IDAHO AVIATION ACCIDENT SCORE CARD (IAASC)

Prepared by the Idaho Division of Aeronautics, Safety and Education Department

2022
WILDERNESS PARTNERS

Wilderness is for everyone!
By being considerate of each other's needs, we can all get along.

☐ A cruising altitude of at least 2000 feet AGL is recommended.

☐ Check NOTAMs for airfield conditions or closures.

☐ Keep number of landings to a minimum.

☐ Minimize proficiency flights.

☐ Practice no trace camping.

MONITOR GUARD FREQUENCY 121.5!

If you hear a distress signal or radio call:
Note your altitude, location and time

and

PASS IT ON . . . IMMEDIATELY!!

• ATC or FSS
• FSS: 800-WXBRIEF (800-992-7433)
• Idaho State Communications (800-632-8000)
• Local FBO
• Local County Sheriff
INTRODUCTION

Welcome to the 2022 Idaho Aviation Accident Score Card (IAASC). The Idaho Division of Aeronautics presents this review of Idaho aviation accidents from 2020 in the hopes that you may learn lessons from the experiences of others that may apply to your flight training and preparation.

This 2022 IAASC report provides details on all Idaho aircraft accidents that occurred from January 1 to December 31, 2020, and is compiled directly from the National Transportation Safety Board (NTSB) database. National data was also obtained from the AOPA Air Safety Institute’s Nall Report.

The IAASC includes: yearly comparisons and summaries, total number of General Aviation (GA) accidents, fatal accidents, fatalities, pilot qualifications, age, and class of aircraft. In addition, the IAASC provides an overview of Idaho aviation trends. It is published annually and analyzes accidents from two years prior. While preliminary information on aircraft investigations is available within weeks of the accident, the full NTSB investigation can take 2-3 years.

The Idaho Division of Aeronautics’ vision is to “forge a nationally renowned, progressive aviation system.” We want to be recognized nationwide as an innovative, forward-thinking organization dedicated to preserving the incredible opportunities our aviation network provides. The Safety/Education unit of the Division supports this vision by providing relevant, high-quality safety information, and education programs for the benefit of our aviation community. We offer welcome packets for visiting pilots, airport standard operating procedures, and fly-in safety briefings. We also sponsor safety seminars and meet every year for our annual Safety Stand Down.

*General Aviation, for the purposes of this report, excludes flight activity performed by the uniformed armed services and scheduled airlines. Furthermore, gliders, weight-shift control aircraft, powered parachutes, gyrocopters, lighter-than-air, and aircraft with maximum takeoff weights greater than 12,500 pounds are also excluded. Please note, however, this report does include flight instruction, agricultural, public-benefit missions such as fire suppression and law enforcement, cargo, and passenger charter operations.*
ACCIDENT STATISTICS

Comparison between 2019 and 2020

- Aircraft accidents decreased from 30 in 2019 to 24 in 2020.
- Fatalities resulting from aircraft accidents increased from four in 2019 to eleven in 2020.
- Fatal Accidents increased by one to a total of four.

Summary of 2020

- All four fatal accidents in 2020 are still under investigation.
  - One mid-air collision in July resulted in the loss of eight lives and two aircraft.
  - Three fatal accidents occurred at low altitude (one on takeoff and two while maneuvering at low altitude.)
- The majority (75%) of the total accidents in 2020 have been categorized as “pilot error” by the NTSB. Twenty-five percent of 2020’s accidents have causes that remain “unknown” due to open investigations.
- 67% of accidents occurred during takeoff or landing.
  - Loss of directional control on takeoff or landing led to thirteen accidents.
  - Unstable approaches contributed to three accidents
- 2020 saw three helicopter accidents, two of which occurred during flight instruction.
- Fuel starvation was a factor in two accidents.
- 38% of Idaho accidents occurred in tailwheel aircraft.
- Private Pilots account for the highest percentage of total accidents.
- Pilots of all ages and experience levels were involved in accidents in 2020.
- In Idaho in 2020, aviation accidents occurred in all seasons. Half of the total accidents occurred during the summer flying season (May through Aug).
- The total number of aircraft accidents of all types occurring in neighboring states compared to Idaho’s accidents:
  - Washington: 28
  - Idaho: 24
  - Oregon: 23
  - Nevada: 22
  - Utah: 21
  - Montana: 19
  - Wyoming: 9
In 2020 there were 24 GA accidents in Idaho with eleven fatalities in four fatal accidents.

