FY2021

Western Pacific (AWP) Regional Runway Safety Plan

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Executive Summary

The Federal Aviation Administration's (FAA) top priority is maintaining safety in the National Airspace System (NAS). The long-term 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 (SI).

FAA's National Runway Safety Plans (NRSP) aligns our strategic priorities with established Safety Risk Management principles. They define 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.

In response to the agency goal and the NRSP, the Western-Pacific Region (AWP) has developed this Regional Runway Safety Plan (RRSP) to provide a roadmap with added regional emphasis for FY2021.

FAA Order 7050.1B, signed by the FAA Administrator, prescribes the FAA's Runway Safety Program (RSP). This cross-organizational directive establishes policy, assigns responsibility, and delegates authority for ensuring compliance with this order within each organization. The AWP Regional Runway Safety Governance Council (RSGC) is chaired by the Regional Administrator and composed of the Regional Runway Safety Program Managers (RRSPM) and executives or designees from the Airports Division, Flight Standards Service and Air Traffic Organization Western and Central Service Area, and Service Center Directors. Each council member identified and designated their line of business (LOB) expert representative on the Regional Runway Safety Team (RRST). **APPENDIX E** lists the members of the RRST.

As directed by the RSP, the RRST is tasked with identifying regional priorities and working through their executive representative to ensure that issues are properly vetted through their respective LOBs for prior coordination before each RSGC quarterly meeting.

RAQUEL GIRVIN
Regional Administrator, Western-Pacific Region

CLARK DESING
Director, Western Service Center

CHRIS DIGGONS
(A) Manager, Runway Safety Program, Western Service Area

JEFF STEWART
Director, Air Traffic Operations, Western Service Area

JOE SANTORO
Runway Safety Program Manager,
Western-Pacific Region, Western Service Area

DAVID W. WASHINO
Director, Technical Operations, Western Service Area

BRUCE DeCLEENE
Director, Office of Safety Standards, AFS-1

ANDY ATCHLEY
Director, Central Service Area

MARK A. McCLARDY
Director, Office of Airports, Western-Pacific Region

FRANKLIN McINTOSH
Director, Air Traffic Operations, Central Service Area

TABLE OF CONTENTS

04 FAA Safety Management System (SMS)

06 Regional Runway Safety Plan (RRSP) Methodology

09 FY21 RRSP Initiatives

11 Safety Assurance

12 Safety Risk Management (SRM)

16 Safety Policy

18 Safety Promotion

25 Appendices

- Appendix A. Plan Initiatives and Status Updates
- Appendix B. FAA Programs & Definitions
- Appendix C. Airport Codes
- Appendix D. Data & Airport Chart
- Appendix E. Regional Runway Safety Team Roster
- Appendix F. LRSAT Participation Matrix

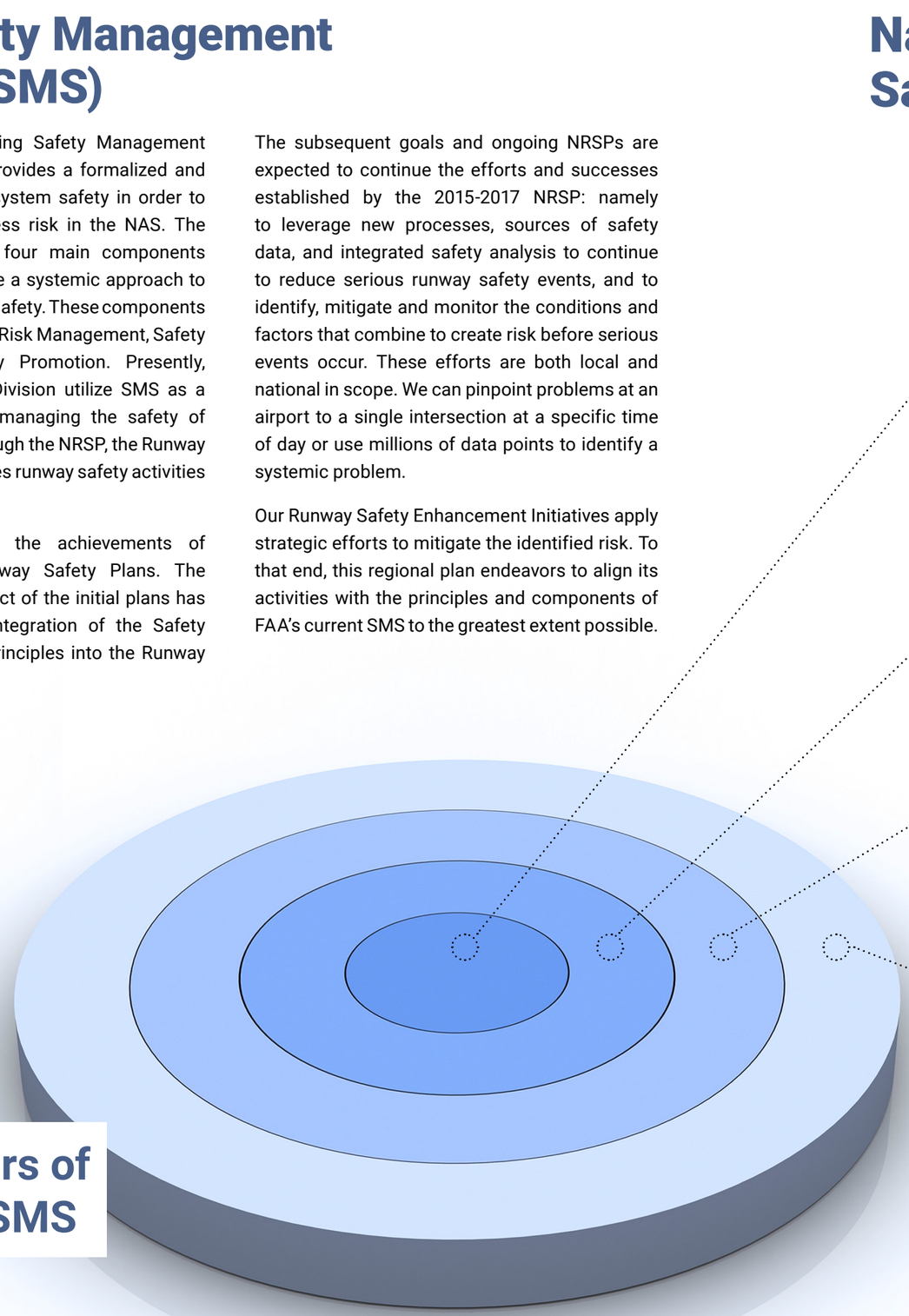
FAA Safety Management System (SMS)

FAA employs an evolving 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 Policy, Safety Risk Management, Safety Assurance, and Safety Promotion. Presently, the ATO and Airports Division utilize SMS as a systemic approach to managing the safety of airport operations. Through the NRSP, the Runway Safety Program continues runway safety activities into the FAA's SMS.

The NRSP builds on the achievements of previous National Runway Safety Plans. The most fundamental impact of the initial plans has been the successful integration of the Safety Management System principles into the Runway Safety strategy.

The subsequent goals and ongoing NRSPs are expected to continue the efforts and successes established by the 2015-2017 NRSP: namely to leverage new processes, sources of safety data, and integrated safety analysis to continue 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. These efforts are both local and national in scope. We can pinpoint problems at an airport to a single intersection at a specific time of day or use millions of data points to identify a systemic problem.

Our Runway Safety Enhancement Initiatives apply strategic efforts to mitigate the identified risk. To that end, this regional plan endeavors to align its activities with the principles and components of FAA's current SMS to the greatest extent possible.



Four Pillars of the FAA SMS

National Runway Safety Plan 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 AWP RRST utilized multiple measures to identify candidate airports for the FY2021 RRSP. The data considered is contained within a 12-month rolling calendar period ending May 31, 2020. AWP airports with 7 or more total RIs or a runway incursion rate per 100,000 airport operations of 5.00 or more were included among the initial candidate airports. Eight airports which did not make either of the baseline cutoffs were added by consensus of the RRST. These included the region's two remaining Core 30 airports, two airports named in the FY2020 RRSP and four airports which the team determined warranted consideration. This initial process resulted in culling AWP's program airports from 81 to 30.

The Regional Runway Safety Team (RRST) then evaluated the 30 candidate airports in light of eleven (11) "Key Performance Indicators" (KPI) which the team considered indicative of actual or potential surface-based risk. The team identified an additional seven Attributes that it felt may compound to or add risk by their inherent nature. Surface-based risk may be associated with the collection of multiple KPI and attributes. While no numerical cutoff was applied, the count of KPI plus Attributes informed RRST members toward those airports which should be considered for inclusion in the FY2021 RRSP.

Figure 1 indicates the KPI and Attributes that were applied to the FY2021 airports analysis.

Additionally, for these 30 candidate airports, the team looked at RI rate trends by comparing the RI rate for the 12-month data set used against the average RI rate for the previous two years and 2 years 8 months for each airport. This enabled the RRST to see what airports' RI rates were remaining relatively flat over recent time, increasing, or decreasing. Figure 1 describes the RI rate trend metrics utilized. The initial list of 30 candidate airports, KPI, Attributes and RI rate trends, is shown in **APPENDIX D**.

