

IDAHO AVIATION ACCIDENT SCORE CARD (IAASC)



Prepared by the *Idaho Division of Aeronautics*
March, 2016

INTRODUCTION

This 2016 Idaho Aviation Accident Score Card (IAASC) provides details on all Idaho aircraft accidents that have occurred from January 1 to December 31, 2014.

The source of data accumulated in this IAASC is compiled directly from the NTSB database.

IAASC specifically includes: total number of fatal accidents, fatalities, class of aircraft, pilot qualifications, and weather conditions at the time of the accident.

In addition, IAASC provides an overview of Idaho aviation safety trends while final investigations of these accidents are being conducted by the NTSB. It will be published annually during the first quarter of the following year and added to the spring issue of the Rudder Flutter.

IAASC information will be discussed during Aeronautics safety and education meetings, and presented to the Division of Aeronautics Advisory Board as well as Idaho flight training organizations.

IAASC is, first and foremost, a teaching tool. Pilots choosing to be safe by learning from others' mistakes and avoiding risky flight operations have an above-average safety record. GA flying in Idaho is as safe as the pilot chooses to make it, thus the Division of Aeronautics must continue to encourage pilots to train, study accident data, and remain proficient.

ACCIDENT STATISTICS

Comparison of 2013 and 2014

- The number of aircraft crashes decreased from 33 in 2013 to 30 in 2014.
- The number of fatalities resulting from aircraft crashes decreased from 12 in 2013 to 6 in 2014.
- The total number of fatal crashes for both 2013 and 2014 was five.

Summary of 2014

- 53 percent of total accidents and 67 percent of total fatalities in 2014 involved out-of-state registered aircraft.
- 57 percent of all aviation accidents occurred at airports with paved-surface runways, while 37 percent occurred at or within close proximity to those designated as backcountry or wilderness airstrips.
- 33 percent of total fatalities occurred at airports with paved surface runways, 50 percent were EnRoute/off airport, while the remaining 17 percent occurred at or within close proximity to those designated as backcountry or wilderness airstrips.
- 83 percent of total accidents in 2014 have been categorized as “pilot error” by the NTSB. The other 17 percent are still under investigation.
- The number of aviation accidents occurring in neighboring states:
 - Wash 47
 - Ore. 18
 - Mont. 22
 - Nev. 23
 - Utah 25
 - Wyo. 10
- Last year, on average, an aviation accident occurred every 12 days in Idaho.

GENERAL AVIATION ACCIDENTS IN IDAHO

In 2014 there were 30 general aviation accidents in Idaho with 6 fatalities in 5 fatal accidents, a 50 percent decrease in fatalities from the previous year. The majority of non-fatal accidents took place on non-commercial fixed-wing flights, the largest segment of U.S. general aviation, accounting for 90 percent of all GA accidents and 100 percent of fatal accidents in Idaho.

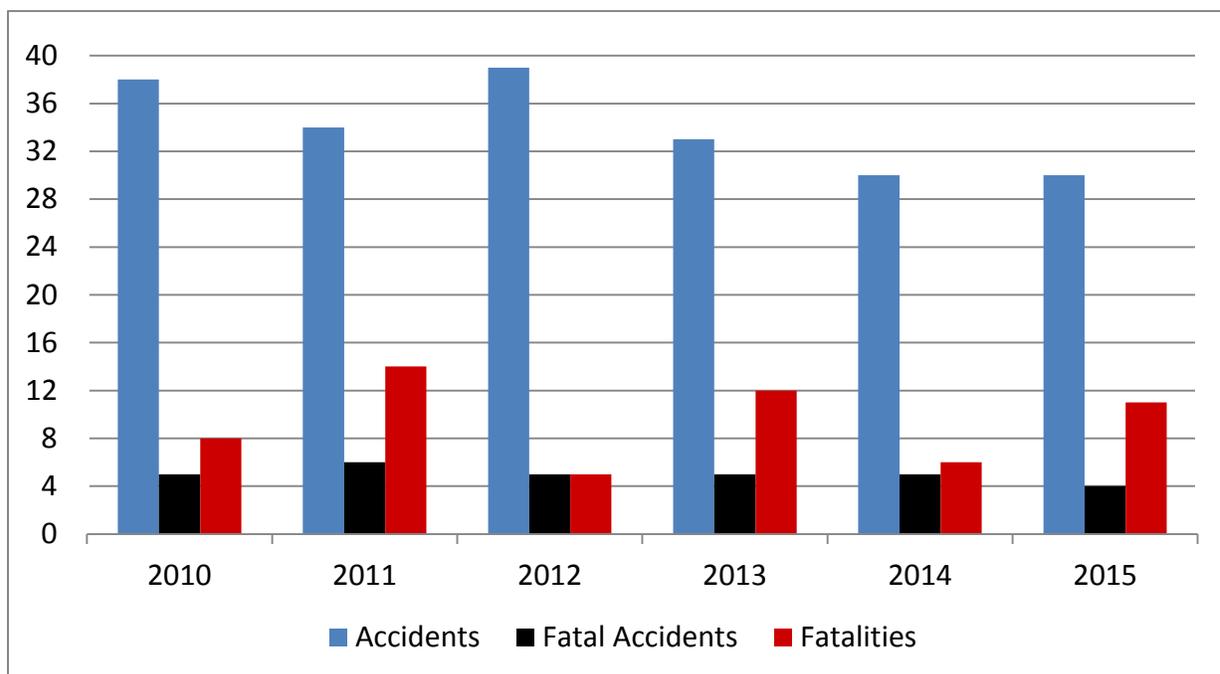
Percentages are based only on those accident investigations that are complete and assigned a “Probable Cause” by the NTSB

