January 18, 2002.)

January 18, 2002: Effective this date, airlines had to inspect all checked baggage for explosives. (See January 15, 2002; February 13, 2002.)

January 26, 2002: FAA launched the User Request Evaluation Tool (URET), a software decision-support tool designed to aide controllers in providing direct routes to high altitude aircraft more quickly, at the Memphis Air Route Traffic Control Center. *January 27*, controllers began using URET at the Indianapolis Air Route Traffic Control Center and on *January 30* at the Cleveland Air Route Traffic Control Center. With Kansas City center already up and running, four URET sites were then in service. (See December 2001; May 6, 2002.)

February 5, 2002: FAA proposed new certification requirements for light-sport aircraft, pilots, and repairmen. Previous FAA regulations had not addressed the sport pilot segment of general aviation. The proposal defined light-sport aircraft as simple, low-performance, low-energy aircraft that would be limited to:

- 1,232 lbs. maximum weight,
- Two occupants,
- A single engine (non-turbine),
- Stall speed of 39 knots,
- Maximum airspeed of 115 knots, and
- Fixed landing gear.

FAA also included two new categories in the sport aircraft proposal – weight-shift-control aircraft and powered parachutes. (See September 1, 2004.)

February 13, 2002: FAA issued an emergency rule enabling private flying to resume under new strict security procedures at three airports in suburban Maryland outside Washington, DC, which had been largely shut down since September 11, 2001. The reinstated airports were: College Park, Potomac, and Washington Executive/Hyde. (See January 18, 2002; February 17, 2002.)

February 17, 2002: Effective this date, formal responsibility for aviation security transferred from FAA to TSA. (See February 13, 2002; March 13, 2002.)

February 22, 2002: FAA announced establishment of government/industry agreements with three companies for the development of technology that would integrate digital voice and data into air/ground communications. Under the agreements, Rockwell Collins Commercial Systems, Honeywell Aerospace Electronic Systems, and Avidyne Corp. would develop VHF digital link mode-3 (VDL-3) avionics. The FAA would partially fund industry development of the airborne components of Next Generation Air/Ground Communications (NEXCOM) program, which would replace the ground radio system currently used for air traffic control communications with state-of-the-art digital technology. (See July 31, 2001; July 15, 2002.)

February 25, 2002: FAA announced pilots could now receive up-to-date weather information in the cockpit via VHF data link mode 2 (VDL-2) avionics that supported flight information services broadcast. Pilots of properly equipped aircraft could receive text messages, including routine and special weather reports, terminal area forecasts, and pilot reports issued by the FAA or the National Weather Service at no cost. They could also receive graphic products such as weather maps, and other flight information services products available through a subscription service.

February 28, 2002: The Department of Transportation Inspector General released an audit of FAA's progress in acquiring the Weather and Radar Processor (WARP), which would provide meteorologists and air traffic controllers more accurate and reliable information to lessen the effects of bad weather. The IG found that FAA had experienced significant problems managing the development and deployment of WARP on controller displays – mostly because of human factors and technical problems. He also found the program's current cost baseline was not realistic and the schedule was at risk. Since 1995, estimated program costs had increased from $227.8 million to $276.8 million. (See March 2002.)

March 13, 2002: Department of Transportation Secretary Norman Mineta announced that flight operations at Washington's Ronald Reagan National Airport would be authorized to return to their pre-September 11, 2001, capacity by April 15, completing full restoration of the nation's commercial aviation system. Since the airport reopened on October 4, 2001, the facility had been returning in phases to full capacity, giving the Federal Government and local authorities a chance to implement enhanced security measures at all airports serving Reagan National. During the first phase of restored flights, service was allowed to eight cities. Phase 2, which had begun October 26, permitted service to an additional 18 cities. Phase 3, carried out in three stages, began January 2 with incremental increases on February 1 and March 1. Service to a total of 43 additional cities was restored during phase 3, during which approximately 620 daily flights were operated at the airport – 77 percent of its pre-September 11 total. With a return to full service, traffic would be able to grow to its previous total of approximately 800 daily flights. (See February 17, 2002; June 21, 2002.)

March 21, 2002: The National Transportation Safety Board determined that the probable cause of the crash of EgyptAir Flight 990 was the airplane's departure from normal cruise flight and subsequent impact with the Atlantic Ocean as a result of the relief first officer's

flight control inputs. EgyptAir Flight 990, a Boeing 767-366ER, crashed into the Atlantic Ocean off the coast of Nantucket, Massachusetts on October 31, 1999. The scheduled flight was being operated from John F. Kennedy International Airport, New York, to Cairo International Airport, Cairo, Egypt. The 14 crewmembers and 203 passengers were killed and the airplane destroyed. Because the crash occurred in international waters, the Egyptian government had responsibility for the investigation under the provisions of Annex 13 to the Convention on International Civil Aviation. However, the Egyptian government delegated the conduct of the investigation to the NTSB under the provisions of Annex 13. (See October 31, 1999.)

March 26, 2002: Department of Transportation and Department of Defense (DoD) Secretaries Norman Mineta and Donald Rumsfeld announced the release of the 2001 Federal Radionavigation Plan. This plan included revised schedules for phasing down most land-based radionavigation systems to allow more time to transition to the global positioning system. Department of Transportation would continue to operate Loran-C in the short term while the administration continued to evaluate the long-term need for the system. Beginning with this edition, federal radionavigation information previously contained in a single document would be published in two separate documents, the Federal Radionavigation Plan, and a companion document entitled Federal Radionavigation Systems. The plan included the introduction, policies, operating plans, system selection considerations, and research and development sections, and would allow more efficient and responsive updates of policy and planning information. Sections relating to government roles and responsibilities, user requirements, and systems descriptions were moved to the companion document and would be updated as necessary. A joint product of the Department of Transportation and DoD, the radionavigation plan was mandated by the National Defense Authorization Act for fiscal year 1998, which also required that the plan be revised and updated at least every two years. (See February 2000.)

March 29, 2002: In response to the En Route Automation Modernization (ERAM) screening information request (SIR) issued March 15, Raytheon filed a formal protest of FAA's sole-sourcing plans to judge bids for the ERAM contract. Raytheon and Lockheed Martin had been the only firms planning to bid on ERAM. Subsequently, an alternative dispute resolution process was set up, FAA shelved the sole-source proposal, and the agency worked with both companies to craft a new SIR. *Late June 2002*, FAA formalized an agreement between Lockheed Martin and Raytheon to resolve the ERAM contract dispute. Lockheed Martin was awarded the contract worth $10 million for the risk-mitigation phase of the ERAM program, with Raytheon named as one of the subcontractors. At the same time, Lockheed Martin was named as a subcontractor to Raytheon on the Standard Terminal Automation Replacement System (STARS) project. If Lockheed Martin successfully executed the risk mitigation phase, it would secure the implementation contract for the full ERAM program. The total projected value for implementation and support was estimated at $1 billion through 2012. (See September 28, 2001; June 30, 2003.)

March 2002: FAA awarded a $26 million follow-on contract to Harris Corporation to maintain and support the Weather and Radar Processor (WARP). Under the original contract, a $72.5 million design and development award given to Harris in July 1996, FAA tasked the firm to develop, procure, install, and support 24 WARP systems at FAA air route traffic control centers and the Air Traffic Control System Command Center. The follow-on contract covered general support and hardware and software maintenance through September 2004. Future awards and options could increase the overall contract value to more than $125 million by 2004. (See February 28 2002; May 2002.)

April 1, 2002: Under contract to FAA's Capstone Program Office in Anchorage, Alaska, General Dynamics Decision Systems, successfully demonstrated a direct small aircraft-to-satellite navigation communications data link capability. Using a Motorola hand-held satellite telephone in a University of Alaska Cessna 180, General Dynamics conducted its proof-of-concept demonstration, transmitting a live stream of aircraft position data, via the Iridium satellite system, to the Anchorage Air Route Traffic Control Center. The test flight departed Merrill Field, proceeded along the Knik Arm of Cook Inlet, past Pioneer Peak, and continued deep into the Knik Glacier valley. (See January 1, 2001; July 1, 2002.)

April 3, 2002: FAA announced it had issued space launch licenses to two U.S. launch vehicles, the Lockheed Martin Atlas V and the Boeing Delta IV rockets. Both were scheduled to fly before the end of the year, each carrying commercial satellite payloads. The new vehicles were highly advanced models of the Atlas and Delta vehicles which had served as the workhorses of U.S. government and commercial launches for many years. (See February 9, 2001; April 1, 2004.)

April 8, 2002: Department of Transportation Inspector General for Auditing, Alexis Stefani, testified before the House Transportation and Infrastructure Aviation Subcommittee on FAA’s oversight of passenger aircraft maintenance. Stefani stated that while FAA’s Air Transport Oversight System (ATOS) for monitoring air carriers was conceptually sound, it was not reaching its full potential at the original ten major carriers and had not been expanded to the remaining 129 passenger air carriers. FAA had a long-standing requirement for carriers to monitor their own maintenance. The carriers, however, placed limited emphasis on information derived from Continuing Analysis and Surveillance Systems, a subcomponent of ATOS used to monitor the effectiveness of their aircraft maintenance and inspection programs. As a result, weaknesses had gone undetected in air carrier maintenance systems. Stefani recommended FAA:

- Finish developing key elements of ATOS – specifically, processes for analyzing inspection results and ensuring that corrective actions were implemented for weaknesses found in air carrier maintenance and operations systems,
- Improve inspector training and locating qualified inspectors where they were most needed, and
- Establish strong national oversight and accountability to ensure consistent ATOS field implementation. (See October 1, 1998.)

April 27, 2002: A new terminal radar control facility (TRACON) began providing air traffic approach and departure control for the entire St. Louis metropolitan area. Airport traffic control tower facilities supported by the new TRACON included St. Louis Lambert International Airport (St. Louis); Spirit of St. Louis Airport; (Chesterfield, Missouri); St. Louis Regional Airport (Alton, Illinois); St. Louis Downtown Airport (Cahokia, Illinois); and Scott Mid-America Airport (Belleville, Illinois), a joint-use facility also responsible for directing air traffic for Scott Air Force Base.

May 6, 2002: FAA announced the successful deployment of the User Request Evaluation Tool (URET) at the Washington Air Route Traffic Control Center in Leesburg, Virginia. URET allowed pilots to select more direct routes to their destinations. The new digital system was one of many building blocks in the FAA Free Flight technology. In addition to Washington, URET was in use at five other air route traffic control centers (Kansas City, Cleveland, Chicago, Indianapolis, and Memphis). (See January 26, 2002; October 30, 2006.)

May 9, 2002: FAA announced the operational use of the Standard Terminal Automation Replacement System (STARS) in El Paso, Texas. This upgraded version, referred to as full STARS, and completely replaced the Automated Radar Terminal Systems (ARTS). Full STARS consisted of state-of-the-art displays and computers providing radar service and a backup service. The full system was being developed in phases so that the concerns of technicians and air traffic controllers could be addressed. In 1999, El Paso and Syracuse, New York, had received an early version of STARS, which had attached STARS to the ARTS processing system. (See January 12, 2000; June 12, 2002.)

May 10, 2002: FAA issued a proposed rule that would reduce the minimum vertical separation between aircraft from the current 2,000 feet to 1,000 feet for all aircraft flying between 29,000 and 41,000 feet, thus allowing more airplanes in the same volume of airspace. At the time, aircraft at those altitudes had to be separated by 2,000 feet vertically, meaning they could fly only at 29,000, 31,000, and 33,000 feet and so forth. Implementing Reduced Vertical Separation Minima procedures was intended to increase the routes and altitudes available and lead to more efficient routings that would save time and fuel. (See December 10, 2001; October 22, 2003.)

May 2002: The Fort Worth Air Traffic Control Center became the first facility to go operational with the Weather and Radar Processor (WARP) on the controller displays. WARP displayed Terminal Doppler Weather Radar information directly to controllers on the same screen as aircraft position data, thus helping controllers to reroute air traffic to avoid areas of severe weather. FAA planned to install WARP at the other en route centers during June and July and have the system operational at all the center sites by the end of October. (See March 2002; January 23, 2003.)

June 12, 2002: FAA announced plans to purchase new radar automation display systems for some low- to medium-activity airports that currently lacked radar displays. The display systems were part of the FAA's plan for providing interim tower displays in advance of the full national deployment of the Standard Terminal Automation

Replacement System (STARS). Called the ARTS IE (Automated Radar Terminal Systems IE) and STARS LITE (STARS local integrated tower equipment), the displays were based on existing air traffic control technology, enabling the FAA to minimize the need for additional testing, evaluation and training. (See May 9, 2002; September 17, 2002.)

June 14, 2002: GAO concluded FAA's controller hiring plans were inadequate, and that the widely publicized problem of controller retirements was going to be even worse than the agency had predicted. Investigating controller attrition at the direction of Congress, the GAO reported that about 5,000 controllers might retire in the next five years, double the number who retired in the previous five years. Although the exact number and timing of the controllers' departures had not been determined, attrition scenarios developed by both FAA and GAO indicated that the total attrition would grow substantially in both the short and long term. As a result, FAA would likely need to hire thousands of air traffic controllers in the next decade to meet increasing traffic demands and to address the anticipated attrition of experienced controllers.

June 21, 2002: FAA issued a notice of agency reconsideration of final rule regarding the charging of fees for providing air traffic services required by aircraft that fly in U.S.-controlled airspace but neither take off from, nor land in, the United States. Since August 1, 2000, the agency had been charging fees for these overflight services. Authorized by the Federal Aviation Reauthorization Act of 1996, the fees were amended by the Aviation and Transportation Security Act, enacted on November 19, 2001. The newer legislation further required that the fees be “reasonably,” rather than directly, related to costs. The 2001 Act provided that the determination of costs by the FAA Administrator was not subject to judicial review. On May 6, 2002, FAA published a notice of inquiry in the *Federal Register* seeking public comment on whether, and to what (if any) extent, these statutory changes required the agency to modify its final rule on fees. (See August 20, 2001.)

June 21, 2002: Effective this date, FAA required improved flightdeck security and operational and procedures changes to prevent unauthorized access to the flightdeck on passenger-carrying aircraft and some cargo aircraft operated by foreign carriers under the provisions of part 129. This final rule applied the same flightdeck security enhancements to foreign air carriers as applied to U.S. air carriers. (See March 13, 2002; October 28, 2002.)

June 26, 2002: FAA announced plans to upgrade the tower data link services (TDLS) to enhance the reliability of service between tower controllers and pilots. The upgrade would include changes to system hardware, software, and supporting technical documentation. Philadelphia and Boston Logan International airports would receive the upgrades first. Over the following 12 months, FAA planned to upgrade 58 high-density airport towers in the U.S. then using TDLS. In all, the system was used by 17 major airlines and two general aviation service providers who relayed flight information to 1,400 aircraft and two cargo carriers.

July 1, 2002: FAA announced that flight service station specialists in Anderson, South Carolina, had begun using the Operational and Supportability Implementation System (OASIS), part of the agency's program to modernize 61 automated flight service stations in all 50 states and Puerto Rico. The stations provided in-flight planning and up-to-date weather information to general aviation pilots. OASIS consisted of commercial-off-the-shelf hardware and software to combine weather, flight plan, and aeronautical database information within a single system. (See August 25, 1997.)

July 1, 2002: FAA announced it had completed the technical and economic evaluations of alternative ADS-B technologies and decided that ADS-B would use a combination of the 1090 MHz extended squitter ADS-B link for air carrier and private/commercial operators of high performance aircraft, and the Universal Access Transceiver ADS-B link for the typical general aviation user. ADS-B airborne systems would transmit an aircraft's identity, position, velocity, and intent to other aircraft and to air traffic control systems on the ground, allowing for common situational awareness to all appropriately equipped users of the national airspace system. (See April 1, 2002; August 30, 2007.)

July 15, 2002: FAA announced that Harris Corporation had been awarded a contract to modernize, operate, and manage the telecommunications infrastructure that air traffic controllers use to communicate with each other and with pilots. The contract called for the replacement of FAA-owned multiplexing and switching networks, as well as telecommunications services leased from multiple providers. The performance-based contract consisted of a five-year base with options that could extend the period of performance up to 15 years. The FAA anticipated the contract value to grow beyond the initial evaluated cost of approximately $1.7 billion to an estimated $3.5 billion.

July 15, 2002: While lauding FAA's initiative to develop new communications technologies that would support future air traffic management needs, a GAO report recommended the agency assess the possible impact of emerging technologies on the effort. Anticipated growth in air traffic would require more channels for voice communication than FAA's current systems could handle, according to the report. The agency had undertaken its Next Generation Air/Ground Communications (NEXCOM) initiative to develop an integrated voice and data communications system that would keep pace with future needs. According to the GAO report, FAA eventually would require aviation users to buy new radios and other equipment to support the system. The agency estimated its long-term funding commitment to NEXCOM could reach $4 billion through fiscal year 2023. Members of the House Subcommittee on Aviation had asked GAO to determine to what extent the FAA's current communications infrastructure could meet future needs, what FAA had done to ensure that the technology selected for NEXCOM would be adequate, and what issues the agency had to resolve before it made its final decision. (See February 22, 2002; February 5, 2003.)

July 17, 2002: The White House announced its intention to nominate National Transportation Safety Board Chair Marion Blakey to become FAA Administrator after Jane Garvey's five-year term ended. Blakey, 54, had been at NTSB for less than a year, having been selected for the post in June 2001 and sworn in September. Before becoming

NTSB chairman, Blakey, a native of Gadsden, Alabama, spent eight years - during the Clinton Administration - running her own public affairs consulting business, Blakey & Associates. Before that she held numerous government posts in Republican administrations, including jobs with the Departments of Commerce and Education, the National Endowment for the Humanities and the White House. She was Administrator of Department of Transportation's National Highway Traffic Safety Administration under the senior President Bush from 1992-1993. She was a 1970 graduate of Mary Washington College, and did graduate work in Middle East affairs while attending the School of Advanced International Studies at Johns Hopkins University. (See August 2, 2002.)

July 18, 2002: FAA awarded the Boeing Company a $23 million contract to examine the feasibility of incorporating satellite-based communications and air traffic management systems into the national airspace system. This was the first significant FAA contract for Boeing's new air traffic management division.

August 2, 2002: Jane Garvey's five year term as FAA Administrator ended. The Senate confirmation hearing for FAA Administrator-designate Marion Blakey, originally scheduled for this date, was postponed. Secretary Mineta named Monte Belger acting administrator. In an earlier memo to the FAA management team, the Secretary announced that Belger had agreed to stay on beyond his planned retirement date to aid in the transition. If Blakey had been confirmed, Belger would have been acting deputy administrator through August 30. (See August 4, 1999; November 8, 1999; July 17, 2002; September 13, 2002.)

August 5, 2002: FAA announced that it was providing pilots with Internet access to runway visual range (RVR) information, an electronic means to display how far a pilot with normal vision would be able to see down the runway during an approach. Pilots and flight operations centers used RVR in deciding whether to land at an airport when visibility was poor. Previously, RVR information had been available only to selected air carriers as part of the FAA’s CDM initiative, where it was used for traffic management planning.

August 7, 2002: Effective this date, FAA amended the noise certification standards for subsonic jet airplanes and subsonic transport category large airplanes. These changes were based on the joint effort of FAA, the European Joint Aviation Authorities (JAA), and the FAA Aviation Rulemaking Advisory Committee, to harmonize the U.S. noise certification regulations and the JAA requirements for subsonic jet airplanes and subsonic transport category large airplanes. The changes would provide nearly uniform noise certification standards for airplanes granted certificates in the United States and in the JAA countries. The harmonization of the noise certification standards would also simplify airworthiness approvals for import and export purposes. (See October 28, 1998; August 2, 2002; January 28, 2004.)

August 27, 2002: FAA issued a final rule confirming interim final rules published on September 29, 1992, and December 30, 1993, requiring deicing operations in ground icing conditions. The interim final rules required Part 121 certificate holders to develop

and comply with a FAA approved ground deicing/anti-icing program, part 125 certificate holders to provide pilot testing on conducting operations in ground icing conditions, part 135 certificate holders to provide pilot training on conducting operations in ground icing conditions, and part 125 and 135 certificate holders to check airplanes for contamination (i.e., frost, ice, or snow) prior to takeoff when ground icing conditions exist.

September 9, 2002: FAA announced plans to develop, and implement within the next year, a plan to establish an air navigation concept called Required Navigation Performance (RNP). Under RNP, the national airspace system would evolve from a ground-based design to one where aircraft could take full advantage of advanced technologies for precision guidance in the en route (high-altitude) and terminal (about a 40-mile radius of the airport) areas. Potential benefits would include allowing more precision approach and departure paths at airports and keeping aircraft clear of obstacles and terrain. Using RNP, flight paths could be developed that met operators' preferred routes and environmental requirements. Parallel paths also could be developed to increase airspace capacity, both in en route and terminal operations. (See October 8, 2002.)

September 13, 2002: Marion C. Blakey was sworn in as the 15th Administrator of FAA. (See August 2, 2002.)

September 13, 2002: Monte Belger, long-serving acting FAA deputy administrator retired. Belger worked for FAA for more than 30 years. He joined the agency in 1972 as a security inspector in Tampa, Florida. From 1980 to 1988, he held three senior management positions in the Great Lakes region. In 1992, he was named executive director for acquisitions and safety oversight. Since 1995, Belger had been associate administrator for air traffic services, responsible for the daily operations of the national airspace system. In 1998, he was named acting deputy administrator. (See August 2, 2002; November 2, 2002.)

September 15, 2002: FAA commissioned a new state-of-the-art air traffic control tower at the Orlando International Airport. The new tower, at 345 feet, became the tallest in North America.

September 17, 2002: The Department of Transportation Inspector General expressed concerns about progress on deploying the Standard Terminal Automation Replacement System (STARS). The IG had pointed out that FAA had officially changed the cost, schedule, and requirements for STARS twice. In October 1999, FAA estimated the cost for its new approach at $1.4 billion, with a schedule to begin deploying STARS in 2002 at 188 facilities, with installation to be complete at all facilities by 2008. The second change occurred in March 2002, when FAA lowered its estimate from $1.4 billion to $1.33 billion, reduced the number of facilities receiving STARS from 188 to 74, and changed the date to complete installation at all facilities from 2008 to 2005. FAA responded to the IG concerns by stating it planned to follow its policy for testing STARS and addressing critical software problems. Because FAA had changed the date for deploying STARS at the first facility from 1998 to 2002, the agency was implementing

interim systems to allow it to continue to meet demands for air traffic services. (See June 12, 2002; September 20, 2002.)

September 20, 2002: Raytheon defended the Standard Terminal Automation Replacement System (STARS) in a statement responding to a recent GAO report that cited critical software problems with the system. FAA planned to introduce STARS at the Philadelphia TRACON on November 18. STARS would control live traffic there, with the current system serving as a backup. FAA expected to commission formally the new system in February 2003. (See September 17, 2002; February 4, 2003.)

October 3, 2002: FAA issued a notice of proposed rulemaking that would require FAA-approved corrosion prevention and control programs to be included in the maintenance and inspection of all airplanes operated under part 121 of Title 14, Code of Federal Regulations, all multiengine airplanes registered in the U.S. but operated in common carriage by foreign air carriers or foreign persons under 14 CFR part 129, and all multiengine airplanes used in scheduled operations under 14 CFR part 135.

October 4, 2002: FAA proposed a two-step program for getting more crash-resistant seats into airplane cabins. Once finalized, these steps would place current-standard "16g" seats in the U.S. fleet within 14 years. FAA proposed giving manufacturers of Part 121 and 135 aircraft four years to get the new seats onto production lines. In-service planes would require the upgrades within 14 years, or when seats were replaced as part of interior upgrades, starting four years after the rule's publication. FAA would tackle the production lines first because new-build planes would have longer useful lives than in-service jets. A FAA study concluded that 16g seats – already in service on many planes – would prevent 114 passenger deaths and 133 serious injuries through 2020. The then-current 9g minimum standard, established in the 1950s, used a static test to measure how much force could be applied to a seat before it broke. The new 16g standard was based on a dynamic test using real-life crash impact data.

October 7, 2002: Controller-Pilot Datalink Communications (CPDLC) became operational at the Miami Air Route Traffic Control Center. The prototype system, which had been tested for one year at Miami, offered four services:

- Transfer of communications (an obligatory data transfer process occurring with a flight’s hand-off from one sector to another).
- Initial contact (an obligatory exchange of information occurring at the time of a crew’s first check-in with an air traffic control facility).
- Exchange of altimeter setting information.
- Exchange of "menu text" to determine what types of messages proved most beneficial to pilots and controllers. (See February 4, 2000.)

October 7, 2002: FAA published a final rule requiring Boeing 737 operators to install a newly designed rudder control system and make other changes to the aircraft to accommodate the new system. The new design increased the overall safety of the aircraft by simplifying the rudder system and eliminating a range of failure possibilities. Operators had six year to install the new system. (See November 13, 2001.)

October 8, 2002: In a speech at the U.S. Chamber of Commerce Aviation Summit, FAA Administrator Marion Blakey announced that, within a month, FAA would approve Required Navigation Performance (RNP) procedures for San Francisco International Airport. Through the use of onboard technology, pilots would be able to navigate aircraft to any point in the world using only geographical coordinates. (See September 9, 2002; December 31, 2002.)

October 28, 2002: Effective this date, FAA revised the pilot certificate requirements to require a person to carry approved photo identification when exercising the privileges of a pilot certificate. Additionally, the rule required a pilot certificate holder to present photo identification when requested by authorities including a duly-authorized representative of the FAA, NTSB, TSA, or a law enforcement agency. (See June 21, 2002; February 10, 2003.)

November 22, 2002: The White House announced plans to nominate Robert Sturgell, senior counsel to FAA Administrator Marion Blakey, to fill the vacant FAA deputy administrator post. (See September 13, 2002.)

November 23, 2002: FAA issued an emergency airworthiness directive for Boeing 737-600s and -700s, 700Cs, 900s, 747s, and 757s after two fuel tank pumps on separate 747s showed “extreme localized overheating of parts.” The AD gave carriers four days to comply. The parts in question were located in the priming and vapor pump section of the fuel pump. FAA said the likely cause of the overheating was friction between the pump parts but found no specific cause. (See June 6, 2001; July 30, 2004.)

November 27, 2002: FAA issued a final rule for air tour operators that called for development of site specific plans to protect the environment of U.S. national parks. The rule, crafted with input from the National Park Service (NPS), accommodated the varied interests of visitors to the parks, Native American tribes, and local air tour operators. The National Parks Air Tour Management Act of 2000 had directed the FAA, in cooperation with NPS, to establish an Air Tour Management Plan (ATMP) for any unit of the National Park System, or abutting tribal lands, where commercial air tour operations were conducted or planned. To continue air tour operations over any national park or abutting tribal lands, all existing air tour operators were required to submit an application to the FAA for operating authority by January 23, 2003. Existing operators who complied with all applicable federal requirements would be granted interim operating authority to continue air tour operations while developing their individual ATMPs. New entrant operators had to apply for and be granted operating authority before commencing air tours over any national park or abutting tribal lands. (See March 15, 2007.)

November 2002: A high-profile government report called for FAA to offer incentives to airlines to introduce the onboard technology necessary to support a modernized air traffic management (ATM) system, and recommended changes to the modernization process itself. The final report of the Commission on the Future of the U.S. Aerospace Industry said airline reluctance to equip their fleets with new technology could hinder ATM

modernization. It said mandatory rules and operational benefits were insufficient to motivate the aggressive operator investments needed for system-wide improvements. Onboard technology should be regarded as part of national aviation infrastructure, and therefore federally funded, the report said.

December 8, 2002: FAA issued an interim final rule requiring inspections and records reviews for most aircraft that had been in scheduled commercial service for 14 years or more. The rule, effective one year from this date, mandated that operators could not keep an airplane in service more than four years from the effective date unless the maintenance program for the aircraft included damage-tolerance-based inspections and procedures for certain parts. The rule affected operators of multi-engine airplanes in scheduled operations under Parts 121, 135, and 129 of the federal aviation regulations, as well as type certificate holders (for example, aircraft manufacturers). The rule did not apply to airplanes operated within the state of Alaska.

December 8, 2002: FAA commissioned a new air traffic control tower at Miami International Airport. The tower could withstand 150-mile-per-hour winds generated by hurricanes. At 333 feet, the Miami tower was the second-tallest in the U.S. after Orlando International's 345-foot tower.

December 14, 2002: The new Potomac Consolidated TRACON began operations. The new state-of-the- art facility in Fauquier County, Virginia, consolidated five existing TRACONs and allowed the FAA to redesign the airspace in this area for more efficient, direct flight routings. (See March 6, 2000.)

December 31, 2002: FAA signed an industry-championed change, eight years in the making, adding Required Navigation Performance (RNP) instrument approach procedures to the rolls of the terminal instrument procedures document and other publications. In about one year from the nondescript event, operators would be permitted to begin flying scaled-downed versions of the futuristic RNP instrument approaches used by Alaska Airlines in remote locations. The RNP rating system defined an aircraft's ability to know its own position in terms of nautical miles. The lower the aircraft's RNP number, the more airspace access – particularly in new or reduced minimums approaches – would be available to it. The role of FAA in the new regime would be to set the required accuracy levels and criteria for routes or procedures, after which users could decide if the rewards of participating were worth the effort of their participation. (See October 8, 2002; July 25, 2003.)

2003

January 7, 2003: FAA announced a tentative agreement in principle to extend the existing contract with the National Air Traffic Controllers Association, signed in 1998, for two years to September 2005. (See June 15, 1998; December 9, 2003.)

January 8, 2003: Air Midwest Flight 5481, a Beechcraft 1900D operating as US Airways Express Flight 5481, crashed into an airport hangar and burst into flames 37 seconds after

taking off from Charlotte/Douglas International Airport in Charlotte, North Carolina. All 19 passengers and two pilots aboard were killed in the accident, one person on the ground received minor injuries. *February 26, 2004*, the National Transportation Safety Board determined that the probable cause of the accident was the airplane's loss of pitch control during takeoff. The findings also suggested that this loss of pitch control probably resulted from a combination of an incorrect rigging of the elevator control system together with a weight distribution that caused the airplane's center of gravity to shift dangerously far aft. (See January 27, 2003.)

January 23, 2003: FAA announced it had completed deployment of the Weather and Radar Processor (WARP) at all 20 air route traffic control centers. WARP allowed air traffic controllers to view highly accurate and timely weather information on the same display that showed aircraft position data. (See May 2002.)

January 27, 2003: FAA issued an emergency AD requiring operators to perform prescribed elevator system checks on Raytheon Beechcraft Models 1900, 1900C and D aircraft by January 31. The actions were aimed at preventing an accident similar to the January 8 crash of Air Midwest Flight 5481. In addition, FAA ordered commuter airlines to begin weighing some passengers out of concerns of possible overloading of passengers and baggage. The program covered planes registered in the U.S. and carrying 10 to 19 passengers. The 30-day sample of passenger and baggage weights was designed to determine whether FAA's assumptions at the time about passenger and baggage weights were valid. In general, the agency had assumed that an average adult would weigh 180 pounds in summer and 185 pounds in winter, and travel with 20 pounds of carry-on luggage. Each child aged two to twelve was assumed to weigh 80 pounds. (See January 8, 2003.)

February 4, 2003: Representative Ellen Tauscher (D-CA), member of the House Transportation aviation subcommittee, expressed concerns that cost overruns on the Standard Terminal Automation Replacement System (STARS) would compromise other agency programs. Tauscher, responding to a GAO report released on February 3, criticized FAA's management of the program in these terms: "After seven years and $1.2 billion, only one major airport has new technology." She considered STARS to be poorly managed. The GAO report was similar in content to a recent Department of Transportation Inspector General report. Tauscher warned the FAA: "This continued lackadaisical management is simply unacceptable." Tauscher said the agency had spent $1.2 billion on STARS since 1996, and estimated it would take at least $153 million over five years to deploy the system. GAO pointed out inaccuracies in the baseline data received by FAA did not reflect the current status of the contract and recommended changes in STARS management. (See September 20, 2002; June 9, 2003.)

February 5, 2003: FAA awarded contracts to ITT Industries, Inc., and Harris Corporation valued at $16 and $21 million, respectively, over a 20-month period for the initial phase of Next Generation Air/Ground Communications (NEXCOM). By integrating data link with digital voice, NEXCOM would make more efficient use of the available frequency spectrum, and accommodate additional air traffic control sectors and new runways to

support continued industry growth. The existing air/ground communications system had been used for air traffic control for more than 50 years. (See July 15, 2002; March 18, 2004.)

February 10, 2003: FAA expanded the restricted airspace over Washington, DC. It now covered a 30-mile radius from each of the region's three major airports – Reagan National, Baltimore-Washington International, and Dulles International. (See October 28, 2002; July 26, 2007.)

May 1, 2003: FAA awarded a Local Area Augmentation System (LAAS) contract to Honeywell International, Inc. A satellite navigation landing system, LAAS would enable pilots to guide planes safely into busy airports in bad weather. It also would significantly increase the accuracy, availability, continuity and integrity of the information received from the global positioning system (GPS) constellation of satellites to enhance the safety and efficiency of air travel. The contract was to unfold in three phases. The first phase, valued at $16.7 million, provided for the software and hardware design of the category I LAAS. Phases 2 and 3 contract options, which totaled an additional $340 million, landing provided a level of service in poor weather conditions down to a ceiling of 200 feet and visibility of one-half mile. (See August 13, 1999.)

May 1, 2003: Effective this date, FAA revised the applicability of certain collision avoidance system requirements for airplanes. The rules previously in place were based on passenger seating configuration and, therefore, excluded all-cargo airplanes. Intended to reduce the risk of a mid-air collision involving a cargo airplane, this final rule would use airplane weight and performance characteristics as the basis for collision avoidance system requirements. Specifically, it would apply to cargo airplanes weighing more than 33,000 pounds maximum certificated takeoff weight.

May 30, 2003: The engineered materials arresting system installed at New York’s John F. Kennedy International Airport successfully stopped a Gemini Cargo McDonnell Douglas MD-11F aircraft that overran the runway. (See May 8, 1999; January 22, 2005.)

June 9, 2003: FAA commissioned the first Standard Terminal Automation Replacement System (STARS) at a large, busy airport – Philadelphia International Airport. Under a joint FAA and DoD program, STARS would eventually replace computers and displays at more than 300 air traffic control facilities nationwide. In addition to Philadelphia, other FAA deployments scheduled for 2003-2004 included: Portland, Oregon; Boston, Massachusetts; Miami, Florida; Milwaukee, Wisconsin; Port Columbus, Ohio; San Antonio, Texas; and Seattle/Tacoma, Washington. (See February 4, 2003.)

June 10, 2003: Department of Transportation Secretary Norman Mineta announced the selection of Russell G. Chew as the FAA's first Air Traffic Organization Chief Operating Officer (COO). (See April 5, 2000; December 7, 2000; November 18, 2003; February 23, 2007.)

June 30, 2003: The Department of Transportation Inspector General outlined cost and timetable overruns in most of FAA's major acquisition programs. The IG raised red flags about large programs such as En Route Automation Modernization (ERAM), a program it considered to be a high-risk effort and one of the largest, most expensive, software-intensive, and complex acquisitions FAA has undertaken. (See March 29, 2002; September 30, 2007.)

June 2003: FAA issued the *Human Factors Design Standard*, a compilation of human factors practices and principles integral to the procurement, design, development, and testing of FAA systems, facilities, and equipment. The guide, which superseded the 1996 *Human Factors Design Guide*, provided a single easy-to-use source of human factors design criteria, oriented to the needs of the FAA mission and systems.

July 10, 2003: FAA commissioned Wide Area Augmentation System, technology designed to improve the accuracy, availability, and integrity of global positioning system (GPS) to provide a navigation and landing system that could deliver precision guidance to aircraft at thousands of airports and airstrips lacking precision landing capability. (See April 10, 2001; March 24, 2006.)

July 21, 2003: Effective this date, FAA amended the airworthiness standards applicable to the lower deck service compartments of transport category airplanes. The change required that two-way voice communication systems between lower deck service compartments and the flightdeck remain available following loss of the normal electrical power generating system. It also clarified the requirements for seats installed in the lower deck service compartment. While adoption of the amendment would not affect then current industry design practices, it would eliminate regulatory differences between the airworthiness standards of the U.S. and requirements of the Joint Aviation Authorities.

July 25, 2003: FAA released a plan to develop air traffic procedures that would employ Required Navigation Performance (RNP) and area navigation (RNAV), coupled with on-board technology, to help pilots to navigate to any point in the world. The RNP Roadmap identified steps and milestones that would transition the U.S. airspace system from reliance on airways running over ground-based navigation aids to a point-to-point navigation concept that would take maximum advantage of advanced automation capabilities aboard aircraft. The plan, which would be updated regularly, was to be divided into three implementation timeframes:

- Near-Term (2003-2006). FAA and industry would implement a first set of RNP and RNAV procedures in all phases of flight. The agency also would continue to develop criteria and guidance for more advanced RNP/RNAV operations.
- Mid-Term (2007-2012). RNAV would become the primary means of navigation in U.S. airspace. Additional RNP procedures would be made available as more aircraft were equipped with advanced technologies. FAA would begin to remove some ground- based navigation aids, routes and procedures from service starting in 2010.
- Far-Term (2013-2020). Based on previous demonstration of RNP/RNAV benefits, the U.S. aircraft fleet would continue to advance its capabilities. By 2020,

> operators would use RNP and RNAV procedures operationally in all areas. A minimal operational network of ground-based navigation aids would remain in place. (See December 31, 2002; December 20, 2005.)

July 30, 2003: FAA dropped an ATR42-300 regional transport airplane 50 feet to the concrete below as part of its efforts to collect the empirical data needed to set crashworthiness standards for commuter aircraft. Data collected from this and previous tests at the William J. Hughes Technical Center would help researchers to assess the impact response characteristics of the airframe structure, seats, overhead stowage bins, fuel tanks, and the potential for occupant injury. (See August 28, 2013.)

July 31, 2003: FAA began issuing new, security-enhanced airman certificates to the nation's 650,000 active pilots. FAA Administrator Marion Blakey unveiled the new certificate before hundreds of aviation enthusiasts at the annual Experimental Aircraft Association AirVenture. The new credit card-sized certificates were made from high-quality composite media card stock and incorporated new security features, such as a hologram of the FAA seal. They replaced the existing paper airman certificates which were easily damaged.

August 18, 2003: Effective this date, FAA amended flight data recorder regulations by expanding the recording specifications of certain data parameters for specified airplanes, and by adding aircraft models to the lists of aircraft excepted from the 1997 regulations. In addition, this rule corrected specifications in an operating rule appendix that were inadvertently omitted in previous actions. These changes were necessary to allow the continued operation of certain aircraft that could not meet the existing recorder criteria without incurring a cost-prohibitive retrofit. (See January 8, 2000; February 24, 2005.)

September 2, 2003: Effective this date, FAA adopted upgraded flammability standards for thermal and acoustic insulation materials used in transport category airplanes. The standards included new flammability tests and criteria that addressed flame propagation and entry of an external fire into the airplane. The standards previously in place did not realistically address situations in which thermal or acoustic insulation materials might have contributed to the propagation of a fire. (See September 8, 2000; April 1, 2005.)

September 4, 2003: Runway 16R/34L opened at Denver International Airport and runway 8/26 opened at Miami International Airport.

September 30, 2003: During FY 2003, which ended on this date, FAA issued its first annual strategic plan, Flight Plan 2004-2008. The new plan laid out four goals and described FAA's strategies for achieving those goals. The Flight Plan was aligned with the Department of Transportation strategic plan and linked to FAA's budget requests. Every staff office and line of business was required to develop a plan that linked directly to the flight plan. (See November 8, 2004; February 19, 2014.)

October 15, 2003: The White House commission established to investigate the September 11, 2001, terrorist attacks issued a subpoena to obtain needed documents from FAA. In

May, the commission had requested all documents relating to FAA's tracking of the hijacked airliners and communications with the North American Aerospace Defense Command. FAA had provided 40 boxes containing 150,000 pages of information in September, but during subsequent interviews, the commission had learned that some materials had not been included. FAA officials responded that their failure to turn over all documents had been caused in part by internal procedures used to search for material. (See July 22, 2004.)

October 21, 2003: FAA announced the nationwide deployment of the first all-digital airport radar system. The Airport Surveillance Radar (ASR-11) replaced older-generation analog radars nearing the end of their service life. The replacement technology provided improved digital aircraft and weather input needed by FAA's new air traffic control automation systems, such as the Standard Terminal Automation Replacement System (STARS). The first ASR-11 went operational in March at the Willow Grove, Pennsylvania, Naval Air Station, and was providing radar data to STARS at the Philadelphia International Airport. The new radars grew out of a joint FAA/DoD program. FAA planned to procure a total of 112 ASR-11s, with scheduled deployment completed in 2009. FAA had procured 25 systems since the contract was awarded in December 1996.

October 22, 2003: FAA issued a new rule reducing the minimum vertical separation between aircraft from the current 2,000 feet to 1,000 feet for all aircraft flying between 29,000 feet and 41,000 feet. RVSM implementation would significantly increase the routes and altitudes available and thus allow more efficient routings that would save time and fuel. FAA planned to implement Reduced Vertical Separation Minima (RVSM) procedures on January 20, 2005, to give airlines and other aircraft operator's time to install the more accurate altimeters and autopilot systems needed to ensure the highest level of safety. The long-awaited rule – FAA initiated the process with a notice of proposed rulemaking in May 2002 – detailed equipment requirements, including dual altimeters and a more advanced autopilot system. Aircraft equipped with traffic alert and collision avoidance system version II (TCAS II) had to be updated with new software, compatible with RVSM operations. (See May 10, 2002; November 26, 2003.)

October 31, 2003: Runway 8L/26R opened at George Bush Intercontinental/Houston Airport.

November 5, 2003: FAA announced U.S. certification of an innovative diesel aircraft engine that used automotive parts and ran on jet fuel. Administrator Marion Blakey made the announcement before the Aircraft Owners and Pilots Association annual conference in Philadelphia, Pennsylvania. The 4-cylinder, 135 hp TAE 125-01 was developed by German-based Thielert Aircraft Engines (TAE), an auto racing engine and global automotive parts manufacturer. This newly certified aircraft engine could be installed in general aviation aircraft such as two- seat Cessna and Piper models.

November 10, 2003: FAA proposed first-time regulations for extended aircraft operations (ETOPS), which would allow consumers to take advantage of new, more direct routes

and more frequent trips on existing routes. If adopted, ETOPS rules would cover scheduled air carriers (Part 121) and charter operators (Part 135) and carry the full legal authority of a federal aviation regulation. Currently, carriers and operators complied voluntarily with FAA advisory circulars that governed ETOPS. (See February 15, 2007.)

November 17, 2003: Effective this date, FAA updated and revised the regulations governing operations of aircraft in fractional ownership programs. The final rule defined fractional ownership programs and their various participants, allocated responsibility and authority for safety of flight operations for purposes of compliance with the regulations, and ensured that fractional ownership program aircraft operations would maintain a high level of safety. These regulations provided a level of safety for fractional ownership programs equivalent to regulations that apply to on-demand operators. (See February 23, 2000.)

November 18, 2003: Department of Transportation Secretary Norman Mineta announced initial details of FAA's new Air Traffic Organization (ATO) business structure. ATO would consolidate the FAA’s air traffic services, research and acquisitions, and free flight program activities into a smaller, more efficient organization with a strict focus on providing the best service for the best value to the aviation industry and the traveling public. The establishment of the ATO was first recommended by the 1997 National Civil Aviation Review Commission, chaired by Mineta. In April 2000, Congress enacted the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century that mandated establishing the position of a Chief Operating Officer (COO) to oversee the air traffic control system. Executive Order 13180 (as amended June 4, 2002) officially created the ATO with the COO as its head. (See January 2001; June 10, 2003; February 8, 2004.)

November 20, 2003: FAA announced that 86 percent of workers belonging to the National Association of Air Traffic Specialists (NAATS) had approved a new, five-year collective bargaining agreement between the union and the FAA.

November 26, 2003: Effective this date, an FAA rule allowed RVSM flights in the airspace over the contiguous 48 States of the United States, the District of Columbia, Alaska, that portion of the Gulf of Mexico where FAA provided air traffic services, the San Juan Flight Information Region (FIR), and the airspace between Florida and the San Juan FIR. The RVSM program would permit 1,000-foot vertical separation at certain altitudes between aircraft that meet stringent altimeter and autopilot performance requirements. The rule required any aircraft equipped with TCAS II and flown in Reduced Vertical Separation Minima (RVSM) airspace to incorporate a version of TCAS II software that was compatible with RVSM operations. (See October 22, 2003; January 20, 2005.)

December 9, 2003: FAA and the National Air Traffic Controllers Association (NATCA) signed a two-year contract extension that expanded pay-for-performance to include air traffic controllers and provided potential savings of several million dollars. The contract extension increased the number of agency employees whose pay was tied partly to

performance from 37 percent to 75 percent. The pay for performance compensation system for over 15,000 air traffic controllers was based on safety and capacity targets set forth in FAA's strategic Flight Plan. The targets included reducing operational errors and runway incursions and increasing on-time performance and arrival efficiency rates. FAA and the union also agreed that, when a provision binding FAA to maintain a fixed number of controllers each year expired at the end of September, the agency could adjust staffing levels based on actual workload. This contract action was initiated following direction from Congress and the Department of Transportation Inspector General to exert greater cost control over air traffic control operations. The current contract was ratified in 1998. FAA expected to begin negotiations on a new agreement with NATCA in early 2005. (See January 7, 2003; July 13, 2005.)

December 12, 2003: President George W. Bush signed the Vision 100 – Century of Aviation Reauthorization Act (Public Law 108-176). The Act abolished the air traffic services subcommittee of the federal aviation management advisory council and created, separate from the council, an Air Traffic Services Committee (ATSC). The ATSC was given substantial governmental authority, including the power to approve the FAA's strategic plan for the air traffic control system, to approve certain large procurements, to appoint and determine the pay of the FAA chief operating officer, to dictate major FAA reorganizations, and to control FAA cost accounting and financial management structure. The legislation also endorsed the concept of the Next Generation Air Transportation System (NextGen) and directed Department of Transportation to create a Joint Planning and Development Office to facilitate the process. The legislation also provided funding for the Airport Improvement Program (AIP) from FY 2004 through FY 2007. The act also changed the basic requirements and guidelines under which FAA implemented AIP, including numerous provisions to assist smaller airports and to streamline the environmental review of airport projects. (See January 27, 2004.)

December 25, 2003: Runway 17L/35R opened at Orlando International Airport.

2004

January 21, 2004: Department of Transportation Secretary Norman Mineta announced a new order intended to reduce flight congestion and passenger inconvenience at Chicago's O'Hare International Airport. Under terms of the order signed by FAA administrator Marion Blakey, both American and United agreed to reduce their operations during the peak hours between 1 p.m. and 8 p.m. by five percent. The reduction of 62 scheduled flights, which took effect in early March and lasted for six months, returned scheduled O'Hare operations to October 2003 levels, the last month prior to significant delays. (See April 21, 2004.)

January 27, 2004: In a luncheon speech to the Aero Club of Washington, Secretary Mineta announced plans for a new, next generation air transportation system with expanded capacity to relieve congestion, prevent gridlock, and secure America's place as global leader in aviation's second century. An inter-agency plan, NextGen would offer a

cleaner, quieter system based on 21st-century technology, seamless security, and added capacity to relieve congestion. (See December 12, 2003; December 15, 2004.)

January 28, 2004: FAA Administrator Marion Blakey dedicated a new FAA Center of Excellence, the Partnership for Air Transportation Noise and Emissions Reduction. (See September 23, 1997; August 7, 2002; August 18, 2010.)

January 30, 2004: FAA Administrator Marion Blakey submitted a final proposal for the National Air Traffic Controllers Association (NATCA) multi-unit contract, along with the union's objections, to Congress seeking help in resolving the issue. The NATCA contract represented about 1,900 employees – mostly administrative personnel in budget, regional accounting and logistics, regional airports, plus some engineers and nurses. Over the previous several months, there had been attempts on both sides to seek outside help to break the impasse, but when those failed, the next step for FAA – according to procedures established in the agency's personnel reform legislation dating from the mid-1990s – was to submit its recommendations to Congress for action within 60 days. If the legislators failed to respond within that time, FAA could implement its own proposal. (See July 10, 2005.)

February 8, 2004: FAA's new ATO officially began operations. The fundamental realignment gave the ATO responsibility for providing air traffic services, research and acquisition, as well as for the free flight organizations. The change came after a decades-long attempt by previous administrations, Congress, and FAA to improve the delivery of air traffic services by adopting business-like practices. (See November 18, 2003; March 25, 2004.)

February 10, 2004: FAA published a final rule in the *Federal Register* modifying 14 Code of Federal Regulations (CFR) Part 158 to change the amount and the basis for compensation to air carriers collecting, handling, and remitting Passenger Facility Charges.

February 29, 2004: Effective this date, FAA revised its regulations for landing under instrument flight rules to allow aircraft to operate below certain specified altitudes during instrument approach procedures, even when the airport environment was not visible using natural vision, if the pilot used certain FAA-certified enhanced flight vision systems.

February 29, 2004: Department of Transportation Secretary Norman Mineta visited Mitchell International Airport in Milwaukee, Wisconsin, to introduce a new air traffic control technology and reiterate the Administration's commitment to improvements aimed at reducing airspace congestion nationwide. The airport was the first to receive ASDE-X, a new radar that provided complete, up-to-the-minute map of all airport operations that controllers used to spot potential collisions and ensure aviation safety on the ground. (See October 24, 2000; August 8, 2007.)

March 2, 2004: A new FAA-developed tool to predict in-flight icing became operational. Using the web-based forecast icing tool, aviation meteorologists and airline dispatchers could warn pilots about icing hazards up to twelve hours in advance.

March 18, 2004: FAA canceled the Next Generation Air/Ground Communications (NEXCOM) rapid prototype development contracts with ITT Industries and Harris Corp. FAA previously canceled a full-scale NEXCOM development contract that had not yet been awarded. FAA said it canceled the contracts because there was disagreement on global standards. FAA and EUROCONTROL agreed in 2003 to study what the next-generation air traffic control voice communication system should be. (See February 5, 2003.)

March 24, 2004: Department of Transportation Secretary Norman Mineta announced a series of steps aimed at reducing potential gridlock and delays during the up-coming peak travel periods of spring and summer. The steps included the creation of new air traffic express lanes, within many of the nation's most heavily congested routes. The measures were developed earlier in the month at a three-day conference called "Growth without Gridlock." Hosted by FAA, the conference brought together more than 60 participants from major and regional airlines, business aviation, pilot organizations, and industry associations to develop a common strategy to reduce system delays.

March 25, 2004: Department of Transportation Secretary Norman Mineta announced the establishment of an office to provide independent safety oversight of the Air Traffic Organization. The office's primary responsibility was to ensure the safety of changes to air traffic standards and procedures. The creation of the new Air Traffic Safety Oversight Service, based within FAA regulation and certification organization, followed a recommendation of the 1997 National Civil Aviation Review Commission chaired by Secretary Mineta. On November 1, 2001, the International Civil Aviation Organization (ICAO) required that its member states, including the U.S., set up independent oversight of air traffic operations. Canada, Great Britain, and Germany were among the ICAO states transitioning to similar systems. (See February 8, 2004; December 5, 2005.)

