2013-2021 Update to *FAA Historical Chronology: Civil Aviation and the Federal Government, 1926-1996* (Washington, DC: Federal Aviation Administration, 1998)

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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 7. (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's Logan airport 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 plans to conduct a comprehensive review of the Boeing 787 critical systems, including 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 the aircraft operator or Boeing 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 ATO would no longer support its own communications office, and FAA's office of communications would

handle ATO needs. As part of the reorganization, he divided the Eastern, Central, and Western service areas into northern and southern regions, with each of those six new areas reporting to a vice president (VP) of the newly formed AJT organization. The AJT would oversee contract towers, 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 he would resign his 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 December 1, 2011; December 2, 2014.)

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 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 as a result of mandatory sequestration, the majority of 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 1, 2013: Saab Sensis Corporation announced it had partnered with Leesburg Executive Airport in Leesburg, VA, to demonstrate and evaluate remote tower technologies at the airport. The Virginia Department of Aviation and FAA were advisory partners for the project. For the demonstration, the partnership deployed a number of Saab technologies at the airport that provided data directly to a remote tower center also located at the airport. (See November 23, 2016.)

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 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 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 flew, the kind of aircraft they used, and the prices they charged. 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 (PANYNJ) 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 to allow the 787 to return to service with the battery system modifications. FAA also required airlines that operated 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 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, FAA experienced staffing challenges at the New York and Los Angeles ARTCCs and at the Dallas-Ft. Worth and Las Vegas TRACONs. Controllers spaced planes farther apart so they could manage traffic with smaller staffs. This resulted in delays at airports including Dallas, Las Vegas and Los Angeles. 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 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 on April 25, furlough-related staffing reductions at the New York, Washington, Cleveland, Jacksonville, and Los Angeles ARTCCs, 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 lifting 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; February 14, 2012.)

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 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 Barrack 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 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. Under the draft policy, all projects would be acted on when 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 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 the recently enacted Reducing Flight Delays Act of 2013 would allow 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. 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; October 1, 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 Airlines, 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 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) was a crosswind-based system that enabled 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 departed the downwind runway and any aircraft followed departing on the upwind runway. WTMD required 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 used 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 were sufficiently strong to allow the reduced separation operations. WTMD notified air traffic control 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 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 flew, the kind of aircraft they used, and the prices they charged. 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-square-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 businesses. 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 percent cuts from the projection provided agencies 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 wildlife 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 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 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 to help the general aviation industry transition to an unleaded fuel. 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 FAA, which noted the currently unavailability of an 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 ARTCCs. 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 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's safety and technical training's quality assurance team. The data helped FAA validate and classify events, and then take steps to prevent issues 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 the FBI had used small, unarmed and unmanned drones to conduct surveillance. The FBI released a statement following Mueller's testimony explaining the use of drones 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 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 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 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 requirements enabled a flight crew 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 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 allow unrestricted air service by the airlines of both countries between and beyond the other's territory, eliminating

restrictions on how often the carriers flew, the kind of aircraft they used, and the prices they charged. This became the 110th such agreement the U.S. signed with other nations. (See May 28, 2013; July 14, 2015.)

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 percent 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 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 unmanned aircraft systems (UAS), a milestone leading 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 advising 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; October 15, 2020.)

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, 2014.)

August 13, 2013: The U.S. Department of Justice (DOJ) filed a lawsuit claiming 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 was based, and US Airways' home state of Arizona. In a review of the proposed merger, Justice's lawsuit 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

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 ½-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 (See March 30 2020.);
- 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 FAA to limit the dissemination of their aircraft situation display to industry data. Under the new policy, owners had to document a legitimate security concern to justify the data-blocking. The FAA notice spelled out the exact information needed 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 ARTCCs. 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 air traffic control facility management, took effect. Version three of the guide included a new paragraph requiring 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 in the 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. FAA and OSHA planned to develop procedures to ensure 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. (See November 30, 2012.)

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 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; June 29, 2017.)

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 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 in NextGen. FAA's COE program was a cost-sharing research partnership between academia, industry and the federal government. 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; December 9, 2021.)

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 by January 14, 2014, to prevent an electrical short and possible ignition source. The AD affected about 4,000 airplanes at a total cost of approximately $325,720.

September 18, 2013: Richard Stockton College of New Jersey announced the college's board had authorized a three-year agreement making the aviation research park being planned near FAA's 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: FAA's national enterprise management center moved into its new building in Salt Lake City. 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 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 FAA in June 2005. With the Category 1 rating, Ukraine's air carriers could add flights and service to the United States and carry the code of U.S. carriers. (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 airline passengers should be allowed to use their personal electronic devices to read, play games, or enjoy movies and music, even when planes were on the ground or flying below 10,000 feet. The panel said restrictions should remain on sending text messages, browsing the Web or checking e-mail after the plane's doors have been closed. Passengers should 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, would still be prohibited throughout the flight. (See August 27, 2012; October 31, 2013.)

September 30, 2013: General Dynamics announced 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 laboratory at the William J. Hughes Technical Center. FAA awarded the task order under its system engineering 2020 program, 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 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, the 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 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, the proposal would codify the exemption authority granted to indirect air carriers to engage in the sale of air transportation related to air ambulance services. Finally, it would make clear and codify certain air services performed under contract with the Federal Government are in common carriage. The public had until November 29, 2013, to provide comments.

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. (See November 22, 2013.)

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. (See May 9, 2013; See December 22, 2018.)

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 could be hand-launched or launched from a tube. The vehicle flew autonomously while the operator directed the route using a touchpad display. Only four hours of training were required before an operator could 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 it planned to cease operations on October 26. MetJet offered flights from Austin Strauble International Airport in Ashwaubenon, WI, to Orlando and Fort Meyers, FL. MetJet'ss contracted airline, Sun Country, did not cease 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. (See November 20, 2005; October 15, 2015.)

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 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 the 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 included 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 grants funded the project.

October 22, 2013: NOAA's office of coast survey announced 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 had the job of creating and maintaining the charts, beginning in 1999, FAA became responsible for printing them. FAA informed NOAA earlier in October 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. (See October 1, 2013.)

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 would pay the United States $475,000; the remainder covered 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 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 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 agency 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 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 would 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 was 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 had to 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 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 two manual, folding wheelchairs could 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 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 was one of several rulemakings required by the act, including the requirements to prevent pilot fatigue that was finalized in December 2011, and the increased qualification requirements for first officers who fly U.S. passenger and cargo planes that was 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 plan outlined FAA's approach to ensuring widespread UAS use was 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 agreed to 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 continued 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 could fly four passengers and two crew members non-stop from Los Angeles to Toronto and Mumbai to Bangkok. Additionally, it was able to handle a range close to 1,950 nautical miles with eight passengers.

November 19, 2013: In an editorial published in 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 to 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 FAA had put the policy on hold, while it worked with aviation stakeholder groups to provide clear guidance on the agency's plan and FAA

planned to pursue a new approach to help physicians diagnose sleep disorders. (See January 23, 2015.)

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. 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 in 2014 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 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 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 might 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, 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 operated Boeing 787s and 747s with GE engines steer clear of thunderstorms with clouds more than 60 miles across. FAA reported it knew of nine instances where ice was sucked into an engine causing it to lose power and 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, included 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 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 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 engine manufacturers to continue the testing and refinement program as the approvals process progressed. (See September 13, 2013; September 8, 2014.)

December 4, 2013: Pam Underwood, FAA deputy division manager at Kennedy Space Center, announced NASA astronauts would 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 would fly 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 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 used 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 used a category of navigation known as RNP-4. The 50/50 standard was for plane pairings that used 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 would cover four areas: how FAA certification compared to foreign counterparts; general lessons learned; challenges U.S. manufacturers had with foreign certification; and how FAA addressed 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 UAS research and test sites around the country. These congressionally-mandated test sites would conduct critical research into the certification and operational requirements necessary to safely integrate UAS into the national airspace over the next several years. The 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 had to have at least 10 hours of rest between shifts, of which 8 hours had to involve uninterrupted sleep. In addition, pilots were 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; December 13, 2018.)

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 (NAS). (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 met quarterly to assess and advise FAA on carrying out its aviation safety and air travel efficiency mission. Panel members served three-year terms in a volunteer capacity and retained 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 Barrack 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 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, the new 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 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 signified India's civil aviation safety oversight regime did not comply with ICAO safety standards. It also prohibited any new Indian carriers from starting service to the U.S. and opened up India's aircraft to additional inspections from FAA. (See September 20, 2013; April 8, 2015.)

January 2014: Colorado banned the use of drones in hunting; 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 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 4, 2015.)

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, could 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 occurred, especially during takeoff and landing. An angle of attack represents the angle between a plane's wing and the oncoming air. If the angle of attack became too great, the wing could lose lift. If a pilot failed 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 (ATC) trainees. Candidates had to have a high school diploma or three years work experience. FAA's collegiate training initiative (CTI) program graduates had to reapply under the new program. 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 telecon 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 was 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 2013 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 Santa Monica had 12

years under the Quiet Title Act to sue to gain unconditional ownership, but that time had 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 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 was required to operate the airport unless the agency granted 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 would 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 requiring 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 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 adopting more stringent noise certification standards for helicopters 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 would be designated as a Stage 3 helicopter. This rule adopted the same noise certification standards for helicopters that existed 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 unmanned aircraft system. FAA proposed a $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 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 was no valid rule in the federal aviation regulations covering model aircraft flight operations. While FAA argued model aircraft by definition were aircraft, NTSB said 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 to the full NTSB, which had the effect of staying the decision until the full NTSB ruled. The agency expressed concerned that the decision could impact the safe operation of the national airspace system and the safety of people and property on the ground. On April 7, FAA filed its administrator's appeal brief with NTSB. (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 Civil Aviation Organization (ICAO) safety standards. The country previously did not hold an international aviation safety assessment rating and no carrier of Azerbaijan had provided service to the U.S. According to a 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 the aircraft soundly designed, met its intended safety level, and 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 were fully aware of their responsibilities; establish a way to ensure suppliers identified realistic program risks; and required 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 was 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 consider all available information. As a result, 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 remained in the national

plan of integrated airport systems (NPIAS) plan as unclassified. FAA planned to 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 operated a U.S.-registered aircraft for a foreign air carrier. FAA believed the extension of the expiration date to March 21, 2015, necessary to prevent a potential hazard to persons and aircraft engaged in such flight operations. (See March 20, 2015.)

March 21, 2014: FAA Administrator Michael Huerta announced 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 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 the purchase of 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 the purchase of 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 required navigation (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, TX. 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 Justice Ruth 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 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 and flight standards personnel, National Air Traffic Controllers Association (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 the country met ICAO safety standards. 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 expected to be connected and operating at all 230 facilities by 2019. By January 1, 2020, all aircraft operating in controlled airspace were required to be equipped with ADS-B Out avionics that broadcast the plane’s location by January 1, 2020. (See June 9, 2013; August 27, 2015.)

April 15, 2014: American Airlines Group and AEA 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 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 was 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 used drones to search for missing persons, filed a petition for review with the U.S. Court of Appeals for the District of Columbia asserting a FAA inspector had wrongly ordered it in a February 2014 email correspondence to cease and desist search and rescue operations using its UASs. 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, AZ, as a national historic landmark. The designation was 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 failed during departure. Aircraft operators had to 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 were operating. The proposal wanted 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 federal aviation regulation (SAFR) prohibiting "certain flight operations" in a portion of the Simferopol Flight Information Region (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 included 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 would remain in effect for one year. FAA said the rule was prompted by the Russian Federation's issuance of a notice to airmen (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 (ERAM) computer system at the Los Angeles air route traffic control center (ARTCC). The ground stop, lasting approximately one hour, led to the cancellation or delay of hundreds of flights. On May 5, both the Department of Defense (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. (See June 18, 2012; April 30, 2015.)

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 certificate of waiver or authorization 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 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. U.S. operators planning to fly in the territory and airspace of Yemen at or below Fl240 had to 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 terminal radar control (TRACON) facility in Elgin, IL, 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 setting 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 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 certificate of waiver or authorization to use an Insitu ScanEagle at the Desert Rock Airport located in Mercury, NV. Desert Rock Airport, owned and operated by the Department of Energy, was 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 unmanned aircraft systems 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 certificate of waiver or authorization to survey BP pipelines, roads, and equipment at Prudhoe Bay, AK, the largest oilfield in the United States. (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; October 5, 2017.)

June 20, 2014: FAA granted the Texas A&M University–Corpus Christi team a two-year certificate of waiver or authorization to use an AAAI RS-16 UAS. The RS-16 weighed approximately 85 pounds and had 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 the FAA Modernization and Reform Act of 2012. The guidance came after 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 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 model aircraft operators flying within five miles of an airport must notify the airport operator and air traffic control tower. FAA could take enforcement action against model aircraft operators who operated their aircraft in a manner that endangered NAS safety. In the notice, FAA explained its enforcement authority was 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 applied only to hobby or recreation operations and did not authorize the use of model aircraft for commercial operations. The notice provided 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. The striking union accused the French government of a lack of investment in air traffic control infrastructure and urged modernization of the system.

June 26, 2014: FAA certified the Instant Eye small UAS, which was used by an energy company to conduct research, development, and training to see if the system was practical for inspecting infrastructure such as pipelines, power lines, and insulators on towers. It was the first unmanned quadrotor to receive FAA certification. Physical Sciences Incorporated developed Instant Eye with funding from the combating terrorism technical support office, the Army research laboratory, and the Defense Department's newly renamed emerging capabilities and prototyping office. (See June 20, 2014; August 7, 2014.)

June 27, 2014: FAA announced the Republic of Serbia complied with ICAO safety standards and had been granted a Category 1 rating. The Republic of Serbia had held a Category 2 rating since 2006. A Category 2 rating meant a country either lacked laws or regulations necessary to oversee air carriers in accordance with minimum international standards, or that its civil aviation authority was 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-on visit to the Republic of Serbia this month. With the Category 1 rating, the Republic of Serbia's air carriers, which were able to secure the requisite FAA and DOT authority, could establish service to the United States 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 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 on explosion that destroyed the plane in flight.

July 2, 2014: Transportation Secretary Anthony Foxx announced a final rule that expanded the Department'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 included 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 would become 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 required 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 a RNAV or required navigation performance route. The software enabled 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 the terminal sequence and spacing from NASA in September 2013, planned to make a full investment decision by the end of the year.

July 17, 2014: FAA issued a notice to airman 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 flight information regions (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; October 13, 2015; October 18, 2018.)

July 22, 2014: In a notice to airmen 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. ETD.

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. (See July 25, 2013; October 8, 2015.)

August 7, 2014: FAA announced the Griffiss International Airport UAS test site in Rome, NY, was ready to conduct research vital to integrating UAS into the NAS. The site was 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 planned to evaluate methods for scouting agricultural fields using different types of sensors, including visual, thermal, and multispectral equipment, which would benefit farmers regionally and nationally. The research would 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 notice to airmen restricting U.S. operators from flying in the airspace above Iraq because of the hazardous situation created by an armed conflict. The new NOTAM superseded previous FAA guidance for this airspace.

August 12, 2014: FAA issued a no-fly zone over Ferguson, MO, to last until August 18, after tensions escalated in the town following the fatal shooting of an unarmed teen. 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 the state 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 was the last of six nationwide to be declared operational. FAA granted Virginia Tech seven certificates of waiver or authorization for two years. They were for: Smart Road Flyer, eSPAARO, Aeryon Sky Ranger, MANTRA2, Sig Rascal, and two AVID EDF-8 micro UASs. (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 seats on flights they intended to take. AirPooler, Inc., had asked FAA for an interpretation of the regulations seeking to confirm 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 arranging for flights and passengers through the AirPooler website met all elements of common carriage and were not legal under Part 91. FAA noted 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 FAA had 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, the International Civil Aviation Organization; the International Air Transport Association representing 240 airlines; and Airports Council International. (See October 11, 2014.)

August 18, 2014: FAA issued a notice to airmen restricting U.S. operators from flying in the Damascus flight information region, which included all of Syria. It 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; December 10, 2018.)

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 an UAS/drone technology demonstration at a national air show at Burke Lakefront Airport in Cleveland, OH. 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 the fall of 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 tests would generate standardized qualification and certification data for candidate fuels, along with property and performance data. FAA expected the testing process to conclude in 2018. (See June 10, 2013.)

September 10, 2014: FAA approved an emergency certificate of waiver or authorization for the use of an UAS in the search for a missing woman near Dallas, TX. The agency approved emergency certificates 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, MD, at the request of the Plano Police Department. NIST had a previously existing relationship with Texas EquuSearch, a non-profit organization that assisted 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 had to limit certain aspects until resources became available. FAA would weigh the availability of designees – company-provided resources approved to verify that projects were done per FAA's requirements – as it sequenced projects. Under the guidelines, FAA resources would be allocated based on a project index. The highest weight would be given to a project's safety index (SI), which factored in overall safety, passenger safety, and fleet size. SI – and the entire sequencing system – was weighted so that airworthiness directives had top priority. Applications also were judged based on the number of "findings" they contain and how

many had to be handled by FAA staff vs. 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, NASA, 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; January 17, 2016.)

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; June 30, 2015.)

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 unmanned aircraft systems 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 the Chicago ARTCC in Aurora, IL, 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, IL, and other surrounding large TRACONs in areas such as South Bend, IN, Rockford and Moline IL, and Milwaukee, WI, 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 appeared as the basic publication number without any suffix. The intent was for the reader to use the latest version of the referenced publication. It also had been reorganized and revised to incorporate the Plain Language Act of 2010; to differentiate what was 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 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 its flagship Gulfstream G650ER had been certified by FAA. The G650ER could 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 had a maximum speed of Mach 0.925. Gulfstream expected 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 would 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 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 a reduce aviation's environmental impact. The plan also called 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 planned to prioritize its work on data communications services, which would

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 were escorted by U.S. Customs and Border Protection (CPB) agents to an area of the airport set aside for screening.
- Trained CBP staff would 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 took their temperature with a non-contact thermometer.
- If the travelers had fever, symptoms, or the health questionnaire revealed possible Ebola exposure, they would be evaluated by a CDC quarantine station public health officer. The public health officer would again take a temperature reading and make a public health assessment. Travelers, who after this assessment, were determined to require further evaluation or monitoring were referred to the appropriate public health authority.
- Travelers from these countries who had neither symptoms/fever nor a known history of exposure received 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 enhanced screening would 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 would 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 permitting 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. (See June 26, 2015.)

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 the 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; April 8, 2015.)

October 20, 2014: FAA type certificated Embraer Executive Jets' fly-by-wire Legacy 500.

October 21, 2014: The Obama Administration announced 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 VA. Orbital subsequently indicated 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; June 26, 2015.)

November 3, 2014: FAA issued a final rule broadening the coverage of its icing certification standards. The updated standards required U.S. manufacturers to show 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 seated 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 could now fly internationally as long as they had 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 did not apply to domestic flights. (See December 13, 2007; June 12, 2015.)

November 18, 2014: NTSB affirmed FAA's position the regulation prohibiting operation of an aircraft in a careless or reckless manner applied to unmanned aircraft. FAA had appealed an earlier decision by a 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 a new air service agreement had been reached between the United States and Mexico that expanded 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 had 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 instruction over Ferguson, MO. For safety reasons, only law enforcement aircraft were permitted to fly through the area. The restricted area

was three miles in diameter, up to 3,000 feet above sea level. It remained 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 February 13, 2013; October 23, 2015.)

December 3, 2014: FAA issued a final rule in the *Federal Register*, effective January 20, 2015, increasing the number of hours a pilot could 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; February 15, 2015.)

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 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 operated a U.S.-registered aircraft for a foreign air carrier, and operators of U.S.-registered civil aircraft, except when such operators were foreign air carriers. The action expanded the area in which flight operations by people 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; October 22, 2015.)

December 30, 2014: FAA expanded its prohibition of certain flight operations in the Damascus 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 operated a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except when such operators were foreign air carriers. 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. The SFAR adopted the prohibitions then in effect via the NOTAM, and required 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; August 28, 2017.)

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.

2015

January 5, 2015: The Department of Transportation issued a final rule to implement Section 403 of the FAA Modernization and Reform Act of 2012 regarding the carriage of musical instruments as carry-on baggage or checked baggage on commercial passenger flights operated by air carriers. Effective March 6, the rule required carriers to allow a passenger to carry into the cabin and stow a small musical instrument, such as violin or a guitar, in a suitable baggage compartment (for example, the overhead bin or under the seats) in accordance with FAA safety regulations. The rule also encouraged carriers to consider modifying their programs to allow the stowage of large musical instruments in passenger seats, provided all safety requirements were met.

January 7, 2015: FAA issued a final rule requiring most U.S. commercial airlines to have safety management systems (SMS) in place by 2018. The rule built on the programs many airlines already used to identify and reduce aviation risk. Airlines had to submit their implementation plans to FAA within six months. The rule also required a single accountable executive to oversee SMS. A SMS defined what was expected rather than how the requirement had to be met. This allowed each air carrier to design an SMS to match the size, complexity, and business model of its organization. (See January 30, 2012.)

January 8, 2015: FAA issued a notice of proposed rulemaking to replace the orders limiting scheduled operations at John F. Kennedy International Airport (JFK), Newark

Liberty International Airport (EWR), and LaGuardia Airport (LGA). This proposal was intended to provide a longer-term and comprehensive approach to slot management at JFK, EWR, and LGA. FAA proposed to maintain the limits on scheduled and unscheduled operations in place under the previous orders, limit unscheduled operations at JFK and EWR, and require the use of an allocated slot 80 percent of the time for the same flight or series of flights to retain historic precedence. FAA also proposed five alternatives for a secondary market that would allow carriers to buy, sell, lease, and trade slots. (See May 14, 2009; November 10, 2015.)

January 23, 2015: FAA issued revised guidance to address sleep apnea, a disorder that might result in daytime sleepiness, impaired alertness, mood changes, and fatigue. The new guidance did not rely on a pilot's body mass index (BMI) to diagnose obstructive sleep apnea (OSA). Rather, the new policy stated, "The risk of OSA will be determined by an integrated assessment of history, symptoms and physical/clinical findings." It incorporated guidance from the American Academy of Sleep Medicine in determining a pilot's airworthiness. Pilots determined to be at significant risk for OSA should receive a regular medical certificate and undergo a sleep apnea evaluation. The evaluation could be performed by any physician, including an aviation medical examiner (AME), and did not require a sleep study unless the physician believed one was needed. Pilots had 90 days to complete the evaluation and forward the results to FAA's aerospace medical certification division, the regional flight surgeon's office, or the AME. (See November 19, 2013.)

January 26, 2015: The Wichita Airport Authority renamed Wichita Mid-Continent Airport the Wichita Dwight D. Eisenhower National Airport.

February 4, 2015: FAA issued a final rule removing the prohibition against certain flights within the territory and airspace of Ethiopia contained in SFAR No. 887. (See January 2014.)

February 6, 2015: In a letter to United Continental Holdings, Inc., FAA informed the company it would increase oversight of the airline because of concerns over recurring safety violations. United provided FAA a plan in March on how it would remedy concerns involving pilot training and scheduling.

February 15, 2015: FAA proposed a framework of regulations that would allow routine use of certain small UAS in the national airspace system while maintaining flexibility to accommodate future technological innovations. The proposal covered safety rules for small UAS (under 55 pounds) conducting non-recreational operations. The rule would limit flights to daylight and visual-line-of-sight operations. It also addressed height restrictions, operator certification, optional use of a visual observer, aircraft registration and marking, and operational limits. The proposed rule included extensive discussion of the possibility of an additional, more flexible framework for "micro" UAS under 4.4 pounds. FAA asked the public to comment on this possible classification to determine whether it should include the option as part of a final rule. FAA also asked for comment about how the agency could further leverage the UAS test site program and an upcoming

UAS Center of Excellence to further spur innovation at “innovation zones.” (See December 10, 2014; April 10, 2015; May 19, 2017.)

February 25, 2015: FAA dedicated a new $16.4 million, state-of-the-art airport traffic control tower at Fort Lauderdale Executive Airport. The new facility’s 117-foot tall airport traffic control tower was topped by a 525-square foot tower cab. A 7,200-square foot, single-story base building housed training rooms, administrative offices, and equipment rooms. FAA began working from the new tower on November 4, 2014.

March 4, 2015: FAA issued a final rule amending the maintenance regulations for domestic, flag, and supplemental operations, and for commuter and on-demand operations for aircraft type certificated with a passenger seating configuration of 10 seats or more (excluding any pilot seat). The new rules required affected air carriers and operators to develop policies, procedures, methods, and instructions for performing contract maintenance acceptable to FAA; the rules also mandated the new policies, procedures, methods, and instructions be included in the air carrier and operator maintenance manuals. The rules required the air carriers and operators to provide FAA with a list of their maintenance personnel.

March 20, 2015: FAA extended the prohibition of flight operations within the Tripoli FIR by all: U.S. air carriers; U.S. commercial operators; persons exercising the privileges of an airman certificate issued by FAA, except when such persons operated a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except operators of such aircraft that were foreign air carriers. The extension of the expiration date was necessary to address a potential hazard to persons and aircraft engaged in such flight operations. Additionally, FAA made clear operations by sub-contractors under a U.S. Government department, agency, or instrumentality's contract, grant, or cooperative agreement might be included in an approval request. The action extended the prohibition to March 20, 2017. (See March 21, 2014; March 15, 2017.)

March 31, 2015. A pilot program that allowed people to use an automated complaint system for reporting helicopter noise to FAA began operating. FAA hoped the collected data collected would help “identify patterns and trends in helicopter operations, improve an understanding of community reaction to helicopter noise, and inform future efforts to develop and implement noise abatement measures.” FAA contracted with Brüeil & Kjaer to operate the system, which was funded through March 2016.

April 8, 2015: Transportation Secretary Anthony Foxx announced India complied with international safety standards set by the International Civil Aviation Organization (ICAO) and had been granted a Category 1 rating. (See January 31, 2014; December 19, 2018.)

April 8, 2015: FAA granted American Airlines and US Airways the authority to operate as a single carrier. The decision allowed the two airlines to combine work forces, websites, and reservations systems, starting in the fall of 2015. (See October 20, 2014; October 16, 2015.)

April 10, 2015: Auburn University announced it had received FAA approval to operate the nation's first UAS flight school. (See February 15, 2015; May 6, 2015.)

April 30, 2015: Secretary of Transportation Anthony Foxx announced the completion of the en route automation modernization (ERAM) program. The first ERAM system went online at the Salt Lake City air route traffic control center (ARTCC) in March 2012, and the last system went online in March 2015 at the New York ARTCC. ERAM used nearly two million lines of computer code to process critical data for controllers, including aircraft identity, altitude, speed, and flight path. The system almost doubled the number of flights that could be tracked and displayed to controllers. (See April 30, 2014.)

May 4, 2015: Science Applications International Corp. announced FAA had awarded it an indefinite delivery, indefinite quantity contract to provide all training and training program support services under the FAA controller training contract. The single-award, firm-fixed price and time-and-materials contract had a 3-year period of performance; two 1-year options, with an estimated contract value of $425 million; and a maximum contract ceiling of $727 million. (See September 9, 2008.)

May 6, 2015: FAA announced a partnership with industry to explore the next steps in UAS beyond the type of operations the agency proposed in the draft small UAS rule it published in February. Under the new Pathfinder program, FAA would work with industry partners on focus areas, including:

- Visual line-of-sight operations in urban areas – CNN would examine how UAS might be safely used for newsgathering in populated areas.
- Extended visual line-of-sight operations in rural areas – this concept involved UAS flights outside the pilot's direct vision. UAS manufacturer PrecisionHawk would explore how this might allow greater UAS use for crop monitoring in precision agriculture operations.
- Beyond visual line-of-sight in rural/isolated areas – BNSF Railway would explore command-and-control challenges of using UAS to inspect rail system infrastructure.
- UAS in the vicinity of airports – in October 2015, FAA signed an agreement with CACI International, Inc., to evaluate how the company's technology could help detect UAS in the vicinity of airports. (See April 10, 2015; May 8, 2015.)

May 6, 2015: FAA demonstrated its new smartphone application called B4UFLY, designed to help model aircraft and unmanned aircraft users know if it was safe and legal to fly in their current or planned location. FAA intended to release the new app to approximately 1,000 beta testers during the summer. (See April 10, 2015; May 8, 2015.)

May 8, 2015: FAA selected a Mississippi State University team as FAA's center of excellence (COE) for unmanned aircraft systems. The COE focused on research, education, and training in areas critical to safe and successful integration of UAS into the nation's airspace. The team brought together 15 of the nation's leading UAS and aviation universities that had a proven commitment to UAS research and development as well as the necessary resources to provide the matching contribution to the government's

investment. Congress appropriated $5 million for the 5-year agreement with the COE, which would be matched by the team members. In addition to Mississippi State University, the other team members included: Drexel University; Embry-Riddle Aeronautical University; Kansas State University; the University of Kansas; Montana State University; New Mexico State University; North Carolina State University; Oregon State University; University of Alabama, Huntsville; University of Alaska, Fairbanks; University of North Dakota; and Wichita State University. (See May 6, 2015; June 14, 2015.)

June 12, 2015: FAA removed the requirement for a pilot-in-command who had reached age 60 to be paired with a pilot under age 60 in international commercial air transport operations by air carriers conducting flag and supplemental operations, as well as for other pilots serving in certain international operations using civil airplanes on the U.S. registry. The removal of this restriction allowed all pilots serving on airplanes in international commercial air transport that had more than one pilot, to serve until age 65 without having to be paired with a pilot under age 60. (See November 13, 2014.)

June 14, 2015: FAA issued a notice of proposed rulemaking regarding the recreational use of drones because existing rules did not recognize launch and recovery operations for high-powered amateur rockets in the United States. The rulemaking included proposals to require FAA to issue temporary flight restrictions (TFRs) for so-called "Class 2 and 3" amateur high-powered rocket launches, and to make those launch, reentry, and amateur rocket operation zone TFRs apply to foreign-registered aircraft as well as to U.S.-registered aircraft. A TFR excluded flight in airspace defined by lateral and vertical dimensions over a certain period of time. (See May 8, 2015; August 4, 2015.)

June 15, 2015: Chairman of the House Transportation and Infrastructure Committee, Bill Shuster (R-PA), announced he was drafting legislation to create a federally chartered, but independent, not-for-profit corporation to operate and modernize the U.S. air traffic control system. Some airlines, industry officials, and lawmakers expressed support for privatization proposals, and Secretary of Transportation Anthony Foxx responded to Shuster's announcement, saying, "This country deserves a serious conversation about the future of our transportation system." (See February 3, 2016.)

June 26, 2015: FAA Administrator Michael Huerta issued a national policy titled "Federal Aviation Administration Compliance Philosophy." The new philosophy, in part, stated, "FAA recognizes that some deviations arise from factors such as flawed procedures, simple mistakes, lack of understanding, or diminished skills. The Agency believes that deviations of this nature can most effectively be corrected through root cause analysis and training, education or other appropriate improvements to procedures or training programs for regulated entities, which are documented and verified to ensure effectiveness. However, reluctance or failure in adopting these methods to remediate deviations or instances of repeated deviations might result in enforcement." (October 14, 2014.)

June 26, 2015: FAA Administrator Michael P. Huerta and French National Space Agency President Jean-Yves Le Gall signed a memorandum of cooperation to cooperate on research and development related to the safety of private sector orbital space launches and re-entry activities. The research-related, non-binding arrangement was the first of its kind covering research into commercial orbital space operations. FAA also had non-binding arrangements or exchanges of letters with Curaçao, Italy, Spain, and the United Kingdom that covered FAA assistance with development of domestic regulations relating to commercial space transportation. (See October 31, 2014.)

June 30, 2015: FAA granted a commercial spaceport license to Houston's Ellington Airport, making it the 10th licensed spaceport in the country. (See September 27, 2014; August 17, 2018.)

July 14, 2015: The United States and Ukraine signed an open skies agreement. (See July 8, 2013.)

July 22, 2015: FAA announced it had selected Alexandria International Airport in Alexandria, LA, to participate in the military airport program (MAP). Alexandria International was a nonhub primary airport that would participate in the program for three years. The MAP selection would help the airport complete a major apron rehabilitation project. Since 1990, FAA had provided MAP sponsors with approximately $690 million for a variety of projects, such as building or rehabilitating surface parking lots, fuel farms, hangars, utility systems, access roads, cargo buildings, and other airfield needs. Some of these project types were not normally eligible for airport improvement program funding, but the MAP program carried unique eligibility rules to help convert the airports to civilian or joint-use. (See August 17, 2016.)