Figure 1

FY2021 Priority Airports and Airports of Interest Metrics

Count of Key Performance Indicators +

Category A or B	≥ 2 OI RI	≥ 7 PD RI	≥ 2 VPD RI	≥ 3 VPD SI + RI	≥ 7 RI / Rate ≥ 5 (Entry Level Indicators)	RE ≥ 2	Twy Excur	WSO	Movement Area Collision

Count of Attributes = KPI and Attributes Count

AELP	Prioritized RIM projects	# of RIM Locations	FY 21 Arpt Const	Fit School /Training Ops	Part 139 Active	Core 30

FY2021 Priority Airports & Airports of Interest RI Rate Trends

TOTAL RI	RI Rate per 100K ops	RI Rate Trend 2 yr 8 mo	RI Rate Trend 2 yr	Ave RI Rate FY18-20	Ave RI Rate FY18-20	FY18 RI Rate	FY19 RI Rate	FY20 YTD (7/1/20) RI Rate	
8	15.69	7.88	11.47						Current RI rate is 3 or more **higher** than the average rates
10	4.53	1.68	2.47						Current RI rate is 1 to less than 3 **higher** than the average rates
22	4.81	0.25	0.19						Current RI rate is between -1 and +1 **lower/higher** than the average rates
20	3.14	-0.22	-0.57						
17	4.01	-1.63	-1.99						Current RI rate is 1 to less than 3 **lower** than the average rates
12	5.55	-3.73	-6.36						Current RI rate is 3 or more **lower** than the average rates

FY2021 Airports of Interest per RRST (Data: June 1, 2019 through May 31, 2020)

Airport Code	FY2021 RRSP Airport of Interest (AoI)-Priority Airport (P)	KPI and Attributes Count	Category A or B	≥ 2 OI RI	≥ 7 PD RI	≥ 2 VPD RI	≥ 3 VPD SI + RI	≥ 7 RI	Rate ≥ 5	RE≥ 2	Twy Excur
DVT	**P**	9		3	19			X		X	
PSP	**P**	8			7			X	X		
STS	**P**	7			8			X	X		
TUS	**P**	10			7	2	3	X	X		
CCR	**AOI**	7			7			X	X		
CNO	**AOI**	8			12			X	X	X	
FFZ	**AOI**	9	1	2	11			X		X	
GCN	**AOI**	3						X	X		
HNL	**AOI**	8		3	8			X			
HND	**AOI**	3			6				x		
HWD	**AOI**	9			7			X	X	X	
IWA	**AOI**	8			8			X			
LAS	**AOI**	10		2	10	4	4	X			
LAX	**AOI**	9		2	15	3	3	X			
OAK	**AOI**	7		2	6	2		X			
PHX	**AOI**	4									
RNO	**AOI**	7							X	X	
SAN	**AOI**	4		3							
SFO	**AOI**	10		7	7	3	3	X			
VGT	**AOI**	7			7	2		X			

Airport Code	WSO	Movement Area Collison	AELP	Prioritized RIM projects	# of RIM Locations	FY 21 Arpt Const	Flt School / Training Ops	Part 139 Active	Core 30
DVT	2		Y		3	Y	Y		
PSP	1		Y		1		Y	Y	
STS	3				3		Y	Y	
TUS	3				2	Y	Y	Y	
CCR	2				1		Y	Y	
CNO	4		Y		5		Y		
FFZ			Y		2	Y	Y		
GCN								Y	
HNL					8	Y	Y	Y	Y
HND							Y		
HWD	1		Y		1	Y	Y		
IWA	7		Y		2	Y	Y	Y	
LAS	4				1	Y		Y	Y
LAX					2	Y		Y	Y
OAK						Y	Y	Y	
PHX					1	Y		Y	Y
RNO	2				2	Y	Y	Y	
SAN						Y		Y	Y
SFO	1				1	Y		Y	Y
VGT			Y		2		Y	Y	

Notes:

These airports decided for FY2021 RRSP inclusion by RRST at 7/20/2020 ad-hoc meeting, from Candidate Airport List of 30 airports carried over from 7/16/2020 monthly RRST meeting.

Airports sorted by Priority then Airport of Interest

P = Priority Airport **AOI** = Airport of Interest **Blue Text** = Core 30

Column	Description
C D through N I & J O through U	• Numerical count of Key Performance Indicators (KPI) and Attributes presented in all blue-toned columns • Planning data-set 6/1/2019 thru 5/31/2020 • Airports presenting 7 or more RI, or RI Rate 5.0 or greater • Attributes known or expected during FY2021

The ultimate airport determinations are based on consensus of each RRST member's subject matter expert (SME) perspective in combination with the data. Each core member had the opportunity to consider the connectivity to or support toward their own business plans where applicable. Based on this combination of data and LOB SME expertise, the RRST's initially-culled list of 30 airports was reduced to the final 20 for inclusion in the FY2021 RRSP. Finally, the final 20 airports were evaluated for and placed into a three-tiered support structure:

- **Tier 1:** four Priority Airports;
- **Tier 2:** sixteen (16) Airports of Interest;
- **Tier 3:** all remaining AWP airports.

Line of Site to RSGC

The AWP plan priorities listed below will be routinely kept within view of and reported up to the RSGC by the RRST:

Priority Airports

- DVT
- PSP
- STS
- TUS

Priority Issues

The priority issues for the region, which are also systemic in nature, include:

- AELP Best Practices - Air Traffic
- RSAP Action Item Review and Support
- Support RIM Program
- Wrong Surface Operations

Tier 1 and 2 airports are differentiated by the level of regional and service area support afforded their Local Runway Safety Action Team (RSAT) meetings, as indicated in Initiatives 2.1 and 2.2 Local RSAT Support - Priority Airports and Airports of Interest, respectively.

The Regional Runway Safety Program Managers (RRSPM) will take appropriate action to monitor Tier 3 airports, address increasing surface error trends and/or raise the level of attention within the RRST.

Additionally, due to their connectivity and impact to multiple facilities within the region, the RRST continues to work various systemic aviation issues. The Runway Safety Governance Council (RSGC) may elevate systemic issues as appropriate to their respective headquarters' Line of Business or to the National Runway Safety Council (RSC) through the Runway Safety Group manager.

Airports of Interest

- CCR
- CNO
- FFZ
- GCN
- HNL*
- HND
- HWD
- IWA
- LAS*
- LAX*
- OAK
- PHX*
- RNO
- SAN*
- SFO*
- VGT

***Core 30**

FY21 Regional Runway Safety Plan Initiatives

The Western-Pacific RRST has developed Initiatives, Action Items and Milestones to implement the FY2021 Regional Runway Safety Plan, which directly support the selected airports, address regional or locally based surface safety concerns, and/or support national efforts. The RRST will be working in concert with the appropriate field office manager within each respective Line of Business to implement the initiatives as outlined.

In addition to these priorities and currently identified initiatives, the RRST will monitor and elevate appropriate ad-hoc issues to the RSGC. The RRST will monitor additional Airports of Interest that may not have risen to the level of RSGC coordination at the time this plan was developed. This is a living document and the RRST reserves the right to update the issues if deemed necessary by them or the council.

All major lines of business have collaborated in the development of this plan, which will be updated biannually by the RRST and with concurrence from the RSGC. The purpose of this plan is to document Western-Pacific Region priorities for FY2021. Each RRST Line of Business (LOB) or Organization (Org) is referenced as follows in this plan:

Acronym	Line Of Business / Organization
RS	Runway Safety
AFX	Flight Standards Service
AJT	Air Traffic and Technical Operations
ARP	Airports Division
NATCA	National Air Traffic Controllers Association
SUPCOM	FAA Supervisory Committee
AWP-1	Western-Pacific Regional Administrator's Office
ALL	All LOBs Listed Above

The following initiatives are addressed in this plan:

	AWP-2019-1.1	Measure the effectiveness of previous AWP Regional Runway Safety Plans (RRSP)
Priority	AWP-2021-2.1	Local RSAT Support – Priority Airports
	AWP-2021-2.2	Local RSAT Support – Airports of Interest
	[REMOVED] 2.3	Local RSAT Support – Additional Core 30 Airports not named under Priority or Airports of Interest
Priority	AWP-2020-2.4	RSAP Action Item Review and Support
	AWP-3.1	Runway Safety - SMS Continuity
	[DISCONTINUED] 4.1	Support Flight Standards Service Aviation English Language Educational Outreach (AELEO) efforts to reduce the frequency of operations affected by Aviation English Language Proficiency (AELP)
Priority	AWP-2017-4.2	AELP Best Practices – Air Traffic
	AWP-2016-4.3	Video Production
	AWP-2019-4.4	Compliance Program Outreach to ATO
	WP-2019-4.5	Best Practice - Pre-Local RSAT Pilot/Controller Outreach Meetings
Priority	AWP-2019-4.6	RIM Program Support
Priority	AWP-2018-4.7	Wrong Surface Operations

Airport Codes: FY2021 Priority Airports and Airports of Interest

Code	Airport Name
CCR	Buchanan Field, Concord CA
CNO	Chino Airport, CA
DVT	Phoenix Deer Valley Airport, AZ
FFZ	Falcon Field Airport, Mesa, AZ
GCN	Grand Canyon National Park Airport, AZ
HND	Henderson Executive Airport, NV
HNL	Daniel K. Inouye International – Honolulu Airport, HI
HWD	Hayward Executive Airport, CA
IWA	Phoenix-Mesa Gateway Airport, AZ
LAS	McCarran International Airport, Las Vegas. NV
LAX	Los Angeles International Airport, CA
OAK	Oakland International Airport, CA
PHX	Phoenix Sky Harbor International Airport, AZ
PSP	Palm Springs International Airport, CA
RNO	Reno/Tahoe International Airport, NV
SAN	San Diego International Airport, CA
SFO	San Francisco International Airport, CA
STS	Charles M Schultz – Sonoma County Airport, CA
TUS	Tucson International Airport, AZ
VGT	North Las Vegas Airport, NV

1. 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.

AWP-2019-1.1

Measure the effectiveness of previous AWP Regional Runway Safety Plans (RRSP) beginning with the FY2016 RRSP:

A key responsibility of the Regional Runway Safety Team (RRST) is to develop the Regional Runway Safety Plan (RRSP), which guides regional and service area activates toward enhanced runway safety at towered airports within AWP. The effectiveness of individual activities and initiatives is measured, to the extent possible, within the limits of their scope and focus.

Evaluating the overall effectiveness of the annual plan is elusive, since the RRST has no direct control over the operational entities that function in the system, and due to the sheer number of variables in operation. Additionally, it is not feasible to assess the effectiveness of a plan until enough time has lapsed, in order to have adequate data to judge its effectiveness.

By bracketing the plan-year, and utilizing data one year prior to and after the plan-year, it may be possible to identify overarching successes and weaknesses within the plan to make a reasonable evaluation of its overall effectiveness, as well as to inform development of future RSAPs.

Action Item:

1.1a Assess the effectiveness of the AWP RRSP's individually and/or collectively as may be possible with available expertise and resources. Findings may support and inform future RRSP development.

MILESTONE

2021

AWP-2019-1.1
Report the results of any assessment of the previous RRSPs to the RRST and utilize pertinent findings to inform the FY2022 RRSP.

Target Date:
September 30, 2021

LOB: RS

Measure of Effectiveness:

1. Completion of an analysis of previous RRSP's individually or collectively; identification of effective and ineffective aspects of Plan(s) which may inform future RRSP's.

2. Safety Risk Management (SRM)

FY18-FY21 NRSP Safety Risk Management Objective: Provide advanced in-depth technical knowledge and experience of the NAS by regional and service area entities, to support and participate in activities aimed at the reduction of surface-based risk at Priority Airports.

