

# Alaska Flight Review Guide

Recommendations for  
CFIs to Reduce Fatal & Serious  
Injury Accidents



Federal Aviation  
Administration



Medallion  
Foundation

The *Alaska Flight Review Guide* contains recommendations for Alaska-based Certificated Flight Instructors (CFIs) to use during 14 CFR § 61.56 Flight Reviews, in combination with the FAA’s *Conducting an Effective Flight Review*<sup>1</sup> publication and *Advisory Circular (AC) 61-98, Currency Requirements and Guidance for the Flight Review and Instrument Proficiency Check*.

This *Guide* suggests both Ground and Flight emphasis on the following Fatal and Serious Injury (FSI) accident study recommendations including post-crash survivability safety equipment. CFIs should encourage pilots to research available equipment and make an informed decision on the best ways to reduce risk, with attention to the type of aircraft, style of flying, and the expected operational environments.

CFIs will find this *Guide* useful in preparing a checklist or lesson plan for conducting a flight review. Additional training syllabus and lesson plan information is available at [FAA.gov/Go/FlyAlaska](http://FAA.gov/Go/FlyAlaska).

	Number of Accidents	Average Pilot Total Experience in Hours	Average Pilot Experience Last 90 Days	Average Pilot Age
<b>Serious Injury Accidents</b>	<b>41</b>	<b>5,964</b>	<b>125</b>	<b>50</b>
<b>Fatal Accidents</b>	<b>56</b>	<b>5,422</b>	<b>110</b>	<b>50</b>
<b>All Accidents</b>	<b>97</b>	<b>5,649</b>	<b>118</b>	<b>50</b>

**Historical Background** In 2009 a team was chartered by the Alaskan Region Flight Standards Division to study the FSI accidents which occurred in Alaska between 2004 and 2009, and make recommendations to reduce the number of FSIs.

During this period, there were 649 accidents, of which 97 were FSI accidents. The team’s review determined that 33 accidents, or 5 percent of the total accidents, were not survivable as equipped. Based on the study, 40 % of those deaths could have been prevented by enhanced aircraft crashworthiness equipment.

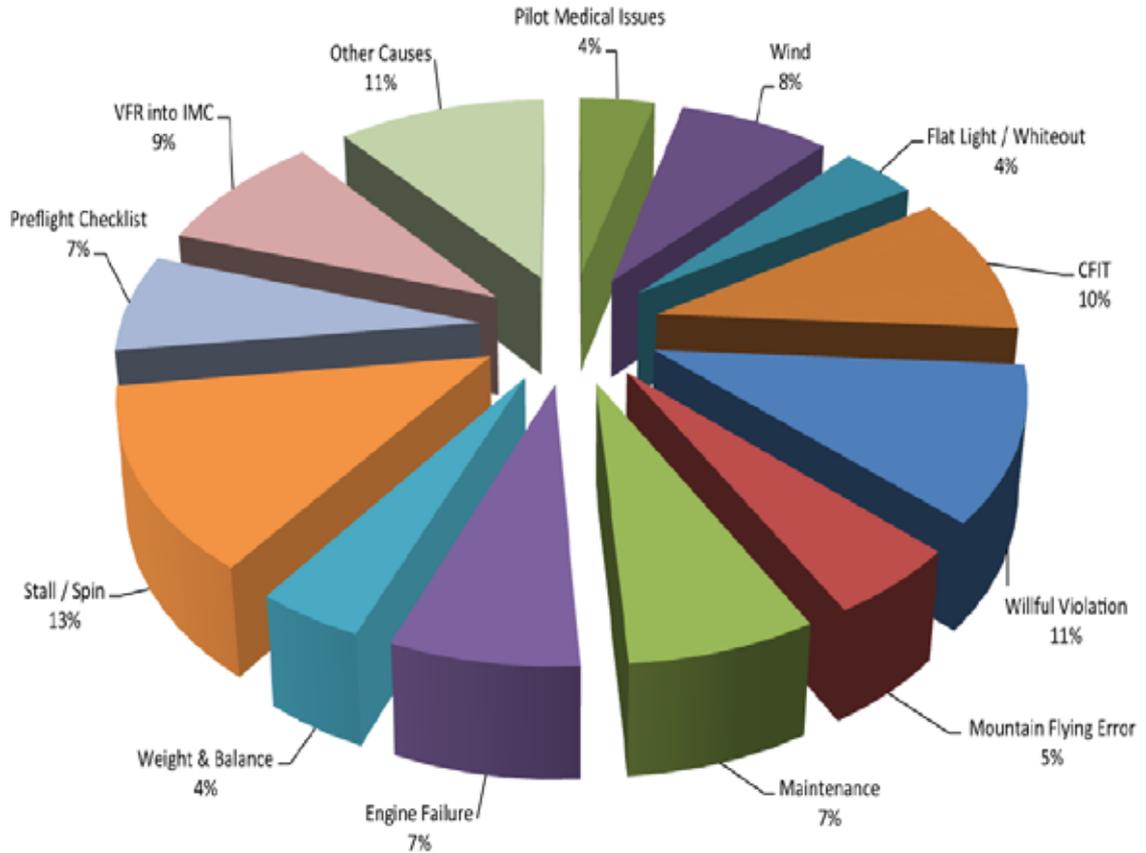
If you might think that this doesn’t apply to you or your students, note the experience of the pilots involved in these accidents below.