August 4, 2015: FAA announced it had issued 1,008 exemptions to businesses to fly unmanned aircraft in the national airspace. The majority of the exemptions went to companies interested in aerial filming for motion picture productions, precision agriculture, and real estate photography. (See June 14, 2015; October 14, 2015.)

August 15, 2015: A glitch in newly installed ERAM system at the Washington ARTCC resulted in a large number of flight cancellations for flights flying in to and out of Washington, DC, area airports.

August 27, 2015: In a response to a petition by airlines, FAA issued a decision saying it would consider extending the deadline for replacing older GPS receivers with newer technology to 2025, but no later. Extensions would be based on individual airline requests. The exemptions would not affect the deadline to implement ADS-B Out by 2020. (April 14, 2014; October 30, 2015.)

August 31, 2015: CSC announced FAA had awarded its team – including Amazon Web Services (AWS), Microsoft Azure, and other strategic business partners – a contract to deliver cost-effective cloud services, data center consolidation, and cloud migration capabilities. The single-award indefinite-delivery/indefinite-quantity contract was valued

at $108,992,884 with the potential to reach $1 billion over 10 years. Under the contract, CSC's team would consolidate FAA data centers and migrate FAA data and systems to a hybrid cloud environment.

September 8, 2015: FAA announced $100 million contract awards to eight companies to develop and demonstrate technologies that reduced fuel consumption, emissions, and noise under the second phase of its Continuous Lower Energy, Emissions, and Noise (CLEEN II) program. Under CLEEN II, FAA selected eight companies: Aurora Flight Sciences; The Boeing Co.; General Electric (GE) Aviation; Delta TechOps/MDS Coating Technologies/America's Phenix; Honeywell Aerospace; Pratt & Whitney; Rolls-Royce-Corp.; and Rohr, Inc./UTC Aerospace Systems. The companies would match or exceed FAA's investment, bringing the total to at least $200 million. The eight awardees worked to develop a variety of airframe and engine technologies. Each effort would culminate in a demonstration aimed at bringing the product to market. CLEEN II would nurture these technologies through crucial phases in their maturation, including full-scale ground and flight test demonstrations. (See June 24, 2010; September 10, 2021.)

September 8, 2015: An engine on British Airways Flight 2276, a Boeing 777, caught fire while waiting to take off from McCarran International Airport in Las Vegas. NTSB investigators subsequently found evidence of disk failure in the engine. No passengers or crew suffered major injury while evacuating the plane.

September 14, 2015: In line with the Agency's new compliance philosophy, FAA issued guidance to offices that handled pilot certificate action, offering an alternative tool for handling FAA violations through remedial training. FAA said it put the new guidance in place in an effort to make the national airspace system safer by correcting deviances through training rather than litigation. The FAA safety team (FAASTeam) would facilitate the remedial training. FAA published the information in a notice directed to affected FAA offices and added into the compliance and enforcement section of FAA's compliance and enforcement program as well as Order 8900.1. The remedial training guidance served as an alternative to administrative or legal enforcement action when appropriate. In addition, because runway incursions were a particularly common violation, the document offered specific guidance for runway incursion remedial training. It also included a specific section in Order 8900.1 dedicated to runway incursions. FAA developed a standardized ground-training curriculum called the runway incursion remedial training program (RIRTP). The RIRTP program would be applied to first-time runway incursions. Repeat offenders who had already completed the RIRTP could be offered the program again or could face litigation. (See June 26, 2015.)

September 14, 2015: Airbus, based in Toulouse, France, opened its first jetliner factory in the United States, in Mobile, AL. Airbus hoped the new plant could produce 50 narrow body jets a month by 2017.

September 15, 2015: Secretary of Transportation Anthony Foxx announced the Department of Transportation would provide $5.5 million to help 11 small communities in 11 states develop solutions to improve their local air service needs under the small

community air service development program. The communities receiving grant awards included: Tallahassee, FL ($750,000); Salmon, ID ($150,000); Presque Isle, ME ($250,000); Traverse City, MI ($750,000); Great Falls, MT ($385,000); Fargo, ND ($500,000); Redmond, OR ($500,000); Sioux Falls, SD ($500,000); College Station, TX ($475,000); Pasco, WS ($750,000); and Riverton, WY ($481,810).

September 16, 2015: FAA announced the award of $24.5 million in grants to 14 airports around the country to reduce emissions and improve air quality through FAA's voluntary airport low emission (VALE) and zero emissions airport vehicle (ZEV) programs. VALE was designed to reduce all sources of airport ground emissions in areas that did not meet air quality standards. FAA established the program in 2005 to help airport sponsors meet their air quality responsibilities under the Clean Air Act. Through these programs, airport sponsors could use airport improvement program (AIP) funds and passenger facility charges to help acquire refueling and recharging stations, electrified gates, low-emission vehicles, and other airport-related air quality improvements. The ZEV program, created through the FAA Modernization and Reform Act of 2012, allowed airport sponsors to use AIP funds to purchase vehicles that produce zero exhaust emissions. AIP funds could cover up to 50 percent of these total project costs.

September 30, 2015: President Barrack Obama signed a 6-month extension of FAA authorization and an additional extension that appropriated funding for federal agencies to continue operations until December 11. (See February 14, 2012).

October 8, 2015: FAA issued a safety alert to encourage carriers to alert passengers at the point of ticket sales and check-in that spare lithium batteries were prohibited in checked and carry-on luggage. The alert stated: "To reduce the risk of lithium battery fires, the U.S. Department of Transportation's Hazardous Materials Regulations (HMR), and equivalent International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods (ICAO TI), prohibit spare lithium batteries from checked baggage." (See August 4, 2014; October 26, 2015.)

October 13, 2015: Dutch Safety Board Chairman Tjibbe Joustra said Malaysia Airlines Flight 17 crashed on July 2014 "as a result of the detonation of a warhead outside the airplane," and investigators found "tell-tale fragments of a Russian-made BUK missile" in the bodies of the plane's pilots. Russia rejected the findings, responding the missile was no longer in its arsenal. (See July 17, 2014.)

October 14, 2015: The Los Angeles City Council approved an ordinance that made violations of drone regulations a misdemeanor that "could be punished with up to $1,000 in fines and six months in jail." Previously, violations resulted in a fine and confiscation of the drone. (See August 4, 2015; October 19, 2015.)

October 15, 2015: Chicago O'Hare International Airport opened a new $516-million runway as part of its $9-billion modernization project. (See October 17, 2013.)

October 16, 2015: FAA announced the Republic of Nicaragua complied with ICAO safety standards and was granted a Category 1 rating. With the Category 1 rating, the Republic of Nicaragua's air carriers could secure the requisite FAA and DOT authority, establish service to the United States, and carry the code of U.S. carriers.

October 16, 2015: US Airways made its last flight prior to its merger with American Airlines. (See April 8, 2015.)

October 19, 2015: Secretary of Transportation Anthony Foxx and FAA Administrator Michael Huerta announced the creation of a task force to develop recommendations for a registration process for UAS. Comprising the task force were 25 to 30 diverse representatives from the UAS and manned aviation industries, the federal government, and other stakeholders who would advise the Department of Transportation on which aircraft should be exempt from registration due to a low safety risk (toys and certain other small UAS were included in this evaluation). The task force also explored options for a streamlined system that would make registration less burdensome for commercial UAS operators. Secretary Foxx directed the group to deliver its report by November 20, 2015. On that date, DOT published information on the establishment of the task force and an explanation on the need for registration of UAS in the *Federal Register* on this date. (See October 24, 2015; October 29, 2015.)

October 22, 2015: FAA extended the prohibition against certain flight operations in the Simferopol and Dnipropetrovsk flight information regions (SFAR No. 113) 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 prohibition was to expire on October 27, 2016. (See December 29, 2014.)

October 23, 2015: FAA and the Indonesian Directorate General of Civil Aviation (DGCA) signed an agreement to promote the development and use of sustainable, alternative aviation fuels as well as additional environmental collaboration between the two nations. The memorandum of understanding built on the Obama Administration's efforts to protect the environment, reduce greenhouse gas emissions worldwide, and provide the United States and the broader global community with more sustainable energy resources. The agreement also created additional partnership opportunities between the U.S. Commercial Aviation Alternative Fuels Initiative (CAAFI) and Indonesia's Aviation Biofuels and Renewable Energy Task Force (ABRETF). Both organizations shared similar goals and successes, such as developing alternative fuels that could be used in existing engines. (See December 2, 2014; June 5, 2019.)

October 26, 2015: Department of Transportation Pipeline and Hazardous Materials Safety Administration issued an interim final rule to prohibit passengers and crewmembers from carrying battery-powered portable electronic smoking devices (e.g., e-cigarettes, e-cigs, e-cigars, e-pipes, personal vaporizers, electronic nicotine delivery systems) in checked baggage and prohibit passengers and crewmembers from charging

the devices and/or batteries on board the aircraft. On January 22, 2015, FAA had issued a safety alert for operators recommending that air carriers require their passengers to carry e-cigarettes and related devices exclusively in the cabin of the aircraft. On June 9, 2015, ICAO published an addendum to its technical instructions for the safe transport of dangerous goods by air that prohibited the carriage of e-cigarettes in checked baggage and restricted the charging of these devices while on board the aircraft. (See October 8, 2015.)

October 27, 2015: Delta Air Lines notified Airlines for America, a trade group representing U.S. airlines, it planned to leave the group on April 26, 2016. Delta, which has not supported many Airlines for America decisions, said it could use the $5 million it paid in annual dues to the organization to invest in employees and products.

October 28, 2015: Delta Air Lines announced it would stop flying to Dubai, effective February 1, 2016. Delta had accused three rival airlines in the Persian Gulf of receiving $42 billion in subsidies from their government owners during the last decade. The Gulf carriers – Emirates, Etihad, and Qatar – denied getting subsidies, and argued their U.S. competitors had received unfair advantages from bankruptcy law unavailable in the United Arab Emirates and Qatar. (See December 9, 2015.)

October 29, 2015: FAA Administrator Michael Huerta announced the membership of the UAS registration task force. Task force members included:

- Nancy Egan – 3D Robotics
- Richard Hanson – Academy of Model Aeronautics
- George Novak – Aerospace Industries Association
- Chuck Hogeman and Randy Kenagy – Air Line Pilots Association
- Jim Coon – Aircraft Owners and Pilots Association
- Sean Cassidy – Amazon Prime Air
- Ben Gielow–Amazon Retail
- Justin Towles – American Association of Airport Executives
- Brian Wynne – Association of Unmanned Vehicle Systems International
- Parker Brugge – Best Buy
- Douglas Johnson – Consumer Electronics Association
- Brendan Schulman – DJI
- Paul Feldman – General Aviation Manufacturers Association
- Dave Vos – GoogleX (Co-Chair)
- Tony Bates – GoPro
- Matt Zuccaro – Helicopter Association International
- Mike Fergus – International Association of Chiefs of Police
- John Perry – Management Association for Private Photogrammetric Surveyors
- Brandon Declet – Measure
- Randall Burdett – National Association of State Aviation Officials
- Sarah Wolf – National Business Aviation Association
- Baptiste Tripard – Parrot
- Tyler Collins – PrecisionHawk

- Gregory McNeal – Small UAV Coalition
- Thomas Head – Walmart
- Earl Lawrence – FAA (Co-Chair)

The task force held its first meeting on November 3, 2015. (See October 14, 2015; November 23, 2015.)

October 30, 2015: Effective this date, a new FAA rule required air carriers conducting domestic, flag, and supplemental operations to make available on their websites information to enable passengers to determine which child restraint system could be used on airplanes in these operations. Specifically, the rule required air carriers to make available on their websites the width of the narrowest and widest passenger seats in each class of service for each make, model, and series of airplane used in passenger-carrying operations. (See September 2006.)

October 30, 2015: FAA announced the Austin air traffic control tower and TRACON facility sustained water damage during flooding from heavy rain. Air traffic controllers provided limited services while FAA assessed the damage. The Houston ARTCC, which normally controlled high-altitude traffic over the area, provided radar separation for flights in the Austin area. Because repairs to the facility were likely to take some time to complete, FAA evaluated options for providing longer-term radar services for lower-altitude aircraft from another facility. Meanwhile, the agency brought in a portable air traffic control tower from storage in Kansas City. For safety reasons, FAA increased the spacing between aircraft using Austin Bergstrom International Airport, which may have resulted in delays during busy periods. The tower and TRACON reopened on November 4.

October 30, 2015: FAA asked RTCA Special Committee 186, the group that created ADS-B industry standards, to consider the feasibility of encrypting ADS-B Out messages to prevent eavesdropping by the public on aircraft identification, position, speed, and other data available on the satellite link. Unlike with radar surveillance, the public could easily acquire low-cost receivers that captured the unencrypted ADS-B Out data from a growing number of equipped aircraft in the United States and globally. (See August 27, 2015; November 11, 2015.)

October 31, 2015: A Russian passenger jet, Metrojet Flight 9268, crashed in Egypt's Sinai Peninsula. All 224 people on board the 18-year old Airbus A321-200 died. Debris from the wreck was scattered over 7.7 miles. The Islamic State of Iraq and Syria (ISIS) subsequently took credit for placing a bomb on the aircraft.

November 4, 2015: The Houston Airport System (HAS) and NASA entered into an agreement that allowed the new commercial spaceport developing at Ellington Airport to tap into the federal space agency's assets and expertise, expanding the possibilities for the growing commercial spaceflight industry. Under the agreement, HAS and NASA would collaborate and NASA would provide access to a number of the unique capabilities at the

Johnson Space Center (including safety-specific training, facilities, and technology capabilities) to support suborbital operations and commercial spaceflight endeavors.

November 5, 2015: FAA announced it would create a working group to review helicopter safety regulations, saying regulators could do a better job increasing the chances that helicopter occupants survived a crash or hard landing. In a notice published in the *Federal Register*, FAA said it would ask the working group to scrutinize current crash safety regulations, develop cost-benefit estimates for possible changes, and formulate a list of recommendations for the agency to consider.

November 10, 2015: The Department of Justice filed an anti-trust lawsuit with a federal court in New Jersey, alleging a recently proposed deal between United Airlines and Delta Air Lines to exchange landing and takeoff slots at Newark and JFK airports would expanded United's dominant presence in the New York market at the expense of other carriers. (See January 8, 2015.)

November 10, 2015: A 10-seat Hawker H25 jet crashed into an apartment building in Akron, Ohio, killing all nine people on the plane but no one on the ground.

November 11, 2015: Members of the United Nations Telecommunication Union announced at the World Radio Communication Conference a deal had been reached for nations to set aside common radio frequencies so that airplanes equipped with ADS-B could be tracked by satellite. The tracking system, done in response to the disappearance of Malaysia Airlines Flight 370 in 2014, would become effective worldwide in November 2016. (See October 30, 2015.)

November 13, 2015: After coordinated attacks on civilian targets in Paris, the French government closed its borders to help restore order, prompting transportation officials around the world to come up with emergency plans on how to handle traffic into and out of the country. ISIS claimed responsibility for the attacks, which killed 129 people and injured over 300 others. (See November 23, 2015.)

November 23, 2015: The State Department issued a worldwide alert to American citizens traveling abroad. Officials warned that the "likelihood of terror attacks will continue as members of ISIL/Da'esh return from Syria and Iraq. Additionally, there is a continuing threat from unaffiliated persons planning attacks inspired by major terrorist organizations but conducted on an individual basis." The travel alert was to expire on February 24, 2016. (See November 13, 2015).

November 23, 2015: GSA announced it had signed a lease to move FAA's Northwest Mountain Regional Headquarters from Renton, WA, to Des Moines, WA. The new building, when completed in 2018, would consolidate regional employees into one facility. (See June 8, 2016.)

November 23, 2015: FAA's drone task force recommended, among other things, that:

1. Drones between 0.55 pound and 55 pounds operated outdoors needed to be registered.
2. The free registration was owner-based, so a number of drones could be registered to one owner.
3. Registration would be mandatory at the time of operation and not the point of sale.
4. Minimum age to register was 13.
5. A registration certificate would be mailed to the owner.
6. The registration number would need to be put on each drone.

FAA planned to use the recommendations, as well as public input, to draft a proposed drone rule. (See October 29, 2015; December 14, 2015.)

November 24, 2015: Airbus announced FAA and the European Aviation Safety Agency had issued a type certificate to the A320neo (new engine option), powered by Pratt & Whitney's Pure Power PW1100G-JM engine.

November 24, 2015: The Airline Operators and Pilots Association reported FAA had released a list of the first 35 of 74 VORs it planned to decommission through 2020. More than 200 more would be decommissioned through 2025. FAA planned to retain more than half of the VORs as it established a minimum operational network to serve as a backup to satellite systems. The list of 35approved VORs, the first in line to be decommissioned, was spread among 17 states. At the time of the announcement, FAA owned and operated 957 VORs in the continental United States. An additional 100 nonfederal VORs were in operation around the country. Included in the list of VORs to be decommissioned were 12 VORs, 155 VOR/DMEs, and 141 VORTACs. The majority were located in the eastern and central regions of the United States. In the case of VOR/DMEs and VORTACs, the DME and TACAN portions of the units would be left in place to facilitate RNAV requirements.

November 25, 2015: DOT issued a notice reminding airlines they were required to compensate passengers for damage to wheels, straps, zippers, handles, and other protruding parts of checked baggage beyond normal wear and tear. The notice also reminded airlines of their obligation to accept all reports of mishandled baggage from consumers even if an airline's agent believed the airline was not liable. The notice was a result of airport inspections, which uncovered the fact that certain airlines routinely excluded liability for damage to specific parts of checked baggage. DOT's office of aviation enforcement and proceedings planned to take enforcement action against airlines that were not in compliance by January 9, 2016.

December 1, 2015: FAA announced the Kingdom of Thailand did not comply with ICAO safety standards and had been assigned a Category 2 rating based on a reassessment of the country's civil aviation authority. A Category 2 rating meant the country either lacked laws or regulations necessary to oversee air carriers in accordance with minimum international standards – or its civil aviation authority (a body equivalent to FAA for

aviation safety matters) was deficient in one or more areas, such as technical expertise, trained personnel, record-keeping, or inspection procedures. With a Category 2 rating, Thailand's carriers could continue existing service, but not establish new service, to the United States.

December 8, 2015: FAA certified HondaJet's model HA-420 business jet. The new jet could seat up to seven and cost approximately $4.5 million.

December 8, 2015: A group of U.S. and Mexican investors opened Cross Border Xpress, one of the largest privately operated U.S. air terminals. The terminal linked Tijuana International Airport with the new terminal at the San Diego airport. It allowed passengers flying into Tijuana to walk across a 390-foot bridge to enter the United States. The fee to cross was $18.00, and passengers were met by U.S. border inspectors. Prior to the opening of the bridge, passengers entering the United States from Tijuana had to drive about 15 minutes to a congested land crossing where they waited up to several hours to enter San Diego by car or on foot.

December 9, 2015: United Airlines announced it would end its flights from Washington Dulles International Airport to Dubai on January 25, 2016. United said in a statement: "Even though we successfully operated the Washington-Dubai route for the past seven years, the entry of subsidized carriers such as Emirates Airline and Etihad Airways into the Washington, D.C., market has created an imbalance between supply and demand to the United Arab Emirates." (See October 28, 2015; May 11, 2018.)

December 14, 2015: FAA announced a streamlined and user-friendly web-based aircraft registration process for owners of small UAS weighing more than 0.55 pounds (250 grams) and less than 55 pounds (approx. 25 kilograms) including payloads such as on-board cameras. Under the rule, any owner of a small UAS who had previously operated an unmanned aircraft exclusively as a model aircraft prior to December 21, 2015, had to register no later than February 19, 2016. Owners of any other UAS purchased for use as a model aircraft after December 21, 2015, had to register before the first flight outdoors. Owners could use either the paper-based process or the new streamlined, web-based system. Owners using the new streamlined web-based system had to be at least 13 years old to register. Registrants needed to provide their name, home address, and e-mail address. Upon completion of the registration process, the web application would generate a certificate of aircraft registration/proof of ownership that included a unique identification number for the UAS owner, which had to be marked on the aircraft. Owners using the model aircraft for hobby or recreation would only have to register once and could use the same identification number for all of their model UASs. The registration was valid for three years. The normal registration fee was $5, but in an effort to encourage as many people as possible to register quickly, FAA waived the fee for the first 30 days (from December 21, 2015 to January 20, 2016). (See November 23, 2015.)

December 16, 2015: The United States and Cuba reached a bilateral arrangement to establish scheduled air services between the two countries. The agreement continued to allow charter operations and established scheduled air service, which would facilitate an

increase in authorized travel, enhance traveler choices, and promote people-to-people links between the two countries. While U.S. law continued to prohibit travel to Cuba for tourist activities, a stronger civil aviation relationship would facilitate growth in authorized travel between the two countries. (See February 16, 2016.)

December 18, 2015: The United States signed a new air transport agreement with Mexico. The agreement benefited U.S. and Mexican airlines, travelers, businesses, airports, and localities by allowing increased market access for passenger and cargo airlines to fly between any city in Mexico and any city in the United States. Cargo carriers now had expanded opportunities to provide service to new destinations not available under the former, more restrictive agreement.

December 21, 2015: Southwest Airlines agreed to pay a $2.8 million civil penalty to settle a lawsuit over maintenance of dozens of its Boeing 737 aircraft. The case involved fasteners and supporting equipment that ensured that plane fuselages withstood the forces of flying at different altitudes and temperatures. Southwest could still face $5.5 million in deferred penalties if it failed to enhance oversight and control of other companies, which performed maintenance on its aircraft, to ensure they met FAA safety regulations

December 22, 2015: FAA announced a comprehensive settlement agreement with Boeing Commercial Airplanes (BCA) that resolved multiple pending and potential enforcement cases. Under the agreement, BCA pledged to implement and improve several certification processes to further enhance the airworthiness and continued compliance of all BCA products. BCA's obligations committed the company to meet specific performance targets. The targets were designed to enhance BCA's early discovery and self-disclosure of potential regulatory compliance problems, as well as the timely development and implementation of effective corrective actions. The company also had to make an immediate payment to the United States Treasury in the amount of $12 million and would face stiff penalties for failing to follow through on its commitments.

2016

January 14, 2016: FAA issued a notice of proposed rulemaking to establish a new noise standard for certain subsonic jet airplanes and subsonic transport category large airplanes. The noise standard, known as Stage 5, would apply to any person submitting an application for a new airplane type design with a maximum certificated takeoff weight of 121,254 pounds or more on or after December 31, 2017; or with maximum certificated takeoff weight of less than 121,254 pounds on or after December 31, 2020. This change would reduce the noise produced by new airplanes and harmonize the noise certification standards for those airplanes certificated in the United States with the ICAO noise standard in Annex 16, Chapter 14. (See August 4, 2005; November 17, 2017.)

January 17, 2016: SpaceX launched its Falcon 9 v1.1 rocket, successfully sending NASA's Jason-3 ocean-measuring satellite into orbit. The rocket, however, failed to make a return landing to a drone platform in the Pacific Ocean. (See September 16, 2014; June 15, 2016.)

February 3, 2016: Republican leaders in the House Transportation and Infrastructure Committee introduced a $69 billion funding bill, the Aviation Innovation, Reform, and Reauthorization Act, that would move air traffic control operations from FAA to a not-for-profit corporation. Bill Shuster (R-PA) sponsored the bill. NATCA and Airlines for America, a trade group for most major airlines, backed the legislation. The committee held hearings on the bill on February 11, and approved the bill the following day. The bill did not go to the full House for a vote. (See June 15, 2015; June 5, 2017.)

February 8, 2016: The U.S. and 22 other countries reached agreement on the first-ever global carbon standards for commercial aircraft. When fully implemented, the standards were expected to reduce carbon emissions more than 650 million tons between 2020 and 2040, equivalent to removing over 140 million cars from the road for a year. The technology standards, agreed to at ICAO, would apply to aircraft manufacturers when formally adopted by the ICAO Council.

February 16, 2016: Transportation Secretary Anthony Foxx, Assistant Secretary of State for Economic and Business Affairs Charles Rivkin, Cuban Minister of Transportation Adel Yzquierdo Rodriguez, and President of the Cuban Civil Aviation Institute, Ministry of Transportation Colonel Alfredo Cordero Puig signed an arrangement that provided for the re-establishment of scheduled air services between the United States and Cuba. (See December 16, 2015; August 31, 2016.)

February 16, 2016: FAA and the Civil Aviation Authority of Singapore signed the first set of maintenance implementation procedures between the U.S. agency and an Asian counterpart. The deal established reciprocal acceptance of maintenance oversight, among other benefits. It built upon a bilateral aviation safety agreement in place since 2004. (See July 12, 2017.)

February 22, 2016: ICAO voted to ban cargo shipments of lithium ion batteries on passenger planes. The ban became effective on April 1, 2016. (See October 26, 2015; September 8, 2016.)

February 24, 2016: FAA established the performance standards and requirements for micro unmanned aircraft systems (UAS) aviation rulemaking committee (ARC). The committee provided a forum for discussion and development of recommendations that would be submitted to FAA for consideration in developing a notice of proposed rulemaking (NPRM) regarding the classification and operation of micro UAS. The ARC was specifically tasked to consider recommendations for a performance-based standard that would allow for micro UAS to be operated over people who were not directly participating in the operation of the UAS or under a covered structure. (See December 21, 2015; March 10, 2016.)

February 25, 2016: Republic Airways, a regional carrier, filed for Chapter 11 bankruptcy protection.

March 4, 2016: DOT published a final rule in the *Federal Register* banning passengers on all U.S. and foreign airlines within, into, or out of the U.S. from smoking electronic cigarettes. The ban took effect on April 3. (See October 26, 2015; May 18, 2016.)

March 9, 2016: FAA issued a NPRM to overhaul the airworthiness standards for small general aviation airplanes (Part 23). FAA's proposal, based on industry recommendations, would reduce the time it took to get safety enhancing technologies for small airplanes into the marketplace, while also reducing cost. (See December 16, 2016.)

March 10, 2016: Australian startup Flirtey made the first FAA-approved package delivery by an UAS to a house. During the test, working with the University of Nevada at Reno, Flirtey's six-rotor small unmanned aerial system flew a preprogrammed route to deliver a package of food, water, and a first-aid kit to an unoccupied house in a sparsely inhabited area of Hawthorne, near Reno. Navigating by the global positioning system (GPS), with visual observers keeping the UAS within line of sight and a ground pilot on standby, the autonomous UAS flew approximately a half-mile, and then hovered to lower the package to the ground on a tether. In July 2015, Flirtey conducted the first FAA-approved package-delivery demonstration with its UAS making three trips over a 2-hour period to ferry medical supplies from a nearby airport to a free clinic held in fairgrounds near Wise, VA. (See February 24, 2016; December 28, 2016.)

March 29, 2016: FAA announced that it had selected unleaded fuel formulations from Shell and Swift Fuels for Phase 2 engine and aircraft testing. Test data would help the companies obtain an ASTM international production specification for their fuels and allow FAA to authorize the existing general aviation fleet to use the unleaded replacement fuels. The testing was scheduled to conclude in 2018. (See September 8, 2014.)

March 30, 2016: FAA issued two new rules dealing with flight simulators and aviation training devices to improve airline pilots' response to a number of unusual situations they might encounter, and give pilots more credit toward the requirements for an instrument rating. The rules set new standards for flight simulator evaluation and qualification, designed to make simulator training and testing more accurate and realistic in scenarios involving stalls, upset recognition and recovery techniques, maneuvers in icing conditions, takeoffs and landings in gusting crosswinds, and bounced landing recovery. FAA required training for most of these maneuvers in a rule published on November 12, 2013. The new rule also addressed a possible lack of simulator fidelity identified in several National Transportation Safety Board (NTSB) safety recommendations and provided greater harmonization with international guidance for flight simulator training. Air carriers had to develop training programs using simulators that met the upgraded requirements by March 12, 2019. (See November 5, 2013.)

March 30, 2016: President Barack Obama signed a short-term extension of aviation programs, giving lawmakers three and a half more months to work on a long-term bill. The measure (HR 4721) extended aviation authorization through July 15. The previous authority (PL 114-55) expired on this date. (See September 30, 2015; July 15, 2016.)

April 1, 2016: Under a new rule effective this date aviation medical examiners could no longer issue student pilot certificates. Instead, new pilots had to use a process similar to that used by private pilots. Student pilots had to apply for certificates through their certified flight instructor, a designated pilot examiner, FAA examiner, or Part 141 flight school certificate representative. The changes gave the Transportation Security Administration time to review student pilot applications as part of an anti-terrorism screening program mandated by Congress.

April 6, 2016: The Micro UAS ARC issued its report and recommended FAA regulate small drones based on the risk they pose to people and set standards manufacturers and operators should meet. FAA planned to examine the recommendations as it formulated a new proposal specific to micro drones. FAA expected to release its next full proposal on drone use in December 2016. (See March 10, 2016; May 4, 2016.)

April 11, 2016: FAA issued a final rule that increased the aviation training device (ATD) hours pilots could credit toward an instrument rating – up to 10-hours credit in a basic ATD and up to 20-hours credit in an advanced ATD, not to exceed a maximum of 20 total hours under Part 61. The previous maximum allowance was 10 hours in an FAA-approved aviation-training device. (See December 3, 2014.)

April 18, 2016: The Department of Transportation (DOT) tentatively approved Norwegian Air's request to begin service into the U.S. from a base in Ireland, ending a two-year review of the request that elicited significant opposition from U.S. carriers. DOT planned to hold a number of public information sessions prior to giving final authority. (See December 2, 2016.)

April 20, 2016: FAA issued a notice of proposed policy to reduce the number of radio frequencies used by flight service stations to communicate with aircraft in flight. Under the proposal, 666 remote communications outlets would be decommissioned. Frequencies especially designated for emergency or military use or for use in Alaska were not included in the proposal.

May 4, 2016: FAA announced it would immediately begin allowing students to operate UAS for educational and research purposes without first obtaining a Section 333 exemption. They still, however, had to follow the rules for model aircraft. (See April 6, 2016; July 1, 2016.)

May 9, 2016: Robinson Helicopters announced FAA had certificated its new R44 Cadet helicopter.

May 18, 2016: The Pipeline and Hazardous Materials Safety Administration issued a final rule prohibiting passengers and crewmembers from carrying battery-powered portable electronic smoking devices (e.g., e-cigarettes, e-cigs, e-cigars, e-pipes, personal vaporizers, and electronic nicotine delivery systems) in checked baggage and prohibited passengers and crewmembers from charging the devices and/or batteries on board an aircraft. (See March 24, 2016.)

May 19, 2016: EgyptAir Flight 804 en route from Paris to Cairo crashed about 260 miles from Cairo. All 66 passengers and crew died. Black box data indicated there was a fire inside the Airbus 320 at the time of the crash.

June 6, 2016: Transportation Secretary Anthony Foxx and FAA Deputy Administrator Michael G. Whitaker broke ground for a new 370-foot-tall air traffic control tower and terminal radar approach control (TRACON) facility at Charlotte Douglas International Airport.

June 8, 2016: FAA broke ground for the Northwest Mountain regional headquarters located in Des Moines, WA. FAA expected the new building to open in February 2018. (See November 23, 2015.)

June 9, 2016: FAA announced steps to address mental health problems among pilots. FAA said it would not require psychological testing for airline pilots. Rather, the agency said it would enhance training for medical examiners who test pilots being hired by airlines and expand mental health assistance for pilots. FAA's goal was "to break down resistance to seeking treatment because pilots can be grounded for certain medical problems or medications."

June 15, 2016: Culminating five years of work, FAA replaced the practical test standards (PTS) for the private pilot certificate and the instrument rating with the new airman certification standards (ACS). ACS improved upon the PTS by adding aeronautical knowledge and risk management elements that supported each PTS skill task.

June 15, 2016: Bombardier Commercial Aviation announced FAA and the European Aviation Safety Agency had certificated the CS100 aircraft.

June 15, 2016: Space X's attempt to land a Falcon 9 rocket booster on a drone ship at sea failed. It was SpaceX's eighth attempted sea landing, and the fifth time that the rocket did not survive. Before this mission, the company had landed three Falcon 9 boosters in a row over the course of the previous three months. (See January 17, 2016; September 1, 2016.)

June 17, 2016: Piper Aircraft announced that FAA had type certificated the Piper M600, a single-engine turboprop.

June 21, 2016: Terrafugia announced FAA approved its 2014 petition for exemption, allowing a vehicle in the Transition® street-legal airplane configuration to be certified as a light sport aircraft (LSA) with a maximum takeoff weight of 1,800 pounds. This was a significant increase over the allowance received in 2010 which granted the Transition® a 1,430-pound weight limit, the same as currently imposed on amphibious LSA. The 1,800-pound weight allowed the Transition® to incorporate automotive occupant protection safety features, including a safety cage, energy absorbing crumple zones, and cabin features that are commonplace in today's automobiles but unavailable in most general aviation aircraft. (See March 23, 2012; January 26, 2021.)

