CONGRESSIONAL BUDGET OFFICE
COST ESTIMATE

April 7, 2016

S. 2658
Federal Aviation Administration Reauthorization Act of 2016

As ordered reported by the Senate Committee on Commerce, Science, and Transportation on March 16, 2016

SUMMARY

S. 2658 would authorize appropriations, through 2017, for activities of the Federal Aviation Administration (FAA) and other federal programs related to civil aviation. The bill also would increase contract authority for the Airport Improvement Program (AIP) and reduce direct spending for federal retirement benefits for certain air traffic controllers. Over the 2017-2026 period CBO estimates that implementing S. 2658 would:

- Result in discretionary outlays totaling $16.7 billion, subject to the appropriation of the authorized amounts;
- Reduce direct spending by $8 million; and
- Increase revenues from civil penalties by less than $500,000.

Pay-as-you-go procedures apply because enacting the legislation would affect direct spending and revenues. CBO estimates that enacting the legislation would not increase net direct spending or on-budget deficits in any of the four consecutive 10-year periods beginning in 2027.

S. 2658 would impose intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) on operators of unmanned aircraft systems (UAS) and providers of helicopter air ambulance services. The bill also would preempt state and local authority to regulate such systems. Based on information from the FAA, public airport operators, and state aviation agencies, CBO estimates that the cost of the mandates on public entities would fall below the annual threshold established in UMRA for intergovernmental mandates ($77 million in 2016, adjusted annually for inflation). The bill would impose additional private-sector mandates on air carriers, owners of certain towers in rural areas, and others. Primarily because some of the mandates would depend on future actions by the FAA and the Transportation Security Administration (TSA), CBO

cannot determine whether the aggregate cost of the mandates on private entities would exceed the annual threshold established in UMRA for private-sector mandates ($154 million in 2016, adjusted annually for inflation).

ESTIMATED COST TO THE FEDERAL GOVERNMENT

The estimated budgetary effect of S. 2658 is shown in Table 1. The costs of this legislation fall within budget function 400 (transportation).

TABLE 1. ESTIMATED BUDGETARY EFFECT OF S. 2658

	By Fiscal Year, in Millions of Dollars											
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2021	2017-2026
INCREASES IN SPENDING SUBJECT TO APPROPRIATION												
Estimated Authorization Level	13,234	0	0	0	0	0	0	0	0	0	13,234	13,234
Estimated Outlays	10,478	1,814	999	709	510	486	458	400	400	400	14,510	16,654
INCREASES OR DECREASES (-) IN DIRECT SPENDING												
Estimated Budget Authority	397	392	387	393	399	405	405	405	405	405	1,967	3,992
Estimated Outlays	-3	-8	-13	-7	-1	5	5	5	5	5	-33	-8

Note: Components may not sum to totals because of rounding.

BASIS OF ESTIMATE

For this estimate CBO assumes that S. 2658 will be enacted early in fiscal year 2017 and that appropriations will be provided as specified by the bill. Estimates of outlays are based on historical spending patterns for the FAA and related activities.

Over the next 10 years, CBO estimates that implementing S. 2658 would result in discretionary outlays totaling $16.7 billion, reduce direct spending by $8 million, and increase revenues by less than $500,000.

Spending Subject to Appropriation

S. 2658 would authorize appropriations for FAA programs and related activities totaling $13.2 billion in 2017. (The bill also would authorize appropriations totaling $13.1 billion for 2016; the Congress has already provided funding in amounts that equal or exceed authorization levels specified for that year.) The bill also would provide contract authority (a mandatory form of budget authority) for the AIP; outlays of that contract authority are controlled by limits specified in annual appropriation acts and are therefore considered discretionary. Assuming appropriation of amounts specifically authorized and estimated to be necessary (as well as the enactment of obligation limitations for AIP that are consistent with levels of contract authority under the bill), CBO estimates that resulting discretionary outlays would total $16.7 billion over the next 10 years (see Table 2).

