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IMPROVING SURFACE SAFETY.

# ***Alaska Region (AAL) Runway Safety Plan FY20***

***2019-2020***

*RUNWAY SAFETY COUNCIL (RSC) #45*



**Federal Aviation  
Administration**  
[www.faa.gov](http://www.faa.gov)

# Executive Summary

The Federal Aviation Administration's (FAA) top priority is maintaining safety in the National Airspace System (NAS). The goal for runway safety is to improve safety by decreasing the number and severity of Runway Incursions (RI), Runway Excursions (RE) and serious Surface Incidents. FAA's 2018- 2020 National Runway Safety Plan (NRSP) outlines the FAA's strategy to adapt its runway safety efforts through enhanced collection and integrated analysis of

data, development of new safety metrics, and leveraged organizational capabilities in support of meeting this goal.

In support of the NRSP, and in support of Air Traffic Organization (ATO) Safety and Technical Training (AJT) FY2018 Business Plan, the Alaskan Region (AAL) has developed this Regional Runway Safety Plan (RRSP) to provide a roadmap with regional emphasis for FY2020.

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# FAA Safety Management System (SMS)

FAA is employing and evolving a Safety Management System (SMS), which provides a formalized and proactive approach to system safety in order to find, analyze and address risk in the NAS. The SMS is comprised of four main components, which combine to create a systemic approach to managing and ensuring safety. These components are Safety Assurance, Safety Risk Management, and Safety Policy, Safety Promotion. Presently, the ATO and Airports Division utilize SMS as a systemic approach to managing the safety of airport operations.

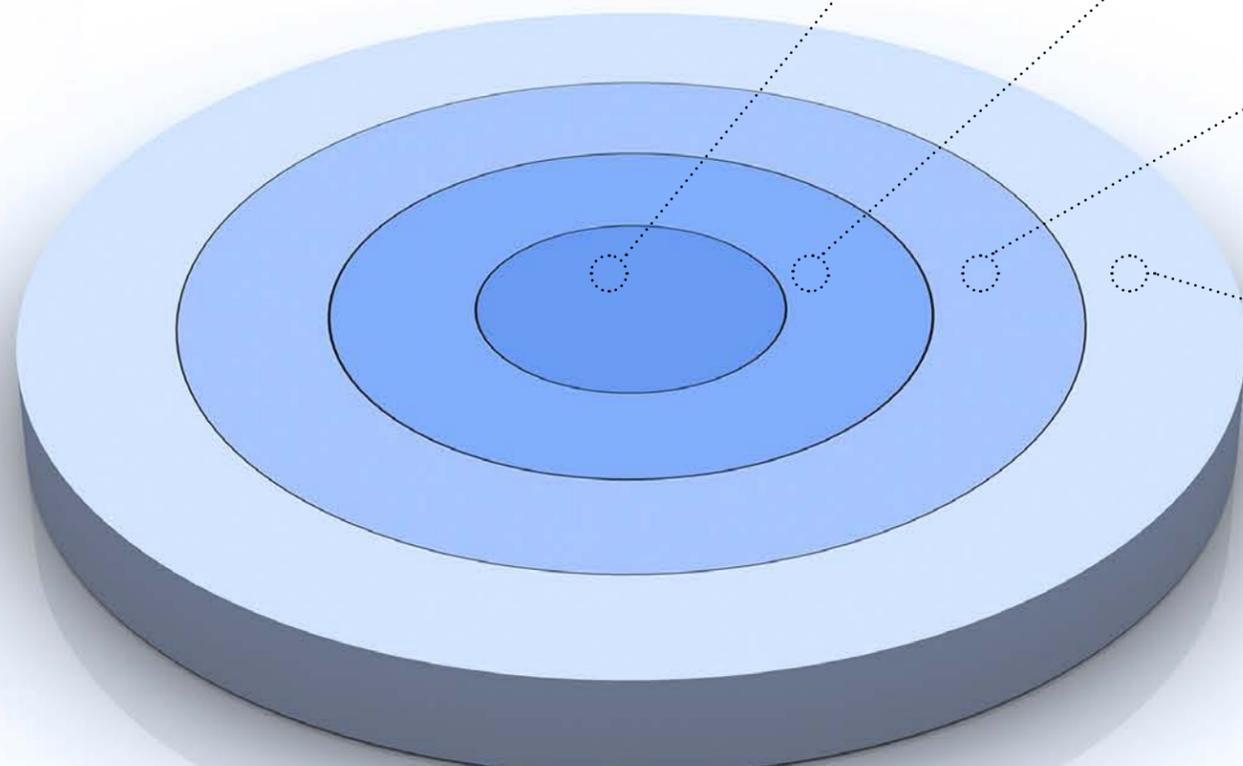
The NRSP focuses on the development of the interagency strategic processes to transition from event-based safety to risk-based safety using multiple data sources and stakeholder subject matter experts to assess current risk, predict future risk, and establish relevant metrics that measure the reduction in risk.

The National Runway Safety Plan 2018-2020 aligns our strategic priorities with established Safety Risk Management principles. The plan defines how the FAA, airports, and industry partners collaborate and use data-driven, risk-based decision-making to enhance the safety of the National Airspace System.

This regional plan endeavors to align its activities with the principles and components of FAA's current Safety Management System.

AAL Regional Runway Safety Initiatives are grouped according to the FAA's Four Pillars of SMS: Safety Assurance, Safety Risk Management, and Safety Policy, Safety Promotion.

# FY18-FY20 NRSP Objectives



## SAFETY ASSURANCE

Remain the global leader in assuring runway safety enhancement initiatives are effective in maintaining an acceptable level of safety at U.S. airports with an air traffic control tower.

- Identify Operating Hazards
- Program Data
- Voluntary Safety Reporting
- Investigations
- Safety Risk Monitoring
- Data Analysis
- Partnership for Safety
- Audits and Evaluations

## SAFETY RISK MANAGEMENT

Implement Runway Safety Enhancement Initiatives that manage or reduce the risk of airport operations.

- Analyze, Assess, Mitigate, and Accept Risk
- Develop Monitoring Plan
- Safety Risk Management Documents

## SAFETY POLICY

Establish and maintain policies and procedures to ensure adequate resources are available to accomplish the FAA's near-term and strategic objectives.

- SMS Orders
- Safety Guidance
- FAA/ATO Safety Orders
- SMS Manual

## SAFETY PROMOTION

Relentlessly promote best practices, lessons learned, and actionable information obtained from data analysis to our global runway safety stakeholders.

- Outreach and Education
- Products
- Lessons Learned
- Workshops
- Safety Communication

# Regional Runway Safety Plan (RRSP) Methodology

In accordance with [FAA ORDER 7050.1B](#), the AAL Runway Safety Governance Council (RGC) is chaired by the Regional Administrator and is composed of the Regional Runway Safety Program Manager (RRSPM) and executives or designees from Airports Division, Flight Standards Service and ATO Operations. At the direction of the AAL Regional Administrator, other directors and managers have been added to the AAL RGC and are identified on the signature page. The council meets quarterly and is responsible for ensuring that regional initiatives and actions are being accomplished in the appropriate manner and timeframe.