June 22, 2016: FAA commissioned the new TRACON at Palm Beach International Airport.

June 24, 2016: Transportation Secretary Anthony Foxx and NASA Administrator Charles Bolden, joined by representatives from the FAA, National Air Traffic Controllers Association (NATCA), American Airlines, celebrated the official opening of a new airspace technology demonstration (ATD-2) laboratory at Charlotte Douglas International Airport. This laboratory was part of a five-year test project aimed to streamline the arrival and departure of aircraft and improve surface operations to increase safety and efficiency and reduce fuel use in the nation's aviation system.

June 30, 2016: Transportation Secretary Anthony Foxx announced $5.15 million in grants would go to nine small communities to help them improve local air service. The grants were provided through the small community air service development program (SCASDP), which began in 2002 to help small communities address the economic challenges of maintaining local air service. Receiving grants were: Bullhead City, AZ ($750,000); Inyokern, CA ($450,000); Stockton, CA ($650,000); Hailey, ID ($500,000); Billings, MT ($750,000); Missoula, MT ($600,000); Santa Fe, NM ($500,000); Amarillo, TX ($750,000); and Port Angeles, WA ($200,000).

July 1, 2016: FAA announced expansion of the part of its pathfinder program that focused on detecting and identifying UASs flying too close to airports. FAA signed cooperative research and development agreements (CRDAs) with Gryphon Sensors, Liteye Systems Inc., and Sensofusion. The CRDAs with Gryphon, Liteye and Sensofusion expanded upon collaborative efforts with industry to develop system standards to identify unauthorized UAS flights near airports, which could pose a hazard to manned aircraft. (See May 4, 2016; August 2, 2016.)

July 7, 2016: Lockheed Martin announced a FAA contract award of $344 million to develop and deploy the terminal flight data manager (TFDM) system. The system would provide electronic flight strips as well as improved surface management tools that would allow streamlined operations in the air traffic control towers for busy airports. The TFDM contract period of performance had a five-year base with seven one-year options.

July 14, 2016: FAA and NATCA signed a new six-year collective bargaining agreement. The new agreement went into effect on July 24. (See March 14, 2012.)

July 15, 2016: President Obama signed the FAA Extension, Safety and Security Act of 2016, a stopgap fix that funded aviation security and other programs for 14 months. The legislation reauthorized FAA through September 2017, providing funding for airport improvement and security programs and additional regulations for drones. (See March 30, 2016; November 22, 2016.)

July 16, 2016: FAA banned flights to and from Turkey following an attempted coup in the country. FAA lifted the ban on July 18.

July 18, 2016: FAA Administrator Michael Huerta announced Victoria Wassmer would serve as acting deputy administrator. Deputy Administrator Michael Whitaker had left the agency at the end of June. (See June 28m 2017.)

July 20, 2016: Moon Express Inc., a Florida-based firm started in 2010, announced FAA had granted it permission to conduct an independent moon landing.

August 1, 2016: Virgin Galactic announced FAA's office of commercial space had granted it a commercial license to operate its SpaceShipTwo. The license reauthorized Virgin Galactic to continue its commercialization process after its spaceship broke up during a rocket-powered test flight over California's Mojave Desert in October 2014. (See October 31, 2014; May 24, 2018.)

August 2, 2016: FAA announced plans to charter an UAS safety team that would include a wide variety of stakeholders from the drone and aviation industries. Similar to the highly successful commercial aviation safety team, this group would analyze safety data to identify emerging threats that drones may pose to aircraft, people, and property. It would also develop mitigation strategies to address these threats and prevent future accidents. The group held its first meeting on October 21. (See July 1, 2016; August 2, 2016.)

August 2, 2016: FAA announced it planned to hire 1,400 new controllers to help meet its future workforce demands. Applicants had a one-week window to apply, August 8-15.

August 2, 2016: FAA granted permission for Google parent company Alphabet to test delivery drones in designated areas. The company could conduct an operational research study, flying drones less than 400 feet, to develop an airspace management system. The data gathered would be shared with government partners to help regulators study questions about critical safety and human factors regarding unmanned aerial vehicle (UAV) cargo deliveries. (See August 2, 2016; August 29, 2016.)

August 12, 2016: FAA announced the selection of the University of Oklahoma and Embry-Riddle Aeronautical University to lead its new transportation center of excellence for technical training and human performance. The center would conduct research and development on technical training for air traffic controllers, aviation safety inspectors, engineers, pilots, and technicians. (See May 8, 2015.)

August 15, 2016: FAA announced Indonesia complied with ICAO safety standards and had been granted a Category 1 rating. FAA first assessed Indonesia's civil aviation authority in September 1997 and found it in compliance with ICAO standards and then lowered the rating from Category 1 to Category 2 in April 2007. The Category 1 rating was based on a March 2016 FAA assessment of the safety oversight provided by Indonesia's Directorate General of Civil Aviation. A Category 1 rating means the country's civil aviation authority complied with ICAO standards. With the Category 1 rating, Indonesian air carriers that were able to secure the requisite FAA and DOT authority, could establish service to the United States and carry the code of U.S. carriers.

August 15, 2016: FAA rejected an appeal by Santa Monica to overturn a recent FAA decision that required the city's airport to remain open at least until 2023. (See)

August 17, 2016: FAA selected Brunswick Executive Airport in Brunswick, ME, to participate in the fiscal year 2016 military airport program (MAP). The MAP used federal funds to convert former military airports to civilian use and supported improvements to joint-use airports. The MAP funding was a set-aside of the airport improvement program that helped increase civilian aviation capacity by financing projects such as building or rehabilitating parking lots, fuel farms, hangars, utility systems, access roads, cargo buildings, and other airfield projects at former military airports. (See July 22, 2015; June 9, 2017.)

August 21, 2016: The air transport agreement between the United States and Mexico, signed on December 18, 2015, went into effect. This new agreement expanded travel and trade between the United States and Mexico, and facilitated broader economic growth in both countries.

August 23, 2016: The Santa Monica city council voted to close the Santa Monica airport as soon as legally permitted, with a goal of on or before July 1, 2018. (See August 15, 2016; September 15, 2016.)

August 28, 2016: Air traffic controllers at McCarran International Airport began working in a $99 million, 352-foot tall control tower. The new tower doubled the height of the original tower, and became the second-tallest air traffic control tower in the country.

August 29, 2016: FAA implemented the first operational rules for routine non-hobbyist use of small UAS, or drones. The provisions of the new rule – formally known as Part 107 – were designed to minimize risks to other aircraft and people and property on the ground. (See August 2, 2016; September 16, 2016; December 28, 2016.)

August 31, 2016: As part of the Obama Administration's effort to normalize relations with Cuba, Transportation Secretary Anthony Foxx arrived in Cuba on the first scheduled flight to the island in over 50 years, on a JetBlue Airways flight from Fort Lauderdale to Santa Clara. (See February 16, 2016; October 25, 2019.)

September 1, 2016: The SpaceX Falcon 9 launch vehicle exploded during a static fire test at Cape Canaveral, FL. The test was in advance of a September 3 launch of the Amos-6 communications satellite for Israeli satellite operator Spacecom. (See June 15, 2016; March 30, 2018.)

September 2, 2016: FAA issued a finding of no significant impact/record of decision for the Southern California Metroplex project. The decision enabled the agency to move forward with the project, which would replace dozens of existing conventional air traffic control procedures with new satellite-based procedures. FAA planned to begin phasing in the new procedures starting in November 2016 and continuing through April 2017. The

project included 99 new satellite-based procedures, consisting of 41 departures, 37 arrivals, and 21 approach procedures. (See March 26, 2020.)

September 8, 2016: FAA issued a statement advising airline passengers not to turn on or charge their Samsung Electronics Company, Ltd., Galaxy Note 7 smartphones during flights or stow them in checked baggage, because of concerns over the phones' fire-prone ion-lithium batteries. Samsung subsequently recalled the phones. (See February 22, 2016; October 14, 2016.)

September 15, 2016: The city of Santa Monica served Atlantic Aviation and American Flyers eviction notices and ordered them to leave Santa Monica airport by October 15 (later extended to November 4). Beginning in June, the city began informing airport tenants that they would not receive new leases. Attorneys for the two companies asked FAA to determine whether the airport's leasing policy violated federal agreements with the city. On September 26, FAA issued a notice of investigation to the City of Santa Monica informing the city it was initiating an investigation into the city's strategy to close the airport by evicting tenants and recommended the city postpone the evictions. (See August 23, 2016; December 13, 2016.)

September 15, 2016: The Astronautics Corporation of America announced a FAA contract to research and develop a way to identify and assess potential aircraft cybersecurity threats as they relate to aircraft certification and operational safety.

September 16, 2016: FAA's new drone advisory committee (DAC) met for the first time. Brian Krzanich, Chief Executive Officer of Intel Corp., chaired the committee. FAA had announced plans to establish the committee the previous February. The DAC was formed under the RTCA federal advisory committee and planned to meet at least three times a year. Members discussed key issues and challenges associated with integrating unmanned aircraft in the world's busiest and most complicated airspace system. (See August 29, 2016; May 29, 2018.)

September 19, 2016: FAA's automatic dependent surveillance-broadcast (ADS-B) rebate website went online. It provided general aviation aircraft owners the opportunity to apply for a $500 rebate to help offset the cost to equip eligible aircraft. ADS-B Out, which FAA required by January 1, 2020, transmitted information about a plane's altitude, speed, and location to air traffic control and other nearby aircraft. ADS-B allowed aircraft to receive traffic and weather information from ground stations and to see nearby aircraft that were broadcasting their positions through ADS-B Out. Owners could choose to install only ADS-B Out equipment to meet the 2020 requirement, or they could purchase an integrated system that also included ADS-B In. (See April 14, 2014; June 26, 2018.)

September 23, 2016: FAA dedicated the new air traffic control tower at Tucson International Airport. The new tower was 252 feet tall – about double the height of the old tower, which had served the airport for 58 years. It sat atop a 13,000 square-foot base building that housed computer equipment, administrative offices, and a backup power system designed to activate automatically in case of a commercial power outage. FAA

expected a 1,600-panel solar farm adjacent to the base building to generate enough power to support all of the facility's electrical needs for several hours a day on sunny days. The total project cost, including computer equipment, electronics, fire suppression systems, and heating and air conditioning, was approximately $40 million.

September 29, 2016: FAA announced Administrator Michael Huerta had approved the performance-based navigation (PBN) national airspace system navigation strategy. The strategy, which had been in development for two years, set a clear vision of PBN as the daily basis for operations at all locations in U.S. airspace. It established near-, mid- and long-term goals for implementing PBN approaches across the NAS and identified navigation capabilities and services that would be available over the next 15 years. (See October 8, 2014.)

October 1, 2016: FAA transitioned from its traditional domestic instrument flight rules (IFR) flight plan (Form 7233-1) to the ICAO IFR flight plan (Form 7233-4) for domestic flight plan filing. The agency said the change was intended to simplify the flight planning process and align U.S. flight plans with ICAO standards.

October 3, 2016: Rockwell Collins announced FAA had renewed its aeronautical mobile communications service agreement. Under the agreement, the company would continue to provide air traffic control communications, including position reports, aircraft requests and air traffic control clearances, between FAA and aircraft flying in U.S. oceanic airspace.

October 7, 2016: FAA issued a notice of proposed rulemaking to require air carriers conducting domestic, flag, and supplemental operations to provide new-hire pilots with an opportunity to observe flight operations to become familiar with procedures before serving as a flightcrew member in operations; revise the curriculum; provide leadership and command and mentoring training for all pilots in command; and establish pilot professional development committees.

October 10, 2016: Ground was broken on a new $240 million airport in Williston, North Dakota. FAA provided funding for 50 percent of the project cost, while the city of Williston and the state of North Dakota funded the rest.

October 11, 2016: FAA and local officials dedicated the new control tower at San Francisco International Airport. Located between Terminals 1 and 2, the tower featured a 147-foot-tall ribbon of glass running down the middle of the structure. The facility also included a three-story, 44,000 square-foot base building, which housed administrative offices, computer equipment, a backup generator, and secure corridors that allowed passengers to transit between terminals without affording access to the tower.

October 14, 2016: The Department of Transportation, with FAA and the Pipeline and Hazardous Materials Safety Administration, announced an emergency order banning all Samsung Galaxy Note7 smartphone devices from air transportation in the United States. Individuals who owned or possessed a Samsung Galaxy Note7 device could not transport

the device on their person, in carry-on baggage, or in checked baggage on flights to, from, or within the United States. This prohibition became effective on October 15, 2016. (See September 8, 2016; January 10, 2017.)

October 17, 2016: Orbital ATK's Cygnus spacecraft lifted off from the Mid-Atlantic Regional Spaceport at Wallops Island, VA, carrying supplies for the International Space Station. This was the first launch from the spaceport since an Antares rocket and its Cygnus spacecraft were lost in October 2014. (See October 28, 2014.)

October 18, 2016: FAA and federal and local officials dedicated the new air traffic control tower at Las Vegas' McCarran International Airport. The facility included a 352-foot tall air traffic control tower and a 59,000 square-foot base building, which housed the TRACON, air traffic control training simulators, administrative offices, and equipment.

October 18, 2016: Transportation Secretary Anthony Foxx announced a number of actions to enhance protections for air travelers and promote competition in the airline industry. The announced actions included (See July 24, 2012):

- Requiring Refunds for Delayed Baggage
- Expanding the Number of Carriers Required to Report Data
- Requiring the Reporting of Data on Flights Operated by Code-Share Partners
- Providing Consumers with a Clearer Picture of Baggage Delivery
- Prohibiting Undisclosed Bias by Airlines and Online Ticket Agents
- Protecting Air Travelers with Disabilities
- Giving Consumers a Voice by extending its advisory committee for aviation consumer protection. New Orleans Mayor Mitch Landrieu was selected to serve as chair of the committee (See November 15, 2018.)

October 27, 2016: FAA extended the prohibition against certain flight operations in the Simferopol and Dnipropetrovsk flight information regions by all U.S. air carriers; U.S. commercial operators; persons exercising the privileges of a U.S. airman certificate, except when such persons operated a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except when such operators were foreign air carriers. The ban would remain in effect through October 2018. (See October 22, 2015.)

October 27, 2016: The campaign plane carrying Republican vice-presidential candidate Mike Pence skidded off the runway after landing at New York's LaGuardia Airport. The engineered material arresting system located at the end of the runway safely stopped the aircraft, which carried 37 passengers and crew. (See October 1, 2016.)

October 31, 2016: Cirrus Aircraft announced FAA had awarded it a FAR Part 23 Type Certificate for its $1.96 million, 300-kt. single-engine turbofan SF50 Vision Jet.

November 10, 2066: FAA Administrator Michael Huerta outlined the agency's Caribbean initiative. Through this Initiative, FAA's technical experts would work with

their Caribbean partners and ICAO to increase airport safety and certification in the region and to improve air traffic flow management through collaborative decisionmaking.

November 22, 2016: DOT's office of aviation enforcement and proceedings, a unit within the office of the general counsel, issued a new enforcement policy on extended tarmac delays in light of the FAA Extension, Safety, and Security Act of 2016. Under the new policy, the DOT would not take enforcement action against U.S. and foreign airlines for lengthy tarmac delays on departing flights so long as airlines returned their aircraft to the gate or another suitable disembarkation point no later than three hours for domestic flights and no later than four hours for international flights after the main aircraft door had closed in preparation for departure. (See July 15, 2016.)

November 23, 2016: FAA issued a request for information seeking vendors of remote air traffic control tower systems to compete for a contract to build a system at Northern Colorado Regional Airport. FAA said the remote tower system must allow controllers to provide Class D services with a facility that is local or remote to the airport. FAA was already evaluating a remote-tower demonstration project run by Saab and the State of Virginia at the Leesburg Executive Airport. (See March 1, 2015; September 29, 2021.)

November 28, 2016: American Airlines Flight 17 landed in Havana, the first U.S. scheduled airline with service to that city in over 50 years. The airline planned to fly four daily flights from Miami International Airport to Havana.

December 2, 2016: The Department of Transportation gave final approval to allow Norwegian Air International (NAI) to fly to the U.S. NAI, a subsidiary of European low-cost carrier Norwegian Air Shuttle, had applied in December 2013 to serve the U.S. Many U.S. domestic airlines, their unions, and some lawmakers opposed approval arguing that NAI was trying to skirt labor and safety laws, by being headquartered in Ireland, and potentially hiring Asian crews for below-market wages. (See April 18, 2016; May 11, 2018.)

December 6, 2016: The Justice Department approved the $2.6 billion Alaska Airlines acquisition of Virgin America. As a condition of the acquisition, Alaska Airlines was required to "slim down its code-sharing agreement with American Airlines." Alaska Air and American would be banned from booking passengers on one another's flights on routes where Virgin and American competed, as well as any routes Alaska Air might start in the future. (See December 14, 2016.)

December 6, 2016: FAA opened its new structures and materials laboratory at its William J. Hughes Technical Center in Atlantic City, New Jersey. The 10,000 square foot building with a 32-foot high ceiling cost $2 million to construct.

December 8, 2016: DOT announced a proposal to require airlines and ticket agents to disclose in advance to consumers if the carriers operating their flights allowed passengers to make voice calls using mobile wireless devices. Federal Communications Commission rules prohibited the use of mobile devices on certain radio frequencies onboard aircraft,

including for voice calls. However, the existing Federal Communications Commission rules did not cover WiFi and other means by which it might become possible to make voice calls. DOT also sought comment on whether disclosure was sufficient or whether it should simply ban voice calls on flights within, to, or from the United States.

December 13, 2016: FAA issued a cease and desist order to the City of Santa Monica to preserve the status quo while it completed its investigation of the issues in the earlier notice of investigation and the complaints filed by American Flyers and Atlantic Aviation over their letters of eviction from the Santa Monica airport. The City had 30 days to file a response. (See September 15, 2016; January 28, 2016.)

December 14, 2016: Alaska Air Group completed its $2.6 billion acquisition of Virgin America. The two airlines now planned to work with FAA to operate as a single carrier. (See December 6, 2014).

December 14, 2016: FAA awarded type validation to the Bombardier CS300 airliner.

December 16, 2016: FAA issued a new Part 23 rule, which established performance-based standards for airplanes that weighed less than 19,000 pounds with 19 or fewer seats and recognized consensus-based compliance methods for specific designs and technologies. It also added new certification standards to address general aviation loss of control accidents and in-flight icing conditions. Overall, the rule streamlined the approval process, reduced the time it took to move safety enhancing technologies for small airplanes into the marketplace, and lowered overall costs for aviation manufacturers. The rule affected airplane manufacturers, engine manufacturers, and operators of affected equipment. (See March 9, 2016; August 30, 2017.)

December 19, 2016: DOT announced it had selected 25 stakeholders representing a cross-section of airport officials, state aviation officials, regional airline executives, consultants, and academicians to serve on its working group on improving air service to small communities. DOT created the working group in accordance with Section 2303 of the FAA Extension, Safety, and Security Act of 2016 (Reauthorization Bill), P.L. 114-190. The bill established the group and directed the Secretary of Transportation to issue a report to Congress by July 2017. The group would operate completely independently from DOT. Their deliberations would be guided by the provisions of the statute, specifically those directing the group to:

- consider whether funding for essential air service program (EAS), small community air service development program (SCASDP) and airport improvement program (AIP) is sufficient, and
- identify initiatives to help increase the supply of commercially qualified pilots.

December 28, 2016: FAA approved a certificate of authorization for the Northern Plains UAS Test Site to oversee unmanned aircraft operations that go beyond the line of sight of the operator. The North Dakota test site was the first in the nation to have such beyond-line-of-sight operability. This meant the test site would be able to support the

development, testing, and evaluation of a wide range of new applications for UAS technology. (See March 10, 2016; April 9, 2018.)

2017

January 10, 2017: FAA announced that U.S. airlines would no longer be required to make a pre-boarding notification to passengers that the Samsung Galaxy Note7 phone was prohibited from transport on aircraft. The devices were still prohibited on both passenger and air cargo aircraft, but the DOT lifted the requirement that the airlines make the specific pre-boarding notification. (See October 14, 2016.)

January 13, 2017: The Department of Transportation (DOT) issued two guidance documents emphasizing federal law guaranteed all passengers the right to fly free from discrimination. The documents superseded prior non-discrimination guidance issued by DOT and were developed in collaboration with representatives of airlines and civil rights organizations. The first document, "Guidance for Airline Personnel on Nondiscrimination in Air Travel," contained example scenarios to help airline employees and contractors understand their legal obligation not to discriminate on the basis of race, color, national origin, religion, sex, or ancestry in air travel. The second document, "Passengers' Right to Fly Free from Discrimination," used a question-and-answer format to assist the flying public understand their rights when flying on commercial airlines.

January 20, 2017: Donald J. Trump took the oath of office as the President of the United States.

January 28, 2017: FAA and the City of Santa Monica, CA, announced a settlement agreement to resolve longstanding litigation over the future of Santa Monica Airport. The agreement required the city to maintain continuous and stable operation of the airport for 12 years, until December 31, 2028, and after that the city had the right to close the airport. In recognition of the city's authority to make decisions regarding land use, the agreement allowed Santa Monica to shorten the airport's single runway to 3,500 feet from its then current length of 4,973 feet. The city obligated to enter into leases with private aeronautical service providers to ensure continuity of those services until the runway was shortened and it decided to provide such services on its own. (See December 13, 2016; June 12, 2018.)

January 31, 2017: Elaine Chao became the Secretary of Transportation.

February 27, 2017: FAA announced Kenya complied with international safety standards and had been granted a Category 1 rating. A Category 1 rating meant Kenya's civil aviation authority met International Civil Aviation Organization (ICAO) standards. With the Category 1 rating, Kenyan air carriers that secure the requisite FAA and DOT authority could establish service to the United States and carry the code of U.S. carriers. FAA had not previously assessed Kenya's civil aviation authority for compliance with ICAO standards.

March 15, 2017: FAA extended the prohibition of flight operations in the Tripoli flight information region (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 operated a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except when such operators were foreign air carriers. FAA found the action necessary because of the continued hazards to persons and aircraft engaged in such flight operations. The prohibition, which was scheduled to remain in effect until March 20, 2017, would now remain in effect until March 20, 2019. (See March 20, 2015.)

April 24, 2017: Transportation Secretary Chao announced FAA had accepted the City of St. Louis's preliminary application for St. Louis Lambert International Airport to participate in the agency's Airport Privatization Pilot Program. Lambert was the second medium hub airport to join the program. On February 25, 2013, Luís Muñoz Marín Airport in Puerto Rico was the first medium hub airport to join the program. (See April 22, 1997.)

April 27, 2017: FAA published more than 200 facility maps to streamline the commercial drone authorization process. The maps depicted areas and altitudes near airports where an unmanned aerial system (UAS) could operate safely. Drone operators still needed FAA authorization to fly in those areas. This marked a key first step as FAA and industry worked together to automate the airspace authorization process. The maps helped drone operators improve the quality of their Part 107 airspace authorization requests and helped FAA process the requests more quickly. (See December 28, 2016; June 21, 2017.)

May 1, 2017: The BasicMed rule became effective, providing general aviation pilots an alternative to FAA's medical qualification process for third class medical certificates. General aviation pilots may take advantage of the regulatory relief in the BasicMed rule or opt to continue to use their FAA medical certificate. Under BasicMed, a pilot was required to complete a medical education course every two years, undergo a medical examination every four years, and comply with aircraft and operating restrictions. For example, pilots using BasicMed could not operate an aircraft with more than six people onboard and the aircraft must not weigh more than 6,000 pounds.

May 19, 2017: The U.S. Court of Appeals for the D.C. Circuit struck down a FAA rule requiring owners of large recreational drones and other model aircraft to registers their devices. FAA had announced the rule in 2015 in response to growing reports of drones flying near aircraft and airports. The Court ruled that federal law prohibited FAA from issuing rules and regulations pertaining to model aircraft. (See February 15, 2015; December 12, 2017.)

June 5, 2017: President Donald J. Trump announced plans to reform FAA by separating air traffic control from the agency into a non-profit, self-financing organization. On June 22, House of Representatives Transportation and Infrastructure Committee Chairman Bill Shuster (R-PA) introduced H.R. 2997, FAA reauthorization legislation that would separate air traffic control from FAA. On June 27, the full Transportation and

Infrastructure Committee approved the bill by a vote of 32 to 25. The bill did not go to the full House for a vote. (See February 3, 2016; September 28, 2017.)

June 9, 2017: FAA announced it had extended the participation of two airports in the Military Airport Program (MAP) – Millington Regional Jetport in Millington, TN, and Waynesville-St. Robert Regional Airport in Waynesville, MO. The program used federal funds to convert former military airports to civilian use and supports improvements to joint-use airports. The MAP funding was a set-aside of the airport improvement program (AIP) that helped increase civilian aviation capacity by financing projects such as building or rehabilitating parking lots, fuel farms, hangars, utility systems, access roads, cargo buildings, and other airfield projects at former military airports. The other airports participating in the program included: Brunswick Executive Airport, Brunswick, ME; Alexandria International Airport, Alexandria, LA; and Jose Aponte de la Torre Airport, Ceiba, PR. (See August 17, 2016; October 29, 2021.)

June 21, 2017: FAA established a new aviation rulemaking committee (ARC) to help the agency create standards for remotely identifying and tracking unmanned aircraft during operations. The rulemaking committee held its first meeting on June 21-23 in Washington, DC. The group's membership represented a diverse variety of stakeholders, including the unmanned aircraft industry, the aviation community and industry member organizations, manufacturers, researchers, and standards groups. The rulemaking committee's tasks included:

- Identify, categorize, and recommend available and emerging technologies for the remote identification and tracking of UAS.
- Identify requirements for meeting the security and public safety needs of law enforcement, homeland defense, and national security communities for remote identification and tracking.
- Evaluate the feasibility and affordability of the available technical solutions, and determine how well they address the needs of law enforcement and air traffic control communities. (See April 27, 2017; December 19, 2017.)

June 22, 2017: Bell Helicopter announced FAA certification of its new Model 505 Jet Ranger X.

June 28, 2017: FAA announced the appointment of Dan Elwell as deputy administrator. Elwell previously served as FAA assistant administrator for policy, planning and environment from 2006 to 2008. Most recently, he had been the senior advisor on aviation to U.S. Secretary of Transportation Elaine L. Chao. Before returning to public service, Elwell was president and managing partner of Elwell and Associates, an aviation consulting firm. Elwell also was senior vice president for safety, security and operations at Airlines for America and a vice president at the Aerospace Industries Association. (See July 18, 2016.)

June 29, 2017: FAA and NASA researchers dropped a 5,180-pound cross-section cut from a 68-passenger regional jet with 10 crash dummies on board from the NASA Langley Research Center's gantry. Both agencies planned to use the data from the drop to

help inform the development of the next generation of aircraft frames. (See August 28, 2013.)

July 12, 2017: FAA signed a maintenance agreement guidance (MAG) with the Civil Aviation Authority of Singapore (CASS). It provided guidance for the implementation of the previously agreed-upon maintenance implementation procedures (MIP). In cases where there were sufficient certificated facilities in both partner countries, MIPs could reduce the number of surveillance activities, free up inspector resources for the authorities, and reduce the regulatory burden on industry. There were 58 FAA-approved repair stations located in Singapore. The MAG furthered the MIP agreement signed by FAA Administrator Michael Huerta and CAAS on February 16, 2016. That agreement was the first of its kind in Asia and reduces costs by allowing the reciprocal acceptance of Singapore and the United States' surveillance of maintenance work. (See February 16, 2016; February 8, 2018.)

July 23, 2017: FAA restructured its aircraft certification service, which realigned the organization based on function. The organization was structured into five functionally-aligned divisions:

- Policy and Innovation - to improve standards and policy with a particular focus on enabling new technology and innovative business models;
- Compliance and Airworthiness - to maintain and improve the record for certifying and assuring continued airworthiness of specific products;
- System Oversight - to coordinate and integrate safety oversight for the aircraft design and manufacturing community.
- Organizational Performance - to monitor performance relative to internal metrics and leads in planning and implementing strategic changes to improve performance;
- Enterprise Operations - to provide core services including human resources, finance, information management, and workforce development support to assure effective management of resources needed to accomplish the Service's mission.

An executive director led the organization and is supported by two deputies. One deputy focused on tactical regulatory operations and the other is focused on strategic initiatives.

July 28, 2017: The U.S. Court of Appeals for the District of Columbia Circuit said FAA must take a second look at its policies in regard to airline seat sizes.

August 20, 2017: FAA's flight standards service made organizational adjustments that enabled it to operate with greater accountability, better use of resources, and more readiness to adapt to change. Organizational changes included the elimination of regional flight standards offices and the creation of four functional organizations within flight standards: air carrier safety assurance; general aviation safety assurance; safety standards; and foundational business.

August 21, 2017: Robison Helicopter announced it had received FAA type certification for its R66 Turbine Newscopter.

August 25, 2017: Hurricane Harvey, a Category 4 hurricane, made landfall near Rockport, Texas. After striking land, the storm moved over the Copano Bay and made a second landfall in Texas just north of Holiday Beach as a Category 3 hurricane. It then weakened to a tropical storm and stalled just inland, dropping very heavy rainfall and causing widespread flash flooding. On August 29, Harvey made its third and final landfall just west of Cameron, Louisiana. During the storm, more than 800 Houston area flights were canceled, including 704 at George Bush Intercontinental Airport and 123 at William P. Hobby Airport. Both airports eventually closed to traffic until storm damage had been assessed and repaired.

August 25, 2017: FAA Administrator Michael P. Huerta and local and state officials dedicated a new, 8,600-foot runway at Taos Regional Airport, New Mexico. Federal grants totaling about $25 million paid for most of the project cost.

August 28, 2017: FAA reissued a prohibition of certain flight operations in the Damascus Flight Information Region by all U.S. air carriers; U.S. commercial operators; persons exercising the privileges of an airman certificate issued by FAA, except such persons operating a U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except where the operator was a foreign air carrier. FAA found the action necessary to safeguard against continuing hazards to persons and aircraft engaged in such flight operations. (See December 30, 2014.)

August 30, 2017: The final rule overhauling airworthiness standards for general aviation airplanes published in December 2016 went into effect. The new part 23 revised standards for airplanes weighing 19,000 pounds or less and with 19 or fewer passenger seats by replacing prescriptive requirements with performance-based standards coupled with consensus-based compliance methods for specific designs and technologies. The rule also added new certification standards to address GA loss of control accidents and in-flight icing conditions. (See December 16, 2016.)

August 30, 2017: FAA issued a notice of final policy announcing it would reduce the number of radio frequencies used by flight service stations to communicate with aircraft in flight. Remote communications outlets (RCOs) in 641 locations would be decommissioned beginning in late fiscal year 2017. FAA planned to issue notices to airmen (NOTAMs) as it decommissioned each frequency. According to the notice of final policy, the current RCO network was “designed at a time when FSS personnel were handling over 10,000 radio calls per day . . . Today, they handle less than 1,000 calls per day.” In addition to lower usage, the RCO infrastructure also included “duplicate, overlapping and seldom used frequencies.” Frequencies in Alaska and those designated for emergency or military were not included.

September 4, 2017: Hurricane Irma made landfall at Barbuda as a Category 5 storm. Irma made successive landfalls at approximately on Sint Maarten, and on Ginger Island and Tortola, in the British Virgin Islands. The storm caused catastrophic damage in Barbuda, Saint Barthélemy, Saint Martin, Anguilla, and the Virgin Islands. On September 10, Irma

made landfall in Cudjoi Key, Florida, and then again on Marco Island, and at Naples, Florida.

September 13, 2017: A FAA mobile tower began operations at the Cyril E. King International Airport in St. Thomas to provide air traffic services for all of the aircraft operating in and out of Key West in support of the relief and recovery efforts in the wake of Hurricane Irma. The existing air traffic control tower at the airport was badly damaged by the storm, and controllers managed air traffic from a tent on the airfield for several days before the mobile tower arrived. FAA shuttled controllers back and forth from San Juan, Puerto Rico to St. Thomas every day to staff the facility. In addition to the air traffic controllers, FAA sent an airport certification safety inspector to St. Thomas to ensure the airport was safe before air carrier operations resumed.