1. All publications referenced in this guide are available at [FAA.gov/Go/FlyAlaska](http://FAA.gov/Go/FlyAlaska)

Potentially 45 lives could have been saved with attention to aircraft and personal safety equipment, risk assessment, mitigation, and focused maneuvers and procedures training.

The leading cause of FSI accidents was stall/spin with 29 accidents, followed by Controlled Flight into Terrain (CFIT) with 23 occurrences. Many of the stall/spin accidents were the result of low level turning maneuvers, commonly referred to as moose stalls. Visual Flight Rules (VFR) into Instrument Meteorological Conditions (IMC) accounted for 19 FSI accidents. Eighteen of the FSI accidents occurred during an off-field takeoff or landing and 23 involved a willful violation of the regulations.

Leading Causes of FSI Accidents in Alaska, 2004-2009



A major focus of this study was post-crash survival. The team studied all of the National Transportation Safety Board (NTSB) reports and available autopsy reports. The reports were evaluated by doctors at the Civil Aerospace Medical Institute (CAMI). Witnesses and Flight Standards Principal Investigators were interviewed. Accident histories were extensively discussed with the NTSB. After this review, the team investigated many post-crash intervention strategies to determine how many lives could have been saved with various strategies.

The study identified seven of the most effective survivability products, training, and procedures which may help the occupants return home alive and without serious injury.

- Installation of Air Bag Seat Belts 38 LIVES
- Use of Helmets in Tandem Seat Airplanes 33 LIVES
- Use of Shoulder Harnesses in All Seats 22 LIVES
- Survival Training 21 LIVES
- Proper Use of Personal Flotation Devices 21 LIVES
- Use of Rescue Air Bottles 18 LIVES
- Installation of an effective  
Emergency Locater Transmitter (ELT) 12 LIVES

This *Guide* presents the most practical intervention strategies developed from the study.

## GROUND DISCUSSIONS OF SUGGESTED SAFETY EQUIPMENT

**Helmets** Considering the type of aircraft and mission, a helmet may help survive an accident. The Department of Transportation and Snell Memorial Foundation have established standards for motor vehicle helmets. The U.S. Military and European Community has established standards for flying helmets. Emphasise the importance of choosing a helmet which meets an appropriate standard for the type of operation, and which is kept in good repair. FSI data suggests that helmets are most useful in tandem seat aircraft.

*FAA InFO: 13001 Safety in Part 137 Agricultural Aircraft Operations*

**Shoulder Harnesses** A three point harness is the minimum installation recommended for both front and back seats. The four and five point harnesses are a great improvement to the security of the user due to the geometry of the belts installation. ANY properly installed and worn shoulder harness is an improvement over no shoulder harness at all.