GA Accidents in 2014

	Non-Commercial Fixed Wing	Commercial Fixed Wing	Non-Commercial Rotor Wing	Commercial Rotor Wing
Total Accidents	26	2	1	1
Number of Aircraft*	27	2	1	1
Fatal Accidents	5	0	0	0
Fatalities	6	0	0	0

**Each aircraft involved in a collision counted separately*

GA Accidents in Idaho 2010-2015



Fixed-Wing Accidents: Summary and Comparison

The causes of general aviation accidents may be grouped into three categories for analysis:

1. **Pilot-Related** – accidents occurring from the improper actions or inactions of the pilot.
2. **Mechanical/Maintenance** – accidents occurring from mechanical failure or an error in maintenance.
3. **Other/Unknown** – i.e. pilot incapacitation and accidents with an undetermined cause according to the NTSB.

In 2014, pilot-related causes led to the vast majority of accidents. Nearly 73 percent of the 30 accident investigations are complete. Of those pilot-related accidents, 17 percent occurred during the “landing”

phase of flight, 23 percent occurred during the “take-off” phase, 20 percent occurred during the “descent/approach” phase, 13 percent during “go-around/climb” and 7 percent during the “standing/taxi” phase.

Non-Commercial Fixed-Wing Accidents

The number of accidents decreased from 33 in 2013 to 30 for 2014, however, fatalities decreased by 50 percent from the previous year to five. Without reliable estimates of flight activity, it’s impossible to assume whether these indicate potential changes in the safety record. Nationally, we see greater than 75 percent were attributed to pilot-related reasons, and less than 15 percent to documented mechanical/maintenance failures. In Idaho during 2014, 97 percent of the completed investigations were wholly or partly attributed to pilot-related errors.