September 17, 2017: A FAA mobile air traffic tower arrived at Key West International Airport, Florida, to provide air traffic services for all of the aircraft operating in and out of Key West in support of the relief and recovery efforts in the wake of Hurricane Irma. In addition to the mobile tower, FAA deployed a trailer to the site to support the tower controllers with an air-conditioned break room and lavatories. Before the tower arrived, controllers managed air traffic airport from a small tent. FAA also authorized drone operations in Florida to aid rapid damage assessment. FAA authorized over 170 drone operations for the area damaged by Hurricane Irma. The primary authorized drone operations supported power and insurance companies.

September 20, 2017: Hurricane Maria, a category 4 storm, made landfall on Puerto Rico, after causing substantial damage in the Caribbean, especially on the island of Dominica. Puerto Rico sustained significant damage from winds and floods.

September 20, 2017: SAE International and Airlines for America presented the annual Better Way Award to a team of researchers from Sandia National Laboratories, FAA, Delta Airlines, NORDAM, and NDT Solutions. They received the award in recognition of efforts for furthering the efficacy and science of nondestructive testing. The recipients include Russell Jones and David Westlund of FAA; John Bohler, Robert Hager and Alexander Melton of Delta; Stephen Neidigk, Tom Rice and Dennis Roach of Sandia; Daryl Graham and Jeff Harper of NORDAM; and Larry Culbertson of NDT Solutions.

September 21, 2017: The first known mid-air collision between a drone and an aircraft occurred when a civilian drown collided with a U.S. Army UH-60 helicopter east of Staten Island, NY. The Army helicopter sustained damage to its main rotor blade, window frame, and transmission deck. NTSB investigators recovered a motor and arm from the drone, identified as a DJI Phantom 4. On December 14, 2017, NTSB said the collision was caused by the drone operator’s failure to see the helicopter.

September 24, 2017: FAA hurricane recovery efforts began supporting more than a dozen commercial passenger flights per day at Luís Muñoz Marin International Airport in San Juan, Puerto Rico. As the agency continued to restore radars, navigational aids, and other equipment damaged during Hurricane Maria, the agency also implemented a slot

reservation system to manage the demand for ramp space at the airport and to separate safely aircraft in the air.

September 28, 2017: FAA air traffic controllers handled the landing of the first commercial air carrier flight in weeks into the Cyril E. King International Airport in St. Thomas, U.S. Virgin Islands. Working from a mobile air traffic tower FAA moved to the island the previous weekend, the controllers began managing a mix of commercial, military, relief, and recovery flights to and from the storm-ravaged island.

September 28, 2017: The House and Senate passed the Disaster Tax Relief and Airport and Airway Extension Act of 2017, which extended extend FAA's authority to operate for six months through March 30, 2018. (See June 5, 2017; October 5, 2018.)

October 3, 2017: Ohio Country (WVA) Commission Administrator Greg Stewart announced the Wheeling-Ohio County Airport manager had received a letter from FAA stating the agency would not renew airport's air traffic control tower when it expired on September 30, 2019. Two contract controllers manned the tower between 8 am and 8 pm.

October 5, 2017: Effective this date, FAA and the Department of Interior agreed to restrict drone flights up to 400 feet within the lateral boundaries of these sites: Statue of Liberty National Monument, New York, NY; Boston National Historical Park (U.S.S. Constitution), Boston, MA; Independence National Historical Park, Philadelphia, PA; Folsom Dam; Folsom, CA; Glen Canyon Dam; Lake Powell, AZ; Grand Coulee Dam; Grand Coulee, WA; Hoover Dam; Boulder City, NV; Jefferson National Expansion Memorial; St. Louis, MO; Mount Rushmore National Memorial; Keystone, SD; and Shasta Dam; Shasta Lake, CA. (See June 20, 2014; December 18, 2017.)

October 3, 2017: In a speech on the House Floor, Transportation and Infrastructure Committee Chairman Bill Shuster (R-PA) announced his air traffic control privatization bill would ensure that the new private, non-profit air traffic control corporation would not receive any appropriations or support from the federal government. The proposal would ensure general aviation users would not have to pay user fees, would be able to nominate two members to the new organization's board, and that the general aviation community would not have any airspace restrictions. (See June 5, 2017.)

October 5, 2017: Tetra Tech, Inc., announced it had received a $356 million contract to provide engineering and technical support services to FAA. Under the five-year navigation technical assistance contract II (NAVTAC II), Tetra Tech would support FAA in the planning, research, development, implementation, maintenance, and decommissioning of FAA's navigation, landing, and lighting systems.

October 18, 2017: CNN reported it had received a Part 107 waiver from FAA allowing it to fly a small UAS over groups of people – the first FAA waiver of its kind. (See June 21, 2017; October 25, 2017.)

October 25, 2017: President Donald Trump directed Secretary of Transportation Elaine Chao to launch an initiative that would safely test and validate advanced drone operations in partnership with state and local governments in select jurisdictions. The initiative – the unmanned aircraft systems integration pilot program – would:

- Give state, local and tribal governments a voice and a stake in the development of a federal regulatory framework for aviation;
- Allow companies and governments to operate drones in ways currently restricted by FAA regulations – including beyond-visual-line-of-sight flights, nighttime operations and flights over people; and
- Collect essential operational data on expanded UAS operations and community participation. (See October 18, 2017; November 8, 2017; October 30, 2020.)

October 26, 2017: A new runway opened at the Bozeman Yellowstone International Airport; the first new runway opened in the state in 30 years.

October 27, 2017: FAA and the Civil Aviation Administration of China (CAAC) announced the signing of an implementing agreement under the U.S.-China Bilateral Aviation Safety Agreement recognizing each other's regulatory systems with respect to the airworthiness of aviation products and articles. The agreement allowed both FAA and the CAAC to submit applications for validation for all categories of aviation products and addresses globalization challenges such as complex business models separating design and production. (See April 6, 2004; June 3, 2020.)

October 30, 2017: Workers at Alaska's Utqiagvik (formerly Barrow) airport removed a seal estimated to weigh 450 pounds from the runway. Workers from North Slope Animal Control used a sled to haul the seal off the runway. Alaska's Department of Transportation joined the fun by issuing a warning to pilots of "low sealings" at the airport.

November 8, 2017: FAA issued information in the *Federal Register* on the UAS integration pilot program and providing instructions on how to apply to participate in the program. Those interested had to submit to FAA a notice of intent by November 28. (See October 25, 2017.)

November 16, 2017: U.S. Transportation Secretary Chao announced plans to create a pilot program, called "Forces to Flyers," to help train and certify military veterans as commercial airline pilots.

November 16, 2017: Airbus announced that both the European Safety Agency and FAA type certificated its A350-1000.

November 17, 2017: Effective this date, FAA adopted a new noise standard for certain newly certificated subsonic jet airplanes and subsonic transport category large airplanes. The noise standard, known as Stage 5, applied to any person submitting an application for a new airplane type design with a maximum certificated takeoff weight of 121,254 pounds (55,000 kg) or more on or after December 31, 2017; or with maximum

certificated takeoff weight of less than 121,254 pounds (55,000 kg) on or after December 31, 2020. As a result of the rule, new large airplane type designs in the subsonic jet airplanes and subsonic transport category will operate at least 7 decibels (dBs) quieter than airplanes in the current fleet. (See January 14, 2016.)

December 5, 2017: Secretary of Transportation Elaine Chao withdrew an Obama Administration proposal to require airlines and ticket agents to disclose fees for carry-on and checked baggage from the beginning of a fare inquiry. Chao also ended a rulemaking process begun in 2011 that would have required airlines to submit detailed data on ancillary fee revenue to DOT four times per year. (See January 24, 2012.)

December 7, 2017: FAA released a test version of a federal pilot records database, which provided airlines federal information on potential pilot hires. This allowed airlines to check the qualifications and backgrounds of pilots before they were hired. The database will eventually expand to include airline and state driving records. (See March 30, 2020.)

December 8, 2017: President Trump signed legislation providing appropriations to fund the government for two weeks through December 22.

December 12, 2017: President Trump signed the 2018 National Defense Authorization Act, which among other things, restored FAA's right to require small UAS to be registered and marked. (See May 19, 2017.)

December 13, 2017: FAA announced the United States and European Union (EU) signed amendments to two US-EU agreements that would expand areas for joint efforts on aviation safety and air traffic management harmonization. An amendment to the U.S-EU aviation safety agreement enabled FAA and the EU to finalize arrangements for reciprocal acceptance of approvals associated with flight simulator training devices and pilot licensing. It also allowed for future collaboration in aircraft operations and air traffic safety oversight. A second amendment expanded collaboration in the area of air traffic management modernization.

December 18, 2017: FAA announced it would ban UAS flights over seven Department of Energy facilities, effective December 29. The ban included Washington State's Hanford Site, Idaho National Laboratory, New Mexico's Los Alamos National Laboratory, South Carolina's Savannah River National Laboratory, Texas' Pantex Site, and Tennessee's Y-12 National Security Site and Oak Ridge National Laboratory. (See October 5, 2017.)

December 19, 2017: The Unmanned Aircraft Systems (UAS) Identification and Tracking ARC chartered in June submitted its report and recommendations to the agency on technologies available to identify and track drones in flight and other associated issues. (See June 21, 2017; May 9, 2018; December 26, 2019.) Those recommendations included:

- FAA should consider two methods for remote ID and tracking of drones: direct broadcast (transmitting data in one direction only with no specific destination or

recipient) and network publishing (transmitting data to an internet service or group of services).
- The data collected must include a unique identifier for unmanned aircraft, tracking information, and drone owner and remote pilot identification.
- FAA should promote fast-tracked development of industry standards while a final remote ID and tracking rule is developed.
- FAA should implement a rule in three stages, with an ultimate goal that all drones manufactured or sold within the United States that comply with the rule must be so labeled.
- FAA should coordinate any ID and tracking system with the existing air traffic control system and ensure it does not substantially increase workloads.
- FAA should exempt drones operating under air traffic control or those operating under the agency's discretion (public aircraft operations, security or defense operations, or with a waiver).
- FAA should review privacy considerations, in consultation with privacy experts and other federal agencies, including developing a secure system that allows for segmented access to the ID and tracking information. Within the system, only persons authorized by FAA (e.g., law enforcement officials, airspace management officials, etc.) would be able to access personally identifiable information.

2018

January 7, 2018: Michael Huerta's 5-year term as FAA Administrator ended. Deputy Administrator Daniel Elwell became the agency's acting administrator. (See March 27, 2012.)

January 11, 2018: FAA approved an operating license for Alaska Airlines and Virgin American to operate as a single airline. Alaska Airlines had announced the purchase of Virgin America in April 2016.

January 15, 2018: A number of airlines, American, Alaska, Hawaiian, Delta, United, and Southwest, prohibited passengers to fly with smart bags that contained nonremovable lithium batteries. The policy change applied to checked- and carry-on bags that used lithium batteries to power high-tech features such as a USB charging station and a location tracker. Other airlines followed suit.

January 19, 2018: FAA approved Boeing's 787-10 Dreamliner for commercial use. (See December 2, 2014; August 28, 2020.)

February 6, 2018: FAA announced it had signed an enhanced Bilateral Aviation Safety Agreement Implementation Procedures for Airworthiness (BASA-IPA) with the Civil Aviation Authority of Singapore (CAAS). The BASA-IPA provided for the mutual recognition of airworthiness of civil aeronautical products, and included an expanded scope of modifications and repairs allowed beyond cabin interiors. These enhancements reduced duplicate certification activities for design approvals issued to air operators and

aeronautical design industries from both the U.S. and Singapore, resulting in significant time and cost savings. (See July 12, 2017.)

February 16, 2018: FAA certificated the Boeing 737 MAX-9 jet for commercial operations. (See October 29, 2018.)

February 28, 2018: The Brazilian Civil Aviation Agency, FAA, and the European Aviation Safety Agency certified the Embraer E190-E2.

March 1, 2018: *Aviation Week* announced its 62nd Annual Laureate Award winners. The FAA/Industry Commercial Safety Aviation Safety Team/Aviation Safety Information Analysis and Sharing Initiative won the commercial safety award.

March 22, 2018: FAA published an emergency order regarding “doors off” and "open-door" operations. The agency issued the order to all operators and pilots of flights for compensation or hire with the doors opened or removed or using aircraft registered in the United States for doors off flights. It prohibited the use of supplemental passenger restraint systems that could not be released quickly in an emergency in doors off flight operations. The order also prohibited passenger-carrying doors off flight operations unless the passengers were at all times properly secured using FAA approved restraints.

March 30, 2018: The Federal Communications Commission (FCC) gave formal approval to a plan by SpaceX to build a global broadband network using satellites. The FCC said the decision was “the first approval of a US.-licensed satellite constellation to provide broadband services using a new generation of low-Earth orbit satellite technologies.” (See September 1, 2016; November 15, 2020.)

April 2, 2018: NASA announced it had awarded Lockheed Martin a $247.5 million contract to design and build a new X-plane, known as the Low-Boom Flight Demonstrator (LBFD), which may soar silently over the U.S. by 2022.

April 9, 2018: FAA granted a beyond visual line of sight (BVLOS) waiver to Xcel Energy, the first such waiver for utility inspection operations. Xcel planned to operate a small BVLOS helicopter weighing less than 55 pounds within a designated area approximately 20 miles north of Denver International Airport. On September 12, Xcel launched its first such drone to inspect electric power lines near Fort St. Vrain Generating Station in Platteville, Colorado. (See December 28, 2016; August 20, 2018.)

April 10, 2018: Bye Aerospace’s prototype Sun Flyer 2, an electrically powered fixed-wing aircraft, made its first flight. (See April 26, 2018.)

April 17, 2018: Southwest flight 1380, A Boeing 737, en route from New York LaGuardia Airport to Dallas Love Field, suffered an engine failure and made an emergency landing at Philadelphia International Airport. One passenger died when an explosion involving the left engine blew out a window and caused the cabin to

depressurize. The passenger fatality was the first on a U.S. airline since 2009. (See February 12, 2009.)

April 20, 2018: FAA issued an emergency airworthiness directive (EAD) that required operators to inspect fan blades on certain CFM56-7B engines within 20 days. The agency based the directive on a CFM International Service Bulletin issued on this date and on information gathered from the investigation of the Southwest Airlines engine failure. Engines with more than 30,000 total cycles from new had to complete inspections within 20 days. The engine manufacturer estimated the corrective action affected 352 engines in the U.S. and 681 engines worldwide.

April 26, 2018: FAA issued an airworthiness certificate to Slovenia-based light aircraft maker Pipistrel for its Alpha Electro all-electric plane. The two-seat electric trainer, tailored to the needs of flight schools, had an all-composite body with electric motor and 20 kWh battery packs. (See April 10, 2018; June 6, 2019.)

May 9, 2018: Secretary of Transportation Elaine L. Chao announced DOT had selected 10 participants for the Unmanned Aircraft Systems (UAS) Integration Pilot Program. First announced in October 2017, the initiative partnered FAA with local, state, and tribal governments, which then partnered with private sector participants to safely explore the further integration of drone operations. (See December 19, 2017; July 20, 2018.) The 10 selectees included:

- Choctaw Nation of Oklahoma, Durant, OK
- City of San Diego, CA
- Innovation and Entrepreneurship Investment Authority, Herndon, VA
- Kansas Department of Transportation, Topeka, KS
- Lee County Mosquito Control District, Ft. Myers, FL
- Memphis-Shelby County Airport Authority, Memphis, TN
- North Carolina Department of Transportation, Raleigh, NC
- North Dakota Department of Transportation, Bismarck, ND
- City of Reno, NV
- University of Alaska-Fairbanks, Fairbanks, AK

May 11, 2018: The DC Circuit Court of Appeals upheld a lower-court ruling in favor of the Transportation Department's decision to approve flights into the U.S. by Norwegian Air International. Brought by four unions representing 135,000 aviation workers, the appellate case centered on language in so-called Open Skies agreements the U.S. negotiated with other countries. (See December 2, 2016.)

May 11, 2018: The United States and the United Arab Emirates resolved a years-old disagreement over alleged Emirati government subsidies to its airlines and accusations of unfair competition in the U.S. Under the deal, Dubai-based Emirates and Abu Dhabi-based Etihad Airways agreed to voluntarily publish annual financial statements consistent with international accounting standards. The major U.S. carriers – Delta Air Lines, American Airlines, and United Airlines – had long alleged those financials reports obscured billions in hidden subsidies by the government. The more sensitive issue related

to flights operated by Emirates that departed from the UAE, made stops in a second nation, and then continued on to the United States was not included in the deal. Emirates operated two such routes, known in the industry as "Fifth Freedom" flights, with one going from Dubai to Athens to Newark and the other going from Dubai to Milan to New York. The U.S. airlines had sought a binding commitment from the Gulf airlines that they would not start additional Fifth Freedom flights. Instead, they got a letter in which the Emiratis stated they currently had no plans to add more such flights. (See December 9, 2015.)

May 15, 2018: The Department of Transportation issued a statement instructing U.S. airlines to continue allowing the transport of the most common service animals. The Department said it "wants to ensure that individuals with disabilities can continue using their service animals while also helping to ensure that the fraudulent use of other animals not qualified as service animals is deterred." The Department said it planned to ask for public comment about amending its existing regulations. (See October 5, 2018.)

May 24, 2018: President Donald Trump signed a policy directive to pursue sweeping regulatory reforms the administration said would encourage commercial space innovation. He gave Transportation Secretary Elaine Chao until February 2019 to review space launch and re-entry licensing process and make changes where the regulatory regime proved inefficient, costly, and burdensome to private enterprise. It specified areas of the licensing process that should receive specific attention during the reform process, including the possibility of requiring just one license for all forms of commercial space launch and re-entry. (See August 1, 2016.)

May 25, 2018: A three-judge panel of the DC Circuit Court of Appeals held that "the FAA can require an insulin-dependent diabetic to submit to expensive and invasive glucose-monitoring to establish that he is medically fit to fly commercial aircraft." (See June 22, 2020.)

May 29, 2018: RTCA's umbrella charter agreement with the FAA as a federal advisory committee expired. As a result, FAA reestablished its Drone Advisory Committee and the NextGen Advisory Committee as separate entities with their own charters. RTCA had served as a federal advisory committee since 1976. (See September 16, 2016.)

June 12, 2018: The NBAA filed a petition to overturn a controversial settlement agreement between the FAA and Santa Monica, California, concerning the city's airport. The subsequent ruling by the Court of Appeals for the District of Columbia Circuit did not address the merits of the filing by the NBAA, but rather denied the petition on procedural grounds. (See January 28, 2017.)

June 18, 2018: FAA approved Boeing's design for the 777X, which featured retractable wings. The design expanded the wingspan to 235 feet, which was too wide for most airports. As a result, Boeing designed the new wings so they could retract and reduce the span to 212 feet – small enough to continue using terminals designed for older 777s. FAA added special conditions to its approval to ensure the plane's safety, such as lockouts and

alarms to eliminate any chance of an aircraft attempting to take off while the wingtips were stowed or the wingtips being inadvertently folded in flight.

June 22, 2018: FAA and the European Commission signed an agreement – called Bilateral Oversight Board Decision 0008 (BOB 0008) – which reduced involvement of the validating authority and opened the door to lower the fees EASA charged U.S. manufacturers. The agreement also permitted the agencies to approve basic aircraft type certifications with minimal scrutiny.

June 23, 2018: FAA began operations in the new air traffic control tower at Sarasota-Bradenton International Airport. FAA and the Sarasota Manatee Airport Authority (SMAA) built the new, 525 square-foot tower under a unique agreement. The FAA funded the new tower design and engineering and electronic equipment. Agency technicians and engineers installed the electronics and maintained the equipment. SMAA funded, constructed, and owned the new tower. SMAA maintained the facility, which included a 9,000 square foot base building that housed equipment, administrative offices, and training rooms. FAA dedicated the new tower on September 10, 2018.

June 26, 2018: FAA Acting Administrator Dan Elwell signed a memorandum of agreement (MOA) with the Department of Defense to guide joint efforts on ADS-B Out implementation. Secretary of the Air Force signed the agreement on July 17. FAA required aircraft that fly in most U.S. controlled airspace to be equipped with a Version 2 ADS-B Out system as of 2020. Under the MOA, the agencies "are jointly pursuing a post-2020 accommodation strategy that assures the Defense Department the same level of access to the national airspace system that it continues to have prior to the mandate." "The accommodations will address those Defense Department aircraft that will not be equipped with ADS-B Out by 2020, as well as certain national security mission sets conducted by aircraft that are ADS-B Out equipped." Some military aircraft may not be equipped until 2029. (See September 19, 2016; October 12, 2018.)

July 20, 2018: In a policy statement, FAA said it had exclusive authority over aircraft operations, including unmanned aircraft systems (UAS), within navigable airspace, although it allowed state and local governments to regulate landing sites. Flight paths, altitudes, or operational bans within navigable airspace – defined by federal regulation as airspace at or above prescribed minimum flight altitudes, including airspace needed for safe takeoff and landing – remained within FAA's purview. (See May 9, 2018; October 1, 2018.)

July 20, 2018: FAA issued Gulfstream Aerospace a production certificate for its G500 twin-engine business jet.

August 10, 2018: A suicidal employee of Horizon Air stole an Air Bombardier Q400 turboprop at Seattle's SeaTac International airport and crashed it on Ketron Island.

August 17, 2018: FAA granted Spaceport Colorado its operator license making it the 11th spaceport in the country. Located at Front Range Airport, the new spaceport could

accommodate space planes that take off like a normal jet and then engage rockets. The airport said it planned to change its name to Colorado Air and Space Port. (See June 30, 2015; May 5, 2020.)

August 20, 2018: In a reorganization of its flight standards organization, FAA moved all flight standards elements under four functionally aligned areas: Office of Air Carrier Safety Assurance, Office of General Aviation Safety Assurance, Office of Safety Standards, and Office of Foundational Business.

August 20, 2018: General Atomics Aeronautical Systems Inc. flew the first large drone approved by the FAA to fly beyond the line of sight of the pilot and without using a manned airplane to observe the flight. The flight took place at the Northern Plains Test Site in Grand Forks, North Dakota. (See April 9, 2018; October 16, 2018.)

September 4, 2018: FAA granted Boeing's KC-46 mid-air refueling tank a supplemental type certificate.

September 9, 2018: FAA issued a notice to airmen updating guidance advising U.S. aircraft operators to exercise caution when flying within or adjacent to the Tehran Flight Information Region (FIR) because of military activities in the Middle East region. Among the threats to civil aviation, FAA listed Russian air-launched cruise missile attacks overflying Iran toward targets in Syria and naval missiles launched from the Caspian Sea. The agency also warned of the potential of Iranian surface-to-surface missile launches from western Iran, targeting Islamic State positions in the region, as well as Iranian GPS jammers. (See June 21, 2019.)

September 18, 2018: In dual order extensions, the FAA continued restrictions dating to its 1968 High-Density Rule (HDR) that limited arrivals and departures at the New York's LaGuardia and John F. Kennedy International airports during peak demand periods to reduce congestion. With the phase-out of the HDR in 2007, the FAA ordered temporary limits at LGA and JFK that periodically had been extended, most recently in 2016 at both airports.

September 18, 2018: FAA extended the prohibition against certain flight operations in the Pyongyang Flight Information Region (SFAR 79) to September 18, 2020, because of the hazardous situation created by North Korean military capabilities and activities. (See September 8, 2020.)

September 21, 2018: FAA signed separate agreements with Brazil's Agência Nacional de Aviação Civil (ANAC) and Transport Canada Civil Aviation (TCCA), which made it easier to approve each country's aircraft and aviation products. The agency signed the first FAA-ANAC Implementation Procedures Agreement (IPA) in September 2006, with two amendments thereafter. The latest revision expanded the IPA to include Part 23 (general aviation aircraft) as well as risk based decision criteria for the U.S. and Brazil to validate each other's aviation products. FAA and TCCA signed a Shared Surveillance Management Plan that defined the process by which they recognized each other's

surveillance of manufacturers and their suppliers in the United States and Canada. The Plan ensured manufacturers, certificate holders, production approval holders, and suppliers complied with the responsible countries' applicable regulatory requirements.

September 28, 2018: FAA received a NASA-developed technology called flight deck interval management (FIM). FIM operated with terminal spacing and sequencing technology to help air traffic controllers manage aircraft arrivals and pilots determine appropriate flight speeds. Using the system, controllers received visual aids with trajectory information they used to guide pilots. The pilots received the information and enter their assessments into the FIM. The technology transfer was part of Air Traffic Management Technology Demonstration 1, a government-industry effort aiming to identify new technologies to help airports reduce delays in arrivals.

September 28, 2018: FAA announced it would automatically refer cases of drone interference with first responders for legal enforcement action.

October 1, 2018: FAA announced nine new partners to its Low Altitude Authorization and Notification Capability (LAANC) initiative, a collaboration between the FAA and the drone industry that provided near real-time processing of airspace authorizations for Part 107 drone operators nationwide who fly in controlled airspace. The new partners included: Aeronyde, Airbus, AiRXOS, Altitude Angel, Converge, DJI, KittyHawk, UASidekick and Unifly. The nine joined five companies – AirMap, Harris Corp., Project Wing, Skyward and Thales Group. The companies already met the technical and legal requirements to provide LAANC Services. (See July 23, 2019.)

October 5, 2018: President Trump signed a five-year FAA reauthorization bill (PL 115–254), which provided one of the longest reauthorization periods for the agency since the 1980s. Among other things, the legislation required FAA to: establish minimum standards for seat size and pitch on commercial airliners; prohibit airlines from bumping passengers once they were on board; banned the placement of live animals in storage bins and set policies for support animals in the cabin (See May 15, 2018; August 8, 2019.); prohibited customers from using cell phones in flight; required FAA to establish an aviation consumer advocate and create an Office of Spaceports; and determine whether airlines provided adequate lavatory access. The bill also required airlines to provide more information to customers about the assistance they provided in event of weather delays. It established a task force to study in-flight sexual assaults and required most commercial airlines to install a second security barrier – a wire mesh gate – to guard against cockpit intrusions. In addition, it gave FAA, the National Telecommunications and Information Administration, and the Federal Communications Commission 270 days to make a determination on what spectrum drones could use to communicate and report its finding to Congress. (See September 28, 2017.)

October 12, 2018: FAA announced a relaunch of its $500 ADS-B rebate program effective immediately and ending October 11, 2019. The Agency made $4,900,000 available under the program, which would fund 9,792 ADS-B Out installations. Under the previous rebate program, which ran from September 19, 2016, to September 18, 2017,

the FAA issued more than 10,000 rebate payments. (See June 26, 2018; October 11, 2019.)

October 16, 2018: FAA announced it would provide $40.9 million to Piedmont Triad International Airport toward building a 180-foot air traffic control tower. When completed, the tower would accommodate up to eight positions for air traffic controllers in a 550-square-foot tower cab. It would replace a 90-foot-tall tower that had been in operation since 1974. A 15,650-square-foot base building would anchor the new tower, which would house the terminal radar approach control with up to 10 radar positions for air traffic controllers. The base building also would include administrative offices and a training classroom. The FAA planned to begin construction in early 2019 and commission the facility in early 2022.

October 16, 2018: Avitas Systems, a GE venture, received the first FAA approval to fly a 55-plus-pound UAS beyond the visual line of sight with no spotter for commercial purposes. Operating on Shell oil facilities in the Permian Basin in part of Loving County, Texas, the company used ground-based radar as its primary enabling technology. (See August 20, 2018; January 8, 2019.)

October 18, 2018: FAA announced U.S. airlines and code-share partners could resume flights at three Ukrainian airports and over parts of the Black Sea, citing improved safety and security in parts of Ukraine. The agency had barred flights over the war zones of the Crimea and Ukraine in April 2014, and expanded prohibitions after Malaysia Airlines Flight MH17 was shot down while it flew over eastern Ukraine, killing nearly 300 people on board. FAA said it would maintain prohibitions on flights over the Crimea and parts of Ukraine. It would, however, allow takeoffs and landings at Kharkiv, Dnipropetrovsk, and Zaporizhzhia international airports in Ukraine. (See July 17, 2014.)

October 26, 2018: FAA, in cooperation with DoD and the U.S. Coast Guard, restricted drone flights near U.S. Navy and Coast Guard vessels operating in the vicinity of Naval Base Kitsap in Washington State and Naval Submarine Base Kings Bay in Georgia. Drone operations were required to maintain a distance of at least 3,000 feet laterally and 1,000 feet vertically from these vessels. FAA had earlier imposed restrictions on drone flights near other Department of Defense and Justice facilities.

October 29, 2018: Indonesian Lion Air Flight JT610, a Boeing 737 Max 8 jet, crashed shortly after takeoff. None of the 189 people onboard survived the crash. After recovering the plane's flight data recorder, the Indonesian National Transportation Safety Committee indicated the Lion Air jet experienced erroneous input from one of its angle of attack sensors. On November 7, Boeing issued a bulletin to airlines worldwide warning of erroneous readings from flight-control software on the Max 8. FAA also issued an emergency notice to all operators of Max 8 and 9 planes. The agency warned airlines that erroneous sensor inputs like the one that came into play in the October 29 crash "could cause the flight crew to have difficulty controlling the airplane," leading to "possible impact with terrain." (See February 16, 2018; March 10, 2019.)

November 1, 2018: A new airline, California Pacific, began operations with flights from Carlsbad, CA, to San Jose, CA, and Reno, NV. It expanded flights to Las Vegas, NV, and Phoenix, NV, on November 15. Its fleet included four, 50-seat Embraer SA E145 jets. FAA granted its operating certificate in May 2018.
November 7, 2018: Bombardier Business Aircraft announced its Global 7500 aircraft had received FAA type certification.

November 9, 2018: In the aftermath of an incapacitated controller found in the Las Vegas airport tower on November 7, the FAA issued a new controller staffing policy. The agency said major airport towers no longer would be able to combine controller responsibilities to one position prior to midnight and 90 minutes after the start of the shift, allowing another controller to go on break.

November 14, 2018: The Sioux County Iowa officials dedicated the new Sioux County Regional Airport near Maurice, Iowa.

November 15, 2018: Department of Transportation Secretary Elaine Chao announced she had reconstituted the Aviation Consumer Protection Advisory Committee (ACPAC) and established the National In-Flight Sexual Misconduct Task Force as an ACPAC Subcommittee. The task force would review practices, protocols, and requirements of U.S. airlines in responding to and reporting allegations of sexual misconduct by passengers on board commercial aircraft. It would also provide recommendations on best practices relating to training, reporting, and data collection. (See October 18, 2016.)

November 30, 2018: FAA announced the U.S. and Argentina signed a new bilateral aviation safety agreement during the G20 summit in Buenos Aires. The agreement replaced an accord the two countries signed in 1989, and allowed the FAA and Argentina's National Civil Aviation Administration (ANAC) to increase collaboration on airworthiness certification of civil aviation products and in the areas of design, production, flight operations, environmental certification and aircraft maintenance. Paired with a new Implementation Procedures for Airworthiness understanding, the agreement permitted ANAC to work on behalf of the U.S. in Argentina, reducing duplication of certification activities for design approvals issued to operators and manufacturers, FAA said. FAA expected the new bilateral agreement to take effect in 2020.

December 4, 2018: FAA opened its new Atlanta Flight Operations Facility at Cobb County International Airport in Kennesaw, Georgia. The 32,050-square-foot facility, accommodated six King Air 300 aircraft and included shop space for aircraft maintenance and repair and space to accommodate 26 FAA employees.

December 10, 2018: FAA extended a ban on flights over Syria until 2020, citing the "threat to civil aviation from the multifaceted conflict and extremist threat, and militant activity." The prohibition originally issued in December 2014, applied to all U.S. carriers and commercial operators, as well as anyone flying with a FAA-issued airman certificate or operating a U.S.-registered civil aircraft, except when flown by a foreign carrier. While the ban did not extend to foreign carriers, Transportation Department codeshare

authorizations forbid foreign carriers using a U.S. partner's code from operating in prohibited airspace. (See August 18, 2014.)

December 13, 2018: Virgin Galactic launched a spacecraft more than 50 miles high, reaching FAA's definition of space. The spacecraft reached a height of 51.4 miles, hitting a top speed of Mach 2.9, before descending and returning the company's space port in Mojave, CA. Although it did not reach orbit, the flight became the first launch of a spacecraft from U.S. soil with humans on board to reach the edge of space since the Space Shuttle was retired in 2011. (See January 10, 2014.)
December 18, 2018: India's Directorate General of Civil Aviation announced that after a FAA audit completed in July 2018, India had retained its Category 1 aviation safety rating. FAA conducted the audit to confirm India's adherence to ICAO standards. (See April 8, 2015.)

December 22, 2018: Because of a lack of 2019 appropriations funding, the FAA, among other agencies, furloughed employees. Many employees in essential positions, such as air traffic controllers, remained on the job, but without pay. The furlough ended on January 28, when the President signed a continuing resolution providing agencies affected by the lack of an appropriation, funding for three weeks. (See October 1, 2013.)