*FAA Brochure: Seat Belts and Shoulder Harnesses: Smart Protection in Small Airplanes*

**Airbag Seat Belts** For years, air bags in vehicles have been found effective in reducing blunt trauma to the head and chest, making higher energy impacts more survivable. The same applies to survivability and reducing serious injuries in aircraft accidents. Installation for front and rear seats is most desirable for pilot and passenger effectiveness.

*AmSafe: Evaluations and Survivability of Inflatable Restraint Systems in Small Fixed Wing Aircraft*

### **406MHz ELTs and Personal Locator Beacons**

Due to the remote terrain encountered after departing from all Alaska locations, use of a 406 MHz capable ELT is the minimum installed equipment recommended for flight in Alaska.

Personal Locator Beacons (PLBs), SpiderTracks, SPOT, InReach, and other tracking/locating devices, provide a satellite link through commercial providers. Some devices can provide continuous flight tracking, texting, and capability to transmit an “SOS” signal routed to the Rescue Coordination Center. The Flight Service Enhanced Special Reporting Service (eSRS) option in the Master Flight Plan can link to tracking services.

See [FAA.gov/Go/FlyAlaska](http://FAA.gov/Go/FlyAlaska) for more info about eSRS.

### **Personal Flotation Devices and Air Rescue Bottles**

Survival in an aircraft accident or incident on the water will likely rely on the use of a Personal Flotation Device (PFD) by all occupants. Use of a PFD such as a float coat significantly improves the chances for survival. A variety of relatively inexpensive, self-inflating PFDs are available today to suit each pilot’s mission and budget.

*Interagency Aviation Accident Prevention Bulletin-No. IAAPB 12-04; Field Test Underwater Breathing Device Video by Learn to Return*

## **SURVIVAL EQUIPMENT IS WHAT YOU ARE WEARING WHEN THE ACCIDENT HAPPENS**

### **Stall Warning and Angle of Attack**

For any given configuration, the airplane will always stall at the same angle of attack, also known as the critical angle of attack. The critical angle of attack does not change with weight, temperature or density altitude.

A stall warning system that has compelling audio and visual annunciations provides additional feedback to the pilot. There are a multitude of different designs with varied levels of complexity and cost. The least complex solution is the installation of a stall sensor switch.

For any aircraft, especially legacy aircraft lacking a stall warning device, an Angle of Attack (AoA) indicator is a worthwhile investment. An AoA indicator can detect this otherwise invisible airfoil position and help to avoid a stall. AoA provides a real-time indication of the wing's angle of attack to the relative wind, which can assist the pilot with trends approaching a stalled state. AoA is especially beneficial during short field approaches or while maneuvering at slow airspeeds. On February 5, 2014, the FAA published new guidance to make installing non-required/supplemental AoA indicator systems easier.

*FAA Safety Briefing: The Safety Benefits of Angle of Attack Systems*

**Situational Awareness** Other equipment that may greatly improve situational awareness are portable Global Positioning System (GPS) with moving map displays, iPad or Android Tablet apps, such as ForeFlight, Garmin Pilot and AOPA's FlyQ, and glass cockpit installations.

### **Pre-flight Planning and Preparation**

CFIs should discuss on or off airport planning and preparation as appropriate for the type of flying and conditions.

*FAA's Off Airport Ops Guide; Seaplane Ops Guide; Alaskan Off Airport Operations Guide Training Syllabus*

## **PREPARATION REDUCES ACCIDENTS**

**Weather** Regardless of the type of flying, a discussion about marginal weather operations should be included. Discuss how to set personal minimums based on factors such as experience, frequency of flying, type of operations typically encountered and recency of IFR and VFR experience. Flight Service (FSS) contacts, use of weather cameras, FSS briefings, online options and displays with "ADS-B In" capability should be discussed.

*FAA General Aviation Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making*

**Weight and Balance** As an aircraft's weight increases, the stall speed increases by a factor of the weight. This may be further aggravated by an aft center of gravity. When aircraft are over-loaded, the additional weight tends to be carried in the rear baggage compartments or rear seat. This moves the center of gravity aft, resulting in lower control forces, poor stall indications, and an increased tendency to spin. In certain aircraft flat spin characteristics increase. This requires heavier control inputs and more altitude for recovery.