AWP-2021-2.1

Priority Issue | **Local RSAT Support-Priority Airports:**

- DVT, PSP, STS, TUS

Airports designated by the RRST and named in the RRSP will receive elevated attention in addressing surface risks and be briefed up to and followed by the RSGC. The RRST core member from each LOB attends the annual Local Runway Safety Action Team (LRSAT) of Priority Airports to provide advanced in-depth technical knowledge and experience of the NAS to support the reduction of risk at the airport. The RRST member will be the subject matter expert (SME) for runway safety related issues pertaining to their respective LOB and will proactively solicit input from field managers to obtain possible local solutions to mitigation efforts.

Action Item:

2.1a Participate in FY2021 RRSP Priority Airport Local RSATS.

RRST core team members LRSAT participation:

- **RS:** RRSPM attend all LRSAT and support all activities
- **ARP:** RRST core member or ARP/ADO management designee attend annual LRSATs; coordinate ADO attendance at more frequent RSATs
- **ATO:** RRST core member or management designee attend annual LRSATs; core member or management designee remote participation at more frequent RSATs
- **AFX:** FAAST RRST core member or management designee attend annual LRSATs to the greatest extent practicable. If unable, remote participation is acceptable. FSDO/FAAST PM or management designee remote participation at more frequent RSATs.
- **AWP-1:** AWP1 RRST core member, and AWP1 or management designee attend annual LRSATs; AWP1 RRST core member or designee, remote participation at more frequent RSATs
- **NATCA:** RRST core member attend annual LRSATs; Core member or designee remote participation at more frequent RSATs
- **SUPCOM:** RRST Representative attend annual LRSATs; Core member or designee remote participation at more

RRST Requirements - ALL:

- Attend (participate in-person at) the annual RSAT
- At facilities that conduct RSATs or other surface safety meetings on a more frequent (monthly or quarterly) basis, participate at least virtually (remote) to the greatest extent practicable. This is in addition to participating in the annual Local RSAT.
- Actively track action items that have been accepted by their LOB/ organization
- Facilitate follow-on activities where mitigations are not showing positive results.
- Be prepared to brief AWP Governance Council on all matters pertaining to priority airports.

AWP-2021-2.2

Provide Local RSAT Support for Airports of Interest:

- CCR, CNO, FFZ, GCN, HND, HNL, HWD, IWA, LAS, LAX, OAK, PHX, RNO, SAN, SFO, VGT

Airports identified by the RRST and named in the RRSP will receive elevated attention in addressing airport surface risks. The RRST core member, or management or core team member designee from each LOB participates in person or remotely in the annual Local Runway Safety Action Team (LRSAT) of Airports of Interest to provide advanced in-depth technical knowledge and experience of the National Airspace System (NAS) to support the reduction of risk at the airport. The additional support and participation of regional and service area entities will have a positive influence in reducing the number and severity of surface events at the airport.

Action Item:

2.2a Participate in FY2021 RRSP Airports of Interest Local RSAT.

RRST core team members LRSAT participation:

- **RS:** RRSPM attend all LRSATs and support all activities
- **ARP:** Core member coordinate ADO/ PM management to attend annual LRSATs; ADO remote participation at more frequent RSATs
- **ATO:** Core member or management designee remote participation at annual LRSATs; management designee remote participation at more frequent RSATs
- **AFX:** FAAST RRST core member or designee remote participation at annual LRSATs; coordinate local FSDO/FAAST remote participation at more frequent RSATs
- **AWP-1:** AWP1 RRST core member, and AWP1 or management designee remote participation at annual LRSATs; AWP1 RRST core member or designee remote participation at more frequent RSATs
- **NATCA:** RRST core member or designee remote participation at annual LRSATs; Coordinate local participation at more frequent RSATs
- **SUPCOM:** RRST Representative or designee remote participation at annual RSATs; Coordinate local participation at more frequent RSATs

RRST Requirements - ALL:

- Remain actively engaged with the Airports of Interest and maintain awareness of their runway safety related issues and concerns
- Coordinate with appropriate parties within their LOB to be aware of the Airports of Interest and attendant activities within the RRSP
- Participate in the annual RSAT as noted above per LOB
- At facilities that conduct RSATs or other surface safety meetings on a more frequent (monthly or quarterly) basis, participate at least virtually (remote) to the greatest extent practicable. This is in addition to participating in the annual Local RSAT.
- Actively track action items that have been accepted by their LOB/ organization
- Facilitate follow-on activities where mitigations are not showing positive results.

APPENDIX F: Plan Airports RSAT Support Participation Matrix

AWP-2.3

[REMOVED] 2.3 Local RSAT Support- Additional Core 30 Airports not named under Priority or Airports of Interest

Beginning in the FY2020 RRSP, All AWP Core-30 airports are identified as a Priority Airport or Airport of Interest and supported accordingly.

AWP-2020-2.4

Priority Issue | **Runway Safety Action Plan (RSAP) Action Item Review and Support**

The RSAP is the product of the Runway Safety Action Team (RSAT). It serves to document surface safety issues and concerns identified at the RSAT meeting, and conveys the action items developed by the team toward mitigating surface risk.

Action Items may become overdue, or linger without adequate or timely progress either toward completion, or closure as not adopted. Since action items are developed by RSATs as potential or actual solutions to identified surface issues, their timely completion is of paramount importance toward improving specific or overall surface safety.

While the points of contact for each action item are assigned by the LRSAT to the entity that can affect or follow/influence the proposed action, all action items ultimately fall under the umbrella of one of the RRST's core LOB's: Runway Safety, ARP, ATO, or AFX. As the RSAP is the document of each control tower's Air Traffic Manager, they are ultimately responsible for the timely updating and following of action items within their RSAP. The RRST is in a position to support ATM's and their local RSAT by staying aware of action items within the core members' LOB's purview, and engaging when necessary to provide guidance and assistance toward the appropriate disposition of the action item.

Action Item:

2.4a RRST core members, with support of AWP Runway Safety, will track RSAP action items and engage LOB-related parties in completing, closing, and /or moving action items forward.

MILESTONES

AWP-2021-2.1

2021

☐ **Milestone 1:** Particpate in annual RSAT's to the extent noted for each LOB.
Target date: September 30, 2021
LOB: RS, AFX, ATO, ARP, NATCA, SUPCOM, AWP-1

☐ **Milestone 2:** Participate in RSAT's in addition to the annual RSAT for airports that conduct more frequent RSATs.
Target Date: September 30, 2021
LOB: RS, AFX, ATO, ARP, NATCA, SUPCOM, AWP-1
Measure of Effectiveness:
1. Participate in 100% of annual RSAT's as noted for each LOB.
2. At airports that conduct more frequent RSAT's participate to the greatest extent practicable

AWP-2021-2.2

2021

☐ **Milestone 1:** Participate in annual RSAT's to the extent noted for each LOB.
Target date: September 30, 2021
LOB: RS, AFX, ATO, ARP, NATCA, SUPCOM, AWP-1

☐ **Milestone 2:** Participate in RSAT's in addition to the annual RSAT for airports that conduct more frequent RSATs.
Target Date: September 30, 2021
LOB: RS, AFX, ATO, ARP, NATCA, SUPCOM, AWP-1
Measure of Effectiveness:
1. Participate in 80% of annual RSAT's as noted for each LOB.
2. At airports that conduct more frequent RSAT's participate to the greatest extent practicable.

AWP-2020-2.4

2021

☐ **Milestone 1:** AWP Runway Safety will track RRSP action items and engage the appropriate RRST member to follow-up on action items within the LOB's they represent toward completing, closing, and /or moving action items forward. Report action item status to the RSGC at each quarterly meeting (i.e. total open, on course, due soon and overdue).
Target date: Quarterly at each RRSG meeting
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM
Measure of Effectiveness:
1. 90% of all open action items will be on course or due soon at the time of the quarterly RSGC meeting."

3. Safety Policy

FY18-FY21 NRSP Safety Policy Objective: Establish and maintain policies and procedures to ensure adequate resources are available to accomplish the FAA's near-term and strategic objectives.

AWP-3.1

Runway Safety and SMS Continuity

Beginning with the FY2016 RRSP, the AWP RRST began viewing surface safety risk management in accordance with the SMS process and aligning its initiatives within the framework of SMS principles. Continuing into this FY2021 RRSP, 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 the various NRSPs.

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

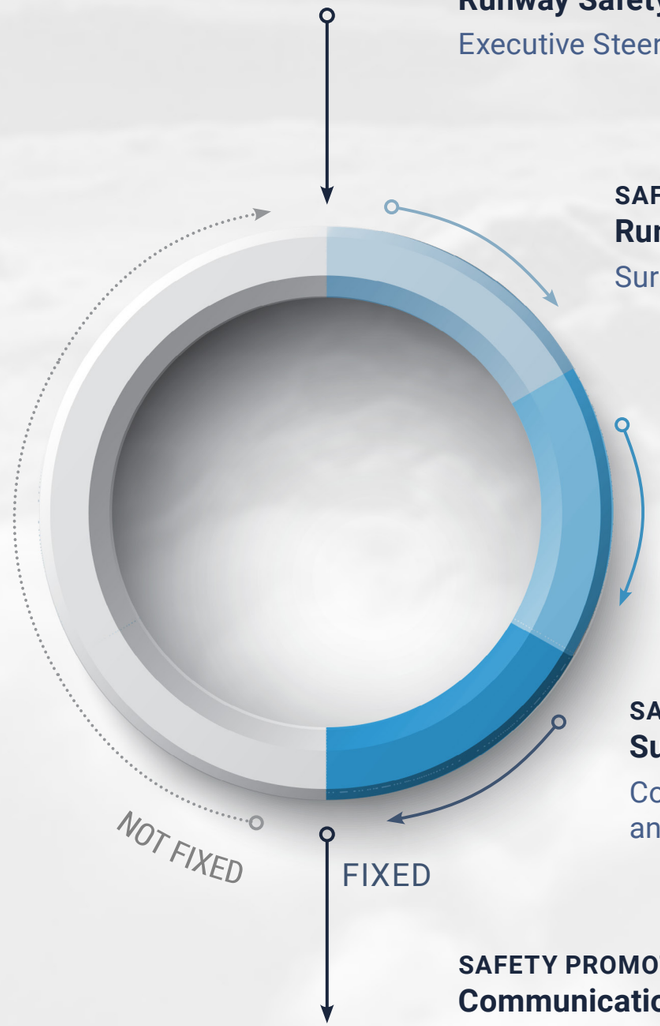
National Runway Safety Plan (NRSP): The FY2018-2021 NRSP builds on the achievements of the NRSP 2015-2017, most fundamentally through the successful integration of the Safety Management System principles into the Runway Safety strategy. The current plan favors iterative steps in support of data-driven, risk-based decision-making. It outlines methods and collaboration opportunities to identify and mitigate safety risks. Three strategic steps include data collection and analysis, plans and policy, and communicating change.