2019

January 8, 2019: State Farm announced it received a long-term FAA waiver to fly drones beyond the operator's visual line of sight (BVLOS) and over people. FAA granted State Farm the first such national waiver to operate drones for damage-assessment flights after natural disasters. The waiver would expire in November 2022. The company had received previous waivers to fly drones BVLOS and over people following Hurricanes Florence in September and Michael in October 2018. (See October 16, 2018; July 31, 2019.)

January 18, 2019: Effective this date, FAA recalled 2,200 furloughed aviation safety inspectors and engineers back to work.

January 25, 2019: President Donald Trump signed a measure to end the 35-day-long partial federal government shutdown.

February 14, 2019: FAA announced Vietnam complied with international safety standards and had been granted a Category 1 rating under the agency's International Aviation Safety Assessment (IASA) program. FAA based the Category 1 status on its August 2018 assessment of the safety oversight provided by the Civil Aviation Administration of Vietnam. A Category 1 rating means Vietnam's civil aviation authority met International Civil Aviation Organization (ICAO) standards for personnel licensing, operations, and airworthiness. (See May 13, 2019.)

February 23, 2019: Effective this date, FAA required drone operators to display their aircraft registration numbers on the outside of the drone.

February 23, 2019: An Atlas Air Boeing 767 cargo jet operated on behalf of Amazon Air crashed east of Houston, TX, killing all three people onboard.

February 27, 2019: The Department of Transportation issued an interim final rule prohibiting passenger airlines from carrying rechargeable lithium-ion batteries as cargo, because of the potential for causing uncontrollable fire in cargo holds. The rule also required lithium-ion cells and batteries to be shipped at not more than a 30 percent state of charge when carried aboard cargo-only aircraft.

March 4, 2019: Commercial service began at Paine Field in Everett, WA, as Alaska Airlines began operations from the airport's new passenger terminal. The airport, also called the Snohomish Country Airport, had previously been used only for Boeing's test flights. FAA had approved the start of commercial flight at the airport on February 20, 2019.

March 8, 2019: FAA and European Union (EU) officials signed two decisions associated with the Airworthiness Annex of the US/EU Safety Agreement. The Bilateral Oversight Board (BOB) Decision 0008-0001 (PDF) enabled reductions of the EU's European Aviation Safety Agency (EASA) fees for validation of U.S. aerospace products. The decision covered simple design modifications such as basic supplemental type certificates. The second decision, BOB Decision 0009, amended the US/EU Safety Agreement to remove country specific limitations associated with aeronautical products and parts eligible for import into the United States. This amendment treated all EU Member States equally under the agreement and recognized EASA's oversight and standardization processes throughout their jurisdiction.

March 10, 2019: A Boeing 737 Max 8 operated by Ethiopian Airlines crashed shortly after takeoff killing all 157 people onboard. A Lion Air Boeing 737 Max 8 had crashed on October 29, 2018, killing all 189 people onboard. China immediately ordered Chinese airlines to ground all 96 Boeing 737 MAX 8 aircraft used on domestic flights. Twenty-two airlines and several countries followed China's lead in grounding the aircraft. On March 13, FAA grounded the Boeing 737 Max when it became aware of new satellite data suggesting a link between the Ethiopian air crash and the earlier crash in Indonesia. Canada had grounded the aircraft earlier in the day. (See October 29, 2018; March 25, 2019.)

March 25, 2019: Secretary of Transportation Elaine Chow announced plans to establish a committee of experts to review how FAA certified the Boeing 737 Max 9. She had asked the Department's Inspector General on March 19 to audit the FAA's certification process.

April 15, 2019: The Embraer E195-E2 jet received simultaneous type certification from three major regulatory authorities: Brazilian Civil Aviation Agency; FAA; and the European Aviation Safety Agency. (See March 10, 2019; October 11, 2019.)

April 18, 2019: FAA grounded the fleet of Cirrus Vision SF50 light aircraft because of issues with the aircraft's angle of attack sensor. The agency issued an emergency

airworthiness directive following three incidents on Cirrus SF50 aircraft in which the stall warning and protection system or electronic stability and protection system engaged even though there was sufficient airspeed and proper angle of attack for normal flight. Before further flight, the aircraft's angle of attack sensor had to be replaced with an improved sensor.

April 19, 2019: A custom-made drone flew a human kidney 2.8 miles to a nearby hospital in Baltimore in the world's first drone delivery of a human organ. The nighttime drone flight followed a three-year collaboration among doctors, researchers, engineers, and aviation experts at the University of Maryland Medical Center and the Living Legacy Foundation of Maryland, a Baltimore-based organization that oversees organ procurement in the state.

April 23, 2019: Department of Transportation Secretary Elaine L. Chao announced FAA had awarded the first air carrier certification to a drone delivery company, Wing Aviation. The certification paved the way for Wing Aviation to begin commercial package delivery in Blacksburg, VA. Wing partnered with the Mid-Atlantic Aviation Partnership and Virginia Tech, as one of the participants in the Department's Unmanned Aircraft Systems Integration Pilot Program.

April 25, 2019: Local and state officials officially opened the new Greensburg Municipal Airport in Greensburg, Kansas.

April 30, 2019: Airports Council International-North America (ACI-NA) and the Association for Unmanned Vehicle Systems International (AUVSI) announced the creation of a Blue Ribbon Task Force on UAS Mitigation at Airports comprised of representatives from associations representing airports and unmanned aircraft systems to address the challenge of drone incursions at U.S. airports. Former FAA Administrator Michael Huerta and Deborah Flint, CEO of Los Angeles World Airports, served as the task force co-chairs. The task force hoped to inform UAS mitigation efforts at other facilities, including landmarks, stadiums, prisons, and military bases.

May 13, 2019: FAA announced the Republic of Costa Rica did not comply with ICAO safety standards and had been assigned a Category 2 rating based on a reassessment of the country's civil aviation authority. A Category 2 rating meant the country either lacked laws or regulations necessary to oversee air carriers in accordance with minimum international standards, or its civil aviation authority – a body equivalent to the FAA for aviation safety matters – was deficient in one or more areas, such as technical expertise, trained personnel, record-keeping, or inspection procedures. In 1996, FAA assigned Costa Rica an initial Category 1 rating. FAA conducted an in-country reassessment of Costa Rica under the IASA program in October 2018. (See February 14, 2019; November 11, 2019.)

May 15, 2019: With the approval of the Secretary of State and in close coordination with the Acting Secretary of Homeland Security, Secretary of Transportation Chao issued an order suspending air service between the United States and Venezuela. The Acting

Secretary of Homeland Security requested the action based on an assessment of security conditions in Venezuela.

May 31, 2019: FAA announced a collaborative effort with the Air Force to counter the national aircrew shortage. Through this effort, the FAA and Air Force agreed to explore options and establish goals to address aviation workforce issues, with a particular focus on cross-agency collaboration. The work of this collaboration will identify and support solutions based in the following areas:

- Priming the pipeline: What can be done to attract new people to critical aviation professions?
- Pathways to proficiency: How can efficiency in training be maximized?
- Productive partnerships: How can we promote productive partnerships with government, Department of Defense, academia and industry?

June 5, 2019: FAA broke ground for a new air traffic control tower and terminal radar approach control facility at Piedmont Triad International Airport in Greensboro, NC. FAA planned to invest $61 million in the new facility. The tower would be 180 feet tall, topped by a 550-square-foot tower cab to accommodate up to eight positions for air traffic controllers. The 15,650-square-foot base building would anchor the new tower and house the terminal radar approach control (TRACON) facility. FAA expected to commission the facility in 2020.

June 5, 2019: United Airlines debuted is Flight for the Planet aircraft, a Boeing 737-900ER. The plane was the first known aircraft to use sustainable aviation biofuel, zero cabin waste efforts, and carbon offsetting. (See October 23, 2015; November 20, 2020.)

June 6, 2019: Ampaire unveiled its prototype electric-powered airplane, the Ampaire 337, in a test flight from Camarillo Airport in California. The twin-engine airplane, which could carry seven passengers, was based on the Cessna 337 Skymaster. (See April 26, 2018; January 7, 2020.)

June 21, 2019: FAA issued an emergency order to U.S. civil aircraft prohibiting all American aircraft operators from entering the Tehran Flight Information Region in the area above the Persian Gulf and Gulf of Oman, the region where a U.S. drone was shot down on June 20. (See September 9, 2018; August 20, 2019.)

June 21, 2019: FAA and NASA performed a crashworthiness test on a Fokker F28 aircraft at the Landing and Impact Research Facility at NASA's Langley Research Facility in Hampton, VA. Data from the test will help researchers ascertain how portions of the cabin interior and occupants of the aircraft react in a crash. In addition, test results will support the development of a new performance based rule that will simplify the certification process by eliminating or minimizing the use of special conditions to certify aircraft.

June 26, 2019: Secretary of Transportation Chao and Argentine Minister of Transport Guillermo Dietrich signed a Protocol of Amendment that modernized the 1985 Air

Transport Services Agreement between the two countries. The agreement allowed for increased competition and service to more destinations between the two countries. It included unrestricted capacity and frequency, open route rights, a liberal charter regime, and open code-sharing opportunities.

June 28, 2019: FAA's new airmen certification standards for the airline transport pilot rating became effective. The standards brought together the previously used practical test standards with additional requirements for the certificate, updates to the knowledge exam, and notes formerly distributed across a variety of source materials.

June 28, 2019: Gulfstream Aerospace Corp. announced FAA type and production certification of its new Gulfstream G600.

July 23, 2019: Effective this date, FAA expanded the use of the Low Altitude Authorization and Notification Capability (LAANC) to recreational drone uses. LAANC was previously available only to commercial operators. Drone hobbyists could use LAANC to obtain near real-time authorization to fly below 400 feet in controlled airspace around airports. Through the LAANC system, operators request flight authorizations using mobile applications offered by FAA-approved UAS Service Suppliers. The apps match flight plans with airspace grids on FAA UAS facility maps that depict preapproved areas and altitudes where a drone can safely fly. (See October 1, 2018; November 21, 2019.)

July 31, 2019: Pilots and researchers from the University of Alaska Fairbanks' Alaska Center for Unmanned Aircraft Systems Integration conducted the first official BVLOS unmanned aircraft flight in the country approved by the FAA. (See January 8, 2019; August 14, 2019.)

August 8, 2019: The Department of Transportation issued guidance designed to clarify rules already in place regarding service animals. The Department limited the number of service animals on a flight, and airlines could deny boarding to an animal too large or heavy or younger than four months. (See October 5, 2019; December 2, 2020.)

August 12, 2019: Secretary of Transportation Elaine Chow swore in Stephen M. Dickson as the FAA's 18th Administrator. Dickson had recently retired as the Senior Vice President of Flight Operations for Delta Air Lines. He also flew in line operations as an A320 captain, and previously had flown the B727, B737, B757, and B767 during his career. A former United States Air Force Officer and F-15 fighter pilot, Dickson was a Distinguished Graduate of the Class of 1979 at the United States Air Force Academy, as well as a graduate of the Georgia State University College of Law, magna cum laude. He had been confirmed by the Senate on July 24.

August 13, 2019: Drone delivery system developer Flytrex and jet charter and management company Causey Aviation announced they had received FAA approval to begin food deliveries by drone in Holly Springs, North Carolina. The approval allowed flights of Flytrex multirotor drones along a predetermined delivery route between the

Holly Springs Towne Center shopping mall and Ting Park, a nearby outdoor sports and recreation facility.

August 14, 2019: The Kansas Department of Transportation (KDOT) announced it had received permission to conduct the first ever BVLOS drone operation in the nation leveraging only onboard detect-and-avoid systems. This was the first FAA authorized operation to fly without a requirement for visual observers or ground-based radar and was the result of the 31-member Kansas Unmanned Aircraft Systems Integration Pilot Program (IPP) team effort to advance drone technologies. In a collaborative effort between Kansas State University Polytechnic Campus (K-State Polytechnic), Westar Energy, Iris Automation, and KDOT, the Kansas IPP team flew a nine-mile track to evaluate technologies to inspect power lines in rural Kansas. (See July 31, 2019; November 21, 2019.)

August 16, 2019: The Italian aircraft manufacturer Tecnam announced FAA had awarded a type certificate to its P2012 Traveller, an 11-seat commuter plane. The aircraft first flew in July 2016 and received EASA type certification in December 2018.

August 20, 2019: FAA issued guidance to U.S. airlines and other commercial flight operators warning of an "increasing inadvertent risk" to aircraft flying over the Persian Gulf and the Gulf of Oman. "Iran has publicly made threats to U.S. military operations in the Gulf region," the FAA said in a notice. Iran possessed a variety of missiles and military jets capable of intercepting airliners, according to the agency. (See June 21, 2019.)

August 22, 2019: Secretary of Transportation Elaine Chow announced the appointment of 22 members to the Safety Oversight and Certification Advisory Committee (SOCAC) to advise her on safety issues including aircraft and flight standards, certification processes, safety management systems, risk-based oversight efforts, and the delegation of oversight responsibilities to manufacturers. The committee, chaired by former Alaska Airlines Chairman and CEO William Ayer, included Boeing VP-Safety, Security and Compliance Beth Pasztor, as well as officials from Delta Air Lines, GE Aviation, Gulfstream Aerospace, Pratt & Whitney and United Airlines. Other members included representatives from trade associations and unions such as the National Air Transportation Association, Professional Aviation Safety Specialists, and AFL-CIO.

August 27, 2109: FAA began requiring all pilots filing flight plans to use the ICAO flight plan format. According to FAA, using the ICAO form allowed for a greater variety of entry types in departure and destination fields including special flight rules area flight plans, transmission of the supplemental pilot data field to the destination facility with the VFR flight plan to reduce search and rescue response times, integration of performance based navigation, and use of more detailed equipment codes to identify better aircraft capabilities.

August 28, 2019: FAA and local officials broke ground for a new air traffic control tower at Southwest Florida International Airport. The new 200-foot tower and terminal radar approach control facility, scheduled to open in 2022, replaces a tower built in 1982.

August 2019: Chattanooga, became the first American airport to be 100 percent solar powered. The $5 million dollar solar farm project took seven years to complete, and received funding from the FAA's voluntary airport low emissions program.

September 13, 2019: Secretary Chao announced the formation of the Air Ambulance and Patient Billing Advisory Committee. The committee will advise the Secretary about issues relating to air ambulance services and patient billing, review options to improve the disclosure of charges and fees for air medical services, better inform consumers of insurance options for such services, and protect consumers from balance billing. Based on its review, the committee will make recommendations regarding disclosure of charges and fees for air ambulance services and insurance coverage, as well as consumer protection and enforcement authorities of both the DOT and state authorities, and the prevention of balance billing to consumers.

September 20, 2019: Secretary Chao announced the formation of the Air Carrier Access Act Advisory Committee. The committee will advise the Secretary about issues relating to the air travel needs of passengers with disabilities. It will identify and assess disability-related access barriers encountered by air travelers with disabilities, evaluate the extent to which DOT's programs and activities are addressing these disability-related access barriers, and recommend actions to improve the air travel experience of passengers with disabilities. The committee planned to submit its recommendations on or before November 20, 2020.

October 1, 2019: FAA awarded air carrier and operator certification to UPS Flight Forward. Flight Forward received the first Part 135 Standard certification for drones. The certification allowed the drone and cargo to total 55 pounds and fly at night; previous restrictions that governed earlier UPS flights. It also allowed UPS to expand its drone delivery service to hospital campuses around the country and provide customers outside of the healthcare industry with delivery options.

October 7, 2019: FAA announced it had completed the operational rollout of ADS-B baseline services with the implementation at the last two of 155 airports slated for the technology, Akron-Canton and Mansfield Lahm Regional airports in Ohio, in September.

October 9, 2019: Secretary Chao announced FAA's establishment of a Women in Aviation Advisory Board. The Board will focus on analyzing industry trends; coordinating efforts among airlines, nonprofit organizations, and aviation and engineering associations to facilitate support for women pursuing aviation careers; expanding scholarship opportunities; and enhancing training, mentorship, education, and outreach programs for women interested in aviation careers. (See May 15, 2020.)

October 10, 2019: Williston Basin International Airport, in North Dakota, opened. Williston's old airport, Sloulin Field International, which opened in 1947, had closed the day before. The new airport cost $273 million, financed with $106 million from the FAA, $55 million from the state, and $112 million from bonds supported by airport revenue.

October 11, 2019: FAA announced the ADS-B rebate program for general aviation aircraft owners had ended. The agency had provided 20,000 rebates. (See October 12, 2018.)

October 11, 2019: The Joint Authorities Technical Review (JATR) team, staffed by representatives from nine civil aviation agencies and NASA, delivered its findings and recommendations to FAA after a five-month review. The JATR urged FAA to "review the B737 MAX compliance" with three regulations—Part 25.1329 (Flight Guidance System), 25.1581 (Airplane Flight Manual-General) and 25.201 (Stall Demonstration) – "and ensure the consistent application and interpretation of regulatory guidance material for the system safety assessment, handling qualities rating method, and conformity requirements for engineering simulators and devices." The task force found that FAA's derivative certification approval process evaluated specific changes from a previous design, but did not always ensure if the changes had an adverse impact on unchanged areas. It also highlighted an insufficient amount of human factors expertise in the certification process. FAA Administrator Steve Dickson thanked the group and said he would "review every recommendation and take appropriate action." The JATR's 28-member team comprised representatives from Australia's Civil Aviation Safety Authority, Transport Canada, the Civil Aviation Administration of China, the European Aviation Safety Agency, Indonesia's Directorate General of Civil Aviation, the Japan Civil Aviation Bureau, the Civil Aviation Authority of Singapore and the United Arab Emirates' General Civil Aviation Authority, FAA, and NASA. Former NTSB Chairman Chris Hart led the team. (See March 25, 2019; October 23, 2019.)

October 18, 2019: Wing Aviation and FedEx Express completed the first scheduled package delivery by drone to a house in Christiansburg, VA. The delivery by Wing's Hummingbird aircraft made use of the first Part 135 air carrier certificate granted by the FAA for a drone operation.

October 23, 2019: The Department of Transportation Inspector General released a 58-page report saying FAA needed to restore public confidence in the aircraft certification process following the two Boeing 737 MAX crashes. The report said FAA faced a "significant oversight challenge" to ensure the companies conducting delegated certification tasks "maintain high standards and comply with FAA safety regulations." (See October 11, 2019; October 25, 2019.)

October 25, 2019: The Department of Transportation announced that as of December 10, 2019, it would ban all flights by U.S. airlines between the U.S. and Cuba with the exception of flights in and out of Havana. The Department took action at the request of the State Department as a means of protesting Cuba's support of the Venezuelan regime

and because of Cuba's repression of its own people. (See August 31, 2016; August 13, 2020.)

October 25, 2019: Indonesia's National Transportation Safety Committee released its report on the Lion Air Boeing 737 Max jet accident. The committee reported a combination of design flaws by Boeing and inadequate pilot training and maintenance lapses by Lion Air that led to the crash. Investigators listed nine contributing factors including an automated system's reliance on a single sensor; the miscalibration of that sensor during repairs; a lack of flight and maintenance documentation; and a failure by the flight crew to manage the chaos in the cockpit as emergency warnings sounded. (See October 23, 2019; November 22, 2019.)

October 31, 2019: FAA announced that runway status lights (RWSL), the first technology to provide direct warning to pilots about potential runway conflicts, was now operational at all 20 sites approved to receive the technology. The technology alerted pilots and vehicle operators to stop when runways and taxiways were not safe to enter, cross, or begin takeoff. Red lights embedded in the pavement illuminated when the presence of other traffic creates a potential conflict. RWSL used the airport's surface surveillance system to determine the location of aircraft and vehicles. (See June 11, 2009.)

November 6, 2019: Epic Aircraft announced FAA had granted type certification to its E1000 all-carbon fiber aircraft design.

November 11, 2019: FAA found that the Civil Aviation Authority of Malaysia (CAAM) did not meet ICAO safety standards and received a Category 2 rating based on a reassessment of the country's civil aviation authority. A Category 2 IASA rating meant CAAM was deficient in one or more areas, such as technical expertise, trained personnel, record-keeping, and/or inspection procedures. In 2003, Malaysia was assigned a Category 1 rating. FAA conducted an in-country reassessment of Malaysia in April 2019, and met with the CAAM in July 2019 to discuss the results. With a Category 2 rating, Malaysia's carriers could continue existing service to the United States, but would not be allowed to establish new service to the United States. (See May 13, 2019; December 13, 2019.)

November 12, 2019: New York Governor Andrew Cuomo announced completion of a 50-mile unmanned traffic management corridor running from Syracuse International Airport to Rome, New York. The corridor would be used to test unmanned aerial systems and unmanned traffic management technologies. On November 7, Cuomo announced FAA had approved BVLOS drone operations within the first segment of the corridor, an 8 x 4-mile section of airspace between Griffiss International Airport in the city of Rome and the New York State Preparedness Training Center in Oriskany. The State of New York invested approximately $30 million in the UAS corridor project, first introduced in 2016.

November 21, 2019: FAA announced an expansion of the LAANC. Four airports – Baltimore/Washington International Thurgood Marshall Airport, Dulles International

Airport, William P. Hobby Airport in Houston and Newark Liberty International Airport – joined the list of approximately 400 air traffic facilities covering about 600 airports where LAANC was available. (See August 14, 2019; December 26, 2020.)

November 22, 2019: In a low key ceremony at its Renton, Washington, plant, Boeing unveiled its 737 Max 10, the largest version of the Max jet.

November 26, 2019: FAA notified Boeing that it would retain authority over the issuance of airworthiness certificates for all newly manufactured 737 Max aircraft. The agency would conduct the final approval of factory-fresh Boeing Co. 737 Max jets rather than allowing company employees to handle routine sign-offs before the planes were delivered. (See October 25, 2019; December 16, 2019.)

December 2, 2019: FAA Administrator Stephen Dickson approved a reorganization of the agency's commercial space organization. The organization created two new directorates within the office. An operational directorate became responsible for licensing, permitting, safety, and compliance. The other handled issues such as policy, research and development, stakeholder outreach, support services, and the new Office of Spaceports.

December 3, 2019: Leidos announced FAA had awarded it a contract to continue supporting the general aviation community under the agency's FAA's Future Flight Services Program. Under the contract, Leidos would provide weather data, aeronautical information and flight planning services to the general aviation community across mainland U.S., Puerto Rico, and Hawaii. The single award, firm-fixed-price contract had a five-year base period of performance followed by ten one-year option periods, at an approximate value of $1 billion, if the FAA exercised all options. FAA had awarded Leidos the predecessor Automated Flight Service Station (AFSS) contract in 2005. (See September 2010.)

December 11, 2019: FAA announced the selection of 12 organization to advise the agency in developing test administration requirements for the recreational UAS aeronautical knowledge and safety test:

1. Embry Riddle Aeronautical University
2. Drone Launch Academy Southeastern University
3. Science Applications International Corp.
4. DJI
5. Horizon Hobby, LLC.
6. Unmanned Aerial Vehicle Coach
7. King Schools
8. Unmanned Safety Institute
9. First Person View Freedom Coalition
10. Aircraft Owners and Pilots Association
11. Academy of Model Aeronautics
12. Drone Racing League

December 13, 2019: FAA announced the Venezuelan regime did not comply with ICAO safety standards under the IASA program and had been assigned a Category 2 rating. A Category 2 IASA rating means the country either lacked laws or regulations necessary to oversee air carriers in accordance with minimum international standards, or its civil aviation authority was deficient in one or more areas, such as technical expertise, trained personnel, record-keeping, inspection procedures, or resolution of safety concerns. (See November 11, 2019.)

December 16, 2019: Boeing announced it would halt production on the 737 Max airplanes indefinitely beginning in January 2020. The announced followed the FAA Administrator's earlier decision the FAA would not re-certify the aircraft by the end of 2019. (See November 26, 2019; December 23, 2019.)

December 23, 2019: Media reported Chicago Executive Airport had launched a sound-insulation program to reduce aircraft noise for nearby residents. Under the program, insulating materials will be provided at no cost to owners of eligible homes, with the FAA funding 90% of the cost and the remainder coming from the airport. The work was expected to extend into 2021 and beyond.

December 23, 2019: Boeing announced president and CEO Dennis Muilenburg had resigned effective immediately. CFO Greg Smith stepped in as interim CEO until David Calhoun, current non-executive chairman of the Boeing board of directors, took over the roles on a permanent basis starting January 13. (See December 16, 2019; September 11, 2020.)

December 23, 2019: Bombardier announced it had received FAA type certification of its Global 5500 and Global 6500 business jets. The milestone follows Transport Canada and European Aviation Safety Agency (EASA) certification and entry-into-service in September 2019.

December 26, 2019: FAA released a 319-page unpublished proposed rule outlining requirements for drones to transmit identifying information to the ground. The proposal described "standard" and "limited" categories of remote identification, with a third category for non-equipped UAS. A drone operated as standard would be capable of connecting to the internet and transmitting data to a Remote ID USS, and of broadcasting its identity directly from the aircraft. A limited-category drone would be capable of transmitting remote identification message elements through an internet connection, while being restricted to operating no more than 400 feet from its control station. The rule would prohibit small drones from using automatic dependent surveillance-broadcast out transponders to send identity and position data. Persons operating drones not equipped for remote identification would have to fly the aircraft within visual line of sight in an "FAA-recognized identification area," such as a flying site established by a community organization (See November 21, 2020). FAA published the proposal as a notice of proposed rulemaking the in the Federal Register on December 31. The cost of the rule to all parties would be $582 million over 10 years, the FAA estimated. (See December 18, 2017.)

2020

January 5, 2020: Boeing and FAA confirmed they were reviewing a wiring issue that could potentially cause a short circuit on the grounded 737 MAX. During an inspection, Boeing found two bundles of wiring close together, which, if not properly separated, could led to a short circuit. (See December 16, 2019; June 29, 2020.)

January 7, 2020: Chinese drone maker Ehang demonstrated its autonomous air taxi in the United States for the first time after FAA granted permission for the flight. The all-electric two-seat plane took a five minute flight above a test track south of Raleigh, North Carolina. The Ehang 216, powered by 16 electric rotors, flew along a pre-planned route at over 80 mph. The aircraft weighed about 600 pounds and could carry another 500 to 600 pounds of cargo or passengers. (See June 6, 2019; May 28, 2020.)

January 7, 2020: The Alaska Volcano Observatory announced Shishaldin Volcano had erupted at 5 a.m. The volcano is located 679 miles southwest of Anchorage near the center of Unimak Island, the largest island in the Aleutians. It sent up an initial ash cloud to 19,000 feet, it then seismicity diminished for a few hours, but increased again. During the increase, the volcano spewed an ash cloud to 25,000 feet, with an increased volume of ash. The ash plume extended approximately 90 miles. The observatory immediately issued a "Code Red" warning for air traffic around the Shishaldin area and FAA issued a warning to aircraft in the area.

January 8, 2020: Ukraine International Flight 752 crashed shortly after it took off from Tehran, Iran, bound for Kyiv. The Boeing 737-800 carried 176 people; there were no survivors. Iranian forces mistakenly shot down the airliner. The incident came shortly after Iran had fired missiles at U.S. military installations in Iraq in retaliation for a January 3 drone strike by the U.S. that killed an Iranian general. Shortly after the crash, FAA issued a notice to airmen banning U.S. airlines from flying in the airspace over Iran and Iraq and the waters of the Persian Gulf and the Gulf Oman. On January 15, FAA loosened restrictions on U.S. aircraft flying over the Persian Gulf and Gulf of Oman to allow flights into and out of certain airports in the region. The new notice allowed flights to and from airports in Doha, Bahrain, Abu Dhabi, Dubai, Sharjah, and Muscat as long as operators flew on a published instrument procedure or under the direction of air traffic control and minimized overwater flight to the greatest extent possible. The agency still prohibited flights from entering the Tehran Flight Information Region, which covered the airspace over Iran and extended from southern Iran part way into the airspace over the Persian Gulf and the Gulf of Oman. FAA lifted the flight restrictions in February. (See July 11, 2020.)

January 14, 2020: FAA announced it had opened a new indoor fire research facility in December 2019 at its Technical Center to conduct performance tests of potential replacement fire extinguishing agents. The work conducted in this new $5 million, 2,500 square-foot facility supported research on fluorine-free firefighting foams.

January 16, 2020: The Special Committee to Review the Federal Aviation Administration's Aircraft Certification Process, appointed by Transportation Secretary Elaine Chao in April 2019 after crashes in Indonesia and Ethiopia killed 346 people, issued its report. The committee concluded FAA correctly treated certification of the Max jet as an update to older 737s and not as a new type of plane, which would have subjected it to more examination. The group, gave high marks overall to FAA's process for certifying planes, calling it safe and effective and a boost to the U.S. aerospace industry. (See January 5, 2020.)

January 25, 2020: Boeing announced it had completed a successful first flight of its new model 777X jetliner. The flight, over Washington State, lasted three hours and 51 minutes. (See June 18, 2019.)

January 31, 2020: President Donald Trump issued a proclamation, effective February 2, limiting entry of travelers from the Republic of China into the United State as a result of the COVID-19 outbreak in the Wuhan Province. A second proclamation on January 28 restricted entrance of travelers from Iran into the United States because of a COVID-19 outbreak in that country. As the virus spread to other countries, the President updated the proclamation banning travelers from those countries entry into the United States. U.S. airlines began reducing/cancelling flights into China.

February 2, 2020: Acting Department of Homeland Security Secretary Chad F. Wolf directed all flights from China and all passengers who had traveled to China within the previous 14 days to be routed through one of eight U.S. airports (three airports added later) where the United States Government had established enhanced screening procedures and the capacity to quarantine passengers, if needed. Additionally, U.S. citizens who had been in China's Hubei province within 14 days of their return were subject to up to 14 days of mandatory quarantine to ensure they had proper medical care and health screening. U.S. citizens who had been in other areas of mainland China also had to undergo proactive entry health screening and up to 14 days of self-quarantine with health monitoring to ensure they had not contracted the virus and did not pose a public health risk. Generally, foreign nationals (other than immediate family of U.S. citizens, permanent residents, and flight crews) who had traveled in China, would be denied entry into the United States. The airports with enhanced screening included:

- John F. Kennedy International Airport (JFK), New York
- Chicago O'Hare International Airport (ORD), Illinois
- San Francisco International Airport (SFO), California
- Seattle-Tacoma International Airport (SEA), Washington
- Daniel K. Inouye International Airport (HNL), Hawaii
- Los Angeles International Airport, (LAX), California
- Hartsfield-Jackson Atlanta International Airport (ATL), Georgia
- Washington-Dulles International Airport (IAD), Virginia
- Newark Liberty International Airport (EWR), New Jersey
- Detroit Metropolitan Airport (DTW), Michigan
- Dallas-Ft. Worth International Airport (DFW), Texas

February 13, 2020: Airbus announced it had received joint type certification from the FAA and the European Aviation Safety Agency (EASA) for its A330-800.

March 3, 2020: FAA announced the expansion of its weather camera safety program to Colorado. FAA entered into a $226,000 cost-reimbursement agreement with the State of Colorado Division of Aeronautics to install weather cameras on 13 automated weather observing systems (AWOS) in mountainous areas, beginning in the spring of 2020. The 13 Colorado cameras were the first to be integrated into the weather camera program outside of Alaska. Under the terms of the agreement, FAA would assist the state with the camera installations, but the state would own and maintain the cameras. (See September 30, 2013; August 4, 2020.)

March 11, 2020: FAA temporarily waived minimum slot-use requirements at U.S. airports to help airlines that canceled flights due to the Coronavirus. Under normal circumstances, airlines could lose their slots at congested airports if they failed to use them at least 80 percent of the time. FAA waived the 80-percent-use requirement through

May 31, 2020. The waiver of the slot usage requirement, applied to John F. Kennedy International Airport (JFK), New York LaGuardia Airport (LGA), and Ronald Reagan Washington National Airport (DCA). Additionally, at four other U.S. airports where the agency has a formal schedule review and approval process – Chicago O'Hare International Airport (ORD), Newark Liberty International Airport (EWR), Los Angeles International Airport (LAX), and San Francisco International Airport (SFO) – FAA gave credit to airlines for flights that were canceled due to the Coronavirus through May 31, 2020. FAA later extended the waiver through October 24. On September 15, FAA proposed to extend through March 27, 2021, the COVID-19-related limited waiver of the minimum slot usage requirement at JFK, LGA, and DCA. The FAA also proposed to extend, through December 31, 2020, its COVID-19-related policy for prioritizing flights canceled at designated International Air Transport Association (IATA) Level 2 airports in the United States. These IATA Level 2 airports include ORD, EWR, LAX, SFO. On October 2, FAA extended the slot waiver and the policy for prioritizing flights through March 27, 2021.