In accordance with FAA Order 7050.1B, the AAL Regional Runway Safety Team (RRST) is comprised of Runway Safety staff and at least one designated representative of Service Area Terminal Operations, Service Area Technical Operations, and the Flight Standards Service, and Airports regional divisions. These are the required members of the RRST, referred to in this plan as the RRST Core members. RGC members will identify their Line of Business (LOB) expert representative(s) to serve on the RRST. Other members of prominence have been invited to join the RRST. Appendix A lists the members of the RRST. The RRST members assist the RSPM in executing the Runway Safety Program.

The RRST is tasked with identifying regional priorities and working through their executive representative to ensure that issues are properly vetted through their respective LOB for prior coordination before implementing action on behalf of the RRSP. The RRST has aligned this plan with agency priorities, the Runway Safety Program (FAA Order 7050.1B) and methodologies to include Safety Management Systems (SMS).

The RRST functions as a working level team in support of the RGC. The RRST meets regularly throughout the year, usually monthly. The RSPM and LOB subject matter experts will brief the RRST on current safety data, trends and issues and solicit input from the other RRST members. The RRST will identify and address specific issues as

well as systemic problems to reduce surface risk at regional airports and elevate critical issues to the RGC.

### FAA Directive

Runway Safety Program Order 7050.1B prescribes the FAA Runway Safety Program (RSP). This directive establishes policy, assigns responsibility, and delegates authority for ensuring compliance with this order within.

### AAL Priority Airport and Airports of Interest

The Regional Administrator as well as all the LOB represented on the RGC will attend or have a representative at all Alaska Local RSAT meetings.

#### AAL Priority Airport:

- *Lake Hood Sea Plane Base (LHD)*

#### AAL Airports of Interest:

- *Bethel (BET)*
- *Fairbanks (FAI)*

### AAL Priority Issues

The following national issues have an impact on locations within the region. More detail regarding these issues is contained in the initiatives section:

- *Runway Confusion Events: Wrong Surface Events, AAL RRSP Initiative 4.2*

*Note: The RGC may elevate systemic issues as appropriate to their respective headquarters LOB or to the National Governance Council (NGC).*

# FY20 Regional Runway Safety Plan Initiatives

To assist with the implementation process of this plan, the RRST has developed the initiatives noted below as its primary focus. The RRST will be working in concert with the appropriate field office manager within each respective LOB to implement the initiatives as outlined.

In addition to these priorities and currently identified initiatives, the RRST will monitor and elevate appropriate impromptu issues to the RGC. This is a living document and the RRST will update issues as needed and keep the RGC apprised.

Runway Safety efforts are an ongoing process; therefore, trend assessment and monitoring plans must continue to be evaluated. All AAL towered airport trends will be routinely monitored by the RRST. Based on the data, if the RRST evaluates certain airports to be worthy of more focused attention, appropriate monitoring plans and mitigations will be developed and recommended by the RRST.

All applicable lines of business have collaborated in the development of this plan, which will be updated annually by the RRST. Each plan will have the concurrence of the RGC.

## The Following Initiatives Are Covered In This Plan:

1.1	Incorporation of Trend Information into RRSP
1.2	Support of NextGen Surface Safety Technologies
2.1	RRST support of LRSAT/RSATs and RSAPs
2.2	AAL RRSP FY2018 Initiative: Support Airports Division Runway Incursion Mitigation (RIM) Program
3.1	Runway Safety – SMS Continuity
3.2	AAL Regional Commitments
4.1	Flight Service Station Pilot Outreach Safety Meeting (Runway Safety and Airborne) at non-towered airports with a Flight Service Station on site
4.2	Wrong Surface Events
4.3	FAAST General Aviation (GA) WINGS
4.4	Unmanned Aircraft Systems (UAS)





**FY18-FY20 NRSP Safety Assurance Objective:** Remain the global leader in assuring Runway Safety enhancement initiatives are effective in maintaining an acceptable level of safety at U.S Airports with an air traffic control tower.

**Activity 1.1 - AAL RRSP FY2020 Initiative: Incorporation of Trend Information into the RRSP**

RRST members will review and assess airport trend data. If any new trends emerge that the team determines to merit extra monitoring, mitigation, and/or addition to this plan, then changes will be made to this document as required.

**Action Item:**

**1.1a** Continuous trend monitoring and assessment of the AAL towered airports.

**Activity 1.2 - AAL RRSP FY20 Initiative Support of NextGen Surface Safety Technologies**

Current and emerging technologies will help increase situational awareness for controllers, flight crews, and vehicle operators, and prevent collisions on runways and other movement areas. Because Airport Surface Surveillance Capability (ASSC) is scheduled to be installed at Anchorage International, AK (ANC) the AAL RGC should be kept apprised

**Airport Surface Surveillance Capability (ASSC)**

This system will bring enhanced surface situational awareness and advanced warning of potential runway incursions to nine U.S. airports for increased safety and efficiency. It is currently operating at San Francisco. The flexible nature of ASSC system architecture enables future airport surface safety enhancements, such as Runway Status Lights and airport surface movement control distribution to other approved systems and use.

Because ASSC is scheduled to be installed at ANC, the AAL RGC should be kept apprised.

**Action Item:**

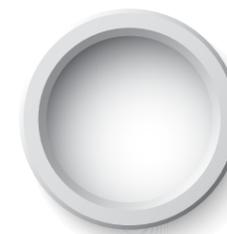
**1.2a** The RRST will continue to monitor the development of current and emerging technologies, especially the implementation of ASSC at ANC, and will report out to the AAL RGC.

**As of September 26, 2019, the schedule for Anchorage International Airport (ANC) ASSC is:**

- Site Acceptance Testing (SAT) and System Optimization, January 2020
- AT and Technician Training, February 2020
- Field Familiarization, February 2020
- IOC Declared, March 2020
- ORD Declared, April 2020



**MILESTONES**



Quarterly surface event review and assessment by RRST members.

**Target Date:**  
By the end of each quarter for the previous quarter's data



Quarterly updates until ORD declared.

**Target Date:**  
Each AAL FY20 RGC. Dates to be determined.



## FY18-FY20 NRSP Safety Risk Management Objective: Implement Runway Safety Enhancement Initiatives (RSEI) that manage or reduce the risk of airport operations.

### Activity 2.1 - AAL RRSP FY2020 Initiative: RRST Support of LRSAT/RSATs and RSAPs

RSAT meetings provide the foundation of the Runway Safety Program (RSP) and are the primary means to identify and address site-specific surface risk at the local level. The RRST are the subject matter experts for runway safety-related issues pertaining to their respective LOB.

