

COMMITTED TO CONTINUOUSLY
IMPROVING SURFACE SAFETY.

New England Region (ANE) Runway Safety Plan FY20

2019-2020

RUNWAY SAFETY COUNCIL (RSC) #47



**Federal Aviation
Administration**

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 decrease the number and severity of runway incursions (RI), runway excursions (RE) and serious surface incidents (SI).

FAA's current 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.

FAA New England Region (ANE) has developed this Regional Runway Safety Plan (RRSP) to provide a roadmap with regional emphasis for FY2020. This plan, in collaboration with FAA lines of business (LOB), outlines a framework to support current and future activities designed to improve runway safety in response to the agency goal and follow up to the NRSP.

This RRSP is aligned with agency priorities, Runway Safety Program [FAA ORDER 7050.1B](#) and methodologies to include Safety Management Systems. This plan is based upon a model which has shown to decrease runway incursions in New England Region since FY2014.

The Regional Runway Safety Governance Council (RSGC) is tasked with identifying regional priorities to ensure local runway safety initiatives and concerns are properly vetted and coordinated for support and mitigation. The RSGC is chaired by the Regional Administrator and is composed of executives from the Airports Division, Safety Standards Division, Air Traffic Organization, and Technical Operations Services. The ANE Runway Safety Program Manager monitors and participates in the National and Regional Runway Safety Governance Councils.

The ANE Runway Safety Program Manager, in collaboration with other LOBs directly

supports the Regional Runway Safety Governance Council and assists in executing the Runway Safety Program Initiatives with the Regional Runway Safety Team (RRST). FAA Order 7050.1B establishes the Regional Runway Safety Team (RRST) which includes the Runway Safety Program staff and at least one designated representative of Service Area Terminal Operations, Service Area Technical Operations Services, Safety Standards, and Airports Regional Divisions.

COLLEEN D'ALESSANDRO
Regional Administrator, New England Region

RON CURTIS
Manager Flight Standards, New England Region

GAIL LATRELL
Manager, Office of Airports, New England Region

ARTHUR LAPOINTE
Manager, Runway Safety, Eastern Services Area

RAYMOND GERMAN
Runway Safety Program Manager, New England Region

ROBERT JONES
Manager, Boston District, Air Traffic Services

JOHN PALLERA
Manager, Boston District, Technical Operations

TABLE OF CONTENTS

4	FAA Safety Management System (SMS)
6	Regional Runway Safety Plan (RRSP) Methodology
7	FY20 RRSP Initiatives
8	Safety Assurance
10	Safety Risk Management (SRM)
14	Safety Policy
16	Safety Promotion



FAA Safety Management System (SMS)

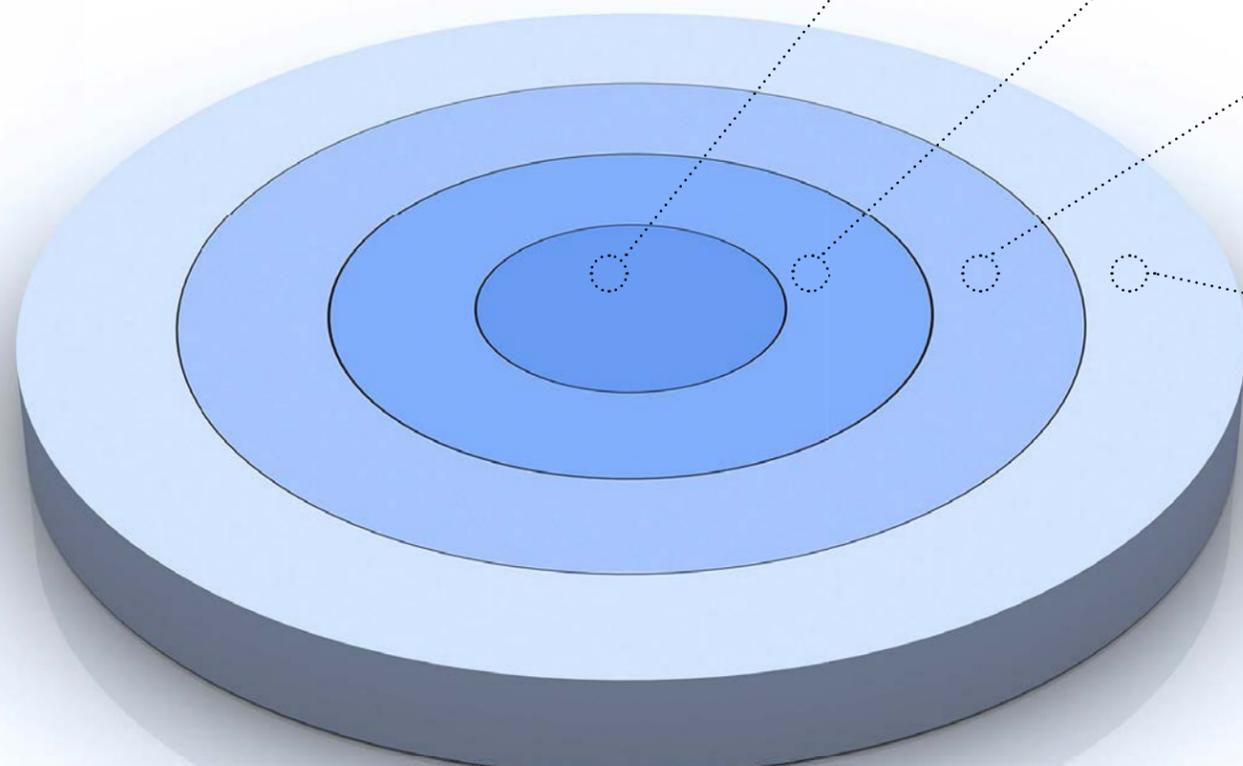
The FAA employs a Safety Management System (SMS), which provides a formalized and proactive approach to find, analyze and address risk in the NAS.

A fundamental impact of the 2015-2017 National Runway Safety Plan has been the successful integration of SMS principles into Runway Safety Strategy. The NSRP focuses on the development of inter-agency strategic processes in the transition from event-based to risk-based analysis in the assessment of current risk and in the prediction of future risk.

The goal for the 2018-2020 NRSP is to leverage new processes, sources of safety data, and integrated safety analysis to reduce serious runway safety events, and to identify, mitigate and monitor the conditions and factors that combine to create risk before serious events occur.

To that end, and while formal directives and agreements are developing, the New England Region Runway Safety Plan will align its activities with the principles and components of FAA's current SMS to the greatest extent possible.

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

The Safety Management System (SMS) is composed of four main components which combine to create a systematic approach to managing and ensuring safety. These components are: Safety Policy, Safety Risk Management, Safety Assurance, and Safety Promotion.

Safety Policy

Safety Policy is the organization's documented commitment to safety, which defines the safety objectives, accountabilities and responsibilities of its employees in regard to safety management. Safety Policy must be:

- Documented;
- Communicated to all employees and responsible parties;
- Consistent with FAA and U.S. SSP goals and objectives; and
- Reviewed periodically to ensure it remains relevant and appropriate.

FY18-FY20 NRSP Objective:

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

Safety Risk Management

All applicable FAA organizations must establish and maintain a Safety Risk Management (SRM) function that provides for initial and continuing identification of hazards and the analysis and

FY18-FY20 NRSP Objective:

Remain the global leader in implementing Runway Safety Enhancement Initiatives that manage or reduce the risk of airport operations.

assessment of risk. SRM functions ensure that appropriate safety risk controls are developed and employed operationally.