April 1, 2004: FAA issued the world's first license for a sub-orbital manned rocket flight. The license was issued to Scaled Composites of Mojave, California, headed by aviation record-holder Burt Rutan, for a sequence of sub-orbital flights spanning a one-year period. The FAA sub-orbital space flight license was required for U.S. contenders in the X-Prize competition, a high-stakes international race ultimately to launch a manned, reusable private vehicle into space and return it safely to Earth. The X- Prize foundation would award $10 million to the first company or organization to launch a vehicle capable of carrying three people to a height of 100 kilometers (62.5 miles), return them safely to Earth, and repeat the flight with the same vehicle within two weeks. *April 23,* FAA announced it had issued a second license for a manned sub-orbital rocket flight to XCOR Aerospace Inc. of Mojave, California, which sought to develop a passenger carrying space vehicle for adventure travelers in the future. *June 21,* SpaceShipOne reached a record altitude of 328,491 feet (approximately 62 miles), making pilot Mike Melville the first civilian to fly a spaceship out of the atmosphere. *September 29,* 2004, Melville

successfully reached suborbital space for a second time. *October 4*, Brian Binnie successfully flew the second orbital flight in the prescribed timeframe. The X-Prize foundation awarded its $10 million prize to Scaled Composites for being the first company to launch a vehicle capable of carrying three people to a height of 100 kilometers (62.5 miles), return them safely to Earth, and repeat the flight with the same vehicle within two weeks. (See April 3, 2002; July 2, 2004; June 7, 2012.)

April 6, 2004: FAA, in partnership with the U.S. Trade and Development Agency and U.S. aviation manufacturers and suppliers, launched the U.S.-China Aviation Cooperation Program to expand relations and cooperation with Chinese counterparts. (See June 22, 2007.)

April 21, 2004: Department of Transportation Secretary Norman Mineta announced plans by United and American Airlines to reduce their daily schedules by another 2.5 percent starting in early June, making this the second time the airlines had trimmed their schedules to help reduce congestion at O'Hare. Both airlines rescheduled the majority of targeted flights to slower times of the day, but each also canceled some operations. (See January 21, 2004; August 4, 2004.)

April 30, 2004: President George W. Bush signed legislation into law renaming the two downtown office buildings that housed FAA after the inventors of powered, sustained, controlled flight, Orville and Wilbur Wright. The measure, approved by Congress earlier in the year, renamed the agency's Federal Building 10-A at 800 Independence Ave., SW, the Orville Wright Federal Building, and Federal Building 10-B at 600 Independence Ave., SW, as the Wilbur Wright Federal Building. *July 8*, FAA headquarters buildings were officially renamed the Orville and Wilbur Wright buildings.

May 24, 2004: FAA dedicated a new, state-of-the-art airport traffic control tower at Sea-Tac International Airport. At 233 feet high, the new tower was more than twice the height of the old tower, built in 1949.

May 2004: FAA released a screening information request (SIR) for the Automated Flight Service Station public-private competition under OMB's A-76 recommendations to improve government efficiency and cost savings through commercialization of certain government operations. Per the announcement, potential service providers would be required to submit technical proposals in August 2004 and cost proposals in September 2004. The agency planned to award the contract by March 17, 2005. (See February 1, 2005.)

June 24, 2004: Secretary of Transportation Norman Mineta released *Capacity Needs in the National Airspace System: An Analysis of Airport and Metropolitan Area Demand and Operational Capacity in the Future*, predicting which airports and communities would need to expand their capacity by the year 2020. The capacity study was the first of its kind to look at current air travel patterns, economic and population trends, current air service, and current capacity. The associated report revealed that 23 of the nation's fastest

growing airports needed to add capacity to accommodate air traffic growth over the next two decades.

June 30, 2004: FAA announced a $13.5 million contract award to Computer Sciences Corporation (CSC) to upgrade the automated system used to ensure the most efficient flow of the nation's air traffic. Under the traffic flow management modernization contract, CSC would design an advanced computer platform that used air traffic data from across the country to predict when the numbers of flights might exceed available routes and capacity. FAA would use this information both to run special programs designed to reduce delays due to severe weather and congestion and to help airlines to provide more accurate flight departure and arrival information to their passengers.

June 30, 2004: The Oakland Air Route Traffic Control Center began started using Advanced Technologies and Oceanic Procedures (ATOP). The new system allowed controllers to reduce separation between aircraft on oceanic routes, and gave pilots greater flexibility to choose their own routes. Oakland was the first of three en route centers handling oceanic operations to use ATOP. (See May 24, 2001; June 23, 2005.)

July 2, 2004: FAA announced it had issued a license to create, at the Mojave Airport in California, the first inland commercial space launch site, and the fifth licensed commercial spaceport, in the U.S. With this announcement, East Kern Airport District could operate the Mojave site in support of suborbital reusable launch vehicle missions. (See April 1, 2004; December 23, 2004.)

July 22, 2004: In its final report, the commission established to investigate the September 11, 2001, terrorist attacks criticized FAA's response and preparedness. The commission, however, acknowledged that agency employees adapted quickly to the crisis. (See October 15, 2003.)

July 30, 2004: FAA extended the date – from December 6, 2004 to December 16, 2008 – for operators to comply with special maintenance program requirements for transport airplane fuel tank systems. The action was intended to allow operators enough time to incorporate revisions into their maintenance programs, after having learned of required fuel tank systems maintenance programs from those who hold design approval. (See November 23, 2002; November 14, 2005.)

August 4, 2004: FAA Administrator Marion Blakey told the carriers serving O'Hare Airport that, if a voluntary approach to reducing their schedules at O'Hare did not work, FAA would use its statutory authority to impose a solution. The agency advised that relaxing schedules would help ease the congestion and reduce delays that started at O'Hare and then rippled throughout the system. (See April 21, 2004; August 18, 2004.)

August 5, 2004: Runway 6L/24R opened at Cleveland Hopkins International Airport.

August 18, 2004: Department of Transportation Secretary Norman Mineta announced that domestic airlines serving O'Hare had agreed to a voluntary limit of 88 scheduled

arrivals per hour between 7 a.m. and 8 p.m. The new limit on scheduled arrivals during peak hours, effective November 1, brought schedules more in line with O'Hare's capacity and was expected to cut the amount of time lost due to delays by 20 percent. The agreement, the result of talks directed by Secretary Mineta and chaired by FAA Administrator Marion Blakey, was expected to cut delay times by imposing a limit on new flights that airlines planned to add in November. United and American Airlines, which were then operating 86 percent of flights at O'Hare, offered the largest reductions. United agreed to reduce 20 arrivals while American canceled 17 incoming flights scheduled between noon and 8:00 p.m. Other airlines with fewer operations also agreed to reduce or change schedules to cut delays. (See August 4, 2004.)

September 1, 2004: Effective this date, FAA began certifying sport pilots and their aircraft. The rule encompassed manufacture, certification, operation, and maintenance of light-sport aircraft that weighed less than 1,320 pounds (1,430 pounds for aircraft intended for operation on water) and were heavier and faster than ultralight vehicles. The rule included airplanes, gliders, balloons, powered parachutes, weight-shift-control aircraft, and gyroplanes. (See February 5, 2002.)

September 22-23, 2004: FAA Administrator Marion Blakey hosted the first FAA international safety forum for government and industry leaders to improve communication and provide solutions to improving aviation safety worldwide. The program became the first in a series of annual meetings.

September 24, 2004: FAA and EUROCONTROL signed a memorandum of cooperation to increase joint air traffic management and research efforts to improve safety, capacity, and standards of air traffic operations between North America and Europe.

October 13, 2004: The President signed into law the Emergency Supplemental Appropriations for Hurricane Disaster Assistance Act, 2005 (Public Law 108-324) as part of the FY 2005 Military Construction Appropriations Act. The law authorized emergency capital funding to compensate airport sponsors for capital costs for replacement or repair of public-use facilities directly related to damage caused by Hurricanes Charley, Frances, Ivan, and Jeanne.

October 26, 2004: FAA started using a new landing procedure, known as the simultaneous offset instrument approach, to help cut delays at San Francisco International Airport. Taking advantage of an advanced radar system that was nearly five times faster than conventional airport radar, this procedure allowed up to a 25 percent increase in the number of arrivals during overcast conditions. Because air traffic controllers could get a much more precise fix on approaching aircraft, the change enabled two arriving planes to fly above and then through the clouds at different angles without compromising the safe separation standards required during overcast conditions. Once the aircraft moved under the cloud deck, the planes were to fly a visual, parallel approach to the airport's two runways.

November 8, 2004: The Association for Strategic Planning, a California-based professional association dedicated to advancing strategic thought, development, and practice awarded the FAA Flight Plan 2004 2008 its 2004 Richard Goodman Strategic Planning Award for continuing excellence in stimulating innovation in the planning process. (See September 30, 2003.)

December 15, 2004: Department of Transportation Secretary Norman Mineta unveiled the *Integrated Plan for the Next Generation Air Transportation System*. This a long-term strategic business plan that laid out goals, objectives, and requirements in eight specific areas: airport infrastructure development; security; the air traffic system; information technology; safety management; environmental stewardship; weather forecasting; and global collaboration. The development of innovative public-private partnerships was a key component to the entire effort. Under the direction of Secretary Mineta and an executive-level policy committee, and with 2025 in mind, six government agencies and representatives from the private sector worked to direct and coordinate research, identify and resolve critical policy issues, and invest in necessary infrastructure and technology. A Joint Planning and Development Office would coordinate the transformation effort. In 2003, Congress established a charter to create NextGen by the year 2025 and established a multi-agency committee to carry out the plan to include the Department of Transportation, FAA, NASA, Departments of Transportation and its Federal Aviation Administration, the National Defense, Commerce, and Homeland Security, and the White House Office of Science and Technology Policy. (See January 27, 2004; July 18, 2006.)

December 16, 2004: FAA Administrator Marion Blakey announced a revised presidential policy on the global positioning system (GPS). The new policy strengthened interagency management of GPS, with a National Executive Committee co-chaired by the Deputy Secretaries of Defense and Transportation. In terms of civil aviation, the policy made it clear that the U.S. remained firmly committed to provide a robust GPS signal free of direct user chargers. The policy directed the Departments of Defense and Transportation to ensure that GPS civil services exceed or at least be equivalent to services provided by the European Galileo system.

December 21, 2004: FAA released its "10-Year Strategy for the Air Traffic Controller Workforce," a staffing plan that called for hiring 12,500 controllers over ten years to cover projected total retirement and non-retirement controller losses. The level of hiring reflected the required lead time for training and maintained the appropriate ratio between developmental and fully certified controllers. The plan also outlined the expedited training actions FAA would initiate to ensure there were enough recruits in the pipeline to replace the more than 11,000 controllers expected to leave the agency between 2005 and 2014. (See August 24, 2006.)

December 23, 2004: President George W. Bush signed the Commercial Space Launch Amendments Act of 2004 (Public Law 108-492). The legislation gave FAA authority to regulate manned suborbital flight. (See July 2, 2004; February 11, 2005.)

December 29, 2004: Effective this date, the FAA and Research and Special Programs Administration (RSPA) banned cargo shipments of non-rechargeable lithium batteries aboard passenger flights, saying these batteries posed a fire hazard when transported in the cargo hold of passenger aircraft. Airline passengers were allowed to carry on board and use, or pack in checked bags, personal computers and other consumer products that contain lithium batteries. The ban applied to all U.S.-carrier flights and those of foreign carriers into and out of the United States. (See October 8, 2010.)

2005

January 20, 2005: At 4:01 a.m. eastern standard time, air traffic controllers inaugurated Reduced Vertical Separation Minima (RVSM), a new procedure designed to allow aircraft to fly more direct routes at the most fuel-efficient altitudes, saving time and money for airlines and travelers alike. Controllers began directing planes to fly 1,000 feet above and below each other at altitudes of 29,000 feet to 41,000 feet. Although invisible to passengers, the procedural change doubled airspace routes at the affected altitudes and greatly increased the routing options available to pilots and air traffic controllers. Before commercial airlines and other aviation users could take advantage of RVSM, FAA would first determine if their aircraft were properly equipped. Canadian, Mexican, Caribbean, and South American civil aviation authorities also began RVSM on this date. (See November 26, 2003.)

January 22, 2005: The engineered materials arresting system installed at New York’s John F. Kennedy International Airport successfully stopped a Boeing 747-200 cargo aircraft that overran the runway. (See May 30, 2003; July 17, 2006.)

February 1, 2005: FAA announced selection of a team headed by Lockheed Martin to take over services provided currently by the agency’s automated flight service stations. The total evaluated cost of the five-year contract, with five additional option years, was $1.9 billion and represented estimated savings of $2.2 billion over the next ten years. After careful review, FAA had formally announced in December 2003 that its flight service stations met the criteria for competitive sourcing and that it would conduct a competition under OMB's Circular A-76 guidelines for an improved way to provide flight service operations. FAA then evaluated five competing service providers, including the incumbent government organization, to determine the best value to the government for the delivery of effective services to support safe and efficient flight. Lockheed Martin assumed operation of the flight service stations in October 2005. Incremental consolidation of the 58 current flight service stations would begin in April 2006 and was expected to result in 20 sites by the end of March 2007. *October 4*, the responsibility for flight services transitioned seamlessly from FAA to Lockheed Martin. (See May 2004; September 2010.)

February 1, 2005: Citing FAA's high priority on cost accounting and the routine use of such information in FAA decision making, GAO announced it had removed the agency from its high risk list for financial management.

February 2, 2005: A Bombardier Challenger CL-600-1A11, during takeoff, ran off the departure end of runway 6 at Teterboro Airport, in New Jersey. The aircraft continued through an airport perimeter fence, crossed a six-lane highway, struck a vehicle, entered a parking lot, and finally impacted a building. The two pilots were seriously injured, as were two occupants in the vehicle. The cabin aide, eight passengers, and one person in the building received minor injuries. *October 31, 2006*, the National Transportation Safety Board determined that the probable cause of the accident was the flight crew's failure to ensure the airplane was loaded within weight and balance limits compounded by their attempt to take off with the center of gravity beyond the aircraft's forward takeoff limit. This improper weight distribution prevented the airplane from achieving the required rotation speed.

February 11, 2005: FAA released draft safety guidelines for space tourism, in anticipation of developing final regulations no later than June 2006. The draft guidelines would require a reusable launch vehicle operator to inform space tourists, in writing, about the safety record of the vehicle they would fly on and compare that record with those of other manned space vehicles. After being given time to ask questions about the risks of flight, passengers would be required to provide written consent prior to flight. Each passenger also would receive safety training on how to respond to any credible emergency situations – which were likely to include cabin depressurization, fire, smoke, and emergency egress. (See December 23, 2004; June 1, 2005.)

February 24, 2005: FAA proposed a series of significant upgrades to aircraft "black boxes" that would increase the quality, quantity, and survivability of recorded data. The notice of proposed rulemaking would require installation of more rugged flight data recorders and cockpit voice recorders designed to give accident investigators more information. The new rules – which would apply to air carriers, other operators, and aircraft manufacturers – would increase the duration of recordings, increase the data recording rate of certain digital parameters, and improve the reliability of the power supply. All data-link messages sent to an aircraft would have to be recorded, and operators would be required to retrofit all aircraft equipped with ten or more seats. (See August 18, 2003.)

March 23, 2005: FAA published a final rule in the *Federal Register* regarding the Non-Hub Pilot Program and related changes to Part 158 mandated by Vision 100 – Century of Aviation Reauthorization Act.

March 28, 2005: FAA formally delayed – until April 6, 2006 – the deadline by which Part 145 repair stations must establish an approved training program. FAA called the one-year delay necessary because the agency had not yet released guidance material to help repair stations develop appropriate training programs. (See June 16, 1999; March 10, 2006.)

April 1, 2005: FAA proposed a rule that would require operators of more than 800 Boeing aircraft registered in the U.S. to replace or modify certain insulation blankets over the next six years. Aircraft insulation blankets protect the passengers and crew from

engine noise and frigid temperatures at high altitudes. The discovery that some insulation blankets coated with a film called AN-26 no longer met the standards for preventing the spread of fire had prompted the proposed airworthiness directive. (See September 2, 2003; January 28, 2004.)

April 25-26, 2005: FAA began a two-day forum with aviation industry representatives to discuss changing the way FAA was funded. The agency wanted to initiate debate on a variety of funding alternatives. At the time, FAA was drawing much more of its annual budget from the aviation trust fund than from the government's general fund. The aviation trust fund, however, was due for congressional reauthorization in 2007. Attendance at the forum was by invitation only, and media were not admitted. Department of Transportation Secretary Norman Mineta, FAA Administrator Marion Blakey, Department of Transportation Inspector General Kenneth Mead, and other FAA officials addressed the forum. Representatives of other countries' aviation systems talked about their own funding models. One funding proposal under consideration was allowing FAA raise public debt to replace and modernize aviation infrastructure.

May 2005: The Supreme Court declined to hear a case brought by a group of pilots against FAA. In Dallas E. Butler et al., Petitioners v. FAA, 12 Southwest pilots challenged a FAA rule dating to 1960 that grounded Part 121 airline pilots at age 60, arguing that FAA should consider the health and skills of each pilot.

June 1, 2005: FAA proposed adding procedures for obtaining a voluntary safety approval to its commercial space transportation regulations. If the agency raised no objection to its launch vehicle, reentry vehicle, safety system, process, service, or personnel, the safety approval holder could then offer its equipment or personnel to prospective launch and reentry licensees for use within a defined and proven envelope. (See February 11, 2005; December 29, 2005.)

June 23, 2005: FAA announced that the Advanced Technologies and Oceanic Procedures (ATOP) system was operational at the New York Air Route Traffic Control Center. The ATOP system provided safe separation of aircraft in areas, such as over the ocean, that were outside radar coverage or direct radio communication. It detected conflicts between aircraft and provided satellite data link communication and position information to air traffic controllers. ATOP also reduced the workload on controllers through the use of electronic flight strips instead of the labor-intensive paper strip method used for decades to track trans- oceanic aircraft. *October 31*, ATOP became operational at the Oakland, California, air route traffic control center. (See June 30, 2004; April 3, 2007.)

June 2005: FAA directed inspectors to increase oversight of Part 135 operations to ensure that those using a "d/b/a" or "doing-business-as" name were doing so properly and complying with regulations. A five-page notice issued to all Part 135 principal operations inspectors clarified the use of a d/b/a and focused attention on who had operational control of an aircraft. FAA issued the notice to address concerns that arose during the investigation of the Challenger runway overrun accident at Teterboro, New Jersey airport in February 2005.

July 10, 2005: Following an unsuccessful three-year bargaining process, with two years of negotiations, FAA implemented its final contract proposal with National Air Traffic Controllers Association (NATCA) multi-unit employees. The contract covered about 1,900 employees from ten smaller union groups that included engineers, inspectors, accountants, nurses, administrative employees, and computer specialists. Unable to reach a voluntary agreement in 2004, the parties had called on the Federal Mediation and Conciliation Service (FMCS). When the FMCS could not remove the impasse, NATCA had sought relief from the Federal Service Impasse Panel. On January 9, 2004, the impasse panel had elected not to assert jurisdiction. FAA had forwarded the contract stalemate to Congress on January 30, 2004. Under the law, Congress had the power either to resolve the stalemate or, by default, allow the agency to implement its final proposal. (See January 30, 2004; July 18, 2007.)

July 13, 2005: FAA and the National Air Traffic Controllers Association began contract negotiations. (See December 9, 2003; November 28, 2005.)

July 29, 2005: Effective this date, FAA terminated a program that had assigned controllers, full-time, at the agency headquarters to provide controller liaison and feedback on modernization programs.

August 1, 2005: FAA requested the air traffic control towers at all airports to assess their current need to use the taxi into position and hold procedure. This procedure was designed to allow aircraft to taxi onto a runway and hold while awaiting clearance from the tower. Facilities needing to employ the procedure were asked to confirm and verify that operational requirement.

August 4, 2005: Effective this date, FAA adopted a new noise standard to ensure that the latest available noise reduction technology was incorporated into new aircraft designs for subsonic jet airplanes and subsonic transport category large airplanes. The new standard, stage 4, was to apply obligatorily to any entity submitting an application for a new airplane type design on and after January 1, 2006, and could be applied voluntarily prior to that date. This noise standard was intended to provide uniform noise standards for stage 4 airplanes being certified in the United States as well as for airplanes that met Annex 16, Chapter 4 of the noise standard published by the International Civil Aviation Organization.

August 11, 2005: Effective this date, a special federal aviation regulation (SFAR) allowed passengers to use certain portable oxygen concentrator devices on aircraft, provided certain conditions were met. The rule required passengers to carry the devices on board and mandated a battery-packaging standard necessary for the safe carriage of extra batteries in carry-on baggage.

August 25, 2005: FAA announced that it would not mandate the use of child safety seats on airplanes. The agency explained that its analyses showed that, if forced to purchase an

extra airline ticket, families might choose to drive to their destination, a statistically more dangerous way to travel. (See September 26, 2005.)

August 29, 2005: Hurricane Katrina, which had formed over the Bahamas on August 23, crossed southern Florida as a category 1 hurricane. It then strengthened in the Gulf of Mexico, made its second and third landfalls as a category 3 storm in southeast Louisiana and at the Louisiana/Mississippi state line. The storm surge caused severe damage along the Gulf Coast, closing all airports in the region. *September 1*, both runways at New Orleans International Airport were restored to 24-hour availability for hurricane relief flights, as FAA worked to repair air traffic control facilities at this and other airports hit by Katrina. FAA said New Orleans could handle nine landings per hour, but only in visual flight rule conditions. *September 2- 7*, FAA personnel supported the largest airlift operation on United States soil, Operation Air Care. *September 8*, FAA restored scheduled, commercial passenger service to the Gulfport-Biloxi, Mississippi, airport, with two roundtrip flights originating from Memphis, Tennessee. *September 13*, FAA restored scheduled, commercial passenger service to Louis Armstrong New Orleans airport, with two roundtrip flights originating from Memphis.

September 9, 2005: FAA reissued a final rule, with a June 6, 2006 compliance date, creating a second-in-command (SIC) type rating. A requirement put forward by the International Civil Aviation Organization mandated the SIC rating for pilots engaged in international operations. When first released on August 4, 2005, this rule had carried an effective date of September 6, 2005.

September 18, 2005: Tropical Storm Rita formed over the Turks and Caicos Islands in the Caribbean and moved toward the Florida Keys. *September 20*, the tropical storm was recategorized as a hurricane, and FAA closed the air traffic control tower at the airport in Key West, Florida. *September 22*, FAA reopened the air traffic control tower in Key West. *September 24*, Hurricane Rita made landfall between Sabine Pass, Texas, and Johnsons Bayou, Louisiana, as a category 3 hurricane. The storm surge caused extensive damage along the Louisiana and extreme southeastern Texas coasts and completely destroyed some coastal communities. The Lake Charles Regional Airport in Louisiana and Beaumont-Port Arthur Airport in Texas closed because of damage. FAA instituted a temporary flight restriction along the Texas and Louisiana coast area to support relief and recovery operations. *September 26*, FAA opened its air traffic control tower at Beaumont-Port Arthur Airport in Texas for visual flight operations only. FAA resumed visual flight operations at the Lake Charles Regional Airport tower in Louisiana, and reopened the Terminal Radar Approach Control facility at the airport.

September 26, 2005: FAA officially opened its Early Dispute Resolution Center at FAA headquarters. Earlier in the year, the Administrator had announced plans to open such an office in response to low marks in the area of conflict management and resolution that the agency had received on the most recent employee attitude survey.

September 26, 2005: Secretary of Transportation Norman Mineta signed a Memorandum of Understanding between the Department of Transportation, FAA, and the National

Academy of Sciences to establish the Airport Cooperative Research Program (ACRP). FAA funded ACRP at $10 million per year from Airport Improvement Program funds to conduct research on problems shared by airports.

September 26, 2005: Effective this date, FAA amended its operating regulations to allow the use of FAA-approved child restraint systems (CRSs) on board aircraft. Current FAA regulations did not allow the use of CRSs other than those that meet specific standards for the automobile environment. (See August 25, 2005; September 2006.)

September 28, 2005: FAA issued the first airworthiness certificate for a civil unmanned aerial vehicle (UAV), the General Atomics Altair. The Altair's FAA airworthiness certificate was in the "Experimental" category and limited flights to research and development, crew training, or market survey. The agency specified a number of safety conditions for the Altair's operation – including weather, altitude, and geographic restrictions, as well as a requirement for a pilot and observer. FAA also collaborated with manufacturers to collect vital technical and operational data that would improve UAV regulatory processes. In addition, FAA asked RTCA, a group that frequently had advised the agency on technical issues, to help develop UAV standards. (See June 1, 2010.)

October 3, 2005: FAA codified the requirements of the Advanced Qualification Program (AQP), provisions that had previously been contained in a Special Federal Aviation Regulation that expired on October 2, 2005. AQP would continue as an alternative regulatory program for airlines seeking more flexibility in training than the traditional training program allowed.

October 6, 2005: FAA proposed regulatory changes affecting wiring systems and fuel tank systems in transport category airplanes. First, to organize and clarify design requirements for wire systems, it proposed to create a single section of the regulations specifically for wiring and new certification rules and then move existing regulatory references to wiring into that section. It also proposed to require holders of type certificates for certain transport category aircraft to analyze their fleets and make the necessary changes to existing instructions for continued airworthiness that would improve maintenance procedures for their wire systems. (See August 16, 2001; December 10, 2007.)

October 7, 2005: President George W. Bush signed Public Law 109-87, which authorized the Secretary of Transportation to provide grants-in-aid for emergency repairs to airports damaged by Hurricanes Katrina and Rita. The law specified that such emergency aid be funded from FY 2005 and 2006 unobligated funds already appropriated to the Airport Improvement Program. The law also waived all federal matching fund requirements.

October 16, 2005: FAA migrated payroll responsibilities to the Department of Interior's Federal Personnel and Payroll System, the last of the Department of Transportation modal administrations to transition to the new service provider.

October 27, 2005: FAA implemented new air routes along the East Coast that cut flight delays and saved fuel. Called the Florida Airspace Optimization Plan, the new routes made significant changes to airspace controlled by air traffic control centers in Washington, Jacksonville and Miami, and various approach controls in Florida. The plan created more efficient routings from points north to Florida.

October 27, 2005: Runway 17/35 opened at Minneapolis-St. Paul International Airport.

November 14, 2005: FAA proposed rules that, over seven years, would require retrofit of more than 3,200 existing, as well as manufacture of certain new large passenger jets, to reduce flammability levels of fuel tank vapors. The notice of proposed rulemaking would require aircraft operators to reduce the flammability levels of fuel tank vapors both on the ground and in the air to remove the likelihood of a potential explosion. Boeing 737, Boeing 747, and Airbus A320 models would be retrofitted first. (See July 30, 2004.)

November 14, 2005: Effective this date, FAA established the Organization Designation Authorization (ODA) program. The ODA program expanded the scope of approved tasks available to organizational designees; increased the number of organizations eligible for organizational designee authorizations; established a more comprehensive, systems-based approach to managing designated organizations; and set phase-out dates for then-current organizational designee programs.

November 28, 2005: FAA Administrator Marion Blakey called for federal mediation to help the agency reach a voluntary contract agreement with the air traffic controllers union. FAA's request, hand- delivered to the National Air Traffic Controllers Association, sought help from the Federal Mediation and Conciliation Service to reach a voluntary agreement after four and a half months of negotiations. FAA's contract proposal maintained the base-pay of in-service controllers while still taking steps to bring in new hires at a lower pay scale – one that narrowed the pay gap between controllers and the rest of FAA's safety focused employees. While the existing contract had technically expired on September 30, a clause had allowed it to remain in place so long as talks had continued. (See July 13, 2005; April 3, 2006.)

December 5, 2005: Russ Chew, chief operating officer of the FAA's Air Traffic Organization (ATO), announced the restructuring of ATO administrative and support functions in the field. The number of service areas was reduced from nine to three and flight service areas from three to two. By eliminating duplication of administrative and support services, the agency expected to reduce the ATO's operating costs by an estimated $360-$460 million over the next ten years. (See March 25, 2004; June 26, 2006.)

December 7, 2005: FAA announced it had completed deployment of a new mission-critical communications gateway that processed radar and flight data in all 20 en route air traffic control centers. Called the En Route Communications Gateway (ECG), the system consolidated all gateway functions into a single system. It provided the foundation to support new communications sources and new radar/surveillance sources, such as ADS-

B. The design of the new system also allowed for easy integration with FAA's En Route Automation Modernization (ERAM) program, a key element in the agency's overall air traffic modernization effort. The ECG replaced the Peripheral Adapter Module Replacement Item (PAMRI), using modern communications protocols and modular, scalable hardware components. PAMRI was a single point of failure in the en route air traffic control infrastructure. The first ECG went operational in Seattle in 2003. The final site to go operational was Miami in October 2005. (See June 11, 2001.)

December 8, 2005: The engineered materials arresting system installed at Chicago's Midway Airport successfully stopped Southwest Airlines Flight 1248 that overran the runway. (See May 30, 2003; October 13, 2006.)

December 19, 2005: A Grumman Turbo Mallard amphibious airplane, on a regularly scheduled passenger flight to Bimini, Bahamas, experienced an in-flight separation of its right wing from the fuselage and crashed into the shipping channel adjacent to the Port of Miami shortly after takeoff. Two flight crewmembers and 18 passengers on board were killed; the airplane was destroyed by impact forces. *May 30, 2007*, the National Transportation Safety Board determined the probable cause of the crash was the failure and separation of the right wing, which resulted from the failure of Chalk's Ocean Airways' maintenance program to identify and properly repair fatigue cracks in the wing, and the failure of FAA to detect and correct deficiencies in the company's maintenance program.

December 20, 2005: FAA announced the inception of a new navigation procedure at Ronald Reagan Washington National Airport. The Required Navigation Performance (RNP) initiative took advantage of a plane's onboard navigation capability to fly a more precise flight path into the airport. The Reagan National RNP approach to Runway 19 allowed planes to land with considerably lower cloud ceilings and visibility than previously required. The procedure was used by any operator who could meet specific FAA requirements for aircraft navigation performance and pilot training. Alaska Airlines, the first air carrier authorized by FAA to use the RNP procedures at Reagan National, had pioneered the use of RNP procedures at Juneau and other airports in Alaska. Besides introducing the new procedure at Reagan National, FAA authorized RNP procedures at Juneau, Alaska; San Francisco and Palm Springs, California; Portland, Oregon; and Hailey (Sun Valley), Idaho. (See July 25, 2003; July 2006.)

December 22, 2005: Runway 18R/36L opened at Cincinnati/Northern Kentucky International Airport.

December 29, 2005: In response to the requirements of the Commercial Space Launch Amendments Act of 2004, FAA proposed rulemaking to affect human space flight of crew and space flight participants. If adopted, the proposed rule would establish requirements for crew qualifications, training, and notification. It also would establish training and informed consent requirements for space flight participants. The regulation would also modify how financial details affecting space flight participants and crew

would be accounted for and, though an additional regulation, how experimental permits would be issued. (See June 1, 2005; August 25, 2006.)

2006

January 3, 2006: The Federal Service Impasse Panel ruled that contract negotiations between FAA and its systems technicians would begin on February 6 and continue through July 21. The contract between FAA and the Professional Airways Systems Specialists expired in July 2005, but no new negotiations had begun because the agency and the union could not agree on a timetable. (See March 30, 2006.)

January 11, 2006: FAA withdrew a rule that would ease Part 121 oxygen requirements after the National Transportation Safety Board warned the rule was based on faulty data and could jeopardize safety. In November 2005, FAA had raised the altitude, to flight level 350, at which a pilot must put on an oxygen mask when the other pilot left the control station. With the rescinding of this less rigorous requirement, pilots left alone at the controls were still required to use their masks at altitudes above flight level 250.

January 30, 2006: FAA announced that an international financial and accounting services firm validated the agency’s calculation that the average 2005 air traffic controller compensation package exceeded $166,000. Other independently validated figures revealed that, between 1998 and 2005, controller compensation had increased by 75 percent and the wage gap between controllers and all other FAA employees had doubled. Cost data used to reach these wage determinations were also independently shown to be consistent with the agency’s accounting system and its audited financial statements. FAA had begun contract negotiations with the union on July 13, 2005. The existing contract had expired on September 30, 2005, but an evergreen clause had allowed the original contract to remain in place so long as talks were ongoing. (See November 28, 2005; April 3, 2006.)

March 1, 2006: Effective this date, U.S. parties interested in transmitting certain types of financial interests (or prospective interests) to the international aircraft registry had to file a completed FAA entry point filing form (International Registry, AC Form 8050-135) with FAA. Upon receipt of the completed form, FAA would issue a unique authorization code. With the establishment of the new international aircraft registry, it was no longer sufficient for U.S. aircraft buyers or sellers to conduct searches and file documents only with FAA; they now also had to conduct searches and register interests in aircraft and high-value engines at the new international registry.

March 10, 2006: The Aeronautical Repair Station Association (ARSA) challenged FAA in federal court over the legality of the agency's changes to its drug- and alcohol-testing regulations. ARSA filed a petition for review with the U.S. Court of Appeals for the D. circuit, claiming the updated testing regulations represented an "unnecessary burden that provides no aviation safety-related benefits." The court filing argued that FAA violated several federal statutes, including the Administrative Procedure Act and the Regulatory

Flexibility Act. Two repair stations and a non-certified maintenance provider joined the filing. (See March 28, 2005; June 30, 2008.)

March 24, 2006: FAA announced that, within a year, use of the Wide Area Augmentation System (WAAS) would be extended to 200 feet above an airport's surface. WAAS, a satellite-based navigation system, was designed to improve the accuracy, availability and integrity of signals from global positioning system (GPS) satellites. WAAS was expected, eventually, to enable the agency to remove a portion of its existing ground-based navigation infrastructure, and thus reduce operational costs, while still improving capacity and safety. Originally commissioned in July 2003, WAAS was initially approved to provide vertical guidance down to 350 feet. Localizer performance with vertical guidance procedures down to 250 feet was later developed to take advantage of the increased performance provided by WAAS. (See July 11, 2003; October 19, 2007.)

March 30, 2006: PASS accepted FAA's contract proposal. However, the union's bargaining team made it clear to FAA that, although it did not think the agency's offer was fair or reasonable, it would leave the decision to its voting members. *August 3*, FAA system specialists voted to reject the agency's contract offer and called for the agency to return to the bargaining table. The Professional Airways Systems Specialists (PASS) union said its members rejected the contract by a margin of 98 percent. The rejection was anticipated because PASS had recommended that its members vote against the contract offer. Because PASS nominally accepted the FAA proposal as a tentative agreement, FAA had to await the conclusion of the voting process before taking any other action. (See January 3, 2006.)

March 2006: A U.S. Equal Employment Opportunity Commission judge ruled that controllers fired by President Reagan after the 1981 strike could proceed with a class action suit against FAA. Specifically, they could argue that age discrimination had prevented their rehiring. In the suit, the Professional Air Traffic Controllers Organization (PATCO) said FAA had not hired any PATCO controllers since 1999. Other discriminatory practices listed by PATCO included the use of separate applicant pools, and hiring quotas for PATCO members.

April 3, 2006: FAA and the National Air Traffic Controllers Association (NATCA) exchanged their final contract proposals. *April 6*, FAA declared that, as it had reached an impasse with the controllers union after nine months of contract talks, only congressional action could prevent the agency from imposing its latest contract offer without union agreement. *April 25*, FAA officially ended contract negotiations with NATCA. *June 5*, FAA announced it would begin imposing its preferred contract terms on the controller work force. Under existing statutory rulings, the agency could impose its contract terms if Congress failed to overturn the agency's proposal within a 60-day window. FAA had sent its contract proposal to Congress in April and the deadline for congressional action was June 4. FAA Administrator Marion Blakey said that, although the previous contract was officially terminated as of the previous day before, the work and pay rules of that contract would remain in effect while the new rules were phased in. She also commented in a

letter to employees that this transition process could take several months. (See November 28, 2005; August 2007.)

April 13, 2006: Runway 11/29 opened at Lambert-St. Louis International Airport.

May 16, 2006: Atlanta Hartsfield International Airport commissioned its fifth runway and dedicated its new 396 foot air traffic control tower.

May 20, 2006: Runway 10/28 opened at Hartsfield-Jackson Atlanta International Airport.

June 7, 2006: FAA posted an announcement in the *Federal Register* that all Federal Aviation Regulations, Part 121, 135 and 91(K) operators would be issued a new operations specification (Ops Spec) or management specification (MSpec) requiring completion of a new en route landing distance assessment for all their turbojet aircraft. This calculation was to take into consideration runway conditions and allow a full-stop landing, on a given runway, with at least a 15-percent safety margin beyond the actual landing distance – according to the conditions existing at the time of arrival, and with deceleration means and other conditions appropriate to the and airplane being used. The calculation was to be staged as close to the time of arrival as practicable. Previous regulations had only mandated that calculations such as these be made prior to the departure of the aircraft.

June 26, 2006: FAA instituted a new Air Traffic Organization service center unit. Three service centers replaced the nine service area offices within en route, terminal, and technical operations. Each of the service centers was made up of five functional groups: administrative services, business services, safety assurance, system support, and planning and requirements. A sixth group, engineering services, was a shared resource and remained in place in the existing locations. (See December 5, 2005; May 8, 2008.)

June 2006: FAA delayed until January 1, 2007, proposed changes in aircraft registration policies that would have severely limited the ability of aircraft owners to request "priority service" in connection with declarations of international flights. Citing an increasingly heavy workload and the observation that many operators routinely requested priority service even if it was really not needed, officials at FAA's aircraft registration organization sought to limit priority handling for international flights to one request per aircraft in any three-month period.

July 7, 2006: Effective this date, Department of Transportation Secretary Norman Mineta resigned his post. (See January 25, 2001; October 24, 2006.)

July 13, 2006: FAA announced plans to phase in a new program designed to reduce the number of flight delays and bring an estimated $900 million in cost savings to the airlines and the flying public. The airspace flow program was designed to allow air traffic controllers to delay only those flights that were expected to encounter extremely bad weather. As a result, the program was expected to minimize the crippling effects of the sudden thunderstorms that frequently affected the nation’s airspace system during the

summer travel season. On a single severe weather day in this high peak season, thousands of flights often have been delayed, diverted or canceled, affecting hundreds of thousands of passengers and resulting in millions of dollars in operating losses for carriers.

July 17, 2006: The engineered materials arresting system installed at Greenville Downtown Airport, Greenville, SC, successfully stopped a Mystere Falcon 900 aircraft that overran the runway. (See January 22, 2005; July 18, 2008).

July 18, 2006: FAA Administrator Marion Blakey and European Commission Vice President Jacques Barrot signed a memorandum of understanding (MOU) that secured enhanced cooperation toward building a more efficient and seamless air traffic system between Europe and the United States. The MOU focused on building administrative bridges between the United States' NextGen and the Commission's Single European Sky Air Traffic Management Research (SESAR) airspace modernization programs. In addition to annual meetings and regular, informal communications between FAA and the Commission, the MOU formalized pre-existing exchanges for facilitating enhanced understanding of these international programs. The memorandum acknowledged the importance of participation by both European and U.S. industry in each other's air traffic modernization efforts. (See May 16, 2007; June 18, 2010.)

July 27, 2006: Eclipse Aviation won FAA provisional certification for the Eclipse 500 very light jet. (See April 2007.)

July 2006: FAA's performance-based operations aviation rulemaking committee, a government and industry group, released the second version of the "Roadmap for Performance-Based Navigation." The first road map, released in 2003, covered concepts and principles, but included very few details. The revised version spelled out how FAA planned to proceed in the near-term (2006-10), mid-term (2011-15), and far-term (2016-25), and outlined dates for mandates on the types of equipment that would be needed by the airlines, business aircraft, and general aviation operators. The near-term period focused on the investment aircraft operators had already made in avionics and FAA spending on satellite-based navigation. It included the wide-scale rollout of RNAV procedures, including the instrument departures and arrivals commissioned at airports such as Atlanta Hartsfield-Jackson International and Dallas-Fort Worth International. (See December 20, 2005; August 6, 2007; March 2007.)

August 24, 2006: FAA released an updated air traffic controller workforce plan designed to address the anticipated retirement and replacement of air traffic controllers over the coming decade. The revised document outlined the agency's plans to hire more than 11,800 new air traffic controllers over the next ten years. The plan was the first update to A Plan for the Future: The Federal Aviation Administration's "10-year Strategy for the Air Traffic Control Workforce," which FAA released in December 2004. The revised plan was based on updated traffic forecasts, experience with productivity increases, actual retirements, and improved mathematical models. As part of the revised plan, FAA planned to hire 930 controllers by the end of fiscal year 2006. The plan also addressed the broader need to hire more than 11,800 controllers over the next ten years based on the

latest attrition and traffic growth modeling. It outlined how FAA would bring on new controllers using a schedule designed to provide adequate training lead-time and to address changing air traffic demands over the coming decade. In addition to the hiring schedule, the plan addressed steps the agency was taking to improve the training process for new controllers. (See December 21, 2004; March 7, 2007.)

August 25, 2006: FAA and U.S. Air Force Space Command issued new, common federal launch safety standards designed to create consistent, integrated space launch rules for the nation. The rule strengthened public safety by harmonizing launch procedures that identified potential problems early and by implementing a formal system of safety checks and balances. The new FAA regulations governed commercial launch operations at federal and non-federal launch sites. (See December 29, 2005; December 15, 2006.)

August 27, 2006: Comair Flight 5191 crashed at the Lexington Blue Grass Airport; 48 of the 49 people on board died in the crash. In pre-dawn darkness, the crew had turned the aircraft onto a 3,500-ft. inoperative VFR-day Runway 26 instead of the 7,000-ft. departure Runway 22, a 40-degree heading difference. The aircraft had run out of concrete during the takeoff roll and crashed into a perimeter fence.

September 25, 2006: A report issued by the Department of Transportation Inspector General outlined a host of problems with FAA's "RESULTS" contracting program, but acknowledged that FAA had moved quickly to shut the program down. The audit was launched at the request of Senators Chuck Grassley (R-Iowa) and Tom Coburn (R-Oklahoma) after a whistleblower highlighted examples of waste and abuse. One of three such contracting programs used by FAA, RESULTS provided a list of 142 pre-qualified vendors to which the agency could award support contracts. Since its inception, the program had awarded more than 114 contracts with a potential value of $543 million. The whistleblower uncovered abuse in one contract. The Office of the Inspector General widened its investigation to cover the entire program. The investigation found that because of inadequate program controls, labor costs were much higher than in other FAA contracting efforts. In addition, RESULTS contracts were awarded without sufficient competition or price analysis, and inadequate oversight of contract performance contributed to further cost overruns.

September 2006: FAA approved the first child safety harness that could be used on commercial aircraft. The harness, manufactured by AmSafe Aviation, incorporated belt and shoulder harnesses secured by straps around the seat back and attachments to existing lap belts. The harness was an alternative to hard-shelled child seats that were the only other child restraint parents could carry onto aircraft. (See September 26, 2005.)

September 2006: FAA issued full type certification to the Cessna's entry-level Citation Mustang, making it the first very light jet to achieve that goal.

October 24, 2006: Mary Peters was sworn in as the 15th Secretary of Transportation. (See July 7, 2006.)

October 30, 2006: FAA completed the deployment of the User Request Evaluation Tool (URET) at all 20 air route traffic control centers. URET was a conflict-detection tool that automatically detected and advised air traffic controllers of predicted conflicts between aircraft or between aircraft and other operational elements within the NAS. This strategic planning tool allowed controllers to create alternative conflict-free flight routings and to manage better the changing air traffic or weather conditions. (See May 6, 2002.)

November 23, 2006: Runway 14/32 opened at General Edward Lawrence Logan International Airport.

December 14, 2006: FAA announced that it had issued a type certificate for the double-decker Airbus A380 jet during a ceremony in Toulouse, France. Airbus applied to FAA for certification of the aircraft on August 12, 1998. The A380's size and complexity required FAA to extend its normal five year certification period for a large airliner to seven years to ensure the required standards of safety.

December 15, 2006: FAA issued final regulations for crew and spaceflight participants. The new regulations require a reusable launch vehicle (RLV) operator to inform space tourists, in writing, about the safety record of the vehicle they would fly in, and compare that record with those of other manned space vehicles. After being given time to ask questions about the risks of flight, passengers will have to provide written consent prior to the flight. Each passenger must receive safety training on how to respond to emergency situations – which include cabin depressurization, fire, smoke, and emergency egress. (See August 25, 2006; April 6, 2007.)

2007

January 30, 2007: In a luncheon speech at the National Press Club, FAA Administrator Marion Blakey proposed a rule change that would allow pilots to fly until they were 65 years of age. Under the proposal, if one pilot on a flight were older than 60, the other pilot in the cockpit would have to be younger than 60. This would be a change from the mandatory retirement age of 60, which had been in effect since 1960. Before this change could become official, FAA would have to issue a notice of proposed rulemaking and ask for public comment. The agency cautioned it could take years to pass new regulations. *December 11*, the House of Representatives approved a bill to let pilots fly until they reached the age of 65 provided they took medical tests twice a year. It also mandated that airlines must perform additional proficiency checks on pilots over 60. *December 12*, the Senate passed a similar bill allowing pilots to fly until age 65. The new law would take effect immediately if signed by President George W. Bush. (See December 13, 2007.)

February 14, 2007: FAA unveiled a proposal to finance its operations and air traffic control modernization through a complex system of user fees and fuel taxes, plus new authority to issue bonds. The proposal was included in a draft FAA reauthorization bill containing financial provisions would last for ten years and other provisions with a three-year life. In October 2008, after the first year of the reauthorization, the FAA would drop the current taxes and fees that provided revenue to the aviation trust fund – mainly a 7.5

percent excise tax on airline tickets. In place of these revenue sources, the agency it would initiate user fees that would raise 53 percent of its total budget; retain and increase fuel taxes that, with reduced international passenger taxes, would provide an additional 28 percent; and rely on the general fund – derived from government-wide taxes and other revenues – for the remaining 19 percent of the budget. Under the proposal, as the airline's share of revenues decreased, aviation's total business share, derived from fees paid by corporate operators, would grow. Additionally, general aviation would pay a higher fuel tax – raised from 20 cents to about 70 cents per gallon.

February 15, 2007: Effective this date, FAA established regulations governing the design, operation, and maintenance of certain airplanes that flew long-range, regularly scheduled commercial routes over remote areas. The rule changed the current limitations and opened routes for twin-engine passenger and cargo planes. It also set uniformly high standards for all commercial passenger planes flying routes more than three hours from an airport. The final rule codified FAA policy, industry best practices and recommendations, as well as international standards designed to ensure safety on long-range flights. To ease the transition for current operators, this rule delayed the compliance dates pertaining to certain requirements applicable to Extended Range Operation with Two-engine Airplanes, or ETOPS. (See November 10, 2003.)

February 23, 2007: Russ Chew, FAA Air Traffic Organization Chief Operating Officer resigned from the agency. Administrator Marion Blakey assigned COO responsibilities to deputy administrator Robert Sturgell as collateral duties. (See June 10, 2003; October 1, 2007.)

March 7, 2007: FAA released an updated plan to hire air traffic controllers over the next ten years. The plan provided a range of authorized controller staffing numbers for each of the FAA's 314 staffed facilities across the country, giving the agency greater flexibility to match the number of controllers with traffic volume and workload. The agency had planned to hire and train more than 15,000 controllers over the next decade, and the updated plan called for hiring nearly 1,400 new controllers by year's end. (See August 24, 2006; April 4, 2012.)

March 15, 2007: Effective this date, FAA implemented a final rule setting safety and oversight rules for a broad variety of sightseeing and commercial air tour flights. The rule standardized requirements for air tour operators and consolidated air tour safety standards. It required operators, including some who were not previously covered, to meet the safety requirements in the expanded national air tour safety standards of the federal aviation regulations. These provision included requirements for enhanced passenger briefings before takeoff, life preservers and helicopter floats for certain over water operations, and the submission of helicopter performance plans. The rules also applied to the growing air tour industry offering tours of national parks. (See November 27, 2002.)

March 23, 2007: FAA dedicated its newest air traffic control facility in Guam. With oversight responsibility for nearly 200,000 square miles of airspace in the South Pacific,

the new Guam Center would consolidate a number of air traffic functions in a single location. It would house en route and terminal radar air traffic control, a new air traffic control tower for the local international airport, and a technical operations division.

March 2007: FAA selected Naverus Inc., as the first FAA-approved Required Navigation Performance (RNP) consultant to help airlines qualify to fly RNP procedures in the U.S. Intending to accelerate the transition from ground-based to satellite-based navigation, the agency had decided to allow third parties to become involved. Broadening the use of RNP would allow minimums to be lower than otherwise possible during instrument approaches and would eventually allow reduced separation of aircraft. Naverus would advise airlines on how to qualify to fly RNP procedures, as outlined in FAA Advisory Circular 90-101. (See July 2006; May 10, 2012.)

April 2, 2007: Runway 7R/25L opened at Los Angeles International Airport.

April 3, 2007: FAA announced completion of Advanced Technologies and Oceanic Procedures (ATOP) deployment with the installation at the Anchorage Air Route Traffic Control Center. ATOP was already deployed at FAA centers in Ronkonkoma, New York, and Oakland, California, providing air traffic service over the Atlantic and Pacific regions respectively. This technology enabled controllers to separate aircraft in areas outside radar coverage or direct radio communication, such as over oceans. It also detected conflicts between aircraft and provided satellite data link communication and position information to air traffic controllers. (See June 23, 2005.)

April 6, 2007: FAA released new guidelines allowing developers to obtain one-year experimental launch permits for reusable spacecraft. These provisions would give businesses the opportunity to fly and test their vehicles before applying for a FAA launch license. A permit would cover multiple vehicles of a particular design and could be used for an unlimited number of launches. Applicants would have to provide FAA a program description, a flight test plan, operational safety documentation (including a hazard analysis), and a plan for responding to any mishap. None of the flights covered by an experimental permit could be flown for profit, and the permits could be renewed following a favorable FAA review. The agency would determine what kind of design changes could be made to a vehicle before its permit would be invalidated. (See December 15, 2006.)

April 11, 2007: FAA dedicated the new $90 million, 324-foot tall air traffic control tower at Phoenix's Sky Harbor International Airport. The new tower featured state-of-the-art equipment and design. At 850 square feet, it was twice as tall as the old Phoenix Tower, built in 1977, and could accommodate 11 controllers in a cab three times the size of the previous one. The new TRACON section of the structure, with work stations for 22 controllers, replaced a 50-year old leased building that had accommodated only 13 controllers.

April 26, 2007: FAA proposed new standards to ensure timely activation of airframe ice protection systems on Part 25 aircraft. The proposal would require manufacturers to

provide a means to alert the flight crew when an ice protection system should be activated. The proposal stipulated three options for hazard detection and activation of the ice protection system: supplying a primary system that would activate automatically to alert the flightcrew of realized danger; supplying visual cues that, together with an advisory ice detection system, would alert the flight crew of the first signs of ice accretion; or supplying technology that would identify external conditions conducive to icing and advise the flightcrew to be prepared to activate the protective system. (See May 12, 1997; April 3, 2009.)

April 2007: FAA awarded a production certificate to Eclipse Aviation for the Eclipse 500, one of the first very light jets to be certified. (See July 27, 2006.)