Within the FY2021 AWP RRSP, the RRST utilized a methodology and process to objectively determine and agree upon the priorities with which its collective efforts would have the most potential for runway safety improvement and severity reduction amongst AWP airports. This process is described in the section: Regional Runway Safety Plan Methodology.

The FY2021 AWP RRSP, in accordance with the NRSP, leverages and combines the expertise of Airports, Flight Standards Service, Runway Safety, and Air Traffic Technical Operations and Terminal Services, toward the mutual goal of RI reduction.

> *"This plan illustrates a portfolio-based approach to risk management by addressing the diverse initiatives associated with each SMS component.*

How We Are Collaborating



Runway Safety Council
Executive Steering

SAFETY ASSURANCE:
Runway Incursion Analysis Team
Surface Risk Analysis Process

SAFETY RISK MANAGEMENT:
Surface Safety Group
Data Analysis Team

SAFETY POLICY:
Surface Safety Initiative Team
Comprehensive Airport Review and Assessment

SAFETY PROMOTION:
Communication and Outreach Team
Dissemination Strategy

4. Safety Promotion

FY18-FY21 NRSP Safety Promotion Objective: Promote best practices, lessons learned, and actionable information obtained from data analysis to our global runway safety stakeholders.

AWP-2017-4.1

[DISCONTINUED] 4.1 Support Flight Standards Service Aviation English Language Educational Outreach (AELEO) efforts to reduce the frequency of operations affected by Aviation English Language Proficiency (AELP)

Challenges with collecting and tracking outreach efforts to the granularity of this outreach specifically relating to AELP prevent RRST from obtaining pertinent information to act upon. RRST will continue to promote AELP efforts wherever possible and pursue Initiative 4.2 aimed to controller response to AELP issues. Results from this survey may suggest new activities to undertake toward pilot AELP.

AWP-2017-4.2

Priority Issue | **Complete AELP controller survey implementation; final coordination, distribution, collection, analysis and feedback loop in order to:**

- Confirm that the AELP issue is more extensive than currently known based solely on MOR Communication reports.
- Identify the extent geographically (regionally and/or locally) where controllers are known to be tactically dealing with the additional workload and distraction resulting from AELP
- Identify any specific methods controllers use to manage AELP aircraft and/or the resulting effects thereof

Continuing from the FY2017 initiative, a survey aimed at collecting air traffic responses to limited AELP pilots has been prepared. This initiative is to include distribution of the survey, collecting and analyzing results, and distributing identified best practices to the field.

Action Item:

4.2a Collect and analyze the results of the AELP air traffic survey and present results to the RRST.

4.2b Share survey findings and any recommendations as the results may suggest for treating identified risk with LOBs, NATCA, SUPCOM and others as appropriate.

AWP-2016-4.3

Continue to produce airport-specific Runway Safety videos for airports that would benefit from audio-visual outreach. Airport selection will be data-driven by consensus of the RRST, Air Traffic Manager, and Airport Sponsor.

Audio visual media and other engaging and interactive knowledge-transfer methods are well-received by pilots as supplements to flight training, planning and safety awareness. They enable targeting of site-specific information to a targeted and/or broad audience.

Runway Safety videos featuring HNL, VNY, CNO, SNA and HWD were produced and distributed via various local, regional, national and social media outlets in FY2016, FY2017, and FY2018. An analysis of the effectiveness of these videos

conducted in March 2018, demonstrated an overall positive impact on RI reduction around the targeted areas. During the FY2018 RRSP, the RRST developed a video production guide covering all facets of acility and content selection, vetting, production, promotion, and distribution. For FY2020 the Runway Safety Group (RSG) secured a program with FAA's Office of Communication (AOC) to produce 33 videos NAS-wide by end of March 2020, with additional videos to be pursued. AWP airports produced during the FY2020 RRSP include STS, MYF, IWA, FFZ, LVK and DVT. Additional videos are expected to be produced during the FY2021 plan.

4.3a RRST to collaborate with AOC and local facility teams to produce videos for AWP airports as coordinated with RSG.

AWP-2019-4.4

Promote surface event reporting and enhance ATO and AFX systemic Safety Culture by increasing ATO awareness and understanding of AFX Compliance Program, its connection to, and support by the issuance of the Brasher notification.

On June 25, 2015, FAA Order 8000.373 established the FAA's Compliance Philosophy, now called Compliance Program, as the overarching guidance for implementing the FAA's strategic Safety oversight approach to meet the challenges of today's rapidly changing aerospace system.

To promote the highest level of safety and compliance with regulatory standards, the FAA implemented Safety Management System constructs based on comprehensive safety data sharing between the FAA and the aviation community. To foster this open and transparent exchange of data, the FAA believes that its compliance program, supported by an established safety culture, is instrumental in ensuring both compliance with regulations and the identification of hazards and management of risk.

Air traffic controllers may avoid reporting certain seemingly minor incidents (i.e. those of minimal to no direct safety impact) due to concern for punitive action taken against pilots. Meantime, individual pilot performance cannot be tracked and improved by Flight Standards Service without the knowledge of those deficiencies in the system. During the FY2018 RRSP, AFX prepared non-mandatory briefing products to offer Air Traffic Services (AJT) for dissemination as appropriate to controllers, supervisors and operational personnel.

These briefings include such information as: what is pilot Compliance Program; what are the pilot and system benefits; what are Flight Standards Service roles and responsibilities; how can Air Traffic support its overall objective of improving pilot and system performance. At the end of the FY2019 RRSP period, this nonmandatory briefing item was in coordination with WSA ATO for approval and dissemination. Subsequently, ATO decided that a Mandatory Briefing Item distributed via the Air Traffic Safety Bulletin to all NAS controllers would be appropriate.

Action Item:

4.4a Complete the coordination in progress with ATO for a Mandatory Briefing Item on *Compliance Program* to controllers, supervisors and ATMs.

4.4b Provide through ATO, briefing on *Compliance Program* to controllers, supervisors and ATMs.

AWP-2019-4.5

Employ best practice - Pre-LRSAT Pilot - Controller Outreach Forums

FAA Order 7050.1b, Runway Safety Program, requires each FAA and federal contract tower to conduct a Local Runway Safety Action Team (LRSAT) meeting annually. The purpose of the LRSAT is to identify and mitigate hazards and risks that lead to human errors that result in runway incursions and/or excursions.

The success of the RSAT depends on air traffic controllers, airport operators, and airport users working together effectively. Often air traffic managers, particularly at smaller facilities, are challenged to gain the participation of local pilot users and stakeholders whom are critical for providing their perspective on runway safety related issues at their airport. Pilots willingly and regularly participate in pilot/controller outreach events sponsored by the FAA's FAAST/Wings program. ATMs can leverage the pilot participation characteristically present at pilot/controller forums to obtain valuable user feedback toward their annual LRSAT meeting.

Promoting the use of Pilot/Controller forums in concert with LRSAT's is among the National FAAST work plan in FY2019 and continues through FY2021. This FY2021 RRSP continues efforts to make pre-LRSAT pilot/controller forums a more well-known and commonly used tool by the ATM's and FAAST Program Managers.

Action Item:

4.5a Continue to socialize and encourage the conduct of pre-LRSAT pilot-controller forums to Air Traffic Managers (ATM) and FAASTeam Program Managers (FPM) to promote user/ stakeholder participation and collection of their runway safety concerns and potential solutions for consideration at annual LRSAT meetings.

4.5b Track efforts and effectiveness of Pre-LRSAT pilot-controller forums to the extent practicable.

AWP-2019-4.6

Priority Issue | **Support the RIM Program through cross LOB collaboration.**

Airfield geometry is identified as a primary contributing factor for runway incursions. In 2014, the Office of Airports (ARP) launched the Runway Incursion Mitigation (RIM) Program to identify airport risk factors that might contribute to a runway incursion and develop strategies to help airport sponsors mitigate those risks.

RIM initially mapped the location of all runway incursions occurring in 2007 through 2013. 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.

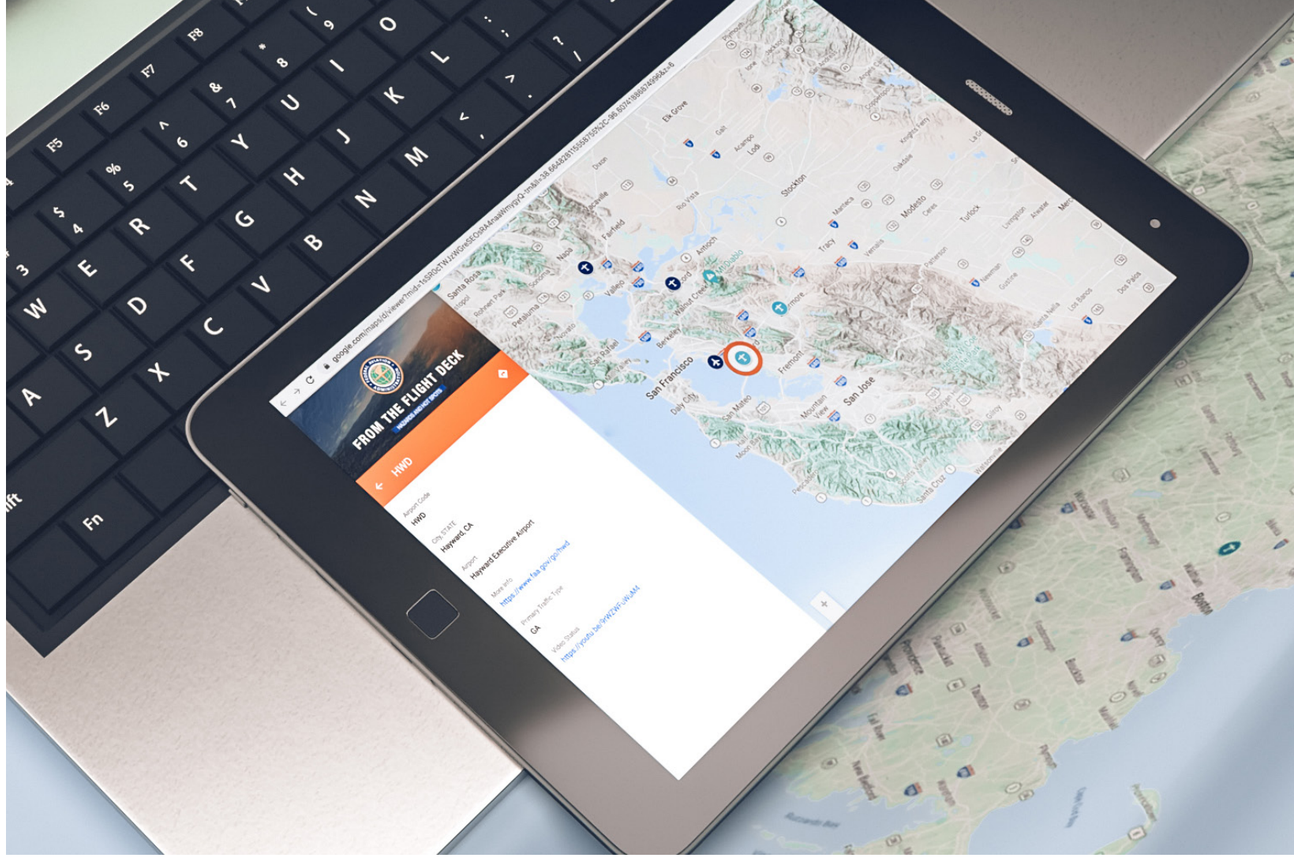
The RIM is a dynamic and continuing program using data-supported risk-based decision making to focus resources on planning and construction projects to mitigate risks associated with runway incursions where airfield geometry may be a contributing factor. RIM locations continue to be updated annually. Beginning in FY2018, the AWP Airports Division established a five-year plan to address RIM locations. A collaborative, cross-LOB approach to validating, prioritizing and implementing RIM solutions within AWP provides the best opportunity to identify and employ the most appropriate mitigations (Infrastructure, air traffic, or combination thereof).