Safety Assurance

All applicable FAA organizations must establish and maintain Safety Assurance processes to ensure that safety risk controls achieve their intended objectives and are used to assess operations to identify hazards. Safety Assurance includes monitoring systems of interest and assessing the need for new risk controls, modification of ineffective risk controls, or elimination of those no longer needed due to changes in the operational environment.

FY18-FY20 NRSP 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.

Safety Promotion

Applicable FAA organizations must establish and maintain a safety promotion function. Safety Promotion is a combination of training and communication of safety information to support the implementation and operation of a Safety Management System. It includes actions taken to create an organizational environment where safety objectives can be achieved in fulfillment of its mission.

FY18-FY20 NRSP Objective:

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

FY20 Regional Runway Safety Plan Initiatives

The Regional Runway Safety Team (RRST) will undertake the initiatives listed in this plan during FY2020. No specific completion dates are provided for each action item, but all are expected to be completed.

The RRST will provide the Runway Safety Governance Council (RSGC) with information to determine impact and necessary resources for assignment to these initiatives. This document is fluid and will be evaluated on a continuing basis and modified as events warrant.

All Regional Runway Safety Team (RRST) members will collaborate in the development of this plan annually, with concurrence from

ANE FY20 Airports of Interest

- Noshua Airport, NH (ASH)
- Westfield-Barnes Regional Airport, MA (BAF)
- Bradley International, CT (BDL)
- Laurence G. Hanscom Field Airport, MA (BED)
- Boston Logan International, MA (BOS)
- Burlington International, VT (BTV)
- Manchester-Boston Regional Airport, MA (MHT)
- Worcester Regional Airport, MA (ORH)
- T.F. Green Airport, RI (PVD)
- Portland Internatioanl, ME (PWM)

the New England Region Runway Safety Governance Council (RSGC).



1. Safety Assurance

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 – Support Safety Analysis and Mitigation

Runway Safety will take action to manage risk by proactively identifying hazards and suggestions for mitigating those risks based on data analysis. This plan supports the Administrator's Risk-Based Decision-Making Initiative by building on Safety Management System principles to proactively address emerging safety risk through consistent, data-informed processes.

Action Items:

1.1a Runway Safety will monitor and coordinate with the program office and support initial operational capability efforts for surface technology at any New England Region airport. Runway Safety will continue to monitor the usage of existing and any new technology utilized as a runway incursion mitigation tool.

1.1b Runway Safety will provide support to the AJI-14 subject matter experts (SME) in the implementation of Taxiway Arrival Prediction

software and training. Bradley Airport, CT (BDL) and Boston Logan, MA (BOS) are the ANE facilities selected for the Taxiway Arrival Prediction program currently.

1.1c Runway Safety will share relevant incursion data and analysis/trends/reports with LOBs to support investigations, inspections and increase awareness and visibility of events.

1.1d Runway Safety will consult with Quality Assurance (QA) on runway incursions for assessment and to identify performance deficiencies. This information will be shared with Airports, Air Traffic and/or Flight Standards to review and/or develop best practices and mitigations.

1.1e Runway Safety and regional LOBs will integrate reliable and consistent data from internal and external sources to improve analysis capabilities in support of hazard identification and risk mitigation for events related to runway incursion and excursions.

1.1f Runway Safety will work with the Quality Control Group (QCG) to ensure local RSAT meeting process complies with **ORDER 7050.1B**. This will include tracking of RSAT meeting scheduling and ensuring the completion and uploading of Runway Safety Action Plans for all towered airports.

1.1g Runway Safety Program Managers or their representative will monitor Services Rendered Teleconferences (SRTs) when invited for surface events affecting their assigned areas of responsibility and support as necessary.

1.1h Runway Safety will monitor and track Action Items that are developed during LRSAT meetings and coordinate the input and any update with QCG and other LOBs as necessary for completion.

1.1i Runway Safety will monitor and track Action Items that are developed during LRSAT meetings and coordinate the input and any update with QCG and other LOBs as necessary for completion.

ASDE-X Taxiway Arrival Prediction (ATAP)

Taxiway Arrival Prediction enhancement is a modification made to ASDE-X software enabling it to expand the alerting parameter to include taxiways. The challenge was to create a modification that did not degrade the system's ability to issue runway alerts.

MILESTONES

2020

ANE Runway Safety will provide support to the AJI-14 SMEs in the implementation of Taxiway Arrival Prediction software and training. Currently, Bradley Airport (BDL) and Boston Logan (BOS) are the ANE facilities selected for the Taxiway Arrival Prediction program.

2020

Runway Safety will continue to coordinate and review existing and future Hot Spots and work with the appropriate LOB to address, publish and/or mitigate those areas of concern.

2. Safety Risk Management (SRM)

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 - Local Runway Safety Team (LRSAT) Meetings

LRSAT meetings provide the foundation of the Runway Safety Program and are the primary means to identify and address site-specific surface risk at the local level.

Action Items:

2.1a New England Region Runway Safety will attend LRSAT meetings at Core 30 airports in person or telephonically and may request participation of other divisions and LOBs when their presence is considered essential.

2.1b New England Region Runway Safety will attend LRSAT meetings at airports of interest in person or telephonically and may request participation of other divisions and LOBs when their presence is considered essential.

2.1c New England Region Runway Safety will request representative participation from the Airports Division when their presence may be considered essential. Airports Division, based on resources, will support LRSAT meetings at Core 30 airports and at airports of interest in person or telephonically.

2.1d New England Region Runway Safety will request representative participation from the Safety Standards Division when their presence may be considered essential. Safety Standards Division, based on resources, will support LRSAT meetings at Core 30 airports and at airports of interest in person or telephonically.

2.1e New England Region Runway Safety will request representative participation from the Technical Operations Division when

their presence may be considered essential. Technical Operations Division, based on resources, will support LRSAT meetings at Core 30 airports and at airports of interest in person or telephonically.

2.1f New England Region Runway Safety will request representative participation from the Air Traffic Organization when their presence may be considered essential. Air Traffic Organization, based on resources, will support LRSAT meetings at Core 30 airports and at airports of interest in person or telephonically.

2.1g Runway Safety and Quality Assurance will provide Air Traffic Managers with the support package for conducting RSAT meetings. This will include historical events/analysis, previous action items, diagrams, and relevant safety information to include promoting the use of the RSAT Toolkit for RSAT and RSAP preparation.

2.1h Runway Safety will support facilities in ANE that are identified for a Special Focus RSAT. Selection will be based upon severity or frequency of wrong surface events.

Runway Incursions for FY2019 Year to Date as of Nov. 2019

Runway incursion rate per 100,000 operations

HCF/HNL	Airport Name	# of RI's	RI Rate Per 100K OPS	Airport Operations
BOS	General Edward Lawrence Logan Intl. Boston, MA	23	5.3	432,722
BTV	Burlington Intl. Airport Burlington, VT	16	21.7	73,529
BED	Laurence G. Hanscom Field, Bedford, MA	8	6.2	128,141
PWM	Portland Intl. Jetport; Portland, ME	5	8.6	58,465
BDL	Bradley Intl. Airport; Windsor Locks, CT	2	2.2	92,414
BGR	Bangor Intl. Airport; Bangor, ME	2	4.4	45,000
MHT	Manchester Regional Airport; Manchester, NH	2	4.0	50,503
OWD	Norwood Memorial Airport; Norwood, MA	1	1.7	508,201
OXC	Waterbury-Oxford Airport; Oxford, CT	1	2.7	36,561

MILESTONES



ANE Runway Safety is continuing to conduct Runway Safety Action Team (RSAT) meetings virtually due to the COVID-19 pandemic. BGR, BDL and BED airports have all completed RSAT meetings virtually, with more airports to follow.