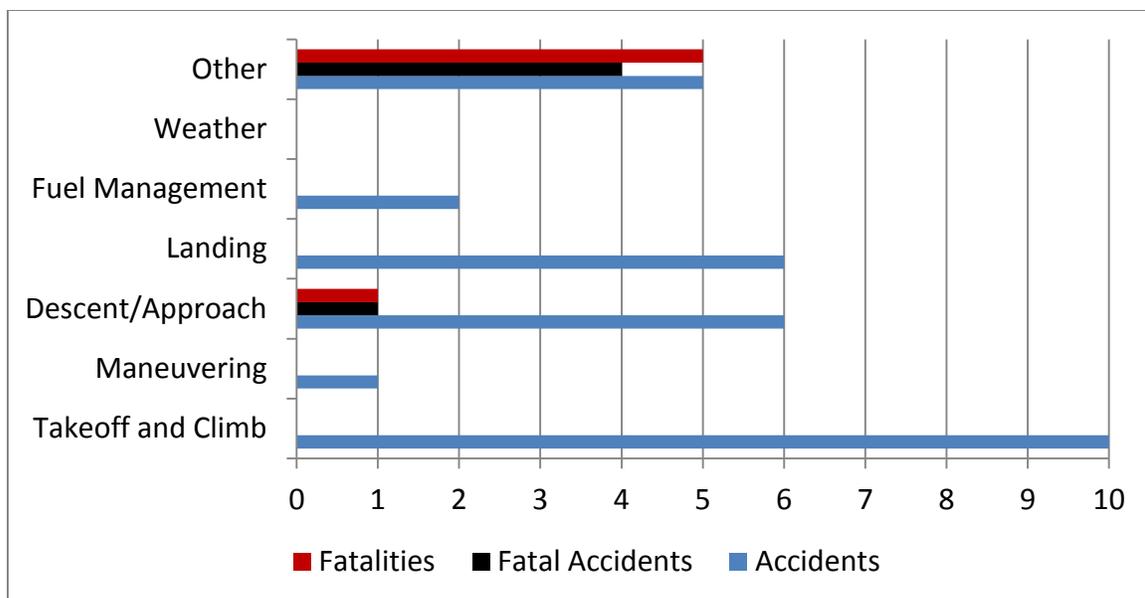
Flight Conditions

Only one accident occurred in instrument meteorological conditions (IMC), but the accident was non-fatal. There were no fatal accidents that occurred during night VMC.

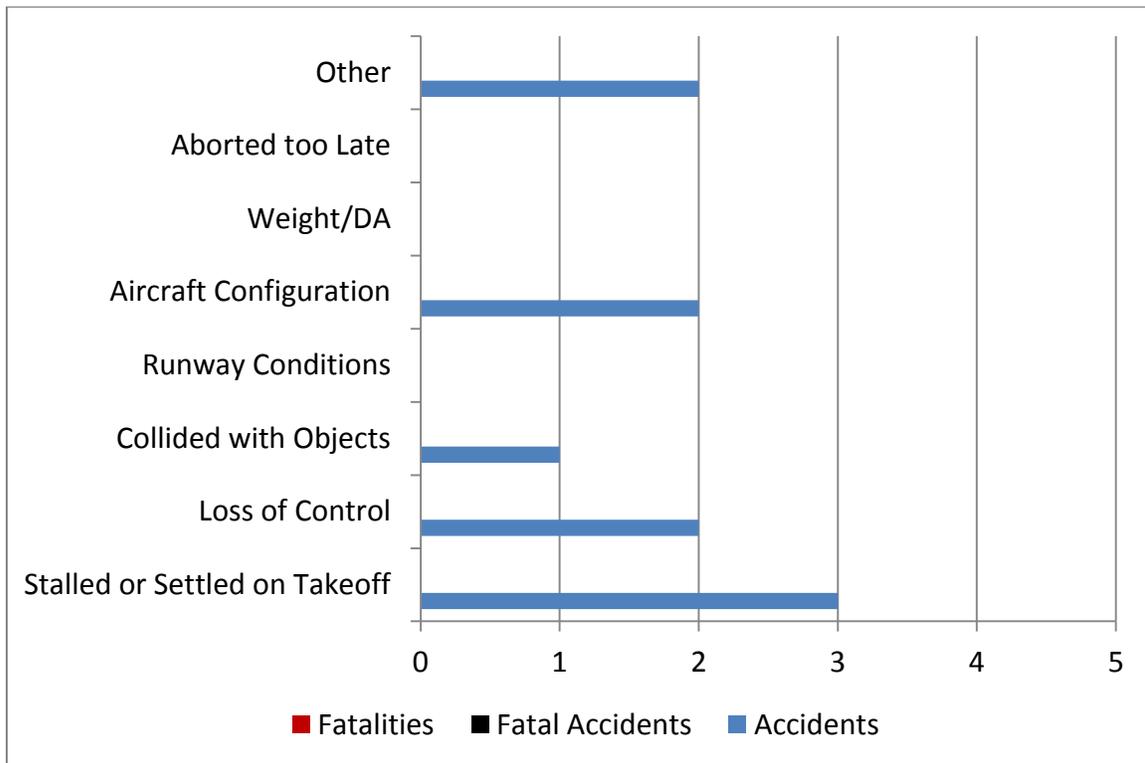
Accident Causes

Most pilot-related accidents identify specific failures of flight planning or decision making or the characteristic hazards of high-risk phases of flight. Six major categories of pilot-related accidents frequently account for the largest number of accidents overall. The “Other” category though not rare for 2014, mechanical failures and rare occurrences such as collisions, and items being overlooked as a result of an inadequate preflight inspection, makes up the rest.