This initiative, begun in the FY2019 RRSP, proved highly successfully at supporting and facilitating the necessary cross-organizational collaboration essential for success of the RIM program, and and is continued in subsequent plans to support RIM program success as projects move from discussion and planning to implementation over time.

Action Item:

4.6a LOBs work collaboratively to support ARP's RIM program implementation and report quarterly accomplishments to RSGC.

4.6b Identify short to midterm RIM program successes and effectiveness.



AWP-2018-4.7

Priority Issue | **Continue efforts regionally, in concert with and/or in support of national entities to proactively and innovatively mitigate Wrong Surface Operations at airports within Western-Pacific Region. Consider mitigations toward AWP WSO-identified airports to include but not limited to:**

- APC, CCR, CNO, DVT, FAT, FFZ, HNL, HWD, IWA, LAS, MYF, PSP, RHV, RNO, STS, SJC, TUS, VGT.

Coordinate and implement strategies where possible.

During the FY2017 RRSP plan year, Western Service Area (WSA) Quality Assurance Group (QAG) identified an increasing trend in wrong surface landings (WSL) at airports within the service area.

Wrong surface operations (WSO) continued to be a regional and national trend through FY2018 and FY2019, is among the ATO Top 5 hazards, and is expected to remain a high priority during FY2021.

Action Item:

4.7a LOBs work collaboratively to reduce WSOs and report initiatives and risk reduction methods to RSGC.

4.7b Review and analyze data for AWP top Wrong Surface Landing (WSL) airports; identify, coordinate and implement possible mitigation strategies on an airport basis.

MILESTONES

AWP-2017-4.2

☒ **Milestone 1:** Follow the currently approved AELP survey through ATO distribution.
Target date: April 30, 2021
LOB: RS

☐ **Milestone 2:** Collect and analyze results of AELP controller best practices survey. Report findings to RRST.
Target Date: September 30, 2021
LOB: RS, AFX, ATO, NATCA, SUPCOM

☐ **Milestone 3:** Organize, format and coordinate identified best practices with ATO for distribution to controller workforce. Forward any systemic recommendations suggested by the survey results to the appropriate LOB for consideration.
Target date: September 30, 2021
LOB: RS, AFX, ATO, NATCA, SUPCOM
Measure of Effectiveness:
1. The analysis of survey results suggests that AELP issue is more pervasive than thought, geographically more broad than currently known, and that controllers mitigate AELP issues routinely. Survey findings will suggest actions that RRST can take toward the pilot side and consider possible initiatives in a mid-term Plan update.

AWP-2016-4.3

☒ **Milestone 1:** Select airports and produce videos for AWP airports as coordinated with RSG to add to AWP's library of 11 existing airport videos.
Target date: September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☐ **Milestone 2:** Determine and report effectiveness of video productions at least 6 months after release.
Target Date: To be determined in concert with new video production schedules
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM
Measure of Effectiveness:
1. Demonstrate an overall decrease in surface events around the targeted issues over the collection of videos produced during FY2021.

AWP-2019-4.4

☒ **Milestone 1:** Complete coordination with ATO of the draft Compliance Program briefing.
Target date: December 31, 2020
LOB: RS, AFX, ATO, NATCA,SUPCOM

☒ **Milestone 2:** Distribute via ATO the coordinated Compliance Program briefing to controllers, supervisors and Air Traffic Managers.
Target Date: September 30, 2021
LOB: RS, ATO, NATCA,SUPCOM

☐ **Milestone 3:** Upon completion of ATO briefings, monitor Pilot Deviation Mandatory Occurrence Reports (MOR) and query Flight Standards for perceived or measurable changes in reporting characteristics.
Target date: 3, 6, 9 full months after completion of briefings
LOB: RS, ATO, NATCA, SUPCOM
Measure of Effectiveness:
1. Any noticeable increase in AWP Pilot Deviation MOR's and/or Flight Standards Pilot Deviation contacts that could be linked to completion of ATO briefings.

AWP-2019-4.5

☒ **Milestone 1:** Promote to ATM's and FPM's awareness and support use of the Pre-LRSAT Pilot/Controller Forum as an outreach and feedback opportunity to add value to the annual RSAT.
Target date: September 30, 2021
LOB: RS, AFX, ATO, NATCA, SUPCOM

☐ **Milestone 2:** Develop a methodology to track Pilot-Controller Forums conducted to support RSAT meetings and set this year's (2021) number as a baseline to track the effectiveness of the goal to increase pilot/controller outreach in future years
Target Date: September 30, 2021
LOB: RS, AFX, ATO, NATCA, SUPCOM
Measure of Effectiveness:
1. Documentation of baseline metrics for continued use year to year. This may include PCFs requested, accomplished, and resulting Frequently Asked Questions (FAQs) from pilots among other key elements as may be determined.

AWP-2019-4.6

☐ **Milestone 1:** Report on RIM Program progress and efforts to the RSGC quarterly.
Target date: Quarterly through September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☐ **Milestone 2:** Identifying short to mid-term program successes and effectiveness.
Target Date: September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM
Measure of Effectiveness:
1. Short-term: Mitigate four AWP RIM locations during FY2021.
Mid to long-term (expected to continue into FY2022): Complete quarterly and annual reviews of incident reoccurrence for mitigated locations. .

MILESTONES

AWP-2018-4.7

☐ **Milestone 1:** Report overall on WSO initiatives and progress toward risk reduction to the RSGC quarterly.
Target date: Quarterly through September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☒ **Milestone 2:** Based on available regional, service area or national analyses or studies, identify, coordinate and implement possible mitigation strategies on an airport-specific basis..
Target Date: March 31, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☒ **Milestone 3:** Identify towered airports with Wrong Surface Operations and Runway End Identifier Lights (REIL's) on runways with Wrong Surface Landings (WSL). Request Sponsors to consider participation in a WSL REIL analysis to identify the effectiveness of operating REIL's 24 hours a day, seven days a week for 12 months.
Target date: March 31, 2020
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☒ **Milestone 4:** Work with Sponsors interested and willing to participate in WSO REIL analysis identified in Milestone 3 to implement a start date of 24/7 REIL operation no later than March 31, 2021.
Target date: March 31, 2020
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☐ **Milestone 5:** In concert with monitoring the effectiveness of known 24/7 operational REIL's, such as FFZ, evaluate the effectiveness of reducing WSL's at the airports identified in Milestone 3.
Target date: June 30, 2021; September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

☐ **Milestone 6:** Identify other potential visual cues that may aid pilots in locating the correct arrival runway for reducing WSL's.
Target date: September 30, 2021
LOB: RS, AFX, ATO, ARP, AWP-1, NATCA, SUPCOM

Measure of Effectiveness:

1. A successful initiative will culminate in a preliminary conclusion on the efficacy of REIL's toward Wrong Surface Landing avoidance. It may include advancement toward the evaluation of other possible WSL mitigations for specific airports as the analyses may suggest.

Appendix A. Plan Initiatives and Status Updates

AWP RSGC
FY2021/Q3 Meeting
6/21/2021

June 21, 2021

FY2021 AWP REGIONAL RUNWAY SAFETY PLAN STATUS UPDATE

- ***Priority Airports*** *and* ***Priority Issues:*** *Priority Airports, and Issues denoting 'Yes' indicate items that will be brought in front of RSGC quarterly. RRST may raise ad-hoc issues at any time.*
- ***LOB:*** *Red text indicates RRST core member LOB's that are involved in a primary or supportive role.*
- *Blue fill-Status Updates (Blue Text most recent); Green highlighting-ON COURSE; Blue highlighting-COMPLETED; Orange highlighting- AT RISK*
- *Initiative ID Key: (Region – FY first initiated – Number).*
  Note- numbers may have changed over Plan years; Numbers align with SMS pillars as identified in the National Runway Safety Plan.

FY2021 RRSP INITIATIVE Objective and Action Items	MILESTONES Metrics and Target Dates
AWP-2019-1.1 Measure the effectiveness previous AWP Regional Runway Safety Plans (RRSP) beginning with the FY2016 RRSP **Priority Issue:** No **Action Item:** 1.1 Assess the effectiveness of AWP RRSP's individually and/or collectively as may be possible with available expertise and resources. Findings may support and inform future RRSP development.	**Milestone 1:** Report the results of any assessment of the previous RRSP's to the RRST and utilize pertinent findings to inform the FY2022 RRSP. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** September 30, 2021 **Measure of Effectiveness:** Completion of an analysis of previous RRSP's individually or collectively; identification of effective and ineffective aspects of Plan(s) which may inform future RRSP's.
STATUS UPDATE **ON COURSE** **6/17/2021:** AWP RRSPM's have requested additional resource to aid in survey analysis of written answers/comments. Awaiting response from headquarters.	