Runway Safety will support facilities in ANE that are identified for a Special Focus RSAT. Selection will be based upon severity or frequency of wrong surface events. Due to the COVID-19 pandemic, these meetings will be conducted virtually.

3. Safety Policy

FY18-FY20 NRSP Safety Promotion Objective: Establish and maintain policies and procedures to ensure adequate resources are available to accomplish the FAA’s near-term and strategic objectives.

Activity 3 – Support the current National Runway Safety Plan and the FY2020 ATO Safety and Technical Training Business Plan

The FY2020 New England Region Runway Safety Plan is a living document to outline efforts, at the regional level, between specified Lines of Business (LOBs) to support the strategic initiatives outlined in the current National Runway Safety Plan and the FY2020 ATO Safety and Technical Training Business Plan.

Action Items:

3.1 New England Region will continue to meet the plan objectives of the 2015-2017 NRSP as well as the 2018-2020 NRSP.

- To leverage new processes, sources of safety data and integrated safety analysis, in order to continue to reduce serious runway safety events (2015-2017 NRSP);
- To identify, mitigate, and monitor the conditions and factors that combine to create risk before serious events occur (2015-2017 NSRP);

3.2 New England Region will continue to meet the plan objectives of the FY2019 AJI-1 Safety Business Plan and the new FY2020 AJI-1 Safety Business Plan.

- To reduce Category A & B runway incursions to a rate of no more than 0.375 per million for commercial aviation and 0.465 per million for non-commercial aviation (FY2018 AJI-1 Safety Business Plan 18S.21); and,
- To enhance the product from Runway Safety Action Teams by ensuring each team meets, or exceeds, the requirements.
- Establish consensus among Runway Safety Stakeholders on a policy to assess and quantify the risk in runway safety events (FY2019 AJI-1 Safety Business Plan 18S-118).
- Address precursors, as well as latent risks, by proactively providing event trend summaries and best practices to the field (FY2019 AJI-1 Safety Business Plan 18S-118).

MILESTONES



ANE Region will continue to meet the plan objectives of the FY2019 AJI-1 Safety Business Plan and the new FY2020 AJI-1 Safety Business Plan



ANE Region will continue to meet the plan objectives of the 2015-2017 NRSP as well as the 2018-2020 NRSP

How We Are Collaborating





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 – Support Communication Strategy and Engagement

Communication and engagement are essential to the success of this Regional Runway Safety Plan. Engaging with key stakeholders, safety experts, frontline employees and FAA organizations enables Runway Safety to advance towards the goal of reducing surface risk.

Action Item:

4.1a The Regional Administrator will obtain executive support and engagement from the management level of each LOB for Runway Safety Governance Council (RSGC) participation and collaboration on regional runway safety initiatives. The Regional Administrator is asked to commit to chairing 4 meetings a year. See **APPENDIX D** for RSCG meetings.

4.1b Runway Safety will participate in the RSGC meetings. Runway Safety will update the council on runway safety initiatives and share relevant information.

4.1c Runway Safety will support State Aviation Director’s meetings and will coordinate information for the Regional Administrator’s participation at those meetings. This will include coordination for distribution of the products offered via the internet to include educational materials, reference documents and links to increase and expand awareness to the aviation community.

4.1d The Horizontal Integration Team (HIT) meeting is a Regional Administrator’s initiative for LOB collaboration on projects, construction and issues which may directly impact runway safety at airports within the New England Region. Runway Safety will support these meetings and provide updates

on runway incursions, LRSAT information, safety concerns and relevant action items for Regional visibility and/or LOB support for implementation.

4.1e Runway Safety will ensure Regional Airports including District Offices, Flight Standards, Technical Operations and New England NASAO are made aware of upcoming LRSAT meetings based on date received from facilities. This may include periodic updates during Regional Management Team (RMT) meetings.

4.1f Runway Safety will provide copies of completed Runway Safety Action Plans for visibility and awareness of discussion items, mitigations and safety recommendations to LOBs when requested or necessary for collaboration on completing local action items.

4.1g Runway Safety, Air Traffic, Technical Operations, Airports and Flight Standards will communicate and collaborate on any regional runway safety issues/concerns raised internally or by stakeholders (air carrier, airport operators, FBOs, etc.).

4.1h Runway Safety will work with Regional ATO Management and/or Air Traffic Managers routinely throughout the fiscal year to promote and increase runway safety awareness.

4.1i Runway Safety will provide outreach support and work with industry and local stakeholders within the region, to include internal collaboration to address safety concerns and issues received from the aviation community.

4.1j Runway Safety will brief front line managers routinely throughout the fiscal year at operations supervisor workshops. The briefings provide general information regarding the work of Runway Safety, best practices, data sharing and question & answer sessions.

4.1k With consideration for resources and budget, Runway Safety will support the 2019 NBAA-BACE Convention to provide awareness and information regarding the work of Runway Safety, best practices, data sharing, question & answer sessions and specific focus topics, as well as Airport Construction.

4.1l Runway Safety will select a facility in ANE for a location-specific video to be produced in collaboration with Infina, Ltd. Selection will

be based upon severity or frequency of Wrong Surface Events.

4.1m Runway Safety will support the 7 facilities identified by Runway Safety in which the ANE Regional Administrator will be attending as part of the Regional Administrator’s Business Plan. See Table 1 with the highlighted facilities.

MILESTONES



ANE Runway Safety will participate in RSGC meetings. The most recent meeting was conducted on May 29, 2020 with full participation of the LOBs. Overview of the program on a regional and national level were discussed as well as wrong surface events and construction. Future meetings are TBD.



Runway Safety is supporting all airports identified under the Regional Administrator’s Business Plan.

For More Information:

Runway Safety Program Managers, New England Region

Raymond German and Timothy Goodall

1200 District Avenue

Burlington, MA 01803

Published by ANE Regional Runway Safety Team



**U.S. Department
of Transportation**

**Federal Aviation
Administration**

www.faa.gov



APPENDIX A

PROGRAMS AND DEFINITIONS

DEFINITIONS RELATING TO RUNWAY SAFETY ARE FOUND IN FAA ORDER 7050.1B.

THE FOLLOWING ARE SELECT DEFINITIONS PERTINENT TO 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 (ARP): 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. 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 regular 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 (ANE-620).
- **Local Runway Safety Action Teams (LRSAT):** The Airports Division strives to participate in as many RSAT meetings as possible.
- **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 to not 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 “Lessons Learned” 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: In FY16, the FAA adopted a program named Compliance Philosophy which, for Flight Standards, 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. Airmen or organizations who demonstrate chronic noncompliance, inability to perform, or who have noncompliant attitudes are ineligible for Compliance Philosophy. Beyond Flight Standards, 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 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 FAA Team Representatives including CFIs and DPEs in all aspects of Runway Safety Promotion.
- Assist FSDO Inspectors in implementation of airman remedial training and counseling 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 (AVS): The Flight Standards organization does business through Flight Standards District Offices (FSDO) and Certificate Management Offices (CMO) located strategically throughout the New England Region. Each FSDO/CMO Office Manager has been assigned direct responsibility for managing all matters relating to Runway Safety within the scope of Flight Standards oversight as concerns his or her geographical area of responsibility. These include:

- Oversight of certificated airmen and aviation organizations including certification, surveillance, accident/incident investigation, and enforcement.
- Safety Promotion and Educational Outreach utilizing the FAA Team employees who report directly to each office manager.
- Collaboration with FAA LOBs and Stakeholders to identify aviation hazards and associated risks and to implement corrective action within the area of responsibility to reduce the potential of aviation accidents and incidents.
- Oversight of Flight Standards Programs at the local level intended to improve runway safety within the area of responsibility and to coordinate this with the RRST through Flight Standards Division Management.