March 13, 2020, President Trump declared a state of national emergency because of the COVID-19 pandemic.

March 17, 2020: FAA temporarily closed the air traffic control tower at Chicago Midway International Airport after several technicians tested positive for the coronavirus. Other FAA facilities also temporarily closed after employees tested positive for COVID-19. After thorough cleanings the facilities reopened. This was the first of a number of facilities that were temporarily closed for cleaning throughout the year.

March 18, 2020: After a 5.7-magnitude, early morning tremor centered in north-central Utah, FAA temporarily evacuated the air traffic control tower at Salt Lake City International Airport and halted flights, diverting inbound aircraft to other airports.

FAA's Salt Lake air route traffic control center, which is housed separately from the airport control tower, handled all air traffic in the area until the tower reopened.

March 20, 2020: FAA announced it would allow air carrier personnel to perform temporarily flight dispatch and flight following duties from their homes on a case by case basis, provided carrier personnel could show they could do so safely.

March 21, 2020: FAA suspended all departures to Kennedy, LaGuardia, Newark, and because of coronavirus-related staffing issues at a regional air-traffic control center. The agency lifted the restriction after about 30 minutes.

March 23, 2020: FAA approved certain requirements for passenger flights to Puerto Rico to help with the response to the COVID-19 pandemic. All scheduled and unscheduled commercial air carrier flights had to land at Luis Munoz Marin International Airport (SJU) where public health officials screened arriving passengers. All domestic and foreign general aviation and charter flights arriving from a location outside Puerto Rico were required to land first at SJU, Isla Grande Airport (SIG), or Rafael Hernandez Airport (BQN) for passenger screening before continuing to their final destinations. The restrictions did not apply to air cargo or maintenance flights into Puerto Rico.

March 24, 2020: The global COVID-19 pandemic led to flight reductions throughout the airline industry. As a result, FAA issued CertAlert #20-02 Temporary Parking of Overflow Aircraft (PDF), for airport operators who were working with airlines on temporary parking plans for their aircraft. The CertAlert contained a list of recommendations an airport operator should consider when making decisions for overflow aircraft parking. On May 5, FAA issued additional information and examples for airport operators to use when producing NOTAMs that closed runways and/or taxiways to temporarily park aircraft.

March 25, 2020: FAA amended its cockpit oxygen-mask regulation to reduce the potential for pilots to be exposed to any pathogens that may be on the masks.

March 26, 2020: FAA granted certain training exemptions to scheduled and on-demand air carriers because of the unprecedented circumstances associated with the COVID-19 pandemic. The exemptions gave operators grace periods for completing certain training and qualification requirements, and gave crewmembers relief from having to don protective breathing equipment or oxygen masks in training, checking, or evaluation.

March 26, 2020: FAA began implementation of the Denver Metroplex Project, which would improve the efficiency of airspace in the Denver Metroplex area by optimizing aircraft arrival and departure procedures to and from various airports, including:

- Denver International Airport (DEN)
- Centennial Airport (APA)
- Greeley-Weld County Airport (GXY)
- Northern Colorado Regional Airport (FNL)
- Rocky Mountain Metropolitan Airport (BJC)

The project would use satellite navigation to move air traffic safely and efficiently through the area. It included 29 new routes and modifications to 15 existing routes. (See September 2, 2016; February 25, 2021.)

March 26, 2020: FAA issued a policy stating it would not take enforcement action against certain pilots or flight engineers who fly domestically with medical certificates that expired between March 31, 2020 and June 30, 2020. The following week, FAA granted an exemption that extended until June 30, 2020, the duration of medical certificates for certain pilots and flight engineers who conducted scheduled and on-demand operations outside the United States if those medical certificates expired between March 31, 2020, and May 31, 2020.

March 27, 2020: President Donald Trump signed into law the Coronavirus Aid, Relief and Economic Security (CARES) Act. Under the $2.2 trillion bill, FAA received $10 billion for its Airport Improvement Program, distributed by formula, to maintain operations at airports across the nation that faced a record drop in passengers. The legislation also included:
Direct grants:

- $25 billion for commercial airlines.
- $4 billion for cargo air carriers.
- $3 billion for contractors who employ baggage handlers, wheelchair attendants, cabin cleaners, food service workers and others at airports.

Conditions:

- The aid must "exclusively be used for the continuation of payment of employee wages, salaries and benefits."
- Grant recipients cannot cut jobs, pay or benefits through Sept. 30, 2020, and they cannot buy back their stock or pay stock dividends through Sept. 30, 2021.
- The airlines must maintain service to all the destinations they served on March 1, 2020, through March 1, 2022, which could mean continuing to fly empty or near-empty planes.

Loans and loan guarantees:

- $25 billion available to passenger airlines.
- $4 billion for cargo air carriers.
- $17 billion in loans and loan guarantees to aerospace "businesses critical to maintaining national security," which industry and congressional sources say in essence means Boeing and its suppliers.

Conditions:

- The companies taking out the loans are prohibited from buying back stock and paying stock dividends during the lifetime of the loan.
- There are limits on compensation, bonuses and golden parachutes for executives earning more than $425,000.
- Recipients of the loans must maintain March 24, 2020, employment levels "to the extent practicable" and under no circumstance can they cut more than 10% of the company's workforce.

- The federal government may require an equity stake in the companies as collateral for the loans.

March 27, 2020: FAA allowed aircraft dispatcher certification course providers to deviate from some standard practices, including instituting or expanding distance-based training for currently enrolled students and suspending course administration.

March 28, 2020: FAA issued guidance for states, localities, and territories that had implemented or might consider implementing quarantine, travel restrictions, and screening requirements on individuals entering from certain locations within the United States and territories. The guidance stated there should be coordination with aviation stakeholders 48 hours before a restriction was imposed; air transportation workers, federal aviation and security personnel were exempt from any restrictions; and no measure could be taken to close a federally funded airport without FAA approval.

March 30, 2020: FAA issued a noise certification notice of proposed rulemaking (NPRM) that proposed to add landing and takeoff noise standards for a certain class of new supersonic airplanes. The NPRM followed a 2019 proposed rule to update the requirements to apply for a special flight authorization for flying above Mach 1 in the United States. (See August 14, 2013; August 4, 2020.)

March 30, 2020: FAA published a NPRM that would require air carriers to enter and share pilot records in a FAA-managed pilot records database before making hiring decisions. Under the proposal, pilots would be required to provide consent for an air carrier to access their records during the hiring process. The records-sharing requirement also would apply to commercial drone operators holding Part 107 remote pilot certificates when an unmanned aircraft system was used in air carrier operations. (See December 17, 2017; May 26, 2021.)

March 31, 2020: FAA issued a policy statement regarding the use of real-time and recorded video to perform prototype conformity inspections, engineering and ground tests, engineering compliance inspections, production conformity inspections, and inspections for issuing 8130-3s, or airworthiness approval tags. Applicants that wanted to use remote technology had to work with their local aircraft certification office and incorporate specific details in certification, engineering test, or conformity inspection plans. Production-approval holders that used remote technology for 8180-3 inspections had to have the procedures in their quality systems. Organization designation authorization holders could also incorporate remote inspections into their programs.

April 5, 2020: RavnAir announced that because of the global COVID-19 pandemic and the unprecedented loss of 90% of passenger revenue at all three of its airlines (RavnAir Alaska, PenAir, and RavnAir Connect) it was:

- Parking all seventy-two (72) of its aircraft;
- Stopping all operations; and

- Temporarily laying off all remaining staff until the company was in a position to cover the costs of rehiring, resuming flights, and operating to the many communities it served throughout Alaska.

Because of the company's critical need for additional funding, Ravn also filed voluntary petitions for relief under Chapter 11 of the Bankruptcy Code in the U.S. Bankruptcy Court for the District of Delaware. Ravn's lenders agreed to provide financing during the pendency of the Chapter 11. The filing allowed the company to await word on its Federal CARES Act grant applications and other sources of financial assistance that would allow it to get through the Coronavirus crisis and successfully restart operations. The company also sought private investment. (See June 25, 2020.)

April 6, 2020: FAA authorized pilot schools to temporarily use distance learning programs or suspend operations for a period of time because of the COVIS-19 pandemic.

April 8, 2020: FAA announced it was taking steps to limit the spread of COVID-19 in air traffic control facilities. Each air traffic control facility established separate teams of controllers that would stay together throughout the duty week. Each crew would contain the same employees, limiting the possibility of cross-exposure to COVID-19 that would come through normal shift rotations. If a person on one team got sick, the only people who would be exposed were the other people on that team.

April 8, 2020: FAA issued an exemption to help protect flight attendants from contracting COVID-19. The exemption allowed flight attendants to relocate from the seats they normally occupied so they could observe social distancing. It also excused them from having to demonstrate the use of certain emergency equipment including life preservers and oxygen masks, allowing for alternative methods to inform passengers regarding the use of such equipment. The exemption ran through June 30. The agency subsequently amended the seat exemption through January 31, 2021, and the deadline for the exemption which gave crewmembers relief from having to don protective breathing equipment or oxygen masks in training, checking, or evaluation through November 30.

April 27, 2020: Effective this date, FAA required air carriers conducting domestic, flag, and supplemental operations to provide new-hire pilots with an opportunity to observe flight operations and become familiar with procedures before serving as a flightcrew member in operations; to revise the upgrade curriculum; and to provide leadership and command and mentoring training for all pilots in command. (See October 7, 2016.)

April 11, 2020: Upon the request of the Wyoming governor, President Trump declared a major disaster existed in the state because of the COVID-19 pandemic. With the declaration, federal funding became available to state, tribal, and eligible local governments, as well as certain nonprofit organizations for emergency protective measures. This was the first time in U.S. history that all 50 states were under a major disaster declaration at the same time.

April 13, 2020: Attorney General William P. Barr issued guidance to Department of Justice components regarding counter-unmanned aircraft systems (C-UAS) actions authorized under the Preventing Emerging Threats Act of 2018. The guidance, a product of extensive collaboration between the Department of Justice, the Department of Transportation, and FAA, outlined the process by which authorized department components could request designation of facilities or assets for protection under the act. It ensured coordination with the FAA when any C-UAS action authorized under the act might affect aviation safety, civilian aviation and aerospace operations, aircraft airworthiness, and the use of the airspace. This included conducting a risk-based assessment in consultation with the Secretary of Transportation to examine potential airspace impacts and other considerations.

April 14, 2020: Secretary of the Treasury Steven Mnuchin announced Alaska Airlines, Allegiant Air, American Airlines, Delta Air Lines, Frontier Airlines, Hawaiian Airlines, JetBlue Airways, United Airlines, SkyWest Airlines, and Southwest Airlines had agreed in principle to accept $25 billion in grants from the government as part of the Trump Administration's $2 trillion economic stimulus program to combat the economic effects of the COVID-19 pandemic. Under the terms of the deal, 70 percent of the money would be given to the airlines outright and 30 percent would have to be paid back to the government. In addition, the airlines would give the government warrants equal to 10 percent of the amount the carriers received. Warrants are securities that give the holder the right, but not the obligation, to buy a certain number of securities (usually the issuer's common stock).

April 14, 2020: FAA issued guidance barring pilots from flying if they had taken the antimalarial drug hydroxychloroquine within the past 48 hours. FAA stated "Chloroquine and hydroxychloroquine were both reviewed by the FAA Federal Air Surgeon when they entered the market and have long been considered generally incompatible for those performing safety related aviation duties."

April 15, 2020: Secretary of Transportation Elaine Chao announced the award of approximately $10 billion to commercial and general aviation airports from the Coronavirus Aid, Relief, and Economic Security (CARES) Act Airport Grant Program. The funding provided support for continuing operations and replacement of lost revenue resulting from the sharp decline in passenger traffic and other airport business because of the COVID-19 public health emergency. The funds were available for airport capital expenditures, airport operating expenses, including payroll and utilities, and airport debt payments.

April 15, 2020: FAA issued a safety alert (SAFO 20008) allowing passenger airlines to turn their planes into cargo-only aircraft provided they took steps to prevent fires and kept weight balanced. Existing FAA rules also required that carriers perform a risk assessment of the new operations. Airlines could remove seats from cabins to accommodate cargo. The tracks beneath the floor that held seat rows could be used to attach cargo, provided the plane was certified to hold such loads. On May 15, FAA issued information and guidance for agency safety inspectors about the carriage of cargo in the

cabin of passenger-carrying planes when no passengers were on board. (See January 7, 2020; May 20, 2020.)

April 16, 2020: Because the COVID-19 public health emergency affected airport sponsors' operations and ability to meet the original 2020 Airport Improvement Program (AIP) deadlines, FAA extended those deadlines to May 4, 2020, to give notice of intent, and to June 15, 2020, to submit the final grant application.

April 22, 2020: FAA announced it planned to temporarily adjust the operating hours of approximately 100 control towers nationwide as a result of a significant reduction in flights because of the pandemic.

April 24, 2020: Boeing announced a planned merger with Brazilian aircraft manufacturer Embraer had been cancelled. The $4.2 billion merger, first announced in 2018, would have given Boeing an 80 percent controlling stake in Embraer.

April 29, 2020: The Department of Transportation issued a notice to all essential air service (EAS) air carriers that it would authorize payment of 50 percent of the contracted per-flight subsidy for flights not being operated because of the pandemic as long as the EAS air carriers serving a community in the continental United States, Hawaii, and Puerto Rico completed at least one round trip flight a day, six days a week, for the EAS community, and an EAS air carrier serving a community in Alaska completed at least 50 percent of its weekly schedule for that EAS community. In addition, the Department would not initiate enforcement action against EAS air carriers for failing to comply with the statutory level-of-service requirements in situations where the noncompliance took place during the effective period of the notice, the significant reduction in passenger demand due to the COVID-19 public health emergency was the cause of the noncompliance, the EAS air carrier complied with the level-of-service requirements provided in the Notice, and the eligible communities did not object to the change in service levels. The plan applied to all 160 communities in the United States and Puerto Rico that received EAS subsidized service, but it did not apply to the 8 communities receiving alternate EAS grants. The action was retroactive to March 1, 2020, and was in effect through June 30, 2020; later extended through September 30, 2020. On September 21, the deadline was extended again, this time through December 31, 2020.

April 30, 2020: To ensure the continuity of air ambulance operations during the COVID-19 pandemic, FAA granted an exemption to the timeframes for completing recurrent training and testing requirements for certain air ambulance personnel. Operators had to fulfill specific requirements to exercise the relief offered in the exemption.

May 5, 2020: FAA issued its 12th spaceport license to the Titusville-Cocoa Airport Authority allowing for commercial space launches from the Space Coast Regional Airport in Titusville, Florida. (See August 17, 2020; December 20, 2021.)

May 5, 2020: FAA announced the selection of eight companies to assist the agency in establishing requirements for future suppliers of Remote Identification (Remote ID).

Remote ID would enable unmanned aircraft systems to provide identification and location information while operating in the nation's airspace. The companies selected included: Airbus; AirMap; Amazon; Intel; One Sky; Skyward; T-Mobile; and Wing. FAA selected the companies through a Request for Information process, which began in December 2018. (See December 26, 2019; December 28, 2020.)

May 8, 2020: FAA announced it had assigned a Category 2 rating to the Organization of Eastern Caribbean States (OECS) because it did not comply with International Civil Aviation Organization (ICAO) safety standards under the FAA's International Aviation Safety Assessment (IASA) program. A Category 2 IASA rating meant that laws or regulations lacked the necessary requirements to oversee air carriers in accordance with minimum international standards, or that a civil aviation authority was deficient in one or more areas, including technical expertise, trained personnel, record-keeping, inspection procedures or resolution of safety concerns. Although the OECS's carriers could continue existing service to the United States, they were not allowed to establish new service to the United States. The OECS provided aviation safety oversight for members Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, St. Vincent, and the Grenadines. (See December 13, 2019.)

May 10, 2020: Colombian airline Avianca filed for Chapter 11 bankruptcy in the U.S. Southern District of New York, citing coronavirus-related travel restrictions as the reason for the bankruptcy filing.

May 15, 2020: Secretary of Transportation Elaine Chao announced the appointment of 30 board members to the newly-formed Women in Aviation Advisory Board (WIAAB). Former U.S. Air Force Secretary Heather Wilson served as chair of the board. At the time of her appointed Wilson was the president of the University of Texas at El Paso. The WIAAB had been mandated by the FAA Reauthorization Act of 2018. The purpose of the WIAAB was to develop strategies and recommendations to encourage women and girls to enter the field of aviation. The WIAAB assessed education, training, mentorship, outreach, and recruitment of women in the aviation industry. (See October 9, 2019.)

May 18, 2020: Piper Aircraft announced the Piper M600/SLS had received FAA type certification for its new HALO safety system making it the first Garmin Autoland-equipped aircraft in the world to receive certification.

May 20, 2020: FAA issued an exemption allowing U.S. airlines to carry cargo on seats in airplane cabins when no passengers were being transported. FAA determined the exemption would reduce the chance that movement of critical cargo would be interrupted as a result of the COVID-19 public health emergency. To exercise the exemption, airlines had to submit a letter of intent and receive specific authorization from FAA, and observe a number of conditions and limitations. The exemption was effective through December 31, 2020. (See April 15, 2020; July 10, 2020.)

May 22, 2020: Pakistan International Airlines Flight 8303, an Airbus A320, crashed in Model Colony, a densely populated residential area of Karachi not far from the runway,

while on a second final approach to Jinnah International Airport. There were 91 passengers and eight crew on board the aircraft. Ninety-seven of them died, while two passengers survived with injuries. Eight people on the ground were also injured. A preliminary investigation report, published by Pakistan's civil aviation authority, reported the plane's engines had scraped the runway three times on the pilot's first attempt to land, causing friction and sparks. The contacts with the runway may have caused possible damage to the engines' oil tank and fuel pump. (See July 1, 2020.)

May 26, 2020: Chile's LATAM Airlines Group, the largest carrier in Latin America, filed for Chapter 11 bankruptcy. LATAM's CEO Roberto Alvo cited coronavirus-related travel restrictions as the primary reason for bankruptcy.

May 26, 2020: Waco Aircraft delivered its first YMF-5F open cockpit biplane on amphibious floats after receiving FAA certification.

May 28, 2020: A modified Cessna Caravan turboprop powered by electricity made its first flight at Moses Lake, Washington. (See January 7, 2020.)

May 29, 2020: FAA extended through July 31, 2020, four regulatory exemptions it previously issued to scheduled and on-demand U.S. air carriers. The exemptions gave operators grace periods for completing certain training and qualification requirements, and gave crewmembers relief from having to don protective breathing equipment or oxygen masks in training, checking, or evaluation. The exemptions originally were set to expire on May 31.

May 30, 2020: SpaceX's Falcon 9 launched Crew Dragon's second demonstration mission from Launch Complex 39A at NASA's Kennedy Space Center in Florida. The following day, Crew Dragon autonomously docked to the International Space Station. With this flight, which delivered NASA astronauts Bob Behnken and Doug Hurley to the space station, the Dragon spacecraft returned human spaceflight to the United States. On August 2, the two astronauts splashed down in the Gulf of Mexico, the first time in 58 years that astronauts used the Gulf as a landing site. (See September 1, 2016; November 15, 2020)

June 3, 2020: The Department of Transportation took regulatory action in response to the failure of China to permit U.S. carriers to perform scheduled passenger air services in accordance with China's obligations under the U.S.-China Air Transport Agreement. On June 4, the Civil Aviation Authority of China responded by revising its restrictions to permit U.S. carriers the ability to operate one flight per week each. As a result, the Department revised its June 3 order and granted Chinese carriers, in aggregate, the right to operate two weekly passenger flights to the United States. On June 15, Chinese officials notified the Department of Transportation that U.S. carriers had been approved to fly four weekly flights to China. In return, the Department amended its order to allow the Chinese air carriers to continue to fly four weekly flights between China and the United States. On July 30, DOT issued an order disapproving future schedules that Chinese carriers filed with the Department pursuant to the original May 22 order. None

of the schedules that Chinese carriers filed could be operated because of the Chinese government's restrictions on international flights. DOT conveyed to its Chinese counterparts that the order was a procedural matter. "The Department continues to indicate our willingness to revisit our action should the Chinese aviation authorities adjust their policies to bring about the necessary improved situation for U.S. carriers in which both they and the Chinese carriers could fully exercise their bilateral rights." On August 18, DOT announced it would allow the four Chinese airlines that had scheduled passenger service to the U.S. to increase their flights to eight weekly round-trip flights. DOT approved the increased service after China permitted, on August 12, United Airlines and Delta Air Lines to increase their number of flights into China. (See October 27, 2017.)

June 5, 2020: Indonesia's largest low-cost airline Lion Air suspended all flights citing poor passenger carriage as travelers struggled to fulfill the strict requirements needed to fly during the pandemic. The announcement also affected Lion Air Group subsidiaries Batik Air and Wings Air. (See October 25, 2019.)

June 13, 2020: Sky Harbor Regional Airport in Duluth, Minnesota, opened a new 2,600-foot runway. FAA funded nearly the entire cost of the $13.2 million project.

June 22, 2020: The Department of Transportation issued an order requiring Indian air carriers to apply to the Department for statements of authorization prior to conducting charter flights. The Department took the action because the Government of India engaged in unfair and discriminatory practices with respect to U.S. charter air transportation services to and from India. The order allowed the Department to scrutinize charter flights by Indian carriers on a case-by-case basis. The Department wanted to restore a level playing field for U.S. airlines, as provided for in the U.S.-India Air Transport Agreement. A subsequent agreement between the two nations allowed commercial flights to resume on July 23.

June 22, 2020: Southwest Airlines Flight 370 became the first United States commercial flight flown by a pilot with insulin-treated Type A diabetes at the controls. (See May 25, 2018.)

June 25, 2020: United States Bankruptcy Court for the District of Delaware approved RAVN Air's Plan of Liquidation that included an auction of the company and its three airlines. The auction would offer Ravn, with its secured lenders, an opportunity to sell the company and all or a substantial portion of its assets in a sale that would be approved by the Court on July 9. Approximately 30 bidders had expressed interest in buying all or some of the Air Group's assets. Of these, five buyers submitted bids. (See April 5, 2020; July 7, 2020.)

June 29, 2020: FAA and Boeing began a series of certification flights to evaluate Boeing's proposed changes to the automated flight control system on the 737 MAX. The flights included a wide array of maneuvers and emergency procedures to assess whether

the changes met FAA certification standards. Test pilots and engineers from FAA and Boeing conducted the tests. (See January 25, 2020; August 4, 2020.)

June 30, 2020: The European Union announced it would open its borders to the residents of 25 nations. Travelers from the United States, Russia, and Brazil were among those banned from going into the European Union because of the number of COVID-19 cases in those countries.

July 1, 2020: The Department of Transportation banned Pakistan International Airlines from flying into United States for six months after it was revealed that about a third of its pilots were flying with "inaccuracies with their licenses." (See May 22, 2020; July 13, 2020.)

July 1, 2020: FAA issued SAFO 20011, "Operations in Oceanic Airspace During the COVID-19 Public Health Emergency." The SAFO advised flightcrews of the potential loss of air traffic control services in the event of an oceanic ATC facility shutdown and recommended mitigating procedures.

July 2, 2020: Transportation Secretary Chao announced public health guidance to airlines and airports for the recovery of the air transportation system from the COVID-19 public health emergency. The Departments of Transportation, Health and Human Services, and Homeland Security developed the "Runway to Recovery." It provided general guidance and recommended specific public health measures airlines and airports should take to mitigate risks associated with COVID-19. The recommendations included:
The measures included:

- Educating and communicating with passengers and employees
- Passengers should wear face coverings everywhere in the air transportation environment
- Promoting social distancing
- Enhancing disinfection and cleaning procedures
- Requiring health assessments from passengers and employees
- Collecting passenger contact information to enable notification in the event of suspected or confirmed exposure to COVID-19, a process known as contact tracing
- Protecting employees and separating passengers and crew
- Minimizing in-person interaction and shared objects, documents and surfaces
- Reporting the daily status of public health risk mitigation efforts
- Enhancing airport security checkpoint operations to reduce exposure
- Using new technology to support mitigation measures

July 6, 2020: FAA issued Safety Alert for Operators (SAFO) 20012 advising air carriers and other commercial operators on how to continue operating safely in terminal airspace when an ATC facility with responsibility for that airspace closed unexpectedly.

July 7, 2020: At an auction, RavnAir Group sold 15 of its Cessna planes for $10 million to Grant Aviation; four Cessnas to Fairbanks-based Wright Air Service, which also

bought Ravn buildings and equipment in Fairbanks, the North Slope communities of Utqiagvik and Deadhorse, and the Yukon River village of Galena for a total of $12.8 million; 14 Cessna planes to Bethel-based Yute Commuter Service for $1.5 million as well as two of Ravn's buildings, in Bethel and St. Mary's; and 8 Beechcraft planes to Anchorage-based ACE Air Cargo for $5 million. A bankruptcy court approved the sales on July 8. On July 9, Ravn announced the sale of six Dash-8 planes and two of its Part 121 federal operating certificates to Float Shuttle, a California commuter flight service, for $8 million. Float Shuttle intended to take advantage of a $31.6 million payroll support loan the Trump administration offered to a Ravn successor. The $8 million sales price was far below the $19 million Ravn had originally asked for as a minimum bid at a failed auction for the certificates and nine Dash-8 planes. (See June 25, 2020; August 7, 2020.)

July 8, 2020: FAA and the Switzerland Federal Office of Civil Aviation announced they had reached an agreement to harmonize domestic and international safety standards for UAS. The two nations planned to collaborate under a declaration of intent (DOI) on UAS issues of mutual interest and benefit. The primary objectives of the DOI were to provide opportunities to engage in research and development; exchange ideas, personnel, and information; provide coordination with other government entities and stakeholders; and to collaborate on other initiatives and projects determined to be of mutual interest and benefit in relation to UAS operations.

July 10, 2020: FAA gave permission to passenger aircraft operators to remove passenger seats and transport cargo on the floor of the cabin in aircraft being deployed on cargo-only flights. The exemption to existing regulations governing aircraft operations would last for one year. FAA also extended until July 10, 2021, its prior ruling that airlines could fly with cargo strapped into the seats through the end of this year. (See May 20, 2020; July 9, 2021.)

July 11, 2020: Iran's Civil Aviation Organization said "a misaligned missile battery, miscommunication between troops and their commanders, and a decision to fire without authorization led to Iran's Revolutionary Guard shooting down a Ukrainian jetliner in January, killing all 176 people on board." (See January 8, 2020.)

July 13, 2020: FAA downgraded Pakistan's air safety rating after the agency raised concerns about pilot certifications. The previous month, Pakistan had grounded almost a third of its pilots after discovering they might have falsified their qualifications. (See July 1, 2020.)

August 4, 2020: Virgin Galactic and its subsidiary, The Spaceship Company, introduced a new supersonic jet design concept aimed at the long-distance commercial aviation segment. In addition, the companies announced the signing of a memorandum of understanding with Rolls-Royce to develop and design "engine propulsion technology for high speed commercial aircraft." According to Virgin Galactic, the FAA's Center for Emerging Concepts and Innovation reviewed the project direction last week and authorized FAA resources to work with the company on outlining a certification framework for the design. (See March 30, 2020.)

August 4, 2020: FAA proposed an airworthiness directive that listed requirements Boeing had to meet before the 737 Max would be allowed to fly again. The changes included installing new flight control computer software; revising the existing airplane flight manual to incorporate new and revised flightcrew procedures; installing new display system software; changing the horizontal stabilizer trim wire routing installations; completing an angle of attack sensor system test; and performing an operational readiness flight. FAA gave the public 45 days to comment. (See June 29, 2020.)

August 4, 2020: FAA and the Colorado Division of Aeronautics announced the availability of 53 new weather cameras installed on the Division's network of 13 AWOS sites. The initiative was funded by the Division with $226,000 of funds and allocated to FAA under a reimbursable agreement. Under the arrangement, the FAA and the Governor's Office of Information Technology installed and configured four weather cameras on each of Colorado's Mountain 13 AWOS units. These were the first weather cameras installed outside of Alaska. (See March 3, 2020; February 8, 2021.)

August 5, 2020: FAA proposed two civil penalties totaling $1.25 million against The Boeing Company for alleged violations in the program that allowed the aircraft manufacturer to perform certain functions on behalf of FAA. The agency alleged that Boeing managers exerted undue pressure or interfered with the work of FAA designees at the company's plant in South Carolina.

August 7, 2020: Float Shuttle announced it had completed acquisition of the RAVNAir assets it purchased at auction. It anticipated the newly named RAVN Alaska would begin flying as a charter service in November serving Homer and a few other remote Alaska communities. On October 13, RAVN Alaska announced FAA granted permission for it to begin flying charter flights, and the DOT issued what's called a "show cause order," which opened a 14-day window for anyone to show cause for the DOT not to find the air carrier fit, willing, and able to provide scheduled air service. On November 13, Ravn Alaska began flying scheduled public chartered flights between Anchorage and Unalaska, Sand Point, Homer, Kenai, and Valdez. (See July 7, 2020.)

August 11, 2020: New York's Monroe County Legislature approved the renaming of Rochester's airport the Frederick Douglass – Greater Rochester International Airport. The decision did not require FAA approval, but the airport had to file paperwork with the agency to the change the airport's name.

August 13, 2020: DOT issued an order suspending all charter flights between the United States and all airports in Cuba, except for authorized public charters to and from Havana and other authorized charter flights for emergency medical purposes, search and rescue, and other travel deemed to be in the interest of the United States. DOT took the action at the request of the Department of State. For most charter carriers, the suspension allowed a 60-day wind-down period and became effective on October 13, 2020. (See October 25, 2019.)

August 17, 2020: FAA, Department of Justice (DOJ), Department of Homeland Security (DHS), and the Federal Communications Commission (FCC) issued guidance to help non-federal public and private entities better understand the federal laws and regulations that might apply to the use of capabilities to detect and mitigate threats posed by UAS operations. The "Advisory on the Application of Federal Laws to the Acquisition and Use of Technology to Detect and Mitigate Unmanned Aircraft Systems" provided a brief overview of various provisions of the U.S. criminal code enforced by DOJ, as well as federal laws and regulations related to aviation safety and efficiency, transportation and airport security, and the radiofrequency spectrum administered respectively by the FAA, DHS, and FCC.

August 18, 2020: FAA announced it had selected 26 schools to participate in the Unmanned Aircraft Systems Collegiate Training Initiative (UAS-CTI), which it launched in April. The program allowed educational institutions to collaborate with the agency to prepare students for careers in UAS. Participating institutions would work with FAA, other participants, general industry, local governments, law enforcement, and regional economic development entities to address labor force needs. FAA selected the following schools to participate in the program:

- Blue Mountain Community College, Pendleton, Oregon
- Central Oregon Community College, Bend, Oregon
- Dakota College, Bottineau, North Dakota
- Embry Riddle Aeronautical University, Daytona Beach, FL, Prescott, AZ, and Worldwide Campus
- Green River College, Auburn, Washington
- Gulf Coast Community College, Panama City, Florida
- Hazard Community and Technical College, Hazard, Kentucky
- Hinds Community College, Bolton, Mississippi
- Idaho State University, Poncatello, Idaho
- Indiana State University, Terra Haute, Indiana
- MiraCosta College, Carlsbad, California
- Mountain Empire Community College, Big Stone Gap, Virginia
- Mountwest Community and Technical College, Huntington, West Virginia
- Niagara Community College, Sanborn, New York
- North Carolina State University, Raleigh, North Carolina
- Northeastern Technical College, Cheraw, South Carolina
- Northland Community and Technical College, Thief River Falls, Minnesota
- Northwestern Michigan College, Traverse, Michigan
- Oklahoma City Community College, Stillwater, Oklahoma
- Palomar College District, San Marcos, California
- Santa Rosa Junior College, Windsor, California
- Southwestern College, Chula Vista, California
- Tallahassee Community College, Tallahassee, Florida
- University of Maine at Augusta, August, Maine
- University of North Dakota, Grand Forks, North Dakota
- WSU Tech, Wichita, Kansas

The FAA Reauthorization Act of 2018 (Public Law 115-254) required the FAA to establish a collegiate training initiative program relating to unmanned aircraft and to establish a process to designate consortia of public, two-year institutions of higher education as Community and Technical College Centers of Excellence in Small Unmanned Aircraft System Technology Training. On September 16, FAA announced 15 more schools have been selected to participate in the program.
The new schools included:

- Austin Community College, Austin, Texas
- Atlantic Cape Community College, Mays Landing, New Jersey
- Big Bend Community College, Moses Lake, Washington
- Blue Ridge Community and Technical College, Martinsburg, West Virginia
- Carroll Community College, Westminster, Maryland
- Clark State Community College, Springfield, Ohio
- Elizabeth City State University, Elizabeth City, North Carolina
- Florida State University, Tallahassee, Florida
- Fullerton College, Fullerton California
- Kansas State Polytechnic, Salina, Kansas
- Liberty University, Lynchburg, Virginia
- Middle Tennessee State University, Murfreesboro, Tennessee
- Mitchell Technical College, Mitchell, South Dakota
- Southern West Virginia Community and Technical College, Mount Gay, West Virginia
- Yavapai College, Prescott, Arizona

August 21, 2020: FAA announced it planned to evaluate technologies and systems that could detect and mitigate potential safety risks posed by unmanned aircraft. The agency planned to test and evaluate at least 10 technologies or systems. It expected to begin the evaluations at its Technical Center in New Jersey in 2020. After the initial testing and evaluation in New Jersey, the agency expected to expand the effort to four additional U.S. airports.