AWP-2021-2.1 Local RSAT Support – Priority Airports: ***(DVT PSP STS TUS)***	See document: *AWP Regional Runway Safety Plan FY2021 Airports of Interest and Priority Airports* for objectives and LOB levels of participation **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM
STATUS UPDATE **ON COURSE** **6/17/2021:** Completed: PSP-12/8/2020; MYF (SFRSAT-not a Plan airport)-5/11/2021; DVT – 6/9/2021 (SFRSAT); Scheduled: STS – 7/19/2021; TUS 9/8/2021	

AWP-2021-2.2 Local RSAT Support – Airports of Interest: ***(CCR CNO FFZ GCN HNL HND HWD IWA LAS LAX OAK PHX RNO SAN SFO VGT)*** ***Burgundy text = Core 30 Airport***	See document: *AWP Regional Runway Safety Plan FY2021 Airports of Interest and Priority Airports* for objectives and LOB levels of participation **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM
STATUS UPDATE **ON COURSE** **6/17/2021: Completed:** SAN - 1/12/2021; GCN-4/5/2021; CNO-5/12/2021; LAX-5/18/2021; LAS 6/8/2021; IWA – 6/10/2021; SFO-6/15/2021; CCR (SFRSAT) 6/14/2021 **Scheduled:** RNO-6/24/2021; HND 7/12/2021; VGT- 7/16/2021; HNL-7/20/2021; FFZ -8/4/2021; HWD-8/17/2021; OAK-8/18/2021; PHX-8/26/2021	

AWP-2020-2.4 Runway Safety Action Plan (RSAP) Action Item Review and Support **Priority Issue:** Yes **Action Item:** **2.4a** RRST core members, with support of AWP Runway Safety, will track RSAP action items and engage LOB-related parties in completing, closing, and /or moving action items forward.	**Milestone 1:** AWP Runway Safety will track RRSP action items and engage the appropriate RRST member to follow-up on action items within the LOB's they represent toward completing, closing, and/or moving action items forward. Report action item status to the RSGC at each quarterly meeting (i.e. total open, on course, due soon and overdue). **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** Quarterly at each RRSG meeting **Measure of Effectiveness:** 90% of all open action items will be on course or due soon at the time of the quarterly RSGC meeting.
STATUS UPDATE **ON COURSE** **6/17/2021:** As of 6/17/2021: Open- 141 ; On Course 113-; Due Soon (within 30 days) – 8; Overdue – 20= 85% not overdue	

AWP-2017-4.2 Complete AELP controller survey implementation: final coordination, distribution, collection, analysis and feedback loop in order to • Confirm that the AELP issue is more extensive than currently known based solely on MOR Communication reports. • Identify the extent geographically (regionally and/or locally) where controllers are known to be tactically dealing with the additional workload and distraction resulting from AELP issues. • Identify any specific methods controllers use to manage AELP aircraft and/or the resulting effects thereof: **Priority Issue:** Yes **Action Items:** **4.2a** Collect and analyze the results of the AELP air traffic survey and present results to RRST. **4.2b** Share survey findings and any recommendations as the results may suggest for treating identified risk with LOB's, NATCA, SUPCOM and others as appropriate.	**Milestone 1:** Follow the currently approved AELP survey through ATO distribution **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 4/30/2021 **Milestone 2:** Collect and analyze results of AELP controller best practices survey. Report findings to RRST. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 9/30/2021 **Milestone 3:** Organize, format and coordinate identified best practices with ATO for distribution to controller workforce. Forward any systemic recommendations suggested by survey results to the appropriate LOB for consideration. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 9/30/2021 **Measure of Effectiveness:** The analysis of survey results suggests that AELP issue is more pervasive than thought, geographically more broad than currently known, and that controllers mitigate AELP issues routinely. Survey findings will suggest actions that RRST can take toward the pilot side and consider possible initiatives in a mid-term Plan update.
STATUS UPDATES **ON COURSE** 6/17/2021: Milestone 2-ON COURSE: Multiple selection answers are completed. 211 open-ended text answers pending categorization	

and analysis. This effort has stalled due to SME resource availability. RRSPM's working with headquarters to identify additional time and SME resources to complete analysis of open-ended questions.   Milestone 3-ON COURSE: Pending completion of Milestone 2

AWP-2016-4.3 Continue to produce airport-specific Runway Safety videos for airports that would benefit from audio visual outreach. Airport selection will be data-driven by consensus of the RRST, Air Traffic Manager, and Airport Sponsor. **Priority Issue:** No **Action Items:** **4.3a** RRST to collaborate with AOC and local facility teams to produce videos for AWP airports as coordinated with RSG,	**Milestone 1:** Select airports and produce videos for AWP airports as coordinated with RSG to add to AWP's library of 11 existing airport videos. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 9/30/2021 **Milestone 2:** Determine and report effectiveness of video productions at least 6 months after release. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** to be determined in concert with new video productions schedules **Measure of Effectiveness:** Demonstrate an overall decrease in surface events around the targeted issues over the collection of videos produced during FY2021.
STATUS UPDATES **ON COURSE** **6/17/2021:** Milestone 1: ON COURSE- AWP airports selected and scheduled for FY21 production: PSP, VGT, RNO, HND, OAK, CCR, PRC, APC plus remake of DVT due to taxiway changes. RNO and HND completed. Pending approval and release. DVT and PSP are near completion. Others in various stages of production: VGT, OAK, CCR, PRC, APC. Milestone 2: ON COURSE- Analyses pending: STS released February 2020; MYF LVK IWA FFZ videos released June 2020 pending analysis of effectiveness. DVT remake will extend analysis period after new release date forthcoming.	

AWP-2019-4.4 Promote surface event reporting and enhance ATO and AFX systemic Safety Culture by increasing ATO awareness and understanding of AFX Compliance Program, its connection to, and support by the issuance of the Brasher notification. **Priority Issue:** No **Action Items:** **4.4a** Complete the coordination in progress with ATO for a Mandatory Briefing Item on *Compliance Program* to controllers, supervisors and ATMs **4.4b** Provide through ATO, briefing on *Compliance Program* to controllers, supervisors and ATMs.	**Milestone 1:** Complete coordination with ATO of the draft Compliance Program briefing. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 12/31/2020 **Milestone 2:** Distribute via ATO the coordinated Compliance Program briefing to controllers, supervisors and Air Traffic Managers. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 09/30/2021 **Milestone 3:** Upon completion of ATO briefings, monitor Pilot Deviation Mandatory Occurrence Reports (MOR) and query Flight Standards for perceived or measurable changes in reporting characteristics. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** 3, 6 and 9 full months after completion of briefings (6/3/2021, 9/30/2021, 12/31/2921) **Measure of Effectiveness:** Any noticeable increase in AWP Pilot Deviation MOR's and/or Flight Standards Pilot Deviation contacts that could be linked to completion of ATO briefings.
STATUS UPDATE **ON COURSE** **6/17/2021:**	

Milestone 3: ON COURSE- Monitor MOR's at 3, 6 and 9 months from completion of Milestone 2. RRSPM's confirming MBI review by ATO 45 days after distribution on 3/10/2021.	
AWP-2019-4.5 Employ Best Practice – Pre-LRSAT Pilot-Controller Outreach Forums **Priority Issue:** No **Action Items:** **4.5a** Continue to socialize and encourage the conduct of pre-LRSAT pilot-controller forums to Air Traffic Managers (ATM) and FAASTeam Program Managers (FPM) to promote user/stakeholder participation and collection of runway safety concerns and potential solutions for consideration at annual LRSAT meetings. **4.5b** Track efforts and effectiveness of Pre-LRSAT pilot/controller forums to the extent practicable.	**Milestone 1:** Promote to ATM's and FPM's awareness and support use of the Pre-LRSAT Pilot-Controller Forum as an outreach and feedback opportunity to add value to the annual RSAT. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** September 30, 2021 **Updated from 3/15/2021 RSGC Meeting:** ~~Milestone 2: Track efforts and effectiveness of Pre-LRSAT pilot/controller forums to the extent practicable.~~ MILESTONE 2: *Develop a methodology to track Pilot-Controller Forums conducted to support RSAT meetings and set this year's (2021) number as a baseline to track the effectiveness of the goal to increase pilot/controller outreach in future years* **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** September 30, 2021 **Measure of Effectiveness:** Documentation of baseline metrics for continued use year to year. This may include PCFs requested, accomplished, and resulting Frequently Asked Questions (FAQs) from pilots among other key elements as may be determined.
STATUS UPDATE **ON COURSE** **6/21/2021:** MILESTONE 2: ON COURSE- FAAST core member and RRSPM's are progressing toward this Milestone as amended at 3/15/2021 RSGC meeting.	

AWP-2019-4.6 Support the RIM Program through cross LOB collaboration **Priority Issue:** Yes **Action Items:** **4.6a** LOBs work collaboratively to support ARPs RIM program implementation and report accomplishments to the RSGC. **4.6b** Identify short to midterm RIM program progress, successes and effectiveness.	**Milestone 1:** Report on RIM Program progress and efforts to the RSGC quarterly. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** Quarterly through September 30, 2021 **Milestone 2:** Identifying short to mid-term program successes and effectiveness. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** Quarterly through September 30, 2021 **Measure of Effectiveness:** Short-term: Mitigate four AWP RIM locations during FY2021. Mid to long-term (expected to continue into FY2022): Complete quarterly and annual reviews of incident reoccurrence for mitigated locations.
STATUS UPDATES **ON COURSE** **6/21/2021:** Milestone 1: ON COURSE- RIM program provided by AWP ARP. Milestone 2: ON COURSE- RIM program provided by AWP ARP	

AWP-2018-4.7 Continue efforts regionally, in concert with and/or in support of national entities to proactively and innovatively mitigate Wrong Surface Operations at airports within Western-Pacific	**Milestone 1:** Report overall on WSO initiatives and progress toward risk reduction to the RSGC quarterly. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** Quarterly through September 30, 2021