AVS Offices are engaged in the following specific efforts related to Runway Safety:

- Prompt response and investigation of occurrences, incidents, and reported pilot deviations.
- Creating high quality reports documenting all investigations.
- Identification of systemic problems and forwarding recommendations and proposed mitigations for appropriate FAA action/response.
- Implementation of the most effective corrective actions through the FAA Compliance Philosophy which emphasizes a cooperative approach with airmen and stakeholders.
- Upholding minimum regulatory standards as applied to airmen and organizations that operate in the NAS.

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.

National Association of State Aviation Officials 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 (RSGC): Chaired by the Regional Administrator or designee, and composed of the RRSPM and executives or designees from Airports, Flight Standards, 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. 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 Manager (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 Safety Team (RRST): The Southern 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 and Airports regional divisions. Advisory members of the team may include designees from each of the Air Traffic and Tech-Ops districts. Appendix F lists the members of the RRST. RRST is charged with identifying regional priorities and working through their executive representative on the RSGC to ensure that issues are properly vetted through their respective LOB and for prior coordination before RSGC meetings.

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 also 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 RI trending. RIPSA focuses on small to medium airports that do not have existing surface surveillance systems. Within the New England Region, the NextGen team visited DeKalb-Peachtree Airport, Daytona Beach International Airport, Sanford International Airport, Miami Executive Airport, and Fort Lauderdale Executive Airport and met with airport and air traffic management to discuss the runway safety challenges at that airport, the present and planned mitigations to address runway safety related risks. The assessment report resulting from the visits suggested PDK, TMB, and FXE be revisited in FY18 for further analysis. DAB has been recommended as a potential candidate site and SFB will be reassessed in FY18. 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

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): The 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 to be 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 Center in College Park, Georgia, the Runway Safety Service Area Manager supervises the Regional Runway Safety Program Managers and interacts with the ATO Service area offices, Regional LOBs 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:**

- **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”.

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.

Wrong Surface Operation: An event where an aircraft lands on the wrong runway, taxiway or at the wrong airport. Also an event where an aircraft departs on the wrong runway or taxiway.

■ ■ ■ APPENDIX B

AS OF OCTOBER 1, 2018, ATO WILL REALIGN DISTRICTS TO REFLECT THE FOLLOWING FAA FACILITIES:

Eastern Service Area					
Boston	Washington DC	Jacksonville	Miami	New York	Atlanta
TEBW	TEDC	TEJX	TEMA	TENY	TETL
Robert Jones	Teresa Mount	Shaun Sanders	Juan Fuentes	James Schultz (A)	Michael Schmidt
ACK	ACY	CAE	FLL	ABE	AGS
ALB	ADW	CHS	FPR	AVP	ATL
BDL	BWI	DAB	FXE	CDW	AVL
BED	DCA	FLO	MIA	EWR	BHM
BGM	FAY	JAX	PBI	FRG	CHA
BGR	HEF	MCO	PIE	HPN	CLT
BOS	IAD	MYR	RSW	ISP	CSG
BTV	ILG	ORL	SJU	JFK	GSO
ELM	ILM	PNS	SRQ	LGA	GSP
MHT	ORF	SAV	STT	MDT	MGM
PVD	PCT	SFB	TMB	MMU	PDK
PWM	PHF	TLH	TPA	POU	TRI
SYR	PHL		VRB	RDG	TYS
	PNE			TEB	
	RDU				
	RIC				
	ROA				

**AS OF OCTOBER 01, 2018, ATO WILL REALIGN ITS DISTRICTS TO REFLECT THE FOLLOWING FACILITIES
WITH FEDERAL CONTROL TOWERS**

Boston	Washington DC	Jacksonville	Miami	New York	Atlanta
TEBW	TEDC	TEJX	TEMA	TENY	TETL
Robert Jones	Teresa Mount	Shaun Sanders	Juan Fuentes	James Schultz (A)	Michael Schmidt
ASH	CHO	ABY	APF	BDR	AHN
BAF	ESN	CRE	BCT	CXY	FTY
BVY	EWN	CRG	BKV	DXR	GMU
EWB	FDK	DHN	BQN	FOK	GYH
GON	HGR	ECP	EYW	HVN	HKY
HFD	ISO	EVB	FMY	IPT	INT
HYA	LWB	FIN	HWO	LNS	JQF
ITH	LYH	GNV	LAL	OXC	LZU
LEB	MTN	HXD	OPF	SWF	MCN
LWM	SBY	ISM	PGD	UNV	RYY
MVY	TTN	LEE	PMP		TCL
ORH		MLB	SIG		
OWD		OCF	SPG		
RME		OMN	STX		
		SGJ	SUA		
		TIX			
		VQO			

BOSTON DISTRICT	
ACK	Nantucket-Memorial
ALB	Albany International
ASH	Boire Field, Nashua
BAF	Barnes Westfield
BDL	Bradley International
BDR	Sikorsky Memorial Bridgeport
BED	L G Hanscom Field Bedford
BGR	Bangor International
BGM	Greater Binghamton
BOS	Boston Logan International
BTV	Burlington International
BVY	Beverly Regional
DXR	Danbury Municipal
ELM	Elmira/Corning Regional
EWB	New Bedford Regional
GON	Groton-New London
HFD	Hartford-Brainard
HVN	Tweed New Haven
HYA	Barnstable Muni, Hyannis
ITH	Ithaca Tompkins Regional
LEB	Lebanon Municipal
LWM	Lawrence Municipal
MHT	Manchester Boston Regional
MVY	Martha's Vineyard
ORH	Worcester Regional
OWD	Norwood Memorial
OXC	Waterbury Oxford
PVD	TF Green, Providence
PWM	Portland International Jetport
RME	Griffiss International, Rome
SYR	Syracuse Hancock International

Note: Highlighted facilities denote Regional Administrator's visits per RA's Business Plan

■ ■ ■ APPENDIX C**NEW ENGLAND REGION GOVERNANCE COUNCIL MEETING SCHEDULE****NOTE: THESE DATES ARE TENTATIVE AND SUBJECT TO CHANGE: INVITES WILL BE SENT OUT BY THE REGIONAL ADMINISTRATORS OFFICE**

FY19 QUARTER 1	OCTOBER 11, 2018	3RD FLOOR CONFERENCE ROOM
FY19 QUARTER 2	FEBUARY 5, 2019	
FY19 QUARTER 3	MAY 7, 2019	
FY19 QUARTER 4	SEPTEMBER 5, 2019	

■ ■ ■ APPENDIX D

REGIONAL RUNWAY SAFETY TEAM ROSTER

NAME	POSITION/ (ORGANIZATION REPRESENTING)	TEAM ROLE	PHONE
Raymond German	Runway Safety Program Manager, New England Region	Core	781-238-7784
Timothy Goodall	Runway Safety Program Manager	Core	781-238-7781
Colleen D'Alessandro	ANE Regional Administrator, ANE-1	Core	781-238-7020
Steve Sherwood	ANE Deputy Regional Administrator, ANE-2	Core	781-238-7024
Ronald Curtis	Manager, Flight Standards Division	Core	781-238-7501
Christopher Burns	Asst. Manager Eastern Region Technical Branch –Air Carrier	Core	781-238-7681
Laurie Dragonas	Airport Lead Certification Inspector, ANE Airports Division	Core	781-238-7630
Gail Latrell	Airports Division Manager, ANE	Core	781-238-7603
John A Pallera	Technical Operations District Manager, Boston District	Core	603-881-1160
Tom Lafen	Support Manager, Boston District	Core	401-734-2828
Robert K. Jones	Air Traffic District Manager, Boston District	Core	603-594-5501

Appendix E

Safety Assurance – Data Monitoring and Analysis 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.