*FAA's Weight and Balance Handbook*

## Single Pilot/Crew/Cockpit Resource Management

SPRM or CRM training helps the pilot maintain situational awareness by managing automation, associated aircraft control, and navigation tasks. SPRM helps the pilot to accurately assess hazards, manage resulting risk potential, and make good decisions. An online CRM course is available at [medallionfoundation.org](http://medallionfoundation.org).

The FAA's WINGS Program provides continued pilot education, training, and proficiency. This program of formal training and education has significantly reduced FSIs within the General Aviation (GA) community. Remind pilots that [FAASafety.gov](http://FAASafety.gov) has flight review, SPRM/CRM, and other courses available for WINGS credit.



Free use of ATDs and Simulators are offered by the Medallion Foundation for use in training for the following elements.

**Decision Making and Risk Management** Training products in aeronautical decision making are widely available from aviation suppliers.

Aircraft Training Devices (ATD) and simulators, such as those offered for free across the state by the Medallion Foundation, provide a risk free environment to train decision making scenarios. Whether alone or with an instructor, regular use of this equipment will contribute to procedure and decision making proficiency.

*FAA Publication: Risk Management Handbook*

**Conscious Go/No-Go Decision Making** Successful training programs cover reduced visibility, flat light conditions, VFR and IFR weather minimums as part of go/no-go/abort decisions. Emphasize that when it is not possible to maintain VFR minimums, including horizontal and vertical separation with terrain/clouds while enroute, and visual contact with the landing surface, the VFR operation must be aborted.

*FAA Publications: Personal Minimums Development Guide, Worksheet, and Checklist; Personal and Weather Risk Assessment*

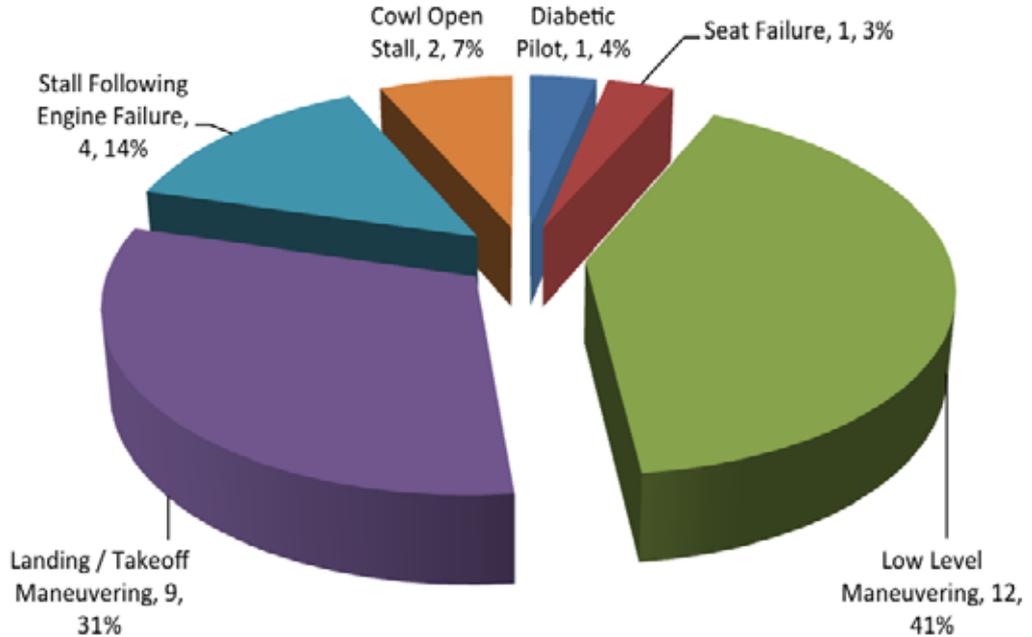
**Stalls and Spins** The leading cause of Fatal and Serious Injury Accidents in the study was Stall/Spin at 29 accidents. Loss of Control is the number one root cause of fatalities in both General and Commercial Aviation. Nationally, in GA alone, we are averaging one fatal loss of control accident every four days.

Many stall and spin accidents are the result of low airspeed, low level turning maneuvers, maneuvering in restricted terrain and limited visibility conditions, inadvertent flight into IMC, and maneuvering to return to a runway after partial or complete loss of power.