#### Action items:

**2.1a** RRST Core members will work with their respective LOB to secure RSAT participation (may or may not be a locally stationed individual) on site at the RSAT meetings; this individual will provide advanced in-depth technical knowledge and experience of the NAS to support the reduction of risk at the airport.

**2.1b** The RRST will assist in providing advanced in-depth technical knowledge and experience of the NAS to support the reduction of risk at AAL towered airports.

### Activity 2.2 - AAL RRSP FY2018 Initiative: Support Airports Division Runway Incursion Mitigation (RIM) Program

One of Runway Safety's primary functions is horizontal integration. The AAL RSPM will support AAL Airports Division RIM activities and assist in development of solutions to events occurring at the three AAL RIM locations (FAI, JNU, MRI) especially when a geometry solution may not be sufficient or appropriate to address the surface safety concerns.

The FAA has developed a preliminary inventory of airport locations where runway incursions have occurred and is working with airports on mitigation strategies. The data collected from FY2008 -FY2017 indicates airport locations where three or more peak annual runway incursions have occurred in a given calendar year or more than ten runway incursions have cumulatively occurred during this period. This information is subject to change as the FAA works with the airport sponsors. As projects proceed and the FAA collects additional data

on runway incursions, the inventory list will be updated. Two additional locations, FAI-25 and FAI-HS1, have been added to the inventory list since the AAL FY18 RRSP was published.

## MILESTONES



Provide input from field managers to obtain locally possible solutions towards risk mitigation efforts.

**Target Date:**  
Continuous



Provide technical knowledge and expertise regarding possible solutions at locations with non-standard or confusing geometries.

**Target Date:**  
Continuous



Core member LOB participation in FY2020 LRSAT meetings at ADQ, AKN, ANC, BET, ENA, FAI, JNU, LHD, MRI airports

**Target Date:**  
September 30, 2020



Continue to monitor and track surface data at AKD RIM locations.

**Target Date:**  
As changes occur, report during next scheduled RGC and RRST meetings.

#### Action Item:

**2.2a** Continue to monitor and track surface event data at AKD RIM locations. Whenever a surface event occurs at a RIM location, the RSPM will review the event with the RIM Regional Planner and assess further action together:

- **FAI-11**  
Runway 20L Approach End /Runway 2 ski strip
- **FAI-25**  
Approach end of Ski Strip 20
- **FAI-HS1**  
Closely located Taxiways (B, T, U) and Runways (Approach ends of 20L and SS02)
- **JNU-01**  
Runway 8-26 /Taxiway D Intersection
- **MRI-13**  
Runway 7-25 /Taxiway C Intersection
- **MRI-25**  
Runway 25 /Taxiway K Intersection
- **MRI-26**  
Runway 5-23 /Taxiway G Intersection

#### Projected AAL RSATs:

- Fairbanks International Airport (FAI)
- Merrill Field Airport (MRI)
- Juneau International Airport (JNU)
- Anchorage International Airport (ANC)
- Kodiak Airport (ADQ)
- Lake Hood Airport (LHD)
- Bethel Airport (BET)
- Kenai Airport (ENA)
- King Salmon Airport (AKN)



# How We Are Collaborating



**FY18-FY20 NRSP Safety Promotion Objective:** Promote best practices, lessons learned, and actionable information obtained from data analysis to our global runway safety stakeholders.

**Activity 3.1 - AAL RRSP FY2020 Initiative:**  
**Runway Safety – SMS Continuity**

The WSA RSP approaches surface safety risk management in accordance with the SMS process and aligning its initiatives within the framework of SMS principles. In doing so, this view of the plan illustrates a portfolio-based approach to risk management by addressing the diverse initiatives

associated with each SMS component.

Policy, responsibility and accountability that bear on surface safety, and the organizations charged with risk mitigation and safety improvement are put forth in FAA Order 7050.1B, Runway Safety Program (RSP), and in the 2018 - 2020 NRSP.

**RSP:** The Runway Safety Program is intended to improve runway safety by decreasing the number and severity of runway incursions (RI), runway excursions (RE), and other surface incidents (SI).

**NRSP:** The National Runway Safety Plan 2018-2020 builds on the achievements of the National Runway Safety Plan 2015-2017. The most fundamental impact of the first plan has been the successful integration of the Safety Management System principles into the Runway Safety strategy.

**Action Item:**

**3.1a** The FY2020 AAL RRST will leverage and combine the expertise of Airports, Flight Standards Service, Runway Safety, Air Traffic Technical Operations and Air Traffic Operations, FAA Flight Service, NATCA and SUPCOM toward the mutual goal of RI reduction.

## AAL REGION IS UNIQUE IN MANY WAYS

- 5 FAA and 4 Federal Contract (FCT) Air Traffic Control Towers (ATCT)
- Three “parent” Flight Service Stations (FSS) and fourteen “satellite” FSS are operated by the FAA in Alaska. The parent facilities have responsibility for extremely large geographic areas, while the satellite stations are located in high-traffic rural communities on site at an airport.
- Alaska has six times as many pilots per capita and 16 times as many aircraft per capita when compared to the rest of the United States.
- 8,288 active pilots
- 2,502 airframe and power plant mechanics of which 760 have inspection authorizations
- 8,734 registered aircraft in Alaska
- 311 certificated air carriers in Alaska providing scheduled and on-demand services
- 26 Part 139 Certificated Airports
- University of Alaska, Fairbanks (UAF) selected by the FAA in December of 2013 as one of seven FAA UAS Test Sites to support Unmanned Aircraft Systems (UAS) integration into the NAS; UAF was selected by the USDOT in May of 2018 as one of 10 state, local and tribal governments and as the lead participant for the State of Alaska team in the FAA’s UAS Integration Pilot Program (IPP)

**Activity 3.2 - AAL Regional Commitment: Support the Alaskan Region in all aspects of FAA Order 7050.1, Runway Safety Program (RSP)**

The primary goal of the RSP is to reduce the number and severity of surface events. Regional Runway Safety Plans present a regional strategy to execute priorities and activities contained in the National Runway Safety Plan.

The success of the AAL RSP depends on the collective efforts of several LOBs within the FAA. It is through this collaborative effort that the program finds strength.

**Action Item**

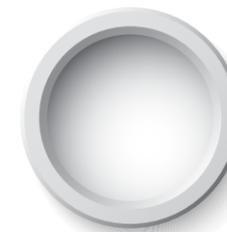
**3.2a** The AAL RGC and RRST will be committed towards promotion, and enhancement of surface safety at all AAL airports. Success of the RSP in AAL will be a collaborative effort.

**3.2b** The AAL Runway Safety Governance Council is committed to supporting the FAA Administrators’ Runway Safety Program and assumes responsibility, and accountability for the execution of this safety program within the

Alaskan Region. The AAL RGC will oversee the execution of the AAL FY2020 RRSP through fiscal quarterly meetings.