TABLE 2. CHANGES IN SPENDING SUBJECT TO APPROPRIATION UNDER S. 2658

	By Fiscal Year, in Millions of Dollars											
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2021	2017-2026
INCREASES IN SPENDING SUBJECT TO APPROPRIATION												
FAA Operations												
Authorization Level	10,025	0	0	0	0	0	0	0	0	0	10,025	10,025
Estimated Outlays	8,922	802	201	100	0	0	0	0	0	0	10,025	10,025
Air Navigation Facilities and Equipment												
Authorization Level	2,862	0	0	0	0	0	0	0	0	0	2,862	2,862
Estimated Outlays	1,288	658	429	229	114	86	58	0	0	0	2,718	2,862
Airport Improvement Program [a]												
Authorization Level	0	0	0	0	0	0	0	0	0	0	0	0
Estimated Outlays	76	244	332	372	396	400	400	400	400	400	1,420	3,420
Research, Engineering and Development												
Authorization Level	169	0	0	0	0	0	0	0	0	0	169	169
Estimated Outlays	85	57	19	8	0	0	0	0	0	0	169	169
Essential Air Service												
Authorization Level	155	0	0	0	0	0	0	0	0	0	155	155
Estimated Outlays	93	47	16	0	0	0	0	0	0	0	155	155
Other Activities												
Estimated Authorization Level	23	0	0	0	0	0	0	0	0	0	23	23
Estimated Outlays	14	6	3	0	0	0	0	0	0	0	23	23
Total Changes												
Estimated Authorization Level	13,234	0	0	0	0	0	0	0	0	0	13,234	13,234
Estimated Outlays	10,478	1,814	999	709	510	486	458	400	400	400	14,510	16,654

Notes: FAA = Federal Aviation Administration; components may not sum to totals because of rounding.

a. Budget authority for the Airport Improvement Program is provided as contract authority, a mandatory form of budget authority; however, outlays from that contract authority are subject to limitations on obligations specified in annual appropriation acts and are therefore considered discretionary.

FAA Operations. S. 2658 would authorize the appropriation of $10 billion in 2017 for FAA operations, primarily for salaries and expenses related to operating the air traffic control system and carrying out regulatory and safety-related activities. (Funding for FAA Operations in 2016 totals $9.9 billion.) Assuming appropriation of the authorized amount, CBO estimates that resulting outlays would occur over the next four years and total $10 billion.

Air Navigation Facilities and Equipment. S. 2658 would authorize the appropriation of nearly $2.9 billion for programs to maintain and modernize infrastructure and systems for communication, navigation, and surveillance related to air travel. (Funding for those activities in 2016 totals about $2.9 billion.) Assuming appropriation of the authorized amount, CBO estimates that outlays would occur over seven years and total $2.9 billion.

Airport Improvement Program. Through the AIP, the FAA provides grants to public-use airports for projects to enhance safety and increase airports' capacity for passengers and aircraft. Funding for the program is provided as contract authority (a mandatory form of budget authority), but outlays of contract authority are subject to limits specified in annual appropriation acts and are therefore considered discretionary.

S. 2658 would provide $3.75 billion in contract authority for the AIP in 2017. Consistent with provisions of law that govern CBO's baseline projections and cost estimates for legislation, we estimate that the projected amount of contract authority for AIP under the bill would total $37.5 billion over the 2017-2026 period, $4 billion more than the amounts projected in CBO's baseline. (See the discussion of AIP under "Direct Spending," below, for more details on the budgetary treatment of this program.) Assuming that obligation limitations on AIP spending, as set forth in annual appropriation acts, are equal to the amounts of contract authority projected for each year, CBO estimates that incremental increases in outlays (relative to baseline levels) would total $3.4 billion over the 2017-2026 period (and $580 million in later years) bringing total spending for AIP to $32.1 billion over the next ten years.

Research, Engineering and Development. S. 2658 would authorize the appropriation of $169 million in 2017 for the FAA's research activities aimed at developing technologies to enhance the safety, economic competitiveness, and environmental performance of aviation-related infrastructure and systems that comprise the U.S. national airspace. (Funding for those activities in 2016 totals $166 million.) Assuming appropriation of the authorized amount, CBO estimates that spending would occur over four years and total $169 million.