April 2007: The precision runway monitoring system became operational at Atlanta Hartsfield International Airport. The system allowed controllers to land planes almost simultaneously on parallel runways, saving time and simplifying operations.

May 9, 2007: FAA and NASA formalized an educational partnership aimed at developing the next generation aviation and aerospace workforce.

May 15, 2007: FAA released the Future Airport Capacity Task (FACT) 2 report. The study identified six airports and four metropolitan areas in the national airspace system that, despite the effect of currently planned improvements, were likely to be capacity-constrained by 2015 and 2025. It recommended airport planning and development to increase the capacity of the system to meet these anticipated future aviation demands.

May 16, 2007: FAA Administrator Marion Blakey and her counterparts from Canada and Mexico signed a formal agreement establishing a cooperative NextGen strategy group. The agreement encouraged all three countries to share information regarding strategic roadmaps, technologies, and environmental metrics, as well as to coordinate harmonization efforts between North America and the International Civil Aviation Organization. (See July 18, 2006; June 13, 2007.)

May 23, 2007: FAA announced its annual Spring/Summer Plan, called the airspace flow program. The program gave airlines the option of either accepting delays for scheduled flights that would have to fly through storms or flying longer routes to maneuver around adverse conditions. The agency successfully launched the program in 2006 at seven locations in the Northeast. On bad weather days at major airports in the region, delays fell by nine percent compared to the year before. The 2007 plan targeted 18 locations around the country where heavy traffic and weather created the most system delays.

May 23, 2007: FAA announced deployment of adaptive compression, a new software program that would help to ensure that airports affected by bad weather would receive as many flights as could safely fly to them. When storms caused flights to be delayed or canceled, the software program would fill automatically vacant arrival slots with the next available flight. Deployed in March, the software tool effectively reduced delays to save time and money for airlines and passengers.

May 23, 2007: FAA published a final rule in the *Federal Register* modifying Part 158. The change added debt service and air carrier bankruptcy requirements and other miscellaneous changes mandated by the Vision 100 – Century of Aviation Reauthorization Act.

May 24, 2007: FAA and the National Association of Government Employees Local signed a contract covering over 200 air traffic assistants who provided support for air traffic operations in terminal and en route facilities.

June 13, 2007: FAA announced release of the "NextGen Concept of Operation," a document which laid out the blueprint for the development and execution of the NextGen system. (See May 16, 2007; June 2007; September 26, 2007.)

June 22, 2007: Department of Transportation Secretary Mary Peters, FAA Administrator Marion Blakey, and Minister Praful Patel from the Ministry of Civil Aviation in India signed a memorandum of agreement that established the U.S.-India Aviation Cooperation Program, a U.S. government and industry initiative to promote aviation relations and cooperation with Indian counterparts. (See April 6, 2004.)

June 2007: FAA published the first version of its expanded Operational Evolution Partnership (OEP), which laid out the agency's path to NextGen through 2025. The OEP, launched in 2001 to improve capacity, was extended in duration as well as broadened in scope to include FAA's NextGen-related activities. (See June 7, 2001; June 13, 2007; September 26, 2007.)

July 18, 2007: FAA and the National Air Traffic Controllers Association (NATCA) signed the NATCA multi-unit agreement covering approximately 1,200 engineers and architects responsible for the planning, design, and installation of facilities, systems and equipment. Negotiations took place over the course of nine months before the agreement was overwhelmingly ratified by the union membership. This development was expected to help ensure the continuing safety of the national airspace system. (See July10, 2005.)

July 26, 2007: FAA announced it was modifying the restricted airspace over the National Capital Region to make it safer, more secure, and easier for pilots to navigate. The new, circular 30-nautical-mile-radius restricted area eliminated the “mouse ears” shape of the previous air defense identification zone and allowed pilots to use a single navigational aid instead of four. The change, which went into effect on August 30, 2007, freed 33 airports and helipads from difficult restrictions affecting approximately 1,800 square miles of airspace. (See February 10, 2003.)

August 6, 2007: Effective this date, FAA amended its regulations to reflect technological advances supporting Area Navigation, or RNAV. The new provisions updated the use of suitable RNAV systems for navigation and made them more consistent with those of the International Civil Aviation Organization. The regulations also removed all reference to

the middle marker, a previously required component of instrument landing systems, and clarified airspace terminology. (See July 2006; October 7, 2011.)

August 8, 2007: FAA announced an airport surface detection equipment program known as ASDE-X had begun an operational suitability demonstration at Chicago's O'Hare airport. ASDE-X used ground surveillance data collected from a variety of sources, including traditional radar, the Automatic Dependent Surveillance — Broadcast system, and aircraft transponders. Controllers in the tower saw the information presented as a color display of aircraft and vehicle positions overlaid on a map of the airport's runways, taxiways, and approach corridors. The system continuously updated a map of all airport-surface operations that controllers could use to spot potential collisions. The FAA planned to commission the system in about a month. ASDE-X was first tested by the FAA in June 2003 at General Mitchell International Airport in Milwaukee, Wisconsin. The system was declared ready for national deployment several months later. (See February 29, 2004; December 5, 2007.)

August 15, 2007: FAA Administrator Marion Blakey assembled a meeting of over 40 aviation leaders to brainstorm short-term remedies for reducing runway incursions. The one-day meeting involved senior FAA officials and industry executives. Blakey asked the meeting participants to consider solutions in four areas: cockpit procedures, airport signage and markings, air traffic procedures, and technology. The aviation community agreed to a five point short-term plan:

- Within 60 days, teams of FAA, airport operators, and airlines would begin safety reviews at the airports where wrong runway departures and runway incursions were the greatest concern.
- Within 60 days, disseminate information and training across the entire aviation industry.
- Within 60 days, accelerate the deployment of improved airport signage and markings at the top 75 airports, well ahead of the June 2008 mandated deadline.
- Within 60 days, review cockpit procedures and air traffic control clearance procedures.
- Implement a voluntary self-reporting system for all air traffic organization safety personnel, such as air traffic controllers and technicians.
- By focusing new procedures and technology on mid- to long-term goals, maximize situational awareness, minimize pilot distractions, and eliminate runway incursions. (See June 24, 2008.)

August 30, 2007: FAA selected ITT Corporation as the prime contractor for the Automatic Dependent Surveillance – Broadcast (ADS-B) system. Under the terms of the approximately $1.8 billion contract, ITT would build the ADS-B ground stations and would own and operate the equipment. FAA would pay subscription charges to ITT for the transmission of ADS-B broadcasts to suitably equipped aircraft and air traffic control facilities. Along with air traffic displays, ADS-B would provide pilots graphical weather information, terrain maps, and flight information that would include temporary flight restrictions and notices to airmen. The system would alert controllers and pilots alike to the precise location of aircraft, enabling them to negotiate more direct flight routes that

would enhance airspace efficiency, reduce delays, and – most importantly – improve safety. (See July 1, 2002; October 2, 2007.)

August 2007: The Federal Labor Relations Authority (FRLA) issued its rulings on three unfair labor practice complaints filed by the National Air Traffic Controllers Association (NATCA) in April, July, and September 2006. The charges related to the negotiation and implementation of the contract. FRLA concluded that there was no merit to NATCA's claims, FAA had bargained in good faith, and the agency's implementation of the contract was lawful. (See April 3, 2006; December 2007.)

September 4, 2007: FAA approved collection of almost $1.3 billion of Passenger Facility Charge (PFC) revenue at Chicago O'Hare International Airport to finance various projects, including new runways and a runway extension associated with the O'Hare Modernization Program at Chicago, Illinois.

September 5, 2007: FAA issued a final decision for redesigning the New York, New Jersey, and Philadelphia metropolitan area airspace as part of efforts to reduce delays, fuel consumption, aircraft emissions, and noise. FAA held more than 120 public meetings in five states to complete the environmental planning process. The airspace redesign involved a 31,000-square-mile area over New York, New Jersey, Pennsylvania, Delaware, and Connecticut with a population of 29 million residents. Twenty-one airports were included in the study. (See August 4, 2005; February 7, 2008.)

September 13, 2007: Marion Blakey left FAA after serving her five-year term. Robert Sturgell became acting administrator. (See September 13, 2002; September 24, 2007; October 23, 2007; February 7, 2008.)

September 18, 2007: FAA dedicated the new air traffic control tower at Washington Dulles International Airport. The new facility, which had become operational about two months before, supplanted a tower that had been in service since the airport opened in 1962.

September 20, 2007: FAA told airlines it planned to impose a new "level 2" international designation on New York's Kennedy and Newark airports – a classification that would require carriers to supply their summer schedules by October 11. This earlier deadline would apply to flights coming to the area between March 9 and November 1, although FAA would accept schedules that coincided with the International Air Transport Association scheduling season of March 30 through October 25. Level 2 airports were defined by IATA as facilities "where there is considerable potential for congestion at some periods . . . which is amenable to resolution by voluntary cooperation between airlines." New York's LaGuardia and Chicago O'Hare were the only U.S. airports designated as level 3.

September 24, 2007: Ruth Leverenz, FAA assistant administrator for centers and regions, became acting deputy administrator. (See September 13, 2007.)

September 26, 2007: House aviation subcommittee Chairman Jerry Costello (D-IL) accused FAA of not acting aggressively enough to prevent airline over scheduling, and suggested the focus by the agency and airlines on the Next Generation Air Transportation System (NextGen) air traffic control system was a red herring. The chairman said he was pleased, however, FAA asked airlines to supply their summer schedules in advance for New York Newark and Kennedy airports. (See June 13, 2007; March 10, 2008.)

September 30, 2007: FAA announced it had accepted early delivery of a crucial en route air traffic control system from manufacturer Lockheed Martin. The En Route Automation Modernization (ERAM) system had passed all FAA requirement tests. The next phase of operational testing would be primarily conducted by FAA at the William J. Hughes Technical Center. FAA stressed the government acceptance milestone was achieved within budget and ahead of time. ERAM would replace the current HOST system at the 20 air route traffic control centers. (See June 30, 2003.)

October 1, 2007: Henry P. Krakowski became the FAA ATO COO, replacing Russ Chew who left the agency in February. Krakowski came to the FAA from a 29-year career at United Airlines. (See February 23, 2007; April 14, 2011.)

October 2, 2007: FAA proposed an initial set of aircraft avionics requirements designed to enable the transition to the next generation satellite-based air transportation system. The proposal would require all aircraft flying in the nation's busiest airspace to have satellite-based avionics by 2020 so air traffic controllers could use the satellite-based Automatic Dependent Surveillance — Broadcast (ADS-B) system to track them. Aircraft not flying in controlled airspace would not be required to have ADS-B avionics. The proposed rule was open to public comment for 90 days, and was scheduled to become final by late 2009. The proposed compliance date of 2020 would give the industry more than ten years to equip aircraft with ADS-B avionics. (See August 30, 2007; March 10, 2008; May 27, 2010.)

October 19, 2007: FAA announced the expansion of Wide Area Augmentation System (WAAS) coverage into Canada and Mexico, increasing capacity at thousands of general aviation airports across the North American continent. WAAS had already improved the accuracy and integrity of Global Positioning System satellite signals, and provided highly precise approaches that could be used regardless of the weather. Nine new international wide-area reference stations were brought online under the expansion. The Canadian locations included Goose Bay, Gander, Winnipeg, and Iqaluit. The Mexican locations included Mexico City, Puerto Vallarta, Merida, Tapachula, and San Jose del Cabo. Cooperation on the expansion project was carried out with Canadian and Mexican aviation authorities under the auspices of the North American Aviation Trilateral Agreement. (See March 24, 2006.)

October 23, 2007: The White House announced its intention to nominate Robert Sturgell for a five-year term as FAA Administrator. (See September 13, 2007.)

October 25, 2007: FAA announced that 23 schools were now participating in the agency's air traffic Collegiate Training Initiative (CTI) program, part of a broader effort by the agency to recruit, train, and hire controllers. CTI schools were accredited to offer a non-engineering aviation degree in aviation programs. To the original 14 CTI institutions, FAA added nine schools: Arizona State University; Community College of Baltimore County (Maryland); Florida Community College-Jacksonville; Green River Community College (Washington); Lewis University (Illinois); Kent State University (Ohio); the Metropolitan State College of Denver (Colorado); Middle Georgia College, and the University of Oklahoma. These nine schools joined fourteen others that renewed their commitment to the program, which was first established in 1990 at Minneapolis Community and Technical College. (See February 10, 2014

November 8, 2007: FAA issued a final rule amending regulations for the certification and operation of transport category airplanes to mitigate conditions that put airlines at risk for wire failures, smoke and fire. The new rule enhances the safety requirements for design, installation and maintenance of electrical wiring in new and existing airplane designs, including the following:

- new maintenance, inspection, and design criteria for airplane wiring to address conditions that put transport airplanes at risk of wire failures, smoke and fire;
- requirements for those aerospace manufacturers holding type certificates, which indicate airworthiness, to analyze the zones of their airplanes for the presence of wire and for the likely accumulation of contaminant materials before 2010;
- requirements for those aerospace manufacturers holding type certificates to develop maintenance and inspection tasks to identify, correct, and prevent wiring conditions that introduce risks to continued safe flight, and that these tasks are included in new Instructions for Continued Airworthiness for wiring and compatible with Instructions for Continued Airworthiness for fuel tank systems while avoiding duplication or redundancy, by 2010; and
- requirements for operators of transport-category airplanes to incorporate maintenance and inspection tasks for wiring into their regular maintenance programs before 2012.

November 15, 2007: President George W. Bush announced an agreement between the FAA and DoD that temporarily released military airspace for Thanksgiving holiday travel. Under the airspace agreement, the Department of the Navy released airspace, above 24,000 feet, off the east coast from Maine to Florida. FAA was allowed to use that airspace from 4 p.m. eastern standard time on Wednesday, November 21, to 6 a.m. eastern standard time on Monday, November 26. The Navy continued to control airspace off the east coast below 23,000 feet for training operations.

November 30, 2007: FAA completed tests of a new systems designed to improve the detection of microburst winds in dry climates at the Las Vegas airport. During the tests, the light detection and ranging, or LIDAR, detected more than half of all possible types of windshear. LIDAR uses pulses of infrared light in a narrow scanning beam, which bounces off dust particles in the air. The frequency of the pulse changes according to the speed of the particles. Microbursts are commonly associated with thunderstorms, and

more than 40 airports in the U.S. have TDWR systems that detect most microbursts during rain. However, these systems do not pick up microbursts that occur when rain does not reach the ground, particularly in high, dry climates or between mountains. Four major airports have these conditions - Las Vegas, Denver, Phoenix, and Salt Lake City.

November 2007: FAA and Japanese aviation officials signed a data exchange agreement to coordinate air traffic operations between the two countries. The agreement was the result of meetings by the Informal Pacific Air Traffic Control Coordination Group (of which Japan and the United States are members) that recommended improvements to air traffic flow management through data sharing. Japan was the first country to participate in the program. (See April 27, 2009.)

December 5, 2007: In a report issued on this date, GAO faulted FAA's approach to reducing runway incursions and increasing ramp safety. GAO said FAA efforts had been uncoordinated, largely because its 2002 runway safety action plan had not been updated – although agency policy called for an update every two to three years. GAO also expressed concern about the deployment of the airport surveillance detection system known as, saying it was skeptical FAA could meet its revised target of deploying ASDE-X to 35 major airports by 2011. GAO echoed National Transportation Safety Board concerns about controller fatigue, particularly the number of controllers working six-day weeks. (See August 8, 2007; October 16, 2008.)

December 6, 2007: FAA announced plans to form an aviation rulemaking committee to develop requirements for aircraft landing distance performance assessments prior to landing. FAA said the takeoff/landing performance assessment aviation rulemaking committee would establish: airplane certification and operational requirements (including training) for takeoff and landing operations on contaminated runways; landing distance assessment requirements, including minimum landing distance safety margins, to be performed at the time of arrival; and, standards for runway surface condition reporting and minimum surface conditions for continued operations.

December 10, 2007: Effective this date, FAA amended regulations for certification and operation of transport category airplanes. These changes improved the design, installation, and maintenance of airplane electrical wiring systems and aligned the amended requirements as closely as possible with those affecting fuel tank system safety. The rule organized and clarified design requirements for wire systems by moving existing regulatory references to wiring into a single section of the regulations specifically for wiring and by adding new certification rules. Under the rule, manufacturers had to complete FAA-approved instructions for new wiring-related maintenance and inspection tasks within 24 months for existing airplanes. U.S. scheduled air carriers and foreign airlines operating U.S.-registered aircraft had to develop maintenance and inspection programs for wiring based on the manufacturers' instructions within 39 months, and had to update those programs, as needed, for subsequent aircraft modifications. (See October 6, 2005.)

December 13, 2007: President Bush signed into law the Fair Treatment for Experienced Pilots Act (Public Law 110-135). The law amended federal transportation law to allow a pilot who has attained 60 years of age to serve as a passenger airline pilot until the age of 65, provided that a pilot who has attained age 60 may serve as pilot-in-command on international flights only if there is another pilot in the flight crew who has not yet attained 60 years of age. It also prohibited subjecting pilots to different medical examinations and standards on account of age unless to ensure an adequate level of safety in flight, except that no person who has attained 60 years of age may serve as a pilot unless such person has a first-class medical certificate. In addition, the act required air carriers to: (1) continue to provide FAA-approved training to pilots, with specific emphasis on initial and recurring training and qualification of pilots who have attained 60 years of age; and (2) evaluate, every six months, the performance of pilots who have attained 60 years of age through a line check of such pilot. (See January 30, 2007; November 13, 2014.)

December 19, 2007: Department of Transportation Secretary Mary Peters announced new measures to reduce airline delays over the holiday season as well as new actions designed to reduce congestion in the New York area starting next summer. The agreement among the major airlines serving John F. Kennedy International Airport, caps the number of flights at either 82 or 83 per hour, depending on the time of day. The hourly caps took effect on March 15, 2008, and would remain in place for two years. Airlines were now allowed to shift their flights to times of the day when the airport has unused capacity, allowing 50 more flights per day than the previous summer. The Secretary also directed the FAA to enter into negotiations to set hourly caps at Newark International Airport. Effective this date, Peters also announced new take-off patterns at Newark and Philadelphia International Airport that allowed aircraft to fan out after takeoff, which provided more options for aircraft waiting to depart. Peters also authorized the appointment of an aviation “czar” to serve as director of the newly-created FAA New York Integration Office. The new office will coordinate regional airspace issues and all projects and initiatives addressing problems of congestion and delays in New York. In addition, the Secretary formed a new federal advisory task force to help airlines and airports better coordinate when unexpected weather strands passengers on tarmacs and in airports. She also authorized the FAA to exercise liberal use of overtime to make sure facilities are staffed to handle the surge in traffic, and placed a moratorium on non-essential maintenance through the holidays so controllers can focus on traffic.

December 31, 2007: In Calendar Year 2007, public agencies collected $2.8 billion in Passenger Facility Charge revenue.

December 2007: According to a memo sent by FAA to its managers, the agency submitted its "second settlement proposal" to the National Air Traffic Controllers Association (NATCA) in the last week of December. Former NATCA President John Carr reportedly sent the memo to *Aviation Daily*. The memo describes the offer as including several pay adjustments as well as additional projects that will further benefit the work force. A FAA spokeswoman confirmed that a new proposal was sent to NATCA. FAA said the agency had been in discussions with the union about a settlement

since last spring, and the latest offer is part of this process. NATCA said FAA gave it a deadline of March 31, 2008, to accept the proposal. (See August 2007.)

2008

January 14, 2008: Department of Transportation Secretary Mary Peters proposed a new national policy that would make it easier for overcrowded airports to add capacity and reduce delays by encouraging airlines to spread their flights more evenly throughout the day. Under the proposal, the Department of Transportation encouraged congested airports in New York and across the country to move away from the decades-old practice of charging aircraft landing fees based on the weight of the plane and begin charging fees based on the time of the day. As a result, airports would be able to spread traffic more evenly throughout the day – allowing them to serve more passengers and reduce delays. The proposed policy changes would be open to public comment for 45 days before being finalized. Changes to FAA's Policy on Airport Rates and Charges would also allow airport operators to include the cost of projects designed to expand capacity in the new landing fees. Currently, airports could only include those costs after the projects had been completed. (See December 19, 2007; March 10, 2008.)

January 24, 2008: FAA announced that, as a result of the runway safety summit held in August 2007, FAA and industry had made significant accomplishments in achieving the goals of their runway safety plan. As of this date, 71 of the targeted 75 medium and large airports had completed upgrades to airport painted markings. The remaining four were expected to have their markings upgraded well in advance of the June 2008 deadline. Sixty-two small airports had also upgraded their markings, 121 airports planned to complete the work by the end of the year, 25 airports planned to enhance markings in 2009, and 22 airports had expressed interest, but had not yet provided a target completion date. FAA proposed extending the enhanced taxiway centerline requirement at all certificated airports. FAA published a draft change to Advisory Circular (AC) 150/5340-1J, Standards for Airport Markings, in late December 2007. Comments were due by February 26, 2008. In addition, FAA completed a runway safety review of 20 airports based on runway incursion data and wrong runway departure data. FAA also issued a draft change to AC 150/5210-20, Ground Vehicle Operations on Airports, in late December 2007. Public comments were due by February 26, 2008. (See August 15, 2007; January 15, 2009.)

January 28, 2008: FAA finalized a special federal aviation regulation (SFAR) that created new pilot training, experience, and operating requirements to increase the safety of the widely used Mitsubishi MU-2B airplane. The final rule mandated a comprehensive standardized pilot training program for the aircraft. The regulation required use of a standardized cockpit checklist and the latest revision of the airplane flight manual. MU-2B operators also must have a working autopilot onboard except in certain limited circumstances. Owners and operators had one year to comply with the SFAR.

February 6, 2008: FAA announced plans to deploy new air traffic tower simulators to 19 locations around the country to help train new air traffic controllers in an interactive

operational environment that provided realistic scenarios. The new simulators would be deployed over the next 18 months at the following towers: John F. Kennedy (NY); Los Angeles; Oakland (CA); Washington Reagan National; Dallas Fort-Worth; Atlanta; Denver; Philadelphia; Cincinnati; Cleveland; San Antonio; Memphis (TN); Honolulu; Orlando (FL); Charlotte (NC); Minneapolis; Boston; and Newport News (VA). FAA planned to install an additional six simulators at the FAA Academy in Oklahoma City.

February 7, 2008: The Senate Committee on Commerce, Science and Transportation held a confirmation hearing for acting FAA Administrator Robert Sturgell to become the FAA administrator. After the hearing, New Jersey's two democratic senators, Frank Lautenberg and Bob Menendez, placed a hold on the nomination, preventing it from going to the Senate floor for a vote. Both said they had concerns about safety and traffic issues with FAA. Both senators were also unhappy with FAA changes to the New York area airspace, saying the changes added to noise pollution. Sturgell had been acting FAA Administrator since Marion Blakey's term expired. Bush nominated Sturgell to be her replacement October 23. (See September 13, 2007; September 5, 2008; January 16, 2009.)

February 14, 2008: Department of Transportation Secretary Mary Peters announced an Open Skies agreement between the United States and Australia that eliminated restrictions on air services for the carriers of both countries. Under the agreement, U.S. and Australian airlines could select routes and destinations based on consumer demand, without limitations on the number of flights that could fly between the two countries. The agreement also removed restrictions on capacity and pricing, and provided opportunities for cooperative marketing arrangements, including code-sharing, between participating carriers. With this agreement, Australia became the 90th U.S. Open-Skies partner. The United States signed its first open skies agreement with The Netherlands on October 14, 1992. (See February 29, 1996; March 13, 2008.)

February 15, 2008: In an effort to streamline the job application process for air traffic controllers, FAA announced establishment of consolidated screening and testing centers to provide one stop shopping for prospective new employees. The first center was set up at the regional FAA office in New York in January 2009. (See March 7, 2007; September 9, 2008.)

February 26, 2008: FAA announced plans to install runway status lights at Los Angeles International Airport. Using a series of red lights embedded in the pavement, the system would warn pilots if it were unsafe to cross over or enter a runway. Under an agreement between FAA and Los Angeles World Airports (LAWA), pilots would begin testing runway status lights in early 2009. LAWA would fund the system at an estimated cost of $6 million. FAA would install, test, evaluate and maintain the system. (See October 16, 2008.)

February 28, 2008: President Bush signed into law legislation extending FAA authorization and the existing aviation excise taxes through June 30, 2008. The legislation, H.R.5270, also renewed FAA's airports contract spending authority, which

had expired at the end of 2007, freeing up Airport Improvement Program dollars. The president signed the legislation one day before the agency's authorization was due to expire. (See February 14, 2007.)

March 6, 2008: FAA initiated an action to collect a $10.2 million civil penalty from Southwest Airlines for operating 46 airplanes without performing mandatory inspections for fuselage fatigue cracking. Subsequently, the airline found that six of the 46 airplanes had fatigue cracks. From June 18, 2006 to March 14, 2007, FAA alleged that Southwest Airlines operated 46 Boeing 737 airplanes on 59,791 flights while failing to comply with a September 8, 2004, airworthiness directive that required repetitive inspections of certain fuselage areas to detect fatigue cracking. FAA alleged that after Southwest Airlines discovered it had failed to accomplish the required repetitive inspections, between March 15, 2007 and March 23, 2007, it continued to operate those same 46 airplanes on an additional 1,451 flights. The amount of the civil penalty reflected the serious nature of those deliberate violations. Southwest Airlines had 30 days from receipt of FAA’s civil penalty letter to respond to the agency. (See March 18, 2008.)

March 7, 2008: The National Aeronautic Association (NAA) announced that the Automatic Dependent Surveillance-Broadcast (ADS-B) Team of public and private sector groups had been selected as the recipient of the 2007 Robert J. Collier Trophy. The team included the FAA, Aircraft Owners and Pilots Association, Air Line Pilots Association, Cargo Airline Association, Embry-Riddle Aeronautical University, ITT Corporation, Lockheed Martin Corporation, NASA, MITRE Corporation, UPS, ACSS, among others. NAA formally presented the Collier Trophy on June 12. The Collier Trophy is awarded annually for the greatest achievement in aeronautics or astronautics in America. (See October 2, 2007; November 24, 2008.)

March 10, 2008: FAA mandated significant upgrades to aircraft cockpit voice and flight data recorders – improvements that would enable investigators to retrieve more data from accidents and incidents requiring investigation. Under the final rule, which affected manufacturers and operators of airplanes and helicopters with 10 or more seats, all voice recorders had to capture the last two hours of cockpit audio instead of the current 15 to 30 minutes. The new rule also required an independent backup power source for the voice recorders to allow continued recording for nine to eleven minutes if all aircraft power sources were lost or interrupted. Voice recorders were required to use solid state technology instead of magnetic tape, a medium shown to be vulnerable to damage and loss of reliability. Airplanes (but not helicopters) operating under Parts 121, 125, or 135 of FAA regulations had to retrofit some equipment by April 7, 2012. The rule also mandated these enhancements on all newly built aircraft and helicopters after April 7, 2010. (See September 26, 2007; October 2, 2007; April 5, 2010.)

March 10, 2008: Airlines serving Newark Liberty Airport agreed to temporarily cap and spread flights for two years at a level that would allow 30 more flights per day than during the previous summer. The cap, which would apply to both domestic and international flights, would allow an average of 83 flights per hour during peak periods and would go into effect in early May. (See January 14, 2008; April 16, 2008.)

March 10, 2008: Department of Transportation Secretary Mary Peters announced that the Department would move key elements of NextGen – the new satellite-based aviation system designed to enhance efficiency and minimize delays across the nation – from design to delivery in 2008. She said Florida would serve as the test-bed for the new system beginning the summer of 2008, with the introduction of NextGen at Daytona Beach. A new descent technique would also help to save fuel, and reduce noise and emissions in Miami. In addition, Automatic Dependent Surveillance — Broadcast (ADSB) technology would help increase the capacity of airspace along Florida's Gulf Coast by allowing planes to fly more closely together without compromising safety. (See September 26, 2007; February 7, 2008; May 8, 2008; June 24, 2010.)

March 13, 2008: Department of Transportation Secretary Mary Peters announced the United States and Croatia had concluded an Open Skies agreement that would establish free trade in aviation services between the two countries. Under the new agreement, airlines from both countries would be allowed to select routes and destinations based on consumer demand, without limitations on the number of U.S. or Croatian carriers that could fly between the two countries or the number of flights they could operate. The agreement contained no restrictions on capacity and pricing, and provided opportunities for cooperative marketing arrangements, including code-sharing, between U.S. and Croatian carriers. The agreement offered U.S. cargo carriers special benefits by allowing them to carry air cargo between Croatia and third countries without requiring a stop in the United States. Croatia became the 91st U.S. Open Skies partner. The United States drafted similar agreements with Kenya on May 30, 2008; Laos on October 3, 2008; Armenia on October 7, 2008; and Japan on December 11, 2009. (See February 14, 2008; April 23, 2010.)

March 18, 2008: FAA directed federal aviation inspectors to reconfirm that commercial carriers operating within the United States had complied with all airworthiness directives (ADs). By March 28, 2008, inspectors had to complete review of ten ADs per fleet. In total, they completed a review of ten percent of the directives applicable to a fleet. (See March 6, 2008; April 2, 2008.)

March 31, 2008: FAA and the National Air Traffic Controllers Association (NATCA) signed an agreement to create an Air Traffic Safety Action Program (ATSAP) designed to foster a voluntary, cooperative, non-punitive environment for the open reporting of safety of flight concerns by FAA employees. Under the ATSAP, all parties would have access to safety information that might not otherwise be obtainable. This information would be analyzed and used to develop skill enhancement or system corrective action to help solve safety issues. The agreement would be in place for 18 months and would begin at several targeted facilities. If both parties determined the program successful after a comprehensive review and evaluation, they would make it a continuing program. (See September 22, 2010.)

April 2, 2008: FAA acting Administrator Robert Sturgell announced that a safety audit had found U.S. air carriers in compliance with 99 percent of the nearly 2,400 airworthiness directives (ADs) sampled by safety inspectors between March 13 and

March 28, 2008. Sturgell also announced plans to (1) enable inspectors to raise their concerns quickly and at a higher level; (2) toughen ethical standards for inspectors to prevent conflicts of interest; (3) enhance airline safety by improving the clarity and coordination of directives issued by FAA to air carriers; (4) require reporting of voluntary disclosures to be made by senior airline officials; and (5) speed up the expansion of our comprehensive aviation safety database. The announced actions included:

- Developing a Safety Issues Reporting System (SIRS) to be implemented by April 30, 2008, which would provide employees an additional mechanism to raise safety concerns if they felt they were not receiving the necessary response from supervisory and management personnel.
- Initiating, by June 30, a rulemaking project to address ethics policies that would enhance inspector post-employment restrictions.
- Working with manufacturers and air carriers to develop a system to improve the clarity of ADs to ensure effective implementation by the industry.
- Requiring senior airline officials submit reports detailing compliance deviations under the Voluntary Disclosure Reporting Program.
- Accelerating the expansion of the Aviation Safety and Analysis Sharing Program. (See March 18, 2008; September 22, 2010.)

April 8, 2008: Department of Transportation Secretary Mary Peters announced the selection of Marie Kennington-Gardiner as director of the New York Integration Office, created as part of a coordinated effort to address chronic aviation delays in the New York region. As the newly appointed aviation "czar," Kennington-Gardiner would coordinate regional airspace issues and all projects and initiatives addressing problems of congestion and delays in New York. (See December 19, 2007.)

April 8, 2008: FAA announced it had transitioned to a new telecommunications network that would increase network reliability and save hundreds of millions of dollars over the next decade. The FAA Telecommunications Infrastructure (FTI) network replaced the legacy telecommunications network known as the Leased Interfacility National Airspace System Communications (LINCS). (See November 2, 1993; December 8, 2009.)

April 16, 2008: The Department of Transportation finalized changes to its so-called bumping rule, which doubled the limit on compensation airlines had to pay passengers involuntarily bumped from their flight. Under the new rule, fliers who were involuntarily bumped would receive up to $400 if rescheduled to reach their destination within two hours of their original arrival time or four hours for international flights, and up to $800 if they were not rerouted within that timeframe. The new rule covered flights operated with aircraft seating 30 people or more; the previous rule covered flights with 60 seats or more. In addition, Secretary Peters announced new air traffic measures designed to help cut summer delays. The first involved new and greater flexibility for aircraft to use alternative routes in the sky to avoid severe weather. FAA would also open a second westbound route for aircraft, akin to adding another interstate highway lane in the sky. Peters said improving the passenger experience was central to the Department's efforts and that she wanted to hear directly from travelers about how they were affected by problems in the air travel industry. She launched a series of Aviation Consumer Forums

to hear from consumers and help educate air travelers about their rights and responsibilities. The first Department-hosted forum was scheduled for April 17 in Miami, to be followed by public meetings in Chicago and San Francisco. (See August 11, 2009.)

April 16, 2008: Under a supplemental rulemaking, the Department of Transportation proposed two market-based options to ease congestions at New York's LaGuardia Airport that would require a limited number of flights operated by the airlines in a given day, known as slots, to be made available through an auction process. Under the first option, all air carriers would be given up to 20 slots a day for the 10 year life of the rule. Meanwhile, over the next five years, 8 percent of the additional slots currently used by an airline would be made available to any carrier via an auction. An additional 2 percent of the slots would be retired to help cut the record delays at the airport. Proceeds from the auction would be invested in new congestion reduction and capacity improvement initiatives in the New York region. The second option also gave airlines permanent access to up to 20 slots a day for a 10 year period. Beyond those flights, 20 percent of the slots currently used by the airlines would be made available over the next five years to all airlines through an auction. Under this option, the carriers would retain the net proceeds of the auction. (See March 10, 2008; May 18, 2008.)

April 18, 2008: Department of Transportation Secretary Mary Peters announced measures to improve FAA safety inspection program and minimize travel disruptions caused when airlines abruptly ground aircraft. She created an external review team and tasked them with developing recommendations within 120 days on how FAA could do a better job safeguarding the skies. Team members included J. Randolph Babbitt, William McCabe, Malcolm Sparrow, Ambassador Edward Stimpson, and Carl Vogt. Peters also said FAA would begin implementing a new program to track the inspections and alert key personnel whenever a safety inspection was overdue. FAA would begin requiring senior level officials within the agency's field offices to be accountable for accepting voluntary safety disclosures from airlines and for revising ethics rules to require a cooling-off period before FAA inspectors could work for an airline they oversaw or interacted with while employed at the agency. In addition, FAA would establish a new National Safety Inspection Review team to conduct focused and comprehensive safety reviews. (See April 2, 2008; September 5, 2008.)

May 5, 2008: FAA issued an advisory circular (AC 120-96) highlighting the best practices for use by helicopter emergency medical service (HEMS) operators in establishing their control centers and training their specialists. (See November 14, 2008.)

May 7, 2008: The Department of Transportation issued a new rule giving people with disabilities additional protections against discrimination when they traveled by air. The rule strengthened the Air Carrier Access Act (ACAA) of 1990 and extended it to foreign airlines operating a flight that began or ended in the United States. It applied to U.S. air carrier operations worldwide. The new rule also made it easier for passengers to use medical oxygen during flights by requiring airlines to allow the use in the passenger cabin of portable oxygen concentrators that met applicable safety, security, and hazardous materials requirements for safe use aboard aircraft. The Department sought

public comment through a supplemental notice of proposed rulemaking (SNPRM) about whether airlines should be required to provide medical oxygen to passengers upon request. The SNPRM also addressed subjects such as accessibility of airline web sites, automated ticketing kiosks, and inflight entertainment systems. The rule provided greater accommodations for passengers with hearing impairments by requiring airlines to include easy-to-read captions for the hearing-impaired in its safety and informational videos. In addition, airlines had to provide the same information to hearing- and vision-impaired passengers that it provided to other passengers in airport terminals or on the aircraft – such as information on boarding, flight delays, schedule changes, weather conditions at the flight's destination, connecting gate assignments, checking and claiming of baggage, and emergencies. The rule did not specify how carriers should make this information available to passengers who are deaf or hard of hearing. The new rule would be effective in one year to give carriers enough time to implement its provisions. (See November 4, 2013.)

May 8, 2008: FAA announced it had created a new position within the Air Traffic Organization. The new senior vice president for NextGen and Operations Planning, Victoria Cox, managed the organizations she previously managed as the vice president for Operations Planning, as well as the Joint Planning and Development Office. (See June 26, 2006; march 10, 2008; October 3, 2008.)

May 18, 2008: FAA proposed to temporarily limit scheduled flight operations at Newark Liberty International Airport to ease persistent congestion and delays during peak operating hours and to accommodate the projected increase in flight delays during the summer. After evaluating the written comments submitted to the public docket, FAA issued a final order, which took effect on June 20, 2008. (See April 16, 2008; August 5, 2008.)

May 29, 2008: Three Iraqi nationals became Baghdad's first tower-certified air traffic controllers after completing months of rigorous instruction based on international aviation safety standards and overseen by a FAA-led team. At a ceremony on May 29, the Director General of Iraq's Civil Aviation Authority Sabeeh Al Shebany and Department of Transportation Secretary Mary Peters presented the controllers with their certifications at Baghdad International Airport's air traffic control facilities.

June 3, 2008: FAA dedicated a new 228-foot-tall airport traffic control tower at the Huntsville International Airport. The facility had become operational at 6 a.m., Sunday, May 4. The $18.5 million tower complex was located one mile south of the previous facility in a gated, fenced complex between the parallel runways. The project consisted of the control tower and a 10,500-square foot base building and included a generator building and parking. The new 800 square foot TRACON more than doubled the size of the old TRACON.

June 16, 2008: Acting Administrator Robert Sturgell announced the elimination of flight caps at Chicago's O'Hare International Airport. He said O'Hare had been designated as an International Air Transport Association (IATA) Level 2 airport, a designation that

required air carriers to continue providing their schedules six months in advance. In 2004, FAA capped arrivals at O'Hare at 88 during most hours of the day to reduce congestion at the world's second-busiest airport. (See August 18, 2004; October 30, 2008.)

June 17, 2008: FAA transitioned the traffic flow management system from the Department of Transportation's John. A. Volpe National Transportation Systems Center in Cambridge, MA, to its William J. Hughes Technical Center in Atlantic City, NJ. FAA dedicated the system, which predicts, detects, and handles airspace congestion problems, on August 7, 2008.

June 26, 2008: The air traffic control tower at St. Louis Downtown Airport, located in Cahokia, IL, began operations.

June 30, 2008: Acting Administrator Robert Sturgell and Antonio Tajani, European Commissioner for Transport, European Commission, signed a safety agreement to further enhance safety cooperation. The agreement:

- Provided for reciprocal acceptance of safety findings in aircraft design and manufacturing, continued airworthiness, and repair station oversight;
- Broadened the scope of potential future United States acceptance of European aeronautical products from all member states of the European Union, beyond the current 14 that have individual agreements with the United States;
- Promoted safety and harmonization by providing for regulatory cooperation, particularly in rulemaking, and safety data exchange; and
- Established a bilateral oversight board to manage implementation of the agreement, consult on urgent matters, and provide a forum for discussion of approaches to safety issues.

The agreement would take effect upon an exchange of diplomatic notes, after each party to the agreement had completed ratification procedures and final arrangements regarding fees and charges. (See March 10, 2006; February 10, 2009.)

July 18, 2008: The engineered materials arresting system installed at Chicago's O'Hare International Airport, Chicago, IL, successfully stopped a Mexicana Airlines Airbus A320 aircraft that overran the runway. (See July 17, 2006; January 19, 2010.)

July 21, 2008: FAA issued a final rule that specified within two years all new transport category aircraft must include technology designed to significantly reduce the risk of center fuel tank fires. In addition, passenger aircraft built after 1991 must be retrofitted with technology designed to keep center fuel tanks from catching fire. The rule did not direct the adoption of specific inerting technology, but established a performance-based set of requirements that set acceptable flammability exposure values in tanks most prone to explosion or required the installation of an ignition mitigation means in an affected fuel tank. The cost of installing the new technology would range from $92,000 to $311,000 per aircraft, depending on its size. The U.S. aircraft to be retrofitted included approximately 2,730 aircraft belonging to the A320 family of 900 airplanes, 50 A330s,

965 Boeing 737s, 60 Boeing 747s, 475 Boeing 757s, 150 Boeing 767s and 130 Boeing 777s. (See December 10, 2007.)

August 5, 2008: Department of Transportation Secretary Mary Peters announced plans to hold an auction for the right to operate a single roundtrip flight at Newark Liberty Airport under a five-year lease. Eos Airlines, which had two slots, had filed for bankruptcy leaving FAA with control of the slots. The winner of the auction would be able to operate at Newark daily, arriving at 5:00 to 5:30 pm every day but Monday and Saturday, when the arrival would be from 12:00 to 12:30 pm, and departing daily from 7:30 to 8:00 pm. The funds generated from the auction would be used to reduce delays and enhance capacity at New York-area airports. The terms and conditions of the lease and details of the auction process were made available on FAA's procurement web site for public comment until August 18. After taking into consideration all comments on both the lease and the auction process, a final notice and invitation to bid would be published August 25 and the auction would take place on September 3. (See May 18, 2008; October 9, 2008.)

August 25, 2008: The U.S. aviation system received a score of 91 out of 100 in a safety audit conducted by the International Civil Aviation Organization (ICAO), a United Nations agency that oversaw international civil aviation. The U.S. score, which was well above the global average of 56, reflected U.S. compliance with over 9,500 international safety standards. FAA led U.S. preparations for the audit, which also included the National Transportation Safety Board, the U.S. Coast Guard and the Pipeline and Hazardous Materials Safety Administration. The team of ICAO auditors conducted a comprehensive audit of all aspects of civil aviation in the United States, including aircraft operations and airworthiness, accident investigation, navigation services, airports, personnel licensing, and legislation and regulations. ICAO established the Universal Safety Oversight Audit Program in 1995 at the urging of the United States. (See July 30, 2010.)

September 5, 2008: FAA inspectors found an overall compliance rate of 98 percent in more than 5,600 audits of airworthiness directives at U.S. air carriers, acting Administrator Robert Sturgell announced. Alleged noncompliance in the audits fell into five categories: instances where the air carrier could not show compliance with the AD; cases where additional records were needed to prove compliance; cases where the air carrier did the work, but had to apply for an alternate means of compliance approval; situations where the AD work was not done, but the airplane was not flying; and other minor discrepancies not involving ADs. All noncompliance issues were corrected before the airplanes flew again, and FAA was investigating to determine if enforcement actions were warranted. Sturgell also provided a progress report on the safety initiatives announced in April 2008:

- Safety Issues Reporting System — Complete
- Voluntary Disclosure Reporting Program Approvals — Complete
- Ethics Policy Enhancement — In progress; proposed rule expected next summer
- Aviation Safety and Analysis Sharing Program expansion — In progress
- Independent Review Team — Complete; with Secretary Peters for review

- Airworthiness Directive Review — In progress (See April 18, 2008; September 10, 2008.)

September 9, 2008: FAA awarded a $437 million contract to Raytheon to support air traffic controller training. The 10-year award replaced separate contracts to support initial training at the FAA Academy in Oklahoma City and to support ongoing training in air traffic facilities nationwide. The consolidation into a single contract gave Raytheon the ability to support the entire lifecycle of controller training. This, in turn, would allow FAA to provide more integrated training activities throughout a controller's career. (See February 15, 2008.)

September 10, 2008: Department of Transportation Secretary Mary Peters directed FAA to implement 13 new safety recommendations made by the team tasked with reviewing the U.S. aviation safety system. Peters said the team's report confirmed the basic approach to aviation safety in the United States had generated unprecedented results, but that there were ways to make the system even safer. In response to a key recommendation by the review team, Peters committed FAA to have guidance in place by the end of the year to ensure that airworthiness directives and their deadlines were fully understood by all appropriate FAA officials and airlines. The review team also recommended new safeguards against FAA personnel developing "overly cozy" relationships with the airlines they regulated through regular audits of field offices where the managerial team had been in place for more than three years. Consistent with recommendations to improve FAA's safety culture, the Secretary also charged the agency with developing, and having underway within six months, a new training program for safety managers and inspectors. (See September 5, 2008; November 20, 2009.)

October 3, 2008: ATO announced a realignment of its senior leadership into four business units, each led by a senior vice president. The new ATO executive council now included Chief Operating Officer Hank Krakowski and four Senior Vice Presidents for Operations, Strategy and Performance, Finance and NextGen and Operations Planning. Previously the EC included the nine different service unit vice presidents. (See May 8, 2008; September 17, 2009.)

October 9, 2008: The Bush Administration committed $89 million over the next eight years to expand capacity at John F. Kennedy International Airport, Department of Transportation Secretary Mary Peters announced. She unveiled new rules designed to lower fares, increase consumer choices, and improve service for air travelers using John F. Kennedy, Newark, and LaGuardia airports. The Secretary said the Department would sign what is known as a "Letter of Intent" committing the federal government to invest the money between 2009 and 2016 to fund a series of taxiway improvements at the airports. The taxiway improvements included constructing two new taxiways, extending or improving six others, and creating new high-speed exit taxiways. The construction work was expected to begin in 2009 and completed by 2014. (See August 5, 2008; October 10, 2008.)

October 10, 2008: FAA published final rules to address congestion at New York area airports by auctioning a limited number of landing and take-off slots at each of the region's three airports. Under the final rules, airlines operating at Kennedy, Newark, and LaGuardia would receive a 10-year ownership of the vast majority of FAA slots they currently operated. However, the new rules called for a gradual auctioning over the next five years of up to 10 percent of the landing and takeoff slots these airlines currently operated free of charge. The rules lowered the hourly operating cap at LaGuardia airport from 75 slots per hour to 71 slots per hour by "retiring" an additional five percent of the slots currently being used. Existing airlines at LaGuardia would keep 988 of the slots they currently operated. The remaining 113 slots would be made available over the next five years by auction to airlines interested in starting new service or expanding current operations at the airport. Under the rules for Kennedy and Newark, existing airlines would keep 1,035 of the slots they operated at Kennedy and 1,154 of the 1,245 slots they operated at Newark. The remaining 89 slots at Kennedy and 91 slots at Newark would be made available over a five-year period for airlines wishing to expand their current operations or start new services at either of the airports. (See October 9, 2008; December 8, 2008.)

October 16, 2008: FAA awarded a three-year contract to Sensis Corp. of Syracuse, NY, to install runway status lights at 22 major U.S. airports. Runway status lights improved runway safety at busy airports by warning pilots when it was unsafe to cross or enter a runway. The initial award, valued at $131 million, included two one-year options to install the lights at additional airports, for a total contract value of $215 million. The runway status lights used the ASDE-X surveillance data to operate. As part of the initial contract, runway status lights would be deployed at Hartsfield-Jackson Atlanta International Airport; Baltimore Washington International Thurgood Marshall Airport; Boston Logan International Airport; Charlotte Douglas International Airport; Chicago O'Hare International Airport; Dallas-Fort Worth International Airport; Denver International Airport; Detroit Metropolitan Wayne County Airport; Washington Dulles International Airport; Fort Lauderdale Hollywood International Airport; Houston Intercontinental Airport; New York John F. Kennedy International and LaGuardia Airports; Las Vegas McCarran International Airport; Los Angeles International Airport; Minneapolis-St. Paul International Airport; Newark Liberty International Airport; Orlando International Airport; Philadelphia International Airport; Phoenix Sky Harbor International Airport; San Diego International Airport; and Seattle Tacoma International Airport. (See December 5, 2007; February 26, 2008; July 29, 2010.)

October 30, 2008: The U.S. Department of Justice approved the merger between Delta Air Lines and Northwest Airlines. The airlines had announced the merger on April 14, 2008. (See December 31, 2009.)

October 30, 2008: FAA extended the expiration date of Special Federal Aviation Regulation (SFAR) No. 105 through October 31, 2010. The action maintained the reservation system established for unscheduled arrivals at Chicago O'Hare International Airport following the expiration of limitations imposed on scheduled operations at the airport. (See June 16, 2008.)

November 3, 2008: Acting Administrator Robert Sturgell announced FAA had signed a $9 million agreement with two companies to accelerate the testing and installation of NextGen technology. Teams led by Honeywell and Aviation Communications & Surveillance Systems (ACSS) would help FAA test and develop technology that would be used on an airport's airfield to detect and alert pilots of potential safety issues. Two Honeywell test planes and pilots from JetBlue Airways and Alaska Airlines would provide operational input from concept development through flight evaluation and demonstration. Honeywell would conduct work at Seattle Tacoma International and Snohomish County Paine Field airports. Under the agreement, Honeywell would receive approximately $3 million. ACSS, which planned to work with US Airways to develop standards, flight demonstrations, and prototypes, would receive approximately $6 million. Twenty Airbus A330 aircraft would be equipped with cockpit displays, transponders, antennas, wiring kits, and Class 2 electronic flight bags. Demonstrations would be conducted at Philadelphia International Airport. (See October 3, 2008; November 18, 2008; March 14, 2011.)

November 11, 2008: The new Indianapolis International Airport opened. Construction funds came from $120 million in federal grants, airport revenue bonds, and passenger head taxes. More than 1,100 residences were bought for the $220 million project, which started in 1987. Parallel runways opened in the 1990s, and after 9/11, the terminal design changed to accommodate improved security. A new air traffic control tower and TRACON opened in 2006.

November 14, 2008: FAA issued a notice in the Federal Register advising operators of important mandatory changes to helicopter emergency medical service (HEMS) flights. The agency encouraged the use of night vision goggles and terrain awareness warning systems. Consistent with NTSB recommendations, all HEMS operators had to comply with Part 135 weather minimums, including repositioning flights with medical crew onboard. FAA also provided greater access to weather reporting facilities, and requiring the flight crew to determine a minimum safe altitude and obstacle clearance prior to each flight. Operators had to comply no later than February 22, 2009. (See May 7, 2008; January 12, 2009.)

November 18, 2008: President George W. Bush issued Executive Order 13479, Transformation of the National Air Transportation System. Among other requirements, the executive order reiterated the national importance of establishing the Next Generation Air Transportation System (NextGen) and mandated the Secretary of Transportation to establish a support staff to support NextGen activities. (See November 3, 2008; December 8, 2008.)

November 20, 2008: New runways at Washington Dulles, Chicago O'Hare, and Seattle-Tacoma International Airports opened. The new runways would allow for an additional 330,000 take-offs and landings each year. The runways, built with $643 million in federal airport improvement program funds, also would help reduce delays at the three airports.

November 20, 2008: FAA commissioned the North Airport Traffic Control Tower at Chicago's O'Hare International Airport.

November 24, 2008: FAA commissioned an automatic dependent surveillance-broadcast (ADS-B) system testbed at Daytona Beach Airport under a joint program with Embry-Riddle Aeronautical University, Lockheed Martin, and other partners. The system provided real-time graphical weather displays from the National Weather Service, along with critical flight information. (See March 7, 2008; November 23, 2009.)

December 4, 2008: FAA broke ground for its new air traffic control system command center near Warrenton, VA, which the agency hoped to open in 2011. The 63,000-square-foot building that would house FAA's new command center would share a site with the Potomac TRACON, a consolidated approach and departure control facility serving Washington, Baltimore, and Richmond-area airports. FAA awarded a $22 million contract to Corinthian Construction Company of Arlington, VA, to build the new center. (See April 15, 1994; April 11, 2011.)