**3.2c** The AAL Regional Runway Safety Team is committed to supporting the FAA Administrators’ Runway Safety Program and assumes responsibility, and accountability for the execution of this safety program within the Alaskan Region. The AAL RRST will monitor and execute the AAL FY2020 RRSP as dictated in this plan and through active participation at regular meetings, normally occurring monthly. This plan is a ‘living document’ and the RRST will propose to the RGC amendments to it as needed.

## MILESTONES



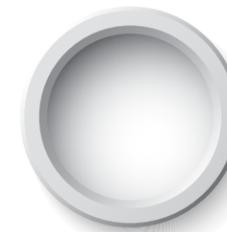
AAL RGC and RRST will continuously support enhancement of surface safety at all AAL airports

**Target Date:**  
Continuous



Support the Alaskan Region in all aspects of FAA Order 7050.1, Runway Safety Program

**Target Date:**  
September 30, 2020



Collaboratively utilize the SMS process for mitigating surface risk at AAL airports

**Target Date:**  
Continuous



AAL RRST will monitor and execute the AAL FY20 RRSP as dictated in this regional plan.

**Target Date:**  
September 30, 2020

# 4. Safety Promotion

**FY18-FY20 NRSP Safety Promotion Objective:** Promote best practices, lessons learned, and actionable information obtained from data analysis to our global runway safety stakeholders.

**Activity 4.1 - AAL RRSP FY2020 Initiative: Flight Service Station Pilot Outreach Safety Meeting (Runway Safety and Airborne) at nontowered airports with a Flight Service Station on site**

A significant portion of the safety information and best practices supported by the RSP are Kodiak Airport, Kodiak, AK (ADQ) applicable at any airport. AAL has 26 Part 139 airports; 12 have an FSS located on the field. The remaining five FSS also interact directly with Anchorage TRACON or Anchorage ARTCC for the purpose of conducting IFR flight operations.

Representatives of Flight Service, Anchorage ARTCC, Flight Standards Service, and Runway Safety will be solicited to participate in the Flight Service Pilot Outreach Safety Meeting. The RRST representatives will be subject matter experts for runway safety-related issues pertaining to their respective LOB and will proactively solicit input from field managers to obtain locally possible solutions towards mitigation efforts.

**Action Item:**

**4.1a** The RRST will support and attend a safety meeting with an associated pilot meeting (Wings qualified if appropriate) at a minimum of two locations. The Regional Runway Safety Team will determine locations.

**Activity 4.2 - AAL RRSP FY2017 Initiative Wrong Surface Events**

Wrong Surface Events was an ATO FY17 and FY18 Top 5 issue. This safety concern was injected with extra energy after the July 2017 SFO event. It is still an FAAwide concern in FY2020.

The WSA leads the nation for wrong surface landings by more than double for at least the past

five years. While the majority of those events have occurred in Western Pacific Region (AWP), AAL also has locations with a history of Wrong Surface Events.

**Action Items:**

**4.2a** Continue to monitor and track AAL wrong surface events

**4.2b** The RRST will engage in outreach targeting commercial, Certified Flight Instructor (CFI) and GA pilot audiences providing awareness of wrong surface events within AAL and the NAS

On August 21, 2018, the FAA (ATO, Aviation Safety, and Airports) hosted a Safety Summit: Working Together to Address Wrong Surface Events at the National Conference Center in Leesburg, VA. (See page 19 for more details)

**Activity 4.3 - AAL RRSP FY2020 Initiative: FAAST General Aviation (GA) WINGS**

Historically, pilot deviations account for approximately 60 percent of runway incursion in the NAS. Of those, approximately 75 percent are attributed to General Aviation (GA) pilots.

**Action Item:**

**4.3** A target of at least three FAAST GA WINGS meetings will be conducted where a significant portion of the meeting will focus on Runway Safety. It is desirable that these meetings coincide directly with an RSAT, or perhaps the evening prior to the RSAT. Representation of each RRST Core Member's LOB will be strongly promoted.

**Activity 4.4 - AAL RRSP FY2020 Initiative: Unmanned Aircraft Systems (UAS)**

FY2016 Appropriations Act-Public Law 114-113 enacted December 2015, directed the FAA to

assess the feasibility of integrating proven UAS mitigation technology at airports.

Omnibus Bill Explanatory Statement enacted December 2015 supports the FAA's Pathfinder Program and encourages the FAA to expand the program to include a commercial airport in conjunction with UAS Center of Excellence as evaluator.

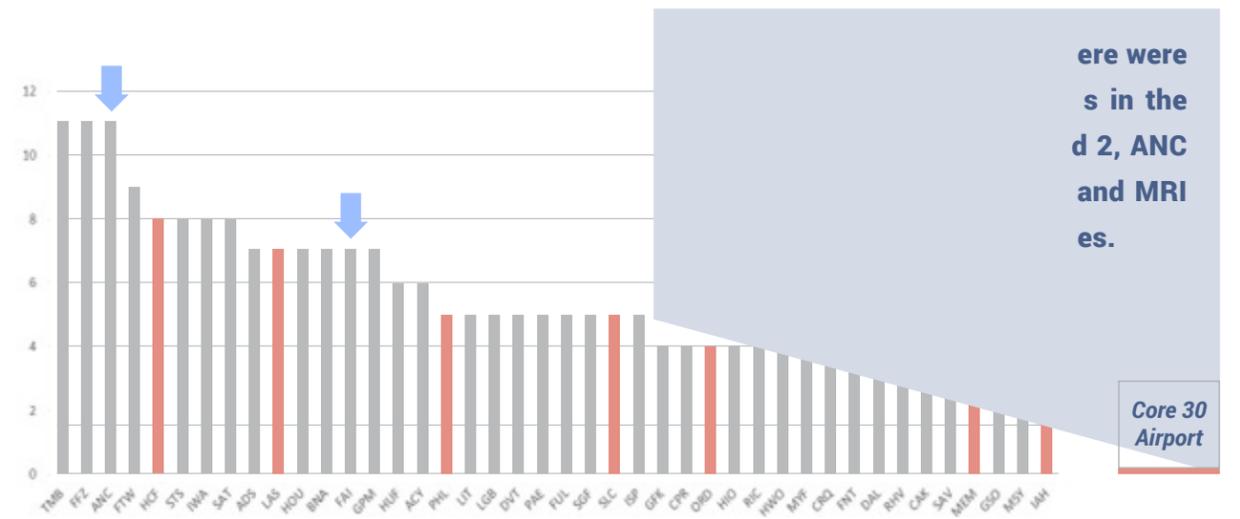
**FY2016 Reauthorization**

Public Law 114-190, Section 2206 enacted July 15, 2016 directed the FAA to establish a pilot program for airspace hazard mitigation at airports and other critical infrastructure using unmanned aircraft detection systems, work with federal partners to

mitigate threats posed by UAS while ensuring that the mitigations did not disrupt normal airport operations and to submit a report on the pilot program 18 months after the start of the program.