Essential Air Service. S. 2658 would authorize the appropriation of $155 million in 2017 for the Essential Air Service program, through which the Department of Transportation (DOT) makes payments to air carriers that provide service to certain rural communities. (Funding for such payments in 2016 totals $175 million.) Assuming appropriation of the specified amount, CBO estimates that resulting outlays would occur over three years and total $155 million.

Other Activities. CBO estimates that implementing other provisions of S. 2658 would cost $23 million over the 2017-2026 period, assuming the appropriation of necessary amounts. That amount includes:

- $10 million specifically authorized for grants to help small communities enhance air service;

- $6 million specifically authorized for a pilot program to develop technologies to mitigate the risk that unmanned aircraft systems pose to airports and infrastructure related to air navigation;

- $5 million specifically authorized for the FAA to enforce safety-related requirements on operators of unmanned aircraft systems;

- $1.5 million in estimated authorizations for DOT and the Government Accountability Office to complete a variety of administrative activities, studies, and reports; and

- $500,000 specifically authorized for applied research related to advanced materials used in aircraft.

In addition, the bill would authorize the FAA to collect and spend fees charged to offset the administrative costs of certain regulatory activities. The FAA already has broad general authority to collect and spend fees for a variety of such activities, which are credited as offsetting collections and spent soon thereafter, resulting in no significant net budgetary effect. Based on information from the agency, CBO expects that any increase in fees collected and spent under S. 2658 would be small, and that resulting changes in net federal spending would be negligible in any given year.

Direct Spending

S. 2658 would provide contract authority for AIP and modify the basis for calculating retirement benefits for certain air traffic controllers. CBO estimates that enacting the bill would reduce net direct spending by $8 million over the next 10 years (see Table 3).

TABLE 3. EFFECTS ON DIRECT SPENDING AND REVENUES UNDER S. 2658

	By Fiscal Year, in Millions of Dollars											
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2017-2021	2017-2026
INCREASES OR DECREASES (-) IN DIRECT SPENDING												
Airport Improvement Program [a]												
Estimated Budget Authority	400	400	400	400	400	400	400	400	400	400	2,000	4,000
Estimated Outlays	0	0	0	0	0	0	0	0	0	0	0	0
Retirement Benefits for Certain FAA Employees												
Estimated Budget Authority	-3	-8	-13	-7	-1	5	5	5	5	5	-33	-8
Estimated Outlays	-3	-8	-13	-7	-1	5	5	5	5	5	-33	-8
Total Changes												
Estimated Budget Authority	397	392	387	393	399	405	405	405	405	405	1,967	3,992
Estimated Outlays	-3	-8	-13	-7	-1	5	5	5	5	5	-33	-8

Notes: FAA = Federal Aviation Administration; components may not sum to totals because of rounding.

a. Budget authority for the Airport Improvement Program is provided as contract authority, a mandatory form of budget authority; however outlays from that contract authority are subject to limitations on obligations specified in annual appropriation acts and are therefore considered discretionary.

Airport Improvement Program. S. 2658 would provide contract authority for the AIP through fiscal year 2017. The Airport and Airway Extension Act of 2016 (Public Law 114-141) provided $2.65 billion in AIP contract authority through July 15, 2016—or $3.35 billion on an annualized basis. Pursuant to provisions of law that govern CBO's baseline projections, funding for certain expiring programs—such as contract authority for AIP—is assumed to continue beyond the scheduled expiration date for budget projection purposes. Consistent with that practice, CBO's baseline incorporates the assumption that AIP contract authority over the 2017-2026 period will remain at the annualized 2016 level of $3.35 billion per year.

S. 2658 would provide $3.75 billion in contract authority for 2017—$400 million more than the amount currently projected for that year. Consistent with CBO's methodology for projecting contract authority under proposed legislation, we assume that contract authority for AIP would continue to be provided after 2017 and would remain at $3.75 billion annually.

Under that assumption, CBO estimates that contract authority under S. 2658 would exceed the levels of contract authority already projected in the CBO baseline by $4 billion over the

2017-2026 period. (Because spending from contract authority is controlled by obligation limitations specified in annual appropriation acts, outlays of the AIP are considered discretionary.)