August 25, 2020: FAA awarded Leidos a prime contract to design and develop a system to provide real-time access to essential weather, aeronautical, and NAS information through a common, NAS-wide Enterprise-Information Display System (E-IDS). The new system replaced five legacy systems as part of FAA's NextGen modernization program. The single award contract had an approximate value of $292 million. It included a four-year base period and 11 one-year options.

August 28, 2020: Boeing announced it had found manufacturing defects on eight of its 787 Dreamliners. The company said the planes had to be inspected and repaired before they could be flown. It was working with the FAA to determine the cause of the problem. Boeing did not identify the exact problem and did not identify the airlines flying the eight planes. On September 8, Boing announced it had discovered an issue on the tails of two-aisle 787s after finding that pieces were clamped together too tightly, which could lead to premature fatigue of the horizontal stabilizer. The company said that the problem could affect 893 of the nearly 1,000 787s built. Boeing delayed deliveries of the 787s while it

inspected the aircraft. Boeing later confirmed it had uncovered a manufacturing problem with 787 vertical fins – the fourth production-quality issue linked to the widebody twinjet program. (See January 19, 2018.)

August 31, 2020: FAA announced it had issued a Part 135 air carrier certificate to Amazon for its fleet of Prime Air drones and would allow Amazon to begin testing drone deliveries to customers on a limited basis. FAA had previously allowed UPS and Alphabet's Wing to test drone deliveries.

September 2, 2020: Magician David Blaine flew about 24,500 feet into the air tethered to 52 weather balloons. He lifted off from the Page airport in Arizona, and landed safely in the desert near the airport. FAA approved flight on September 1. The FAA deemed the flight a research and development project and classified his balloons as an experimental aircraft. The agency required Blaine to get licensed for hot-air balloon piloting before the stunt.

September 4, 2020: The Gulf Shores (Alabama) Airport Authority broke ground for a new federal contract air traffic control tower at Jack Edwards National Airport. The authority received $6.13 million in funding from the FAA and the Cares Act to help pay for the construction. The Authority expected the new tower to open in mid-2021.

September 8, 2020: FAA announced an Aviation Maintenance Technical Workforce Development Grant Program to recruit students for careers in aviation maintenance. The program was designed to support projects such as establishing new educational programs, providing scholarships or apprenticeships, supporting career outreach efforts, and enhancing aviation maintenance technical education. Congress appropriated $5 million in fiscal year 2020 to fund projects to address the projected shortages of aviation maintenance technical workers. Eligible groups could apply for grants from $25,000 to $500,000 for any one grant in any one fiscal year. (See September 9, 2020.)

September 8, 2020: FAA extended the special federal aviation regulation from September 18, 2020 to September 18, 2023, that prohibited certain flight operations in the Pyongyang Flight Information Region by all: U.S. air carriers; U.S. commercial operators; persons exercising the privileges of an airman certificate issued by the FAA, except when such persons are operating U.S.-registered aircraft for a foreign air carrier; and operators of U.S.-registered civil aircraft, except when the operator of such aircraft is a foreign air carrier. (See September 18, 2018.)

September 9, 2020: FAA issued a notice in the *Federal Register* announcing the Aircraft Pilots Workforce Development Grant Program. The program was designed to help expand the pilot workforce and help high school students receive training to become aerospace engineers or unmanned aircraft systems operators. The program also would help prepare teachers to train students for jobs in the aviation industry. In fiscal year 2020, Congress appropriated $5 million to create and deliver a training curriculum to address the projected shortages of aircraft pilots. Eligible groups could apply for grants from $25,000 to $500,000. (See September 8, 2020.)

September 11, 2020: The European Aviation Safety Agency (EASA) announced it had completed Boeing 737 MAX flight testing, clearing the way for joint regulatory agency evaluations of the grounded model's updated training. In the next step in its evaluation of the aircraft for return to service, EASA began analyzing the data and other information gathered during the flights tests in preparation for the Joint Operations Evaluation Board (JOEB). The JOEB includes participation from Brazilian, Canadian, European, and U.S. pilots and regulators and was planned to start on September 14 at London Gatwick Airport. The board evaluated proposed MAX training for pilots and fed an FAA-led Flight Standardization Board report that established minimum training curriculum. (See December 23, 2019; September 17, 2020.)

September 17, 2020: The House Transportation & Infrastructure Committee issued final 238-page report on the design, development and certification of 737 MAX, citing Lion Air and Ethiopian crashes were a horrific culmination of a series of faulty technical assumptions by Boeing engineers, a lack of transparency by Boeing management to compete with Airbus and deliver profits, and insufficient oversight by the FAA. (See September 11, 2020; September 30, 2020.)

September 18, 2020: FAA announced its policy for approving drone designs as a special class of aircraft. The policy statement confirmed a notice the agency released in February. The earlier notice informed the public of its plan to treat drones as a special class of aircraft under its Part 21.17 regulation for very light airplanes when assessing if the design of a model complies with airworthiness standards. With the new policy, the FAA began issuing type certificates, or design approvals, for unmanned aircraft systems (UAS) under a Part 21.17(b) process. The agency said it could still tailor design approvals for some drones, where appropriate, using airworthiness criteria from other categories of airplanes and helicopters under Part 21.17(a).

September 24, 2020: FAA announced had added 133 additional air traffic facilities to its Low Altitude Authorization and Notification Capability (LAANC) system. LAANC provided near-real-time approval for qualified drone pilots making requests to fly below 400 feet in controlled airspace. Nationwide beta testing for the program began in April 2018 and included nearly 300 air traffic facilities covering almost 500 airports. (See November 21, 2019.)

September 28, 2020: FAA announced it had certified the largest commercial jet engine ever built, the General Electric GE9x, designed for Boeing's new fleet of 777X aircraft. The new engine had 16 blades and delivered 110,000 pounds of thrust at takeoff.

September 30, 2020: FAA Administrator Steve Dickson flew the Boeing 373 Max in a two-hour test flight during which he flew high angle-of-attack patterns and activated the flight control software that provide erroneous information on the MAX crash flights in Indonesia and Ethiopia that killed 346 people. Dickson went through new pilot training procedures for the aircraft, plus spent time in a 737 Max simulator ahead his flight. Before the plane can return to service, several steps need to be completed: Flight Standardization Board (FSB) Report, Final Design Documentation and Technical

Advisory Board Report, Continued Airworthiness Notification to the International Community (CANIC) & AD, rescinding grounding order, issuing Certificates of Airworthiness, and finalizing training programs. (See September 18, 2020; October 6, 2020.)

September 30, 2020: U.S. Ambassador Earl R. Miller and Bangladesh Ministry of Civil Aviation and Tourism Senior Secretary Mohamed Mohibul Haque signed the Air Transport Agreement between the Government of the United States of America and the Government of the People's Republic of Bangladesh. This bilateral Agreement established a modern civil aviation relationship with Bangladesh consistent with U.S. Open Skies international aviation policy. It included unrestricted capacity and frequency of services, open route rights, a liberal charter regime, and open code-sharing opportunities. FAA had to conduct an inspection before carriers could begin direct air services.

September 30, 2020: Regional airline ExpressJet Airlines ceased operation. As one of the country's largest regional airlines, ExpressJet had operated flights for a number of larger airlines, including American Airlines, Delta Air Lines and, most recently, United Airlines.

October 6, 2020: FAA placed the draft Boeing 737 MAX Flight Standardization Board (FSB) report online. The report incorporated the recommendations from the Joint Operations Evaluation Board (JOEB) which was comprised of civil aviation authorities from the United States, Canada, Brazil, and the European Union. The FAA planned to publish a final FSB report after reviewing and addressing public comments on the draft. Several key milestones remained before the Boeing 737 Max could fly again:

- Final Design Documentation and Technical Advisory Board (TAB) Report – The FAA must review Boeing's final design documentation to evaluate compliance with all FAA regulations. The multi-agency TAB would also review the final Boeing submission and issue a final report prior to a final determination of compliance by the FAA.
- Continued Airworthiness Notification to the International Community (CANIC) & AD – The FAA will issue a CANIC providing notice of pending significant safety actions and will publish a final AD that addresses the known issues for grounding. The AD will advise operators of required corrective actions before aircraft may re-enter commercial service.
- FAA Rescinds Grounding Order – This marks the official ungrounding of the aircraft, pending completion by operators of the work specified in the AD, along with any required training.
- Certificates of Airworthiness – The FAA will retain its authority to issue airworthiness certificates and export certificates for all new 737 MAX airplanes manufactured since the grounding. The FAA will perform in-person, individual reviews of these aircraft.
- Operator Training Programs – The FAA will review and approve training programs for all Part 121 operators.

These actions were applicable only to U.S. air carriers and U.S.-registered aircraft. (See September 30, 2020; November 20, 2020.)

October 15, 2020: FAA issued the Streamlined Launch and Reentry Licensing Requirements Final Rule (PDF) for commercial space transportation launches and reentries. The rule consolidated four regulatory parts and applied a single set of licensing and safety regulations for all types of vehicle operations. The final rule's application processes allowed:

- A single operator's license that can be used to support multiple launches or reentries from potentially multiple launch site locations.
- Early review when applicants submit portions of their license application incrementally.
- Applicants to negotiate mutually agreeable reduced time frames for submittals and application review periods.
- Applicants to apply for a safety element approval with a license application, instead of needing to submit a separate application.
- Additional flexibility on how to demonstrate high consequence event protection.
- Neighboring operations personnel to stay during launch or reentry in certain circumstances.
- Ground safety oversight to be scoped to better fit the safety risks and reduce duplicative requirements when operating at a federal site.

This rule became effective 90 days after issuance. Legacy licenses could be used for up to five years after the rule's effective date. (See July 31, 2013; March 21, 2021.)

October 19, 2020: A 7.5 magnitude earthquake, centered near Sand Point, Alaska, and a subsequent tsunami warning disrupted air traffic in the region for a short period. The quake was felt widely in communities along the southern coast, including Sand Point, Chignik, Unalaska, and the Kenai Peninsula, according to the Alaska Earthquake Center, which reported a magnitude 5.2 aftershock 11 minutes later.

October 30, 2020: Secretary of Transportation Elaine Chao announced the three-year Unmanned Aircraft Systems Integration Pilot Program successfully concluded on October 25. Eight of the nine state, local and tribal governments that participated in the program have signed new agreements with the FAA to continue to tackle remaining UAS integration challenges. (October 25, 2017.) This new initiative called BEYOND, included the following participants:

- Choctaw Nation of Oklahoma
- Innovation and Entrepreneurship Investment Authority of Virginia
- Kansas Department of Transportation
- Memphis-Shelby County Airport Authority
- North Carolina Department of Transportation
- North Dakota Department of Transportation
- City of Reno, Nevada
- University of Alaska-Fairbanks

November 4, 2020: FAA issued a Special Airworthiness Information Bulletin (SAIB) to advise owners and operators of transport category airplanes of important airworthiness information and guidelines with respect to disinfecting airplane interiors. The information and guidelines might also apply to other categories of aircraft. FAA warned, although disinfection is not directly related to aircraft airworthiness, too frequent or improper application could result in negative impacts, which could include the following conditions:

- Corrosion
- Embrittlement
- Increased flammability
- Electrical short circuit

Depending on the system or part affected, any of these conditions could create either an immediate or latent airworthiness issue, according to FAA.

November 12, 2020: Aireon announced an agreement with FAA allowing the agency access to its satellite-routed aircraft surveillance data to evaluate different air traffic control (ATC) applications. Under the agreement, FAA "will have broad, intra-agency access" to Aireon's space-based automatic dependent surveillance-broadcast (ADS-B) data feed to integrate in its ATC automation platforms, Aireon said. L3Harris Technologies, which operated FAA's ground-based ADS-B surveillance network, will act as prime contractor. Aireon receiver payloads carried by Iridium Next satellites capture ADS-B messages that are continuously broadcast by transponder-equipped aircraft below, then stream the data to Aireon's ground-based teleport network. Aireon processes the data and distributes it to air navigation service providers that subscribe to its service. FAA plans to evaluate the use of Aireon's data feed for airspace safety analysis, search and rescue, airport surface applications and commercial space launch operations, according to the announcement.

November 15, 2020: A SpaceX capsule carried four astronauts to the International Space Station in SpaceX's "first regular NASA mission to the" station. The Crew-1 mission was also the first human orbital flight licensed by FAA, which had responsibility for public safety because the flight was conducted by a commercial company. (See May 30, 2020; December 9, 2020.)

November 17, 2020: The US and the UK officially signed a new Open Skies agreement on, ensuring air transport between the nations continues seamlessly in a post-Brexit environment. The accord allowed nonstop passenger flights operated by US and UK airlines from one country to another to continue unimpeded. US all-cargo carriers will also receive additional traffic rights on US-UK routes. Air traffic between the US and the UK had been covered under the US-European Union (EU) Open Skies regime, but the UK's exit from the EU made a new agreement necessary. Secretary of Transportation Elaine Chao and Secretary of State Mike Pompeo signed the agreement on behalf of the US on November 10. British transport minister Grant Shapps signed the agreement on November 17 on behalf of the UK.

November 19, 2020: The FBI arrested a Hollywood, California, man on charges that he crashed a drone into a Los Angeles Police Department (LAPD) helicopter in September. According to a press release issued by the U.S. Attorney's Office for the Central District of California, the collision took place during the early morning of September 18 as the helicopter crew responded to a report of a burglary at a pharmacy in Hollywood, which is part of Los Angeles. The impact caused the pilot to make an emergency landing at the LAPD's rooftop Hooper Heliport. The helicopter sustained damage to its nose, antenna and bottom cowlings. After colliding with the helicopter, the drone fell to the ground and damaged a car parked near the pharmacy, according to the press release. Its operator, a 22-year-old man living across the street from the pharmacy, faced a misdemeanor charge of unsafe operation of an unmanned aircraft, which carried a maximum sentence of one year in federal prison. The case against the man "is believed to be the first criminal case in the nation alleging the unsafe operation of an unmanned aircraft," the U.S. Attorney's Office said.

November 20, 2020: FAA Administrator Steve Dickson signed an order that paved the way for the Boeing 737 MAX to return to commercial service. Administrator Dickson's action followed a comprehensive and methodical safety review process that took 20 months to complete. In addition to rescinding the order that grounded the aircraft, the FAA published an airworthiness directive specifying design changes that must be made before the aircraft returns to service, issued a continued airworthiness notification to the international community, and published the MAX training requirements. These actions did not allow the MAX to return immediately to the skies. The FAA had to approve 737 MAX pilot training program revisions for each U.S. airline operating the MAX and would retain its authority to issue airworthiness certificates and export certificates of airworthiness for all new 737 MAX aircraft manufactured since the FAA issued the grounding order. Furthermore, airlines that had parked their MAX aircraft had to take required maintenance steps to prepare them to fly again. On November 25, Brazil adopted the FAA requirements for the 737 Max to return to service. (See October 6, 2020; December 1, 2020.)

November 20, 2020: The University of Tennessee Institute of Agriculture announced it had received a one-year $250,000 grant from the FAA to study the possible use of certain farming biomass in the production of jet fuel. The institute said the FAA "grant will fuel a one-year study that looks into the use of pennycress, soybean, canola, carinata and camelina, and softwood logging residues." The study "is expected to involve airports around Nashville; Memphis; Chattanooga; Birmingham, Alabama; and Atlanta, Georgia." According to the university, "The use of biomass feedstock may reduce greenhouse gas emissions by as much as 80% compared to petroleum-based fuels." (See June 5, 2019; October 15, 2021.)

November 27, 2020: The Department of Transportation issued a final rule codifying its longstanding definitions for the terms "unfair" and "deceptive" when the Department used its statutory authority to prohibit unfair or deceptive practices by airlines or ticket agents. Most of the Department's aviation consumer protection regulations, such as the Department's tarmac delay rule and rules on overbooking, are based on the Department's

authority to prohibit unfair or deceptive practices. As defined by the final rule, a practice is "unfair" to consumers if it causes or is likely to cause substantial injury, which is not reasonably avoidable, and the harm is not outweighed by benefits to consumers or competition. The final rule also stated a practice is "deceptive" to consumers if it is likely to mislead a consumer, acting reasonably under the circumstances, with respect to a material matter. A matter is material if it likely affected the consumer's conduct or decision with respect to a product or service. Proof of intent is not necessary to establish unfairness or deception.

December 1, 2020: The Department of Transportation announced that all necessary regulatory measures had been taken for the safe, rapid transportation of the COVID-19 vaccine by land and air. Transportation agencies and Operation Warp Speed officials coordinated with the private sector companies that plan to carry the vaccines from manufacturing facilities to the distribution centers and inoculation points. The Department established the appropriate safety requirements for all potential hazards involved in shipping the vaccine, including standards for dry ice and lithium batteries. In October, the FAA COVID-19 Vaccine Air Transport Team was established as part of the Department's effort to support the safe and expedited transportation and distribution of approved COVID-19 vaccines, including providing support to Operation Warp Speed. Key to this effort has been coordination with the Department's Pipeline and Hazardous Materials Safety Administration to ensure the safe transportation of hazardous materials.

December 1, 2020: FAA extended through March 31, 2021, two regulatory exemptions (18509, 18512) it previously issued to scheduled and on-demand U.S. air carriers. The exemptions gave crewmembers relief from having to don protective breathing equipment or oxygen masks in training, checking, or evaluation. They originally were going to expire on November 30, 2020.

December 1, 2020: FAA announced it had issued its first airworthiness certificate for a Boeing 737 MAX built since March 2019. Boeing had about 450 737 MAX airplanes built since 2019 awaiting approval by the FAA before they could be delivered to airlines. (See November 20, 2020; December 9, 2020.)

December 2, 2020: The Department of Transportation issued a final rule revising its Air Carrier Access Act regulation on the transportation of service animals by air. (See August 8, 2019.) The Traveling by Air with Service Animals final rule:

- Defined a service animal as a dog that is individually trained to do work or perform tasks for the benefit of a person with a disability
- No longer considered an emotional support animal to be a service animal
- Required airlines to treat psychiatric service animals the same as other service animals
- Allowed airlines to require forms developed by DOT attesting to a service animal's health, behavior, and training, and if taking a long flight attesting that the service animal can either not relieve itself, or can relieve itself in a sanitary manner

- Allowed airlines to require individuals traveling with a service animal to provide the DOT service animal form(s) up to 48 hours in advance of the date of travel if the passenger's reservation was made prior to that time
- Prohibited airlines from requiring passengers with a disability who are traveling with a service animal to physically check-in at the airport instead of using the online check-in process
- Allowed airlines to require a person with a disability seeking to travel with a service animal to provide the DOT service animal form(s) at the passenger's departure gate on the date of travel
- Allowed airlines to limit the number of service animals traveling with a single passenger with a disability to two service animals;
- Allowed airlines to require a service animal to fit within its handler's foot space on the aircraft
- Allowed airlines to require that service animals be harnessed, leashed, or tethered at all times in the airport and on the aircraft
- Continued to allow airlines to refuse transportation to service animals that exhibit aggressive behavior and that pose a direct threat to the health or safety of others
- Continued to prohibit airlines from refusing to transport a service animal solely based on breed

On December 29, Alaska Airlines became the first U.S. airline to announce, that beginning January 11, 2021, it would only transport service dogs specially trained to perform tasks for the benefit of a qualified individual with a disability.

December 4, 2020: The airport in Burlington, Vermont, opened its new $35.4 million taxiway paralleling the main runway. FAA funded 90 percent of construction through an airport improvement program grant.

December 9, 2020: Brazil's Gol Linhas Aéreas began flying the Max, the earliest of any global airline, on domestic routes from Sao Paulo. On December 29, American Airlines became the first U.S. airline to fly scheduled Max flights. (See December 1, 2020.)
December 9, 2020: A full-size prototype of SpaceX's heavy-lift Starship launch vehicle soared high into the atmosphere in a test flight over South Texas, and successfully guided itself to a beachside landing site before exploding at touchdown. (See November 15, 2020; April 8, 2021.)

December 10, 2020: The U.S. Air Force gave a safety endorsement to Joby Aviation's electric-powered vertical-takeoff-and-landing (eVTOL) vehicle – the first safety endorsement the service has given to an eVTOL. The endorsement allows Joby Aviation to use its vehicle to transport military equipment, but industry and military officials said the endorsement could be the first step towards eventual civilian certification.

December 17, 2020: FAA and the Kansas Department of Transportation (KDOT) announced an agreement to establish a flight corridor for testing civil supersonic aircraft. The Kansas Supersonic Transportation Corridor (SSTC), a 770-nm, racetrack-shaped flight route, ran the length of the state at Flight Level 390 (39,000 ft.) and above. Located

in low-volume airspace just north of the Kansas-Oklahoma border, the route supported sustained flight speeds to Mach 3 and was within reach of numerous airports. Aircraft entered the SSTC at specific points and operators were required to clear flight routes prior to takeoff. The KDOT Division of Aviation, FAA's Central Region and its Kansas City Air Route Traffic Control Center, and Lemasters Group Consulting wrote new procedures to provide safety margins during supersonic flights.

December 21, 2020: Under FAA Exemption No. 19685, FAA increased the time frame for a check airman to conduct a proficiency or competency check under the observation of an FAA inspector or an aircrew designated examiner from 24 to 36 months. FAA also granted a petition to extend relief on crew training deadlines for completing recurrent training and qualification requirements for ground personnel and crewmembers through March 31, 2021. The extension provided relief for requirements due in January, February, and March 2021.

December 27, 2020: President Trump signed into law H.R. 133, an Act making consolidated appropriations for the fiscal year ending September 30, 2021, providing coronavirus emergency response and relief, and for other purposes. The bill included mandates for FAA to reform its certification processes. Among other things, the bill:

- Required aviation manufacturers to adopt safety management systems;
- Ordered an independent review of Boeing's organization delegation authorization (ODA), safety culture, and capability to perform FAA-delegated functions;
- Reformed the FAA's greater oversight of manufacturer's ODA units and FAA-designees working within those units;
- Authorized civil penalties against aviation manufacturer supervisors who interfere with or place undue pressure on other employees who are empowered to act as FAA designees in finding that a design or product complies with design requirements;
- Required FAA to approve each new designee who performs those functions;
- Authorized more than $75 million over three years for FAA to recruit and retain engineers, safety inspectors, human factors specialists, software and cybersecurity experts, and other qualified technical experts;
- Required FAA to consider whether there comes a point at which a derivative of an old aircraft design should no longer be certificated as a derivative instead of as a new design;
- Locked in new requirements on the disclosure of safety-critical systems;
- Expanded whistleblower protections;
- Required FAA to review pilot training, including manual flying skills training, and the assumptions relied upon by FAA and manufacturers when designing an airplane, and to work with the international community to improve pilot training globally; and
- Ensured better understanding of human factors and how to integrate them into the aircraft certification process.

December 28, 2020: FAA announced final rules for unmanned aircraft. The new rules required Remote Identification (Remote ID) of drones and allow operators of small

drones to fly over people and at night under certain conditions. Remote ID will help mitigate risks associated with expanded drone operations, such as flights over people and at night, and both rules support technological and operational innovation and advancements. The Remote ID rule (PDF) applies to all operators of drones that require FAA registration. There are three ways to comply with the operational requirements:

1. Operate a standard Remote ID drone that broadcasts identification and location information of the drone and control station;
2. Operate a drone with a Remote ID broadcast module (may be a separate device attached to the drone), which broadcasts identification, location, and take-off information; or
3. Operate a drone without Remote ID but at specific FAA-recognized identification areas.

The Operations Over People and at Night rule applied to Part 107 operators. The ability to fly over people and moving vehicles varies depending on the level of risk a small drone operation presents to people on the ground. The rule allowed for operations at night under certain conditions. The final rule required that small drone operators have their remote pilot certificate and identification in their physical possession when operating, ready to present to authorities if needed. This rule also expanded the class of authorities who may request these forms from a remote pilot. The final rule replaces the requirement to complete a recurrent test every 24 calendar months with the requirement to complete updated recurrent training that included operating at night in identified subject areas. Both rules became effective 60 days after publication in the Federal Register. The Remote ID rule included two compliance dates. Drone manufacturers had 18 months to begin producing drones with Remote ID, with operators having an additional year to start using drones with Remote ID. (See May 5, 2020; April 21, 2021.)

December 28, 2020: The U.S. Environmental Protection Agency (EPA) finalized emissions standards for airplanes used in commercial aviation and large business jets. This action will align U.S. standards with the international carbon dioxide (CO2) emissions standards set by the International Civil Aviation Organization (ICAO), ensuring domestically manufactured aircraft remain competitive in the global marketplace.

December 28, 2020: Effective this date, the Centers for Disease Control and Prevention required that anyone traveling from the United Kingdom to the United States Passengers get a viral test (i.e., a test for current infection) for COVID-19 within three days before their flight from the U.K. to the U.S. departs, and provide written documentation of their laboratory test result (in hard copy or electronic) to the airline. Airlines had to confirm the negative test result for all passengers before they boarded the aircraft. If a passenger chose not to take a test, the airline had to deny boarding to the passenger.

December 31, 2020: The Coronavirus Response and Relief Supplemental Appropriation Act (CRRSAA) (H.R. 133), signed into law by the President on December 27, 2020, included $2 billion in funds to be awarded as economic relief to eligible U.S. airports and eligible concessions at those airports to prevent, prepare for, and respond to the

coronavirus disease 2019 (COVID-19) public health emergency. To distribute these funds, FAA announced establishment of the Airport Coronavirus Response Grant Program. The agency plans to make grants to all eligible airports that are part of the national airport system, including all commercial service airports, all reliever airports, and some public-owned general aviation airports. Under this new grant program:

- Primary commercial service airports, those with more than 10,000 annual passenger boardings, will share $1.75 billion based on the number of annual boardings, in a similar way to how they currently receive Airport Improvement Program (AIP) entitlement funds.
- Primary commercial service airports will share an additional $200 million based on the number of annual boardings, and these funds will then be available for these airports to provide relief from rent and minimum annual guarantees to on-airport car rental, on-airport parking, and in-terminal airport concessions. Airports will provide this relief to each airport concession based on its proportional share of the total annual rent and minimum annual guarantees for the airport.
- Non-primary commercial service and general aviation airports will share $45 million based on their airport categories, such as National, Regional, Local, and Basic. Of that $45 million, airports that participate in the FAA Contract Tower Program will divide $5 million equally.

2021

January 6, 2021: FAA issued a final rule to facilitate the safe development of civil supersonic aircraft. The rule streamlined and clarified procedures to obtain agency approval for supersonic flight testing in the United States. (See September 23, 1977.)

January 8, 2021: FAA and NASA signed a memorandum of understanding (MOU) to support commercial space activities related to the transport of government and non-government passengers, cargo, and payloads for both orbital and suborbital missions. Under the MOU, the two agencies planned to build a stable launch and reentry framework for the U.S. space industry that was transparent and avoided conflicting requirements and multiple sets of standards. The two agencies planned to establish a point-to-point commercial suborbital pilot program with designated spaceports and airspace designs. Other existing collaboration between FAA and NASA included the Flight Opportunities Program to help develop a framework for flying researchers from industry and academia on commercial suborbital flights and efforts to extend suborbital space transportation capabilities for NASA astronauts and other NASA personnel.

January 13, 2021: FAA Administrator Steve Dickson signed an order directing a stricter legal enforcement policy against unruly airline passengers in the wake of recent incidents. Effective immediately, the agency would pursue legal enforcement action against any passenger who assaulted, threatened, intimidated, or interfered with airline crew members. The policy would be in effect through March 30, 2021. Passengers who interfered with, physically assaulted, or threatened to physically assault aircraft crew or

anyone else on an aircraft faced stiff penalties, including fines of up to $35,000 and imprisonment. FAA subsequently extended the zero tolerance order. (See July 13, 2021.)

January 19, 2021: FAA announced the availability of two Aviation Workforce Development Grant programs aimed at developing and inspiring a more inclusive pool of pilots and aviation maintenance technicians to join the next generation of aviation professionals. The Aircraft Pilots Workforce Development Grants provided money to expand the pilot workforce and educate students to become pilots, aerospace engineers, or unmanned aircraft systems operators. The Aviation Maintenance Technical Workers Workforce Development Grants was designed to prepare aviation maintenance technicians. Applicants from academia and the aviation community could submit applications through March 22, 2021.

January 20, 2021: Joe Biden became the 46th President of the United States.

January 26, 2021: Terrafugia announced it had received a FAA Special Light-Sport Aircraft airworthiness certificate for its Transition® roadable aircraft. As a unique integration of a two-seat aircraft and an automobile, the Transition® was designed to meet safety standards from both FAA and the National Highway and Traffic Safety Administration. The vehicle that received the certificate was legal for flight only and represented the initial version of the Transition® roadable aircraft. Terrafugia planned to produce and sell additional initial (flight-only) versions to interested parties and hoped to develop the driving portion of the Transition® design, with the goal of being legal both in the sky and on local roads in 2022. (See June 21, 2016.)

January 31, 2021: TSA announced that starting on February 21, it would require travelers to wear face masks when in airports, bus, and rail stations, as well as while on passenger aircraft, public transportation, passenger railroads, and over-the-road buses operating on scheduled fixed-routes. On April 30, TSA announced an extension to the face mask requirement, originally set to expire on May 11, through September 13, 2021. On August 20, TSA again extended the requirement to January 21, 2022. (See September 10, 2021).

February 3, 2021: Pete Buttigieg became Secretary of Transportation.

February 8, 2021: FAA announced expansion of its weather camera program to Hawaii. FAA planned to install 23 camera facilities throughout the islands. The agency began camera installations on Kauai in March. (See August 4, 2020.)

February 11, 2021: FAA announced the Republic of Costa Rica complied with international safety standards and had been granted the highest international ranking. Costa Rica received a Category 2 rating in May 2019 after it failed to comply with ICAO's safety standards. The Category 1 status was based on a reassessment in 2020 and a January 2021 safety oversight meeting with the Directorate General of Civil Aviation (DGAC). A Category 1 rating meant the country's civil aviation authority complied with ICAO standards. Under Category 1 rating, properly authorized Costa Rican air carriers

were permitted to serve the United States and carry the code of U.S. carriers without limitation.

February 24, 2021: FAA issued an emergency airworthiness directive (AD) requiring U.S. operators of airplanes equipped with certain Pratt & Whitney PW4000 engines to inspect those engines before further flight. FAA took action as the result of a fan-blade failure that occurred February 20 on a Boeing 777-200 that had departed from Denver International Airport. Although the aircraft landed safely, the failure resulted in damage to the engine, an in-flight engine fire, and damage to the airplane. After reviewing the available data and considering other safety factors, FAA determined operators must conduct a thermal acoustic image (TAI) inspection of the large titanium fan blades located at the front of each engine. TAI technology could detect cracks on the interior surfaces of the hollow fan blades, or in areas that could not be seen during a visual inspection.

February 25, 2021: FAA assessed $5.4 million in deferred civil penalties against the Boeing Company for failing to meet performance obligations under a 2015 settlement agreement. Under the 2015 agreement, Boeing pledged to change its internal processes to improve and prioritize regulatory compliance. The agreement required the company to meet specific performance targets, and authorized FAA to assess deferred penalties if it failed to do so. The Chicago-based aircraft manufacturer also agreed to pay $1.21 million to settle two pending FAA enforcement cases. One case alleged the company implemented an improper structure of its FAA-approved Organization Designation Authorization (ODA) program and exerted undue pressure or interfered with ODA unit members. The other case alleged it failed to follow its quality-control processes and subjected ODA members to undue pressure or interference in relation to an aircraft airworthiness inspection.