One partner in this undertaking is the Alliance for System Safety of UAS through Research Excellence (ASSURE). ASSURE is comprised of twenty-three of the world's leading research institutions and more than a hundred leading industry/government partners. One of the fifteen core research universities involved in ASSURE is the University of Alaska Fairbanks (UAF).

UAF involvement in UAS predates ASSURE; UAF has been conducting UAS operations since 2001. UAF was one of seven UAS Test Sites selected by



the FAA in December 2013 to facilitate research for the safe integration of UAS into the National Airspace System (NAS). The Alaska Center for Unmanned Aircraft Systems Integration (ACUASI) at UAF provides an avenue for the UAS industry and stakeholder community to conduct more advanced UAS research and operational concept validation.

In 2017, ACUASI acquired the **Griffon Aerospace Outlaw SeaHunter** (see image 1 ) and has established a COA with Clear Air Force Base, Alaska for operating from their uncontrolled runway. ACUASI has been working with Transport Canada to safely integrate UAS into their airport operations and national airspace system. Their efforts include flying the UAF SeaHunter, including taxiing like a manned aircraft, out of airports including Michel-Pouliot Gaspé Airport (YGP) and Alma Airport (YTF) in Quebec, Canada.

UAF was selected by the USDOT in May of 2018 as



Image 1

## FAA Safety Summit 2018: Working Together to Address Wrong Surface Events

On August 21, 2018, the FAA (ATO, Aviation Safety, and Airports) hosted a Safety Summit: Working Together to Address Wrong Surface Events at the National Conference Center in Leesburg, VA. A wrong-surface event is when the pilot of an aircraft lands or departs on the wrong runway, taxiway, or the wrong airport. 196 private invitations, not including FAA employees, were delivered on behalf of Acting FAA Administrator, Daniel K. Elwell to various stakeholders across the aviation industry.

one of 10 state, local and tribal governments and as the lead participant for the State of Alaska team in the FAA's UAS Integration Pilot Program (IPP). The IPP focus provided to UAF by the FAA is the 24/7 beyond visual line of sight monitoring of linear infrastructure in Alaska, including the 800-mile Trans-Alaska Pipeline System. The end point of this effort is to be able to commercially fly a large UAS from an airport to routinely monitor the pipeline.

### Action Item:

**4.4a** The Regional Runway Safety Team will work with ACUASI to develop policies and procedures for safely integrating UAS operations into Alaskan airports. This will include determining the technology needed to identify runway markings and signage, such as nose cameras, and how to make the UAS appear to be equivalent to a manned aircraft in the runway environment.

Discussed was the work the FAA is doing on taxiway alignment warnings and other automation upgrades. Other ideas were voiced by airspace users, to include:

- Colored runway markings (i.e., Oshkosh 'colored runway dots')
- Runway alignment alerts
- Airfield coloration (i.e., Deer Valley [DVT] Airport)

The WSA leads the nation for wrong surface landings by more than double for at least the past five years. While the majority of those events have occurred in Western Pacific Region (AWP), AAL also has locations with a history of Wrong Surface Events.



RRST will engage more GA pilot participation in surface safety discussions.

**Target Date:**  
September 30, 2020



Engage more GA pilot participation in surface safety discussions.

**Target Date:**  
Continuous



Provide advanced in-depth technical knowledge and experience of the NAS to support the reduction of surface risk at AAL non-towered airports with an active Flight Service Station.

**Target Date:**  
Continuous



Continue heightened awareness throughout the Agency and the industry regarding the risk incurred by the NAS because of Wrong Surface Events.

**Target Date:**  
Continuous

## MILESTONES



Conduct at least three FFAST GA WINGS meetings in which a significant portion of the meeting will focus on Runway Safety.

**Target Date:**  
September 30, 2020



AAL RRST will work with ACUASI to develop policies and procedures for safely integrating UAS operations into Alaskan airports

**Target Date:**  
September 30, 2020



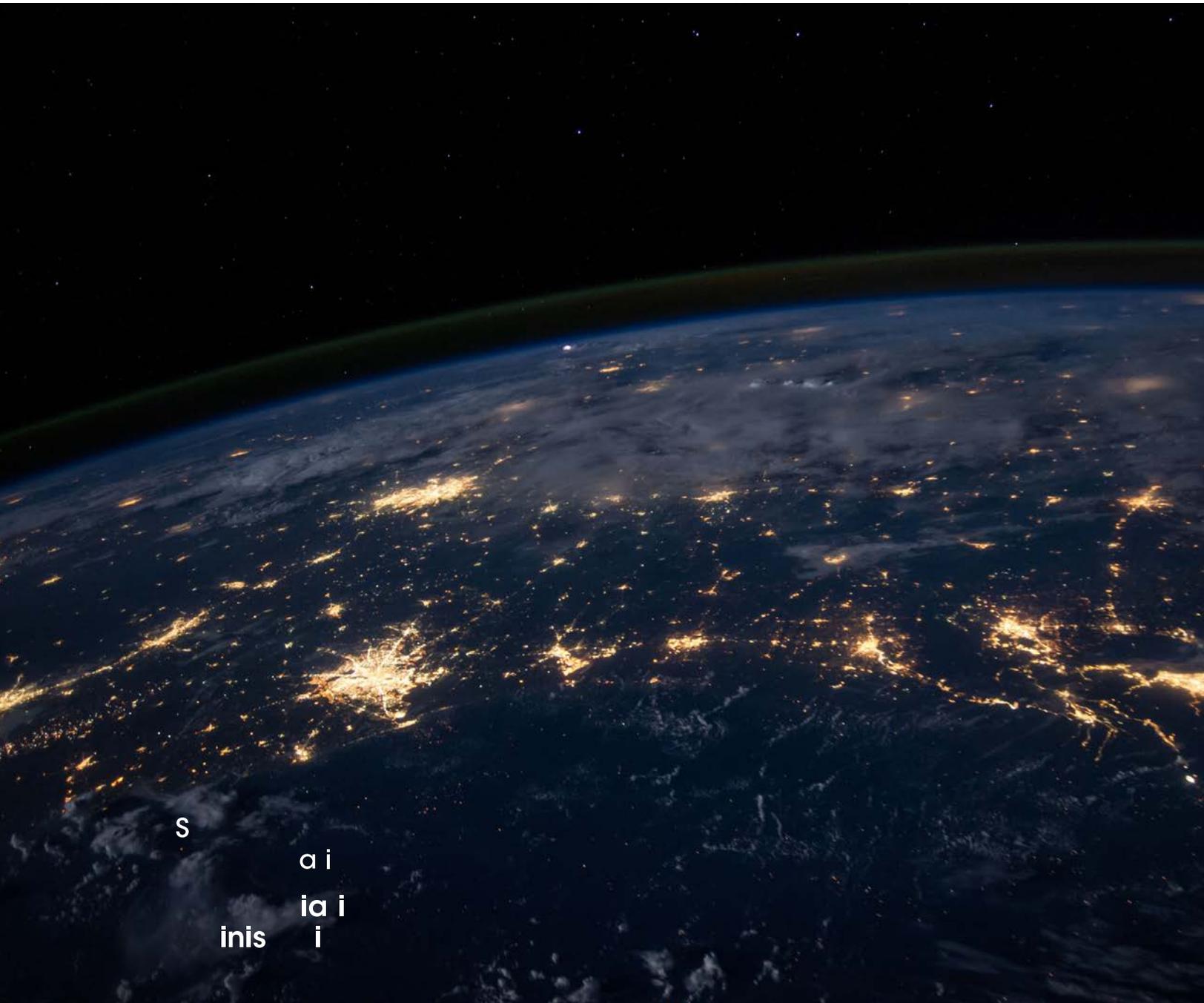
Maintain the current safety performance at controlled airports in the future, Runway Safety Program will continue to expand outreach to Unmanned Aircraft System (UAS)/ Remotely Piloted Aircraft Systems (RPAS) operators.