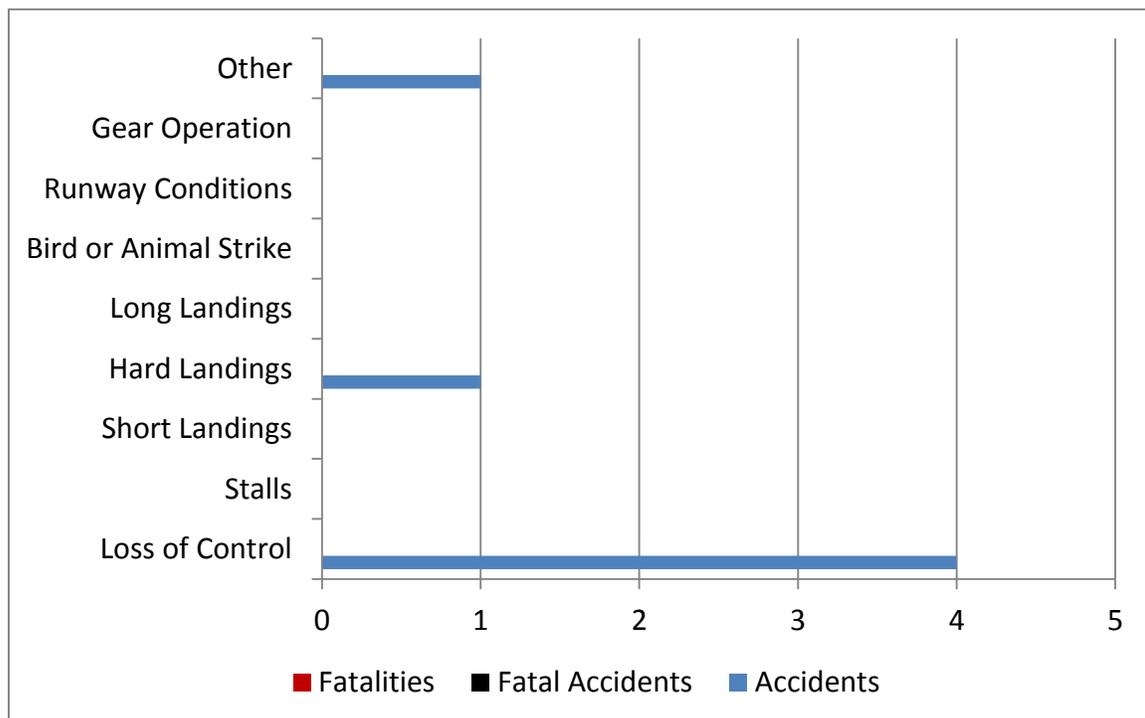
Categories of Pilot-Related Accidents in Idaho