December 8, 2008: The United States Court of Appeals for the District of Columbia Circuit stayed the FAA final rules issued on October 10 concerning slot auctions at three New York area airports. *January 22, 2009*, the Air Transport Association requested Secretary of Transportation Ray LaHood withdraw the final rule in light of the court's stay. While the regulations were already incorporated into the Code of Federal Regulations, they no longer had force and effect because of the court's ruling. (See October 10, 2008; December 22, 2008.)

December 8, 2008: FAA signed a wide-ranging agreement with fractional jet operator NetJets to run some test programs in various parts of the U.S. by equipping some of the 550 to 600 aircraft it manages with NextGen avionics. (See November 18, 2008; September 21, 2009.)

December 15, 2008: FAA issued a launch site license to the New Mexico Spaceport America. The 16,000-acre site was the first launch facility built for passenger spaceflights. Construction work on the site, situated 40 miles north of Las Cruces, was scheduled to open in 2010. (See July 2, 2004; January 26, 2009; December 9, 2013.)

December 16, 2008: FAA published a final rule making permanent the air defense identification zone around Washington, DC. The rule established a 15-nautical-mile radius Flight Restricted Zone and an outer Special Flight Rules Area 30 nautical mile radius around Washington National Airport. (See July 26, 2007.)

December 17, 2008: FAA approved the charter of a new Aviation Rulemaking Committee (ARC) created for the purpose of consulting with FAA regarding the cost of providing air traffic control and related services to overflights, and providing advice and recommendations to the administrator regarding the future level of FAA's overflight fees. (See June 21, 2002; September 28, 2010.)

December 20, 2008: Continental Airlines Flight 1404, on a scheduled flight from Denver to Houston, crashed while attempting to takeoff from runway 34L. During its takeoff roll, the aircraft veered to the left, exited the runway, went down a ravine, and caught fire. Thirty-eight occupants were injured, 5 critically.

December 21, 2008: Scaled Composites and Virgin Galactic successfully flew the WhiteKnightTwo on its first flight from Mojave, CA. The aircraft made a 59-minute flight, taking off from Mojave and reaching a maximum altitude of 16,000 feet. The twin-boomed aircraft, powered by four Pratt & Whitney Canada PW308A turbofans, had been undergoing a series of high-speed taxi and brake tests in the run-up to the first flight. (See April 6, 2007; June 7, 2012.)

December 22, 2008: Department of Transportation Secretary Mary Peters announced that FAA would work with carriers to reduce voluntarily scheduled operations at New York's LaGuardia Airport from 75 to an average of 71 per hour as part of continued efforts to address chronic congestion at the delay-prone airport. The airport ranked just 28th for on-time departure performance over the first 10 months of 2008. Data showed that lowering the hourly cap on operations from 75 to 71 could reduce delays by up to 41 percent, saving up to $178 million in delay related costs per year. (See December 8, 2008; March 11, 2009.)

2009

January 7, 2009: FAA certified Embraer's largest executive jet, the Lineage 1000. The aircraft won type certification in December 2008 from Brazil's National Civil Aviation Agency as well as the European Aviation Safety Agency.

January 12, 2009: FAA issued instructions (Notice 8900.63) to agency inspectors with oversight of HEMS operators to find out how many operators had adopted FAA recommended best practices. (See November 14, 2008; October 12, 2010.) With reports in from all 74 operators surveyed, the percentages that had adopted various programs were:

- Decision-making skills and risk assessment programs – 94 percent
- Response to FAA guidance on Loss of Control (LOC) and Controlled Flight Into
- Terrain (CFIT) avoidance – 89 percent
- Integration of operation control center – 89 percent
- Installation of Flight Data Recorders and devices that can re-create a flight – 11 percent
- TAWS equipage – 41 percent
- Use of radar altimeters – 89 percent

January 15, 2009: United Airlines Flight 1549 struck a flock of birds after departing New York LaGuardia Airport en route to Charlotte, NC. Captain Chesley "Sully" Sullenberger successfully ditched the aircraft into the Hudson River. All onboard survived.

January 15, 2009: FAA awarded Thales ATM a contract to install and test a low-cost ($500,000 or less) ground surveillance system that the agency planned for small- and medium-size airports. Kansas-based Thales ATM was among several companies that submitted proposals in response to FAA's August 2007 Call to Action to reduce risk of runway incursions. The low-cost system was radar-based and would provide surface movement information to controllers, who in turn would advise flight crews of potential collisions. (See January 24, 2008; July 1, 2009.)

January 16, 2009: Acting Administrator Robert Sturgell resigned with the change in presidential administrations. Lynne Osmus, acting deputy administrator, became the acting administrator. See February 7, 2008; March 27, 2009.)

January 20, 2009: Barack Obama became the 44th President of the United States.

January 23, 2009: Ray H. LaHood became the 16th U.S. Secretary of Transportation.

January 26, 2009: Following up on an executive order signed on November 18, 2008, the Department of Transportation named Karlin Toner, Ph.D., as the chief multiagency liaison for the NextGen air traffic control modernization effort. Toner would serve as the senior staff adviser to the transportation secretary regarding NextGen and would be the senior liaison between the Department and the different agencies involved in the Joint Planning and Development Office. Toner was detailed to the secretary's office from FAA, where she recently had been selected to head the human factors research and engineering group. Toner had 15 years of experience at NASA. She served as NASA's director of airspace systems programs from August 2006 to December 2008 and had held several other NASA positions in aerospace and aeronautical planning and research. (See November 18, 2008; see February 2, 2009.)

January 30, 2009: Delta signed a memorandum of understanding with the Air Line Pilots Association and FAA to reinstate its Aviation Safety Action Program (ASAP) for Delta pilots. Under the program, pilots could report safety concerns without repercussions. Delta said it had formal ASAP programs in place for its dispatchers and technical operations employees, and other safety reporting programs for flight attendants and ground employees. The airline also planned to continue ASAP programs currently covering pre-merger Northwest pilots, dispatchers, and load planners. (See January 14, 2000; September 22, 2010.)

February 2, 2009: FAA called for the establishment of a new industry-based task force charged with developing an industry consensus for the midterm goals of the NextGen system. (See January 26, 2009; September 9, 2009.) FAA asked the task force, the NextGen Mid-Term Implementation Task Force (TF5), carried out through RTCA, to complete its recommendations by August 2009. FAA charged the task force with:

- identifying a specific set of operation capabilities that would be fully deployed and could deliver benefits by 2018;
- determining steps necessary to reach the capabilities, including procedures, training, technical risk mitigation and policy changes;

- recommending interim milestones;
- suggesting ways to accelerate operational benefits, including preferred means to accommodate “mixed-equipage” operations; and
- providing strategies to ensure that the intended benefits are delivered and to encourage operators to equip their aircraft.

February 3, 2009: Aviation Partners Boeing (APB) delivered Continental Airlines’ first winglet-equipped Boeing 757-300. Continental became the first U.S. major airline to order blended winglets when it ordered the modification for both retrofit on 757-200 and for production line fit on 737 Next Generations in April 2004. FAA awarded APB a supplemental type certificate for the winglet upgrade on the 757-200 in May 2005, and APB officially launched the retrofit for the 757-300 in June 2008 when it won orders from Continental and German tour operator Condor.

February 10, 2009: FAA suspended Miami-based AAR Landing Gear Services’ repair station certificate because the company had not followed manufacturer maintenance manual procedures for conducting liquid penetrant exams, shot peening, and cadmium plating before returning to service a variety of airliner landing gear parts. The agency said AAR employed defective processes and followed defective inspection protocols. FAA had inspected the Miami facility in early July 2008, and on July 16 had issued a written notice of alleged discrepancies, to which AAR said it responded with corrective actions on July 29. On November 7, AAR and FAA representatives met to discuss the company’s responses and its corrective actions. On January 30, FAA sent the company a follow-up letter identifying items that required further attention. AAR said it was in the process of responding to that request when it received the suspension notice. AAR had until February 20 to appeal the Emergency Order of Suspension. (See June 30, 2008; February 17, 2009.)

February 12, 2009: Colgan Air (Continental Connection) Flight 3407, on a scheduled passenger flight from Newark, NJ, crashed while on approach to the Buffalo/Niagara International Airport. The twin-engine turboprop had been cleared for the ILS approach to runway 23 in icy weather conditions when it disappeared from radar approximately 5 miles northeast of the airport. Soon after, it was reported that the aircraft had crashed into a residence and exploded in flames near the Buffalo suburb of Clarence Center. All 49 passengers onboard the aircraft and one person on the ground were killed. (See June 9, 2009.)

February 17, 2009: AAR Landing Gear Services and FAA entered into a consent order that terminated the agency’s February 10 emergency suspension of the company’s repair station certificate. As a result of the consent order, AAR Landing Gear’s certificate now was in a state of “voluntary surrender.” To get it back, the company had to adhere to a list of agreed upon stipulations, including revisions to its manuals and procedures, stepped up non-destructive testing of components, greater FAA oversight, and enhanced training for its staff. (See February 10, 2009; November 20, 2009.)

February 23, 2009: Seattle-Tacoma International Airport became the first U.S. facility to install and test avian radar. The risk of bird strikes to aircraft was highlighted on January 15 when Canada geese caused a dual-engine failure on US Airways Flight 1549. The FAA-funded research project at the airport is a collaborative effort with the University of Illinois. Sea-Tac's experimental avian radar, installed on top of the airport office building, was used to monitor bird movements in the vicinity of the airport. The project was aimed at determining how airport operators could use the technology as an early warning detection system against aircraft-bird collisions. (See January 15, 2009.)

March 2, 2009: FAA reached a settlement agreement with Southwest Airlines to resolve outstanding enforcement actions. Under the agreement, Southwest Airlines would pay a $7.5 million civil penalty that would double to $15 million if the airline did not accomplish specific safety improvements outlined in the agreement. The agreement stemmed from a $10.2 million civil penalty FAA proposed on March 6 against Southwest Airlines for operating 46 airplanes on 59,791 flights without performing mandatory inspections for fuselage fatigue cracking. (See March 6, 2008.)

March 5, 2009: FAA announced it had no plans to ground Eclipse Aviation's EA500 despite the company's recent announcement it had entered Chapter 7 liquidation. With all Eclipse operations (including certification, production, service centers, training centers, and dealers) closed, FAA issued a special airworthiness information bulletin (SAIB) that requested owners and operators of the Eclipse Model EA500 aircraft to report all unsafe conditions that may exist on the aircraft to its Airplane Certification Office in Fort Worth, Texas. Owners and operators could still fly their aircraft as long as it was in an airworthy condition in accordance with 14 CFR Part 91.

March 9, 2009: FAA announced it had convened a new Aviation Rulemaking Committee to develop recommendations for comprehensive Safety Management System (SMS) rulemaking. The ARC initially comprised 12 people from across the aviation industry, but membership was expected to grow as working groups formed to delve into the application of SMS to the various industry sectors. FAA planned to release an advanced notice of proposed rulemaking later in the year that would provide a starting point for the SMS rule. The ARC had a three-year charter. (See October 7, 2010.)

March 11, 2009: The President signed Public Law 111–8, Omnibus Appropriations Act, 2009. That legislation provided several departments within the executive branch, including the Department of Transportation, with the funds to operate until the end of the fiscal year. The law contained a provision that prohibited the Secretary of Transportation from promulgating regulations or taking any action regarding the scheduling of airline operations that involved auctioning rights, permission to conduct airline operations at such an airport, or withdrawing a right or permission to conduct operations at such an airport (except when the withdrawal was for operational reasons or pursuant to the terms or conditions of such operating right or permission). The prohibition was limited to the fiscal year. (See December 22, 2008; May 14, 2009.)

March 27, 2009: The White House announced its intention to nominate J. Randolph Babbitt for FAA administrator. The President nominated Babbitt on May 11 and the Senate confirmed him on May 21, 2009. He was sworn in as FAA's sixteenth administrator on June 1, 2009. Babbitt came to FAA from Oliver Wyman, an international management consulting firm where he served as partner. A veteran pilot, Babbitt had been a member of the agency's Management Advisory Council since 2001. He was the founding partner of Eclat Consulting in 2001, and served as President and CEO until Oliver Wyman acquired Eclat in 2007. Babbitt began his aviation career as a pilot, flying 25 years for Eastern Airlines. A skilled negotiator, he served as President and CEO for the Air Line Pilots Association (ALPA). Lynne Osmus, who had served as acting administrator, became the acting deputy administrator. (See January 16, 2009; December 4, 2009.)

April 27, 2009: FAA announced a bilateral aviation safety agreement between the United States and Japan that allowed for the reciprocal certification of aircraft and aviation products. (See November 2007.)

May 14, 2009: FAA proposed to rescind the October 10, 2008, final rules regarding slots at three New York airports citing the impact of the Omnibus Appropriations Act on the rule and the state of the economy in general. The comment period closed June 15, 2009. FAA received five sets of comments, all of which supported rescission of the rule. *October 9, 2009*, FAA rescinded the final rules. (See March 11, 2009; June 17, 2009.)

May 18, 2009: Mediation aimed at ending an ongoing contract dispute between FAA and the National Air Traffic Controllers Association (NATCA) began. Both parties signed a process agreement to move the negotiations forward. The agreement provided for extensive mediation sessions and for binding resolution of any unresolved issues, guaranteeing a new collective bargaining agreement between the parties. Jane Garvey, former FAA administrator, led the mediation as part of a three-member panel that also included Richard Bloch and George Cohen. (See December 2007; August 13, 2009.)

June 9, 2009: Department of Transportation Secretary Ray LaHood and FAA Administrator Randy Babbitt announced they had ordered FAA inspectors to immediately focus attention on training programs to ensure that regional airlines were complying with federal regulations. Secretary LaHood and Administrator Babbitt also announced plans to gather representatives from the major air carriers, their regional partners, aviation industry groups, and labor in Washington, DC, on June 15 to participate in a "call to action" to improve airline safety and pilot training. (See February 12, 2009; June 15, 2009.)

June 11, 2009: FAA announced the runway status light system was operational at Los Angeles International Airport. The system used a series of red lights embedded in the pavement to warn pilots if it was unsafe to enter or cross a runway, or to take off. Los Angeles World Airports paid for the $7 million system and FAA installed the system and would maintain it. The runway status light system was connected to the airport's ground radar system. The lights turn red if the ground radar detected a potential conflict between

two aircraft or an aircraft and a vehicle. Los Angeles was the third U.S. airport to get runway status lights following several years of successful tests at Dallas-Fort Worth and San Diego. It was the first airport to have the lights installed on multiple runways. (See October 16, 2008.)

June 15, 2009: Senior officials from U.S. airlines, pilot unions, and FAA agreed on several major actions to improve safety programs and pilot training. Secretary of Transportation Ray LaHood and FAA Administrator Randy Babbitt hosted the "Call to Action" to identify immediate steps to strengthen and improve pilot hiring, training, and testing practices at airlines that provided regional service as well as at the country's major air carriers. The participants agreed on best practices for pilot record checks that would result in a more expansive search for all records available from a pilot's career. The airlines and unions would also review existing pilot training programs over the next several months to see how they could be strengthened. Airline and union officials recommended developing pilot mentoring programs that would expose less experienced pilots to the safety culture and professional standards practiced by more senior pilots. The programs could pair experienced pilots from the major airlines with pilots from their regional airline partners. To address concerns about pilot fatigue, Babbitt said FAA would start the rulemaking process to rewrite the rules for pilot flight and duty time to incorporate recent scientific research about the factors that lead to fatigue. Babbitt also asked airlines to operate safety reporting systems, such as Flight Operations Quality Assurance (FOQA) and the Aviation Safety Action Program (ASAP), to provide better data about safety issues. In addition, FAA and industry representatives agreed to hold as many as 10 similar meetings throughout the country to assure that every carrier and pilot union had the opportunity to commit to these actions and to identify and share best practices. (See December 14, 1995; November 23, 2009.)

June 17, 2009: FAA published a proposal to extend an earlier order limiting operations at New York’s LaGuardia Airport to 71 scheduled operations and three unscheduled operations per hour from October 2009 to October 2010. This would allow the agency to consider options with regard to managing congestion at the airport on a longer-term basis. Options under consideration would provide a means for carriers to either commence or expand operations at the airport, thereby introducing more competition and service options to benefit the traveling public. (See May 14, 2009.)

June 18, 2009: Controllers at the Salt Lake City Air Route Traffic Control Center (ARTCC) were the first to control operational traffic with the new the En Route Automation Modernization System (ERAM). The goal of the operational test was to place ERAM in limited use during a period of low air traffic activity and record how the technology worked in an operational environment. ERAM, which will replace the HOST system, processed flight surveillance data, provided communications, and generated display information to air traffic controllers. It also supplied crucial flight plan information to terminal radar and control tower facilities. When fully operational at the ARTCC, the new technology will provide additional capabilities, such as the ability to process data from 64 radars instead of the current 24. (See September 30, 2007.)

July 1, 2009: FAA awarded Northrop Grumman Corp. a contract for the first U.S. installation of low-cost ground surveillance (LCGS) systems designed to help manage airport surface traffic. The contract was for an initial LCGS system at the Reno, NV, airport and included options for additional airports. (See January 15, 2009; December 1-3, 2009.)

August 3, 2009: FAA announced new certification standards for transport category airplanes. Under the certification standards, new transport aircraft designs had to use one of three methods to detect icing and to activate the airframe ice protection system:

- An ice detection system that automatically activated or alerted pilots to turn on the ice
- protection system;
- A definition of visual signs of ice buildup on a specified surface (e.g., wings) combined with an advisory system that alerted the pilots to activate the ice protection system; or
- Identification of temperature and moisture conditions conducive to airframe icing that would tip off pilots to activate the ice protection system.

The standards further required that after initial activation, the ice protection system must operate continuously, automatically turn on and off, or alert the pilots when the system should be cycled. (See April 26, 2007; August 19, 2011.)

August 8, 2009: Nine people died when a sightseeing helicopter collided with a small plane near New York City. The single-engine Piper had taken off from Teterboro Airport in NJ, and the helicopter, operated by Liberty Helicopter, had taken off from West 30th Street in Manhattan. Wreckage from both aircraft landed in the Hudson River. (See August 14, 2009.)

August 11, 2009: Department of Transportation Secretary Ray LaHood announced he had asked the Department's General Counsel to look into whether Continental Airlines or its regional partner, Express Jet Airlines, had violated any laws in connection with the lengthy tarmac delay on their Houston-Minneapolis flight on August 8 during which passengers were stuck in a small plane for seven hours. August 21, 2009, Secretary LaHood announced the Department had concluded the preliminary phase of its investigation and had determined that the Express Jet crew was not at fault. While the crew of the ExpressJet flight did all it could to assist the passengers, more senior personnel within Continental or ExpressJet should have become involved in an effort to obtain permission to take the passengers off the plane. The representative of Mesaba – the only carrier able to assist Continental at the airport – had said at the time of the incident that the airport was closed to passengers, apparently because there was no one from the Transportation Security Administration (TSA) available to screen passengers. In fact, TSA procedures allowed passengers to get off the plane, enter the terminal and reboard without being screened again as long as they remained in a sterile area. LaHood said the Department was considering the appropriate actions to take as it completed the investigation, which it expected to conclude within a few weeks. The Department would

use the findings from this investigation to formulate a final rule that would provide better protection for airline passengers. (See November 24, 2009; April 29, 2010.)

August 13, 2009: FAA announced that mediation with NATCA had resulted in a draft labor agreement. NATCA members had 45 days to ratify the many agreed-upon issues in the proposed agreement. The five issues decided by arbitrators, including compensation, were not subject to ratification by members. The agreement provided employees with greater flexibility in their work schedules, childcare support, a new grievance review process, and a variety of other gains. At the same time, it gave FAA flexibility to more effectively redeploy labor to congested airports using controller incentive pay. The agreement also restored a more equitable pay standard, to benefit new hires as well as veterans nearing retirement. The associated costs would be phased in over the three years of the contract. (See May 18, 2009.)

August 14, 2009: FAA convened a New York Airspace Working Group to review current operating procedures over the Hudson and East Rivers and recommend safety improvements within two weeks. August 28, the working group made a number of recommendations to FAA. One of the most significant recommendations suggested dividing the airspace into altitude corridors that separated aircraft flying over the river from those operating to and from local heliports or seaplane bases. This new exclusionary zone would be comprised of three components:

- It would establish a uniform “floor” for the Class B airspace over the Hudson River at 1,300 feet, which would also serve as the “ceiling” for the exclusionary zone.
- Between 1,300-2,000 feet, it would require aircraft to operate in the Class B airspace under visual flight rules under positive air traffic control, and to communicate on the appropriate air traffic frequency.
- Between 1,000-1,300 feet, it would require aircraft using VFR to use a common radio frequency for the Hudson River. Aircraft operating below 1,000 feet would use the same radio frequency.

In addition, new pilot operating practices would require pilots to use specific radio frequencies for the Hudson River and the East River, would set speeds at 140 knots or less, and would require pilots to turn on anti-collision devices, position or navigation equipment and landing lights. Existing common practices that took pilots along the west shore of the river when they were southbound and along the east shore when they were northbound would become mandatory. In addition, pilots would be required to have charts available and to be familiar with the airspace rules. *September 2, 2009*, FAA announced it would modify the airspace over the Hudson River by revising procedures to create safe, dedicated operating corridors for all the aircraft that fly at lower altitudes around Manhattan. It also would propose standardized procedures for fixed-wing aircraft leaving Teterboro to enter the Class B airspace over the Hudson River or the exclusionary zone. (See August 8, 2009; November 16, 2009.)

August 17, 2009: FAA issued a notice of proposed rulemaking to update FAR Part 23 standards to accommodate new light and very light jets. The proposal would eliminate the

exemptions, special conditions, and equivalent levels of safety findings the agency used to certify this class of aircraft under Part 23. The proposal would codify the current practice of certificating multiengine turbojets weighing up to and including 19,000 pounds.

September 9, 2009: The RTCA NextGen Mid-Term Implementation Task Force submitted its final report to FAA. The Task Force developed a short list of actionable operational capability recommendations in five problem areas (Surface, Runway Access, Metroplex, Cruise, Access to NAS) and two cross-cutting areas (Data Communication Applications and Integrated ATM). The Task Force also made four overarching recommendations that were considered essential to the implementation of any of the prior recommendations. (February 2, 2009; September 21, 2009).

September 12, 2009: A new wide-area multilateration surveillance system began operating at Colorado's Yampa Valley-Hayden, Craig-Moffat, Steamboat Springs, and Garfield County Regional-Rifle airports. The system allowed air traffic controllers to track aircraft not covered by radar in remote, mountainous regions. FAA and the Colorado Department of Transportation shared the cost of the system. (See May 4, 2010.)

September 17, 2009: As part of a strategy to reduce emerging aviation risks using national safety data, FAA's Office of Aviation Safety established a new Accident Investigation and Prevention Service that integrated the work of the Offices of Accident Investigation and Safety Analytical Services. The new organization consolidated resources so FAA could better understand current and emerging risks across the aviation community through the use of data from accident and incident investigations, historical accidents and incidents, and voluntarily submitted information from industry programs, such as Aviation Safety Action and Flight Operational Quality Assurance programs. FAA also announced the creation of a new Office of Audit and Evaluation. The office, which reported to the FAA Chief Counsel, consolidated into one organization:

- Administrator's Hotline — gave FAA employees a way to get high-level management attention for concerns unresolved by established procedures.
- Aviation Safety Hotline — provided an outlet for anyone to express concerns about unsafe aviation situations without fear of reprisal.
- Public Inquiry Hotline — responded to and referred inquiries from the public about aviation matters.
- Whistleblower Protection Hotline — coordinated with the Department of Labor on safety disclosures made by private-sector aviation workers, including government contractors.
- Safety Issues Reporting System — established in April 2008, allowed Office of Aviation Safety employees to report safety issues they believed had not been addressed by other FAA processes.

September 21, 2009: FAA announced approval of Honeywell's Smartpath Precision Landing System, which provided precise navigation service based on the global positioning system (GPS). The first U.S.-approved system would be located in Memphis, TN, and would become operational in early 2010. The ground-based system (GBAS)

augmented GPS to provide precision approach guidance to all qualifying runways at an airport. It monitored the GPS signals to detect errors and augment accuracy by transmitting correction messages to aircraft via local radio broadcast. GBAS would initially supplement the legacy Instrument Landing Systems used at airports. FAA's NextGen Implementation Plan had identified GBAS as an enabler for descent and approach operations to increase capacity at crowded airports. The Honeywell system was approved for precision approach operations down to 200 feet above the surface. (See September 9, 2009; January 31, 2010.)

October 16, 2009: FAA published new regulations for manufacturers of aircraft and aviation products that updated and standardized FAA requirements to better align them with the global manufacturing environment. The regulations, which would become effective on April 14, 2010, included:

- Standardization of quality control system requirements for all aviation manufacturers.
- Updated export requirements to facilitate global acceptance and documentation of parts.
- Standardization of part marking and identification requirements so they aligned with other countries' rules, and consolidation of the requirements into one regulation.
- Updated and standardized language in the regulations for production approvals, exporting, and identification marking.

October 19, 2009: FAA officials helped break ground on the Aviation Research Technology Park located adjacent to the William J. Hughes Technical Center in Atlantic City, NJ. The Park will be a high-technology aviation facility that provides the opportunity for FAA partners to perform research, development, testing, integration and verification of new technologies for the Next Generation Air Transportation System. The seven-building, multi-million dollar project was expected to create more than 2,000 jobs. (See September 18, 2013.)

October 27, 2009: FAA announced revocation of the licenses of two Northwest Airlines pilots who overflew their destination airport on October 21, 2009, while operating Flight 188 from San Diego to Minneapolis. Air traffic controllers and airline officials repeatedly tried to reach them through radio and data contact, without success. The emergency revocations cite violations of a number of Federal Aviation Regulations. Those included failing to comply with air traffic control instructions and clearances and operating carelessly and recklessly.

November 16, 2009: FAA finalized a rule, effective November 19, 2009, that separated low-altitude, local aircraft flights over the Hudson River from flights transiting through the river airspace. The rule required pilots to follow safety procedures that were previously recommended, but were not mandatory. In a new Special Flight Rules Area over the Hudson and East Rivers, pilots must:

- Maintain a speed of 140 knots or less.
- Turn on anti-collision and aircraft position/navigation lights, if equipped.

- Self-announce their position on specific radio frequencies.
- Carry current charts for the airspace and be familiar with them.
- In an exclusion zone below 1,300 feet over the Hudson River, announce their aircraft type, position, direction, and altitude at charted mandatory reporting points and stay along the New Jersey shoreline when southbound and along the Manhattan shoreline when northbound.
- When transiting the Hudson River, fly at an altitude between 1,000 feet and 1,300 feet and operate local flights in the lower airspace below 1,000 feet.

The rule also incorporated provisions of an October 2006 Notice to Airmen (NOTAM) that restricted fixed-wing aircraft in the exclusion zone over the East River to seaplanes landing or taking off on the river or those specifically approved by FAA air traffic control. (See August 14, 2009.)

November 19, 2011: President Barack Obama signed the Transportation, Housing and Urban Development appropriations bill that d$12.5 billion in FAA funding for Fiscal Year 2012. The bill stipulated that the Office of Audit and Evaluation report directly to the Administrator rather than the Chief Counsel. (See October 3, 2008; May 3, 2010.)

November 20, 2009: FAA published a notice of proposed rulemaking proposed limits on airlines and other operators from hiring FAA safety inspectors and their managers for two years after those employees left the agency. The proposed rule would prohibit air carriers, flight schools, repair stations, and other certificated organizations from employing or contracting with former FAA inspectors and managers to represent them in agency matters if the former employee had any direct oversight of the certificate holder in the preceding two years. The rule would apply to anyone who owned or managed a fractional ownership program aircraft. The rule would not keep operators from hiring former inspectors to serve in other positions (e.g., aircraft dispatcher, flight attendant, maintenance technician, pilot, or training instructor) as long as they did not represent the operator in FAA matters. (See September 10, 2008; February 17, 2009; December 21, 2009; August 19, 2011; February 12, 2013.)

November 23, 2009: FAA issued a notice of proposed rulemaking that would require scheduled airlines to either retrofit their existing fleet with ice-detection equipment or make sure the ice protection system activated at the proper time. For aircraft with an ice detection system, FAA proposed that the system alert the crew when they should activate the system. The system would either turn on automatically or pilots would manually activate it. For aircraft without ice-detection equipment, the crew would activate the protection system based on cues listed in their airplane's flight manual during climb and descent, and at the first sign of icing when at cruising altitude. FAA estimated the rule would cost operators about $5.5 million to implement. Operators would have two years after the final rule was effective to make the changes. The proposed rule would apply only to in-service aircraft with a takeoff weight less than 60,000 pounds, because most larger airplanes already had equipment that met the requirements. (See April 26, 2007; December 1, 2009.)

November 23, 2009: FAA withdrew a previously published notice of proposed rulemaking (NPRM) designed to establish consistent and clear duty period limitations, flight time limitations, and rest requirements for domestic, flag, supplemental, commuter, and on-demand operations. In June 2009, FAA had chartered the Flight and Duty Time Limitations and Rest Requirements Aviation Rulemaking Committee, comprised of labor, industry, and FAA representatives, to develop recommendations for a rule based on current fatigue science and a thorough review of international approaches to the issue. (See June 15, 2009; August 1, 2010.)

November 23, 2009: FAA began using its automatic dependent surveillance-broadcast (ADS-B) system in Louisville, marking the first time U.S. controllers used this technology for handling traffic on a continuous basis. (See November 24, 2008; January 12, 2010.)

November 24, 2009: The Department of Transportation levied a civil penalty of $100,000 against Continental Airlines and ExpressJet Airlines for their roles in causing the passengers on board Continental Express Flight 2816 to remain on the aircraft at Rochester International Airport for an unreasonable period of time (7 hours) on August 8, 2009. In addition, the Department assessed a civil penalty of $75,000 against Mesaba Airlines, which provided ground handling for the flight, for its role in the incident. (See August 11, 2009; December 21, 2009.)

November 25, 2009: Edward Stimpson, one of general aviation's most respected advocates in Washington and founder of the General Aviation Manufacturers Association (GAMA), died at home in Boise, Idaho, from cancer. Stimpson was credited, along with former Cessna Chairman and CEO Russ Meyer, with championing the General Aviation Revitalization Act of 1994, which helped reinvigorate the industry by capping manufacturers' product liability to 18 years. He went on to become chairman of the Flight Safety Foundation (FSF). Stimpson joined FAA at the invitation of then-Administrator Najeeb Halaby and served through much of the 1960s as its congressional liaison. He became head of GAMA shortly after it was founded in 1970 and he led the organization almost continuously for 25 years. President Bill Clinton later nominated Stimpson to represent the U.S. at the International Civil Aviation Organization. He served in that ambassadorial post from 1999-2004, ending his tenure at the United Nations agency as vice president of its Assembly.

December 1, 2009: FAA issued a final rule, effective February 1, 2010, that prohibited operations with polished frost on the wings and stabilizing and control surfaces of aircraft. Under the final rule, operators were required to remove any frost adhering to critical surfaces prior to takeoff. Additionally, the rule restructured language in parts 91, 125, and 135 to clarify that aircraft must have functioning deicing or anti-icing equipment to fly under IFR into known or forecast light or moderate icing conditions, or under VFR into known or forecast light or moderate icing conditions. (See November 23, 2009; June 29, 2010.)

December 1-3, 2009: FAA, in cooperation with the American Association of Airport Executives (AAAE) and the MITRE Corporation, held its first International Runway Safety Conference in Washington, DC. Nearly 500 people attended the conference, which focused on ways to reduce and eventually eliminate runway incursions and excursions. (See January 24, 2008.)

December 4, 2009: FAA Administrator Randy Babbitt announced the retirement of acting deputy administrator, Lynne Osmus, effective January 3, 2009. Effective this day, Osmus returned to her permanent post as assistant administrator for security and hazardous materials and David Grizzle, FAA general counsel, became the acting deputy administrator. (See March 27, 2009; December 8, 2009.)

December 8, 2009: FAA Administrator Randy Babbitt called for the establishment of a group comprised of both FAA and non-agency members to assess the FAA Telecommunications Infrastructure (FTI) outage that caused widespread air traffic delays across the country. An FTI software configuration problem interrupted automated flight plan processing and other electronic traffic flow management tools for four hours on November 19, 2009. While critical safety systems and radar and communications services were unaffected, controllers and flight data communications specialists had to manually input data, which resulted in delays. The panel was tasked with producing two reports by early 2010: one focused on the outage with suggestions for any immediate changes to the FTI system and the other focused on the FTI architecture as it related to future FAA systems. Panel members included: U.S. Navy Vice Admiral (retired) Nancy Brown, former Joint Staff director of command, control, communications and computer systems; Amr ElSawy, President and CEO of Noblis, a nonprofit science, technology, and strategy organization; Federal Chief Technology Officer Aneesh Chopra; Department of Transportation Chief Information Officer (CIO) Nitin Pradhan; FAA CIO Dave Bowen; and FAA's Air Traffic Control Organization CIO Steve Cooper. (See April 18, 2008; November 12, 2010.)

December 8, 2009: The White House nominated Michael Huerta to be FAA deputy administrator. The White House had announced its intention to nominate Huerta the day before. Huerta had his own consulting firm, which advised clients on transportation policy, technology, and financing. Until April 2009, Huerta was Group President of the Transportation Solutions Group of Affiliated Computer Services, Inc., a technology services provider supporting transportation agencies worldwide. Before joining ACS, he was a managing director with the Salt Lake Organizing Committee for the Olympic Winter Games of 2002. From 1993 to 1998, Huerta served in two senior positions at the Department of Transportation under President Bill Clinton. He also held senior positions in the cities of San Francisco and New York. Huerta has a master's degree from the Woodrow Wilson School of Public and International Affairs at Princeton University and a bachelor's degree from the University of California at Riverside. He is currently Chairman of the Board of Directors of the Intelligent Transportation Society of America and served as a member of President Obama's transition team for the U.S. Department of Transportation. (See December 4, 2009; June 23, 2010.)

December 9, 2009: FAA announced a new service to provide the public information about airport delays. The Airport Status and Delays web service, registered on Data.gov, combined FAA information about ground delays, airport closures, ground stops, and arrival or departure delays with local weather data from the National Oceanic and Atmospheric Administration.

December 13, 2009: An American Airlines Boeing 737's wingtips touched the ground during landing at Charlotte, NC, when the part of the plane's landing gear veered off the runway while touching down in low visibility. On December 22, an American Airlines flight overshot the runway during heavy rain in Jamaica. The Boeing 737 broke into three sections; all passengers survived. On December 24 an American Airlines McDonnell Doulas MD-80's wingtip touched the ground while landing at Austin, Texas. On January 1, 2009, FAA issued a statement saying the Agency would conduct a review of the mishaps to determine if there was a larger issue with the airline.

December 14, 2009: FAA issued a type certificate for Embraer's Phenom 300 light jet. Brazil certified the aircraft on December 3.

December 15, 2009: After over two years of delays, Boeing's first new aircraft design in over 10 years, the 787 Dreamliner made its maiden flight.

December 21, 2009: The Department of Transportation announced new rules that prohibited U.S. airlines operating domestic flights from permitting an aircraft to remain on the tarmac for more than three hours without deplaning passengers, with exceptions allowed only for safety or security or if air traffic control advises the pilot in command that returning to the terminal would disrupt airport operations. U.S. carriers operating international flights departing from or arriving in the United States must specify, in advance, their own time limits for deplaning passengers, with the same exceptions applicable. Carriers were required to provide adequate food and potable drinking water for passengers within two hours of the aircraft being delayed on the tarmac and to maintain operable lavatories and, if necessary, provide medical attention. This rule was adopted in response to a series of incidents in which passengers were stranded on the ground aboard aircraft for lengthy periods and also in response to the high incidence of flight delays and other consumer problems. The rule also:

- Prohibited airlines from scheduling chronically delayed flights, subjecting those who do to DOT enforcement action for unfair and deceptive practices;
- Required airlines to designate an airline employee to monitor the effects of flight delays and cancellations, respond in a timely and substantive fashion to consumer complaints and provide information to consumers on where to file complaints;
- Required airlines to display on their website flight delay information for each domestic flight they operate;
- Required airlines to adopt customer service plans and audit their own compliance with their plans; and
- Prohibited airlines from retroactively applying material changes to their contracts of carriage that could have a negative impact on consumers who already have purchased tickets. (See November 24, 2009; April 29, 2010.)

December 25, 2009: A passenger on Northwest Flight 253 from Amsterdam to Detroit tried to explode a device and was subdued by passengers and crew. The flight landed safety at Detroit where the individual was arrested. On *January 3, 2010*, the Transportation Security Administration issued new security directives to all United States and international air carriers with inbound flights to the U.S. effective January 4, 2010.

December 31, 2009: FAA granted Delta Air Lines permission to integrate fully its Northwest Airlines subsidiary's planes and flight crews into its fleet. Authority to fly under a single operating certificate allowed the airlines to use common technical manuals and organizational structure. Delta acquired Northwest for $2.8 billion in October 2008. (See October 30, 2008.)

2010

January 12, 2010: Controllers at the Houston Air Route Traffic Control Center began using automatic dependent surveillance-broadcast (ADS-B) to manage aircraft flying over the Gulf of Mexico. Houston was the first of four sites selected to demonstrate ADSB services to go live with the service. (See November 23, 2009; April 26, 2010.)

January 19, 2010: The engineered material arresting systems (EMAS) at Yeager Airport in Charleston, WVA, successfully stopped a PSA Airlines Bombardier CRJ-200 that overran the runway. This was the sixth save by an EMAS, which consisted of a layer of crushed concrete positioned at the end of runways that slows and stops aircraft in runway overruns. EMAS was developed in a research partnership with the FAA and Engineered Arresting Systems Corp. (ESCO), a division of Zodiac Aerospace. (See July 18, 2008; October 1, 2010.)

January 21, 2010: FAA dispatched a portable, temporary control tower to Haiti to help assist with aircraft operations at Port-au-Prince International Airport after an earthquake destroyed much of the air traffic control equipment at the airport. Shipment of the portable tower came at the request of the Haitian government. FAA air traffic and airport specialists also deployed to Haiti to help with airport reconstruction efforts.

January 31, 2010: The FAA released action plans outlining how it planned to implement recommendations from an aviation community task force on modernizing the Next Generation Air Transportation System (NextGen). The plans were contained in a report issued in response to recommendations made in September by the RTCA NextGen Mid-Term Implementation Task Force. Responses to the RTCA recommendations focused on improvements in five operational areas: surface, runway access, congested metropolitan airspace (metroplex), cruise, and national airspace system access. They also encompassed two specific NextGen capabilities: automated digital communications and integrated air traffic management. (See September 21, 2009; February 26, 2009.)

February 16-17, 2010: An air traffic tower controller at New York's John F. Kennedy International Airport (JFK) permitted his 9 year old son to transmit six clearances on JFK's tower frequency. The following day, his 7 year old daughter made a couple of

transmissions also under supervision. FAA subsequently put the controller and a supervisor on administrative leave while it investigated the incident. FAA also suspended the tower visitor program, while it reviewed visitor procedures.

February 26, 2010: FAA announced the selection of Karlin Toner, Ph.D., as the new Director of the NextGen Joint Planning and Development Office. Toner served as senior advisor to Transportation Secretary Ray LaHood on NextGen and continued in that role. In her new position, Toner reported to the FAA deputy administrator. (See January 31, 2010; March 2010; January 17, 2014.)

March 2010: FAA issued an updated version of the NextGen Implementation Plan. The Plan expanded upon earlier efforts by including information on the potential effects the future air traffic control system could have upon airports, the environment, and international initiatives. (See February 26, 2010; April 8, 2010; October 8, 2014.)

March 2010: FAA granted a type certificate to the Cessna Citation CJ4 after a 22-month flight-test program.

April 5, 2010: Based on industry comments, effective this date, FAA extended the compliance deadline mandating significant upgrades to aircraft cockpit voice and flight data recorders. As compared with the earlier rule adopted in March 2008, this final rule adopted the following flight recorder equipment compliance times:

- For the ten-minute backup power source for cockpit voice recorders (CVR), the compliance date for newly manufactured aircraft operating under part 91 would be April 6, 2012.
- For increased digital flight data recorder (DFDR) sampling rates, the compliance date for newly manufactured aircraft operating under part 91 would be April 6, 2012.
- For increased DFDR sampling rates, the compliance date for newly manufactured aircraft operating under part 121, 125, or 135 was December 6, 2010.
- For recordation of datalink communications, the compliance date after which newly installed datalink systems must include recording capability for aircraft operating under part 91 would be April 6, 2012.
- For recordation of datalink communications, the compliance date after which newly installed datalink systems must include recording capability for aircraft operating under part 121, 125, or 135 was December 6, 2010. (See March 10, 2008.)

April 5, 2010: FAA began allowing, on a case-by-case basis, pilots who take one of four antidepressant medications – Fluoxetine (Prozac), Sertraline (Zoloft), Citalopram (Celexa), or Escitalopram (Lexapro) – to fly provided that they had been satisfactorily treated on the medication for at least 12 months.

April 8, 2010: FAA awarded CSSI, Inc., a $280 million contract to perform engineering work for NextGen. This was the first of six contracts that would be awarded under an

umbrella portfolio contract called System Engineering 2020 (SE-2020), which had a ceiling of $7 billion. (See March 2010; May 18, 2010.)

April 20, 2010: In a message to employees, Administrator Randy Babbitt announced changes to the agency's vision and values statement.

- Old vision statement: We continue to improve the safety and efficiency of flight. We are responsive to our customers and are accountable to the taxpayer and the flying public.
- New vision statement: We strive to reach the next level of safety, efficiency, environmental responsibility and global leadership. We are accountable to the American public and our stakeholders.
- Old Value Statement:
  - Safety is our passion. We are world leaders in aerospace safety.
  - Quality is our trademark. We serve our country, our stakeholders, our customers, and each other.
  - Integrity is our character. We do the right thing, even when no one is looking.
  - People are our strength. We treat people as we want to be treated.
- New Value Statement:
  - Safety is our passion - We work so all air and space travelers arrive safely at their destinations.
  - Excellence is our promise - We seek results that embody professionalism, transparency and accountability.
  - Integrity is our touchstone - We perform our duties honestly, with moral soundness, and with the highest level of ethics.
  - People are our strength - Our success depends on the respect, diversity, collaboration, and commitment of our workforce.
  - Innovation is our signature - We foster creativity and vision to provide solutions beyond today's boundaries.

April 23, 2010: Secretary of Transportation Ray LaHood announced that the United States and Israel had reached an Open-Skies aviation agreement that liberalized air services for the carriers of both countries. Israel became the 97th U.S. Open-Skies partner. (See March 13, 2008; May 4, 2010.)

April 26, 2010: Controllers at Philadelphia International Airport began using ADS-B as part of the FAA demonstration program. (See January 12, 2010; June 24, 2010.)

April 29, 2010: An airline consumer protection rule went into effect. Under the new rule, U.S. airlines operating domestic flights could not permit an aircraft to remain on the tarmac at large and medium hub airports for more than three hours without deplaning passengers, with exceptions allowed only for safety or security reasons or if air traffic control advises the pilot in command that returning to the terminal would disrupt airport operations. U.S. carriers operating international flights departing from or arriving in the United States were required to specify, in advance, their own time limits for deplaning passengers, with the same exceptions applicable. Carriers were also required to provide adequate food and drinking water for passengers within two hours of the aircraft being

delayed on the tarmac and to maintain operable lavatories and, if necessary, provide medical attention. In addition, the rule:

- Prohibited the largest U.S. airlines from scheduling chronically delayed flights;
- Required U.S. airlines to designate an airline employee to monitor the effects of flight delays and cancellations, respond in a timely and substantive fashion to consumer
- complaints, and provide information to consumers on where to file complaints;
- Required U.S. airlines to adopt customer service plans and audit their own compliance with their plans; and
- Prohibited U.S. airlines from retroactively applying material changes to their contracts of carriage that could have a negative impact on consumers who already had purchased tickets. (See December 21, 2010; June 2, 2010.)

April 2010: FAA changed the name of its bimonthly safety magazine for the general aviation community from *FAA Aviation News* to *FAA Safety Briefing* beginning with the March/April 2010 issue. FAA Aviation News started in 1961 as a newsletter and expanded to a magazine format in 1962. In 1976, it sharpened its focus on general aviation.

May 3, 2010: FAA named Julie Oettinger, managing director for international and regulatory affairs at United Airlines, to head the newly reunited Office of Aviation Policy, International Affairs and Environment. Prior to joining United Airlines, Oettinger served as assistant general counsel at US Airways from 1998 to 2002. From 1990 to 1998 — and then again from 2002 to 2003 — Oettinger served as an attorney advisor in the Legal Advisor's Office at the U.S. Department of State. (See September 17, 2009; September 23, 2011.)

May 4, 2010: Secretary of Transportation Ray LaHood announced that the United States and Trinidad and Tobago had reached an Open-Skies aviation agreement that liberalized air services for the carriers of both countries. Trinidad and Tobago became the 98th U.S. Open-Skies partner. (See April 23, 2010; July 2, 2010.)

May 4, 2010: FAA announced that controllers in Juneau, Alaska, were using a new surveillance technology, the wide-area multilateration system (WAM), to track aircraft along the difficult approach to Juneau – a mountainous area where radar coverage was not possible. WAM, comprised of a network of small sensors deployed around Juneau, sent out signals that received and sent back by aircraft transponders. The system triangulated the returning signals to determine the precise location of each aircraft. Controllers saw those aircraft on their screens as if they were radar targets. (See September 12, 2009.)

May 12, 2010: U.S. Transportation Secretary Ray LaHood announced the members of a new committee on the future of the U.S. aviation industry. He had formally created the Future of Aviation Advisory Committee in March to provide information, advice, and recommendations principally on five issue areas: ensuring aviation safety; ensuring a world-class aviation workforce; balancing the industry's competitiveness and viability;

securing stable funding for aviation systems; and addressing environmental challenges and solutions. The members selected represented airlines, airports, labor, manufacturers, environment, finance, academia, consumer interests, and general aviation stakeholders. Susan Kurland, Assistant Secretary for Aviation and International Affairs at the Department of Transportation, chaired the committee, which included: Juan J. Alonso, Associate Professor, Department of Aeronautics and Astronautics, Stanford University; Susan M. Baer, Director, Aviation Department, Port Authority of NY/NJ; David Barger, President and CEO, JetBlue Airways Corporation; Bryan K. Bedford, Chairman, President and CEO, Republic Airways; Severin Borenstein, Professor, HAAS School of Business, University of California, Berkeley; Thella F. Bowens, President and CEO, San Diego County Regional Airport Authority; John M. Conley, International Administrative Vice President and Air Transport Division Director, Transport Workers Union of America, AFL-CIO; Cynthia M. Egnotovich, Segment President, Nacelles and Interior Systems, Goodrich Corporation; Patricia A. Friend, International President, Association of Flight Attendants-Communications Workers of America, AFL-CIO; Robert L. Lekites, President, UPS Airlines; Ana McAhron-Schulz, Director of Economic and Financial Analysis, Air Line Pilots Association; William J. McGee, Consultant to the Consumers Union; Daniel McKenzie, U.S. Airlines Research Analyst, Hudson Securities; Jack J. Pelton, Chairman, President and CEO, Cessna Aircraft Company; Nicole W. Piasecki, Vice President, Business Development, Boeing Commercial Airplanes; Raul Regalado, President and CEO, Metropolitan Nashville Airport Authority; Glenn F. Tilton, Chairman, President and CEO, UAL Corporation; and Christopher J. Williams, Chairman and CEO, The Williams Capital Group. The committee held its first meeting on May 25. (See December 15, 2010.)

May 17, 2010: FAA ruled that the 130 offshore turbines planned for Nantucket Sound posed no threat to aircraft, provided they were properly marked and lighted. The 400-foot turbines would occupy a 25-mile stretch off Cape Cod. The decision came a month after U.S. Department of the Interior Secretary Ken Salazar gave his approval.

May 18, 2010: FAA's Aviation Safety organization released a plan identifying the key roles that its staff would play in setting standards for NextGen and providing oversight for the safe implementation of new technologies, processes, and procedures. The AVS Work Plan for NextGen established the commitments – schedules, resources, management structure, and internal coordination – that the organization would make to ensure the successful transition to the next-generation air traffic control system. (See March 2010; June 7, 2010.)

May 23, 2010: Northwest Beaches International Airport opened in Panama City, FL – the first new commercial passenger airport to open since Denver International Airport opened in 1995.

May 26, 2010: FAA awarded Boeing, General Dynamics, and ITT contracts worth up to $4.4 billion under the System Engineering 2020 (SE-2020) contract. Under the contract the three companies would conduct large-scale demonstrations, including the use of aircraft as flying laboratories, to see how NextGen concepts, procedures, and

technologies could be integrated into the current national airspace system. The FAA would work with the companies to develop and demonstrate new procedures in four dimensions, adding the element of time to the current three-dimensional profile of an aircraft's latitude, longitude, and altitude. Other work to be performed included the development and rollout of modernized weather services. (See May 18, 2010; May 27, 2010.)

May 27, 2010: FAA issued a final rule mandating performance requirements for aircraft tracking equipment that would be required under NextGen. The avionics would allow aircraft to be controlled and monitored with greater precision and accuracy by a satellite-based system called Automatic Dependent Surveillance – Broadcast (ADS-B). The rule mandated that the broadcast signal meet specific requirements in terms of accuracy, integrity, power, and latency. All planes were required to have the system by 2020. (See May 26, 2010; June 7, 2010.)

May 27, 2010: Northrop Grumman Corporation announced a FAA contract award to provide national maintenance services and logistic support of several critical FAA communications products and systems, including the integrated communications switching system, rapid deployment voice switching system, enhanced terminal voice switch, and small tower voice switch. Under the terms of the contract, Northrop Grumman would ensure the existing communications systems, hardware, firmware, and documentation were supported into the year 2015. The company would supply round-the-clock technical assistance support, including next day delivery of critical repairs. The five year contract encompassed one base year and four additional one-year options with a not-to-exceed value of $32 million.

May 2010: FAA's Office of Commercial Space Transportation approved a simulator – the only one of its kind – developed by NASTAR that could replicate the G-forces of launch and descent. FAA required crews planning to fly sub-orbital missions to demonstrate an ability to withstand the stresses of spaceflight. (See December 15, 2009; July 1, 2010.)

May 2010: FAA announced that Atlantic City International Airport would be the first in the national airspace system to deliver digital NOTAMS. The notices had long been posted in difficult-to-read shorthand designed for delivery over teletype machines. The digital versions would be easier to read, more accurate, and would be disseminated quicker.

June 1, 2010: U.S. Transportation Secretary Ray LaHood joined federal and state officials in breaking ground for a new air traffic control tower at Palm Springs International Airport, CA. American Recovery and Reinvestment Act funding totaling $13.9 million would finance the construction of an approximately 150 foot-tall tower and a 7,000 square-foot base building.

June 1, 2010: Effective this date, FAA approved a certification of authorization (COA) for an unmanned aerial vehicle to patrol a portion of the U.S.-Mexico border extending

from Arizona to the El Paso region of Texas. Three drones were already used along the border in Arizona. Several others were deployed for border patrols in North Dakota and Florida. Officials at Customs and Border Protection intended to deploy the unmanned vehicles along the entire U.S. border by 2015. (See September 28, 2010; June 9, 2010.)