Region. Consider mitigations toward AWP WSO-identified airports to include but not limited to: *APC-CCR-CNO-DVT-FAT-FFZ-HNL-HWD-IWA-LAS-MYF-PSP--RHV-RNO-STS-SJC-TUS-VGT.* Coordinate and implement strategies where possible. **Priority Issue:** Yes **Action Item:** **4.7a** LOBs work collaboratively to reduce WSOs and report initiatives and risk reduction methods to RSGC. **4.7b** Review and analyze data for AWP top Wrong Surface Landing (WSL) airports; identify, coordinate and implement possible mitigation strategies on an airport basis.	**Milestone 2:** Based on available regional, service area or national analyses or studies, identify, coordinate and implement possible mitigation strategies on an airport-specific basis. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** March 31, 2021 **Milestone 3:** Identify towered airports with Wrong Surface Operations and Runway End Identifier Lights (REIL's) on runways with Wrong Surface Landings (WSL). Request Sponsors to consider participation in a WSL REIL analysis to identify the effectiveness of operating REIL's 24 hours a day, seven days a week for 12 months. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** March 31, 2020 **Milestone 4:** Work with Sponsors interested and willing to participate in WSO REIL analysis identified in Milestone 3 to implement a start date of 24/7 REIL operation no later than March 31, 2021. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** March 31, 2021 **Milestone 5:** In concert with monitoring the effectiveness of known 24/7 operational REIL's, such as FFZ, evaluate the effectiveness of reducing WSL's at the airports identified in Milestone 3. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** June 30, 2021; September 30, 2021 **Milestone 6:** Identify other potential visual cues that may aid pilots in locating the correct arrival runway for reducing WSL's. **LOB:** RS AFX ATO ARP AWP-1 NATCA SUPCOM **Target Date:** September 30, 2021 **Measure of Effectiveness:** A successful initiative will culminate in a preliminary conclusion on the efficacy of REIL's toward Wrong Surface Landing avoidance. It may include advancement toward the evaluation of other possible WSL mitigations for specific airports as the analyses may suggest.
STATUS UPDATES **ON COURSE** **6/21/2021:** Milestone 1: ON COURSE- Quarterly update of WSO initiatives region/NAS-wide reported to RSGC at the June 21, 2021 meeting. Milestone 5: ON COURSE- first data collection and analysis due June 30, 2021. Results will be shared with participating facilities and airport sponsors, ATO districts, RRST and RSGC. Milestone 6: ON COURSE- pending analysis and follow-on efforts emanating from WSA parallel runway WSL analysis	

Appendix B.
FAA Programs & Definitions

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:

Part 139 Airport Certification Safety Program: The Airports Division certificates 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 (ASO-620).

Local Runway Safety Action Teams (LRSAT): The Airports Division Strives to participate in as many RSAT meetings as possible. Airports Division utilizes a Regional Tracking System to monitor Airports Division Action Items in Runway Safety Action Plans and report on the status as part of Business Plan reporting.

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 and 2016 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.

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).

ASDE-X Taxiway Arrival Prediction (ATAP): ATAP is a software adaptation to existing Airport Surveillance Detection Equipment Model X (ASDE-X) platforms, which predicts taxiway alignments of arrival aircraft and provides an aural and visual alert to the controller prompting a go-around instruction. Each airport is different, requiring the adaptation of site-specific parameters to achieve robust alert response with minimal nuisance alerts. The beta and first operational installation was at Seattle/Tacoma (SEA) International Air Traffic Control Tower in FY2018. All 36 ASDE-X equipped towers NAS-wide will be evaluated for suitability of this highly successful enhancement, with installations projected through FY2020.

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.

Aviation Risk Identification and Assessment (ARIA): A computer system that automatically analyzes radar and other surveillance data. ARIA utilizes algorithms that examine the geometry between aircraft and incorporates factors such as speed, altitude, and trajectory. ARIA identifies air traffic operations that represent potential safety risks, even if operations are technically deemed compliant.

Barrier Analysis Review (BAR): The process used to assess severity, likelihood, and barrier effectiveness in Referred ARIA Reports. Barrier analysis is also used to identify and assess factors (mitigating, aggravating, or observed) for air traffic operations where at least one aircraft is receiving Air Traffic Control (ATC) services.

Combined Safety Barrier Review (CSBR): A cooperative process between QA and facilities to gather additional information from subject matter experts and inform all concerned individuals about potential areas of risk in the system. This process utilizes aggregate data from BAR (if available) and includes facility stakeholders in an effort to identify, assess, and mitigate risk present in the operation.

Compliance Program: The FAA relies on voluntary compliance with aviation safety regulations by certificated airmen and organizations operating in the NAS. The FAA Flight Standards 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 (name changed in FY2019 to Compliance Program) 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. 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, Compliance Program 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).

Construction Notice Diagrams: Construction Notice Diagrams are created for airports that are undergoing major construction projects. They currently are manually created Monday thru Friday and uploaded to the following site:

https://www.faa.gov/air_traffic/flight_info/aeronav/aero_data/Apt_Constr_Notices/

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.
- Aviation English Language Educational Outreach (AELEO): Flight Standards' program to reduce the frequency of operations affected by Aviation English Language Proficiency (AELP).
- 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 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.

FSDOs 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:

- 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.
- 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.

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.

General Aviation and Commercial Division. The General Aviation and Commercial Division is responsible for regulations and policy development governing the training, certification, inspection, and surveillance of General Aviation (GA) airmen, flight instructors, GA air agencies (pilot schools), commercial operations (rotorcraft, external-load, agricultural, banner tow, Title 14 of the Code of Federal Regulations (14 CFR) part 125 operators, part 91, corporate, business, personal and recreational (aviation events, experimental aircraft, parachute, and ultralight operations), part 91subpart K (part 91K) fractional ownership), and public aircraft operations.

Commercial Operations Branch. The Commercial Operations Branch (AFS-820) is responsible for the operational aspects of 14 CFR part 91 (except for air traffic and aircraft maintenance rules). Additional operational responsibilities include aerial work and public aircraft operations (PAO), UAS policy and processing under part 107, private and commercial (non-air carrier) flights conducted in piston and turbine aircraft by individuals and companies under parts 91 and 125, fractional ownership program managers under part 91K, helicopter external load operators under part 133, agricultural aircraft operators under part 137.

General Aviation Operations Branch. The General Aviation Operations Branch (AFS-830) is responsible for policy and regulatory development related to the GA operational aspects of part 91 (except for air traffic and aircraft maintenance rules) as pertaining to amateur-built / recreational / personal operations aircraft, aerobatic practice, areas air shows and aviation events (including airshows, balloon events, air races, parachute demonstrations, aerobatic contests and fly-overs), civil operations of surplus military aircraft, and operations under 14 CFR parts 103 and 105. This branch also provides guidance and regulatory support for parts 101, 103, 105, and 91.

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.

Occurrence: Any observed or suspected event that meets the definition of an MOR.

Preliminary ARIA Report (PAR): An initial report of an air traffic operation identified by ARIA for further review by QA personnel.

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. Western-Pacific Region established the 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 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 Safety Team (RRST): The Northwest Mountain 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 (RI): Any occurrence at an airport involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft.

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 Northwest Mountain 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 FY17. 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 drive 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): An 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 Council (RSC): The mission of the RSC is to provide government and industry leadership to develop and focus implementation of an integrated, data-driven strategy to reduce the number and severity of runway incursions. The vision to develop a world-class methodology for achieving the highest levels of runway safety. To enable the data-driven approach to runway safety, the RSC chartered a joint government and industry team to analyze key runway safety events, conduct integrated causal and human performance analyses from a systems perspective, and recommend intervention strategies.

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 Service Area Manager: Located in the Western Service Center in Renton, Washington, the manager manages 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 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 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.

Types of Surface Events: 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 that 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

Western Service Area Safety Working Group (WSA SWG): A number of groups in each Service Area are focused on the identification and resolution of NAS safety concerns. These groups include Quality Assurance, Quality Control Group, Runway Safety, Technical Operations and the Air Traffic Safety Action Program (ATSAP) Event Review Committee. Each group has their own defined procedures and sources of safety data. The Service Area Safety Council provides an opportunity for these groups to share information and provide mutual support for efforts to mitigate identified safety risks. The council has the following specific purposes: share information on possible safety concerns across programs, ensuring that all parties are knowledgeable about the types of safety issues being reported in the field; provide mutual support to each other in mitigating safety risks identified in each program area and ensure safety efforts are well coordinated between organizations; provide a consolidated picture for the Directors of Operations on the highest priority NAS safety issues in the Service Area. Participation in the council does not prevent any individual member from taking action to address safety risks in their own program area using the tools available to them.

Appendix C. Airport Codes

Code	Airport Name
APC	Napa County Airport , CA
CCR	Buchanan Field, Concord CA
CNO	Chino Airport, CA
DVT	Phoenix Deer Valley Airport, AZ
FAT	Fresno Yosemite International, CA
FFZ	Falcon Field Airport, Mesa, AZ
GCN	Grand Canyon National Park Airport, AZ
HND	Henderson Executive Airport, NV
HNL	Daniel K. Inouye International – Honolulu Airport, HI
HWD	Hayward Executive Airport, CA
IWA	Phoenix-Mesa Gateway Airport, AZ
LAS	McCarran International Airport, Las Vegas. NV
LAX	Los Angeles International Airport, CA
MYF	Montgomery-Biggs Executive Airport, CA
OAK	Oakland International Airport, CA
PHX	Phoenix Sky Harbor International Airport, AZ
PSP	Palm Springs International Airport, CA
RHV	Reid-Hillview Airport, CA
RNO	Reno/Tahoe International Airport, NV
SAN	San Diego International Airport, CA
SFO	San Francisco International Airport, CA

Code	Airport Name
SJC	San Jose International, CA
STS	Charles M Schulz – Sonoma County Airport, CA
TUS	Tucson International Airport, AZ
VGT	North Las Vegas Airport, NV