**Target Date:**  
September 30, 2020

# ***For More Information:***

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Alaskan Region  
222 West 7th Ave. #14, Anchorage, AK 99513

*Published by AAL Regional Runway Safety Team*



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## Appendix A. Regional Runway Safety Team Roster

IAW FAA Order 7050.1B, Runway Safety Program, the Regional Runway Safety Team (RRST) is a team comprised of \*Runway Safety staff and at least one designated representative of \*Service Area Terminal Operations, \*Service Area Technical Operations, \*Flight Standards Service, and \*Airports regional divisions

### Standing Members

#### **Airports\***

Matthew Stearns/Airport Certification Safety Inspector, AAL - Airports Division,AAL-600\*\*

#### **Flight Standards Service**

Tom Noble/ Supervisory Aviation Safety Inspector, AFX-480, Flight Standards Service Division

Kenneth A Thomas/ Safety Promotion Program Office (SPPPO)-Safety Liaison Team Lead, Flight Standards Service Division

#### **Runway Safety Program\***

Thomas Candelario/RSPM/AAL, AJI-144 (AAL RSPM)

#### **Service Area Technical Operations\***

Doneva Cheeseman/Technical Operations Manager, Northern Alaska Group/ WWQ1-FAI

#### **Service Area Terminal Operations\***

Craig F Powers/Operational Evaluations Specialist, Operational Evaluations North Team, AJV-W13

#### **AAL AJT**

Rob Stephenson/Quality Control Manager, ZAN - Anchorage, AK ARTCC, WNA-ZAN

#### **FSS**

Andrew McClure/Alaska Flight Services Information Area Group, AJR-BAL

#### **WSA-SUPCOM**

Ryan Grampp/SUPCOM Western Runway Safety Division

#### **NATCA**

Ron Swinton/ Air Traffic Control Spec (T), JNU - Juneau, AK ATCT, AAL NATCA RS-Rep

**Note:** NATCA National Runway Safety Representative is

**Bridget Singratanakul**

Runway Safety/

RWSL Representative/

email: rsat-rwsl@natca.net

\*required (Core) members per FAA Order 7050.1B

## Appendix B. Known FAA Programs and definitions

Note: This Appendix is a Work in Progress, and is intended to be a reference for known FAA Programs, and associated definitions, addressing surface safety concerns. Any additions, corrections, or concerns should be addressed to the Regional Runway Safety Program Manager for update and inclusion in future versions of this document.

**Airport Construction Advisory Council (ACAC):** ACAC is dedicated to ensuring the safety of all stakeholders operating in the National Airspace System (NAS) during all runway and taxiway construction projects. The ACAC is tasked with developing strategies and risk mitigations, for Air Traffic Managers (ATMs) to employ, that will enhance surface safety and ensure that communication is complete and consistent. The ACAC strives to serve as a conduit for sharing good operating practices between managers throughout the NAS. The ACAC is responsible for transforming appropriate strategies and best practices into future Air Traffic Organization policy to perpetuate operational safety during all construction projects.

**Airports Division:** The Airports Division is involved in a number of programs and initiatives focused on improving airport and runway safety and reducing the number and severity of runway incursions. Provided below is a brief synopsis of these programs:

**Airport Improvement Program (AIP):** The Airports Division administers the Airport Improvement Program (AIP), which provides grant funds to airport operators for airport planning, and improvements. Airfield projects designed to reduce runway incursions may be eligible for AIP funding. These may include airfield geometry changes, certain Runway Safety Action Plan (RSAP) Action Items, certain airfield marking, lighting, and signage projects. All questions and discussions regarding AIP projects or eligibility must be referred to the appropriate Airports District Office (ADO).

**Part 139 Airport Certification Safety Program:** The Airports Division certifies airports serving air carriers utilizing aircraft over nine passenger seats. However, the Alaskan Region has an exemption that only requires certification of airports serving air carriers utilizing aircraft with 31 or more seats. Part 139 contains a number of regulations relevant to runway safety. These include requirements and minimum standards for airport pavement, runway safety areas, airfield marking, lighting, and signage limiting access to airport movement areas and airfield driver training. Airport Certification Safety Inspectors conduct airfield inspections on a periodic basis to ensure compliance with these and other applicable requirements. In addition, all Runway Incursions involving ground vehicles or pedestrian deviations (V/PDs) are formally investigated by the Airports Division. Any questions and discussions about compliance with Part 139 must be referred to the Airport Safety and Standards Branch.

**Runway Incursion Mitigation Program (RIM):** In 2014, the Office of Airport launched the Runway Incursion Mitigation (RIM) Program to address non-standard geometry at airports. RIM initially mapped the location of all runway incursions occurring in 2007 through 2013. The data for 2014 has since been added. This information was then overlaid upon locations where airfield geometry appeared not to meet current FAA design standards. Locations with multiple runway incursions and non-standard geometry were identified as priority RIM locations and discussions were initiated

with the airport operators regarding possible changes to the airfield to address the runway incursion risks. The RIM is a dynamic and continuing program using Risk-Based Decision Making to focus resources on the planning and construction of projects to reduce the potential for runway incursions where airfield geometry may be a contributing factor.

**Air Traffic Organization Technical Operations (AJW):** Technical Operations is responsible for maintaining and repairing National Airspace System (NAS) equipment. This may include but is not limited to Instrumental Landing Systems (ILS). Typically, the ILS is located in between or near runways. The Airway Transportation System Specialists (ATSS) attend required instruction annually to traverse in those areas. If a deviation has occurred involving Technical Operations, a System Service Review (SSR) is completed and a review of driver training records is conducted. If need be, a briefing or Service Rendered Telecom (SRT) will take place involving the parties.