Since 2014 the number of accidents in Idaho has trended down, as you can see indicated by the dotted blue line. **Fatal accidents have remained stable near three for several years.** We will further break down information of the accidents that have occurred to see what we can learn.
The causes of Idaho accidents in 2020 fell into three categories for analysis:

- **Pilot-Related** – accidents occurring from the improper actions or inactions of the pilot.
- **Mechanical** – accidents occurring from mechanical failure.
- **Other/Unknown** – bird strike, incapacitation and accidents with an undetermined cause according to the NTSB.

In 2020, major pilot errors include loss of directional control on takeoff or landing (13), unstable approaches (3 fast), controlled flight into terrain or objects (7), and poor fuel management (2). Note: some accidents fit into multiple error categories.
Accidents by phase of flight in Idaho mirror the nationwide trend. Landing continues to be the leading accident phase in Idaho as well as the nation, while take-off/climb is the second leading phase of accidents across the board.

In 2020, Idaho had seven total accidents while in maneuvering flight. This was a significant increase over previous years. Many of those involved commercial operations. One mid-air collision claimed eight lives. Flight instruction, agricultural operations and firefighting operations all suffered losses in maneuvering flight in 2020.
In Idaho, 48% of accidents were commanded by Private pilots, 28% were Commercial pilots and zero were ATP. In 2019, the percent of ATP rated pilots in accidents doubled from previous years. In 2020, that may have evened out. Several incomplete investigations likely included ATP and Commercial pilots. Three accidents in 2020 occurred with a Flight Instructor on board.

**Pilots of all experience levels can, and do, have accidents.**
When looking at flight time, accidents are spread out across the spectrum of experience.

Pilots over the age of 61 account for 40% of the accidents in 2020. This is lower than in previous years where pilots over 61 made up more than half of the total. We have no demographic data on the numbers of pilots in each age group or their hours of flying done each year.

Accidents occur in all age groups and at all levels of flight experience.

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BE FOUND!

Register your 406 MHz beacon!

Registration is FREE and helps us find you faster in an emergency situation.

To register or get more information:
www.beaconregistration.noaa.gov
Monitor Guard - 121.5

Idaho.Aeronautics@itd.idaho.gov
We recommend you check and update your registration annually
Tailwheel aircraft were involved in 38% of all accidents in Idaho. This is down nearly 20 percent from previous years, but still exceeds the national average. The latest national data from 2020 indicated 33% of single-engine fixed-wing accidents occurred in tailwheel aircraft.

*Idaho is above the national average for accidents in tail wheel aircraft.*

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**Backcountry Courtesy**

1. Fly to the right side of the canyon;
2. Turn on your landing lights;
3. Monitor 122.9 and make position reports;
4. Announce your intentions while in the traffic pattern and on the ground;
5. Avoid multiple takeoffs and landings;
6. Stay as high as possible except during takeoff and landing
   (200 feet AGL recommended);
7. Reduce power and RPMs when safety permits;
8. Above all, be safe.
Accident Rate Methodology
We calculated the GA accident rate based on total 100LL fuel purchased in the state of Idaho for the analysis year. We use average fuel burn of 13.9 gallons per hour for 2020. We then divided total gallons sold by 13.9 to give total flight hours flown for the analysis year. The number of accidents and number of fatalities are used to determine the equivalent rate per 100,000 hours flown. *(13.9 GPH per FAA 2020 GA Survey)*

The General Aviation accident rate in Idaho continues to trend downward, but only slightly. Fatal accidents are nearly flat at 3-4 per year, with total fatalities dependent mostly upon the number of passengers involved. On average, Idaho has approximately 30 aircraft accidents a year (trending downward). 10-15% of those accidents will include a fatality.
2020 Accident Review

Review of Fatal Accidents
Fatal accidents can often provide good lessons for all of us. Unfortunately, none of the investigations of fatal accidents from 2020 are complete as of this printing. Accidents in the mountains or backcountry are separated and included on the following page to highlight trends in and out of the mountains.

Takeoff Accidents:
- Lost directional control during takeoff with gusty crosswind.
- Lost directional control on takeoff (tailwheel) x2.

Landing Accidents:
- Aircraft damaged avoiding obstacle during forced landing following fuel problem.
- Unintended touchdown on snow covered runway. Flipped aircraft.
- Gear collapsed on landing.
- Fuel exhaustion. Collision during forced landing.
- Loss of directional control during crosswind landing.
- Loss of airspeed control, stall in landing flare. (tailwheel)

Maneuvering Accidents:
- Helicopter hit power lines during low altitude agricultural flight.
- Airplane hit power lines during low altitude agricultural flight.
- Two aircraft collided during sightseeing flight. Fatal. Investigation WPR20FA206.