June 2, 2010: Transportation Secretary LaHood proposed new protections for air travelers, building on the Department of Transportation's earlier rule banning carriers from subjecting passengers to long tarmac delays and other deceptive practices. The proposed rule would:

- increase compensation for passengers involuntarily bumped from flights
- allow passengers to make and cancel reservations within 24 hours without penalty
- require full and prominently displayed disclosure of baggage fees as well as refunds and expense reimbursement when bags are not delivered on time
- require fair price advertising
- prohibit price increases after a ticket is purchased
- require timely notice of flight status changes (See April 29, 2010; August 23, 2011.)

June 7, 2010: FAA dedicated its newest laboratory at the William J. Technical Center. The NextGen Integration and Evaluation Capability (NIEC) laboratory, designed to simulate the national airspace system, provided a testbed where researchers could simulate and evaluate the effects of NextGen components on the system. (See May 27, 2010; June 18, 2010.)

June 9, 2010: FAA signed a cooperative research and development agreement with Boeing subsidiary, Insitu Inc., to facilitate FAA understanding of how unmanned aerial systems were constructed and how they functioned and operated in the national airspace system. Insitu provided the FAA with a Scan Eagle system to help the agency develop recommendations for integrating unmanned aircraft into the U.S. airspace system. The system, including two Scan Eagle small unmanned aircraft, was delivered to the FAA's William J. Hughes Technical Center under a cooperative research and development agreement. (See June 1, 2010; November 22, 2010.)

June 18, 2010: FAA and the European Commission signed an agreement that recognized the importance of coordinated research and implementation of results into seamless air traffic services between the two continents. The agreement specified 22 specific areas of cooperation that would facilitate joint research and development of NextGen/Single European Sky ATM Research (SESAR) projects. (See June 7, 2010; December 16, 2010.)

June 21, 2010: FAA announced the selection of Clay Foushee as director of the Office of Audit and Evaluation. FAA created the office in 2009 to ensure that safety complaints from both inside and outside the agency were handled in a fair and timely manner and that they received proper consideration. The office monitored the progress of the investigations and reported them to the FAA administrator. Foushee had wide experience in the aviation industry, having served in senior executive positions at Northwest Airlines

and as chief scientific and technical advisor for human factors at the FAA. His most recent position was on the senior professional staff of the House Committee on Transportation and Infrastructure. (See September 17, 2009.)

June 23, 2010: The U.S. Senate confirmed Michael P. Huerta as FAA deputy administrator. Prior to his appointment he ran his own consulting firm, advising clients on transportation policy, technology, and financing. He also served as a member of President Obama's transition team for the Department of Transportation. He had been president of the Transportation Solutions Group of Affiliated Computer Services, Inc., a technology services provider supporting transportation agencies worldwide. Huerta served in two senior positions at the Department of Transportation under President Clinton from 1993 to 1998. He held a master's degree from the Woodrow Wilson School of Public and International Affairs at Princeton University and a bachelor's degree from the University of California at Riverside. (See December 8, 2010; May 15, 2013.)

June 24, 2010: FAA announced contracts with Boeing, General Electric, Honeywell, Pratt & Whitney, and Rolls-Royce-North America to develop and demonstrate technologies to reduce commercial jet fuel consumption, emissions, and noise. The contracts, part of the FAA’s Continuous Lower Energy, Emissions and Noise (CLEEN) program, were expected to total $125 million over the five-year span of the program. Under a cost sharing arrangement, the companies would match or exceed the FAA’s contribution, bringing the overall value of the program to more than $250 million. (See March 10, 2008; June 29, 2012; February 13, 2013.)

June 24, 2010: FAA announced that controllers at the Anchorage Air Route Traffic Control Center and at the Juneau Air Traffic Control Tower were using ADS-B, critical for operations in Juneau because, like in the Gulf of Mexico, there was no radar coverage. (See April 26, 2010; October 25, 2010.)

June 29, 2010: FAA issued a notice of proposed rulemaking that would require plane manufacturers to show that small airliners could fly safely in certain icy weather conditions, such as rain that falls as a liquid but freezes when it touches a plane. To improve the safety of transport category airplanes operating in super cooled large droplet (SLD), mixed phase, and ice crystal icing conditions, the proposed regulations would:

- Expand the certification icing environment to include freezing rain and freezing drizzle.
- Require airplanes most affected by SLD icing conditions to meet certain safety standards in the expanded certification icing environment, including additional airplane performance and handling qualities requirements.
- Expand the engine and engine installation certification, and some airplane component certification regulations (for example, angle of attack and airspeed indicating systems), to include freezing rain, freezing drizzle, ice crystal, and mixed phase icing conditions. (See December 1, 2009; November 3, 2014.)

June 2010: FAA agreed to classify the Terrafugia Transition flying car, or roadable aircraft, as a Light Sport Aircraft, even though the vehicle was 120 pounds too heavy to

qualify for that class. Pilots needed only 20 hours of flight time (just five of it solo) to qualify for a license to fly a Light Sport Aircraft. (See March 23, 2012.)

July 1, 2010: FAA awarded a license to the state of Florida to operate Cape Canaveral Air Force Station's Launch Complex 46 for commercial use. (May 2010; August 3, 2010.)

July 1, 2010: FAA, the Professional Aviation Safety Specialists (PASS), and the National Air Traffic Controllers Association (NATCA) introduced the Partnership for Safety program to identify safety issues before incidents or accidents occur by seeking input from employees.

July 2, 2010: The Department of Transportation signed an Open-Skies Agreement with Barbados that liberalized air services for airlines of both the U.S. and Barbados. Barbados became the 99th U.S. Open-Skies partner. (See May 4, 2010; November 11, 2010.)

July 12, 2010: SRA International announced that its subsidiary company Systems Research and Applications Corporation had won a five-year, $57 million FAA contract to provide research and development services to the FAA William J. Hughes Technical Center in Atlantic City, NJ. The work would involve the areas of airport pavement design and testing; aircraft rescue and firefighting; wildlife hazards; bird strike mitigation, and runway surface technology. SRA would also provide services in airport capacity analysis and planning, visual guidance and lighting technologies and materials testing.

July 20, 2010: FAA issued a final rule requiring re-registration of all civil aircraft over the next three years and renewal every three years after that. Re-registration would enhance the aircraft registration database with current data derived from recent contact with aircraft owners. The new regulations also would ensure that aircraft owners gave the FAA updated information at least once every three years when they renewed their registration. The FAA planned to cancel the N-numbers of aircraft that were not reregistered or renewed. (See April 30, 1980.)

July 29, 2010: FAA commissioned the airport surface detection equipment-model X (ASDE-X) at Ronald Reagan National Airport. (See October 16, 2008; March 29, 2011.)

July 30, 2010: FAA announced that Mexico was not in compliance with international safety standards set by the International Civil Aviation Organization (ICAO), following an assessment of the country's civil aviation authority. As a result, the United States downgraded Mexico from a Category 1 to Category 2 rating. As part of the FAA's International Aviation Safety Assessment (IASA) program, the agency assessed the civil aviation authorities of all countries with air carriers that operate or have applied to fly to the United States and made that information available to the public. The assessments determined whether or not foreign civil aviation authorities met ICAO safety standards, not FAA regulations. With the IASA Category 2 rating, Mexican air carriers could not establish new service to the United States, although they could maintain existing service. (See December 1, 2010.)

December 1, 2010, FAA announced that Mexico again complied with international safety standards based on the results of a November FAA review of Mexico's civil aviation authority. Mexico now had a Category 1 rating. (See August 25, 2008; July 30, 2010; August 23, 2010.)

August 1, 2010: President Barack Obama signed the Airline Safety and Federal Aviation Administration Extension Act. The bipartisan bill extended aviation programs and excise taxes through September 30. It also required airline pilots to have a FAA airline Transport pilot license and increased the minimum number of flight hours from 250 to 1500. The bill also extended aviation programs and excise taxes for two months, or for the remainder of fiscal year 2010. (See November 23, 2009; September 14, 2010.)

August 3, 2010: FAA approved a NASA plan to expand the Mid-Atlantic Regional Spaceport at the Wallops Flight Facility, VA, to accommodate commercial launches. (See July 1, 2010; August 18, 2010; September 30, 2010.)

August 4, 2010: Lexington Blue Grass Airport opened a new 4,000-foot runway, R 9/27. The $27 million runway would be used for crosswind operations.

August 9, 2010: A DeHavilland DHC-3T crashed near a remote Alaskan fishing village killing five of the nine people aboard the aircraft. Former Senator Ted Stevens (R-AK) was among the victims. Former NASA administrator Sean O'Keefe and his son survived the accident. (See November 26, 2012.)

August 18, 2010: FAA selected New Mexico State University, Las Cruces, NM, to lead a new Air Transportation Center of Excellence for Commercial Space Transportation. The center, a partnership of academia, industry, and government, was established to address current and future challenges for commercial space transportation. The center's research and development efforts would focus on: space launch operations and traffic management; launch vehicle systems, payloads, technologies, and operations; commercial human space flight; and space commerce (including space law, space insurance, space policy, and space regulation). The FAA entered into 50-50 cost-sharing cooperative agreements with the new center, and planned to invest at least $1 million per year for the initial five years of the center's operations. (See January 28, 2004; August 3, 2010; September 30, 2010.)

August 23, 2010: FAA announced that Nigeria had achieved a Category 1 rating under FAA's International Aviation Safety Assessment program, which meant that Nigeria complied with international safety standards set by the International Civil Aviation Organization. The IASA Category 1 rating was based on the results of a July FAA review of Nigeria's civil aviation authority. With the IASA Category 1 rating, Nigerian air carriers could apply to operate to the United States with their own aircraft. (See December 1, 2010; November 1, 2012.)

September 14, 2010: FAA issued a notice of proposed rulemaking that would set a nine-hour minimum for rest prior to a pilot's duty period, a one-hour increase over the current rules. The proposed rule would establish a new method for measuring a pilot's rest period, so that the pilot would have the chance to receive at least eight hours of sleep during the rest period. Cumulative fatigue would be addressed by placing weekly, 28-day, and annual limits on the amount of time a pilot could be assigned any type of duty. Pilots would have to be given at least 30 consecutive hours free from duty on a weekly basis, a 25 percent increase over the then current rules. (See August 1, 2010; December 21, 2011.)

September 22, 2010: FAA announced a new safety program that, for the first time, would integrate voluntary safety information self-reported by pilots and air traffic controllers into the Aviation Safety Action Program and the Air Traffic Safety Action Program. This data-sharing program would give the FAA a more complete picture of the national airspace system by collecting, assessing, and reviewing safety events from the perspective of both pilots and air traffic controllers. United Airlines and its pilots became the first to participate in the demonstration program. The FAA expected to sign similar agreements with other carriers. (March 31, 2008; January 30, 2009.)

September 27, 2010: Southwest Airlines announced it had entered into an agreement to acquire all of the outstanding common stock of AirTran Holdings, Inc., the parent company of AirTran Airways, for a combination of cash and Southwest Airlines' common stock. Southwest said it could take up to two years before all aspects of the merger were complete, including combining of staff and frequent-flier programs and retrofitting of aircraft.

September 28, 2010: FAA issued a notice of proposed rulemaking that would adjust existing overflight fees by using current FAA cost accounting data and air traffic activity data. The agency believed the adjustment necessary because operational costs for providing air traffic control and related services for overflights had increased steadily since it established the fees in 2001. (See December 17, 2008; October 1, 2011.)

September 28, 2010: The Department of Transportation, the International Civil Aviation Organization, the International Air Transport Association, and the European Commission signed a memorandum of understanding covering the Global Safety Information Exchange program. The program provided a framework for identifying what safety information could be shared, how to communicate that information, and the mechanisms to be used for the actual exchange of information.

September 30, 2010: FAA announced a new grant program designed to fund projects for the development and expansion of the commercial space transportation infrastructure. The first Space Transportation Infrastructure Matching grants included: $43,000 for the New Mexico Spaceport Authority to provide an automated weather observing system; $227,195 to the Alaska Aerospace Corporation for a rocket motor storage facility; $125,000 to the East Kern Airport District in Mojave, CA, for an emergency response vehicle; and, $104,805 to the Jacksonville Airport Authority in Florida to develop a

spaceport master plan for Cecil Field. (See August 3, 2010; August 18, 2010; September 17, 2014.)

September 2010: FAA awarded Lockheed Martin a three-year contract extension to continue to provide automated flight service station services. The contract option, a follow-on to the initial 2005 contract, was worth $356 million. (See February 1, 2005.)

October 1, 2010: The engineered material arresting systems (EMAS) at Teterboro Airport in Teterboro, NJ, successfully stopped a G-4 Gulfstream that overran the runway. This was the seventh EMAS save. An EMAS consisted of a layer of crushed concrete positioned at the end of runways that could slow and stop aircraft in runway overruns. EMAS was developed in a research partnership with the FAA and Engineered Arresting Systems Corp. (ESCO), a division of Zodiac Aerospace. (See January 19, 2010; November 2014.)

October 1, 2010: United Continental Holdings, Inc., formerly UAL Corporation, announced that a wholly owned subsidiary had merged with Continental Airlines, Inc., and that Continental Airlines and United Air Lines, Inc., were now wholly owned subsidiaries of United Continental Holdings, Inc. (See November 30, 2011.)

October 7, 2010: FAA issued a notice of proposed rulemaking that would require each certificate holder to establish a safety management system (SMS) for its entire airfield environment (including movement and non-movement areas) to improve safety at airports hosting air carrier operations. A SMS was a formalized approach to managing safety by developing an organization-wide safety policy, developing formal methods of identifying hazards, analyzing and mitigating risk, developing methods for ensuring continuous safety improvement, and creating organization-wide safety promotion strategies. (See March 9, 2009; November 5, 2010.)

October 8, 2010: FAA issued a safety alert for operators (SAFO), which summarized research showing that lithium metal (non-rechargeable) and lithium-ion (rechargeable) batteries were highly flammable and capable of igniting during air transport under certain circumstances. The research also indicated that Halon 1301, the suppression agent found in Class C cargo compartments, was ineffective in suppressing lithium metal battery fires. The SAFO recommended procedures air carriers could use when transporting lithium batteries. (See December 29, 2004.)

October 10, 2010: Controllers began operations in the new air traffic control tower at LaGuardia Airport. FAA formally dedicated the new tower on January 21, 2011. (See January 21, 2011.)

October 12, 2010: FAA issued a notice of proposed rulemaking that would require helicopter operators to use the latest on-board technology and equipment to avoid terrain and obstacles. The proposal contained provisions which, when finalized, would require operators to use enhanced procedures for flying in challenging weather, at night, and

when landing in remote locations. The proposed rules would require air ambulance operators to:

- Equip with Helicopter Terrain Awareness and Warning Systems (HTAWS)
- Conduct operations under Part 135, including flight crew time limitation and rest requirements, when medical personnel are on board
- Establish operations control centers if they are certificate holders with 10 or more helicopter air ambulances
- Institute pre-flight risk-analysis programs
- Conduct safety briefings for medical personnel
- Amend their operational requirements to include Visual Flight Rules (VFR) weather minimums, Instrument Flight Rules (IFR) operations at airports/heliports without weather reporting, procedures for VFR approaches, and VFR flight planning.
- Ensure their pilots in command hold an instrument rating

Under the proposal, all commercial helicopter operators would be required to:

- Revise IFR alternate airport weather minimums
- Demonstrate competency in recovery from inadvertent instrument meteorological conditions
- Equip their helicopters with radio altimeters
- Change the definition of "extended over-water operation" and require additional equipment for these operations

In addition, the proposed rules would require all Part 135 aircraft, i.e., helicopter and fixed wing on-demand operators, to:

- Prepare a load manifest
- Transmit a copy of load manifest documentation to their base of operations, in lieu of preparing a duplicate copy
- Specify requirements for retaining a copy of the load manifest in the event that the documentation is destroyed in an aircraft accident
- Require Part 91 general aviation helicopter operators to revise the VFR weather minimums

The public had until January 10, 2011, to comment on the proposed rule. (See January 12, 2009; February 20, 2014.)

October 15, 2010: FAA broke ground for a new air traffic control tower at Oakland International Airport. Two air traffic control towers served Oakland International Airport. A 158-foot-tall tower on the southern portion of the airfield was built in 1962 as part of a terminal expansion project. In 1972, construction of a large hangar blocked some views from the south tower, requiring the Port of Oakland to build a second tower to handle traffic on the north runways. Replacing both towers with a single one would improve air traffic operations and reduce operating costs. (See June 20, 2013.)

October 18, 2010: FAA broke ground for a new air traffic control tower at the Frederick Municipal Airport in Frederick, MD. Approximately 200 general aviation aircraft were

based at Frederick Municipal Airport, a reliever airport for Baltimore-Washington International Thurgood Marshall Airport. The airport handled more than 135,000 aircraft operations annually.

October 19, 2010: FAA's Air Traffic Organization announced its workforce engagement (WE) effort with the launch of the WE website. The ATO contracted with Gallup, a leader in employee engagement, to support ATO's long-term effort to create a better place to work. On December1, ATO invited its employees to take a short, 15 question survey to establish a baseline of employee engagement, which would be used to help measure progress as the WE initiatives progressed.

October 21, 2010: FAA and the U.S. Department of Agriculture announced a five year agreement to develop aviation fuel from forest and crop residues and other feedstocks to decrease dependence on foreign oil and stabilize aviation fuel costs. Under the partnership, the agencies would assess the availability of different kinds of feedstocks that could be processed by bio-refineries to produce jet fuels. The participants would develop a tool to evaluate the status of different components of a feedstock supply chain, such as availability of biomass from farms and forests, the potential of that biomass for production of jet fuel, and the length of time it would take to ramp up to full-scale production. The agencies already had existing programs and collaborative agreements with private and public partners and resources to help biorefiners develop cost-effective production plans for jet aircraft biofuels. (See September 13, 2011; February 13, 2013.)

October 21, 2010: TASC, Inc., announced a 10-year FAA contract award worth up to $827.8 million for national airspace system support services. The SE-2020 support services contract covered advanced systems engineering, investment and business case analysis, planning and forecasting, as well as business, financial and information management support services related to the development and the transformation of the national air transportation system. (See May 26, 2010.)

October 25, 2010: ITT Corporation announced it had received clearance from FAA for nationwide deployment of the ADS-B. Achievement of this In Service Decision milestone followed successful tests at four key sites in Alaska, the Gulf of Mexico, Louisville, and Philadelphia. (See June 24, 2010; February 3, 2011.)

October 26, 2010: FAA dedicated the new air traffic control tower at Reno-Tahoe Airport, NV. The $29 million tower was 195 feet tall, three times as big as the old one built in 1957.

October 28, 2010: Law enforcement agencies discovered potential suspicious packages on two cargo planes in transit to the United States. Based on close cooperation among U.S. government agencies and with our foreign allies and partners, authorities identified and examined two suspicious packages, one in East Midlands, United Kingdom, and one in Dubai. Both of these packages originated from Yemen. At the direction of the President and Secretary Napolitano, the Transportation Security Administration and Customs and Border Protection immediately took additional measures to enhance

existing protocols for screening inbound cargo, including grounding packages originating from Yemen destined for the United States and deploying a team of inspectors to assist the Government of Yemen with their cargo screening procedures.

November 1, 2010: An interim FAA requirement mandated that planes landing after Boeing's 747-8 jumbo jet stay at least 10 miles behind went into effect. The FAA said the interim standards were based, in part, on guidance received from international regulatory organizations that studied the wake vortices of the Airbus 380-800 in 2006. After those studies, the International Civil Aviation Organization issued a 10-mile separation standard for the A380 superjumbo jet. This was later relaxed, but a separation of 6 to 8 miles was still required for the A380, depending on the size of the aircraft behind it. Prior to its Boeing 747-8 ruling, the U.S. requirement for large airplanes was just 4 miles separation from other heavy jets and up to 6 miles from light aircraft. (See August 17, 1996; November 1, 2012.)

November 2, 2010: FAA issued a final rule amending the airworthiness standards for transport category airplanes concerning flight crew alerting. The standards updated definitions, prioritization, color requirements, and performance for flight crew alerting to reflect changes in technology and functionality. This amendment added additional alerting functions, and consolidated and standardized definitions and regulations for flight crew warning, caution, and advisory alerting systems. It also harmonized standards between the FAA and the European Aviation Safety Agency. The rule became effective on January 3, 2011.

November 2-3, 2010: The first meeting of the FAA's National Labor-Management Forum took place in Baltimore, MD. The meeting provided an opportunity for approximately 30 representatives from FAA's labor unions and management to discuss how a National Labor-Management Forum could work to improve the agency. President Obama signed an executive order in December 2008 establishing Labor-Management Forums as a tool to improve labor relations within the federal government. The FAA labor-management participants first came together in June 2010 and jointly decided to create a national forum. Participants at the Baltimore forum agreed to a charter that outlined its responsibilities, procedures, and guiding principles. Participants also set up work groups to take on issues involving metrics, pre-decisional involvement, joint collaboration, training, and communication. In addition, they agreed to meet quarterly and to:

- Handle high level agency-wide issues
- Set a tone for the agency that would help facilitate a broad culture change and encourage collaboration efforts
- Enable and support continuing collaborative efforts and those that have yet to get underway
- Commit to provide tools for collaboration and dispute resolution
- Reflect positive interaction

November 5, 2010: FAA issued a notice of proposed rulemaking that, when finalized, would require each certificate holder operating under 14 CFR part 121 to develop and implement a safety management system (SMS) to improve the safety of their aviation

related activities. A SMS included an organization-wide safety policy; formal methods for identifying hazards, controlling, and continually assessing risk; and promotion of a safety culture. (See October 7, 2010.)

November 6, 2010: Quentin Taylor, a long-time FAA executive died. Taylor began his FAA career in 1958. He served as the agency's first manager of the Office of Civil Rights, later as deputy director of the FAA's Alaska region, and director of its New England region. In 1977, he became the FAA's deputy administrator. He later became director of the Office of International Aviation and then deputy associate administrator for airports. He retired in 1999. (See May 4, 1977.)

November 11, 2010: Colombia became the United States' 100th Open-Skies partner when representatives of the two countries reached agreement to liberalize U.S.-Colombia air services for airlines of both countries. Once full Open Skies took effect at the end of 2012, airlines from the United States and Colombia would be allowed to select routes, destinations and prices for both passenger and cargo service based on consumer demand and market conditions. (See July 2, 2010; December 3, 2010.)

November 12, 2010: FAA accepted the final report on the November 2008 telecommunications outage prepared by an independent review panel asked to investigate the incident. Administrator Randy Babbitt had asked the panel to examine the cause of the FAA Telecommunications Infrastructure (FTI) outage and to recommend strategies to reduce the potential for similar future outages. He also asked the panel to examine the FTI's present and future architecture as it relates to emerging technology and future FAA systems. The final report on the FTI outage laid out 14 long-term strategic recommendations the FAA should pursue as it transitions to future network systems. The recommendations focused on:

- Governance: the decision making process for FAA systems
- Situational Awareness: FAA network monitoring and information sharing
- Interoperability: data sharing between systems and stakeholders
- Resilience: ability of a network to continue operating under a variety of conditions
- Cyber Security: the ability to thwart, detect, and respond to any attempts to compromise the system (See December 8, 2009.)

November 15, 2010: SkyWest Inc. announced completion of its $133 million purchase of ExpressJet Holdings Inc. Both SkyWest and ExpressJet provide regional service for bigger carriers.

November 15, 2010: In a notice of proposed policy, FAA announced its intention to clarify the definition of "actively engaged" for the purposes of evaluating applications for Inspector Authorizations (IA). In the current list of requirements, FAA stated that an applicant must have been "actively involved" in maintaining aircraft certificated and maintained in accordance with FAA regulations. However, it lacked the necessary clarification on what qualified as "actively engaged," leading to a substantial amount of confusion. In the newly proposed policy amendment, FAA addressed the issue by adding

language intended to help clarify the requirement. The new policy language, when adopted, would assist aviation safety inspectors in making the appropriate determination when assessing IA applications, as well as prevent applicant confusion. Under the new language, those holding supervisory positions and, as such, were not actively engaged in maintenance activities, would not be permitted to retain their IA. FAA planned for the new policy to go in effect for the next IA renewal cycle in March 2011.

November 15, 2010: FAA issued a final rule requiring aircraft manufacturers and certification applicants to establish a number of flight cycles or hours a plane could operate and be free from widespread fatigue damage (WFD) without additional inspections for fatigue. Once manufacturers established the flight cycle limits, operators of affected aircraft had to incorporate them into their maintenance programs within 30 to 72 months, depending on the model of aircraft. The new regulation applied to airliners with a takeoff weight of 75,000 lbs. and heavier, as well as all transport designs certificated in the future.

November 16, 2010: Donald Nyrop, the second administrator of the Civil Aeronautics Administration, died; he was 98. Nyrop joined the CAA in 1939 after graduating from law school and became administrator in 1950. In 1951 he became chairman of the Civil Aeronautics Board and three years later because president of Northwest Airlines. He retired from Northwest in 1978. (See October 4, 1950.)

November 18, 2010: FAA issued a notice of proposed rulemaking that, if finalized, would require a pilot to carry a pilot certificate with photo with an expiration date of eight years. At the end of this period, the pilot had to update their photo and obtain a new certificate. The proposal responded to section 4022 of the Intelligence Reform and Terrorism Prevention Act. The FAA previously required all pilots to obtain a plastic certificate (excepting temporary certificates and student pilot certificates). The FAA also proposed to require student pilots to obtain a plastic certificate with photo. Student pilot certificates would have the same duration as other pilot certificates. Additionally, because of the new photo requirements, the proposal modified the application process and the fee structure for pilot certificates. The new certificate cost $22.00.

November 22, 2010: FAA issued its first license permitting the reentry to earth of a privately developed spacecraft to the Space Exploration Technologies Corporation (SpaceX). The Space X Dragon space capsule launched atop the Falcon 9 rocket on December 8 and returned to earth three hours later. The unmanned flight was a precursor to NASA and SpaceX efforts to provide commercial trips to the International Space Station with cargo and crew. (See June 9, 2010; May 22, 2012.)

November 23, 2010: FAA issued an advisory circular (AC 150/5220-25) requiring that radars used for airport wildlife hazard programs must be capable of tracking 1,000 targets simultaneously. The tracking capability within an area 0.3 to 3 nautical miles was a minimum standard set by the 50-page advisory circular, a mandatory document for airports that accepted federal funding or levy passenger facility charges.

December 3, 2010: The Department of Transportation agreed to implement an Open-Skies Agreement with Brazil that would liberalize air services for airlines of both countries. The agreement immediately removed restrictions on pricing and on the routes between each country that can be served by U.S. and Brazilian scheduled and charter airlines and provided immediately for full code-share rights and additional charter flexibility. When the full Open Skies agreement takes effect in 2015, airlines from the United States and Brazil would be allowed to select routes, destinations, and prices for passenger, cargo, and charter services based on consumer demand and market conditions. Brazil was the 101st U.S. Open-Skies partner. (See November 11, 2010; April 18, 2011.)

December 7, 2010: FAA awarded a contract to Jacobs Engineering Group, Inc., to provide up to $271 million in design-build services for at least the next five years. Jacobs would work with the FAA's en route facilities program, which oversees the management of the nation's 21 air traffic control centers. Specifically, the company would provide strategic facilities planning, cost estimates, construction support, hazardous material abatement, and related services.

December 16, 2010: The Future of Aviation Advisory Committee presented its final recommendations to Secretary of Transportation Ray LaHood. The Committee made 23 recommendations in 5 categories, including safety, workforce/labor, competitiveness and viability, finance, and environment. Among the recommendations presented by the committee were proposals that federal government assist in funding NextGen equipage on aircraft, ensure greater transparency for consumers in airline pricing, expand the sources of safety data available to the FAA, and ensure that global airline alliances enhance the viability and competitiveness of the U.S. aviation industry. Other specific recommendations included:

- Developing improved methods of predicting safety risks;
- Incorporating safety standards into planning for NextGen;
- Improving links between airports and other forms of transportation;
- Enhancing science and technology training for the future and current aviation workforce;
- Ensuring that aircraft operators are able to realize the benefits of NextGen as quickly
- as possible;
- Reducing aviation’s impact on the environment through use of sustainable fuels and improved aircraft technology, as well as accelerating the use of NextGen equipment to promote greater efficiency.

After review of the recommendations, the Department of Transportation planned to develop a strategy to implement the recommendations. (See June 18, 2010; February 3, 2011.)

December 20, 2010: FAA launched a new web-based job application system called the automated vacancy information access tool for online referral (AVIATOR). The system, which replaced the automated staffing and application process (ASAP) used by the

agency since 2005, provided an automated application process and an instant notification of application submissions, and stored applications for future use.

December 27, 2010: Alfred Kahn, the architect of the historic deregulation of the airline industry, died. As head of the Civil Aeronautics Board in 1977-1978, Kahn oversaw the Carter Administration's airline deregulation policies. In October 1978, President Carter appointed him as his anti-inflation czar with a mandate to curb the rising costs in food, medical care, and energy. Kahn spent most of his career as a professor at Cornell University. (See October 24, 1978.)

December 27, 2010: FAA issued a proposed airworthiness directive that, if finalized, would mandate software upgrades to onboard aircraft collision avoidance devices manufactured by Aviation Communication and Surveillance Systems, a unit of L-3 Communications Holdings. FAA proposed the directive after reports of anomalies with the devices during a test flight over a high-density airport. Operators had 48 months after the effective date of the AD to install the software upgrade.

2011

January 12, 2011: The City of St. George, UT, opened a new airport with a 9,300-foot long runway. The new airport replaced the old St. George Municipal Airport.

January 21, 2011: FAA dedicated a new airport traffic control tower at LaGuardia Airport. The new tower replaced a tower built in 1964. The total cost to design, equip, and construct the new 233-foot high tower was approximately $100 million. (See October 10, 2010.)

February 3, 2011: FAA announced that it had signed an agreement with JetBlue that would allow the airline to fly more precise, satellite-based flights from Boston and New York to Florida and the Caribbean beginning in 2012. Under the agreement, as many as 35 of JetBlue's A320 aircraft will be equipped with Automatic Dependent Surveillance Broadcast (ADS-B) avionics over the next two years, enabling them to fly in two major routes off the East Coast even if traditional radar coverage was not available. The agreement also allowed JetBlue to fly a new route to the Caribbean. The FAA planned to collect valuable NextGen data by observing and conducting real-time operational evaluations of ADS-B on revenue flights. (See December 16, 2010; February 28, 2011.)

February 25, 2011: Executive Jet Management (EJM), working with Jeppesen, announced that it had secured FAA's first approval for use of the iPad for aeronautical charting in all phases of flight. The approval followed three months of testing and 250 flight trials that included a successful rapid decompression test to 51,000 feet and noninterference testing.

February 28, 2011: The FAA and NASA released a new plan focused on human factors research for the Next Generation Air Transportation System. FAA and NASA developed this document titled, "NextGen Human Factors Research Coordination Plan," in response

to a 2010 report by the Government Accountability Office – along with previous recommendations from the JPDO and the Department of Transportation Inspector General – stating the need for a cross-agency, human factors plan that coordinated research efforts by the two agencies. (See February 3, 2011; September 23, 2011.)

March 9, 2011: FAA and Sensis Corporation received the Jane's Airport Review Runway Safety Award at the 2011 ATC Global Exhibition and Conference in Amsterdam, the Netherlands. This was the first year for the Runway Safety award category, which recognized a contribution to improved safety on or near the runway. The award recognized the FAA's deployment of Sensis Corporation Airport Surface Detection Equipment, Model X (ASDE-X) technology at 35 major U.S. airports, including five of the world's ten busiest airports. (See July 29, 2010.)

March 14, 2011: FAA commissioned Automatic Dependent Surveillance-Broadcast (ADS-B) equipment on its Airbus 330/340 flight simulator at the FAA Mike Monroney Aeronautical Center. The one year, $1 million project featured other enhancements, such as dual electronic flight bags with traffic information display; an air/ground display of traffic bearing/speed/altitude indicator cueing; a new traffic collision avoidance system (TCAS) integrated with ADS-B; and a fully integrated simulator visual system and electronic flight bag for up to 50 aircraft. (See November 3, 2008; February 3, 2011; January 2, 2013; April 22, 2013.)

March 21, 2011: Effective this date, FAA prohibited flight operations with the Tripoli Flight Information Region by all U.S. air carriers; U.S. commercial operators; persons exercising the privileges of a U.S. airman certificate, except when such persons are operating a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except when such operators are foreign air carriers. FAA issued this regulation because the ongoing armed conflict in Libya and presented a potential hazard to civil aviation.

March 22, 2011: Effective this date, FAA required all certificate holders conducting operations under Part 135 to include in their training programs crew resource management training for crewmembers, including pilots and flight attendants.

March 25, 2011: As part of the Alaskan Aviation Camera Program begun in 1999, FAA turned on its 150th weather camera in Talkeetna. The FAA uses these cameras to view sky conditions around airports, air routes, and mountain passes. They provide pilots with critical weather information to help them decide whether it is safe to fly. (See September 30, 2013.)

April 11, 2011: FAA announced its new David J. Hurley Air Traffic Control System Command Center, located in Warrenton, VA, was fully operational. The new Command Center, co-located with the FAA's Potomac Terminal Radar Approach Control, or TRACON, is responsible for managing the overall use of the national airspace system. Traffic management specialists balance air traffic demand with system capacity, working

with aviation stakeholders to handle any constraints in the system, such as weather, runway closures and delays. (See December 4, 2008.)

April 13, 2011: FAA announced that effective immediately, it was placing an additional air traffic controller on the midnight shift at 27 control towers around the country staffed with only one controller during that time. FAA took this action after an incident at Reno-Tahoe International Airport when a controller fell asleep while a medical flight carrying an ill patient attempted to land. The medical flight pilot communicated with the Northern California Terminal Radar Approach Control (TRACON) and landed safely. FAA suspended the controller, who was out of communication for approximately 16 minutes, while it investigated the incident. (See April 14, 2011.)

April 14, 2011: FAA Administrator Randy Babbitt announced he had accepted the resignation of ATO COO Hank Krakowski. In his statement, Babbitt said, "Over the last few weeks we have seen examples of unprofessional conduct on the part of a few individuals that have rightly caused the traveling public to question our ability to ensure their safety. This conduct must stop immediately." David Grizzle, FAA's Chief Counsel, became acting COO, and on July 7, 2011, Administrator Babbitt announced that Grizzle would be the permanent COO. (See October 2, 2007; April 13, 2011; April 17, 2011; August 13, 2013.)

April 17, 2011: Administrator Babbitt announced changes to air traffic controller scheduling practices after suspending an air traffic controller the day before for falling asleep while on duty during the midnight shift at the Miami Air Route Traffic Control Center. The new scheduling rules included:

- Controllers would now have a minimum of nine hours off between shifts. Currently they may have as few as eight.
- Controllers would no longer be able to swap shifts unless they have a minimum of 9 hours off between the last shift they worked and the one they want to begin.
- Controllers would no longer be able to switch to an unscheduled midnight shift following a day off.
- FAA managers would schedule their own shifts in a way to ensure greater coverage in the early morning and late night hours. (See April 14, 2011; July 1, 2011.)

April 18, 2011: The United States signed its 102nd Open Skies Agreement with Saudi Arabia that liberalized air services for airlines of both countries. (See December 3, 2010; July 11, 2011.)

May 20, 2011: FAA dedicated a new airport traffic control tower at Long Island MacArthur Airport. The new 158-foot high tower, which replaced a tower built in 1963, housed a 525-square-foot tower cab. The total cost to design, equip, and construct the new tower was approximately $20 million.

June 2, 2011: FAA announced it would begin to impose civil penalties against people who point a laser into the cockpit of aircraft. An agency legal interpretation determined

that shining a laser beam into an aircraft cockpit could disrupt a flight crew's ability to perform its duties while operating an aircraft, in violation of Federal Aviation Regulations. The FAA could impose a civil penalty of up to $11,000 on an individual who interferes with a flight crew.

July 1, 2011: FAA and the National Air Traffic Controllers Association (NATCA) announced agreement on a number of fatigue recommendations developed by a joint FAA-NATCA working group. The agreement reinforced existing FAA policy that prohibits air traffic controllers from sleeping while they are performing assigned duties. FAA and NATCA also agreed that all air traffic controllers must report for work well-rested and mentally alert. As a result of this agreement, air traffic controllers can now request to take leave if they are too fatigued to work air traffic. (See April 17, 2011.)

July 1, 2011: FAA revoked the operating certificate of Bimini Island Air. The Fort Lauderdale-based on-demand operator surrendered its certificate on July 1 after an emergency order of revocation was issued the previous month.

July 11, 2011: The United States and Macedonia reached an Open-Skies aviation agreement, which allowed airlines of the two countries to select routes, destinations and prices for both passenger and cargo service based on consumer demand and market conditions. It was the first aviation agreement between the two countries, and was the 103rd U.S. open skies agreement. (See April 18, 2011; December 5, 2011.)

July 23, 2011: FAA furloughed 4,000 employees and stopped work on a number of airport improvement projects when Congress failed to pass the 21st reauthorization extension for the agency. The employees, paid out of the aviation trust fund, included engineers, scientists, administrative assistants, computer specialists, program managers and analysts, environmental protection specialists, and community planners. Congress passed an extension of FAA's reauthorization on August 4, allowing FAA employees to return to work. On September 13, the House passed the 22nd extension; the Senate passed the bill for the four-month extension on September 15. The bill extended then current funding levels through January 31, 2012. (See February 22, 2013.)

July 23, 2011: FAA dedicated a new, 254 foot tall airport traffic control tower at Dayton International Airport.

July 26, 2011: A FAA contract award to Harris Corporation was announced. Under the 10-year contract, worth $85 million, Harris would replace and upgrade the existing satellite communications network that links the Alaska Air Route Traffic Control Center in Anchorage with 64 FAA facilities throughout the region.

August 1, 2011: Effective this date, air traffic controllers could once again ride in aircraft cockpits with commercial pilots as part of a voluntary education program. The Flight Deck Training program, designed to improve safety by giving air traffic controllers a greater understanding of the pilots' experience and workload in the cockpit, replaced a previous program called Familiarization Training, or FAM trip, which was suspended in

2001. Controllers are limited to two training trips in a calendar year instead of the eight permitted under a FAM trip, and controllers cannot fly to the same airport on consecutive flights. A controller must have advanced approval to participate and must also submit an itinerary, as well as medical and security information. Foreign travel was not permitted.

August 19, 2011: FAA issued a final rule that prohibited air carriers and other certificate holders from employing certain former FAA aviation safety inspectors as company representatives to the agency for a period of two years after they have left the agency. These restrictions applied if the former FAA employee directly served as or was responsible for the oversight of a Flight Standards Service aviation safety inspector and had direct responsibility to inspect, or oversaw the inspection of, the operations of the certificate holder. This rule also applied to persons who own or manage fractional ownership program aircraft used to conduct certain commercial operations. (See November 20, 2011.)

August 19, 2011: FAA issued a new rule that required scheduled airlines to install ice detection equipment in their existing fleets or to update their flight manuals to ensure crews know when to activate their ice protection systems. For aircraft equipped with an ice-detection system, the new rule mandated that the system alert the crew every time they needed to activate ice protection. The system could either automatically turn on the ice protection or pilots could manually activate it. For aircraft without ice-detection equipment, the crew must activate the protection system based on cues listed in their airplane's flight manual during climb and descent, and at the first sign of icing when at cruising altitude. The rule applied only to in-service aircraft that weighed less than 60,000 pounds because studies showed smaller planes were more affected by undetected icing or late activation of the ice protection system. (See April 26, 2007.)

August 23, 2011: New consumer protections for airline passengers went into effect mandating airlines to refund any fee for carrying a bag if the bag is lost. Airlines must prominently disclose all optional fees on their websites, including but not limited to fees for baggage, meals, canceling or changing reservations, or advanced or upgraded seating. The new rules also doubled the amount of money passengers were eligible to be compensated for in the event they were involuntarily bumped from an oversold flight. The rule expanded the existing ban on lengthy tarmac delays to cover the international flights of foreign airlines at U.S. airports, and established a hard four-hour time limit on tarmac delays for all international flights at U.S. airports. It also extended the three-hour tarmac delay limit for domestic flights, then in place at large-hub and medium-hub airports, to flights at small-hub and non-hub airports. All carriers subjected to the tarmac rule would be required to report lengthy tarmac delays to DOT. In all cases, exceptions to the time limits were allowed only for safety, security or air traffic control-related reasons. Carriers must also ensure that passengers stuck on the tarmac are provided adequate food and water after two hours, as well as working lavatories and any necessary medical treatment. (See June 2, 2010 and November 14, 2011.) Additional measures under the new rule would take effect January 24, 2012, including:

- Requiring all taxes and fees to be included in advertised fares.
- Banning post-purchase price increases.

- Allowing passengers to hold a reservation without payment, or to cancel it without penalty, for 24 hours after the reservation is made, if the reservation is made one week or more prior to a flight's departure date.
- Requiring disclosure of baggage fees when passengers book a flight.
- Requiring that the same baggage allowances and fees apply throughout a passenger's journey.
- Requiring disclosure of baggage fee information on e-ticket confirmations.
- Requiring prompt notification of delays of over 30 minutes, as well as cancellations and diversions.

August 26, 2011: At an event at Boeing's facility in Everett, Washington, Administrator Babbitt presented Boeing executives with two certificates for the design and production of the Boeing 787 Dreamliner with Rolls-Royce engines. The first, a type certificate, was for the FAA's approval of the airplane's design. The second, a production certificate, allowed Boeing to manufacture the 787 following a rigorous review by FAA inspectors of Boeing's quality system, production tooling, manufacturing processes and controls, inspection methods, and supplier control procedures. The Dreamliner made its inaugural flight from Tokyo to Hong Kong with paying passengers on October 26, 2011. (See December 4, 2012.)

September 7, 2011: Lockheed Martin announced that controllers at the Minneapolis-St. Paul International Airport were now using a tool it developed with the FAA. The automated terminal proximity alert (ATPA) tool automatically lets controllers know what the distance is between aircraft that are flying in-line instrument approaches. The system also visually alerts a controller when a trailing plane is predicted to get too close to an aircraft ahead of it, allowing the controller to take action before a loss of standard separation occurs.

September 13, 2011: U.S. Secretary of Transportation Ray LaHood and Australian Ambassador to the United States Kim Beazley signed a memorandum of agreement to continue research and development of clean, sustainable alternative aviation fuels. The agreement called for Australia and the United States to exchange information about policies, programs, projects, research results, and publications, and to conduct joint studies in areas such as fuel sources and environmental impacts. The memorandum also facilitated analysis of fuel source supply chains. (See October 21, 2010; November 7, 2011.)

September 23, 2011: In a message to FAA employees, Administrator Babbitt announced that Congress had approved FAA's reprogramming request. The request, dated June 30, 2011, proposed to shift approximately $608 million in funding between budget accounts to execute a reorganization of the agency. With congressional approval, the FAA moved the organization responsible for NextGen from the ATO to a new office reporting directly to the FAA deputy administrator. The ATO senior vice president for NextGen and Operations Planning became the Assistant Administrator for NextGen. The Joint Planning and Development Office also became a direct report to the deputy administrator. In addition, the agency created a Senior Vice President for Program

Management within the ATO. Programs covering approximately 125 Capital Investment Plan budget line items moved into the new organization. A new assistant administrator for finance and management, reporting to the administrator, took over the separate offices that managed acquisition and business services, financial services, and regions and center operations. All of FAA's financial, information technology, non-ATO acquisition, property management, and related administrative functions now reported to this new organization. The assistant administrator had four deputies, once for each functional area. (See February 28, 2011; February 14, 2012; January 17, 2014.)

October 1, 2011: Effective this date, FAA updated its fee structure. The fee levels that would eventually be achieved reflect increases above then levels of 69 percent in the en route environment and 36 percent in the oceanic environment. This would be accomplished by increasing the fees on October 1 in each of the years 2011 through 2014 at annual compounded rates of 14 percent for en route and 8 percent for oceanic. (See September 28, 2010.) The actual dollar amounts of each fee on the four revision dates would be:

- October 1, 2011 $38.44 $17.22
- October 1, 2012 $43.82 $18.60
- October 1, 2013 $49.95 $20.09
- October 1, 2014 $56.86 $21.63

October 7, 2011: FAA announced approval of the first public use helicopter area navigation routes (RNAV) known as TK routes. The new TK routes connected New York City with Washington, DC. Publishing the RNAV routes on IFR en route low altitude charts offered helicopter operators several benefits, such as dedicated routes and IFR capability. (See August 6, 2007.)

October 17, 2011: FAA broke ground on a new $69 million, 324-foot air traffic control tower and terminal radar approach control facility at Cleveland Hopkins International Airport. The new tower would replace one opened in 1988. FAA expected to commission the new tower and TRACON in late 2014.

October 20, 2011: FAA dedicated the new $72.6 million, 336-foot-tall air traffic control tower and TRACON at Memphis International Airport.

October 31, 2011: Beginning this date, FAA required pilots of business jets certified for single-pilot operations to pass yearly proficiency checks. The rule required approximately 3,000 US-based pilots to have flight checks, which must be performed either in full-flight simulators or in an aircraft with an FAA-designated examiner on board.

November 7, 2011: United Airlines flew the first-ever commercial domestic flight using a blend of 40% biofuel mix created from algae by Solazyme, a San Francisco based company and traditional jet fuel. (See September 13, 2011; December 1, 2011.)

November 14, 2011: DOT announced it had imposed the first fine for violating the April 2010 three-hour tarmac delay rule. DOT fined American Eagle $900,000 in civil

penalties and ordered the air carrier to cease and desist from future violations of the tarmac delay rule. On May 29, 2011, American Eagle had tarmac delays of more than three hours on 15 flights arriving at O'Hare. Those 15 flights had tarmac delays of up to 225 minutes, which was 45 minutes beyond the limit. While the airline had a procedure in place to bring passengers subject to an extended tarmac delay back to the gate, the carrier was late in implementing its procedure, resulting in violations of the rule. A total of $650,000 had to be paid within 30 days, and up to $250,000 could be credited for refunds, vouchers, and frequent flyer mile awards to the passengers on the 15 flights, as well as to passengers on future flights that experience lengthy tarmac delays of less than three hours. (See August 23, 2011.)

November 28, 2011: The Air Transport Association formally changed its name to Airlines for America with the slogan "We Connect the World." The name change was publically announced on Capitol Hill on November 30. (See January 3, 1936.)

November 29, 2011: FAA dedicated the new Environmental Modeling Lab at its Washington, DC, headquarters. The facility allowed the FAA to develop and use the tools necessary to assess aviation environmental impacts and advise policy and regulatory decision-making processes, both domestically and internationally.

November 29, 2011: AMR, the parent company of American Airlines filed for chapter 11 bankruptcy. (See February 13, 2013.)

November 30, 2011: FAA granted United Continental Holdings a single operating certificate allowing Continental and United to operate as one airline. (See October 1, 2010.)

November 30, 2011: DOT hosted a forum on flight diversions to examine what happened on October 29 when the poor weather caused a massive diversion of flights from the New York area airports to other airports, including Bradley Airport in Hartford, CT. Flights sat on the tarmac for hours at Bradley as the aviation system in place broke down under the sheer volume and speed of an October snowfall, strong winds, long-scheduled runway maintenance, and equipment outages at the New York area airports. The baggage system also broke down at Bradley due to the volume of air traffic diverted there, and there was insufficient Customs and Border Protection staff to handle diverted flights coming from international destinations. The forum's 100 participants met in three breakout groups – airport operations, airline operations, and the customer experience – to discuss how the events of October 29 could have been prevented. They addressed five FAA proposed recommendations on how to improve procedures at airports to reduce the impact caused by inclement weather. The groups unanimously agreed that increased collaboration and real-time information sharing via an airport information portal managed by the FAA would help alleviate prolonged tarmac delays. Other recommendations included coordinating contingency plans among all airports in a given region; clearly identifying diverted flights on the monitoring systems used by air traffic controllers and airport operators to delineate between them and regularly scheduled air traffic at a given airport;

and including smaller airports on the FAA's routine strategic planning teleconferences where information is routinely exchanged on diverting flights.

December 1, 2011: FAA announced it had awarded $7.7 million in contracts to eight companies to help advance alternative, environmentally-friendly, sustainable sources for commercial jet fuel. (See November 7, 2011; December 2, 2014.) The FAA funds were distributed by the Department of Transportation's John A. Volpe Center. The eight companies selected for the contracts helped the FAA develop and approve alternative, sustainably-sourced "drop-in" jet fuels that could be used without changing aircraft engine systems or airport fueling infrastructure. As part of that work, the companies will develop these biofuels from sources such as alcohols, sugars, biomass, and organic materials known as pyrolysis oils. In addition, the contracts called for research into alternative jet fuel quality control, examination of how jet biofuels affect engine durability, and guidance to jet biofuel users about factors that affect sustainability. Awardees included:

- $1.1 million for Honeywell UOP of Des Plaines, IL
- $3 million for LanzaTech, Inc. of Roselle, IL
- $1.5 million for Virent Energy Systems of Madison, WI
- $1.5 million for Velocys, Inc. of Plain City, OH
- $280,000 for Honeywell Aerospace of Phoenix, AZ
- $250,000 for Metron Aviation, Inc. of Dulles, VA
- $50,000 for Futurepast: Inc. of Arlington, VA
- $25,000 for Life Cycle Associates, LLC of Portola Valley, CA

December 5, 2011: FAA Administrator Randy Babbitt announced he would be taking an extended leave of absence from the agency. DOT Secretary appointed FAA Deputy Administrator Michael Huerta acting administrator. The following day, on December 6, Babbitt announced his resignation from the FAA.

December 5, 2011: The United States and Montenegro concluded an Open Skies aviation agreement that liberalized air services for the carriers of both countries. This was the first aviation agreement between Montenegro and the United States. Previously, air rights between the two countries were governed by an agreement between the United States and Yugoslavia. Under the Open Skies agreement, the airlines of both countries could fly to, from, and beyond the other's territory, without restriction on how often carriers fly, the kind of aircraft they use and the prices they charge. The agreement made Montenegro the 105th U.S. Open-Skies partner. (See July 11, 2011; December 13, 2011.)

December 11, 2011: J. Lynn Helms, FAA's eighth administrator, died at the age of 86. During his tenure as Administrator, he played a key role in keeping the NAS operating during the August 3, 1981 air traffic control strike, headed the U.S. delegation to the United Nations emergency session following the Soviet Union's shooting down of Korean Air Flight 007, spearheaded FAA's development of TCAS, and initiated the National Airspace Review to develop methods and procedures for improved safety and operational efficiency in use of all national airspace. Helms also originated and oversaw development of the 1982 National Airspace System (NAS) Plan. The 450-page document

spelled out specific improvements to be made to facilities and equipment to meet the projected demands of air transportation. (See April 22, 1981.)

December 13, 2011: Republic Airways Holdings announced plans to sell Frontier Airlines.

December 13, 2011: The United States and St. Christopher and Nevis signed an Open-Skies aviation agreement that liberalized air services for the carriers of both countries. Previously, aviation relations between the two countries were governed by Bermuda II, the former aviation agreement between the United States and United Kingdom which restricted route rights and pricing. Under the Open-Skies agreement, the airlines of both countries could fly to, from and beyond the other's territory, without restriction on how often carriers flew, the kind of aircraft they used, and the prices they charged. The agreement made St. Christopher and Nevis the 104th U.S. Open-Skies partner. (See December 5, 2011; March 25, 2013.)