**Air Traffic Services (ATS):** The primary purpose of the ATC system is to prevent a collision between aircraft operating in the system and to provide a safe, orderly and expeditious flow of traffic. ATS provides safe, efficient and secure air traffic control and traffic management services to system stakeholders.

**Air Traffic Services Quality Control Group (QCG):** The purpose of Quality Control, as defined in the ATO, is to assess the output (whether a product or service) of a particular process or function and identify any deficiencies or problems that need to be addressed. Within this quality control concept, it is a primary responsibility to take action, particularly at the Service Delivery Point (SDP), to ensure that these products or services meet the requirements of the SDP and the ATO organizationally. Quality Control directives outline the processes and steps utilized to ensure the quality of products and services provided at the SDP level on an ongoing basis.

**Anti-Runway Incursion Device (A-RID):** Any device that is used to provide a reminder to a controller that the runway surface is in use and therefore not safe to be crossed, landed upon, used for takeoff, etc.

**Compliance Philosophy:** The FAA relies on voluntary compliance with aviation safety regulations by certificated airmen and organizations operating in the NAS. The FAA Flight Standards Service Organization investigates reports of noncompliance and has a statutory responsibility to take appropriate corrective action up to and including punitive enforcement when necessary to ensure that certificated entities are meeting regulatory safety standards. In FY16, the FAA adopted a program named Compliance Philosophy, which for Flight Standards Service, mandates that Aviation Safety Inspectors finding any airman or organization not meeting the minimum regulatory requirements related to their certificate, evaluate underlying cause, airman/ organizational attitude, and implement corrective action that promptly and effectively restores full compliance. Such actions are taken in a cooperative process involving specific compliance actions such as airman counselling, remedial training, or other specific program related to the problem(s) identified in the investigation. If the deviation does not involve intentional, reckless, or criminal behavior and the airman/ organization is qualified and willing to cooperate, AFX should resolve the issue through use of compliance tools, techniques, concepts, and programs Beyond Flight Standards Service, Compliance Philosophy exists throughout the FAA and is supported by the Safety Management System (SMS) approach to aviation safety.

**Comprehensive Electronic Data Analysis and Reporting Tool (CEDAR):** Refers to the Comprehensive Electronic Data Analysis and Reporting Tool used by ATO to report occurrences in the National Airspace System (NAS).

**FAA Safety Team (FAAST):** The FAASTeam supports the Administrator's Runway Safety initiatives by participating at LRSATs and providing Runway Safety outreach to pilots. FAASTeam employees working within (Flight Standards Service District Offices) FSDOs are engaged in the following efforts related to Runway Safety:

- Carry out tasks in the FAASTeam National Performance Plan (NPP) related to Runway Safety.
- Coordinate FAA outreach with airmen and aviation organizations in association with local ATC facilities and airport operators.
- Assist FSDO Inspectors in investigation of PDs to the extent that useful safety information is discovered and acted upon.
- Draft formal Safety Recommendations if applicable.
- Draft educational programs and/or products appropriate to local Runway Safety issues.
- Utilize volunteer FAASTeam Representatives including CFIs and DPEs in all aspects of Runway Safety Promotion.
- Assist FSDO Inspectors in implementation of airman remedial training and counselling per the Compliance Philosophy.
- Report and analyze local safety issues and trends as a section of the annual FSDO Report to the FSDO Manager.

**Flight Standards Service District Office (FSDO):** On August 20, 2017, the Flight Standards Service was reorganized from a regionally (geographically) based organization to a functionally based organization employing the Safety Management System (SMS) principles of safety assurance, safety standards, Safety Risk Management (SRM), and safety promotion. Flight Standards Service has four offices: (1) Office of Air Carrier Safety Assurance; (2) Office of General Aviation Safety Assurance; (3) Office of Safety Standards; and, (4) Office of Foundational Business.

FSDO's are aligned with the Office of General Aviation Safety Assurance.

The Office of General Aviation Safety Assurance is comprised of functionally aligned divisions, which share responsibilities and balance the level of work identified below:

1. Provides all certification and oversight activities of all aviation entities that are not under the purview of the Office of Air Carrier Safety Assurance's purview.
2. Ensures consistency and standardization in application of oversight activities by the workforce, applies RBDM for enhanced and focused utilization of certification and surveillance resources, and works across the Service to ensure stakeholder and public needs are proactively and expeditiously met.
3. Conducts or assists in investigating accidents, incidents,

and possible violations of 14 CFR and ensures the adequacy of operators' flight procedures, operating methods, airmen qualifications and proficiency, and aircraft maintenance not under the Office of Air Carrier Safety Assurance's purview.

**Hotspot:** An airport surface hotspot is a location on an airport movement area with a history of potential risk of collision or runway incursion, and where heightened attention by pilots/drivers/controllers is necessary.

**Incorrect Presence:** Presence inside the movement or protected area caused by non-compliance with a requirement or instruction.

**Mandatory Occurrence Report (MOR):** An occurrence involving air traffic services for which the collection of associated safety-related data and conditions is mandatory. CEDAR is the preferred method of submitting MOR's.

**Movement Area:** The runways, taxiways, and other surface areas of an airport/heliport which are used for taxiing/hover taxiing, air taxiing, and/or takeoff and landing of aircraft, and which are under control of the operating ATCT. The movement area is typically defined in a local letter of agreement between the ATCT and airport operator.

**NASAO Runway Safety Initiative (FAA/NASAO Runway Safety Initiative):** As put forth in a Memorandum of Understanding (MOU) between FAA and NASAO (National Association of State Aviation Officials) both parties will explore methods of working collaboratively, to provide and disseminate information on runway safety in order to reduce both incursion and excursions at towered controlled airports. The focus will be on providing educational outreach and subject matter expertise to the aviation community regarding Runway Safety operations, regulations, and related issues. The MOU is considered an ongoing commitment, until both FAA and NASAO determine the objectives of the MOU have been satisfactorily achieved.

**Protected Area:** The protected area of a surface intended for landing or takeoff includes the area inside the runway hold position markings (e.g., hold line) on paved taxiways or ramps and the designated runway safety area.

**Regional Runway Safety Governance Council (RGC):** Chaired by the Regional Administrator or designee, and composed of the RRSPM and executives or designees from Airports, Flight Standards Service, and ATO Terminal Operations. Each region may choose whether to establish such a council, based on the needs of the region and the judgment of the Regional Administrator. If established, the council is responsible for ensuring that regional initiatives and actions are being accomplished in the appropriate manner and timeframe. The council is responsible for ensuring that regional initiatives and actions are being accomplished in the appropriate manner and timeframe, and to approve/concur or provide resources, if necessary, as recommended by the RRST.

**Regional Runway Safety Program Managers (RSPM):** Represents the Runway Safety Group in activities within the region. Chairs the RRST, develops and implements the Regional Runway Safety Plan. For a complete description of responsibilities, please see Order 7050.1B.