Types of Takeoff and Climb Accidents



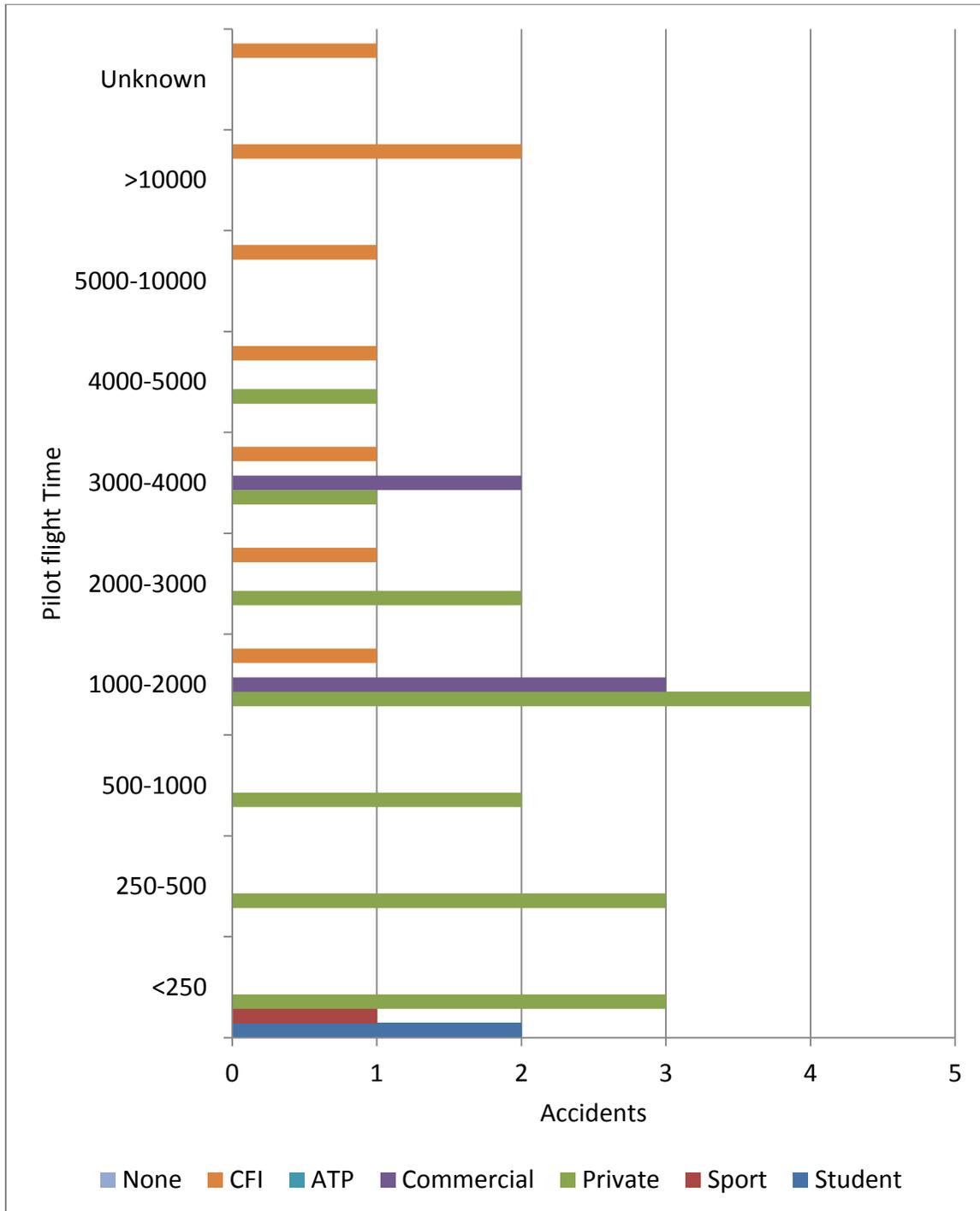
Types of Landing Accidents



Pilot Qualifications

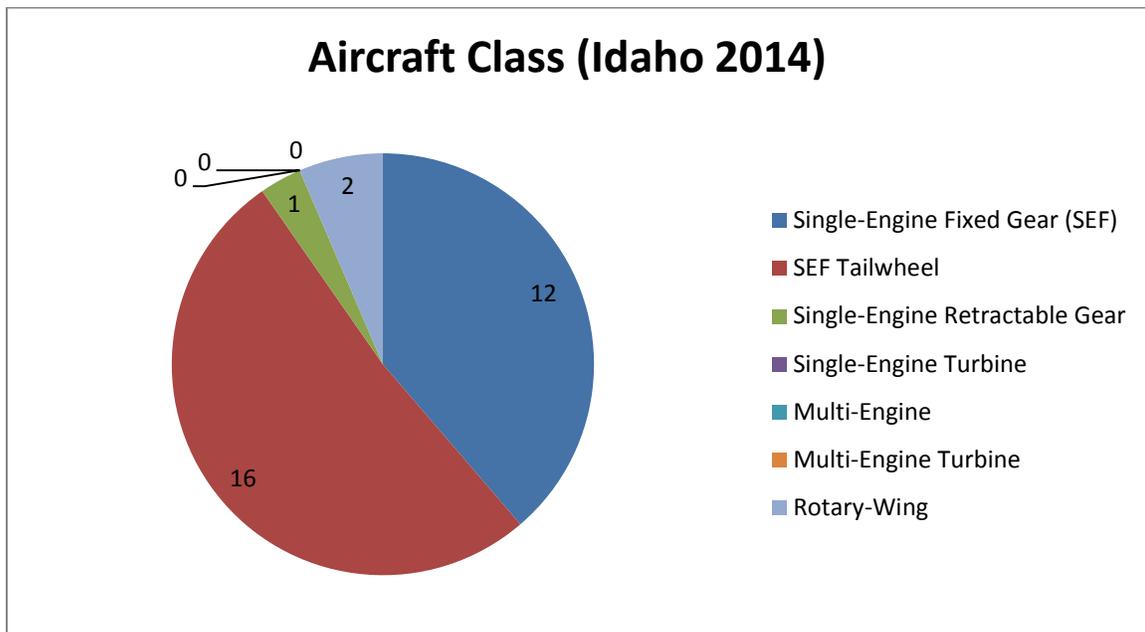
Nationally, around 45 percent of all accident flights, fatal and non-fatal alike were commanded by private pilots. Flights commanded by private pilots were fatal three times as often as those flights commanded by an Airline Transport Pilots (ATP).