February 25, 2021: FAA implemented its Las Vegas Metroplex project, one of 11 such projects nationwide. The project used satellite navigation to create new direct routes for McCarran International Airport, Henderson Executive Airport, and North Las Vegas Airport, which automatically separated aircraft from each other and provided efficient climb and descent profiles. (See March 26, 2020; April 22, 2021.)

March 2, 2021: FAA selected five host airports to evaluate technologies and systems that might be able to detect and mitigate potential safety risks posed by unmanned aircraft. Researchers planned to test and evaluate at least 10 technologies or systems at the following airports:

- Atlantic City International Airport in Atlantic City, New Jersey
- Syracuse Hancock International Airport in Syracuse, New York
- Rickenbacker International Airport in Columbus, Ohio
- Huntsville International Airport in Huntsville, Alabama
- Seattle-Tacoma International Airport in Seattle, Washington

March 17, 2021: FAA renewed two unmanned aerial system launch operator licenses for Orbital Sciences, LLC, a subsidiary of Northrop Grumman. The licenses were valid for

five years and authorized the company to conduct flights of its Pegasus launch vehicle from the Wallops Flight Facility in Virginia and the Cape Canaveral Space Force Station in Florida. Orbital Sciences still had to receive FAA authorization for specific launches.

March 21, 2021: FAA issued a final rule that streamlined and modernized its commercial space launch and reentry licensing regulations by eliminating obsolete requirements, replacing most prescriptive requirements with performance-based criteria, and reducing duplicative regulations. It also established a single set of licensing and safety regulations for several types of commercial space operations and vehicles. (See October 15, 2020.)

March 25, 2021: The United States and the United Kingdom completed an exchange of diplomatic notes that brought into force a new air transport agreement. The United States and the United Kingdom signed the agreement on November 10 and November 17, 2020, respectively, and began applying the terms of the agreement on January 1, 2021. The agreement met all the criteria of the U.S. Open-Skies policy and provided for additional traffic rights for U.S. all-cargo operations to and from the United Kingdom. The agreement also included the UK Overseas Territories and Crown Dependencies, expanding and modernizing our air transport relationship with those regions.

March 28, 2021: FAA's Mike Monroney Center Aeronautical Center announced a three-year MOU with the Choctaw Nation of Oklahoma to study how Unmanned Aircraft Systems (UAS) could best transport cargo, including parcels, at lower altitudes.

April 8, 2021: Boeing notified FAA it had recommended operators of certain Boeing 737 MAX airplanes to temporarily remove them from service to address a manufacturing issue that could affect the operation of a backup power control unit. (See December 9, 2020; May 27, 2021.)

April 21, 2021: Effective this date, FAA's Remote Identification (Remote ID) rule provided for identifying drones in flight and the location of their control stations. The rule applied to all drones requiring FAA registration. The new Operations over People rule, also effective this date, applied to pilots who flew under Part 107 of the Federal Aviation Regulations. Under that rule, the ability to fly over people and over moving vehicles varied depending on the level of risk a small drone posed to people on the ground. Additionally, the rule allowed operations at night under certain conditions provided pilots completed certain training or passed knowledge tests. (See December 28, 2020.)

April 22, 2021: FAA implemented the first phase of the South-Central Florida Metroplex when it published 54 new air traffic procedures. Metroplex procedures allowed more direct flights and more efficient climb and descent profiles. Seventeen of the procedures required additional training of air traffic controllers and automation upgrades at air traffic control facilities before they could be implemented. (See February 25, 2021; August 12, 2021.)

April 30, 2021: FAA and the Civil Aviation Authority of Singapore (CAAS) released the first in a series of joint videos to share lessons learned during the COVID-19 crisis. The five episode executive video series covered resilient leadership, safety oversight, emerging technology, risk-based decision-making and women in aviation. The videos presented lessons learned to benefit both agencies as well as the international aviation community. It is one of several collaborations under a longstanding partnership between FAA and the CAAS.

May 5, 2021: FAA announced it had added space launch activity areas to the navigation charts used by pilots who fly visually. The agency now represented all 12 FAA-licensed spaceports, and other federal and private launch and reentry sites, on the charts by a rocket symbol. These areas were in Alaska, California, Colorado, Florida, New Mexico, Oklahoma, Texas and Virginia. Pilots could download the free charts and reference FAA's Aeronautical Chart User's Guide for more information.

May 22, 2021: The Virgin Galactic SpaceShipTwo flight from SpacePort America in New Mexico marked the 400th FAA licensed commercial space launch. The first space launch occurred in 1989 at Whites Sands Missile Range in New Mexico. (See December 13, 2018; July 11, 2021.)

May 25, 2021: FAA announced Mexico did not meet International Civil Aviation Organization (ICAO) safety standards. Based on a reassessment of Mexico's civil aviation authority, FAA downgraded Mexico's rating to Category 2. While the new rating allowed Mexican air carriers to continue existing service to the United States, it prohibited any new service and routes. U.S. airlines no longer were allowed to market and sell tickets with their names and designator codes on Mexican-operated flights.

May 26, 2021: FAA issued the final rule for the Pilot Records Database, which required air carriers and certain other operators to report pilots' employment history, training, and qualifications to the database. The rule also required air carriers and certain operators to review records contained in the database when considering pilots for employment. (See March 30, 2020.) The database included the following information:

- FAA pilot certificate information, such as certificates and ratings
- FAA summaries of unsatisfactory pilot applications for new certificates or ratings
- FAA records of accidents, incidents, and enforcement actions
- Records from employers on pilot training, qualification, and proficiency
- Pilot drug and alcohol records
- Employers' final disciplinary action records
- Pilot records concerning separation of employment
- Verification of pilot motor vehicle driving record

The rule took effect 60 days after publication in the Federal Register. Additional actions and timelines to support implementation of the rule included:

- Six months after the rule was published, operators had to begin reviewing FAA records electronically in the database instead of submitting a form requesting records

- One year after the rule was published, operators had to begin reporting and reviewing records to the database
- Operators had three years and 90 days to transition and fully comply with the rule

May 27, 2021: FAA announced the Boeing Company would pay at least $17 million in penalties and undertake multiple corrective actions with its production under a settlement agreement. FAA found that the Chicago-based manufacturer installed equipment on 759 Boeing 737 MAX and NG aircraft that contained sensors not approved for that equipment; submitted approximately 178 Boeing 737 MAX aircraft for airworthiness certification when the aircraft potentially had nonconforming slat tracks installed; and improperly marked those slat tracks. Boeing paid the $17 million penalty within 30 days after signing the agreement. If Boeing did not complete certain corrective actions within specific timeframes, FAA would levy up to $10.1 million in additional penalties. The corrective actions included:

- Strengthening procedures to ensure that it does not install on aircraft any parts that fail to conform to their approved design
- Performing Safety Risk Management analyses to determine whether its supply-chain oversight processes are appropriate and whether the company is ready to safely increase the Boeing 737 production rate
- Revising its production procedures to enable FAA to observe production rate readiness assessments, the data on which the company bases the assessments, and the results of the assessments
- Taking steps to reduce the chance that it presents to the FAA aircraft with nonconforming parts for airworthiness certification or a Certificate of Export
- Enhancing processes to improve its oversight of parts suppliers (See April 8, 2021; October 14, 2021.)

May 28, 2021: FAA issued an alert advising U.S. passenger airlines to exercise extreme caution while flying over Belarus. The notice to airmen said airlines should continue to exercise extreme caution until the agency could better assess Belarus' actions surrounding the May 23 diversion of a passenger jet and the potential for Belarus to repeat similar actions in the future. FAA planned to continue its oversight of Boeing's engineering and production activities and implemented oversight provisions from the 2020 Aircraft Certification, Safety, and Accountability Act. (See June 29, 2021.)

June 4, 2021: FAA revoked Universal Flight Services' ability to charge passengers for flights and revoked the owner's pilot certification for conducting illegal charter flights. The company conducted 26 illegal passenger flights without a FAA certificate from October 22, 2015, to February 17, 2019. In March 2019, the Florida-based company had received the required FAA certificate to conduct passenger flights. However, between September 9, 2019, and September 20, 2020, the company operated seven flights with unauthorized pilots and/or aircraft. Additionally, all flights from October 2015 to September 2020, were flown by pilots who had not passed the required tests and checks.

June 4, 2021: FAA renewed the spaceport license for the Oklahoma Space Industry Development Authority, authorizing them to operate a launch site at Clinton-Sherman

Industrial Airpark. The license had to be renewed every five years. The Authority is one of twelve FAA-licensed commercial spaceports.

June 21 2021: FAA launched a new Voluntary Safety Reporting Program for those who worked in FAA's Aviation Safety organization. The system gave employees the ability to report confidentially any safety concerns without fear of punitive action. The agency's aviation safety workforce included about 7,400 professionals who provided oversight of airlines, manufacturers, maintenance providers, aviation medical practitioners and flight crews.

June 21, 2021: FAA and the Department of the Air Force signed an agreement for commercial activities at U.S. Space Force ranges. Under the agreement, the two agencies merged safety protocols at the ranges and eliminated duplicative processes and approvals. FAA accepted the Air Force's safety rules as long if they met FAA regulations. The Air Force received FAA licensing decisions and did not impose its own requirements. The two agencies agreed to consult and coordinate actions before responding to requests and publishing safety materials.

June 22, 2021: FAA selected sixteen organizations to administer its Recreational Unmanned Aircraft Systems Safety Test (TRUST). The agency developed the test to provide recreational drone flyers with aeronautical safety knowledge and an overview of the rules for operating drones in the national airspace system. The test could be taken through the following approved organizations:

- Academy of Model Aeronautics
- Boy Scouts of America
- Chippewa Valley Technical College
- Community College of Allegheny County–West Hills Center
- CrossFlight Sky Solutions LLC
- Drone Launch Academy LLC
- Drone U
- Embry-Riddle Aeronautical University
- HSU Educational Foundation
- Lake Area Technical College
- Pilot Institute
- Proctorio Incorporated
- Tactical Aviation
- UAV Coach
- University of Arizona Global Campus
- Volatus Aerospace Corp

June 24, 2021: DOT renewed the Commercial Space Transportation Advisory Committee through June 2023. The committee, established in 1984, advised DOT and FAA on the commercial space transportation industry.

June 29, 2021: DOT issued an order proposing to block the sales of air transportation tickets between the US and Belarus. The U.S. would make exemptions on a case-by-case

basis for necessary travel to the Eastern European country. This decision came as the result of the diversion of the Ryanair flight 4978, where Belarus forced the plane to land in its territory. (See May 28, 2021.)

June 30, 2021: FAA, for the first time, used its new Space Data Integrator (SDI) prototype during the SpaceX Transponder 2 launch from Cape Canaveral Space Force Station in Florida. SDI automated the delivery of vehicle-related telemetry data to the FAA Air Traffic Control System Command Center. The information improved FAA's situational awareness of where the vehicle was as it travels to space or as it returned to the Earth. In addition to existing tools, FAA used SDI to manage air traffic more efficiently and address contingencies in the event of an anomaly during a mission.

July 1, 2021: FAA implemented an alternative air traffic procedure for arrivals to Runway 19 at Teterboro Airport in New Jersey. The procedure used satellite-based technology to guide a mix of aircraft along a pathway that generally followed New Jersey State Route 17 to Runway 19 at Teterboro Airport. The alternative procedure did not replace the existing conventional instrument approach which remained the preferred approach for Runway 19. FAA developed the procedure at the request of the Port Authority of New York and New Jersey and the Teterboro Airport Noise Abatement Advisory Committee. The procedure provided a viable alternative approach to Runway 19 that helped reduce the number of aircraft flying over the Hackensack University Medical Center and the surrounding residential areas.

July 9, 2021: FAA extended two cargo exemptions through December 31. The first exemption authorized airlines to transport cargo secured to the seat tracks of a passenger aircraft when seats were removed and no passengers were in the cabin. The second exemption allowed airlines to secure cargo to passengers' seats if no passengers were in the cabin. (See July 10, 2020.)

July 11, 2021: Virgin founder Richard Branson soared more than 50 miles above the New Mexico desert aboard a Virgin Galactic rocket plane and safely returned in the vehicle's first fully crewed test flight to space. (See May 22, 2021; September 2, 2021.)

July 13, 2021: In light of increasing unruly passenger incidents, FAA launched a toolkit to inform passengers about its zero tolerance policy against unruly passengers. The toolkit included a public service announcement from Dickson, a video of kids discussing disruptive behavior on flights, and several social media memes. (See January 13, 2021; December 21, 2021.)

July 14, 2021: Secretary Buttigieg announced the appointment and reappointment of four members of the Aviation Consumer Protection Advisory Committee (ACPAC). Attorney General Maura Healy served as the new chairperson. He also announced the creation of the new Anti-Discrimination Subcommittee of the ACPAC, dedicated to ensuring the fair treatment of airline passengers. The subcommittee reviewed airline policies, procedures, and practices to prevent discrimination.

July 16, 2021: FAA suspended operations of Rhoades Aviation, the parent company of Transair. The decision came after the crash of Transair Flight 810 on July 2, which sent the two pilots to the hospital. By stripping Rhoades Aviation the ability to conduct maintenance inspections, it prevented the company from operating and grounded all flights.

July 16, 2021: FAA ordered all operators of Boeing 737 series aircraft to carry out inspections of cabin altitude pressure switches, after FAA found a high rate of switch failure. The switches ensured cabins were properly pressured throughout the flight.

July 19, 2021: FAA opened a safety field office in Houston to increase its oversight of commercial space operations in Texas and New Mexico. From this location, FAA inspectors could more effectively and efficiently monitor the ongoing testing programs and commercial space tourism operations of SpaceX and Blue Origin in Texas and Virgin Galactic in New Mexico, along with others in the region. (See July 11, 2021; July 20, 2021.)

July 20, 2021: FAA issued its decision on the environmental review for the LaGuardia Airport AirTrain. The decision allowed the Port Authority of New York and New Jersey to build the train, which would connect LaGuardia to the New York City Transit Subway 7 Line and the Long Island Railroad Port Washington Branch at Mets-Willets Point. The $2 billion project to build a rail link connecting New York City to LaGuardia Airport was officially put on hold on October 12, after weeks of criticism from public officials and a lawsuit from neighborhood and environmental groups. In a news release, the Port Authority of New York and New Jersey said it is pausing the project to consider alternatives.

July 20, 2021: FAA updated its FAA Commercial Space Astronaut Wings Program, inaugurated in 2004. The original policy stated that a person qualified for astronaut status if they flew 50 miles above the Earth’s surface. This change came in light of Richard Branson’s space flight on July 11 and Jeff Bezos’s Blue Origin flight on July 20. The new policy would became effective in January 2022. To earn such wings, commercial launch crew members had to be employed by a FAA-certified company performing the launch; they had to reach an altitude higher than 50 miles above the surface of the Earth during flight; and they had to have demonstrated activities during the mission "essential to public safety, or contributed to human space flight safety." Space tourists who paid for space joy rides were not eligible to receive astronaut wings. On December 10, FAA revised the program and announced it would end its Commercial Space Astronaut Wings Program in 2022. Beginning in 2022 FAA would recognize individuals who reach space on its website instead of issuing Commercial Space Astronaut Wings. Before the program ended, FAA awarded wings to those who had qualifying space travel in 2021.

July 22, 2021: FAA approved Trailwind Air’s seaplane route from Boston Harbor to Manhattan. The airline made its first flight on August 3.

July 25, 2021: In an emergency announcement, FAA imposed new flight restrictions over Afghanistan for U.S. airlines and other U.S. operators in response to the risk posed by extremist/militant activity. FAA prohibited flights operating below 26,000 feet in the Kabul Flight Information Region, which largely covered Afghanistan, unless operating in and out of Hamid Karzai International Airport. (See August 20, 2021.)

July 30, 2021: FAA requested applications for air traffic controller positions. The announcement closed on August 2, 2021. During that time, FAA released campaigns encouraging women and minorities to apply. For the first time FAA asked for people with video gaming skills, because the skills needed for air traffic control were similar to those used for gaming.

August 12, 2021: FAA began operations under the second phase of new air traffic routes and procedures in South-Central Florida. The project, referred to as the South-Central Florida Metroplex initiative, optimized aircraft arrival and departure procedures to and from 21 airports. New routes included changes in aircraft flight paths and altitudes in certain areas, but did not increase the number of aircraft operations at any of the airports. It was one of 11 Metroplex projects nationwide to improve traffic flow and reduce congestion in major metropolitan areas across the country. (See February 25, 2021.)

August 20, 2021: The Department of Defense activated Stage 1 of the Civil Reserve Air Fleet, calling for carriers to support the military's effort to evacuate people from Afghanistan. The activation called for 18 aircraft: three each from American Airlines, Atlas Air, Delta Air Lines and Omni Air; two from Hawaiian Airlines; and four from United Airlines. CRAF activated aircraft did not fly into Hamid Karzai International Airport in Kabul, but rather moved passengers from temporary safe havens and interim staging bases outside of Afghanistan. This was only the third time the Civil Reserve Air Fleet had been activated since its establishment in 1951. The program was voluntary, and participating carriers were given preference in carrying commercial peacetime cargo and passenger traffic for DOD. (See May 14, 1991; July 25, 2021.)

August 27, 2021: FAA released a final environmental assessment that found "no significant impact" for Virgin Orbit to conduct launches using its Boeing 747-400 carrier aircraft and LauncherOne rocket from Andersen Air Force Base in Guam. According to FAA's report, Virgin Orbit proposed to conduct a maximum of 25 launches over the next five years to place small satellites into a variety of low Earth orbits. The company also had to meet FAA safety, risk, and financial responsibility requirements.

September 2, 2021: FAA grounded Virgin Galactic's SpaceShipTwo suborbital spaceplane until it completed an investigation into a problem on the vehicle's previous flight in July. FAA needed to determine if the issues related to the incident affected public safety. The statement came a day after a New Yorker article said the two SpaceShipTwo pilots ignored an "entry glide cone warning" during the July 11 flight from Spaceport America in New Mexico. That warning indicated the vehicle was outside the volume of space known as the glide cone where it had enough energy to glide back to a runway landing at the spaceport. The warning appeared late in the powered portion of

the flight, showing SpaceShipTwo was not climbing steeply enough. (See July 19, 2021; September 2, 2021.)

September 10, 2021: TSA announced an increase in the range of civil penalties that might be imposed on individuals who violated the federal mask mandate at airports, on commercial aircraft, and in various modes of surface transportation, including passenger railroads, intercity bus services, and other public transportation. The new range of penalties were $500-$1000 for first offenders and $1000-$3000 for second offenders. (See January 31, 2021.)

September 10, 2021: FAA announced it had awarded more than $100 million for companies to help develop technologies that reduce fuel use, emissions and noise. Under the Continuous Lower Energy, Emissions and Noise (CLEEN) Program's phase 2, FAA and six industry partners planned to focus on reducing aviation emissions and noise, including pursuing goals of reducing carbon dioxide (CO2) emissions by improving fuel efficiency by at least 20 percent below the relevant ICAO standard; NOx emissions by 70 percent relative to the most recent ICAO standard; particulate matter emissions below the ICAO standard; and noise by 25 dB cumulative relative to the FAA Stage 5 standard. (See September 8, 2015.)

September 13, 2021: DOT announced it would offer $482.3 million in funding to 313 aerospace businesses, under the Aviation Manufacturing Jobs Protection Program, a new jobs-saving program created as part of the Biden-Harris administration's American Rescue Plan. The funding went to companies based in 37 states and Puerto Rico. On November 8, DOT said it would offer an additional $184 million in funding provided by the American Rescue Plan to 158 more aviation manufacturing businesses. The program had already helped protect nearly 30,000 American manufacturing jobs across 41 states and Puerto Rico.

September 15, 2021: Elon Musk's SpaceX launched four people into space on the Inspiration4 mission – the first time a spacecraft circled Earth with an all-amateur crew and no professional astronauts. The spacecraft hit an altitude of about 363 miles. The rocket's first-stage booster, after separating from the spacecraft's top half, flew itself back to Earth and touched down safely on a landing platform floating in the Atlantic. The spaceship landed on September 18, splashing down into the ocean off the east coast of Florida. Previous tourists who traveled that deep into space had to purchase seats on Russian government rockets. (See July 19, 2021.)

September 21, 2021: The Justice Department filed a lawsuit to block an alliance between American Airlines and JetBlue, criticizing it as a "de facto merger" that reduced competition. The lawsuit comes after President Biden specifically named the airline industry as being too heavily concentrated in a July executive order to crack down on anti-competitive practices.

September 24, 2021: DOT fined United Airlines $1.9 million for violating federal statutes and the department's rule prohibiting long tarmac delays. DOT also ordered the airline to

cease and desist from future similar violations. This is the largest fine issued by the Department for tarmac delay violations. An extensive investigation by the Department's Office of Aviation Consumer Protection found that between December 2015 and February 2021, United allowed twenty domestic flights and five international flights at various airports throughout the United States to remain on the tarmac for a lengthy period of time without providing passengers an opportunity to deplane, in violation of the Department's tarmac delay rule. The tarmac delays affected a total of 3,218 passengers. Under the DOT tarmac delay rule, airlines operating aircraft with 30 or more passenger seats are prohibited from allowing their domestic flights to remain on the tarmac for more than three hours at U.S. airports and their international flights to remain on the tarmac for more than four hours at U.S. airports without giving passengers an opportunity to leave the plane. The rule prohibiting long tarmac delays for domestic flights took effect 2010 and was expanded to include international flights in 2011.

September 29, 2021: FAA cleared Virgin Galactic to operate space flights again, but found the company failed to communicate a mistake that occurred during a high-profile mission earlier in the year. FAA completed a probe into the July flight that carried billionaire Richard Branson, the founder of Virgin Galactic, and five others to the edge of space and back to a facility in New Mexico. The agency found the company's spacecraft deviated from its assigned airspace during its descent back to Earth, and Virgin Galactic failed to report that error to the FAA as required. (See September 2, 2021.)

September 29, 2021: FAA issued an operational viability decision for the continued use of the remote air traffic control tower at Leesburg Executive Airport in Virginia. Swedish aerospace company SAAB partnered with nonprofit scientific organization Virginia SATSLab and the town of Leesburg in 2014 to launch the system, which became the first project under the FAA's Remote Tower Pilot Program. (See November 23, 2016.)

October 13, 2021: Blue Origin successfully completed its second human spaceflight on board New Shepard. The 10 minute, 17 second flight included passengers Dr. Chris Boshuizen, Glen de Vries, Audrey Powers, and William Shatner. (See July 20, 2021.)

October 14, 2021: Italian airline Alitalia made its final flight. The seventy-five year old airline had entered bankruptcy protection in 2007. A new airline, Italia Trasporto Aero, owned by the Italian government, took over some of the airline's fifty-two aircraft, most of its airport slots, and about a quarter of its employees.

October 14, 2021: FAA released recommendations on how to increase aviation safety in Alaska after a yearlong, sweeping examination of safety issues specific to the challenges of flying in Alaska, where more than 80 percent of its communities are accessible only by air. The report included five primary recommendations:

- Install Automated Weather Observing Systems (AWOS) at airports that don't have them and where the systems would have the biggest safety benefit, and continue testing a new technology called Visual Weather Observation System (VWOS)

- Develop a comprehensive Alaska airspace navigation strategy, including creating lower-altitude flight routes and improving GPS backup systems
- Continue a collaborative working group initiative in partnership with the Aircraft Owners and Pilots Association that's verifying and adding mountain pass information on aeronautical charts, and continue to hold FAA bi-annual charting meetings, allocating time for Alaska-specific discussions
- Continue efforts to expand ADS-B services to areas that don't have it, and continue outreach efforts to encourage operators to equip their aircraft with ADS-B
- Continue existing safety outreach programs and look for new opportunities where different FAA divisions could work together to address safety issues from multiple perspectives

The FAA planned to develop a draft roadmap by mid-February 2022, identify the resources necessary to implement it, and then seek aviation stakeholder feedback on the roadmap through May 2022. The agency said it would continue initiatives already underway and would begin to incorporate aspects of the new initiatives by summer 2022. It hoped to issue a progress report to stakeholders by September 30, 2022. In October 2020, the FAA Administrator launched the FAA Alaska Aviation Safety Initiative to discuss recommendations the National Transportation Safety Board made about Alaska charter and commuter operations. The agency then directed the formation of a group of FAA experts to focus on safety issues particular to Alaska, which resulted in the safety initiative. Throughout the spring and summer of 2021, the FAA hosted 12 virtual meetings with aviation stakeholders – including pilots, trade associations, airports and state officials – to get their feedback on current and planned safety efforts in Alaska.

October 14, 2021: The U.S. Department of Justice announced a U.S. federal grand jury indicted former Boeing 737 MAX chief technical pilot Mark Forkner, alleging he intentionally withheld crucial information about flight control software changes from FAA officials during the model's certification, helping set the stage for two fatal accidents linked to the software. The indictment charged Forkner with two counts of fraud involving aircraft parts in interstate commerce, for knowingly sending false information—737 MAX training documents—to American Airlines and Southwest Airlines in 2017, and four counts of wire fraud linked to electronic invoices Boeing sent the airlines as part of their orders. (See May 27, 2021.)

October 15, 2021: London-based jet engine maker Rolls-Royce carried out a flight test on a Boeing 747 test plane at Tucson International Airport with one of its engines burning 100% low-carbon, sustainable biofuel, and the three other engines running on standard jet fuel. The engine burning the bio-fuel had no engineering issues during the 54-minute flight. (See November 20, 2020; December 1, 2021.)

October 20, 2021: FAA issued a safety alert to operators warning of the risk of inadvertently activating the go-around mode switch on Boeing 757s and 767s. The alert pointed out the switches' proximity to the speed brake and flap lever could result in

inadvertent activation. It also urged flight crews to adhere to established pilot monitoring and flight path management practices.

October 21, 2021: FAA published a notice of proposed rulemaking to provide an extra hour of rest to flight attendants in between shifts. The proposal would extend the federal minimum rest hour requirement for flight attendants from nine hours to ten hours when scheduled for a duty period of fourteen hours or less.

October 28, 2021: FAA launched a nationwide solicitation to find a new design for control towers that could be built and operated sustainably at regional and municipal airports. (See Nov 5, 1962.)

October 29, 2021: FAA selected three airports to be eligible for grants to add civilian aviation operations at former and current military airfields: Kelly Field in San Antonio, Texas; Mobile Downtown Airport in Mobile, Alabama; and Salina Regional Airport in Salina, Kansas. The Military Airport Program (MAP) provides funding as a set aside of the airport improvement program to help increase civilian aviation capacity at current or former military airports by funding projects such as surface parking lots, fuel farms, hangars, utility systems, access roads, cargo buildings, and other airfield-related infrastructure. (SEE June 9, 2017.)

October 29, 2021: As part of an ongoing 15-year FAA-sponsored research program titled Crashworthiness Certification of Composite and Metallic Aircraft Structures, the National Institute for Aviation Research (NIAR) at Wichita State University conducted a full-scale fuselage drop test. Among other things, NIAR planned to use the data collected during the test to verify and validate finite element modeling techniques and human body models.

November 2, 2021: FAA issued a Special Airworthiness Information Bulletin alerting aviation manufacturers, operators, and pilots to the potential adverse effects of new 5G wireless networks on radio altimeters. The bulletin—AIR-21-18—recommended aircraft and avionics manufacturers and operators voluntarily provide FAA with information on radio altimeter design, functionality, and number of systems installed, and test their equipment to determine its susceptibility to interference from emissions in the 3700-3980 MHz frequency range. Radio altimeters, also called radar altimeters, track an aircraft's altitude over terrain by measuring reflected signals from about 2,500 ft. above ground level, operating between 4200-4400 MHz. (See November 4, 2021.)

November 2, 2021: FAA proposed a rule requiring commercial hot-air-balloon pilots to hold medical certificates when operating for hire. The rule would mandate a second-class medical certificate, the same standard required for commercial pilots.

November 4, 2021: FAA and the Federal Communications Commission issued a joint statement saying AT&T and Verizon would delay the launch of 5G on key frequencies amid concern that it might interfere with airplane safety systems. The companies planned to delay their rollouts until January 5, 2022. The announcement came after FAA issued a

bulletin to aircraft manufacturers and pilots on November 2, warning them action might be needed to address potential interference from the 5G expansion. (See November 2, 2021; December 7, 2021.)

November 20, 2021: Astra Space launched its LV0007 vehicle from the Pacific Spaceport Complex – Alaska on Kodiak Island, Alaska. The vehicle reached orbit at an altitude of 500 kilometers as part of a commercial launch on behalf of a U.S. Department of Defense's Space Force contract to test a payload under its space test program. The launch came almost three months after aborting a mission because of an engine malfunction. After the malfunction, Astra conducted an investigation with the FAA that led to a rocket redesign and improvement of verification processes for both design and rocket operations.

November 29, 2021: Vietnam Airlines inaugurated the first non-stop passenger service from the United States to Vietnam on a flight from San Francisco International Airport to Tan Son Nhat International Airport in Ho Chi Min City. (See February 14, 2019.)

December 1, 2021: A United Airlines flight from Chicago's O'Hare airport to Washington, DC's, Reagan National Airport, made the first commercial flight carrying passengers operating on 100% sustainable fuel in one of two engines. (See October 15, 2021; December 9, 2021.)

December 7, 2021: Sikorsky announced FAA had completed certification of the S-70M Black Hawk helicopter by issuing it a Restricted Category Special Airworthiness Certificate. Sikorsky expected FAA certification, and the establishment of a pilot type rating, to broaden the market for the military-designed helicopter by allowing civil and commercial operators in the United States to purchase new Black Hawk aircraft direct from the factory. Sikorsky received a type certificate for the S-70M aircraft from the FAA in February 2019.

December 7, 2021: FAA issued airworthiness directives requiring operators of helicopters and passenger-carrying airplanes to prohibit certain operations requiring radio altimeter (RadAlt) data when in the presence of 5G wireless transmissions. AD 2021-23-12, which applied to transport- and commuter-category airplanes, and AD 2021-23-13, which covered all helicopters equipped with RadAlts, were "prompted by a determination that radio altimeters cannot be relied upon to perform their intended function if they experience interference from wireless broadband operations in the 3.7-3.98 GHz frequency band," the agency stated. (See November 4, 2021.)

December 8, 2021: The Drone Racing League (DRL) announced FAA accredited it as the first UAS event organizer. DRL also announced its participation in FAA's Partnership for Safety Plan (PSP) Program where it will work to establish a standardized set of safety protocols for individuals and organizations seeking to conduct UAS demonstrations, air shows, exhibitions and events in front of live audiences.

December 9, 2021: FAA announced grant awards totaling more than $1.4 million to five universities to undertake research to build sustainable aviation fuel supply chains in different regions across the United States. Since 2014, the FAA has invested more than $13 million in the effort being conducted by ASCENT, the FAA Center of Excellence for Alternative Jet Fuels and Environment. The research teams on this project include:

- Washington State University: $412,000 – to examine the potential for retrofitting existing pulp and paper mills, sugarcane mills, dry corn ethanol plants, and petroleum refineries to enable jet fuel production from forest harvests, waste materials, and various crops, and evaluate supply chains for their ability to create jobs, aid U.S. industry, and add resiliency to the national liquid fuel supply.
- Massachusetts Institute of Technology: $450,000 – to consider the economic and environmental sustainability of a range of fuel pathways, including the co-production of sustainable aviation fuel in existing petroleum refineries.
- University of Tennessee: $100,000 – to support the development of an industry to produce sustainable aviation fuel using woody biomass feedstock in the Central Appalachian Region.
- University of Hawaii: $100,000 – to develop a model for tropical oil supply chains and assess gasification systems to produce fuel and/or hydrogen from construction and demolition landfill waste.
- Purdue University: $350,000 – to understand the land use impacts of sustainable aviation fuels on greenhouse gas emissions. (See September 13, 2013; December 1, 2021.)

December 14, 2021: The name of Las Vegas McCarran International Airport changed to Harry Reid International Airport. The airport, first known as Alamo Airport, opened in 1942. It took on the name McCarran Field in 1948 after Clark County purchased the airport. In 1968, the airport gained its international designation after the facility expanded and the first international flight from Mexico arrived.

December 20, 2021: FAA granted a five-year launch site operator license to Spaceport Camden in Camden County, Georgia, for small-rocket launches to low Earth orbit. The spaceport became the thirteenth licensed spaceport in the United States. (See May 5, 2020.)

December 21, 2021: FAA and TSA announced a program under which FAA will share information of passengers facing fines for unruly behavior with TSA who may remove the passenger from TSA PreCheck® screening eligibility, which is a privilege reserved for low-risk travelers. In addition to the FAA providing the TSA with information of passengers who receive proposed fines for unruly behavior, the TSA will share information to help the FAA identify and locate unruly passengers to serve them with penalty notices. (See July 13, 2021.)