National Data

The below information depicts a summary of the previous 6 Years (FY2014 to FY2019), and a summary of the previous 2 Fiscal Years:

6 YEARS: FY 2014 to FY 2019 (Sep 30, 2020)	2 YEARS: FY 2018 to FY 2019 (Sep 30, 2020)
<p>SERIOUS RI - CATEGORY A & B</p> <ol style="list-style-type: none"> The rate¹ of Category A & B runway incursions has decreased by 33%. When ATC is primarily responsible (OI), rate of Category A & B runway incursions has decreased by 33%. <p>CATEGORY A, B, & C</p> <ol style="list-style-type: none"> The Category A, B, & C runway incursions ranged from 41% to 48% of the TOTAL RUNWAY INCURSIONS.² When ATC is primarily responsible (OI), the Category A, B, & C runway incursions ranged from 79% to 92% of the TOTAL RUNWAY INCURSIONS.³ <p>TOTAL RUNWAY INCURSIONS</p> <ol style="list-style-type: none"> The rate of TOTAL RUNWAY INCURSIONS has increased by 22%. When ATC is primarily responsible (OI), the rate of TOTAL RUNWAY INCURSIONS has increased by 7%. <p>CORE 30</p> <ol style="list-style-type: none"> CORE 30 airports have consistently accounted for 23% - 26% of the NAS-wide airport operations. CORE 30 airports have averaged 24% of the TOTAL RUNWAY INCURSIONS. CORE 30 airports have averaged 38% of the CATEGORY A, B & C RUNWAY INCURSIONS. 	<p>SERIOUS RI - CATEGORY A & B</p> <ol style="list-style-type: none"> The rate of Category A & B runway incursions has decreased by 25%. When ATC is primarily responsible (OI), rate of Category A & B runway incursions has decreased by 31%. <p>CATEGORY A, B, & C</p> <ol style="list-style-type: none"> The Category A, B, & C runway incursions changed from 42% to 41% of the TOTAL RUNWAY INCURSIONS. When ATC is primarily responsible (OI), the Category A, B, & C runway incursions changed from 88% to 83% of the TOTAL RUNWAY INCURSIONS. <p>TOTAL RUNWAY INCURSIONS</p> <ol style="list-style-type: none"> The rate of TOTAL RUNWAY INCURSIONS has decreased by 11%. When ATC is primarily responsible (OI), the rate of TOTAL RUNWAY INCURSIONS has decreased by 16%. <p>CORE 30</p> <ol style="list-style-type: none"> CORE 30 airports changed from 25% to 23% of the NAS-wide airport operations. CORE 30 airports changed from 22% to 22% of the TOTAL RUNWAY INCURSIONS. CORE 30 airports changed from 36% to 33% of the CATEGORY A, B & C RUNWAY INCURSIONS.

Total Runway Incursions by Fiscal Year

TIn FY 2019, New England Region ranks amongst the lowest in Runway Incursions with 59 total.

AJI-14 Surface Events
Monthly Surface Safety Report PDF

Runway Incursions



Fiscal Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Airport Ops	51,254,958	50,739,762	50,576,043	49,936,655	49,623,893	49,722,104	49,995,304	50,324,768	51,770,422	53,261,551	4,649,382
AAL	38	27	25	42	53	59	55	53	51	49	
ACE	41	24	31	37	24	33	60	49	57	49	
ACA	77	90	146	114	150	145	133	175	159	131	
AGL	139	126	154	172	139	192	218	261	275	219	
ANE	32	28	25	44	22	44	30	63	67	59	
ANM	101	95	96	121	110	125	155	186	176	195	
ASO	173	178	199	231	222	268	248	284	336	295	
ASW	143	143	184	172	185	189	242	224	251	245	
AWP	222	243	290	309	351	403	419	443	435	430	

On September 19, 2017, the National Transportation Safety Board held a Runway Incursion Forum to raise awareness of the increase in runway incursions in the U.S. and the need to reverse the trend. Safety experts from the aviation industry participated, including representatives from major air carriers, the Aircraft Owners and Pilots Association (AOPA), and the Air Line Pilots Association (ALPA). Participating government agencies included the FAA, NASA and the Transportation Safety Board of Canada.

The number of Runway Incursions has declined since 2018 while the level of airport operations has remained constant.

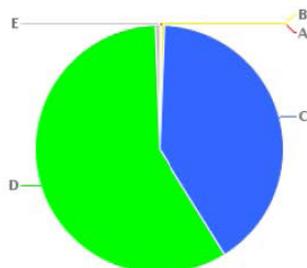
Detailed report on each region ranked by total Runway Incursions Nationally for FY-2019

AJI-14 Surface Events
Monthly Surface Safety Report PDF

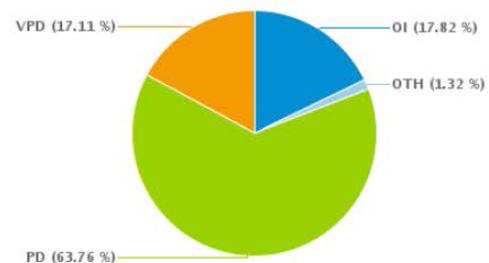
Runway Incursions by FY2019

Region	Service Area	Airport Ops	I Rate per 100	# of RIs	RI By Category				RI By Severity				
					OI	PD	VPD	Other	A	B	C	D	E
AAL	WSA	840,477	5.83	49	8	24	15	2			16	33	
ACE	CSA	1,435,971	3.41	49	3	29	17				10	39	
AEA	ESA	6,099,974	2.15	131	41	60	29	1	1	1	68	60	1
AGL	CSA	6,248,357	3.5	219	50	115	51	3		1	75	142	1
ANE	ESA	1,781,888	3.31	59	13	38	8				30	29	
ANM	WSA	5,291,408	3.69	195	30	147	17	1			80	112	3
ASO	ESA	12,986,603	2.27	295	56	183	49	7		2	120	172	1
ASW	CSA	6,704,385	3.65	245	41	149	53	2		3	85	157	
AWP	WSA	11,872,488	3.62	430	56	321	47	6	2		194	230	4
	Totals	53,261,551	3.14	1,672	298	1,066	286	22	3	7	678	974	10