December 14, 2011: FAA certified the passenger version of the new 747-8 Intercontinental jumbo jet. At 250 feet long with a 225-foot wingspan, the 747-8 was the largest Boeing jet and carries 467 passengers in a typical 3-class airline configuration. The list price of the aircraft was$333 million, though aircraft valuation firm Avitas estimated the real market value after standard discounts at about $167 million. December 15, 2011: Fort Lauderdale-based regional carrier Gulfstream International Airlines rebranded itself as Silver Airways.

December 16, 2011: Secretary of State Hillary Clinton and DOT Secretary Ray LaHood sent a letter to several European Commission officials, including EU President Jose Manuel Barroso, saying the U.S. would take "appropriate action" if the EU did not change its policy of including international aviation in the emissions trading scheme. The letter stated the U.S. had a "strong record of performance" in reducing emissions and in researching sustainable and other initiatives and the emissions trading policy was inconsistent with international law. The letter did not identify what actions the U.S. may take. The previous week, DOT ordered U.S. and European carriers to submit emission trading scheme data to the U.S. government, in a move that many believed to be the first step in a potential U.S. retaliation against the policy.

December 21, 2011: FAA issued a final rule mandating pilot flight and duty requirements. (See September 14, 2010; January 4, 2014.) Airlines had two years to comply. The rule did not apply to cargo carriers. Key components of this final rule for commercial passenger flights included:

- Varying flight and duty requirements based on what time the pilot's day begins. The new rule incorporated the latest fatigue science to set different requirements for pilot flight time, duty period and rest based on the time of day pilots begin their first flight, the number of scheduled flight segments and the number of time zones they cross.
- The previous rules included different rest requirements for domestic, international and unscheduled flights.

- Flight duty period. The allowable length of a flight duty period depended on when the pilot's day begins and the number of flight segments he or she was expected to fly, and ranged from 9-14 hours for single crew operations. The flight duty period began when a flightcrew member reported for duty, with the intention of conducting a flight and ended when the aircraft is parked after the last flight. It included the period of time before a flight or between flights that a pilot was working without an intervening rest period. Flight duty included deadhead transportation, training in an aircraft or flight simulator, and airport standby or reserve duty if these tasks occurred before a flight or between flights without an intervening required rest period.
- Flight time limits of eight or nine hours. The FAA limited flight time – when the plane was moving under its own power before, during, or after flight – to 8 or 9 hours depending on the start time of the pilot's entire flight duty period.
- 10-hour minimum rest period. The rule set a 10-hour minimum rest period prior to the flight duty period, a two-hour increase over the old rules. The new rule also mandated that a pilot must have an opportunity for eight hours of uninterrupted sleep within the 10-hour rest period.
- New cumulative flight duty and flight time limits. The new rule addressed potential cumulative fatigue by placing weekly and 28-day limits on the amount of time a pilot could be assigned any type of flight duty. The rule also placed 28-day and annual limits on actual flight time. It also required that pilots have at least 30 consecutive hours free from duty on a weekly basis, a 25 percent increase over the old rules.
- Fitness for duty. The FAA expected pilots and airlines to take joint responsibility when considering if a pilot was fit for duty, including fatigue resulting from pre-duty activities such as commuting. At the beginning of each flight segment, a pilot was required to affirmatively state his or her fitness for duty. If a pilot reported he or she was fatigued and unfit for duty, the airline had to remove that pilot from duty immediately.
- Fatigue Risk Management System. An airline could develop an alternative way of mitigating fatigue based on science and using data validated by the FAA and continuously monitored.

2012

January 17, 2012: FAA's Air Traffic Organization reorganized to simplify management and reporting structures. The changes included a simplified reporting structure under the chief operating officer and his deputy and clarified lines of responsibility and accountability. Safety functions and technical training became part of the new ATO Safety and Technical Training organization. A new Program Management Organization pulled together key acquisition programs into one office. ATO consolidated most non-technical operational support under Management Services and realigned technical operational mission support under Mission Support Services. (See September 23, 2011 and January 30, 2012.)

January 18, 2012: FAA broke ground for a new $16.4 million, state-of-the-art airport traffic control tower at Fort Lauderdale Executive Airport. When complete, the new facility will include a 117-foot-tall air traffic control tower topped by a 525-square-foot tower cab. A 7,200-square-foot single-story base building will house training rooms, administrative offices, and equipment rooms. FAA planned to commission the new tower in the spring of 2014. It will replace the existing tower, commissioned in 1970.

January 23, 2012: Transportation Secretary Ray LaHood and Acting FAA Administrator Michael Huerta helped break ground for a $791 million runway expansion at Fort Lauderdale-Hollywood International Airport. The project will extend, shift and lengthen Runway 9R/27L from 5,276 feet to 8,000 feet, giving the airport two parallel runways that will increase the airport's capacity from 84 to 107 flights per hour.

January 24, 2012: New regulations went into effect requiring airlines and ticket agents to include all mandatory taxes and fees in published airfares and to disclose baggage fees to consumers. The new provisions, part of the airline consumer rule issued by the U.S. Department of Transportation in April 2011, included requirements allowing passengers to hold a reservation without payment, or cancel a booking without penalty, for 24 hours after making a reservation, if they made it one week or more prior to a flight's departure date. In addition, airlines had to notify passengers of flight delays of over 30 minutes, as well as flight cancellations and diversions, and they were prohibited from increasing the price of passenger tickets after purchase. (See November 14, 2011; July 24, 2012.)

January 30, 2012: FAA issued five new orders for ATO's operational service units – En Route, Terminal, and System Operations that embodied the core principles of the Safety Management System (SMS). SMS integrated safety-related operational processes, procedures, policies and programs, and provided the framework for the ATO to anticipate potential sources of risk so it could act before they can jeopardize safety. (See November 5, 2010 and August 6, 2012.)

February 7, 2012: FAA and airport officials at the Rocky Mountain Metro Airport in Broomfield, CO, dedicated the airport's new control tower. The $23 million tower replaced one built in 1966.

February 10, 2012: An Airbus A320 test aircraft made the world's first four-dimensional, or 4D, trajectory flight as part of a Single European Sky Air Traffic Management Research (SESAR) initiative. SESAR, founded by the European Commission, Eurocontrol, Airbus, Honeywell, Indra, NORACON, and Thales, reported that during flight from Toulouse, France, to Stockholm, Sweden, the relevant air navigation service providers and airports successfully exchanged the trajectory information containing current and predicted position.

February 14, 2012: President Barack Obama signed the FAA Modernization and Reform Act of 2012 – a four-year reauthorization bill. The law included provisions for:

- Advancing NextGen – established deadlines for adopting existing NextGen navigation and surveillance technology and mandates development of precision navigational procedures at the nation's 35 busiest airports by 2015.

- Enhancing Runway Safety – directed FAA to develop and implement a plan to improve runway safety by reducing the number and severity of runway incursions and requires a plan to develop and install a system to alert pilots and controllers of potential runway incursions.
- Making Laser Attacks on Aircraft a Federal Crime – made shining a laser pointer at an aircraft a federal crime.
- Applying Flight and Duty Time Limits to Tail-End Ferry and Maintenance Flights – counted flight segments to reposition aircraft that may be added to the end of a pilot's duty day toward flight-time limits by including Part 91 flights in flight-time limits under FAR 121.
- Improving Safety of Lithium Battery Shipments by Air – gave the Department of Transportation the ability to regulate the air transport of lithium metal and lithium ion batteries more stringently than the International Civil Aviation Organization technical instructions.
- Continuing to Authorize Transpacific Alternate Airports – kept the alternate airfield open on Midway Island, as well as airports in the Marshall Islands, Micronesia, and Palau.
- Strengthening Voluntary Aviation Safety Data Protections – enhanced protections for data collected by the Aviation Safety Action Program, the Flight Operations Quality Assurance Program, Line Operation Safety Audits, and Safety Management Systems and voluntarily submitted to FAA by mandating that the data cannot be released to the public unless it is completely de-identified.
- Studying Feasibility of Installing Flight Deck Doors or Alternatives on All-Cargo Aircraft – took action toward the goal of enhancing all-cargo safety and security by funding studies on the feasibility of adding hardened cockpit doors or alternatives to all-cargo aircraft.
- Opposing EU Environmental Trading Scheme for Commercial Aviation – made clear Congress's opinion that the European Union should not extend its emissions-trading proposal to international civil aviation operations without working through the International Civil Aviation Organization.
- Supporting Critical Aviation Safety Research – directed GAO to study the effectiveness of FAA's oversight of the use of new technologies to prevent or reduce danger from smoke in the cockpit. Supported weather research on icing, volcanic ash, and wake vortices. Continued authorization for research and development in areas of fire safety, airworthiness, aircraft catastrophic failure prevention, human factors, aeromedical, unmanned aircraft systems, Safety Management Systems, atmospheric hazards, airspace management, propulsion and fuel systems, and alternative jet fuel. (See November 22, 2011; March 7, 2012.)
- Expanding IRA Rollover Options for Airline Employees During Bankruptcy – expanded choices for qualified airline employees who receive payments during airline bankruptcies to allow the funds to be considered an IRA rollover contribution. (See September 23, 2011; March 6, 2012.)

February 14, 2012: The Federal Communications Commission revoked the conditional approval it gave LightSquared after the National Telecommunications and Information Administration said there was no practical way to mitigate the potential GPS interference.
February 15, 2012: FAA contract controllers began controlling aircraft from the Punta Gorda (FL) Airport's first air traffic control tower. A grant from the Florida Department of Transportation and the Charlotte County Airport Authority funded the $4 million tower.

February 27, 2012: FAA proposed raising the qualification requirements for first officers who fly for U.S. passenger and cargo airlines. Consistent with a mandate in the Airline Safety and Federal Aviation Administration Extension Act of 2010 (see August 1, 2010), the proposed rule would require first officers – also known as co-pilots – to hold an Airline Transport Pilot (ATP) certificate, requiring 1,500 hours of pilot flight time. Previously, first officers had to hold a commercial pilot certificate, which required 250 hours of flight time. The proposal also would require first officers to have an aircraft type rating, which would involve additional training and testing specific to the airplanes they fly. Other highlights of the proposed rule included:

- A requirement for a pilot to have a minimum of 1,000 flight hours as a pilot in air carrier operations that require an ATP prior to serving as a captain for a U.S. airline.
- Enhanced training requirements for an ATP certificate, including 50 hours of multi-engine flight experience and completion of a new FAA-approved training program.
- An allowance for pilots with fewer than 1,500 hours of flight time, but who have an aviation degree or military pilot experience, to obtain a "restricted privileges" ATP certificate. These pilots could serve only as a first officer, not as a captain. Former military pilots with 750 hours of flight time would be able to apply for an ATP certificate with restricted privileges. Graduates of a four-year baccalaureate aviation degree program would be able to obtain an ATP with 1,000 hours of flight time, only if they also obtained a commercial pilot certificate and instrument rating from a pilot school affiliated with the university or college. (See December 21, 2011.)

March 6, 2012: FAA and the A6 alliance of European air navigation service providers signed a joint statement to work toward an interoperable aviation system. Representatives agreed to create a forum to enhance collaboration on the deployment and implementation of NextGen and the Single European Sky Air Traffic Management Research, or SESAR, initiative. (See February 14, 2012; August 27, 2012.)

March 7, 2012: FAA requested public input on the agency's selection process for six unmanned aircraft system (UAS) test sites, as mandated by Congress under the National Defense Authorization Act and the 2012 FAA reauthorization bill. Specifically, the request for comment asked for input on several important questions, such as public versus private management of the sites, research activities and capabilities of the test areas, the requirements for test site operators, and the geographic and climate factors that should influence site selection. (See February 14, 2013.)

March 14, 2012: FAA and NATCA announced an extension of the NATCA contract for another four years. The contract was enacted in 2009 and was to expire on October 1. The extension, which did not require a vote of the union's members, prolonged the agreement to July 1, 2016. (See August 13, 2009.)

March 20, 2012: The Little Rock (AR) Municipal Airport Commission voted to rename the Little Rock National Airport the Bill and Hillary Clinton National Airport/Adams Field.

March 23, 2012: Manufacturer Terrafugia flew the first production prototype of its flying car, Transition, from its base in Plattsburgh, NY. The company successfully conducted tests of initial drive and conversion to an aircraft of its two-seat light sport aircraft – designed as a street legal aircraft that can be driven safely on the highway. During the eight-minute flight the aircraft reached an altitude of 1,400 feet. The proof-of-concept Transition took to the skies in 2009 and completed 28 flights. (See June 2010.)

March 27, 2012: President Barack Obama nominated acting FAA Administrator Michael Huerta to be FAA Administrator for a five-year term. Huerta had been confirmed as the agency's deputy administrator in June 2010. The Senate Commerce, Science and Transportation Committee held a confirmation hearing for Huerta on June 21. The hearing, however, was suspended because Senators needed to cast ballots on a bill. The Committee met on July 31and unanimously voted to send the nomination to the full Senate for a vote. Senator Jim DeMint (R-SC), however, placed a hold on the nomination until after the presidential elections. He lifted the hold once the elections were over. The U.S. Senate confirmed Huerta for a five-year term as FAA Administrator on January 1, 2013. (See December 5, 2011 and January 1, 2013.)

April 4, 2012: FAA announced release of its seventh annual update to the controller workforce plan, which outlined the agency's strategies to maintain controller staffing levels at air traffic control facilities across the country for the next decade. According to the plan, the FAA had hired more than 7,500 new air traffic controllers in the last five years, and currently employed more controllers than in 2000, even though air traffic has declined 23 percent in the past decade. The FAA planned to hire 6,200 more controllers during the next five years to keep pace with forecast retirements and traffic growth. In the last five years, 3,151 controllers had retired. (See March 7, 2007; February 10, 2014.)

April 30, 2012: Delta Airlines announced it had agreed to purchase the ConocoPhillips refinery in Trainer, PA, for $150 million. Delta expected to decrease annual fuel expenses by $300 million once the refinery was retrofitted and reopened. Delta was the first airline to run its own refinery.

May 2, 2012: FAA, state, and local officials dedicated a new air traffic control tower at the Abilene (TX) Regional Airport. The 145 foot tower, which replaced the tower commissioned in 1951, cost $9.24 million and included a nearly 400 square foot cab and 9,900 square feet for offices and training and break rooms.

May 10, 2012: FAA announced a contract award to ITT Exelis and GE Naverus to help accelerate the development of satellite-based procedures that would allow aircraft to fly

more directly to their destinations. Under the $2.77 million contract, ITT Exelis, the prime contractor, and GE Naverus, the sub-contractor, would develop Required Navigation Performance (RNP) approach procedures into five airports: Ted Stevens Anchorage International, James M. Cox Dayton International, Charles B. Wheeler Downtown Airport (Kansas City), General Mitchell International (Milwaukee) and Syracuse Hancock International. (See March 2007.)

May 14, 2012: FAA announced interim rules that allowed public safety agencies to fly drones weighing as much as 25 pounds without applying for special approval needed under previous regulations. The rule required agencies to show they could operate a drone before getting a FAA permit. Drones had to fly within 400 feet of the ground, remain in sight of the operator, and stay clear of airports. FAA also streamlined its approval process for the special certificates it required for other agencies to fly drones and for flying larger drones. The new application process expedited approvals for time-sensitive emergency missions and included a procedure allowing for applicant appeals if they were denied a permit. (See June 9, 2010; February 14, 2012.)

May 22, 2012: The SpaceX Falcon 9 rocket launched and, on May 25, became the first U.S. commercial space rocket to dock at the International Space Station. The SpaceX mission, considered to be the first test of NASA's plan to outsource space missions to privately funded companies, was designed to prove to NASA that the Falcon 9 rocket and Dragon capsule could successfully haul cargo, and eventually astronauts, for the space agency. The Dragon capsule returned to earth on May 31. (See November 22, 2010; September 16, 2014.)

May 24, 2012: Transportation Secretary Ray LaHood announced the appointment of the four members of a new committee to advise him on measures to protect the rights of air travelers. The committee members included Lisa Madigan, Illinois attorney general, who chaired the committee; David A. Berg, senior vice president at Airlines for America; Deborah Ale-Flint, director of aviation at Oakland International Airport; and Charles Leocha, director of the Consumer Travel Alliance. The FAA Modernization and Reform Act of 2012, signed by President Obama on February 14, mandated the establishment of this committee. The law required the Secretary of Transportation to appoint to the committee four members with one representative each of air carriers, airport operators, state or local governments, and nonprofit public interest groups with expertise in consumer protection. According to the law, the committee would terminate on September 30, 2015.

June 7, 2012: FAA's Office of Commercial Space Transportation issued the first experimental permit to allow for rocket-powered testing of a spaceship designed to carry humans. The permit, issued to Mojave, CA-based aerospace development company Scaled Composites, LLC, permitted the firm to begin powered test flights of its suborbital spacecraft, SpaceshipTwo, using its carrier aircraft, WhiteKnightTwo. The firm was developing and testing the spaceship for Virgin Galactic, founded by Richard Branson, which planned to offer space flights to paying customers in the future. (See April 1, 2004; December 21, 2008; April 29, 2013.)

June 14, 2012: FAA decommissioned the four-decades-old HOST computer system at the Seattle and Salt Lake City ARTCCs and replaced the system with the En Route Automation Modernization (ERAM) system. ERAM reached its operational readiness date (ORD) at Salt Lake City on March 27 and at Seattle on April 14. ORD signified the commissioning of a new system into the NAS. (See June 18, 2009; April 30, 2014.)

June 18, 2012: FAA and NASA signed a memorandum of understanding to coordinate standards for commercial space travel of government and non-government astronauts to and from low-Earth orbit and the International Space Station. In addition, the agreement addressed proper protocols for implementation, financial obligations, liability, free exchange of data and information, and other administrative obligations between FAA and NASA. (See November 9, 1999.)

June 22, 2012: A fire at FAA's William J. Hughes Technical Center forced the evacuation of 1,600 people working at the complex. The fire made some traffic flow systems unavailable. Operations resumed at the Center the following Monday, although 230 employees working the Center's main administrative building had to be relocated. FAA subsequently estimated the fire caused $2.2 million in damages to the facility.

June 29, 2012: Controllers began work at a temporary tower at East Hamptons (NY) Airport. The air traffic controllers directed planes into and out of the general aviation airport between 7 am and 11pm daily through October. The Town of East Hampton hoped controlled airspace during the busy summer season would mitigate aviation noise, in particular helicopter noise, in the area. The seasonal tower closed at the end of October. (See June 24, 2010; September 18, 2012.)

July 9, 2012: Transportation Secretary Ray LaHood and Acting FAA Administrator Michael Huerta joined federal and local officials in breaking ground for a new air traffic control tower at San Francisco International Airport (SFO). When completed in late 2015, the new tower will be 221 feet tall with a 650 square-foot controller work area. The project will include a three-story, 44,000 square-foot base building, which will house administrative offices, computer equipment, a backup generator and secure corridors that will allow passengers to transit between terminals without permitting access to the tower. The current tower, which FAA commissioned in 1984, was 190 feet tall and had a 525 square-foot controller work area. Under a partnership with the airport, FAA would pay up to $69.5 million toward the project's $102 million cost and the airport would pay the additional costs as well as supervise the design and construction work.

July 13, 2012: FAA proposed a $13.57 million civil penalty against The Boeing Company, the second-largest fine in the agency's history, for missing a deadline to submit service instructions that would enable airlines to further reduce the risk of fuel tank explosions on more than 380 Boeing jetliners. (See March 2, 2009.)

July 18, 2012: DOT's Inspector General (IG) testified before the House Subcommittee on Aviation regarding FAA's Contract Tower Program. Established in 1982, the program oversaw 250 contract towers providing air traffic control services to airports nationwide. The IG testified that contract towers continued to provide safe air traffic services. Those towers had a lower number and rate of reported safety incidents and Agency-identified

deficiencies when compared with similar FAA towers. The IG found that the average contract tower cost roughly $1.5 million less to operate annually than a comparable FAA tower, largely due to lower staffing and salary levels. However, the IG noted that FAA could improve its oversight of the program by implementing a voluntary safety incident reporting program at contract towers, reviewing labor hours worked to ensure contract compliance, and implementing processes to regularly evaluate contract towers as required by Congress. (See February 2, 1994.)

July 24, 2012: Transportation Secretary Ray LaHood praised the ruling by the U.S. Court of Appeals for the D.C. Circuit in favor of the U.S. Department of Transportation in Spirit Airlines, Inc. v. United States Department of Transportation. Spirit Airlines, Allegiant Air, and Southwest Airlines challenged portions of the Department of Transportation's April 2011 air passenger consumer protection rule requiring airlines and ticket agents to include all mandatory taxes and fees in published airfares, hold reservations without payment or penalty for 24 hours after the reservation was made, and prohibit post purchase baggage price increases after the initial ticket sale. The court ruled it reasonable for DOT to require airlines to add government fees and taxes to the base fare and disclose those as a total price, prominently displayed to prevent confusion over the total cost of their travel. Further, the court concluded that the rule properly regulated airline cancellation policies because existing airline cancellation and refund practices were deceptive and unfair, and that the regulation was allowed under DOT's statute that targeted unfair and deceptive practices. Finally, the court ruled that it was reasonable for DOT to conclude that increasing the prices for baggage after the purchase of a ticket amounted to an unfair consumer practice. (See January 24, 2012.)

August 3, 2012: President Obama signed the Pilot's Bill of Rights, which expanded the rights of general aviation pilots facing potential penalties from FAA. The bill required FAA to give a pilot under investigation all relevant evidence at least 30 days before a decision to proceed with an enforcement action. FAA also had to provide the pilot access to flight service and tower communications pertinent to the enforcement action.

August 6, 2012: FAA ATO COO David Grizzle announced Teri Bristol would replace Deputy COO Rick Ducharme upon his retirement on August 31. At the time of the announcement Bristol served as the vice president of ATO's Technical Operations organization. (See January 30, 2012; January 16, 2013.)

August 9, 2012: FAA published a notice in the Federal Register asking for comments on its plans to decommission the last of the direction finders (DF) in the U.S. – 29 in Alaska. The agency had decommissioned DFs outside of Alaska in 2007. In the notice, FAA said use of DFs for pilot orientation "has become almost nonexistent." The Alaska Flight Service Information Area Groups (AFSIAG) had documented eight flight assists involving lost or disoriented pilots over the past eight years. Of those instances, use of DF equipment for flight assists was documented just three times. There have been no documented flight assists with DFs since 2008.

August 15, 2012: FAA issued a "Does Not Exceed (DNE)" determination for the proposed construction of 130 wind turbines in Nantucket Sound. A FAA study determined the proposed construction of the 130 wind turbines, individually and as a

group, would have no effect on aeronautical operations. Therefore, the FAA concluded that the project, if constructed as proposed, posed no hazard to air navigation.

August 27, 2012: FAA announced plans to establish a government-industry group to study the portable electronic devices (PED) policies and procedures aircraft operators used to determine when such devices could be used safely during flight. FAA's mandate to the study group excluded in-flight use of cell phones. Current FAA regulations required an aircraft operator to determine the radio frequency interference from the devices were not a safety risk before authorizing them for use during certain phases of flight. As the first step in gathering information for the working group, FAA sought public input on the agency's current PED policies, guidance, and procedures for operators. The Request for Comments appeared in the Federal Register on August 28. (See September 30, 2013.)

August 27, 2012: FAA announced the selection of Harris Corp. to develop the National Airspace System (NAS) Voice System (NVS) as a replacement for the 40-year-old legacy system. NVS would support ground-to-ground voice communications between air traffic controllers and air-to-ground voice communications between controllers and aircraft. The FAA planned to deploy NVS in air traffic control towers, terminal and en route facilities, and future NextGen air traffic control facilities. The NVS contract had a five-year base and five two-year options, with a potential total value of $291.6 million. (See March 6, 2012; September 28, 2012.)

September 11, 2012: FAA and its German counterpart signed a declaration of cooperation to promote, develop, and use sustainable alternative aviation fuels in the United States and Germany. The declaration identified specific areas in which FAA and Germany's Ministry of Transport, Building and Urban Development, might cooperate, including exchanging information about research results, publications, funded research and development activities, and the sharing of best practices in alternative jet fuel conversion research and development and deployment. In addition, the countries could explore possibilities for cooperation in other areas, such as researching the lifecycle impact of the use of candidate alternative fuels on atmospheric emissions. The declaration also created an umbrella for cooperation between the Commercial Aviation Alternative Fuels Initiative (CAAFI) — comprised of several U.S. agencies and aviation industry groups — and its German counterpart, the Aviation Initiative for Renewable Energy.

September 18, 2012: FAA issued a notice of proposed rulemaking that, if adopted, would mandate more stringent noise certification standards for helicopters certificated in the United States. The rule would apply to new helicopter type designs and for supplemental type certificates for those new type designs. Helicopters type certificated under the new standard would be designated as a Stage 3 helicopter. The new standards would harmonize U.S. standards with those of ICAO. The public had until November 19, 2012, to comment on the proposed rule. (See June 29, 2012; December 4, 2012; March 4, 2014.)

September 20, 2012: Harris Corp. Government Communications Systems announced FAA had selected it to provide Data Communications Integrated Services (DCIS). With a

subcontracting team that included ARINC Inc., GE Aviation, and Thales, Harris would develop DataComm to supplement analog voice-only air-to-ground communications system with a digital system. DataComm would provide a two-way data exchange between controllers and flight crews for clearances, instructions, advisories, requests, and reports. FAA planned to install the system in air traffic control towers by 2016 and in air traffic facilities that managed high-altitude traffic beginning in 2019. The $331 million contract covered seven years, with 10 additional one-year options.

September 21, 2012: The new air traffic control tower at Missoula International Airport (MT) opened, replacing a tower built in 1961.

September 28, 2012: FAA Acting Administrator Michael Huerta and Secretary of Transportation Ray LaHood dedicated the new $20.5 million air traffic control tower at Wilkes-Barre/Scranton International Airport in PA. The 118-foot tower, equipped with Terminal Radar Approach Control (TRACON) facility, provided NextGen capable air-traffic capability for flights within a 57-mile radius of the airport. Air traffic controllers had begun managing flights from the new tower in August. (See August 27, 2012; May 9, 2012.)

September 28, 2012: FAA's Office of Airports issued an updated Airport Design Advisory Circular (AC) 150/5300-13A, the first major rewrite of the AC in over 20 years. The AC, used by airport operators, airport planners, and engineers, provided guidance and recommendations for the geometric layout and engineering design of runways, taxiways, aprons, and other facilities at civil airports.

October 1, 2012: A new FAA rule required all pilots to use FAA MedXPress to apply for an Airman Medical Certificate. The electronic system allowed pilots and aviation medical examiners to query the system electronically and determine the status of applications. FAA planned future enhancements to the system to all air traffic control specialists (ATCSs) to use MedXPress.

October 12, 2012: The Mingo County (WVA) Airport Authority held a grand opening ceremony for the new Appalachia Regional Airport. The airport officially opened on June 26 with limited services. The airport consisted of 975 acres of previously mined land donated to the county in 2008 by Alpha Natural Resources. The Airport Authority said a total of $9 million had been invested in the site to date.

October 12, 2012: FAA approved the type certificate for the Sikorsky S-76D helicopter. Originally announced in 2005, the S-76D featured all-composite main rotor blades, Pratt & Whitney PW210S engines, and Thales TopDeck avionics.

October 15, 2012: The first air traffic control tower at Hernando County (FL) Airport began operations. The FAA contract operated from 7 am until 10 pm seven days a week. The 82-foot tower cost $2.2 million to construct.

October 15, 2012: Southwest Airlines announced it had hired former FAA Administrator Randy Babbitt as its senior vice president of labor relations. (See December 5, 2011.)

October 18, 2012: Officials dedicated a runway extension at the General Wayne A. Downing Peoria (IL) International Airport. A FAA grant paid for the majority of the approximately $950,000 project, which allowed larger turbine powered aircraft to use the airport.

October 25, 2012: FAA announced it had begun deploying a new web application that made the process of submitting, reviewing, and issuing Notices to Airmen – or NOTAMS – more efficient and accurate. The e-NOTAM II or ENII tool expedited the time it took to publish a NOTAM. With the new system, it took less than three seconds for a NOTAM to be published once a flight service specialist had reviewed and approved it. Previously, specialists had to copy and paste information from a system that handled requested NOTAMs into a system that issued the NOTAMs. They would then submit the NOTAM to a centralized office for approval and publication. (See May 2010.)

October 29-30, 2012: Hurricane Sandy hit the east coast of the United States causing power outages and damage to FAA facilities and equipment. FAA prepared for the storm by pre-positioning restoration assets, readying control facilities, and working with airlines as they cancelled thousands of flights. FAA reported that the storm affected three en route centers, nine TRACONS, 40 control towers, and equipment, including 25 airport surveillance radars, 121 localizers, and 74 very high frequency omni directional range facilities (VORs) with tropical storm force winds, rain, snow, and flooding.

October 2012: Portland, ME-based Elite Airways received FAA Part 121 air carrier certification.

November 1, 2012: FAA upgraded Israel to a Category 1 safety rating based on international safety standards set by ICAO. FAA downgraded Israel in 2008 to a category 2, which meant it lacked laws or regulations necessary to oversee airline safety, its civil aviation authority lacked technical expertise or trained personnel, or it was deficient in its record keeping or inspection procedures. (See August 23, 2010; September 10, 2013.)

November 1, 2012: FAA implemented new wake turbulence categories for aircraft separation standards. Under the re-categorization, aircraft models were placed in one of six categories (labeled A-F) based on considerations other than maximum gross takeoff weight, such as approach speeds, wing characteristics, and lateral control characteristics. FAA split the heavy category (including the “super” Airbus A380) into three wake categories, “A” (super); “B” (upper heavy); and “C” (lower heavy) aircraft. When a lower heavy jet followed an upper heavy jet into an airport, the separation standard remained at four miles. When an upper heavy jet followed a lower heavy jet, the separation could be reduced to three miles. The former method of wake turbulence categorization was based solely on maximum gross takeoff weight. (See November 1, 2010 and May 8, 2013.)

November 1, 2012: The Department of Transportation Inspector General (IG) issued a report detailing a range of ethical, personnel, and procurement issues at the Metropolitan Washington Airport Authority (MWAA). MWAA operated two-federally owned airports, Reagan National and Dulles International, and had responsibility for managing a two-phased extension of the Silver Line subway. After the IG issued an interim report in May

that highlighted systematic procurement and ethical lapses at MWAA, Secretary of Transportation appointed, on July 1, a Federal Accountability Officer to provide MWAA with advice and counsel on improved ethics, procurement, and governance policies. DOT attorney Kimberly Moore served as the accountability officer until Congress established an inspector general position for MWAA. (See June 7, 1987.)

November 8, 2012: FAA, airlines, and aviation labor unions announced a partnership with the National Transportation Safety Board to share summarized safety information that could help prevent accidents. The information, shared through an initiative called the Aviation Safety Information Analysis and Sharing (ASIAS) Executive Board, would help NTSB determine if an accident was a unique event or an indication of systemic risks. The agreement outlined the procedures, guidelines, and roles and responsibilities for the ASIAS Executive Board to address specific written NTSB requests for ASIAS information. ASIAS used aggregate, protected data from industry and government voluntary reporting programs, without identifying the source of the data, to find proactively safety issues, identify safety enhancements, and measure the effectiveness of solutions.

November 13, 2012: FAA issued a notice of proposed rulemaking to tighten requirements for aircraft maintenance outsourcing. Under the proposal, each carrier that contracts out any of its maintenance must have policies and procedures in place to ensure that the contracted maintenance would be performed in accordance with its maintenance program and manual. The requirement would apply to scheduled service carriers under Part 121 regulations, but also to most commuter and on-demand carriers operating under Part 135 regulations. (See June 16, 1999.)

November 22, 2012: Dan McKinnon, who helped oversee the deregulation of the U.S. airline industry as the last chairman of the Civil Aeronautics Board in the early 1980s, died at the age of 78. In a 1984 speech to the Aero Club of Washington, McKinnon counted among his accomplishments a tough new U.S. policy to negotiate quid pro quos for U.S. aviation interests in bilateral accords; the elimination of antitrust immunity for travel agents to sell airline tickets; and the transfer of the remaining CAB functions to the U.S. Transportation Department. (See December 31, 1984.)

November 26, 2012: FAA banned the use of Velcro-type straps to secure emergency locator transmitters (ELT) designed and built after November 26, 2012. FAA issued the technical standard order (TSO-C126b) two years after a high-profile crash that killed Alaska Senator Ted Stevens and four others. The ELT aboard the Otter aircraft they were on came loose on impact and detached from the antenna. Rescuers found it on the floor in the back of plane, activated, but unable to transmit because it was no longer connected to the antenna. (See August 9, 2010.)

November 27, 2012: President Obama signed the European Union Emission Trading Scheme Prohibition Act, introduced by Senator John Thune (R-SD), which gave the Secretary of Transportation the authority to ensure that U.S. aircraft operators would not be penalized or harmed by the European Union’s emissions trading system (ETS). Under ETS, the European Union could subject all international flights operating to and from the European Union to pay an emissions tax. (See December 16, 2011.)

November 28, 2012: The Consistency of Regulatory Interpretation Aviation Rulemaking Committee (ARC) charted by FAA on April 30, 2012, issued its final report. Among other things, it concluded that the agency's Flight Standards Service and Aircraft Certification Service offices should review all guidance documents and interpretations to identify and cancel outdated material, and cross-reference material to the applicable rule. Further, the ARC suggested FAA expand its current aviation safety information management system initiative to consolidate all of the aviation safety organization libraries into a single master electronic resource, organized by rule, to allow users access to relevant rules and all active and superseded guidance material and related documents.

November 30, 2012: FAA, working with the Department of Labor Occupational Safety and Health Administration (OSHA) proposed a new policy for addressing flight attendant workplace safety. While the FAA's aviation safety regulations took precedence, the agency proposed that OSHA enforce certain occupational safety and health standards currently not covered by FAA oversight. Under the proposal, flight attendants would, for the first time, be able to report workplace injury and illness complaints to OSHA for response and investigation. On December 7, FAA published the proposed policy in the Federal Register and requested comments on that policy by January 7, 2013.

December 3, 2012: FAA and Colorado Department of Transportation (CDOT) announced the activation of new technology to help pilots address inclement weather around Montrose Regional Airport in western Colorado. The technology, known as Wide Area Multilateration (WAM), improved safety and efficiency by allowing air traffic controllers to track aircraft in mountainous areas outside radar coverage. The WAM deployment around Montrose was part of the larger Colorado Surveillance Project, a partnership between the FAA and CDOT, which began providing radar-like service to the mountain communities of Craig, Hayden, Steamboat Springs, and Rifle in 2009. The FAA and State of Colorado expected to complete the project by deploying WAM around Durango, Gunnison, and Telluride in summer 2013. (See May 4, 2010; July 31, 2013.)

December 4, 2012: FAA released a report approving commercial passenger flights at Paine Field south of Everett, WA. FAA began studying the issue in 2008 when Allegiant Air expressed interest in providing regional flights from the airport. In the report, FAA stated that up to 23 daily flights would not significantly increase noise, traffic, or pollution in nearby communities. (See September 18, 2012; September 3, 2013.)

December 4, 2012: FAA issued an airworthiness directive ordering airlines to inspect Boeing 787 Dreamliners for improperly installed fuel-line connectors that could result in leaks or fires. Airlines had reported fuel leaks on two in-service 787s, and subsequent inspections by Boeing of jets in service or still in production revealed some fuel line connectors installed incorrectly. Boeing recommended such inspections to 787 customers on November 25; the FAA airworthiness directive made those inspections mandatory. A third aircraft experienced electrical problems after the FAA issued its directive. (See August 26, 2011 and January 7, 2013.)

December 6, 2012: FAA lifted its 16-year ban on commercial flights by U.S. carriers to two international airports, Erbil and Sulaymaniyah, in Kurdish northern Iraq because of

increased stability in the region. FAA banned flights to the region on October 16, 1996 (SFAR No. 77) for safety reasons.

December 9, 2012: A Learjet 25 (N345MC) carrying Los Angeles-based Mexican-American singer Jenni Rivera crashed in northern Mexico approximately 10 minutes after departing the airport in Monterey, Mexico. Six others, including 2 pilots, were on the plane. There were no survivors. The NTSB assisted in the accident investigation. The 43-year old aircraft was owned by Starwood Management of Las Vegas, Nevada.

December 14, 2012: FAA issued a safety directive mandating a three-day deadline for 200 operators of Gulfstream business jets to conduct high-priority inspections and possible fixes of flight-control systems on the aircraft. FAA issued the mandate to avoid grounding Gulfstream 350 and 450 models when it discovered potential problems controlling horizontal stabilizers on the tails of the aircraft.

December 14, 2012: After an extensive two-year application and development process, FAA awarded Geisinger Life Flight an air carrier certificate. The certificate allowed Geisinger Health System to operate the aircraft assets it leased and owned. In addition, GHS could now employ its own pilots, mechanics, and aviation support personnel a process previously done through contracted air-services vendors. Averaging 2,600 flights per year, Life Flight operated 24-hours a day with a fleet of six twin-engine helicopters from air bases in Danville, State College, Avoca, Williamsport, and Minersville, PA.

December 14, 2012: FAA and Professional Aviation Safety Specialists leaders signed a new five-year contract covering PASS's Air Traffic Organization (ATO) bargaining units (Technical Operations, Flight Inspection Services and Mission Support Services). The agreement became effective on December 16, 2012. Among other things, the new contract contained a variety of provisions regarding pay, including annual increases each year from 2013 through 2017. The new agreement prevented the agency from reducing pay increases, guaranteed that PASS would have an active role in modernization of the NAS, and required the agency to notify PASS before it explored the contracting out of a bargaining unit function or service that would significantly change the scope of an employee's work responsibilities.

December 21, 2012: FAA closed its Center for Management and Executive Leadership in Palm Coast, Florida. FAA’s lease for the facility, under a contract with Embry-Riddle Aeronautical Center signed in 1987, expired on August 21. FAA planned to hold management training classes at its aeronautical center in Oklahoma City until it found a new location for the training center. (See March 14, 1986.)

Calendar Year 2012: According to the Netherlands-based Aviation Safety Network, 2012 was the safety year for air travel since 1945. The world's airlines – including passenger and cargo flights – reported only 23 accidents resulting in 475 fatalities last year, compared with the 10-year average of 34 accidents and 773 fatalities per year. In the U.S., the network's data base showed only two fatal commercial airline accidents, resulting in two deaths.

2013

January 1, 2013: The Senate confirmed Michael Huerta as the new FAA Administrator. DOT Secretary Ray LaHood swore him in for a five-year term on January 9. (See March 27, 2012.)

January 2, 2013: Garmin announced it had received FAA's Technical Standard Order (TSO) Authorization and Approved Model List Supplemental Type Certificate (AML STC) approval for the GDL 88 series, the industry's first dual-link ADS-B solution for certified aircraft. With these certifications, FAA approved the GDL 88 for installation on most Part 23 fixed-wing aircraft. The dual-link capability allowed the GDL 88 to receive both the 978 MHz UAT and 1090 MHz frequency bands. (See March 14, 2011; April 4, 2013.)

January 7, 2013: A Japan Airline 787 Dreamliner that had flown into Boston Logan from Tokyo caught fire while parked at the gate due to a malfunctioning battery. All passengers and crew from the plane had already departed the aircraft when the fire started. (See December 4, 2012; January 11, 2013.)

January 11, 2013: In light of a series of recent events with the Boeing 787, FAA announced it planned to conduct a comprehensive review of the Boeing 787 critical systems, including the design, manufacture, and assembly. FAA planned to validate the work conducted during the certification process to ensure the aircraft met FAA's safety requirements. A team of FAA and Boeing engineers and inspectors conducted the joint review, with an emphasis on the aircraft's electrical power and distribution system. (See January 7, 2013; January 16, 2013.)

January 16, 2013: FAA ordered all Boeing 787's grounded. FAA's emergency airworthiness directive required that the aircraft operator or Boeing had to prove the batteries safe before the aircraft could fly again. On this same day, All Nippon Airways Co. and Japan Airlines Co., the world's largest users of Boeing 787 jets, grounded their entire fleets of Dreamliners after one of All Nippon's 787s made an emergency landing in Japan the previous day because of smoke coming from the aircraft. (See January 11, 2013; March 12, 2013.)

January 16, 2013: In his weekly message to ATO employees, COO David Grizzle announced plans to combine the Terminal and En Route service organizations into a new Air Traffic Services (AJT) organization. The reorganization would be effective on October 6, 2013, pending congressional approval. He also announced that the ATO would no longer support its own communications office, and FAA's Office of Communications would handle ATO needs. As part of the reorganization the Eastern, Central and Western service areas were divided into northern and southern regions, with each of those six new areas reporting to a vice president (VP) of a newly formed Air Traffic Services division, rather than alignment based on facility type. This VP would oversee contract towers, and other contract operations and technical issues. In addition, a significant portion of Terminal and En Route headquarters functions would move into other service units – more than 40 current Terminal and En Route personnel would move to Mission Support Services, ten or more would move to Management Services, and

several others would move to Safety and Technical Training, and System Operations Services. FAA received congressional approval the week of October 21 and the reorganization became effective on November 3. (See August 6, 2013; August 13, 2013.)

January 29, 2013: Secretary of Transportation Ray LaHood announced that he would resign he post when the U.S. Senate confirmed his successor. (See April 29, 2013.)

February 12, 2013: FAA approved the Shanghai Hawker Pacific Business Aviation Service Center as an overseas repair station, making it the first aviation support facility in mainland China to hold Part 145 approval. (See November 20, 2009; August 12, 2014.)

February 13, 2013: FAA and the Spanish Aviation and Security Agency signed a declaration of cooperation to help develop alternative aviation fuels. (See October 21, 2010; June 11, 2013.)

February 13, 2013: American Airlines and US Airways agreed to a merger that would create the world's largest airline. (See November 29, 2011; July 12, 2013.)

February 14, 2013: FAA solicited proposals to create six drone sites around the U.S. in a major step toward opening U.S. airspace to unmanned drones. The tests sites would be used to determine the requirement needed to ensure that drones do not interfere with planes in the airspace or endanger people or property on the ground. (See March 7, 2012; June 19, 2013.)

February 22, 2013: Secretary of Transportation Ray LaHood issued a statement which said that as a result of mandatory sequestration, the majority of the FAA's nearly 47,000 employees would be furloughed for approximately one day per pay period until the end of the fiscal year. (See July 23, 2011; March 22, 2013.)

March 12, 2013: FAA approved the Boeing Commercial Airplane Company's certification plan for the redesigned 787 battery system. The first step in the process to evaluate the 787's return to flight, the certification plan required Boeing to conduct extensive testing and analysis to demonstrate compliance with the applicable safety regulations and special conditions. The plan established specific pass/fail criteria, defined the parameters that should be measured, prescribed the test methodology, and specified the test setup and design. FAA also approved limited test flights for two aircraft to validate the aircraft instrumentation for the battery and battery enclosure testing in addition to product improvements for other systems. (See January 16, 2013; April 19, 2013.)

March 22, 2013: FAA announced that 149 federal contract towers would close beginning on April 7 as part of the agency's sequestration implementation plan. The agency made the decision to keep 24 federal contract towers open that it had previously proposed for closure because of national interest considerations. An additional 16 federal contract towers under the "cost share" program would remain open because Congressional statute set aside funds every fiscal year for those towers. FAA planned to begin a four-week phased closure of the 149 federal contract towers beginning on April 7. (See February 22, 2013; April 5, 2013.)

March 25, 2013: The U.S. and Guyana signed an agreement establishing an Open Skies air transportation relationship between the two countries. Prior to this agreement, U.S. Guyana aviation relations had been governed by the 1946 Air Transport Agreement between the United States and the United Kingdom. The Open Skies agreement established a liberalized aviation relationship that permitted unrestricted air service by the airlines of both countries. It eliminated restrictions on how often carriers fly, the kind of aircraft they may use, and the prices they charge. This was the 108th such agreement. (See December 13, 2011; May 28, 2013.)

April 4, 2013: US Airways announced it had received FAA certification, the first airline to receive such approval, to use SafeRoute on its wide-body Airbus A330. The SafeRoute suite of four applications used Automatic Dependent Surveillance-Broadcast (ADS-B) technology to provide pilots with more precise position information of the operating aircraft and other airplane traffic. It also included Interval Management (IM), In-Trail Procedures (ITP), Cockpit display of traffic information to Assist in Visual Separation (CAVS), and Surface Area Movement Management (SAMM). IM made use of onboard aircraft surveillance to provide flight deck spacing commands that enable aircraft to follow one another at the safest, most efficient interval possible, from cruise altitude to the runway. ITP improved situational awareness and enabled flight crews to perform desired altitude changes on a more frequent basis in oceanic or non-radar airspace. CAVS allowed the flight crew to continue visual approach procedures using the electronic display to maintain separation if they lost visual contact with Traffic-to-Follow due to hazy or night conditions. It also assisted the flight crew in properly timing the deceleration to final approach speed, configuring the aircraft for landing and properly spacing aircraft on the final approach segment just prior to landing. SAMM provided a moving map display of the airport surface in the cockpit that showed other traffic operating in the terminal, taxi, and runway areas. (See January 2, 2013; June 9, 2013.)

April 5, 2013: FAA announced it would delay the closure of all 149 federal contract air traffic control towers until June 15. The previous month, FAA had announced it would eliminate funding for these towers as part of the agency's required $637 million budget cuts under sequestration. This additional time would allow the agency to attempt to resolve multiple legal challenges to the closure decisions. As part of the tower closure implementation process, the agency continued to consult with airports and operators and reviewed appropriate risk mitigations. (See March 22, 2013; April 23, 2013.)

April 8, 2013: In a settlement agreement and order made public on this date, the Port Authority of New York and New Jersey said it would spend the next 12 months creating a dedicated aircraft rescue firefighting (ARFF) force at the four New York-area airports it owned and operated – John F. Kennedy (JFK), Teterboro, LaGuardia, and Newark Liberty International after acknowledging lapses that included allowing untrained Port Authority police officers to serve on active ARFF duty. PANYNJ paid $3.5 million in fines to settle the case and agreed to hire dedicated ARFF firefighters, facility captains, and a fire chief, as well as to set up a training academy to ensure they met basic standards. FAA's investigation began when Port Authority officials could not supply training documentation during a routine inspection at JFK in December 2011. FAA then reviewed training at LaGuardia, Newark Liberty, and Stewart International, and found

only Stewart – where DOD provided ARFF services – in compliance. FAA and Port Authority officials planned to meet monthly to review progress on meeting the milestones set out in the settlement, and FAA could impose an additional $1.5 million in fines, plus $27,500 daily for each additional violation, if PANYNJ violated the settlement deal.

April 19, 2013: FAA took the next step in returning the Boeing 787 to flight by approving Boeing's design for modifications to the 787 battery system. Boeing's changes addressed risks at the battery cell level, the battery level and the aircraft level. FAA subsequently planned to issue instructions to operators for making changes to the aircraft and to publish in the Federal Register the final directive that would allow the 787 to return to service with the battery system modifications. The FAA also required airlines that operate the 787 to install containment and venting systems for the main and auxiliary system batteries and to replace the batteries and their chargers with modified components. (See March 12, 2013; April 25, 2013.)

April 22, 2013: Eight months after becoming the first U.S. airline to obtain FAA approval to use Apple iPads on the flight deck during all phases of flight, American Airlines completed its rollout of the off-the-shelf electronic flight bags across its entire mainline fleet. Pilots of the carrier's Boeing 757s and 767s completed a 30-day transition with the iPads as primary flight support and paper charts as backup. American first tested the iPad on a Boeing 777 in January 2011. (See March 14, 2011; June 26, 2013.)

April 23, 2013: As a result of employee furloughs due to sequestration, which began on April 21, FAA began implementing traffic management initiatives at airports and facilities around the country. FAA announced that travelers could expect to see a wide range of delays that would change throughout the day depending on staffing and weather-related issues. For example, the FAA experienced staffing challenges at the New York and Los Angeles En Route Centers and at the Dallas-Ft. Worth and Las Vegas TRACONs. Controllers spaced planes farther apart so they could manage traffic with smaller staffs. This led to delays at airports including Dallas, Las Vegas and Los Angeles. The FAA also expected delays at Newark and LaGuardia because of weather and winds. On April 21, FAA attributed more than 1,200 delays in the system to staffing reductions resulting from the furlough. 1,400 additional delays resulted from weather and other factors. (See April 5, 2013 April 24, 2013.)

April 24, 2013: FAA announced that due to employee furloughs as a result of sequestration, on April 23 the furlough caused more than 1,025 delays in the system. Weather and other delays caused more than 975 additional delays. The following day, FAA announced that on April 25, furlough-related staffing reductions at the New York, Washington, Cleveland, Jacksonville, and Los Angeles En Route Centers, the Potomac, Dallas and Southern California TRACONs and Detroit Tower contributed to more than 863 delays, and weather and other factors caused more than 1,269 additional delays. (See April 23, 2013; April 27, 2013.)

April 25, 2013: FAA published a rule that lifted the grounding the Boeing 787s operated by carriers based in the U.S. once those carriers installed modified lithium-ion batteries. The following day, Japanese authorities formally approved Boeing's proposed fixes to the batteries and declared the aircraft fit for use. On April 27, a Boeing 787 flew from

Ethiopia to Kenya, the first Dreamliner flight since the plane's grounding in January 2013. United Airlines restarted its Dreamliner flights within the U.S. on May 20. (See April 19, 2013; June 23, 2013.)

April 27, 2013: After Congressional action FAA suspended all employee furloughs. A typo in the legislation delayed getting the bill to the President, but President Obama signed it on May 1. The law allowed the FAA to move as much as $253 million within its budget to end furloughs and gave the agency enough flexibility to cancel the planned June 15 closing of 149 small airport control towers operated by contractors. (See April 24, 2013; May 9, 2013.)

April 29, 2013: President Barack Obama nominated Charlotte, NC, Mayor Anthony Foxx to succeed Ray LaHood as Transportation Secretary. (See January 29, 2013; May 22, 2013.)

April 29, 2013: Virgin Galactic's SpaceShipTwo made its first powered flight. It broke the sound barrier in a test over the Mojave Desert. The flight lasted 10 minutes. It made its second powered flight on September 5. (See June 7, 2012; July 31, 2013; January 10, 2014.)

April 2013: FAA and other U.S. government agencies completed the third and final operational field test in a two-year, $8 million program to study the physical and electromagnetic interference between radar systems and wind turbine farms, and to identify mitigation techniques to address potential issues. Researchers at Sandia National Laboratories and the Massachusetts Institute of Technology Lincoln Laboratory analyzed data from the third Interagency Field Test and Evaluation of Wind Turbine-Radar to help develop long-term mitigation techniques. Interference with radar had been a safety concern for both the FAA and the military, as well as a key roadblock to developers of new wind turbine farms, both in the U.S. and abroad.

May 3, 2013: FAA proposed a new policy aimed at providing better handling of a wide range of certification applications. The draft policy set the maximum delay that the agency could apply to applications for type certificates, amended type certificates, supplemental type certificates and several other approvals, including parts manufacturer approval (PMA). Under the draft policy, all projects would be acted on when the FAA received an application, and the maximum delay in starting a project would be based on a metric each certification office set to perform a project, plus 90 days. First in the queue would be higher-priority projects, based on the highest value of a "safety index" developed by the FAA. FAA based the draft policy, in part, on input the agency received after posting a request for comments in September 2011. Congress had mandated a broader review of the agency's certification processes under the FAA Modernization and Reform Act of 2012. In response, the agency co-chaired an aviation rulemaking committee that reviewed existing processes and made recommendations in February. (See February 14, 2012; December 11, 2013.)