Changes in Retirement Benefits for Certain FAA Employees. S. 2658 would modify the basis for calculating retirement benefits for certain FAA employees. Relative to current law, CBO expects that the proposed change would increase benefits for some existing retirees and increase benefits (and delay retirement) for some future retirees, resulting in an overall net reduction in direct spending of $8 million over the 2017-2026 period.

Recalculated Retirement Benefits for Certain Existing FAA Retirees. Under current law, the Office of Personnel Management (OPM) has instructed FAA to recalculate the retirement benefits of approximately 185 current annuitants who retired from the FAA under MRA+30.[1] Under the retirement provisions of MRA+30, those annuitants received enhanced credit (1.7 percent of average salary per year of service) at retirement for certain years of supervisory service. According to OPM's current interpretation of the relevant statutes, those years of supervisory service should have been credited at the standard rate (1.0 percent of average salary per year of service) in annuity calculations. Based on information from the FAA, CBO estimates that the difference between the original annuity (using the enhanced rate of 1.7 percent) and the recalculated annuity (using the standard rate of 1.0 percent) is about $9,000 per year, per person. S. 2658 would reinstate the enhanced credit for eligible years of supervisory service, returning annuities to their full amounts (previous to OPM's instructed recalculation). As a result, CBO estimates that enacting that provision would increase direct spending over the 2017-2026 period by about $17 million.

OPM also has stated that they intend to seek recovery of any overpayments those 185 annuitants have already received. CBO estimates that the total outstanding amount available for collection is about $9 million. The process of recovering any overpayments is likely to be long and will possibly result in collections of less than the full outstanding amount. In addition, the FAA plans to pursue options with OPM to forgive the debt created by the overpayments. Because of the uncertainty surrounding the timing and amount of eventual recoveries, CBO assumes that under current law OPM would collect about $5 million, or 50 percent of the total. S. 2658 would provide for the repayment of any such recoveries to the affected annuitants, increasing estimated direct spending by about that amount over the 2017-2026 period.

Increased Retirement Benefits for Future FAA Retirees. For current air traffic controllers with qualifying supervisory experience who choose to retire under the MRA+30 enhanced retirement option in the future, S. 2658 would allow them to collect the enhanced level of

1. Under the Federal Employees Retirement System, an MRA+30 retirement allows for an unreduced annuity once an employee reaches minimum retirement age, or MRA, (depending on year of birth, MRA ranges from 55 to 57 years of age) and completes 30 years of federal service.

credit (1.7 percent of average salary per year of service versus 1.0 percent under current law) at retirement for years of service at certain supervisory levels. Based on information from the FAA, CBO estimates that, as a result of the higher annuity available under the enhanced credit provided by S.2658, about 250 employees (who are currently eligible for MRA+30 retirement) would choose to delay retirement, by an average of about 3 years, and remain in service longer in order to accrue the higher benefit. Because of those delayed retirements, CBO estimates that S. 2658 would initially reduce direct spending by the amount of annuity payments that would have been made under current law. Those savings would be partially offset over the 2017-2026 period because these employees would eventually receive a higher annuity. (After 2026, the costs of the higher annuities would more than offset the savings from delayed retirement.) In total, CBO estimates that such changes in retirement behavior would decrease net direct spending by $29 million over the 2017-2026 period.

The FAA has also indicated that under current law OPM's reinterpretation of how supervisory service should be accounted for in certain annuity calculations could also hasten the retirement of a significant number of other air traffic controllers who are at or approaching retirement eligibility over the next several years. Enacting S. 2658 could delay those anticipated departures, which would further reduce direct spending, as described above for the MRA+30 retirees. However, CBO does not have sufficient information at this time to estimate the budgetary impact of those changes.

Revenues

S. 2658 would establish new civil penalties and modify existing ones for various violations of aviation-related laws and regulations. As a result, enacting the bill could increase revenues from such penalties. Based on information about the FAA about the limited number of cases likely to be involved, CBO estimates that any increases in revenues under S. 2658 would not exceed $500,000 in any year.

