

# GAO Highlights

Highlights of [GAO-24-105561](#), a report to congressional requesters

## Why GAO Did This Study

The U.S. commercial space transportation industry, which provides launch and other services for government and private customers, has grown rapidly in recent years. Growth is expected to continue, as commercial space activities expand into new areas. FAA's focus, among other things, is protecting the "uninvolved public"—members of the public not involved in commercial space operations but at risk if something goes awry.

GAO was asked to review safety oversight of the industry. This report examines 1) commercial space mishaps from 2000 to mid-January 2023, 2) roles and responsibilities of federal agencies in investigating commercial space transportation mishaps, 3) FAA's mishap investigation process and areas for improvement, and 4) efforts by FAA and others to share safety lessons learned.

GAO examined data on commercial space flights and mishaps; examined documentation from FAA and other relevant federal agencies; and interviewed federal agency officials, executives of launch operators, and other stakeholders.

## What GAO Recommends

GAO is making two recommendations to FAA, to 1) develop criteria for determining when the agency will authorize a launch operator to lead a mishap investigation on the agency's behalf and 2) comprehensively evaluate the effectiveness of its mishap investigation process. FAA agreed with our recommendations.

View [GAO-24-105561](#). For more information, contact Heather Krause at (202) 512-2834 or [krauseh@gao.gov](mailto:krauseh@gao.gov).

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# COMMERCIAL SPACE TRANSPORTATION

## FAA Should Improve Its Mishap Investigation Process

### What GAO Found

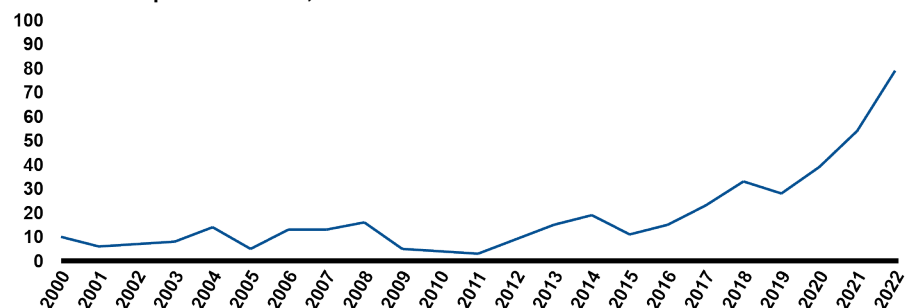
Federal Aviation Administration (FAA) data show that 50 commercial space launches from 2000 through mid-January 2023 resulted in "mishaps"—the industry term for incidents such as catastrophic explosions and other failures. This represents about 12 percent of 433 launches during the period and caused no fatalities, serious injuries, or significant property damage to the public.

FAA is generally the lead agency for mishap investigations, according to FAA data, while coordinating with other agencies through various arrangements. Both FAA and the National Transportation Safety Board (NTSB) have authority to investigate FAA-licensed commercial space mishaps, and they recently signed a new agreement to aid in managing their authorities. These agencies, plus the Department of the Air Force and the National Aeronautics and Space Administration, also have other collaborative mechanisms to address mishaps.

When mishaps occur, FAA can conduct an investigation itself or instead authorize launch operators to lead investigations of their own mishaps under FAA oversight, according to FAA. In practice, however, FAA has authorized operator-led investigations for all mishaps where it had lead investigative authority, GAO found. Agency procedures cite individual circumstances of a mishap as the basis for authorizing an operator-led investigation. However, FAA has not developed criteria to ensure it is appropriately making such determinations. FAA has taken some steps to improve mishap investigations, such as contracting for independent reviews of some operator-led investigations. However, GAO found that FAA has not evaluated the effectiveness of its operator-reliant process. Although stakeholders generally told GAO they support FAA's investigation process, some expressed concerns whether operators can credibly investigate their own mishaps. Without a comprehensive evaluation of its mishap investigation process, FAA cannot be assured its process is effective, especially given the expansion of commercial space operations in recent years.

There is currently no formal mechanism for sharing safety lessons learned, but informal channels have developed among federal agencies and the industry. Previous efforts by FAA to create a formal system were unsuccessful, but FAA officials said they are making a new attempt, including by consulting an advisory committee. NTSB has previously recommended establishing such a system.

Commercial Space Launches, 2000-2022



Source: GAO presentation of Federal Aviation Administration data. | [GAO-24-105561](#)