May 9, 2013: FAA announced it no longer planned to close 72 medium-sized air traffic control facilities overnight because of sequestration. The following day, on May 10, Transportation Secretary Ray LaHood announced that the recently enacted Reducing

Flight Delays Act of 2013 would allow the FAA to transfer sufficient funds to end employee furloughs and keep the 149 low activity contract towers originally slated for closure in June open for the remainder of fiscal year 2013. The FAA also planned to put $10 million towards reducing cuts and delays in core NextGen programs and allocated approximately $11 million to partially restore infrastructure support in the national airspace system. (See September 28, 2012; April 27, 2013; May 20, 2013; August 14, 2013.)

May 15, 2013: The White House nominated Michael Whitaker, an airline industry veteran, to fill the deputy administrator role left vacant by Michael Huerta's January 1 appointment as FAA administrator. Whitaker, who worked for the air transport division of Indian conglomerate InterGlobe Enterprises, had more than 20 years of experience in the airline industry, first with Trans World Airlines and then at United, where he worked for 15 years. Whitaker served as senior vice president for alliances, international, and regulatory affairs at United before joining InterGlobe in 2009. Secretary of Transportation Ray LaHood swore him in on June 3, 2013. (See June 23, 2010.)

May 8, 2013: FAA announced that controllers at the San Francisco, Houston, and Memphis international airports would have a new tool to reduce delays beginning on May 15, May 20, and August 5, respectively, as part of a one-year FAA pilot program. The wake turbulence mitigation for departures (WTMD) is a crosswind-based system that enables closely spaced parallel runway departures to take place without wake turbulence constraints. The system allowed for the crosswind-enabled elimination of wake turbulence separation minima when Heavy/B757 aircraft depart the downwind runway and any aircraft follows departing on the upwind runway. WTMD requires favorable wind conditions for a specific airport's runway configuration and a minimum ceiling and visibility of 1,000 feet altitude above ground level (AGL) and 3 statute miles (SM). The WTMD system uses wind information at the surface and incrementally up to about 1,200 feet AGL to ensure actual crosswinds and a conservative forecast of future crosswinds are sufficiently strong to allow the reduced separation operations. WTMD notifies ATC supervisors when one of the closely spaced parallel runway (upwind runway) could be used as wake independent from Heavy/B757 aircraft departing from the parallel (downwind) runway and allowed them to enable the WTMD procedure. (See November 1, 2012.)

May 20, 2013: The U.S. Court of Appeals for the Ninth Circuit vacated a lawsuit combining claims by airports groups and local communities against the FAA over plans to close the contract air traffic control towers. DOT and FAA asked the court to drop the suit, arguing it was moot given the decision to continue funding the contract tower program through fiscal 2013. (See May 9, 2013.)

May 22, 2013: The Senate Commerce, Science and Transportation Committee held a confirmation hearing for Anthony Foxx to become the next Secretary of Transportation. At the hearings, Representative John Thune (R-SD) placed a hold on the nomination until DOT and FAA answered the questions posed in letters he sent earlier in the year asking for information on budgets, budget cuts, and related decisionmaking processes. After Thune lifted his hold, the Committee approved the nomination on June 10. (See April 29, 2013; June 27, 2013.)

May 28, 2013: The U.S. and Saudi Arabia signed an Open Skies agreement, which, following a transition period would permit unrestricted air service by the airlines of both countries between and beyond the other's territory, eliminating restrictions on how often the carriers fly, the kind of aircraft they use, and the prices they charge. This became the 109th such agreement the U.S. signed with other nations. (See March 25, 2013; July 8, 2013.)

May 29, 2013: State officials dedicated a new air traffic control tower at Kona Airport, Hawaii. The new tower replaced one constructed almost 43 years ago. Officials also formally broke ground for a new 24,000-squiare-foot aircraft rescue and firefighting facility. FAA and state funds covered the cost of the $14.5 million project.

May 29, 2013: Savannah/Hilton Head International Airport celebrated the completion of a $29 million project designed to support the expansion of its largest tenant, Gulfstream Aerospace, while making room for future aviation business. Announced in late 2010, the North Aviation Development project involved the realignment of Gulfstream Road, including construction of a tunnel; a new electrical vault; a taxiway bridge; Taxiway H; as well as the extension of existing Taxiway A. FAA grants and airport revenues funded the project.

May 29, 2013: The Office of Management and Budget told federal agencies to prepare their fiscal 2015 budget requests with three levels of spending in mind, including 5% and 10% cuts from the projection laid down in April with the 2014 request. The budget-crafting guidance represented the first formal recognition of the long-term effects of the 2011 Budget Control Act, whose first round of widespread, automatic sequestration rescissions took effect in March 2013.

May 31, 2013: FAA issued an updated version of its 10-year old advisory circular on wildlife collisions, AC 150/5200-32B. The update explained a number of recent improvements to the agency's strike reporting system.

June 3, 2013: NASA awarded $38 million in contracts to Boeing, Honeywell, Rockwell Collins, and Saab Sensis to conduct research to develop and improve technologies and methods to improve situational awareness of real-time electronic information. The two-year contracts, with three one-year follow-on options would total $9.5 million if NASA exercised all contract options. NASA tasked the companies with studying the human factors designs of how information could be best presented on flight decks or at control stations, including developing human-machine interfaces that reduced uncertainties associated with real-time information presentation.

June 5, 2013: Santa Monica, CA-based start-up airline Surf Air announced it had been certified by the FAA. The new membership-based airline began flights on June 12. Surf Air offered all-you-can-fly service to its members. The airline had 150 members, each paying $1,350 per month to belong. The airline had another 4,000 people on its waiting list. The company flew Pilatus PC-12 aircraft, a single-engine turboprop plane, configured to seat six people. Its first route linked San Carlos and Burbank.

June 9, 2013: JetBlue conducted its first ever automatic dependent surveillance-broadcast (ADS-B) commercial flights from Fort Lauderdale to San Francisco. This was the first commercial aircraft that reached its destination using a route that relied primarily on ADS-B. FAA determined the route over the Gulf of Mexico based on the need for the aircraft to avoid turbulent weather. (See April 4, 2013; April 14, 2014.)

June 10, 2013: FAA asked the world's fuel producers to submit proposals for fuel options that would help the general aviation industry make a transition to an unleaded fuel. The FAA hoped to develop a new unleaded fuel by 2018 that would minimize the impact of replacing 100 octane low-lead fuel for most of the general aviation fleet. The request came in response to the July 2012 Unleaded Avgas Transition Aviation Rulemaking Committee report to the FAA, which noted the currently unavailability of a "drop-in" unleaded replacement fuel. (See February 13, 2013; August 14, 2013; September 8, 2014.)

June 18, 2013: FAA announced the integration of the Traffic Analysis Review Program (TARP) at all en route centers. The TARP software automatically detected losses of aircraft separation and reported all such losses to the Comprehensive Electronic Data Analysis and Reporting program (CEDAR). The system that TARP replaced – the Operational Error Detection Patch – captured losses of separation but did not transfer them directly into CEDAR. With TARP, alerts automatically showed up in CEDAR as Electronic Occurrence Reports. CEDAR gathered both Mandatory and Electronic Occurrence Reports for analysis by ATO Safety and Technical Training's Quality Assurance team, helping the FAA study data to validate and classify events, and then to take steps to prevent them from occurring again. TARP had been used at Terminal facilities since 2009.

June 19, 2013: In testimony before the Senate Judiciary Committee, FBI Director Robert Mueller acknowledged for the first time in public that the FBI had used small, unarmed and unmanned drones to conduct surveillance. The FBI released a statement following Mueller's testimony explaining that the use of drones had allowed the agency to "learn critical information that otherwise would be difficult to obtain without introducing serious risk to law enforcement personnel." The agency also noted that it only used drones to conduct surveillance on stationary objects. (See February 14, 2013; July 19, 2013.)

June 19, 2013: NTSB received a petition urging the agency to reconsider its investigation of the 1996 TWA 800 crash. A group of individuals who took part in a new documentary about the deadly crash initiated the petition. The documentary suggested that NTSB investigators had not interviewed any of the eyewitnesses "who claimed to have seen something like a missile leave the shore that night headed toward the" plane. On June 28, NTSB issued a statement and invited journalists to its training center on July 2, saying "Since the accident occurred 17 years ago, many who are now covering the petition filing are less familiar with the details and findings of the NTSB's four-year investigation." (See July 17, 1996.)

June 20, 2013: Controllers began handling flights from a new, 236-foot tower at Oakland International Airport. The new tower replaced two existing towers – the first built in 1962

and the other approximately 10 years ago when a new hanger blocked controllers' view of the north side of the airport. Having all controllers working in one tower reduced the amount of coordination required between the two towers and streamlined operations and procedures. (See October 15, 2010; November 22, 2013.)

June 23, 2013: A United Airlines Boeing 787 flight from Houston to Denver returned to Houston shortly after takeoff because of an issue with the brake indicator. The previous Thursday, June 20, a United Boeing 787 from London to Houston made an emergency landing in Newark, NJ, because an indicator showed low engine oil. On Tuesday, June 18, a United Boeing 787 from Denver to Tokyo diverted to Seattle because of what the airline called an oil filter issue. (See April 25, 2013; July 25, 2013.)

June 26, 2013: JetBlue announced it had received regulatory approval from FAA to allow its pilots to use electronic flight bags during all phases of flight. JetBlue had tested the electronic flight bags with a limited number of pilots before gaining approval to equip all of it pilots. Like American Airlines it provided its pilots Apple iPads. (See April 22, 2013; February 10, 2014.)

June 27, 2013: The Senate confirmed Charlotte, NC, Mayor Anthony Fox as Secretary of Transportation. He was sworn in during a private ceremony on July 2. Vice President Joe Biden publicly swore him in on July 12. (See May 22, 2013.)

July 2, 2013: Effective this date, a new FAA rule amended design requirements in the airworthiness standards for transport category airplanes to minimize the occurrence of design-related flightcrew errors. The new design requirements enabled a flightcrew member to detect and manage his or her errors when the errors occurred. The rule eliminated regulatory differences between U.S. and European Aviation Safety Agency (EASA) airworthiness standards without affecting current industry design practices.

July 7, 2013: Asiana Flight 214 from Seoul, South Korea, crashed at San Francisco International Airport when the plane hit a seawall upon landing. The Boeing 777 had more than 300 people aboard and the accident caused 3 deaths and over 180 injuries.

July 8, 2013: The United States and the Republic of Suriname signed an Open Skies agreement, which, following a transition period would permit unrestricted air service by the airlines of both countries between and beyond the other's territory, eliminating restrictions on how often the carriers fly, the kind of aircraft they use, and the prices they charge. This became the 110th such agreement the U.S. signed with other nations. (See May 28, 2013.)

July 12, 2013: US Airways' planned merger with AMR Corp. was approved by the company's shareholders. The vote, cast after the company's annual general meeting in New York, returned a more than 99% approval of the deal, which still had to be approved by AMR's bankruptcy court and U.S. regulators. (See February 13, 2013; August 13, 2013.)

July 15, 2013: A new FAA regulation went into effect requiring a second in command (first officer) in domestic, flag, and supplemental operations to hold an airline transport pilot certificate and an airplane type rating for the aircraft to be flown. An airline

transport pilot certificate required that a pilot be 23 years of age and have 1,500 hours total time as a pilot. (See December 21, 2011; November 5, 2013.)

July 16, 2013: FAA issued a final policy statement that permitted general aviation airports to enter into residential through-the-fence (RTTF) agreements with property owners or associations representing property owners. To gain access, the property owner was required to pay access charges; bear the cost of building and maintaining the infrastructure necessary to provide access to the airfield; maintain the property for residential, noncommercial use for the duration of the agreement; prohibit airport access from other adjacent or nearby properties; and prohibit any refueling on the property. FAA clarified that sponsors of commercial service airports were not permitted to enter into RTTF arrangements. However, the sponsors of GA airports could enter into such an arrangement if the airport sponsor complied with certain requirements contained in the FAA Modernization and Reform Act of 2012. (See February 14, 2012.)

July 19, 2013: FAA issued restricted category type certificates to a pair of UAS, a milestone that would lead to the first approved commercial UAS operations later in the summer. The newly certified UAS – Insitu's Scan Eagle X200 and AeroVironment's PUMA – were small UASs weighing less than 55 pounds. Each was about 4 ½ feet long, with wingspans of ten and nine feet, respectively. (See June 19, 2013; September 12, 2013.)

July 25, 2013: FAA issued an airworthiness directive that advised airlines to inspect or remove emergency locator transmitters in Boeing's 787 Dreamliner jets. The agency published the directive in the wake of a fire linked to one of the devices. (See June 23, 2013; July 26, 2013.)

July 25, 2013: The new air traffic control tower in Palm Springs, CA, became operational.

July 26, 2013: An Aviation Rulemaking Committee (ARC), convened by FAA recommended a broad range of policy and regulatory changes that could significantly improve the safety of general aviation aircraft while simultaneously reducing certification and modification costs for those aircraft. The committee's recommendations covered the areas of design, production, maintenance, and safety. The ARC's goal was to identify ways to streamline the certification process, making it cheaper and easier for manufacturers to incorporate safety improvements into their products, allow for upgrades to the existing fleet, and provide greater flexibility to incorporate future technological advancements.

July 26, 2013: FAA issued an airworthiness directive (AD) giving Boeing 787 operators 10 days to inspect Honeywell emergency locator transmitters (ELTs) or remove them from service. The AD, triggered by the July 12 fire on an Ethiopian Airlines 787 at London Heathrow Airport, ordered checks of the ELT, its lithium-manganese-dioxide battery, and associated wiring for discrepancies. (See July 25, 2013; September 30, 2013.)

July 31, 2013: A new ground and satellite-based air traffic control system, the Wide Area Multilateration system went into operation at the Telluride airport in Colorado. The Colorado Division of Aeronautics, FAA, and a $110,000 contribution by the Telluride Regional Airport Authority funded the new system, which allowed controllers to track planes below 12,000 feet all the way to the ground. (See December 3, 2012.)

July 31, 2013: FAA released its draft "Established Practices for Human Space Flight Safety" for public comment. It updated the draft with its "rationale" on September 23, 2013. According to the report's introduction, FAA developed "this document to share our thoughts about established practices for human space flight occupant safety. Ultimately, our goal is to gain the consensus of government, industry, and academia on established practices as part of our mandate to encourage, facilitate, and promote the continuous improvement of the safety of launch and reentry vehicles designed to carry humans. The outcome of this effort may also serve as a starting point for a future rulemaking project." (See April 29, 2013; December 4, 2013; September 16, 2014.)

August 11, 2013: Rockwell Collins announced it had agreed to purchase ARINC, Inc., for $1.39 billion. The purchase, when completed, would expand Rockwell Collins' aerospace business by combining its avionics and cabin technologies with ARINC's ground-based navigational networks. (See December 2, 1929.)

August 13, 2013: FAA Administrator Michael Huerta announced that ATO COO David Grizzle would be leaving the agency in December. Grizzle's last day at FAA was December 12, 2013. (See April 24, 2011; January 16, 2013; March 21, 2014EA.)

August 13, 2013: The U.S. Department of Justice (DOJ) filed a lawsuit that claimed the proposed merger between AMR Corp. and US Airways could be illegal on more than 1,000 domestic city pairs and must be dismantled to stop a clique of national carriers from manipulating services and ticket prices. The lawsuit was jointly filed by Justice, six states, and the District of Colombia. The states included Texas, where AMR is based, and US Airways' home state of Arizona. In a review of the proposed merger, Justice's lawsuit with the District Court for the District of Columbia cited numerous public comments and internal communications by senior US Airways executives—some dating to 2006—that it said proved that competition between U.S. airlines would be weakened should the merger be approved. Both airlines reacted immediately, issuing a joint statement calling the DOJ's assessment "wrong," and that stopping "this pro-competitive merger will deny customers access to a broader airline network that gives them more choices." (See July 12, 2013; October 28, 2013.)

August 14, 2013: UPS Flight 1354, an A300 cargo plane en route from Louisville, KY, to Birmingham, AL, crashed approximately 1/2 mile north of Runway 18 on approach to Birmingham Shuttlesworth International Airport at about 6 am EDT, killing both pilots onboard.

August 14, 2013: NASA Administrator Charles Bolden unveiled a new strategic vision for the agency's Aeronautics Research Mission Directorate to align program activities and investments toward progress in six research and technology areas (see May 9, 2013; August 22, 2013):

- Safe, efficient growth in global operations, including NextGen and technologies to improve safety;
- Innovation in commercial supersonic aircraft, including work on lowering sonic boom impacts;
- Ultra-efficient commercial transports, including pioneering technologies for big leaps in efficiency and lessening environmental impacts;
- Transition to low-carbon propulsion and alternative fuels (See June 10, 2013; September 13, 2013.);
- Real-time, system-wide safety assurance, with emphasis on new integrated monitoring technology; and
- Breakthroughs in autonomy with high-impact applications.

August 21, 2013: FAA published its final policy regarding the procedures for aircraft owners and operators to ask the FAA to limit the dissemination of their Aircraft Situation Display to Industry data. Under the new policy, owners must document a legitimate security concern to justify the data-blocking. The FAA notice spelled out the exact information that had to be included in the request, such as the aircraft registration number and the requestor's contact information.

August 21, 2013: FAA announced it had installed a new system, Time-Based Flow Management (TBFM) at all 20 en route centers. TBFM replaced the traffic management advisor. The time-based scheduling tool metered aircraft through all phases of flight to deliver the correct number of aircraft to airspace sectors and down to the runway at the exact pace at which the aircraft could be accommodated.

August 22, 2013: Updates to FAA joint order 7210.3X, the agency’s operational guide to ATC facility management, took effect. Version three of the guide included a new paragraph that required facilities to develop procedures to ensure positive control during opposite-direction operations to reduce the likelihood of aircraft being placed in close proximity in a head-on conflict with high closure rates. Another change addressed the complexity of the risk of operations on closed runways. In another update, the well-used radio prefix “Lifeguard” was being replaced by the term “Medevac.”

August 22, 2013: Federal and State officials dedicated the new south runway at Port Columbus International Airport. FAA funded 63 percent of the $140 million project.

August 22, 2013: Paul Poberezny, founder of the Experimental Aircraft Association (EAA), died at the age of 91. He started EAA as a club for those who built and restored their own aircraft in 1953, and grew the club into an association with more than 180,000 members.

August 22, 2013: FAA Administrator Michael Huerta announced the selection of Major General Edward L. Bolton, Jr. USAF (Ret.) as the new assistant administrator for NextGen. Bolton began his Air Force career as an enlisted cost and management analyst. He was commissioned in 1983 after completing an electrical engineering degree via the Airmen Education and Commissioning Program and graduating from Officer Training School. He had over twenty years of executive-level experience in acquisition, program

management, systems engineering, requirements development, policy development, strategic planning, financial management and congressional engagement. Prior to joining FAA, he has served as the Deputy Assistant Secretary for Budget, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller. He began his FAA duties on September 9. (See August 14, 2013; September 13, 2013.)

August 22, 2013: FAA, working with the Department of Labor's Occupational Safety and Health Administration (OSHA), issued a final policy for improving workplace safety for aircraft cabin crewmembers. Aircraft cabin safety issues that fell under OSHA standards included information on hazardous chemicals, exposure to blood-borne pathogens, and hearing conservation programs, as well as rules on record-keeping and access to employee exposure and medical records. The FAA and OSHA planned to develop procedures to ensure that OSHA did not apply any requirements that could adversely affect aviation safety. On August 26 FAA clarified the policy, stating it covered "all aircraft operations that utilize at least one aircraft cabin crewmember" while the aircraft was in operation. Pilots were exempt from the policy. The new policy replaced ones from 1975 and became effective on September 26, 2013.

August 28, 2013: As part of a joint research effort with FAA, the Navy, and Army, NASA dropped part of a military helicopter from about 30 feet to test improved seat belts and seats at its Langley, VA, facility. Nearly 40 cameras positioned inside and outside the fuselage recorded the effects on the 13 crash dummies. The helicopter hit the ground at about 30 miles per hour under conditions meant to be severe, but survivable. (See July 30, 2003.)

September 3, 2013: FAA issued a final rule that prohibited, after December 31, 2015, the operation in the contiguous United States of jet airplanes weighing 75,000 pounds or less that did not meet Stage 3 noise levels as defined in 14 CFR Part 36. Operators of airplanes that did not comply with Stage 3 noise levels could choose to replace them, or to incorporate noise-reduction technologies that might be available to make the airplanes Stage 3 noise compliant. (See December 4, 2012.)

September 12, 2013: ConocoPhillips made the first commercial flight of an unmanned aircraft. Under a restricted category type certification the FAA awarded in July, ConocoPhillips launched an Insitu ScanEagle from the research vessel *Westward Wind* in the Chukchi Sea, part of the Arctic Ocean west of Alaska, to monitor whale migrations and ice flows in the Chukchi Sea. FAA had an agreement with ConocoPhillips to collect data about the UAVs flight operations. (See July 19, 2013; October 15, 2013.)

September 13, 2013: Secretary of Transportation Anthony Foxx announced the selection of a team of universities to lead a new FAA Air Transportation Center of Excellence (COE) for alternate jet fuels and the environment. Led by Washington State University and the Massachusetts Institute of Technology, the COE would explore ways to meet the environmental and energy goals that were part of the Next Generation Air Transportation System (NextGen). The FAA's COE program was a cost-sharing research partnership between academia, industry and the federal government. The FAA anticipated providing this COE with $4 million a year for each of the 10 years of the program. Core team partners included Boston University, Oregon State University, Purdue University, the

University of Dayton, the University of Illinois at Urbana-Champaign, the University of Pennsylvania, the University of Washington, Missouri University of Science and Technology, Georgia Institute of Technology, Pennsylvania State University, Stanford University, the University of Hawaii, the University of North Carolina at Chapel Hill, and the University of Tennessee. (See August 14, 2013; August 22, 2013; September 18, 2013; December 3, 2013.)

September 15, 2013: FAA began operations in the new, $33 million, 268-foot, air traffic control tower at the Boise Airport. The new tower replaced a 40-year old, 65 foot tall control tower. The new tower also housed a new TRACON. City officials formally dedicated the tower on November 17, 2013.

September 17, 2013: FAA issued an airworthiness directive (AD) identical to the August 26 Transport Canada Civil Aviation directive which required airlines to inspect Honeywell emergency locator transmitters (ELTs) by January 14, 2014, to prevent an electrical short and possible ignition source. The FAA AD affected about 4,000 airplanes at a total cost of approximately $325,720.

September 18, 2013: Richard Stockton College of New Jersey announced that the college's board had authorized a three-year agreement making the aviation research park being planned near the FAA William J. Hughes Technical Center an auxiliary organization of the college. The move was made in part due to a FAA request that the park, a registered nonprofit organization, find a stable development partner for the project first announced eight years ago. Long known as the NextGen Aviation Research and Technology Park, the college eliminated "NextGen" from the park's name, instead calling it the Stockton Aviation Research and Technology Park. (See October 19, 2009.)

September 18, 2013: The FAA's National Enterprise Management Center moved into its new building in Salt Lake City. The FAA established two such centers two decades ago in Atlanta and Salt Lake City to house redundant operations systems that that collect and distribute weather data and flight plans, manage telecommunications, and host the network security gateways for external stakeholders and international users. FAA completed a new Atlanta facility in January 2011.

September 19, 2013: FAA dedicated a new air traffic control tower at Palm Springs International Airport. The $24.5 million project — paid for, in part, with $13.9 million in federal stimulus funds — got underway in June 2010. It replaced the control tower built in 1967.

September 20, 2013: FAA announced that Ukraine complied with international safety standards set by ICAO, based on the results of a July FAA review. FAA upgraded Ukraine to Category 1 from the Category 2 safety rating the country received from the FAA in June 2005. With the International Aviation Safety Assessment (IASA) Category 1 rating, Ukraine's air carriers could add flights and service to the United States and carry the code of U.S. carriers. With the Category 2 rating, a country's airlines can maintain existing service to the United States, but cannot establish new services. At the time of the announcement, Ukraine did not provide service to the United States. (See November 1, 2012; January 31, 2014.)

September 27, 2013: A United Airlines pilot suffered a fatal heart attack while flying en route from Houston to Seattle, He was 63 years old. The co-pilot safely landed the plane.

September 30, 2013: An advisory panel established by FAA to provide recommendations on the use of electronic devices on airplanes delivered its recommendations to the agency. The panel said that airline passengers should be allowed to use their personal electronic devices to read, play games or enjoy movies and music, even when planes are on the ground or flying below 10,000 feet. The panel said that restrictions should remain on sending text messages, browsing the Web or checking e-mail after the plane's doors have been closed. Passengers can do that only when the aircraft's Wi-Fi network is turned on, typically above 10,000 feet. The use of cellphones to make voice calls, which was not part of the review, will still be prohibited throughout the flight. After reviewing the recommendations, FAA Administrator Michael Huerta will determine next steps. (See August 27, 2012; October 31, 2013.)

September 30, 2013: General Dynamics announced that FAA had awarded it a $12 million task order to provide engineering, software design and development, infrastructure, and administrative support to the NextGen Integration and Evaluation Capability (NIEC) laboratory at the William J. Hughes Technical Center. FAA awarded the task order under the FAA's System Engineering 2020 program, which was awarded to General Dynamics in 2010. (See September 13, 2013; October 31, 2013.)

September 30, 2013: Boeing Commercial Airplanes Marketing Vice President Randy Tinseth acknowledged ongoing reliability issues with the 787 Dreamliner at a press conference in Santiago, Chile. The aircraft had suffered an assortment of electrical and safety issues, the latest of which occurred on September 29 when a 787 operated by Poland's carrier LOT had to land unexpectedly in Iceland because of a problem with the plane's identification system. Over the same weekend, Norwegian Air Shuttle ASA grounded a brand new 787 Dreamliner and demanded that Boeing repair it after it suffered repeated breakdowns. Tinseth said the process of improving reliability could be a long one, but said the reliability of the 787 was better than 95 percent. (See July 26, 2013; November 22, 2013.)

September 30, 2013: DOT issued a notice of proposed rulemaking seeking comments on four new proposals to strengthen the legal protections provided to consumers of charter air transportation. First, this proposal would require air taxis and commuter air carriers that sell charter air transportation but rely on others to perform that air transportation to make certain consumer disclosures as recommended by the National Transportation Safety Board (NTSB). This proposal would also create a new class of indirect air carriers to be called "air charter brokers" to provide as principals single entity charter air transportation of passengers aboard large and small aircraft. In addition, this NPRM would codify the exemption authority granted to indirect air carriers to engage in the sale of air transportation related to air ambulance services. Finally, the NPRM would make clear and codify that certain air services performed under contract with the Federal Government are in common carriage. The public had until November 29, 2013, to provide comments on the proposals.

September 30, 2013: During the fiscal year that ended on this date, FAA installed 25 new aviation weather cameras in Alaska, bringing the total of installed cameras to 215. (See March 25, 2011.)

October 1, 2013: FAA discontinued direct-to-the-public individual sales of paper aeronautical charts and related paper products. FAA's aeronautical paper products were now available through authorized sales chart agents.

October 1, 2013: The lack of fiscal year 2014 appropriations resulted in a partial government shutdown. The shutdown led to about 15,500 of the approximately 46,000 FAA employees being furloughed. Late on October 16, Congress passed and the President signed early on October 17 a continuing resolution funding the government through January 15. Employees began returning to work on October 17. Prior to the furlough ending, FAA had recalled approximately 3,000 safety inspectors.

October 15, 2013: Applied Research Associates Inc. (ARA) announced FAA had issued its Nighthawk IV micro-unmanned aircraft system a special airworthiness certificate, which would allow potential customers to apply for agency approval to operate the 2-lb. aircraft in the national airspace. Capable of being operated by one or two personnel, the Nighthawk IV can be hand-launched or launched from a tube. The vehicle flies autonomously while the operator directs the route using a touchpad display. Only four hours of training are required before an operator can conduct a flight, according to ARA. (See September 12, 2013; November 7, 2013.)

October 15, 2013: Air travel provider De Pere, Wisconsin-based MetJet informed the Department of Transportation that it planned to cease operations on October 26. MetJet offered flights from Austin Strauble International Airport in Ashwaubenon, Wisconsin, to Orlando and Fort Meyers, Florida. MetJet's contracted airline, Sun Country, is not ceasing operations.

October 17, 2013: A 10,800 foot runway opened at O'Hare International Airport as part of a larger expansion project. The new runway, 10 Center/28 Center, became the airport's only airstrip capable of accommodating the largest planes in the commercial fleet – the Airbus A380 and the Boeing 747-8 Intercontinental.

October 21, 2013: United Airlines announced plans to equip up to 397 of its aircraft over the next six years with avionics equipment necessary to provide the pilot-to-controller digital communications under the FAA NextGen data comm avionics equipage program. United became the first carrier to commit to such equipage. On September 20, 2012, FAA awarded Harris Corp., a $331 million Data Communications Integrated Services (DCIS) contract as part of the NextGen airspace modernization initiative. Among other things, the contract called for a data comm avionics equipage program, an $80 million fund to encourage equipping a minimum of 1,900 aircraft during the course of the first six years of the contract for Future Air Navigation Systems (FANS) 1/A. (See September 30, 2013.)

October 22, 2013: Chilton County Airport (Alabama) held a groundbreaking ceremony to mark the beginning of a $2.6 million project that would include a new runway lighting

system, a resurfaced runway, the installation of a new hangar housing 10 airplanes, and the clearing of six parcels of land to extend the runway to 4,000 feet. FAA and Alabama DOT grants funded the project.

October 22, 2013: NOAA's Office of Coast Survey announced that starting April 13, the federal government would no longer print traditional lithographic (paper) nautical charts, but would continue to provide other forms of nautical charts, including print on demand charts and versions for electronic charting systems. While NOAA has the job of creating and maintaining the charts, beginning in 1999, the FAA became responsible for printing them. FAA informed NOAA earlier in October that it planned to stop printing the charts. FAA based its decision on several factors, including the declining demand for lithographic charts, the increasing use of digital and electronic charts, and federal budget realities.

October 25, 2013: DOT fined United Airlines $1.1 million for13 weather-related lengthy tarmac delays that took place at Chicago-O'Hare International Airport on July 13, 2012. DOT ordered the airline to cease and desist from future violations of the tarmac-delay rule. This was the largest fine assessed for a tarmac-delay violation since the rule limiting long tarmac delays first took effect in April 2010. Of the $1.1 million, United will pay the United States $475,000; the remainder covers mitigation measures for affected passengers and significant corrective actions by United to enhance future compliance with tarmac delay requirements.

October 28, 2013: American Airlines, US Airways, and the U.S. Justice Department said in a court filing they had agreed to use a mediator to try to settle the government's lawsuit against the airlines' proposed merger. If mediation failed, a trial would begin on November 25. The court filing also noted that most of the discovery in the case had been completed, with the airlines producing more than 1.3 million documents and the Justice Department producing 900,000 documents. The Justice Department argued that the merger would lead to higher fares, reduced competition, and a cut in services to smaller cities. American Airlines and US Airways said the merger would help them better compete with other airlines that have grown bigger through mergers of their own. Separately, the judge hearing the government's antitrust case granted the request of four airports dominated by American and US Airways — Dallas-Fort Worth International Airport, Charlotte Douglas International Airport, Phoenix Sky Harbor International and Philadelphia International Airport — the chance to file friend-of-the-court briefs in support of the merger. (See August 13, 2013; November 12, 2013.)

October 31, 2013: FAA Administrator Michael Huerta announced the FAA would allow airlines to permit passenger use of portable electronic devices (PEDs) during all phases of flight, and provided airlines with implementation guidance. The guidance helped airlines assess the risks of potential PED-induced avionics problems for their airplanes and specific operations. Before allowing use of PEDs, airlines had to evaluate avionics as well as changes to stowage rules and passenger announcements. Each airline also had to revise manuals, checklists for crewmember training materials, carry-on baggage programs, and passenger briefings before expanding use of PEDs. FAA then had to certify PED use for each model of airplane in an airline's fleet. Each airline determined how and when they will allow passengers broader use of PEDs. FAA did not consider

changing the regulations regarding the use of cell phones for voice communications during flight because the issue is under the jurisdiction of the Federal Communications Commission (FCC). On November 8, FAA approved JetBlue Airways and Delta Airlines use of PEDs and on November 3, approved American Airlines. By November 15, Alaska Airlines and United Airlines had joined the list of airlines approved for PED use. (See September 30, 2013; February 11, 2014.)

November 1, 2013: The City of McKinney, Texas, took over operations at Collin County Regional Airport, a general aviation airport established in 1979. The change included a new city-operated Fixed Base Operator, McKinney Air Center. On November 6, the McKinney City Council approved changing the name of the airport to McKinney National Airport.

November 4, 2013: DOT fined US Airways $1.2 million for failing to provide adequate wheelchair assistance to passengers in Philadelphia, PA, and Charlotte, NC. The fine was one of the largest ever assessed by DOT in a disability case. Under DOT's rules implementing the Air Carrier Access Act, airlines must provide free, prompt wheelchair assistance upon request to passengers with disabilities. This included helping passengers to move between gates and make connections to other flights.

November 4, 2013: Transportation Secretary Anthony Foxx announced that DOT, as part of its ongoing effort to ensure equal access to air transportation for all travelers, now required airline websites and automated airport kiosks to be accessible to passengers with disabilities. In addition, DOT allowed airlines to choose between stowing wheelchairs in a cabin compartment on new aircraft or strapping them to a row of seats, an option that would ensure that two manual, folding wheelchairs can be transported at a time. The new rules were part of DOT's continuing implementation of the Air Carrier Access Act of 1986. (See May 7, 2008.)

November 5, 2013: FAA issued a final rule to improve pilot training. The final rule stemmed in part from the tragic crash of Colgan Air 3407 in February 2009, and addressed a Congressional mandate in the Airline Safety and Federal Aviation Administration Extension Act of 2010 to ensure enhanced pilot training. The rule is one of several rulemakings required by the Act, including the requirements to prevent pilot fatigue that were finalized in December 2011, and the increased qualification requirements for first officers who fly U.S. passenger and cargo planes that were issued on July 15, 2013 (see that date). The final rule required:

- ground and flight training enabling pilots to prevent and recover from aircraft stalls and upsets. These new training standards will impact future simulator standards as well (See December 3, 2014);
- air carriers to use data to track remedial training for pilots with performance deficiencies, such as failing a proficiency check or unsatisfactory performance during flight training;
- training for more effective pilot monitoring;
- enhanced runway safety procedures; and
- expanded crosswind training, including training for wind gusts.

November 7, 2013: FAA released its first annual Roadmap outlining efforts needed to safely integrate unmanned aircraft systems (UAS) into the nation's airspace. The Roadmap outlined the FAA's approach to ensuring that widespread UAS use is safe, from the perspective of accommodation, integration, and evolution. FAA planned to establish requirements that UAS operators would have to meet to increase access to airspace over the next five to 10 years. The Roadmap discussed items such as new or revised regulations, policies, procedures, guidance material, training and understanding of systems, and operations to support routine UAS operations. (See October 15, 2013; December 30, 2013.)

November 12, 2013: The Justice Department and American Airlines and US Airways settled the lawsuit brought by the Justice Department over the merger of the two airlines. The DOJ filed papers in U.S. District Court in the District of Columbia to announce the settlement that avoided a trial scheduled to start November 25. Under the terms of the settlement, the airlines will divest Under the proposal, American and US Airways would sell 104 takeoff and landing slots at Ronald Reagan National Airport in Washington, 34 slots at La Guardia Airport in New York, and two gates each at Boston's Logan airport, O'Hare, Dallas Love Field, Los Angeles, and Miami. A judge overseeing American Airlines' bankruptcy proceeding approved the merger settlement on November 27. The two airlines would continue to operate separately until FAA approved unified operations. (See October 28, 2013; December 7, 2013.)

November 14, 2013: FAA certificated the Learjet 75, a light business jet with a maximum range greater than 2,000 nautical miles at cruise speeds up to Mach 0.81. The Learjet 75 aircraft can fly four passengers and two crew members non-stop from Los Angeles to Toronto and Mumbai to Bangkok. Additionally, it will be able to handle a range close to 1,950 nautical miles with eight passengers.

November 19, 2013: In an editorial published in the FAA's Federal Air Surgeon's Medical Bulletin, Federal Air Surgeon Fred Tilton said the agency would soon implement a new policy on obstructive sleep apnea. In particular, airmen and air traffic controllers with a body mass index of 40 or more would have to be evaluated by a physician board certified as a sleep specialist. Anyone diagnosed with obstructive sleep apnea would then have to undergo treatment before being medically certificated. The policy resulted in growing criticism from the aviation community, and a bill introduced in the House of Representatives that would prevent FAA from implementing new rules pertaining to pilots with sleep apnea without adhering to the normal rulemaking process. On December 20, the *Wall Street Journal* reported the FAA put the policy on hold, while it worked with aviation stakeholder groups to provide clear guidance on the agency's plan and that FAA planned to pursue a new approach to help physicians diagnose sleep disorders.

November 21, 2013: FAA released a 279-page report that noted, although flying has never been safer, pilot confusion or inattention to cockpit automation has raised concerns in fatal crashes. "Pilots sometimes rely too much on automated systems and may be reluctant to intervene," the report said. The use of technology for calculations and managing flights "is increasing, including implementations that may result in errors and confusion." The report made 18 recommendations to improve safety, and the FAA has

begun to take action on each one. Beyond the recommendations in the cockpit-automation report, FAA Administrator Huerta announced FAA would establish a joint government and industry Air Carrier Training Steering Group early next year to prioritize outstanding recommendations from a variety of sources. He also asked participants at an industry meeting to provide him with the top five focus areas to improve air carrier training. Huerta wanted the new Air Carrier Training Steering Group, comprised of safety experts from the airlines, crew-member unions, government and the aviation community, to consider the recommended focus areas as the first order of business when it convened.

November 22, 2013: FAA dedicated a new, 236-foot tall air traffic control tower at Oakland International Airport. A $33.2 million American Recovery and Reinvestment Act (ARRA) grant helped pay for constructing the tower and a 14,000-square-foot base building. The grant was the FAA's largest single ARRA award. The new control tower replaced two air traffic control towers that served Oakland International Airport for more than 40 years. A 158-foot-tall tower on the southern portion of the airfield was built in 1962 as a part of a terminal expansion project. In 1972, construction of a large hangar blocked some views from the south tower, requiring the Port of Oakland to build a second tower to handle traffic on the north runways. The total cost of the new tower, including site preparation, electronics, air traffic control equipment, utilities, and installation of equipment was $51 million. (See October 15, 2010.)

November 22, 2013: Boeing issued a notice urging carriers to avoid flying 747-8 and 787 Dreamliner planes with engines made by General Electric at high attitude within 50 nautical miles of thunderstorms that may contain ice crystals. The move followed six incidents from April to November involving five 747-8s and one 787 when aircraft powered by GE's GEnx engines suffered temporary loss of thrust while flying at high altitude. The problem was caused by a build-up of ice crystals, initially just behind the front fan, which ran through the engine, said a GE spokesman, adding that all of the aircraft landed at their planned destinations safely. (See September 30, 2013; November 27, 2013.)

November 27, 2013: FAA issued an airworthiness directive requiring airlines that operate Boeing 787s and 747s with GE engines steer clear of thunderstorms with clouds more than 60 miles across. The FAA reported it knew of nine instances where ice was sucked into an engine causing it to lose power and that two of those incidents caused engine damage. (See November 22, 2013; March 19, 2014.)

November 23, 2013: China declared an "East China Sea Air Identification Zone," and said unannounced flight in the area would face "defensive emergency measures." On November 29, the U.S. State Department issued a statement saying U.S. airlines should respect a Chinese order to notify Beijing of flights through international airspace where the country recently claimed jurisdiction.

November 25, 2013: Officials at Barnes Regional Airport in Westfield, MA, opened a new $13.5 million runway. The project, announced in July with groundbreaking in August, was financed with $8.7 million in federal funds toward the total $20 million job that in addition to the runway includes auxiliary lighting and concrete pads for the F-15 jets.

November 27, 2013: President Barack Obama signed the Small Airplane Revitalization Act of 2013 into law. The legislation directed the FAA to issue a final rule to advance the safety and continued development of small airplanes by reorganizing the certification requirements to streamline the approval of safety advancements. It also required the final rule to meet certain consensus-based standards and FAA Part 23 Reorganization Aviation Rulemaking Committee objectives, including: (1) establishment of a regulatory regime for small airplane safety; (2) the establishment of broad, outcome-driven objectives that would spur small plane innovation and technology adoption; (3) the replacement of current, prescriptive requirements under Part 23 with performance-based regulations; and (4) the use of FAA-accepted consensus standards to clarify how Part 23 safety objectives may be met using specific small plane safety designs and technologies.

November 29, 2013: Evergreen International Airlines, Inc., a cargo airline based in McMinnville, Oregon, ceased operations because of financial difficulties. The airline flew its final flight on December 2, from Travis Air Force Base in California to Victorville, California.

December 3, 2013: Shell announced it had become the first major oil company to develop a lead-free replacement for aviation gasoline (Avgas 100 and 100LL). The formulation was successfully evaluated in industry laboratory engine (bench) tests by Lycoming and in a flight test by Piper. Shell planned to engage the aviation industry, regulators and authorities, including the FAA, American Society for Testing and Materials, and European Aviation Safety Agency to obtain approvals for the unleaded Avgas. Shell also planned to work with other OEMs to continue the testing and refinement program as the approvals process progresses. (See September 13, 2013; September 8, 2014.)

December 4, 2013: Pam Underwood, FAA deputy division manager at Kennedy Space Center, announced that NASA astronauts will fly as “space flight participants” aboard commercial spaceships being developed to taxi crews to and from the international space station. FAA’s definition of crew required them to be employees of the licensee or subcontractor licensee. NASA astronauts are neither, so they will be flying under the category of space flight participant, under current FAA regulations. The ruling did not limit the scope of the work government-employed astronauts could perform aboard commercial space taxis, including piloting the vehicle, aborting launch if necessary, overseeing emergency response, and monitoring and operating environmental controls and life support systems. (See August 14, 2013.)

December 7, 2013: A consumer group, concerned that the American Airlines and US Airways merger would lead to increased fares and fewer choices for fliers, filed for an emergency stay to block the merger in a federal appeals court in New York. When the court denied the stay, the group appealed to the U.S. Supreme Court. Justice Ruth Bader Ginsberg declined to hear the stay request. (See November 12, 2013; December 9, 2013.)

December 9, 2013: FAA renewed Spaceport America’s license to host suborbital and horizontal rocket launches. The renewal became effective on December 15 and would last through December 15, 2018. (See December 15, 2013.)

December 9, 2013: American Airlines exited bankruptcy and completed its merger with US Airways. The merged company, with its new stock symbol, AAL, began trading on the NASDAC. (See December 7, 2013; October 20, 2014.)

December 10, 2013: The New York ARTCC became the last of FAA's three Oceanic Control Areas to implement reduced oceanic separation standards for aircraft that use advanced navigation technology and fly satellite-based routes. To qualify for the standards, planes traveling through the control area had to have:

- FANS-1/A avionics, which enabled controllers to communicate clearances to pilots, pilots to submit requests to controllers, and controllers to track aircraft positions;
- Controller-pilot data link communications, or CPDLC, which streamlined conversations between pilots and controllers via text messages;
- Automatic Dependent Surveillance-Contract, or ADS-C, which reported flight positions to the center within approved timeframes

The Ocean21 automation system at the ARTCC collected data from the aircraft's equipment so controllers knew what each aircraft could do, its location, flight path, and any potential future conflicts. Controllers could then separate qualified pairs of planes by either 30 nautical miles lateral and longitudinal or 50 nautical miles lateral and longitudinal. The 30/30 standard was applied to flights that use a category of navigation known as RNP-4. The 50/50 standard was for plane pairings that use RNP-10. RNP is short for required navigation performance, a term for procedures that used satellites to guide aircraft on more precise flight paths.

December 11, 2013: The House Transportation and Infrastructure Committee's aviation subcommittee tasked the Government Accountability Office (GAO) with evaluating foreign civil aviation authority certification processes to see if any lessons learned could benefit both FAA's process and U.S. manufacturers. GAO's study will cover four areas: how FAA certification compares to foreign counterparts; general lessons learned; challenges that U.S. manufacturers have with foreign certification; and how FAA addresses foreign challenges to U.S. approvals. (See May 3, 2013; September 15, 2014.)

December 13, 2013: FAA awarded airworthiness certification to the HondaJet HF 120 engine built by GE Honda Aero Engines.

December 15, 2013: FAA contract controllers began operations in the new $2.8 million air traffic control tower at the Mesquite Metro Airport in Mesquite, Texas.

December 30, 2013: FAA announced the selection of the six public entities to develop unmanned aircraft systems (UAS) research and test sites around the country. These congressionally-mandated test sites will conduct critical research into the certification and operational requirements necessary to safely integrate UAS into the national airspace over the next several years. Those sites included: University of Alaska; State of Nevada; New York's Griffiss International Airport; North Dakota Department of Commerce; Texas A&M University; and Virginia Tech. (See November 7, 2013; April 21, 2014.)

2014

January 4, 2014: FAA's new pilot rules (FAR 117) went into effect. Under the new rules, non-cargo pilots must get at least 10 hours of rest between shifts, of which 8 hours must involve uninterrupted sleep. In addition, pilots are only allowed to fly for 8 or 9 hours depending on their start times. (See December 21, 2011.)

January 10, 2014: Virgin Galactic successfully completed the third rocket-powered supersonic flight of its passenger-carrying reusable space vehicle, SpaceShipTwo. The spacecraft ascended to a record-breaking height of 71,000 feet, at a maximum speed of Mach 1.4. (See April 29, 2013; October 31, 2014.)

January 11, 2014: FAA and the Academy of Model Aeronautics signed a memorandum of agreement to work jointly to ensure the continued safe operation of model aircraft in the national airspace system. (See June 19, 2013; January 2014; June 23, 2014.)

January 13, 2014: Secretary of Transportation Anthony Foxx appointed 10 new members to the FAA Management Advisory Council (MAC). The new members included: Steve Alterman, president, Cargo Airline Association; Bill Ayer, former chairman, Alaska Air Group; Montie Brewer, former president and CEO, Air Canada; Ray Conner, vice chairman, The Boeing Co., and president and CEO, Boeing Commercial Airplanes; Craig Fuller, president, the Fuller Co. and former president, Aircraft Owners and Pilots Association; Jane Garvey, Meridiam Infrastructure/MITRE board member and former FAA administrator; Mayor Michael Hancock, City of Denver, CO.; Lee Moak, president, Air Line Pilots Association; John "Jack" Potter, president and CEO, Metropolitan Washington Airports Authority; and, Gwynne Shotwell, president and COO, Space X. Created by the Federal Aviation Reauthorization Act of 1996, the MAC meets quarterly to assess and advise FAA on carrying out its aviation safety and air travel efficiency mission. Panel members serve three-year terms in a volunteer capacity and retain their private sector positions. By law the MAC has 13 members. The new appointments joined the three incumbent council members: Department of Transportation Acting Deputy Secretary Victor Mendez; Department of Defense Brig. Gen. Steven M Shepro; and Paul Rinaldi, president, National Air Traffic Controllers Association. (See July 11, 2001.)

January 17, 2014: President Barack Obama signed the Consolidated Appropriations Act of 2014 (PL 113-76), which, among other things, eliminated funding for the Joint Planning and Development Office (JPDO). FAA had established the office in 2003 under the Vision 100-Century of Aviation legislation that launched the NextGen modernization program. Karlin Toner, who headed the JPDO, became FAA's Director of Global Strategy within FAA's Office of Policy, International Affairs, and Environment. In May 2014, FAA created a new interagency office to coordinate federal investment in the NextGen ATC modernization effort following the elimination of the JPDO. FAA said it established an Interagency Planning Office to replace the JPDO under the direction of Gisele Mohler. Consisting of employees from FAA and other federal agencies to replace the JPDO, the office "will plan, identify and prioritize key multi-agency research to drive consensus in the development of investment choices and decisions related to NextGen.

Part of its mission is to improve efficiencies, reduce redundancy and ensure compatibility across federal agencies, while pooling resources and investments." (See February 26, 2010; September 23, 2011.)

January 21, 2014: Per language in the 2014 omnibus spending bill signed by President Obama on January 17, DOT's Research and Innovative Technology Administration became the new Office of the Assistant Secretary for Research and Technology.

January 29, 2014: FAA announced in a *Federal Register* notice that it had combined two divisions – the Aircraft Engineering division with the Production and Airworthiness division – to create the Design, Manufacturing, and Airworthiness Division within its Office of Aviation Safety. The new group, which assumed the old engineering division's AIR-100 designation, had five branches: Certification and Procedures, Technical and Administrative Support, Systems and Equipment Standards, Operational Oversight and Policy, and Systems Performance and Development.

January 31, 2014: FAA down-graded India's aviation-safety ranking from Category 1 to Category 2 because of safety deficiencies. The Category 2 rating signifies that India's civil aviation safety oversight regime does not comply with ICAO safety standards. It also prohibits any new Indian carriers from starting service to the U.S. and opens up India's aircraft to additional inspections from FAA. (See September 20, 2013; January 2014.)

January 2014: Colorado banned the use of drones in hunting and Montana followed suit in February. Idaho and Wisconsin had already included drones in their current prohibitions against the use of aircraft for hunting. (See January 11, 2014; March 7, 2014.)

January 2014: FAA announced that Ethiopia had passed the agency's five-day-long safety audit, allowing the country to keep its Category 1 safety status. (See January 31, 2014; March 7, 2014.)

February 5, 2014: FAA simplified design approval requirements for a cockpit instrument called an angle of attack (AOA) indicator. AOA devices, common on military and large civil aircraft, can be added to small planes to supplement airspeed indicators and stall warning systems, alerting pilots of a low airspeed condition before a dangerous aerodynamic stall occurs, especially during takeoff and landing. An AOA is the angle between a plane's wing and the oncoming air. If the angle of attack becomes too great, the wing can stall and lose lift. If a pilot fails to recognize and correct the situation, a stall could lead to loss of control of the aircraft and an abrupt loss of altitude.

February 6, 2014: Aviation Partners Boeing announced it had received supplemental type certification (STC) from FAA for split scimitar winglets to be installed on Boeing 737-800 aircraft. The company planned to develop and certify the split scimitar winglet modification for all the Boeing 737-700, -800, and -900 series aircraft, including Boeing Business Jets. On February 19, United Airlines became the first U.S. airline to use the

split scimitar winglets on commercial flights. The new winglet design demonstrated significant aircraft drag reduction over the basic blended winglet, which resulted in a 2.5 percent fuel savings. On October 10, the company announced it had received FAA STC covering the installation of the new winglets on three additional configurations of the Boeing 727-800. FAA approved use of the winglets on all Boeing 737-800 and 737-900ER aircraft.

February 10, 2014: FAA certified Ohana by Hawaiian, Hawaiian Airlines' new turboprop subsidiary. Ohana planned to enter the inter-island market with flights between Honolulu International Airport and Molokai on March 11 and between Oahu and Lanai on March 18.