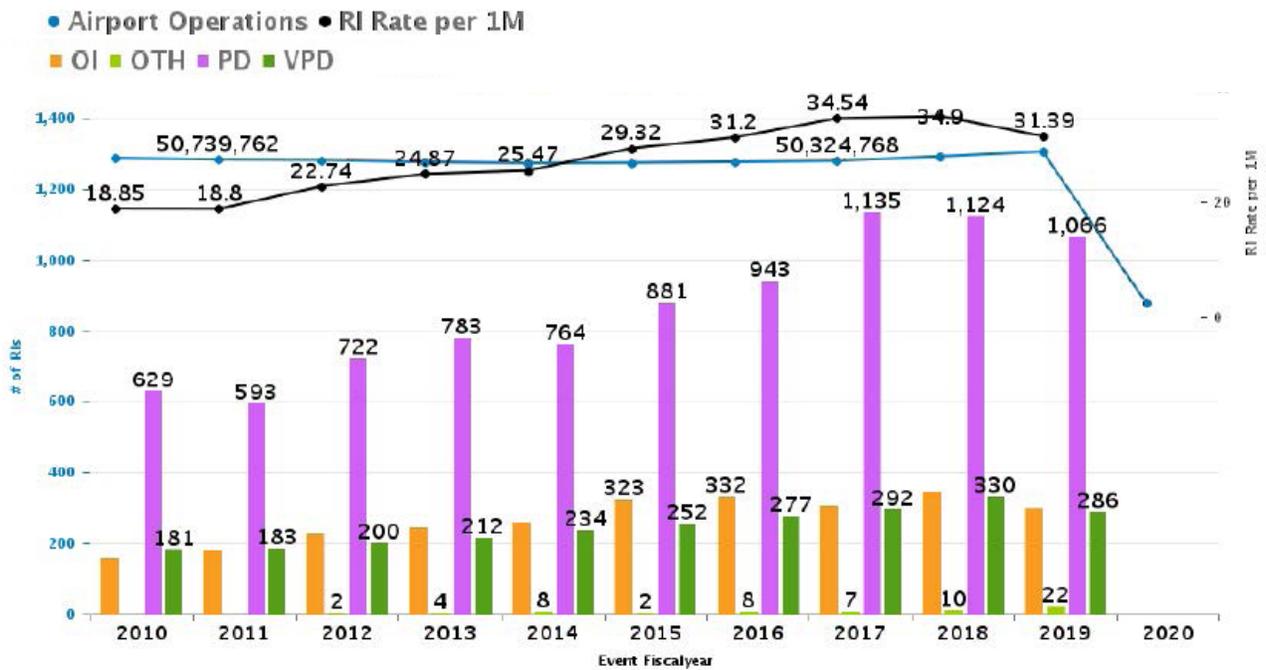
RI By Severity



RI By Type



Category A and B Runway Incursions National Trend



A & B Runway Incursions Broken Down by Regions and Years

Runway Incursions for previous Fiscal Year by Regions



Fiscal Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Airport Ops	51,254,958	50,739,762	50,576,043	49,936,655	49,623,893	49,722,104	49,995,304	50,324,768	51,770,422	53,261,551	4,649,382
AAL					1		1	1		1	
ACE		1				1	1	1		1	
AEA				2	3	1	2	2	1	1	2
AGL			4	5		6	3	2			1
ANE									2		
ANM			1	2		2	1	1	1	1	
ASO		1		4	1	1	3	3	1	2	2
ASW		1	1		1		2	5		2	3
AWP		3	1	5	5	3	2	4	3	5	2

AJI-14 Surface Events
Monthly Surface Safety Report PDF

Runway Incursions by FY

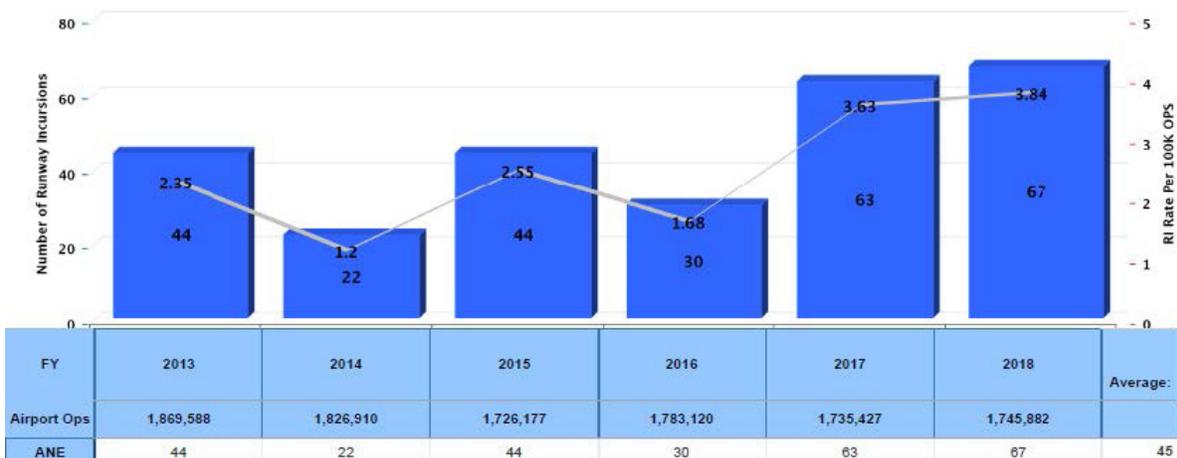
Region	Event Fiscalyear	Service Area	Airport Ops	Rate per 100	# of RIs	RI By Category				RI By Severity				
						OI	PD	VPD	Other	A	B	C	D	E
AAL	2015	WSA	823,713	7.16	59	12	34	13			1	17	41	
	2016	WSA	813,312	6.76	55	10	27	18			1	21	33	
	2017	WSA	788,742	6.72	53	6	31	14	2			16	37	
	2018	WSA	830,504	6.14	51	5	33	13		1		12	36	2
	2019	WSA	840,477	5.83	49	8	24	15	2			16	33	
ACE	2015	CSA	1,455,355	2.27	33	9	18	4	2	1		13	19	
	2016	CSA	1,432,735	4.19	60	7	40	13			1	16	43	
	2017	CSA	1,408,123	3.48	49	15	31	3				22	27	
	2018	CSA	1,406,078	4.05	57	16	27	14		1		17	39	
	2019	CSA	1,435,971	3.41	49	3	29	17				10	39	
AEA	2015	ESA	5,932,441	2.44	145	46	78	21		1	1	77	66	
	2016	ESA	5,963,315	2.23	133	47	65	21			2	67	64	
	2017	ESA	5,914,279	2.96	175	57	76	41	1	1		96	78	
	2018	ESA	5,917,401	2.69	159	44	82	33			1	92	66	
	2019	ESA	6,099,974	2.15	131	41	60	29	1	1	1	68	60	1
AGL	2015	CSA	6,039,993	3.18	192	43	106	43		1	2	81	108	
	2016	CSA	6,099,754	3.57	218	78	96	43	1	1	1	98	118	
	2017	CSA	6,104,486	4.28	261	67	149	45				113	148	
	2018	CSA	6,200,160	4.44	275	52	162	57	4			101	173	1
	2019	CSA	6,248,357	3.5	219	50	115	51	3		1	75	142	1
ANE	2015	ESA	1,726,177	2.55	44	18	22	4				29	15	
	2016	ESA	1,783,120	1.68	30	9	17	4				17	13	
	2017	ESA	1,735,427	3.63	63	17	30	16			2	35	26	
	2018	ESA	1,745,882	3.84	67	18	43	5	1			35	32	
	2019	ESA	1,781,888	3.31	59	13	38	8				30	29	
ANM	2015	WSA	4,671,266	2.68	125	25	78	22		1		59	65	
	2016	WSA	4,798,582	3.23	155	15	101	37	2		1	52	101	1
	2017	WSA	4,882,656	3.81	186	19	131	36		1		61	124	
	2018	WSA	5,156,764	3.41	176	19	132	23	2	1		61	114	
	2019	WSA	5,291,408	3.69	195	30	147	17	1			80	112	3
ASO	2015	ESA	11,405,813	2.35	268	62	168	38		3		132	133	
	2016	ESA	11,505,552	2.16	248	50	149	47	2		3	116	129	
	2017	ESA	11,702,165	2.43	284	39	198	45	2		1	110	169	4
	2018	ESA	12,270,093	2.74	336	83	199	53	1	1	1	157	175	2
	2019	ESA	12,986,603	2.27	295	56	183	49	7		2	120	172	1
ASW	2016	CSA	6,462,697	2.93	189	26	121	42		2		82	106	
	2016	CSA	6,366,726	3.8	242	56	144	42		3	2	105	131	1
	2017	CSA	6,369,937	3.52	224	36	150	38				85	139	
	2018	CSA	6,528,287	3.84	251	38	147	66			2	83	165	1
	2019	CSA	6,704,385	3.65	245	41	149	53	2		3	85	157	
AWP	2015	WSA	11,214,649	3.59	403	82	256	65		2		202	199	
	2016	WSA	11,232,208	3.73	419	60	304	52	3	3	1	206	208	1
	2017	WSA	11,418,953	3.88	443	48	339	54	2	3		191	249	
	2018	WSA	11,715,253	3.71	435	68	299	66	2	3	2	182	246	2
	2019	WSA	11,872,488	3.62	430	56	321	47	6	2		194	230	4
		Totals	259,723,531	3.17	8,235	1,600	5,149	1,437	49	33	32	3,537	4,608	25