2019 Fatal Accident Update

- The pilot’s loss of control during a low-level aerobatic maneuver, which resulted in impact with terrain. Contributing to the accident was the pilot’s impairment due to the effects of alcohol and antidepressant medication.
- The pilot’s failure to ensure adequate fuel onboard and his subsequent failure to maintain airspeed while maneuvering which resulted in an aerodynamic stall following a total loss of engine power due to fuel exhaustion. Contributing to the accident was the pilot’s impairment due to his use of marijuana.
Nine of the accidents in Idaho in 2020 occurred in/around the mountains or at backcountry airstrips. The majority were landing accidents – mirroring the nationwide trend in 2020.

**Takeoff Accidents**
- High Density Altitude takeoff, poor climb. Hit trees. (tailwheel)
- Loss of directional control on crosswind takeoff. (tailwheel)

**Landing Accidents**
- Hot landing. Nosed over while braking. (Two, both tailwheel)
- High/fast – late go-around impacted trees.
- Lost directional control landing in gusting crosswind. (tailwheel)

**Maneuvering Accidents**
- Turned up wrong canyon in smoke. Controlled flight into terrain.
- Collided with terrain during firefighting operations. Fatal. Investigation **WPR20LA315**.
- Downdraft on leeward side of ridge. Impacted terrain.
Focus for 2022: Preventing Loss of Control Accidents

At the Division of Aeronautics, our goal is to provide the safest transportation system possible. Aviation is inherently risky, but we want to continue to move toward zero deaths. To move that direction, we use this report to identify areas of risk that we can improve through training. Takeoff and landing accidents remain the top two areas of concern for GA flying. Fewer accidents through better training helps keep aviation more enjoyable and affordable.

Loss of Control (LOC) Prevention: Over half of the accidents in 2020 were a result of pilot’s losing control of their aircraft in speed or direction, often in gusty wind conditions. This year we are promoting training to prevent LOC accidents using Rich Stowell’s Learn to Turn program. Rich’s “Learn-Do-Fly” system uses academics, simulators and flight to sharpen your understanding of the wing and its controls. Get with an instructor and try it out! https://apps.itd.idaho.gov/Apps/info/Aero_Learn2Turn.pdf

Mid-Air Collision Avoidance: While mid-air collisions are rare, in 2020 eight lives were lost on a clear VFR day. While waiting for the results of the investigation I recommend this review of collision avoidance from the Arizona Pilot’s Association: https://azpilots.org/commentary/50647-mid-air-collision-avoidance

Drug and Alcohol Use: An increasing number of accident reports contain evidence of drug or alcohol use. Many of these medications are over-the-counter (OTC) drugs that are not recommended for flight. The FAA has a guide on OTC medication use that includes safe alternatives to some of the more dangerous drugs. Consult your AME or Doctor for advice. https://www.faa.gov/licenses_certificates/medical_certification/media/OTCMedicationsforPilots.pdf

Throughout 2022, many aviation safety organizations have stepped in to help with online classes, webinars and guides for proficiency flying. You will find links to those organizations in the resources section of this report.

Have a safe flying year - we look forward to seeing you at our annual Safety Stand Down April 9th in Nampa.
Flying Resources

Please follow us on Facebook at https://www.facebook.com/idahoaeronautics/
You can also find us on our webpage at https://itd.idaho.gov/aero/

Our webpage contains information on Idaho aircraft registration, the Welcome to Flying Idaho guide, this IAASC Report, and Standard Operating Procedures for the following backcountry airstrips: https://itd.idaho.gov/aero/?target=publications

- Big Creek
- Cavanaugh Bay
- Garden Valley
- Johnson Creek
- Smiley Creek
- Stanley

Other Flight Safety Resources:
The AOPA Backcountry Resource Center is now online. This multi-state and multi-agency partnership is focused on providing quality resources and products to help you prepare for backcountry flying. https://www.aopa.org/training-and-safety/air-safety-institute/backcountryresourcecenter

Community Aviation: https://www.communityaviation.com/program-product/learn-to-turn
EAA: https://www.eaa.org/eaa/pilots/EAA-pilot-proficiency
FAAST: https://www.faasafety.gov/
FAA WINGS: https://www.mywingsinitiative.org
Flight Chops: https://flightchops.com/
Learn to Turn: https://apps.itd.idaho.gov/Apps/info/Aero_Learn2Turn.pdf
NTSB Database: https://data.ntsb.gov/carol-main-public/basic-search
Pilot Workshops: https://pilotworkshop.com/
SAFE: https://www.safepilots.org/programs/pilot-proficiency-project™/

If you plan on flying in the backcountry, please get training as backcountry flying is very unforgiving. The Idaho Aviation Association has a listing of Instructors qualified to teach backcountry and tailwheel flying.

You can find them online at: https://idahoaviation.com/instructors