February 10, 2014: Microsoft announced it received FAA authorization for Surface 2 tablets to be used as electronic flight bags. (See June 26, 2013.)

February 10, 2014: FAA launched a 10-day campaign to recruit air traffic controller trainees. Candidates had to have a high school diploma or three years of work experience. FAA's Collegiate Training Initiative (CTI) program graduates had to reapply under the new program to be considered. All applicants had to pass the normal ATC aptitude test (AT-SAT), as well as a new "biographical" test. In addition, a single vacancy announcement would be used for all applicant sources, and a single nationwide referral list would be generated containing all candidates who met the qualification standards and passed the assessments. Location preferences would no longer be used as a determining factor for referral or selection. Centralized selection panels would no longer be convened to make selection from the referral list. Selection would now be fully automated, grouping candidate by assessment scores and veteran's preference. FAA notified the 36 CTI schools of the impending change on December 30, 2014, and held a telecom with the schools on January 8, 2014, to discuss the changes. The changes in hiring policy came after FAA released a barrier analysis of air traffic control hiring in April 2013. (See March 7, 2007; April 4, 2010.)

February 11, 2014: FAA issued a final rule prohibiting flightcrew members in operations under Part 121 from using a personal wireless communications device or laptop computer for personal use while at their duty station on the flight deck when the aircraft is being operated. The rule became effective on April 14, 2014. (See October 31, 2013.)

February 13, 2014: A federal judge threw out Santa Monica's lawsuit to wrest control of its airport from the U.S. government. Santa Monica sued in October to free itself from a 1948 agreement that transferred ownership of the property and its 5,000-foot runway back to the city after World War II on the condition that it remain an airport unless the government approved a change in use. The judge ruled that Santa Monica had 12 years under the Quiet Title Act to sue to gain unconditional ownership, but that time has expired by 1960. The judge's decision threw out another contention that the government's control of the airport amounted to an illegal taking of municipal property without just compensation. The judge noted that the city failed to first seek compensation in the U.S. Court of Federal Claims. On March 25, the Santa Monica City Council voted 6-0 in favor

of a plan to take control of the city-owned portion of Santa Monica Airport, and voted to "scale back flight operations, cut the 5,000-foot runway by 2,000 feet, and reduce aviation related services." The Council was open to repaying a $250,000 grant and prepared for additional legal battles to take control over the site and its use. FAA repeated its position that Santa Monica is required to operate the airport unless the agency grants a change.

February 19, 2014: FAA Administrator Michael Huerta unveiled his four strategic initiatives at a FAA-wide Town Hall event. He noted that while the transformational agenda will span beyond the next four years, he expected to see significant progress toward the vision in that timeframe. The four initiatives were titled: risk-based decision making; the NAS; global leadership; and workforce of the future. (See September 30, 2003.)

February 20, 2014: FAA issued a final rule that required helicopter operators, including air ambulances, to have stricter flight rules and procedures, improved communications, training, and additional on-board safety equipment. Under the new rule, all Part 135 helicopter operators were required to:

- Equip their helicopters with radio altimeters.
- Have occupants wear life preservers.
- Equip helicopters with a 406 MHz Emergency Locator Transmitter (ELT) when a helicopter is operated beyond power-off glide distance from the shore.
- Use higher weather minimums when identifying an alternate airport in a flight plan.
- Require that pilots be tested to handle flat-light, whiteout, and brownout conditions and demonstrate competency in recovery from an inadvertent encounter with instrument meteorological conditions.

In addition, all air ambulance operators were required to:

- Equip with Helicopter Terrain Awareness and Warning Systems (HTAWS).
- Equip with a flight data monitoring system within four years.
- Establish operations control centers if they are certificate holders with 10 or more helicopter air ambulances.
- Institute pre-flight risk-analysis programs.
- Ensure their pilots-in-command hold an instrument rating.
- Ensure pilots identify and document the highest obstacle along the planned route before departure.
- Comply with Visual Flight Rules (VFR) weather minimums, Instrument Flight Rules (IFR) operations at airports/heliports without weather reporting, procedures for VFR approaches, and VFR flight planning.
- Conduct the flight using Part 135 weather requirements and flight crew time limitation and rest requirements when medical personnel are on board.

- Conduct safety briefings or training for medical personnel.

The rule was to be effective on April 22, 2014. On April 17, 2014, FAA extended the deadline to April 22, 2015, after the agency determined the rule's original effective date did not provide adequate time for affected certificate holders to implement the new requirements. (See October 12, 2010.)

March 4, 2014: FAA issued a final rule that adopted more stringent noise certification standards for helicopters that are certificated in the U.S. The rule applied to applications for a new helicopter type design. It also allowed applicants to upgrade Stage 1 and Stage 2 helicopters to Stage 3 when applying for a supplemental type certificate. A helicopter type-certificated under this standard will be designated as a Stage 3 helicopter. This rule adopts the same noise certification standards for helicopters that exist in ICAO standards. The effective date of the new regulation was May 5, 2014. (September 18, 2013.)

March 7, 2014: FAA issued a notice appealing a March 6 decision by an NTSB Administrative Law Judge in the civil penalty case Huerta v. Pirker. That decision dismissed a proposed civil penalty for unauthorized use of an UAS. FAA proposed the $10,000 civil penalty in August 2011 against Raphael Pirker for acting as pilot-in-command of a Ritewing Zephyr UAS for compensation without possessing a pilot certificate. FAA further charged that the UAS was operated "in a careless or reckless manner so as to endanger the life or property of another." Pirker appealed the decision to NTSB, arguing there is no valid rule in the Federal Aviation Regulations covering model aircraft flight operations. While FAA argued that model aircraft by definition are aircraft, NTSB says such an "interpretive argument would lead to a conclusion that those definitions include as an aircraft all types of devices/contrivances intended for, or used for, flight in the aircraft. The extension of that conclusion would then result in the risible argument that a flight in the air of, e.g., a paper aircraft, or a toy balsa wood glider, could subject the 'operator' to the regulatory provisions of FAA Part 91." FAA appealed the decision of an NTSB Administrative Law Judge to the full NTSB, which has the effect of staying the decision until the Board rules. The agency expressed concern that the decision could impact the safe operation of the NAS and the safety of people and property on the ground. On April 7, FAA filed its Administrator's Appeal Brief. (See January 2014; November 18, 2014.)

March 7, 2014: FAA granted the Republic of Azerbaijan a Category 1 rating for aviation safety after an assessment determined it complied with international safety standards set by ICAO. The country previously did not hold an International Aviation Safety Assessment (IASA) rating and no carrier of Azerbaijan had provided service to the U.S. According to an FAA statement, the Republic of Azerbaijan's air carriers could now add flights and service to the U.S. and carry the code of U.S. carriers. (See January 2014; April 10, 2014.)

March 8, 2014: Malaysia Airlines Flight 370, a Boeing 777, disappeared en route to Beijing with 239 people on board. On May 1, as the search for the missing plane continued in the Indian Ocean, the Malaysian government issued a preliminary report on

the plane’s disappearance. The five-page report included the recordings of communication between the flight-crew and air traffic controllers, which appeared routine. It also noted that it took four hours for the Malaysian search and rescue center to be activated from the time Vietnam told Malaysia the plane was missing.

March 12, 2014: NTSB Chairwoman Deborah Hersman announced she would be leaving the agency on April 24 to become president and CEO of the National Safety Council.

March 19, 2014: FAA released the findings of a review team formed in January 2013 to review the Boeing 787's design, manufacture, and assembly processes. The joint team of FAA and Boeing technical experts found that the aircraft was soundly designed, met its intended safety level, and that the manufacturer and FAA had effective processes in place to identify and correct issues that emerged before and after certification. The team identified issues in the manufacturing and supplier quality areas and made four recommendations to Boeing, including the need to continue to implement and mature gated design and production processes; ensure suppliers are fully aware of their responsibilities; establish a way to ensure suppliers identify realistic program risks; and require its suppliers to follow industry standards for personnel performing Boeing-required inspections. The team made parallel recommendations to FAA for improved, risk-based FAA oversight to account for new business models. The team recommended FAA should: revise its order on certificate management of manufacturers to recognize new aircraft manufacturing business models; revise its order on production approval procedures to more fully address complex, large-scale manufacturers with extended supply chains; and revise other orders to ensure engineering conformity inspections for all projects are based on risk. Based on the team's recommendations, FAA planned to revise its policies, orders, and procedures: to use risk tools to ensure manufacturing surveillance is conducted at the highest risk facilities; to assess risks related to emerging technologies, complex manufacturing processes, and supply chain management; and to make engineering conformity determinations using standardized, risk-based criteria. (See November 27, 2013; May 28, 2014.)

March 20, 2014: FAA issued its second study of general aviation (GA) airports called ASSET 2: In-Depth Review of the 497 Unclassified Airports. The original ASSET study, completed in 2012, categorized nearly 3,000 GA airports into four areas: national, regional, local, and basic. In addition, the study defined the vital and diverse roles small airports play in the national air transportation system. However, 497 airports did not fit into a category under the original study. In January 2013, FAA began working with airport sponsors, state aviation offices, and industry stakeholders to conduct an in-depth review of the unclassified airports to ensure all available information was considered. As a result of that work, FAA placed 212 airports into one of the four categories. The study also discovered four airports closed to the public or no longer serving as active airfields. The remaining 281 airports were unable to meet minimum criteria for an existing category. Although the agency could not determine a federal role for these airports, they will remain in the National Plan of Integrated Airport Systems (NPIAS as unclassified, and FAA will monitor their activity level and role for possible changes.

March 21, 2014: FAA extended the expiration date of the prohibition of flight operations within the Tripoli Flight Information Region (FIR) by all U.S. air carriers; U.S. commercial operators; and persons exercising the privileges of an airman certificate issued by FAA, except when such persons are operating a U.S.-registered aircraft for a foreign air carrier. FAA believed the extension of the expiration date to March 21, 2015, was necessary to prevent a potential hazard to persons and aircraft engaged in such flight operations.

March 21, 2014: FAA Administrator Michael Huerta announced that he had selected acting ATO COO Teri Bristol as the new ATO COO. Prior to this appointment she had served as deputy COO; vice president for technical operation services; vice president for the service center; director of terminal mission support; director of terminal operations for the western service area; and the director of terminal program operations. (See August 13, 2013.)

March 21, 2014: FAA and the Experimental Aircraft Association (EAA) announced an agreement for the next nine years under which FAA would provide, as it had in past years, air traffic control and other personnel for AirVenture, with the EAA covering the cost of travel, accommodations, and other expenses for air traffic control personnel.

March 26, 2014: NTSB cautioned airline pilots to exercise vigilance in the approach phase of a flight to avoid “potentially catastrophic mistakes.” The safety alert came after wrong-airport landings by Southwest Airlines in January and Atlas Air in November 2013.

March 27, 2014: Facebook announced it had purchased Ascenta, a U.K.-based aerospace company for $20 million to help deliver the Internet to underserved areas by building drones, satellites, and lasers. On April 14, Google announced it had purchased Titan Aerospace, a New Mexico company that manufactured high-altitude drones.

March 28, 2014: FAA published a revised version of AC No: 20-138D that clarified and added new guidance material to the airworthiness approval process for a variety of GPS systems, including augmented GPS and RNAV equipment for required navigation performance (RNP) operations and baro-Vnav equipment. Several changes covered: the differences between equipment capability and installed limitations; clarification of the database configuration and equipment capability; adding step-down fixes to navigation databases; and a new appendix for demonstrating radius to fix (RF) leg capability and RNP prediction guidance for RNP authorization-required approaches.

April 2, 2014: FAA dedicated its new air traffic control facility at George Bush Intercontinental Airport in Houston, Texas. The 47,500-square-foot terminal radar approach control (TRACON) facility replaced an outdated structure commissioned more than 40 years ago.

April 2, 2014: The Supreme Court ruled unanimously “an airline had the right to dump a frequent flier who complained too much.” The Court said airlines “have sole discretion to

drop frequent fliers." The case "involved Rabbi Binyomin Ginsberg, who was ousted from Northwest Airlines' WorldPerks loyalty program for complaining too often about getting bumped from flights and repeatedly seeking compensation the airline considered unfair." The airline argued that frequent-flier programs "operate at the sole discretion of the airline," and that airlines "can't tailor their programs to a patchwork of consumer laws in 50 states." Writing for the court in overturning the 9th Circuit Court of Appeals, Justice Samuel Alito said "that travelers have protection from being mistreated because they could sue for possible breach of contract, just not for covenants that Ginsberg had argued were implied by participating in a loyalty program."

April 3, 2014: FAA began using "climb via" phraseology for route transitions and/or the assignment of area navigation (RNAV) standard instrument departure (SID) procedures containing speed and altitude restrictions. These new and revised air traffic procedures were the result of a collaborative effort between the ATO, Flight Standards, NATCA, and industry stakeholders. Concurrent with climb via, FAA also implemented expanded guidance on speed adjustment phraseology. FAA implemented the new phraseology in FAA Order 7110.65V.

April 10, 2014: FAA reinstated a Category 1 rating to the Republic of the Philippines following the agency's determination in March that the country met international safety standards set by ICAO. The country held a Category 1 rating until January 2008 when FAA downgraded it to a Category 2 because of its failure to meet certain safety criteria. (See March 7, 2014; June 27, 2014.)

April 14, 2014: FAA issued a final rule prohibiting flightcrew members in operations under Part 121 from using a personal wireless communications device or laptop computer for personal use while at their duty station on the flight deck while operating the aircraft.

April 14, 2014: FAA announced the nationwide installation of the automatic dependent surveillance-broadcast (ADS-B) radio network that supported a satellite-based surveillance system that tracks aircraft with the help of GPS. Of the 230 air traffic facilities across the country, 100 were using the system to separate traffic. FAA expects to be connected and operating at all 230 facilities by 2019. By January 1, 2020, all aircraft operating in controlled airspace will be required to be equipped with ADS-B Out avionics that broadcast the plane's location. (See June 9, 2013.)

April 15, 2014: American Airlines Group and American Eagle Airlines' management changed the name of American Eagle Airlines to Envoy Air Inc. to differentiate the airline from other regional airlines flying as American Eagle.

April 21, 2014: FAA announced that the first of six test sites chosen to perform UAS research was operational more than 2 ½ months ahead of the deadline specified for the program by Congress. FAA granted the North Dakota Department of Commerce team a certificate of waiver or authorization (COA) to begin using a Draganflyer X4ES small UAS at its Northern Plains Unmanned Aircraft Systems Test Site. The COA will be

effective for two years. The team planned to begin flight operations during the week of May 5. (See December 30, 2013; May 5, 2014.)

April 21, 2014: EquuSearch, a nonprofit organization that uses drones to search for missing persons, filed a petition for review with the U.S. Court of Appeals for the District of Columbia asserting that an FAA inspector had wrongly ordered it in a February 2014 email correspondence to cease and desist search and rescue operations using its UAS. On July 18, a three-judge panel for a federal appeals court dismissed the lawsuit. In its ruling, the court said it could not review the case because the email Texas EquuSearch had received did not represent FAA's final conclusion on the use of drones. Final rules on drone use were not expected until 2015.

April 23, 2014: Secretary of the Interior Sally Jewell and National Park Service Director Jonathan Jarvis announced the designation of the 1956 Grand Canyon TWA-United Airlines Aviation Accident Site, Grand Canyon National Park, Arizona, as a national historic landmark. The designation may be the first landmark to commemorate something that happened exclusively in the air. On June 30, 1956, a Trans World Airlines Super Constellation L-1049 and a United Airlines DC-7 collided in uncongested airspace 21,000 feet over the Grand Canyon in Arizona, killing all 128 people onboard the two flights. The tragedy spurred an unprecedented effort to modernize and increase safety in America's postwar airways, culminating in the establishment of the Federal Aviation Agency. (See June 30, 1956.)

April 24, 2014: FAA issued a *Federal Register* notice seeking public comment on a proposed policy change to protect airspace for emergency operations when an aircraft engine fails during departure. Aircraft operators must plan for the potential of an engine failure (one engine inoperative, or OEI) during take-off in accordance with 14 CFR Parts 25, 121, and 135. An engine failure could prevent the aircraft from climbing at the normal climb rate and structures near an airport could, under such circumstances, create a safety risk. The agency evaluated certain airport clear zones assuming both engines are operating. The proposal wants to consider a common departure path for all aircraft in the event of a power failure. The 60-day comment period on the new policy closed on June 24, 2014.

April 25, 2014: FAA issued a Special FAR (SFAR) prohibiting "certain flight operations" in a portion of the Simferopol FIR by all U.S. airlines and commercial operators, and, with few exceptions, those with a U.S. airman certificate and operators of U.S.-registered civil aircraft. This prohibited area includes sovereign Ukrainian airspace over the Crimean Peninsula and the associated Ukrainian territorial sea, as well as international airspace managed by Ukraine over the Black Sea and the Sea of Azov. The SFAR will remain in effect for one year. FAA said the rule was prompted by the Russian Federation's issuance of a NOTAM on March 28 "purporting to establish unilaterally a new FIR, effective April 3, 2014, in a significant portion of the Simferopol (UKFV) FIR," following Russia's annexation of Crimea. (See July 17, 2014.)

April 30, 2014: FAA issued a ground stop, stopping takeoffs at Southern California airports as a result of a problem with its en route automation modernization computer system at the Los Angeles ARTCC. The ground stop, lasting approximately one hour, led to the cancellation or delay of hundreds of flights. On May 5, both DOD and FAA said a U2 plane in the area created the computer problem. The ERAM system interpreted the U2 flight, flying at about 60,000 feet, as a more typical low-altitude operation, and began processing it for a route below 10,000 feet. The extensive number of routings that would have been required to de-conflict the aircraft with lower-altitude flights used a large amount of available memory and interrupted the computer's other flight-processing functions. FAA subsequently increased the amount of flight-processing memory on the computer system. (June 18, 2012.)

May 5, 2014: FAA announced the University of Alaska's UAS test site was the second of six to become operational. FAA granted the University of Alaska Fairbanks a COA authorizing flights by an Aeryon Scout small UAS for animal surveys at its Pan-Pacific UAS Test Range Complex in Fairbanks. The COA was effective for two years. The team began the wildlife flight operations on this date. (See April 21, 2014; June 9, 2014.)

May 9, 2014: FAA issued a special security NOTAM advising that due to terrorist activities and civil unrest in Yemen, there was a significant risk to civil flight operations in that country. FAA warned that "terrorists and insurgents in the region possess man-portable air defense systems (manpads) and indirect fire weapons, and have threatened and targeted both international civil aviation and airports in country, most notably, Sanaa International airport (OYSN). U.S. operators planning to fly in the territory and airspace of Yemen at or below Fl240 must obtain current threat information, comply with all applicable FAA regulations and directives, and provide advance notice to FAA" with specific flight details.

May 13, 2014: Smoke resulting from a burning electrical motor at the TRACON in Elgin, Illinois, resulted in an evacuation of the facility, causing more than 1,000 flights to be cancelled at O'Hare International Airport and Midway International Airport. FAA stopped flights in and out of the two airports for approximately four hours.

May 28, 2014: FAA approved extended operations for Boeing's 787 Dreamliner, allowing the plane to fly for up to 330 minutes (5.5 hours) away from an airport rather than the previous 180 minutes. FAA's approval allowed new routings, such as nonstop flights from Los Angeles to Melbourne. It also allowed the longer-range version of the 787, called the 787-9, to fly polar routes. (See March 19, 2014; December 2, 2014.)

May 28, 2014: FAA and Virgin Galactic signed an agreement that set the parameters for how routine space missions launched from Spaceport America would be integrated into the NAS. In particular, the agreement spelled out how FAA's Albuquerque ARTCC and the New Mexico Spaceport Authority would work with Virgin Galactic to safely provide clear airspace for SpaceShipTwo. (See January 10, 2014; October 31, 2014.)

June 9, 2014: FAA announced that the State of Nevada's UAS test site was ready to conduct research vital to integrating UAS into the nation's airspace. Nevada was the third of six congressionally mandated test sites to become operational. FAA granted the State of Nevada team a two-year COA to use an Insitu ScanEagle at the Desert Rock Airport located in Mercury, Nevada. Desert Rock Airport, owned and operated by the Department of Energy, is a private airport and not for general use. The ScanEagle would fly at or below 3,000 feet, monitored by a visual observer and mission commander. Nevada's research concentrated on UAS standards and operations as well as operator standards and certification requirements. The site's activities also included a concentrated look at how air traffic control procedures would evolve with the introduction of UAS into the civil environment and how those aircraft would integrate with NextGen. (See May 5, 2014; June 20, 2014.)

June 10, 2014: FAA gave approval for energy corporation BP and UAS manufacturer AeroVironment to fly an AeroVironment Puma AE for aerial surveys in Alaska – the first time FAA had authorized a commercial UAS operation over land. FAA issued a COA to survey BP pipelines, roads, and equipment at Prudhoe Bay, Arkansas, the largest U.S. oilfield. (See June 9, 2014; June 20, 2014.)

June 20, 2014: National Park Service Director Jonathan B. Jarvis signed a policy memorandum directing all national park superintendents to write rules barring the launching, landing, or operation of drones. Unmanned aircraft had already been prohibited at several national parks. Those parks initiated bans after noise and nuisance complaints from park visitors, an incident in which park wildlife were harassed, and concerns about the safety of park visitors. (See June 10, 2014; June 20, 2014.)

June 20, 2014: FAA granted the Texas A&M University–Corpus Christi team a two-year COA to use an AAAI RS-16 UAS. The RS-16 weighs approximately 85 pounds and has a wingspan of almost 13 feet. Texas A&M-Corpus Christi's research concentrated on multiple areas, including safety of operations and data gathering in authorized airspace, UAS airworthiness standards, command and control link technologies, human-factors issues for UAS control-station layout, and detect-and-avoid technologies. The site was the fourth of six to become operational. (See June 9, 2014; June 20, 2014; August 7, 2014.)

June 23, 2014: FAA published a notice in the *Federal Register* on its interpretation of the statutory special rules for model aircraft in FAA Modernization and Reform Act of 2012. The guidance comes after recent incidents involving the reckless use of unmanned model aircraft near airports and involving large crowds of people. FAA restated the law's definition of "model aircraft," including requirements that they not interfere with manned aircraft, be flown within sight of the operator, and be operated only for hobby or recreational purposes. The agency also explained that model aircraft operators flying within five miles of an airport must notify the airport operator and air traffic control tower. FAA may take enforcement action against model aircraft operators who operate their aircraft in a manner that endangers the safety of the NAS. In the notice, FAA explained that this enforcement authority is designed to protect users of the airspace as

well as people and property on the ground. FAA reaffirmed that the Act's model aircraft provisions apply only to hobby or recreation operations and do not authorize the use of model aircraft for commercial operations. The notice gives examples of hobby or recreation flights, as well as examples of operations that would not meet that definition. (See January 11, 2014.)

June 24, 2014: A strike by one of France's air traffic controller unions, UNSA-INCA, forced the cancellation of flights throughout Europe. The controllers union SNCTA did not join in the strike, which was scheduled to last through June 29. UNSA-INCA accused the French government of a lack of investment in ATC infrastructure and urged modernization of the system.

June 26, 2014: FAA certified the Instant Eye small unmanned aerial system, which will be used by an energy company to conduct research, development, and training to see if the system is practical for inspecting infrastructure such as pipelines, power lines, and insulators on towers. It was the first unmanned quadrotor to receive FAA certification and might be the lightest aircraft ever certified. Physical Sciences Incorporated developed Instant Eye with funding from the Combating Terrorism Technical Support Office (CTTSO), the Army Research Laboratory, and the Department of Defense's newly renamed Emerging Capabilities and Prototyping Office. (See June 20, 2014; August 7, 2014.)

June 27, 2014: FAA announced that the Republic of Serbia complied with ICAO safety standards and had been granted a Category 1 rating. The Republic of Serbia has held a Category 2 rating since 2006. A Category 2 rating means a country either lacks laws or regulations necessary to oversee air carriers in accordance with minimum international standards, or that its civil aviation authority is deficient in one or more areas, such as technical expertise, trained personnel, record-keeping, or inspection procedures. The Category 1 status was based on a March 2014 FAA assessment of the safety oversight provided by the Civil Aviation Directorate of the Republic of Serbia and an FAA verification of necessary corrective actions during a follow-up visit to the Republic of Serbia this month. With the International Aviation Safety Assessment (IASA) Category 1 rating, the Republic of Serbia's air carriers, which are able to secure the requisite FAA and DOT authority, can establish service to the U.S. and carry the code of U.S. carriers. (See April 10, 2014.)

July 2, 2014: NTSB denied a petition for reconsideration of its findings in the investigation of the 1996 TWA Flight 800 crash. The TWA 800 Project, which filed the petition, claimed that a detonation or high-velocity explosion could have caused the crash. NTSB said the crash was the result of an oxygen buildup in a partially empty fuel tank that caused an explosion that destroyed the plane in flight.

July 2, 2014: Transportation Secretary Anthony Foxx announced a final rule that expanded the Department of Transportation's requirement that air carriers report to the Department incidents involving the loss, injury, or death of an animal during air transport. The revised rule required, for the first time, all covered carriers file a calendar-

year report that includes the total number of animals transported in the calendar year as well as the total number of animals that were lost, injured, or died during air transport in the calendar year, if any. The rule becomes effective on January 1, 2015.

July 8, 2014: Embry-Riddle announced it had become the first school to receive approval from FAA for its airline transport pilot (ATP) certification training program. Under a rule, effective August 1, 2014, FAA will require all airline pilots to complete an ATP certification training program to qualify to take the ATP airman knowledge test, a prerequisite for employment as a commercial airline pilot in the U.S.

July 14, 2014: NASA transferred to FAA a new NextGen software technology, called terminal sequence and spacing, that allows air traffic controllers to maximize the benefits of performance based navigation (PBN) procedures on the approach to the runway. With the new technology, controllers see circles – called slot markers – on their display screens that indicate where an aircraft should be to fly an RNAV or RNP route. This software enables the use of PBN procedures to become more routine, requiring less vectoring, fewer level-offs of aircraft, and less communication between controllers and pilots. FAA, which received an initial technology transfer of Terminal Sequence and Spacing from NASA in September 2013, will make a full investment decision by the end of the year through its Joint Resources Council, a team of top agency executives that reviews major acquisitions and approves funding.

July 17, 2014: FAA issued a NOTAM prohibiting, until further notice, U.S. flight operations in the airspace over eastern Ukraine because of recent events and the potential for continued hazardous activities. A Malaysia Airlines Boeing 777 flying over the Ukraine had been shot down earlier in the day with a suspected surface-to-air missile, with the loss of all 290 people onboard. The restricted area included the entire Simferopol and Dnepropetrovsk FIRs. This action expanded a prohibition of U.S. flight operations issued by FAA in April over the Crimean region of Ukraine and adjacent areas of the Black Sea and the Sea of Azov. No scheduled U.S. airlines flew routes through this airspace. (See April 15, 2014; December 29, 2014.)

July 22, 2014: In a NOTAM issued at 12:15 EDT, FAA prohibited U.S. airlines from flying to or from Israel's Ben Gurion International Airport for a period of up to 24 hours. FAA issued the notice in response to a rocket strike which landed approximately one mile from the airport on the morning of July 22, 2014. The order, which affected 12 U.S. flights per day, was issued to reduce the chance of air travelers becoming casualties in the war between Israel and Hamas. FAA extended the ban for an additional 24 hours on July 23, but later cancelled the notice at 11:45 p.m. EDT.

July 24, 2014: An Air Algerie MD-83 en route from Burkina Faso to Algeria crashed in Mali. All 116 persons on board died in the crash.

August 4, 2014: DOT issued new standards to strengthen safety conditions for the shipment of lithium cells and batteries. These changes, some of which focus specifically on shipments by air, will better ensure that lithium cells and batteries are able to

withstand normal transportation conditions and are packaged to reduce the possibility of damage that could lead to an unsafe situation. The rule, which became final six months after DOT issued the notice of proposed rulemaking:

- Enhanced packaging and hazard communication requirements for lithium batteries transported by air.
- Replaced equivalent lithium content with watt-hours for lithium ion cells and batteries,
- Adopted separate shipping descriptions for lithium metal batteries and lithium ion batteries.
- Revised provisions for the transport of small and medium lithium cells and batteries including cells and batteries packed with, or contained in, equipment.
- Revised the requirements for the transport of lithium batteries for disposal or recycling.
- Harmonized the provisions for the transport of low production and prototype lithium cells and batteries with the ICAO Technical Instructions and the International Maritime Dangerous Goods Code.
- Adopted new provisions for the transport of damaged, defective, and recalled lithium batteries.

August 7, 2014: FAA announced that the Griffiss International Airport UAS test site in Rome, New York, was ready to conduct research vital to integrating UAS into the NAS. The site is the fifth of six test sites to become operational. In addition to providing invaluable information for the integration of UAS into the NAS, the research at the Griffiss test site will evaluate methods for scouting agricultural fields using different types of sensors, including visual, thermal, and multispectral equipment, which will benefit farmers regionally and nationally. The research will enhance current methods of monitoring crops and provide additional information for continuing field research efforts. (See June 26, 2014; August 13, 2014.)

August 8, 2014: FAA issued a new NOTAM, restricting U.S. operators from flying in the airspace above Iraq because of the hazardous situation created by the armed conflict. The new NOTAM superseded previous FAA guidance for this airspace.

August 12, 2014: FAA issued a no-fly zone over Ferguson, Missouri, to last until August 18, after tensions escalated in the town following the fatal shooting of an unarmed teen over the weekend. The agency restricted the airspace above the St. Louis suburb to provide a safe environment for law enforcement activities. Only operations under the direction of Missouri could be carried out. On August 18, FAA renewed the ban on aircraft from operating under 3,000 feet through August 25; however, FAA lifted the ban on August 22.

August 12, 2014: FAA issued a final rule allowing the agency to deny an application for a new repair station certificate if the applicant or certain associated key individuals had materially contributed to the circumstances that caused a previous repair station

certificate revocation action. The rule also added a new section prohibiting fraudulent or intentionally false entries or omissions of material facts in any application, record, or report made under the repair station rules, and provided that making the fraudulent or intentionally false entry or omitting or concealing the material fact was grounds for imposing a civil penalty and for suspending or revoking any certificate, approval, or authorization issued by FAA to the person who made or caused the entry or omission. (February 12, 2013.)

August 13, 2014: FAA announced that the Virginia Polytechnic Institute and State University's UAS test site program was ready to conduct research vital to integrating UAS into the nation's airspace. The site is the last of six nationwide to be declared operational. FAA granted Virginia Tech seven COAs for two years. They were for Smart Road Flyer, eSPAARO, Aeryon Sky Ranger, MANTRA2, Sig Rascal, and two AVID EDF-8 micro UAS. (See August 7, 2014; August 31, 2014.)

August 13, 2014: FAA issued a legal opinion ruling against peer-to-peer general aviation flight-sharing Internet-based operations that allowed private pilots to offer available space on flights they intended to take. AirPooler, Inc., had asked FAA for an interpretation of the regulations seeking to confirm that a pilot participating in the AirPooler service would not be receiving compensation as prohibited by FAR 61.113, and whether pilots participating in AirPooler were commercial operators and thus required to hold a certificate under Part 119. FAA stated that arranging for flights and passengers through the AirPooler website met all elements of common carriage and were not legal under Part 91. FAA noted that its position forbidding website-based ride-sharing operations was consistent with rulings it had made previously on nationwide initiatives involving expense-sharing flights. Ride-sharing programs were offered by both AirPooler and Flytenow, both of which argued that FAA has overstepped its bounds in the interpretation.

August 18, 2014: The World Health Organization urged countries affected by Ebola (Liberia, Sierra Leone, and Guinea) to conduct exit screening at international airports, seaports, and land crossings. The recommendation came from a task force that included health officials, ICAO, the International Air Transport Association representing 240 airlines, and Airports Council International. (See October 11, 2014.)

August 18, 2014: FAA issued a NOTAM restricting U.S. operators from flying in the Damascus Flight Information Region, which included all of Syria. This replaced the NOTAM then in place that strongly advised U.S. operators against flying in that airspace and required them to contact FAA before operating in that airspace. Because of the presence of anti-aircraft weapons among the extremist groups and ongoing fighting in various locations throughout Syria, there was a continuing significant potential threat to civil aviation operating in Syrian airspace. (See December 30, 2014.)

August 24, 2014: A magnitude 6.0 earthquake caused damage in Northern California. The quake, the largest in the Bay Area since the deadly Loma Prieta earthquake of 1989, struck three miles northwest of American Canyon. Most of the windows were blown out

of the air traffic control tower at the Napa County Airport. The structure was unusable and the Oakland ARTCC took over control of the airspace. FAA sent two temporary towers to the airport – one began operations on August 28 and the other was delivered on September 4. (See October 17, 1989.)

August 31, 2014: For the first time, FAA permitted the first UAS/drone technology demonstration at a national air show at Burke Lakefront Airport in Cleveland, Ohio. The demonstration featured 10 drones, both fixed-wing and multi-rotors flying simultaneously. (See August 13, 2014; September 10, 2014.)

September 8, 2014: FAA announced the selection of four unleaded fuels for further evaluation as part of the piston aviation fuels initiative (PAFI), a government and industry initiative designed to help the general aviation industry transition to an unleaded aviation gasoline. Shell and TOTAL, with one fuel each, and Swift Fuels, with two fuels, worked with FAA on Phase 1 testing, which began in fall 2014 and was scheduled to conclude in fall 2015. Based on the results of the Phase 1 laboratory and rig testing, FAA anticipated the selection of two or three fuels for Phase 2 engine and aircraft testing. That testing will generate standardized qualification and certification data for candidate fuels, along with property and performance data. FAA expects the testing process to conclude in 2018. (See June 10, 2013.)

September 10, 2014: FAA approved an emergency COA for the use of an UAS in the search for a missing woman near Dallas, Texas. The agency approves emergency COAs for natural disaster relief, search and rescue operations, and other urgent circumstances. Under the Emergency COA, Texas EquuSearch could operate its aircraft from September 11 until sunset September 15. FAA issued the COA to the National Institute of Standards and Technology (NIST) of Gaithersburg, Maryland, at the request of the Plano Police Department. NIST had a previously existing relationship with Texas EquuSearch, a non-profit organization that assists with locating missing individuals. (See August 31, 2014; September 25, 2014.)

September 15, 2014: FAA put into place a new certification process, detailed in a standard operating procedure document. Under the new process, FAA would permit complex projects to move forward even if the agency may have to push off certain aspects until resources become available. FAA would also weigh the availability of designees – company-provided resources approved to verify that projects are done per FAA's requirements – as it sequences projects. Under the guidelines, FAA resources will be allocated based on a project index. The highest weight would be given to a project's safety index (SI), which factors in overall safety, passenger safety, and fleet size. SI – and the entire sequencing system – was weighted so that airworthiness directives are top priority. Applications also were judged based on the number of "findings" they contain and how many must be handled by FAA staff versus organizational designees. (See December 11, 2013.)

September 16, 2014: FAA released the "Recommended Practices for Human Space Flight Occupant Safety" report, which provided a framework for industry to use in developing

consensus standards. The recommended safety practices were broadly written and primarily performance-based, stating a safety objective to be achieved, and leaving the design or operational solution up to the designer or operator. In developing the document, FAA's Office of Commercial Space Transportation reviewed existing government and private sector requirements and standards to tap into the wealth of information that has been accrued through 50 years of human space flight. FAA also consulted with a wide audience, including the Commercial Space Transportation Advisory Committee, the National Aeronautics and Space Administration, FAA's Civil Aerospace Medical Institute, and FAA's Center of Excellence for Commercial Space Transportation. (July 31, 2013.)

September 16, 2014: NASA awarded contracts to Boeing and SpaceX to ferry astronauts to the International Space Station. The two companies planned to begin ferrying astronauts in 2017. (See May 22, 2012; October 31, 2014.)

September 17, 2014: FAA approved a space launch site license for Midland International Airport in Texas. Renamed the Midland International Air & Space Port, the airport was the first primary commercial airport to gain FAA certification as a spaceport. It was the ninth commercial spaceport license issued by FAA. (See September 30, 2010.)

September 19, 2014: Fort Lauderdale-Hollywood International Airport opened a new runway. The project, which cost $826 million, gave the airport two parallel runways to accommodate more flights and reduce delays.

September 25, 2014: Secretary of Transportation Anthony Foxx announced FAA had granted regulatory exemptions to six aerial photo and video production companies in a first step to allowing the film and television industry to use UAS in the NAS. FAA determined that the UAS to be used in the proposed operations did not need an FAA-issued certificate of airworthiness based on a finding they did not pose a threat to national airspace users or national security. (See September 10, 2014; December 10, 2014.)

September 25, 2014: FAA evacuated its Chicago ARTCC in Aurora, Illinois, just before 6:00 a.m. local time, because of a fire reported in a basement telecommunications room. FAA managed traffic through adjacent high-altitude radar centers in Cleveland, Indianapolis, Kansas City, and Minneapolis. Those facilities worked with the TRACON facility in Elgin, Illinois, and other surrounding large TRACONs in areas such as South Bend, Indiana, Rockford and Moline Illinois, and Milwaukee, Wisconsin, to track flights on radar and manage departures and arrivals in Chicago ARTCC airspace. FAA re-routed overflights around the airspace. FAA brought in a clean-up crew at the ARTCC to begin drying out water-damaged equipment and to clean and sanitize the area after a fire and attempted suicide in the telecommunications room. After inspecting the damaged equipment, FAA decided to replace the central communications network in a different part of the same building to restore the system as quickly as possible. The agency restored services at the Chicago ARTCC on October 13. (See November 24, 2014.)

September 30, 2014: FAA issued an updated version of its AIP Program Handbook (Order 5100.38D). FAA's Office of Airports streamlined the handbook and replaced guidance with references to more appropriate source of guidance (such as in other orders or advisory circulars). This included deleting guidance on airport planning, capital planning, labor rates, and civil rights. The references appear as the basic publication number without any suffix. The intent is for the reader to use the latest version of the referenced publication. It also has been reorganized and revised to incorporate the Plain Language Act of 2010; to differentiate what is required by law and policy; and to incorporate program guidance letters issued prior to July 30, 2012.

October 8, 2014: DIGITALiBiz announced it had been awarded a prime contract to continue supporting FAA's Flight Standards Service (AFS) Flight Technologies and Procedures Division under a contract called Technical, Engineering, Administrative, and Programmatic Support. The scope of work under the contract, valued at nearly $45 million over the next five years, included: providing support in developing policies and procedures for improving flight safety and efficiency; assisting in developing regulations and policy recommendations governing instrument flight procedures and safety, capacity, and efficiency improvements based on advanced technology and innovative concepts; and supporting flight test or simulator test programs, simulator setup, pilot briefings, and observer responsibilities specifically for data collection in support of test plans.

October 8, 2014: Gulfstream Aerospace Corp. announced that its flagship Gulfstream G650ER has been certified by FAA. The G650ER can travel 7,500 nautical miles/13,890 kilometers at Mach 0.85 and 6,400 nm/11,853 km at Mach 0.90. This represented an increase of up to 500 nm/926 km over the range of the G650, which entered service in 2012. Like the G650, the G650ER has a maximum speed of Mach 0.925. Gulfstream expects to deliver the first fully outfitted G650ER business jets to customers ahead of the projected 2015 delivery date.

October 8, 2014: FAA and the NextGen Advisory Committee agreed on the NextGen Priorities Joint Implementation Plan that would accelerate the delivery of key NextGen initiatives over the next three years. FAA delivered the plan to Congress on October 17. According to the plan, FAA will institute new NextGen procedures through the use of multiple runway operations at 36 airports nationwide and deploy satellite-based navigation procedures known as performance based navigation (PBN) at three key metropolitan areas – Northern California, Atlanta, and Charlotte – to provide more direct flight paths; improve airport arrival rates; enhance controller productivity; increase safety and fuel savings; and reduce aviation's environmental impact. The plan also calls for FAA to increase surface operations data-sharing to increase predictability and provide actionable and measurable surface efficiency improvements at the nation's airports. In addition, FAA will prioritize its work on data communications services, which will upgrade communication between pilots, air traffic controllers, and airline operations centers from voice to digital. (See March 2010; October 17, 2014.)

October 11, 2014: The Center for Disease Control and Prevention (CDC) and the Department of Homeland Security began Ebola screening passengers from Guinea,

Liberia, and Sierra Leone at New York's John F. Kennedy International Airport. Enhanced screening began at Washington Dulles, Newark, Chicago O'Hare, and Atlanta International airports on October 14. CDC sent additional staff to each of the five airports. After passport review:

- Travelers from Guinea, Liberia, and Sierra Leone will be escorted by U.S. Customs and Border Protection (CBP) agents to an area of the airport set aside for screening.
- Trained CBP staff will observe them for signs of illness, ask them a series of health and exposure questions, and provide health information for Ebola as well as reminders to monitor themselves for symptoms. Trained medical staff will take their temperature with a non-contact thermometer.
- If the travelers have fever or symptoms, or the health questionnaire reveals possible Ebola exposure, they will be evaluated by a CDC quarantine station public health officer. The public health officer will again take a temperature reading and make a public health assessment. Travelers, who after this assessment, are determined to require further evaluation or monitoring will be referred to the appropriate public health authority.
- Travelers from these countries who have neither symptoms/fever nor a known history of exposure will receive health information for self-monitoring. (See August 18, 2014; October 11, 2014.)

October 11, 2014: Great Britain announced it planned to introduce measures at airports and rail terminals to screen passengers from countries affected by Ebola. Prime Minister David Cameron said that enhanced screening will initially be implemented at London's Heathrow and Gatwick airports and Eurostar terminals. Under the new screening procedures, travelers from Liberia, Sierra Leone, and Guinea will be questioned about their travel history and could be assessed by medical personnel. (See October 11, 2014; October 21, 2014.)

October 14, 2014: A new FAA rule went into effect that permitted informal conferences to occur before the agency took certain actions against certificate holders and/or other parties. The informal conference covered orders issued by the agency that did not involve certificate suspensions/revocations or civil penalties since the option was already available to such actions. The rule applied to orders of compliance, cease and desist orders, and orders of denial, among others. FAA regulations had already permitted affected parties to request a hearing or to reply in writing to an order. This rule added the informal conference as a third option that could open the possibility of a resolution of an issue or a narrowing of the issue. This could save money and time for both FAA and affected parties.

October 17, 2014: FAA released the "NextGen Priorities Joint Implementation Plan," to Congress. The plan summarized the high-level commitments agreed upon by FAA and the aviation community and provided a timeline of capability milestones and locations. The plan also identified four core priorities designed to cut down on wait time between

flights taking off and landing: optimizing airports with multiple runways; reconfiguring the navigation system from radar to GPS-based; increasing the efficiency of surface operations; and improving communications between aircraft and the ground through digital communication systems. (See October 8, 2014.)

October 20, 2014: American Airlines and US Airways completed combining their cargo operations into the new American Airlines Cargo. This was the first time that operating divisions of the two carriers had become fully combined since receiving approval for their merger. The two airlines expected to receive FAA approval to combine passenger operations in 2015. (See December 9, 2013.)

October 20, 2014: FAA type certificated Embraer Executive Jets' fly-by-wire Legacy 500.

October 21, 2014: The Obama Administration announced that all passengers arriving to the U.S. from Liberia, Sierra Leone, and Guinea must land at one of the five airports with enhanced Ebola screening: John F. Kennedy, Dulles, O'Hare, Newark, or Atlanta. On October 23, Center for Disease Control Director Tom Frieden announced that, starting October 27, passengers from the three countries most affected by Ebola would be required to report their temperature daily for 21 days and call a state hotline if they showed any symptoms of the illness. The program began in six states — New York, Pennsylvania, New Jersey, Georgia, Maryland, and Virginia – and later expanded to other states. (See October 11, 2014.)

October 24, 2014: Alan Eustace, a senior vice president at Google, parachuted from a balloon near the top of the stratosphere. He fell faster than the speed of sound and broke the world altitude record. A balloon filled with 35,000 cubic feet of helium had lifted Eustace to an altitude of more than 25 miles. Eustace, who wore a special space suit, cut himself loose from the balloon with the aid of a small explosive device. His descent took approximately 15 minutes at speeds which peaked at 822 miles per hour.

October 28, 2014: An unmanned Orbital Sciences Antares rocket carrying a Cygnus spacecraft loaded with cargo and supplies for the crew of the International Space Station exploded moments after liftoff at NASA's Wallops Flight Facility in Virginia. Orbital subsequently indicated that an issue in the first stage of the Antares rocket led to a loss of thrust, which led an operator to activate an onboard self-destruct system.

October 31, 2014: Virgin Galactic's SpaceShipTwo exploded in midair during a test flight, killing one test pilot and injuring another. Virgin Galactic was testing the craft, built by Scaled Composites, in preparation for commercial space tourism. (See May 28, 2014; January 10, 2014.)

November 3, 2014: FAA issued a final rule that broadened the coverage of its icing certification standards. The updated standards required U.S. manufacturers to show that transport airplanes could operate safely in freezing drizzle or freezing rain conditions that constitute the icing environment known as supercooled large drops. The standard also included ice crystal weather conditions. (See June 29, 2013.)

November 12, 2014: FAA type certificated the Airbus A350-900. The European Aviation Safety Agency approved the jetliner in September. The aircraft seats approximately 300 passengers and was designed to compete with Boeing Co.'s larger 787 Dreamliners and 777 jets.

November 13, 2014: In a rule effective this date, FAA eased the pilot pairing requirement for pilots over the age of 60 on international flights. Pilots over the age of 60 can now fly internationally as long as they have a second pilot to back them up, regardless of the other pilot's age. Previously the other pilot had to be under the age of 60. The rule does not apply to domestic flights. (See December 13, 2007.)

November 18, 2014: NTSB affirmed the FAA's position that the regulation prohibiting operation of an aircraft in a careless or reckless manner applied to unmanned aircraft. FAA had appealed an earlier decision by an NTSB Administrative Law Judge in Huerta v. Pirker after the judge dismissed the Agency's order requiring Raphael Pirker to pay a civil penalty of $10,000 for operating an unmanned aircraft in a careless or reckless manner at the University of Virginia in October 2011. Before FAA could impose a fine, an administrative law judge would have to make a factual determination on the careless and reckless nature of the UAS operation. (See March 7, 2014.)

November 21, 2014: The Department of Transportation announced that a new air service agreement had been reached between the United States and Mexico that will expand opportunities for passenger and cargo carriers and strengthen the economic ties between the two countries. The new agreement included unlimited market access for U.S. and Mexican air carriers, improved intermodal rights, pricing flexibility, and other important commercial rights. In addition, cargo airlines, for the first time, would have expanded opportunities to provide service to new destinations. The agreement would go into force on January 1, 2016.

November 24, 2014: In the aftermath of the Chicago ARTCC fire, FAA announced a series of changes that would lead to faster disaster recovery and more secure facilities and equipment. FAA's three-stage plan included: making radar, voice radios, flight planning data and weather and aeronautical information more rapidly available to support operations in a new configuration; reducing or eliminating the manual nature of operations by recreating specific sectors and services of the off-line facility at surrounding facilities; and enhancing NextGen capabilities to make services available even more quickly if a facility has a catastrophic loss. (See September 25, 2014.)

November 25, 2014: Because of law enforcement reports of gunshots fired into the air, FAA activated a temporary flight restriction (TFR) over Ferguson, Missouri. For safety reasons, only law enforcement aircraft were permitted to fly through the area. The TFR was three miles in diameter, up to 3,000 feet above sea level. It was in effect from 10:15 p.m. Central on November 24, to 4:15 a.m. Central on November 25.

November 2014: Midway Airport became the first airport to install a new type of arrestor bed to stop aircraft in the event of a runway overrun. Made by Runway Safe, the bed was made of recycled glass, formed into lightweight glass rocks. Until Runway Safe

developed its product, Engineered Arresting Systems was the only FAA-approved manufacturer of arresting-bed technology. (See October 1, 2010.)

December 2, 2014: Boeing announced it had completed the world's first flight using green diesel, a sustainable biofuel widely available and used in ground transportation. The company powered its ecoDemonstrator 787 flight test airplane with a blend of 15 percent green diesel and 85 percent petroleum jet fuel in the left engine. (See December 1, 2011; May 28, 2014.)

December 3, 2014: FAA issued a final rule in the *Federal Register*, effective January 20, 2015, that increased the number of hours pilots may log toward an instrument rating using approved aviation training devices. The rule raised the limit to 20 hours in advanced training devices versus 10 hours under the old rules. Under the rules, Part 61 students could log up to 20 hours of instrument time in an approved advanced aviation training device (AATD) or up to 10 hours of time in an approved basic aviation training device (BATD). Part 141 students would be allowed to accomplish up to 40 percent of their total flight training hour requirements in an aviation training device. In addition, students would no longer be required to wear view-limiting devices while training in AATDs. (See November 5, 2013.)

December 10, 2014: FAA granted five regulatory exemptions for UAS operations to four companies representing several industries that showed promise to benefit from UAS technology. Trimble Navigation Limited, VDOS Global, LLC, Clayco, Inc., and Woolpert, Inc. (two exemptions) received exemptions to fly UAS to perform operations for aerial surveying, construction site monitoring, and oil rig flare stack inspections. FAA earlier granted exemptions to seven film and video production companies. (See September 25, 2014.)

December 28, 2014: AirAsia Flight QZ8501, an Airbus A320-200 flying from Surabaya to Singapore, disappeared in Indonesian airspace with 162 people on board. Indonesian authorities leading the rescue efforts believed the plane went down in the Java Sea between the islands of Belitung and Borneo.

December 29, 2014: FAA amended Special Federal Aviation Regulation (SFAR) No. 113, ‘‘Prohibition Against Certain Flights in the Simferopol (UKFV) Flight Information Region (FIR),’’ which prohibited certain flight operations in a portion of the Simferopol (UKFV) FIR by all U.S. air carriers, U.S. commercial operators, persons exercising the privileges of a U.S. airman certificate, except when such persons are operating a U.S.-registered aircraft for a foreign air carrier, and operators of U.S.-registered civil aircraft, except when such operators are foreign air carriers. The action expanded the area in which flight operations by persons subject to SFAR No. 113 were prohibited, to include all of the Simferopol (UKFV) FIR, as well as the entire Dnipropetrovsk (UKDV) FIR. (See July 17, 2014.)

December 30, 2014: FAA expanded its prohibition of certain flight operations in the Damascus (OSTT) FIR by all U.S. air carriers; U.S. commercial operators; persons exercising the privileges of a U.S. airman certificate, except when such persons are operating a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-

registered civil aircraft, except when such operators are foreign air carriers. The FAA previously prohibited such flight operations in NOTAM 4/4936, issued on August 18, 2014, which would have remained in effect until December 31, 2014. SFAR adopted the prohibitions then in effect via the NOTAM and requires compliance with the prohibitions for 2 additional years unless FAA determined it was necessary to amend or rescind the rule based on the situation in the region. (See August 18, 2014.)

Calendar year 2014: According to Ascend, a Fligthglobal advisory service, 2014 was the best year ever for airline safety. Ascend's director of air safety and insurance, Paul Hayes, stated the global airline fatal accident rate in 2014 was one fatal accident per 2.38 million flights. On this basis 2014 was, narrowly, the safest year ever. The figures excluded the loss of Malaysia flight MH17 on the grounds that it was shot down by a missile and was considered a war risk loss, not an accident. Although doubts exist about the status of missing Malaysia flight MH370, that incident was included in the fatal accident rate.