***Maneuvers and Procedures – Discuss with the pilot the stall series you will expect to cover during the Flight review. Encourage specialized aerobatic or upset recovery training.***

*FAA Publications: AC 61-67, Stall and Spin Awareness Training: Airplane Flying Handbook*

## Causes of 29 Stall / Spin Accidents Studied



**Controlled Flight into Terrain (CFIT)** Twenty three of the 97 FSI accidents involved CFIT; four occurred during good Visual Meteorological Conditions (VMC), and 11 occurred in Instrument Meteorological Conditions (IMC). CFIs are encouraged to use Medallion ATDs for CFIT procedures training with Flight Review applicants.

**VFR into IMC** resulting in Loss of Control is the second highest accident cause (20 accidents studied). The Capstone Safety Program appeared to reduce VFR into IMC accidents. Pilot proficiency with basic IFR skills, Proficiency with installed moving map technology, whether portable GPS devices or a Primary Flight Display/Multi-Functional Display (PFD/MFD) glass cockpit, should be encouraged. Stress the benefits of obtaining an Instrument Rating. General Aviation fatal accidents are four times more likely to be associated with a violation than non-fatal accidents. Encourage flying within the rules!

***Maneuvers and Procedures – CFI should discuss which IFR proficiency skills will be part of the Flight review.***

**Off Airport Operations Decision Making and Risk Management** Accidents associated with off airport operations accounted for 7 percent of the total accidents studied in the period 2004-2009.

Off-airport practice fields with 100 foot markings include Palmer Municipal Airport, Fairbanks International Airport Ski Strip, and Knik Goose Bay. Encourage pilots to use these airports to improve proficiency. Visit [FAA.gov/Go/FlyAlaska](http://FAA.gov/Go/FlyAlaska) for the current list of practice airports.

CFIs should discuss going in empty or light before taking in passengers. How to assess and mark landing sites should be discussed. For tail wheel aircraft, anticipating fuel sloshing forward, large tire spin-up pitching moments, especially in soft sand, and use of baggage or ballast to offset these factors can be included in flight planning discussions.

***Maneuvers and Procedures – CFI should discuss which airports will be used during the Flight Review and the details regarding special operations into each field.***

*FAA's Off Airport Ops Guide; Seaplane Ops Guide; Alaskan Off Airport Operations Training Guide Syllabus*

**Drift and Directional Control during Takeoff and Landing** Strong or gusty winds were a factor in 18 of 97 accidents in the study. Of these 18 accidents, seven occurred during an off field landing or takeoff. An NTSB study cites this as a leading cause of accidents in Alaska.

***Maneuvers and Procedures – Discuss experience and ability levels, as well as the aircraft's limitations. Demonstrate, or be train to proficiency in strong, gusty winds and crosswind conditions.***

**Mountain Flying** The majority of mountain flying accidents in Alaska are due to pilots flying into rising terrain. For pilots inexperienced in mountain flying, there are many training programs and instructors available to provide specialized training.

*Maneuvers and Procedures – Discuss various mountain flying scenarios, procedures and maneuvers which may be encountered during the flight review.*

**Flat Light** conditions contribute to the pilot not realizing that the aircraft is getting dangerously close to the terrain until too late for evasive maneuvering.

*FAA Video & FAA Safety.gov Learning Center Course:  
Flying in Flat Flight and White Out Conditions*

### **Communication and Collision Avoidance Procedures**

The Airmen's Information Manual has specific guidance for communication and collision avoidance procedures. Special communication areas and procedures are provided in the Alaska Supplement for specific areas across the state. Review the areas each pilot regularly operates. Discuss Visual Check Points and Flight Advisories listed in the Alaska Supplement and Aeronautical Charts. Emphasize the benefit of pre-programming the GPS with key check points prior to flight.

Pre-planning communication frequencies will reduce the workload during the flight. Pay particular attention to congested areas and potential overlap of communication frequencies, such as transitions from North to South Denali or the West Forelands Area to Mat-Su Valley.