**Regional Runway Regional Runway Safety Team (RRST):** The RRST is comprised of Runway Safety staff and at least one designated representative of Service Area Terminal Operations, Service Area Technical Operations, and the Flight Standards Service and Airports regional

divisions. Advisory members of the team may include designees from each of the Air Traffic and Tech-Ops districts. The members of the RRST are charged with identifying regional priorities and working through their executive representative on the RGC to ensure that issues are properly vetted through their respective LOB and for prior coordination before RGC meetings.

**Runway Confusion:** Landing or departing or attempting to land or depart from the wrong runway or from a taxiway. This represents a subcategory of either a runway incursion or surface incident.

**Runway Excursion (RE):** A veer-off or overrun off the runway surface.

**Runway Incursion Prevention Shortfall Analysis (RIPSA):** Runway Incursion Reduction Program (RIRP) has initiated the Runway Incursion Prevention Shortfall Analysis (RIPSA). RIPSA was created in response to NTSB Safety Recommendation A-00-66 and is a Call to Action NextGen Technology Initiative. Initial candidate airports were selected from a list of 484 airports that reported runway incursions over a 10-year period ending FY 2014. The candidate airports were reevaluated and the list adjusted due to changes in runway incursion trending. RIPSA focuses on small to medium airports with air carrier service that do not have existing surface surveillance systems. This will amount to selecting the candidate airports and identifying the technology that is the right size, right fit for that airport. The current projection is 12 to 18 months to gain approval and purchase the technology. The testing period could be up to three years at the chosen locations.

**Runway Incursion Warning System (RIWS):** The RIWS system has been proven to prevent incursions by alerting a driver – visually and audibly, prior to the vehicle entering a runway safety area (RSA) or other airport defined hazard zones. The system meets the technical requirements for accuracy, frequency of positional updates, prediction of vehicle position, and alerting set forth by the FAA on windows or Apple iOS based systems. This is accomplished through proprietary software algorithms and precision WAAS enabled GPS modules on each device. The combination of software and hardware make it possible to calculate the position of the vehicle, its speed and direction of travel ten times per second and to predict if the vehicle will make entry into a protected area and alert the driver with sufficient time to take corrective action if not authorized to make entry. The system has demonstrated its capability to prevent runway incursions and improve situational awareness at airports like Dallas Fort-Worth, Baltimore Washington International, Tampa, and Centennial International Airports. The RIWS solution provides airports of all sizes with an added layer of safety for vehicle movements by:

- Preemptively alerting a driver of a potential incursion into a Runway Safety Area or protected space.
- Improving situational awareness by displaying a highly accurate location of the vehicle over the airports own geographical information system maps.
- Displaying the position of aircraft and other vehicles in near real-time from sources such as the FAA ASDE-X/ASSC systems.
- Broadcasting the position of the vehicle through FAA certified vehicle movement area transponder units to air traffic controllers and pilots.

- Displaying of static, airport pre-defined routes to common locations, to further assist in mitigating disorientation of a driver in reduced visibility or at night.

**Runway Safety Action Team (RSAT):** A RSAT convenes to discuss surface movement issues and concerns at a particular airport and formulate a Runway Safety Action Plan (RSAP) to address those concerns. Regional and local RSATs must include personnel from the ATCT and airport operator and may include personnel from various FAA lines of business (including Runway Safety) and interested users of the airport. Composition of special focus teams may vary. All attendees at the RSAT meeting are considered part of the RSAT. A Regional RSAT is led by Runway Safety and a local RSAT is led by the ATCT manager.

**Runway Safety Service Area Manager:** Located in the Service Centers in College Park, Georgia (ESA), Fort Worth, Texas (CSA), and Renton, WA (WSA), the manager directs the work of Regional Runway Safety Program Managers and interacts with the ATO Service Area offices, Regional LOB Managers, and Regional Administrators. For a complete description of responsibilities, please see Order 7050.1B.

**Runway Safety Group (RSG):** RSG is the focal point for runway safety initiatives in the NAS. RSG works with other FAA organizations and the aviation community to improve runway safety by reducing the frequency and severity of Runway Incursions (RI) Runway Excursion (RE) and Surface Incidents (SI). RSG responsibilities are set forth by FAAO 7050.1B, Runway Safety Program.

**Runway Safety Program (RSP):** RSP is a cross lines of business program focused on improving runway safety by decreasing the number and severity of runway incursion, runway excursions, and other surface incidents. The FAA lines of business are guided by FAA Order 7050.1B, Runway Safety Program. The order establishes policy, assigns responsibilities and delegates authority for ensuring compliance with this order within each organization.

**Runway Safety Tracking System (RSTS):** The RSTS is a web based database application employed by the RSG to track events, action items, documents and other information pertinent to FAA's runway safety mission. The primary data sources are regional and local Runway Safety Action Team meetings.

**Severity Classifications:** Runway Incursions are assessed by Runway Safety and classified by the severity of the event. The Severity Classifications are (excerpted from FAAO 7050.1B Appendix B):

- Accident. An incursion that results in a collision. For the purposes of tracking incursion performance, an accident will be treated as a Category A runway incursion.
- Category A. A serious incident in which a collision was narrowly avoided.
- Category B. An incident in which separation decreases and there is a significant potential for collision, which may result in a time critical corrective/evasive response to avoid a collision.
- Category C. An incident characterized by ample time and/or distance to avoid a collision.

- Category D. An incident that meets the definition of a runway incursion, such as incorrect presence of a single vehicle/person/ aircraft on the protected area of a surface designated for the landing and take-off of aircraft, but with no immediate safety consequences.
- Category E. An incident in which insufficient or conflicting evidence of the event precludes assigning another category

**Surface Event:** An occurrence at an airport involving a pedestrian, vehicle, or aircraft on the defined airport movement area that involves either a runway excursion, or an incorrect presence, unauthorized movement, or occurrence that affects or could affect the safety of flight of an aircraft. Surface events are classified into the following types:

- Operational Incident (OI). A surface event attributed to ATCT action or inaction.
- Pilot Deviation (PD). A surface event caused by a pilot or other person operating an aircraft under its own power (see FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting, for the official definition).
- Vehicle or Pedestrian Deviation (VPD). A surface event caused by a vehicle driver or pedestrian (see FAA Order 8020.11, Aircraft Accident and Incident Notification, Investigation and Reporting, for the official definition).
- Other. Surface events, which cannot clearly be attributed to a mistake or incorrect action by an air traffic controller, pilot, driver, or pedestrian, will be classified as “other.” These events would include incursions caused by equipment failure or other factors.

**Surface Incident (SI):** Unauthorized or unapproved movement within the designated movement area (excluding runway incursions) or an occurrence in that same area associated with the operation of an aircraft that affects or could affect the safety of flight.