The following chart shows the number of Idaho accidents, pilot's certificate level and pilot flight hours.



Aircraft Class

Nationally, around 73 percent of accident aircraft were single-engine, fixed-gear (SEF) airplanes, which were involved in over 60 percent of all fatal accidents. The following chart illustrates that more than 90% of all accidents in Idaho during 2014 involved SEF airplanes.



Amateur-Built and Experimental Light-Sport Aircraft

Nationally, in 2014, amateur-built and experimental light-sport aircraft were more likely to be involved in an accident than other aircraft. In Idaho they accounted for 35 percent of all accidents and 83 percent of fatalities. All eleven amateur-built accidents involved piston singles. There were four fatal accidents with five fatalities.

Accident Case Study-WPR14LA271

Cessna 182Q

1 Serious Injury

History of Flight - The flight departed the McCall Municipal Airport (MYL), McCall, Idaho, about 0800 mountain daylight time, with U60 (Big Creek) as its destination. Approaching from the south, the aircraft descended into the downwind leg behind the “Hogback” ridge for runway 19. The pilot stated that on the base leg, he determined that the airplane was higher and much closer to the runway than he anticipated. In response, he initiated a left-wing-down slip to lose altitude, and shortly thereafter, while concurrently attempting to maintain the slip, he initiated a left turn to align with the final approach path. Almost immediately after the turn began, the airplane stalled, descended, and impacted trees and terrain about 800 feet short of the runway threshold.

Weather - Visual meteorological conditions prevailed with cool and clear weather. Winds were very light and variable.

Probable Cause - The pilot's execution of a traffic pattern that did not put the airplane in position for a normal final approach and the pilot's decision to continue the landing attempt instead of initiating a go-around, which resulted in the airplane exceeding its critical angle-of-attack and experiencing an aerodynamic stall at an altitude too low to prevent ground impact.

Safety Comments – Loss of control accidents usually start with distractions often due to deviations from normal procedures.

This was a preventable accident if the pilot flew a stabilized approach. *Early recognition to abort is paramount and requires instinctive action by the pilot. You must abort the landing early if you cannot land on-speed, on aim-point, and within the first third of the runway.*

Trends

This IAASC identifies that the majority of Idaho accidents occurred during the “takeoff, approach and landing” phases of flight. These findings identify **loss of control** as a major factor of accidents in Idaho for 2014.