*Maneuvers and Procedures – Review all frequencies, visual reporting points, pre-flight GPS programming, and collision avoidance techniques and procedures with the pilot.*



## **Proactive Safety Points in Review**

- Consider installing an enhanced stall warning or AoA system.
- Encourage Shoulder Harness installation for all aircraft seats.
- Discuss the use of low cost terrain avoidance system, panel Mounted PFD/MFD, or portable GPS for addressing VFR into IMC FSI in Alaska.
- Recommend installation of a 406 MHz ELT.
- Encourage training for inadvertent VFR into IMC escape by using ATDs at Medallion Foundation or other locations as applicable. This can also be demonstrated and trained in the aircraft.
- Discuss proper flotation devices for all occupants, underwater egress training for all pilots operating over water.
- Encourage use of Medallion Foundation decision making programs.
- Cover “Moose stalls” and spin awareness training.
- Simulate wake turbulence encounter with turbulence in turns at various aircraft weights.
- Simulate the “Impossible Turn” as discussed in the Airplane Flying Handbook by demonstrating altitude loss from a safe altitude.
- Demonstrate the use of the FAA WeatherCam site and Weather Cam Mobile Apps.

## **Flight Review Procedures and Maneuvers**

- Calculating Landing Runway Length
- Determining and Maintaining Target Airspeeds
- Landing Site Selection
- Off-Airport Landing Site Evaluation
- Establishing Normal and Off-Airport Stabilized Approach Parameters
- Wind Direction Determination
- Drift and Directional Control Management during Takeoff and Landing
- Establishing Go-Around Criteria
- Go-Around Decision Triggers
- Go-Around/Rejected Landing
- Determining Takeoff Rejection Point
- Soft Field Takeoff and Climb (Off Airport)
- Soft Field Approach and Landing (Off Airport)
- Short Field Takeoff and Climb (Off Airport)
- Short Field Approach and Landing (Off Airport)

## **Reference Materials**

All reference materials cited in this document may be found at [FAA.gov/Go/FlyAlaska](http://FAA.gov/Go/FlyAlaska).

The FAA does not endorse any product or service.

Trade names and copyrighted terms are only used as examples of representative products.

## **SAMPLE -- Alaska Flight Review Lesson Plan (Ground)**

This is an example of an Alaska special emphasis Lesson Plan. It is recommended that each CFI develop a complete Flight Review checklist or lesson plan that contains the key elements that are appropriate to the flight activities and equipment of the applicant.

### **Drift and Directional Control/Normal and Off Airport Landing and Takeoff**

**Attention (3 min):** Relate an accident in which a single engine aircraft landed outside of or ran off the end of an off airport landing area. This could be avoided by determining wind velocity and direction, properly evaluating and selecting a safe landing site, and correctly computing the landing and takeoff distances. Relate personal experiences with cross winds and off airport landings and takeoffs. Use examples of Serious and Fatal Accidents.

**Motivation (5 min):** Relate to student how a misjudgment of a safe landing and takeoff area, the distance required, and a lack of proficiency in this environment can directly affect them in their aircraft.

**Explanation Demonstration (15-25 min):** Define landing and takeoff distance. Familiarize the applicant with the Off Airport Ops Guide and the use of specific local off airport practice fields with 100' markings; base calculations on one of these fields. Demonstrate takeoff and landing distance calculations using varying temperatures, headwinds, and tailwinds. Explain normal and off airport landing and takeoff distance using charts and scale interpolation.

Show the chart in the following order:

1. Temperature
2. Pressure Altitude
3. Gross Weight
4. Headwind-Tailwind
5. Ground roll distance using graph
6. Takeoff roll distance and distance to clear a 50' obstacle using graph



### **Explain and discuss:**

1. Off airport landing and takeoff site evaluation and selection.
2. Determining and maintaining target airspeeds.
3. Establishing normal and off airport stabilized approach and departure parameters.
4. Wind direction determination.
5. Drift and directional control management during takeoff and landing.
6. Establish go-around criteria and a go-around/rejected landing.
7. Determine takeoff rejection point.
8. Soft and Short field approach and landing.
9. Soft and Short Field takeoff and climb.