Runway Incursions for previous Fiscal Year by Region Historical Data for New England Region

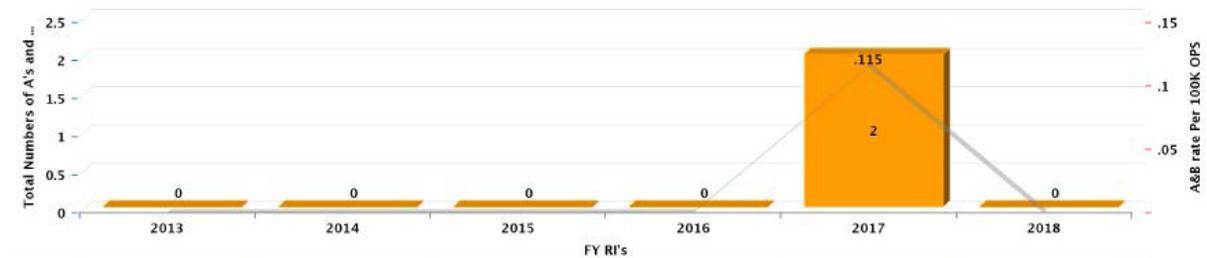
RI - FY 2019 Year to Date as of 11/15/2019

HCF/ HNL	Airport Name	# of RI's	RI Rate Per 100K OPS	Airport Operations
BOS	General Edward Lawrence Logan Intl. Boston, MA	23	5.31	432,722
BTV	Burlington Intl. Airport Burlington, VT	16	21.76	73,529
BED	Laurence G. Hanscom Field, Bedford, MA	8	6.24	128,141
PWM	Portland Intl. Jetport; Portland, ME	5	8.55	58,465
BDL	Bradley Intl. Airport; Windsor Locks, CT	2	2.16	92,414
BGR	Bangor Intl. Airport; Bangor, ME	2	4.44	45,00
MHT	Manchester Regional Airport; Manchester, NH	2	3.96	50,503
OWD	Norwood Memorial Airport; Norwood, MA	1	1.71	508,201
OXC	Waterbury-Oxford Airport; Oxford, CT	1	2.73	36,561

RI Rate per 100K OPS



Previous Fiscal Years Data (Continued)



FY	2013	2014	2015	2016	2017	2018
OPS	1,869,588	1,826,910	1,726,177	1,783,120	1,735,427	1,745,882
ANE	0	0	0	0	2	0

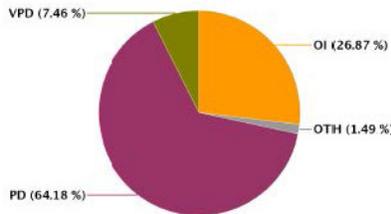
Monthly Runway Incursion Briefing
A&B RI's

All Measures
■ Total Numbers of A's and B's
 ■ A&B rate Per 100K OPS

ANE_ Runway Incursion report

Monthly Runway Incursion Briefing
Type Severity

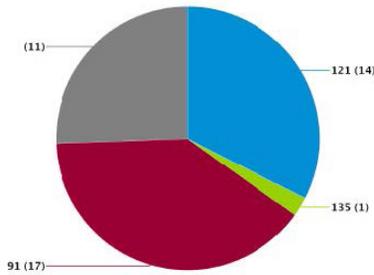
FY: 2018



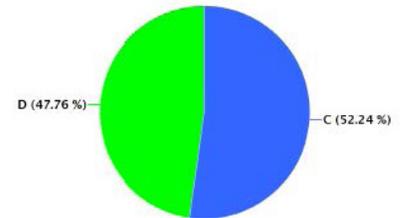
Incident Type Category	# of RI's
OI	10
OTH	1
PD	43
VPD	5
Sum:	67

Monthly Runway Incursion Briefing
FY: 2018 PD'd by type of Operation

FY: 2018 RI involving a PD by FAR type



	C	D
121	6	8
135		1
91	5	12
	4	7
Total	15	28



Severity Category	# of RI's
C	35
D	32
N/A	0
Sum:	67

ANE_ Runway Incursion report

	121	135	91		Total
ANE	14	1	17	11	43
Total	14	1	17	11	43

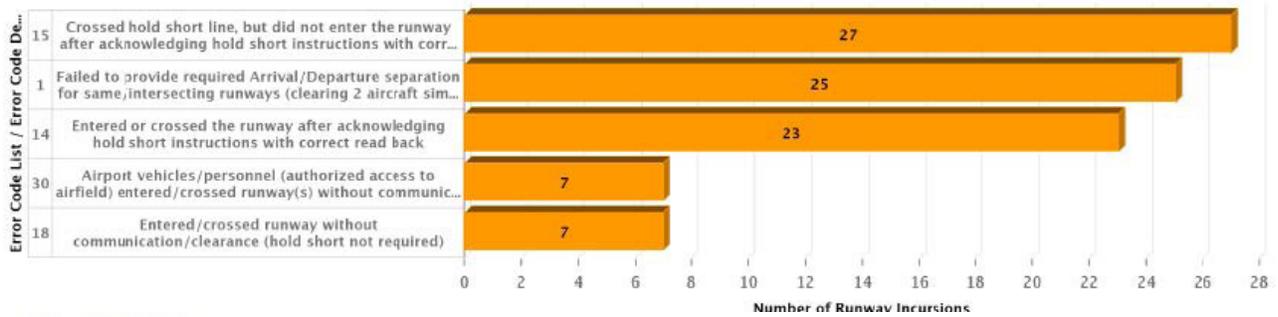
FAR Part	PD Lables	RI's	Percentage:
121	Scheduled airline (Part 121)	14	32.56%
135	On demand (Part 135)	1	2.33%
91	General Aviation (91)	17	39.53%
		11	25.58%
		Percentage:	100.00%