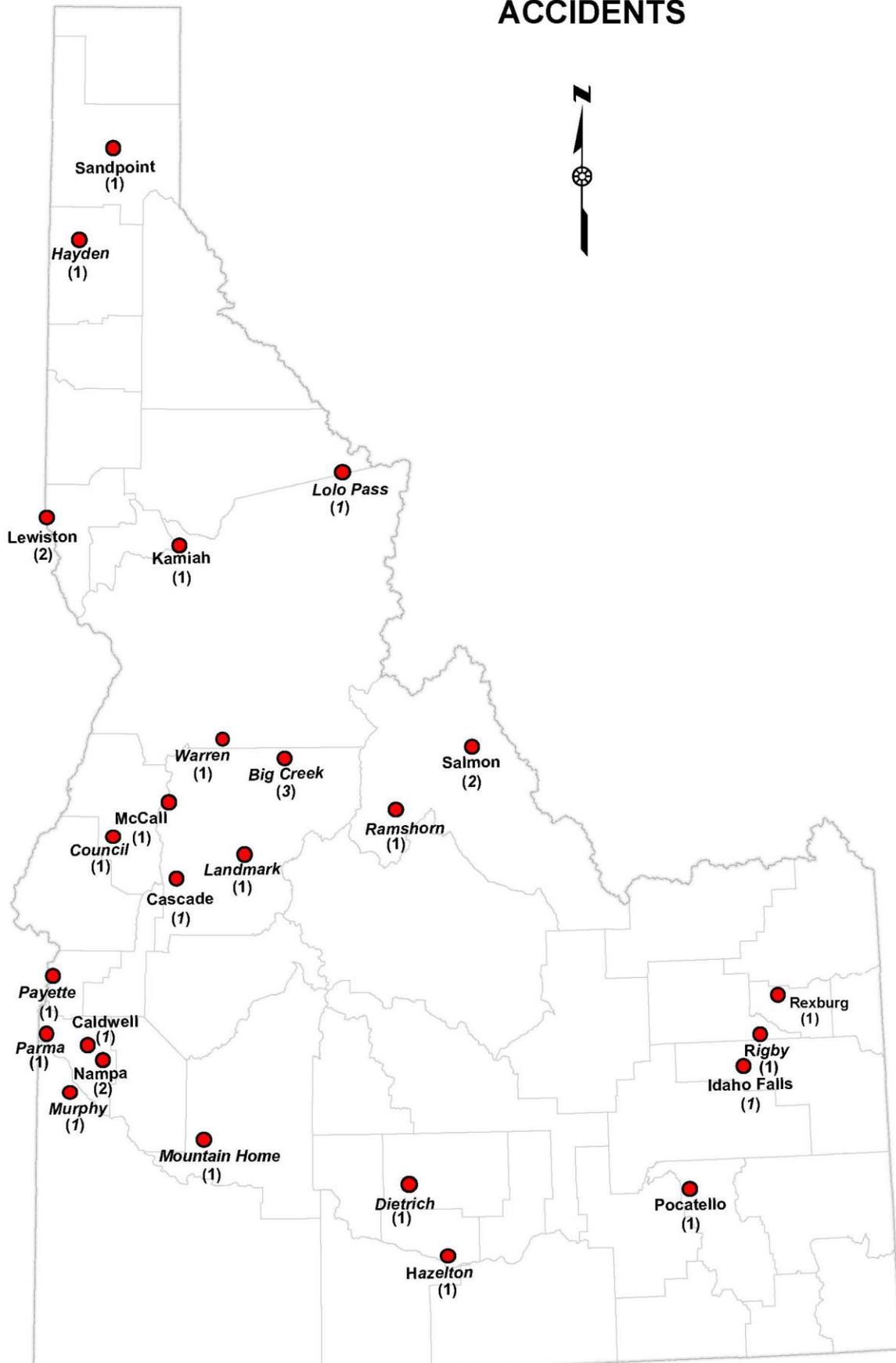
NTSB FINDINGS

In January 2016, the NTSB posted their “**Most Wanted**” list of transportation safety improvements. These are the problem areas that we need to focus on in order to reduce accidents and save lives. It is quoted by the NTSB that “while airline accidents have become rare in the U.S., pilots of non-airline flights and their passengers still die by the hundreds in general aviation accidents every year due to pilot **loss of control**. These accidents can be reduced through ongoing pilot education, flight currency, self-assessment, and vigilant situational awareness in the cockpit.” The NTSB’s Most Wanted List highlights safety issues identified from the NTSB’s accident investigations to increase awareness about the issues and recommended safety solutions (www.nts.gov/mostwanted).

SUMMARY

- In Idaho the number of GA accidents decreased 10% from 2013 to 2014. While fatalities decreased by a full 50%.
- Adverse weather did not cause any of Idaho’s accidents or fatalities in 2014. Nationally those accidents where weather was a primary causal factor, the fatality rate was very high.
- Tailwheel aircraft were responsible for more than half of the accidents yet only involved two fatalities, suggesting that perhaps more tailwheel training emphasis is in order.
- A pilot’s **loss of control** at or close to the airport was the leading cause of accidents in Idaho during 2014.

2014 IDAHO AVIATION ACCIDENTS



IMPACT OF AN ACCIDENT

- Death
- Injury
- Airport Closure
- FAA enforcement action
- Cost of Search and Rescue and emergency services
- Insurance deductibles
- Fines, citations, punitive damages, civil litigation
- Legal fees
- Lost time
- Morale
- Criminal liability
- Loss of resale value
- Loss of use
- Loss of Investment return
- Site contamination and clean-up
- Loss of staff Investment
- Loss of cargo and/or mail and/or passenger baggage
- Cost of accident investigation
- Cost of wreckage removal
- Loss of income/value/reputation
- Societal/Personal costs
- Emergency inspections
- Negative public perception of aviation