PAY-AS-YOU-GO CONSIDERATIONS

The Statutory Pay-As-You-Go Act of 2010 establishes budget-reporting and enforcement procedures for legislation affecting direct spending or revenues. The net changes in outlays and revenues that are subject to those pay-as-you-go procedures are shown in the following table.

CBO Estimate of Pay-As-You-Go Effects for S. 2658, as ordered reported by the Senate Committee Commerce, Science, and Transportation on March 16, 2016

	By Fiscal Year, in Millions of Dollars												
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2016-2021	2016-2026
NET INCREASE OR DECREASE (-) IN THE DEFICIT													
Statutory Pay-As-You-Go Impact													
Changes in Outlays	0	-3	-8	-13	-7	-1	5	5	5	5	5	-33	-8

INCREASE IN LONG-TERM DIRECT SPENDING AND DEFICITS

CBO estimates that enacting the legislation would not increase net direct spending or on-budget deficits by more than $5 billion in any of the four consecutive 10-year periods beginning in 2027.

INTERGOVERNMENTAL AND PRIVATE-SECTOR IMPACT

S. 2658 would impose intergovernmental and private-sector mandates as defined in UMRA. Based on information from the FAA, public airport operators, and state aviation agencies, CBO estimates that the cost of the mandates on public entities would fall below the annual threshold established in UMRA for intergovernmental mandates ($77 million in 2016, adjusted annually for inflation). Primarily because some of the mandates would depend on future actions by FAA and the TSA, CBO cannot determine whether the aggregate cost of the mandates on private entities would exceed the annual threshold established in UMRA for private-sector mandates ($154 million in 2016, adjusted annually for inflation).

Mandates That Apply to Both Public and Private Entities

The bill would require public and private operators of unmanned aircraft systems (UAS) to maintain records of the name and contact information for each person on whose behalf the UAS has been operated. The bill also would require public and private providers of helicopter air ambulance services to report additional information to FAA. CBO expects that the cost of maintaining records and reporting information would be small.

Mandates and Other Effects on Public Entities Only

The bill includes a mandate that would affect only state and local governments, and it also includes provisions that would provide significant benefits to public entities.

Preemption of State and Local Regulation of UAS. The bill would preempt state and local authority to regulate unmanned aircraft systems with respect to their design, manufacture, registration, and operation, among other areas. Because state and local governments would be unable to generate revenue, such as permit fees, from regulation in those areas, the bill would result in a small amount of foregone revenue for public entities. Based on information from the FAA and state aviation agencies about the number of UAS operated by public entities and the amount of revenue generated from permit fees, CBO estimates that the cost of the mandate on public entities would fall below the annual threshold established in UMRA for intergovernmental mandates ($77 million in 2016, adjusted annually for inflation).

Other Effects on Public Entities. The bill would provide benefits to public and private airports by authorizing grants for planning, development, noise mitigation, and other initiatives. Specifically, the bill would expand from 10 to 15 the number of states that may participate in the State Block Grant Program. Under this program, states assume responsibility for administering the Airport Improvement Program (AIP), which provides grants to airports classified as "other than primary" airports—that is, nonprimary commercial service, reliever, and general aviation airports. Each state is responsible for determining which airports will receive funds for improvement projects. This expansion would make more federal funds available to help smaller airports. Any costs those entities incur to meet grant requirements would result from complying with conditions of federal assistance. The bill also would provide the FAA with greater flexibility to allow airports to charge higher Passenger Facility Charges (PFC fees), which fund airport development projects.

Mandates That Apply to Private Entities Only

The bill also contains private-sector mandates on air carriers, operators and manufacturers of unmanned aircraft systems, and other entities such as owners of certain towers located in rural or agricultural areas.

Requirements For Air Carriers

The bill would impose several mandates on air carriers. Specifically, the bill would require that air carriers:

- Refund baggage fees for delayed baggage and fees for unused services;
- Establish training, rest requirements, and a fatigue risk management plan for flight attendants;
- Disclose information about ancillary fees in a standardized format, provide information about seat selection, and provide phone numbers and links for consumers to make complaints;
- Ensure that medical kits contain supplies for treating children in emergencies, if determined to be appropriate by the FAA;
- Comply with a ban on the transport of bulk shipments of lithium ion batteries on passenger planes; and
- Report more information related to accidents to the FAA.