Monthly Runway Incursion Briefing
Top 4 Error Codes

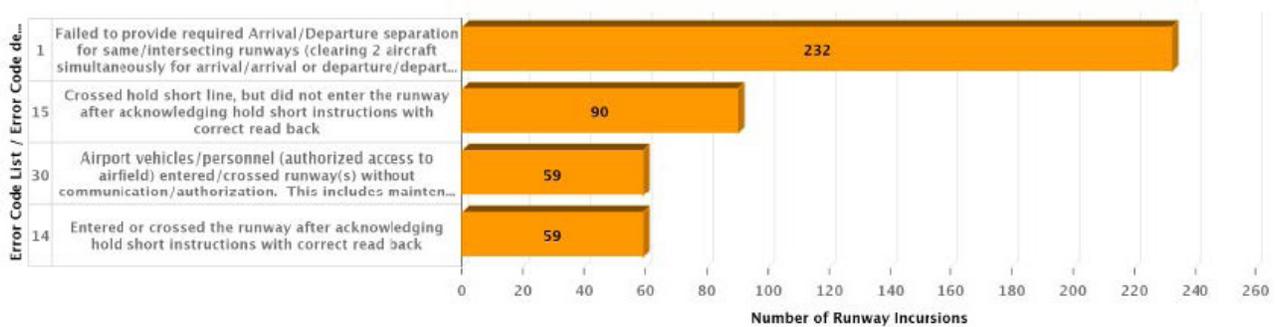
ANE_ Runway Incursion report

Top Four Error Codes in FY 17 and 18

National



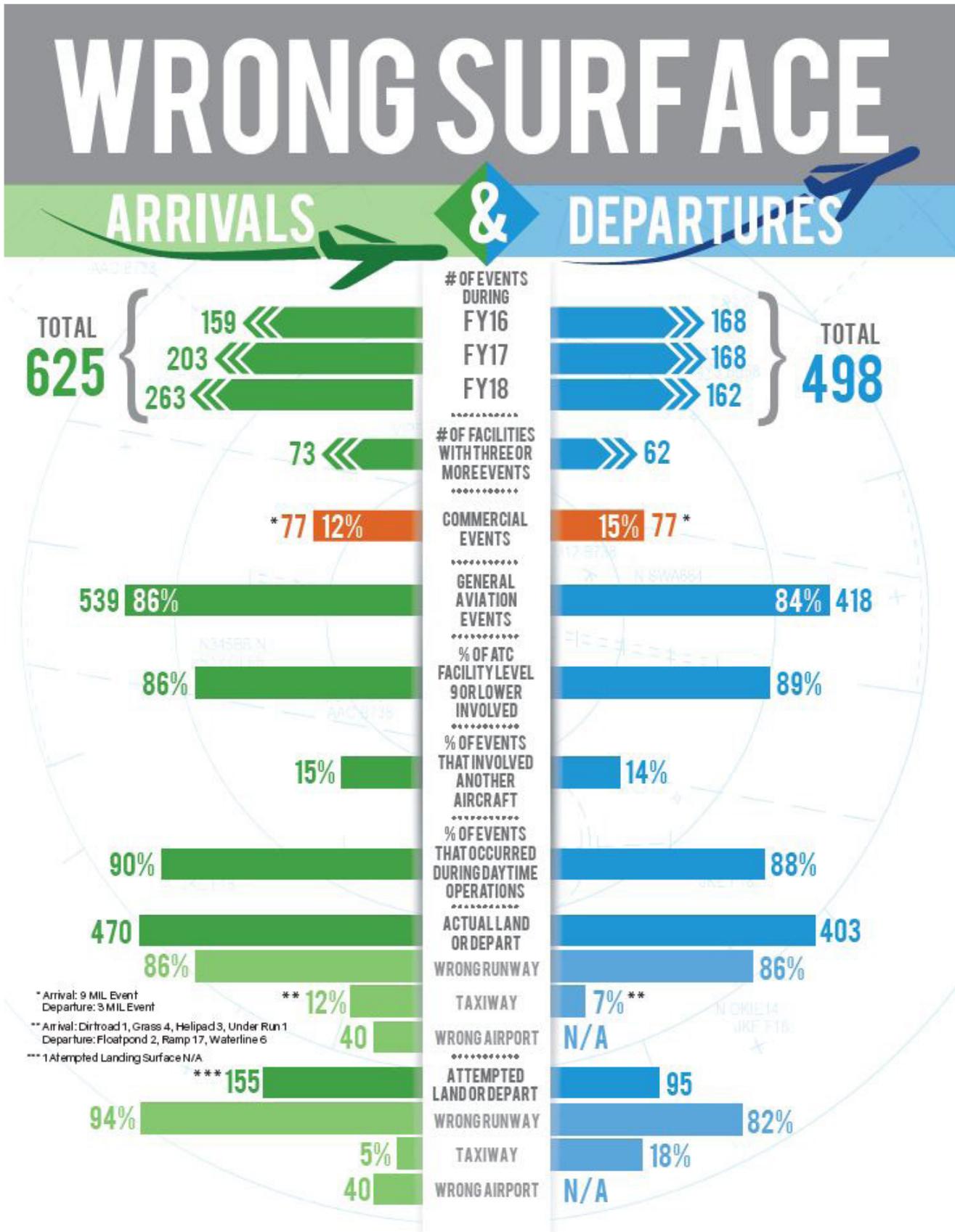
Core 30 airports



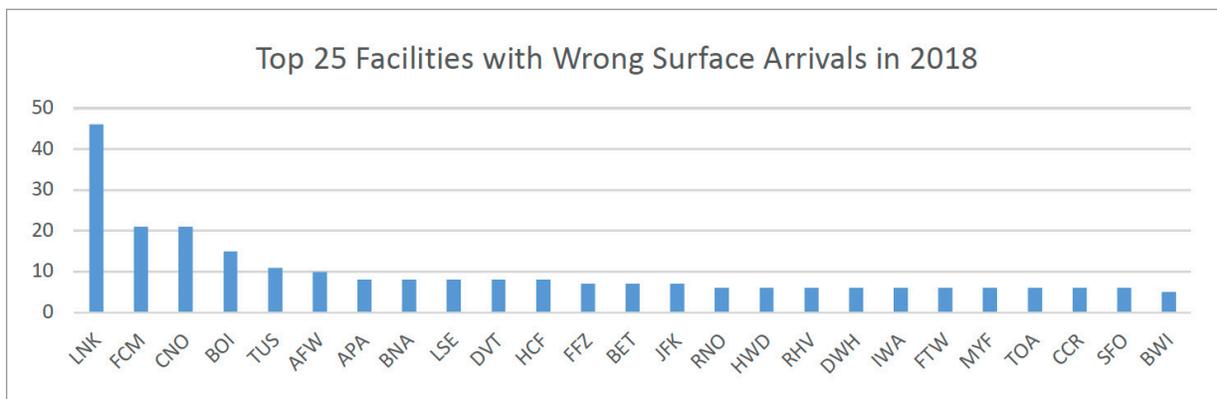
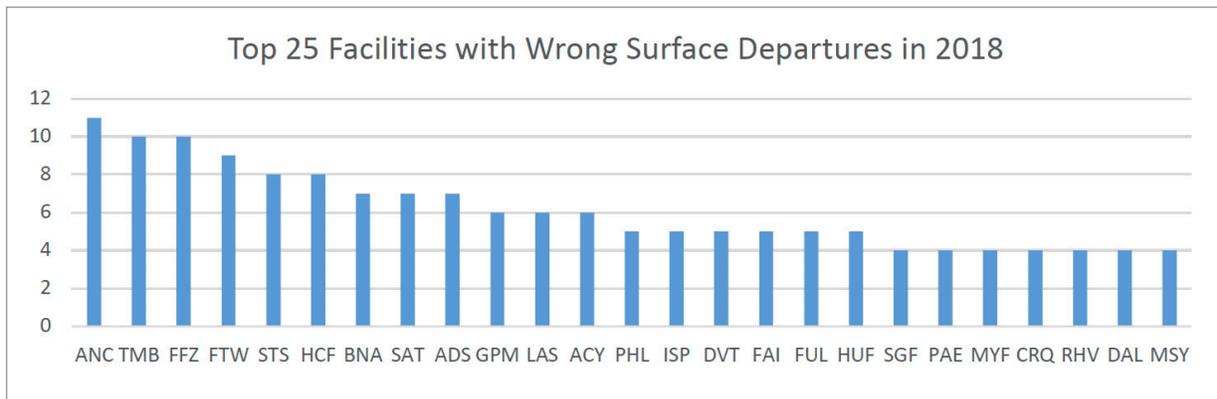
National Wrong Surface Event Statistics

(Next page)

National Wrong Surface Event Statistics



National Wrong Surface Event Statistics (Continued)



Raymond German and Timothy Goodall

**Runway Safety Program Manager
New England Region**

1200 District Avenue
Burlington, MA 01803

More information can be found
on the Runway Safety website at

https://www.faa.gov/airports/runway_safety/