**Performance Supervision (15 min):** Review Standards. Using the Off-Airport Ops Guide, chart and practice problems, calculate landing and takeoff distances within acceptable standards and re-teach any areas of difficulty as the lesson progresses.

**Evaluation (10 min):** Review procedure again using the chart and reemphasize standards of acceptable performance. Hand out evaluation problems and have applicant work them according to conditions specified.

**Summary, Motivation and Conclusion (10 Min):** Review lessons with emphasis on weak area(s). Review off airport criteria and remind applicant that selection of safe off airport landing and takeoff areas, and drift and directional control, will be practiced to proficiency in the flight portion of the review; they will be important considerations in any aircraft they fly.



## SAMPLE -- Alaska Flight Review Lesson Plan (Flight)

### Drift and Directional Control/Normal and Off Airport Landing and Takeoff

Dual-Local

(7 to 10 knot crosswind conditions required for the cross wind portion of the flight)

#### Sequence:

1. Preflight Orientation
2. Flight
3. Post flight Evaluation

**Lesson Objective:** During the lesson the student will review off airport site selection and evaluation utilizing one of the local areas designated Off Airport practice sites equipped with 100' distance markings. The applicant will also review crosswind landing and takeoff techniques in actual crosswind conditions and attempt to increase understanding and proficiency during the execution. The principals of a stabilized landing will be emphasized.

#### Lesson Review:

1. Calculating Landing and Takeoff Runway length.
2. Off airport landing and takeoff site evaluation and selection.
3. Determining and maintaining target airspeeds.
4. Establishing normal and off airport stabilized approach and departure parameters.
5. Wind direction determination.
6. Drift and directional control management during takeoff and landing.
7. Establish go-around criteria and a go-around/rejected landing.
8. Determine takeoff rejection point.
9. Soft and Short field approach and landing.
10. Soft and Short Field takeoff and climb.
11. Slips
12. Crosswind landings and takeoffs.



**Completion Standards:** The applicant will demonstrate an understanding of site evaluation and selection based on aircraft performance, environment, runway surface, and weather conditions. The applicant will demonstrate proficiency in short field and soft field landing and takeoff techniques, and demonstrate crosswind landing and takeoffs in light crosswind conditions.

**Note:** CFI's should discuss going into an unfamiliar off airport site light and without passengers. How to assess and mark sites and for tail wheel aircraft fuel sloshing forward, large tire spin up and soft surface damming causing abrupt forward pitching moments. Emphasize that the runway, aircraft path, and longitudinal axis of the aircraft must be aligned at touchdown. Have the applicant demonstrate a stabilized approach and slip early on final. This would allow the applicant concentrate on controlling drift with the upwind wing lowered while maintaining runway alignment during the flare, and touchdown on speed and at the intended point of landing.



## **SAMPLE -- Alaska Flight Review Lesson Plan (Ground)**

This is an example of an Alaska special emphasis Lesson Plan. It is recommended that each CFI develop a complete Flight Review checklist or lesson plan that contains the key elements that are appropriate to the flight activities and equipment of the applicant.

### **Conscious Go/No-Go Decision Making /VFR into IMC**

**Attention (3 min):** Relate an accident in which an aircraft flew from Visual into Instrument conditions followed by Controlled Flight Into Terrain or Loss of Control (Stall/Spin). This could be avoided by making a Conscious Go-No Go Decision/Abort decision. Emphasize that when not possible to maintain VFR minimums, including horizontal and vertical separation with terrain/clouds while enroute, and visual contact with the landing surface, the operation must be aborted. Also emphasize that in the event the applicant encounters Inadvertent Instrument Meteorological Conditions (IIMC) that basic instrument proficiency, including an IMC 180 degree turn, must be practiced, and proficiency maintained. Relate personal experiences with flying in marginal VFR conditions including flat light and VFR night conditions. Use examples of Serious and Fatal Accidents.

**Motivation (5 min):** Relate to applicant how lack of proficiency, poor decision making, and risk management can directly affect them in their aircraft.