On the basis of information from the Department of Transportation about revenues from baggage fees and reports of mishandled baggage, CBO estimates that the cost of the mandate to refund baggage fees for delayed baggage could total about $10 million annually. The mandate to refund fees for unused services may have similar costs, but CBO has no basis to estimate that cost. On the basis of information about existing training programs and current industry practices, CBO estimates that the cost of most of the other mandates would be small and that none would impose significant additional costs on air carriers relative to UMRA's threshold.

The bill also would direct FAA to assess standards for flight data recovery and to revise those standards as appropriate. The standards would impose a mandate if they were revised to establish new requirements for flight data recorders. The cost of this mandate would depend on future regulations.

Requirements For Unmanned Aircraft Systems

The bill would impose a mandate on owners and operators of unmanned aircraft systems by authorizing FAA to assess fees to recover the costs of regulatory and administrative activities related to the authorization of unmanned aircraft systems. CBO estimates that any increase in fees collected by FAA under the bill would be small.

The bill also would prohibit any person from selling an unmanned aircraft system that does not comply with the standards on airworthiness to be adopted by FAA. If the FAA were to apply those requirements to unmanned aircraft systems that may be operated under current law (such as model aircraft), sellers of those aircraft would have to comply with a new mandate. The cost of the mandate would depend on the nature and scope of regulations to be issued by FAA, but could be substantial considering that industry sources project sales of 100,000 or more such units annually. Additionally, the bill would prohibit any person from selling an unmanned aircraft system unless a safety statement is attached to the unmanned aircraft or is included in its packaging. The bill also would establish a test on aeronautical knowledge and safety for operators of some unmanned aircraft systems. CBO expects that the cost per unit to include a safety statement and the cost per operator to complete a test would be small.

Requirements For Other Entities

The bill would impose a mandate on owners of certain towers (such as meteorological towers) located in rural or agricultural areas by requiring those towers to be marked so that they are visible to operators of airplanes distributing pesticides and other chemicals. The bill would direct the FAA to require those towers to be marked in a manner consistent with FAA's current voluntary guidance. In addition, some states require towers to have markings visible to aircraft. For those reasons CBO expects that the cost of the mandate would not be substantial relative to UMRA's threshold.

The bill would exempt air carriers and their employees from liability for voluntary disclosures of any suspected illegal activities related to human trafficking. That exemption from liability constitutes a mandate on private entities as it would limit their ability to file a claim against the air carrier or its employees for damages in such cases. The cost of the mandate would be the forgone net value of settlements and damages that would have been awarded. CBO expects few cases would be filed and that the cost of the mandate would be small.

The bill could impose a mandate on aircraft manufacturers if the Administrator of the Transportation Safety Administration requires a secondary cockpit barrier or other equipment on aircraft to be installed. The cost of the mandate would depend on future action by TSA, but based on information from industry sources, CBO estimates that the cost of installing a secondary barrier would total no more than about $15 million annually for passenger aircraft delivered in the United States.

The bill also could require owners and operators of general aviation aircraft to report additional information to the FAA following an accident. CBO expects that the cost of that mandate would be small.

PREVIOUS CBO ESTIMATES

CBO has completed two other estimates for legislation that would reauthorize certain activities of the FAA:

- On February 23, 2016, CBO transmitted a cost estimate for H.R. 4489, the FLIGHT R&D Act, as ordered reported by the House Committee on Science, Space, and Technology on February 11, 2016.

- On March 9, 2016, CBO transmitted a cost estimate for H.R. 4441, the Aviation Innovation, Reform, and Reauthorization Act of 2016, as ordered reported by the House Committee on Transportation and Infrastructure on February 11, 2016.

Differences in our estimates of spending subject to appropriation under S. 2658, H.R. 4489 and H.R. 4441 reflect differences in the periods of time covered by each bill and the scope of activities for which they would authorize appropriations.

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