**Explanation Demonstration (15-25 min):** Review airspace weather minimums, and the applicant's personal departure, enroute, and destination weather minimums. Familiarize the applicant with the FAA Publications: Personal Minimums Development Guide, Worksheet, and Checklist; Personal and Weather Risk Assessment. FAA Instrument Proficiency Check (IPC) Guidance. Discuss the applicant's minimum equipment requirements for VFR and IFR flight and the use of panel mounted or portable GPS/Moving Map displays for situational awareness.

### **Explain and discuss:**

1. Pre-flight Planning and Preparation.
2. Weather. Regardless of the type of flying, a discussion about marginal weather operations should be included. Discuss how to set personal minimums based on factors such as experience, frequency of flying, type of operations typically encountered and recent of IFR and VFR experience. Flight Service (FSS) contacts, use of weather cameras, FSS briefings, online options and GPS displays with ADS-B In capability should be discussed.

3. Set personal minimums based on factors such as experience, frequency of flying, type of operations typically encountered.
4. Applicant's recent of IFR and VFR experience.
5. Portable Global Positioning System (GPS) with moving map displays, iPad or Android Tablet apps such as ForeFlight, Garmin Pilot and AOPAs FlyQ, and glass cockpit installations.
6. IMC maneuvers to be performed including IIMC 180 turn, Unusual Attitudes, VOR concepts, Intercepts, and tracking.
7. Encourage stress training for inadvertent VFR into IMC escape by using ATDs at Medallion Foundation or other locations as applicable.
8. Single Pilot Crew Resource Management. SRM training helps the pilot maintain situational awareness by managing automation, associated aircraft control, and navigation tasks. This enables the pilot to accurately assess hazards, manage resulting risk potential, and make good decisions. The Medallion Foundation offers an on-line CRM course available at [medallionfoundation.org](http://medallionfoundation.org).
9. The FAA's WINGS Program provides continued pilot education, training, and proficiency. This program of formal training and education has significantly reduced FSI's within the General Aviation community.

10. Remind pilots that FAA Safety.gov has flight review, SRM, and many other courses available for WINGS credit.

11. Encourage those applicants lacking an Instrument Rating to work towards attaining one.

### **Performance Supervision (15 min):**

Using the FAA General Aviation Pilot's Guide to Preflight Weather Planning, Weather Self-Briefings, and Weather Decision Making, review standards and re-teach any areas of difficulty as the lesson progresses.

### **Summary, Motivation and Conclusion (10 Min):**

Review lessons with emphasis on weak area(s). Review VFR minimums criteria and remind applicant that basic IFR proficiency, including the use GPS/moving map displays for situational awareness, will be practiced to proficiency in the flight portion of the review; they will be important considerations in any aircraft they fly.



## SAMPLE -- Alaska Flight Review Lesson Plan (Flight)

### Conscious Go/No-Go Decision Making /VFR into IMC

Dual-Local:

Visual Meteorological Conditions/VFR

#### Sequence:

1. Preflight Discussion and Orientation
2. Instructor Demonstration
3. Applicant Demonstration
4. Post flight Evaluation

**Lesson Objective:** During the lesson the applicant will demonstrate instrument proficiency



#### Lesson Review:

1. Pre-flight Planning and Preparation.
2. Vision limiting device to be used where appropriate.
3. Decision making and maneuvering under simulated marginal weather conditions.
4. Basic IFR maneuvers including climbs, descents, vectors, and VOR To/From tracking and intercepts IIMC timed 180 degree turn utilizing a partial panel of Altimeter, Airspeed, and Turn and Bank Indicator.
5. Unusual Attitudes.
6. Use of Portable Global Positioning System (GPS) with moving map displays, iPad or Android Tablet apps such as ForeFlight, Garmin Pilot and AOPAs FlyQ, and glass cockpit installations.

**Completion Standards:** The applicant will demonstrate proficiency in risk assessment and decision making, basic IFR skills, unusual attitudes, and use of moving map device(s).

**Note:** CFI's should discuss how and when a vision limiting device will be utilized.



"Wearing a helmet and shoulder harness is part of 'Off-airport' decision making and risk management."

*Paul Claus, Ultima Thule Lodge*



# Alaska Flight Review Guide

## Recommendations for CFIs to Reduce Fatal & Serious Injury Accidents



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