Appendix D.
Data & Airport Chart

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB	AC	AD	AE	AF
1	Airport Code	KPI and Attributes Count	Category A or B	≥ 2 OI RI	≥ 7 PD RI	≥ 2 VPD RI	≥ 3 VPD SI + RI	≥ 7 RI	High Qty RI	RI Rate per 100K ops	RI Rate Trend 2 yr 8 mo	RI Rate Trend 2 Yr	Ave RI Rate FY18-20	Ave RI Rate FY18-19	FY18 RI Rate	FY19 RI Rate	FY20 YTD (7/1/20) RI Rate	RE	Rate ≥ 5	RE≥ 2	Twy Excur	WSO	Movement Area Collison	AELP	Prioritized RIM projects	# of RIM Locations	FY 21 Arpt Const	Flt School/ Training Ops	Part 139 Active	Core 30	SFRSAT past 3 yrs	Airport Code
2	TUS	10			7	2	3	X	9	**7.08**	-7.02	-9.31	14.10	16.39	19.82	12.96	9.52		X			3				2	Y	Y	Y			TUS
3	SFO	10		7	7	3	3	X	17	**4.01**	-1.63	-1.99	5.65	6.00	5.71	6.29	4.94					1				1	Y		Y	Y	Y	SFO
4	LAS	10		2	10	4	4	X	16	**3.16**	-0.23	-0.07	3.39	3.22	3.35	3.10	3.71					4				1	Y		Y	Y		LAS
5	HWD	9			7			X	8	**7.25**	-3.50	-6.76	10.76	14.02	12.75	15.28	4.24	3	X	X		1		Y		1	Y	Y				HWD
6	DVT	9		3	19			X	22	**4.81**	0.25	0.19	4.56	4.62	3.96	5.28	4.44	5		X		2		Y		3	Y	Y				DVT
7	FFZ	9	1	2	11			X	13	**3.83**	-0.10	-0.44	3.93	4.27	3.92	4.63	3.25	7		X				Y		2	Y	Y				FFZ
8	LAX	9		2	15	3	3	X	20	**3.14**	-0.22	-0.57	3.36	3.71	3.26	4.17	2.66									2	Y		Y	Y		LAX
9	PSP	8			7			X	8	**15.69**	7.88	11.47	7.81	4.22	1.81	6.64	14.99		X			1		Y		1		Y				PSP
10	CNO	8			12			X	12	**5.55**	-3.73	-6.36	9.28	11.91	13.44	10.38	4.03	3	X	X		4		Y		5		Y			Y	CNO
11	HCF	8		3	8			X	12	**3.75**	-1.07	-2.12	4.82	5.87	6.19	5.55	2.73	1								8	Y	Y	Y	Y		HCF
12	IWA	8			8			X	9	**3.14**	-1.66	-2.10	4.80	5.24	6.84	3.64	3.93	1				7		Y		2	Y	Y	Y		Y	IWA
13	STS	7			8			X	8	**9.92**	-2.34	-6.45	12.26	16.36	18.66	14.06	4.05		X			3				3		Y	Y		Y	STS
14	CCR	7			7			X	8	**8.82**	-2.26	-4.12	11.08	12.94	9.40	16.49	7.34		X			2				1		Y	Y			CCR
15	RNO	7							6	**6.25**	0.06	-1.47	6.19	7.71	4.40	11.03	3.14	2	X	X		2				2	Y	Y	Y		Y	RNO
16	VGT	7			7	2		X	9	**4.64**	-1.51	-2.48	6.16	7.12	8.63	5.61	4.23							Y		2		Y	Y			VGT
17	OAK	7		2	6	2		X	10	**4.53**	1.68	2.47	2.84	2.06	1.66	2.45	4.42										Y	Y	Y			OAK
18	BUR	5						X	7	**5.04**	-1.09	-2.53	6.13	7.57	5.97	9.17	3.25		X							1		Y	Y			BUR
19	RHV*	5	1	2		2			5	**2.57**	-1.16	-0.87	3.73	3.44	2.31	4.56	4.32	1						Y				Y				RHV
20	SMO	4							4	**5.45**	-2.44	-2.04	7.90	7.49	9.74	5.25	8.70	3	X	X				Y				Y				SMO
21	SBA	4		2					5	**4.85**	-0.28	0.86	5.13	3.99	4.14	3.84	7.41	3		X								Y	Y			SBA
22	VNY	4			8			X	9	**4.23**	0.98	1.02	3.25	3.21	2.36	4.07	3.33	2		X								Y				VNY
23	SAN	4		3					6	**2.77**	0.45	1.22	2.32	1.55	1.35	1.74	3.86	1									Y		Y	Y		SAN
24	MYF	4							6	**2.38**	-3.19	-3.52	5.57	5.90	4.91	6.89	4.91	5		X		2				5		Y				MYF
25	PHX	4							2	**0.48**	-1.00	-1.37	1.48	1.85	2.32	1.38	0.73									1	Y		Y	Y		PHX
26	HND*	3			6				6	**9.06**	0.84	3.70	8.22	5.36	6.63	4.08	13.96		x									Y				HND
27	LVK	3							4	**8.76**	4.05	3.14	4.71	5.62	4.78	6.46	2.90	4		X						2		Y				LVK
28	GCN	3						X	7	**8.25**	1.26	4.62	6.99	3.63	1.95	5.31	13.72		X										Y			GCN
29	RYN	3							3	**2.73**	1.06	0.82	1.67	1.91	0.00	3.83	1.18	2		X		1						Y				RYN
30	GYR*	3							2	**1.72**	-0.95	-0.95	2.67	2.67	3.48	1.87	2.65					1		Y				Y				GYR
31	SEE*	2							6	**2.68**	0.43	1.44	2.25	1.24	1.26	1.23	4.28	1						Y				Y				SEE

Core 30 - blue text

Airports sorted by highest to lowest count of KPI + Attributes

**NOTE: SEE, HND, GYR, RHV added to candidates at July 16, 2020 monthly RRST meeting*

CCR OAK GCN HND: Discussed at length with respect to final airports to include or exclude in FY21 RRSP. GCN and OAK Increasing trend and FAR 139; CCR FY20 RSAT not completed at this time (Aug 2020); HND increasing trend and NFL football team arrival expected to influence traffic count and mix

Column	Descirption
B	Numerical count of Key Performance Indicators and Attributes presented in all blue-toned columns
C thru H & S thru W	Key Performance Indicators (KPI) Planning data-set 6/1/2019 thru 5/31/2020
H & S	Airports presenting 7 or more RI, or RI Rate 5.0 or greater proceeded to Candidate List
J	RI Rate at the end of this 12-month data set 6/1/2019 - 5/31/2020
K & L	Rate trend= Diff in average RI rate (- better or + worse) than the planning rate in Col K
M thru Q	RI average rate calculation values that populate Cols K and L
X thru AD	Attributes known or expected during FY2021
AE	Special Focus RSAT conducted within past 3 years

COL's K & L FILL KEY: RI Rate Trend Reference Col J	
Gray	within 1 +/-
Lime	-1 to less than -3
Green	-3 or lower
Pink	+1 to less than +3
Red	+3 or greater

Appendix E. Regional Runway Safety Team Roster

Name	Position / Organization Representing	Team Role	Phone
Santoro, Joe	Runway Safety Program Manager, WSA, AWP, AJI-144	Core	424-405-7766
Diggons, Chris	Runway Safety Program Manager, WSA, AWP, AJI-144	Core	424-405-7767
Morales, Fernando	Runway Safety Program Manager, WSA, AWP, AJI-144	Core	424-405-7798
Buley, George	Senior Analyst, Runway Safety Team, WSA. AJI-144	Designee	206-231-2288
Young, Carlette	Program Manager, Special Programs, AWP-1SP	Core	424-405-7012
Armstrong, Brian	Manager, Airport Safety and Standards, AWP-620	Core	424-405-7303
Thomas, Kenneth	Safety Liaison Team Lead, Flight Standards Service - General Aviation and Commercial Division, AFS-850	Core	907-782-8870
Novia, Robert	Manager, Quality Control Group, WSA. AJV-W1	Core	206-231-4243
Wright, Mindy	Operational Evaluations South Team Manager, Western Service Area, AJV-W14	Core	206-231-2475
Conley, Clarissa	Team Manager, Quality Control Group, WSA, AJV-W13	Designee	206-231-2487
Stark, James	Operational Evaluations Specialist, WSA, AJV-W39	Designee	206-231-2348
Beck, Robert	Manager, Quality Control Group, CSA. AJV-C1	Core	603-594-5532
Beasley, Carl	Quality Control Group-South Team Lead, CSA. AJV-C14	Designee	817-222-5043
Vacant	National Air Traffic Controllers Association (NATCA National Runway Safety Rep)	Core	
Vacant	FAA SUPCOM	Core	

Appendix F. LRSAT Participation Matrix

FY2021 AWP RRSP Airports LRSAT Participation Matrix

- It is understood that normally, the desired mode of RSAT participation is in person vs remotely, barring unforeseen circumstances or those out of RRST's control such as the response to the COVID-19 pandemic.
- The primary difference between support of RSAT's at Priority Airports and Airports of Interest is the intent for the Core Team management member or commensurate (or higher) level designee to participate in the former. In both cases flexibility is afforded for each LOB to manage resources while striving to meet desired support levels.
- Where RSAT participation refers to the "appropriate designee", the intent is for the RRST core members to retain visibility of that airport's activities and support needs, and for the local airport, air traffic, internal and external stakeholders to be aware of the regional and service area-level attention by the RRST. If needing to delegate RSAT attendance, RRST core members will refer the most appropriate participant that will meet the support needs of the airport within the available LOB resources.
- Where mentioned, more frequent RSAT's may be stand-alone or combined with other standing meetings which include a surface safety component/agenda item. Examples include: Hawaii quarterly Aviation Users' meeting; SFO monthly local runway safety/ramp meeting; monthly Las Vegas Users' Council, etc. RRSPM's will know and advise where more frequent RSAT's are conducted.

Priority Airports *RRSP Initiative 2.1* (Scheduled Time)	Annual LRSAT Date	Level of Participation	More Frequent LRSATs Q/M*	Next Qtly or Monthly LRSAT Date	Level of Participation
DVT* (0800-1400 PDT)	6/9/2021	**RS:** RRSPM participate in annual LRSAT and supportive outreach activities. **AFX, ARP, ATO, NATCA, SUPCOM:** Core team member or appropriate designee participate in annual LRSAT's. **AWP-1:** Core team member or appropriate designee **and** AWP-1 or appropriate designee participate in annual LRSAT;			**ALL:** Core team member or appropriate designee participate to the greatest extent practicable in more frequent RSAT's.
PSP (0900-1200 PST)	12/8/2020				
STS (0900-1100 PDT)	8/16/2021				
TUS (0900-1130 PDT)	9/8/2021		Ad-Hoc	TBA	

Scheduled Planning Completed Red Text – New or Changed Dates

BOLD DATE – Save-the-Date Forwarded to RRST

Bold Facility ID – Invitation Forwarded to RRST

Airports of Interest *RRSP Initiative 2.2* (Scheduled Time)	Annual LRSAT Date	Level of Participation	More Frequent LRSATs Q/M*	Next Qtly or Monthly LRSAT Date	Level of Participation
CCR* (0800-1300 PDT)	6/14/2021	**RS:** RRSPM participate in annual LRSAT and supportive outreach activities. **AFX, ARP, ATO, NATCA, SUPCOM:** Core team member coordinate for appropriate designee to participate in annual LRSAT. **AWP-1:** Core team member or appropriate designee participate in annual LRSAT; Additionally for Core 30 airports AWP-1 or appropriate designee participate in annual LRSAT.			**ALL:** Core team member or appropriate designee participate to the greatest extent practicable in more frequent RSAT's.
CNO (0900-1300 PDT)	5/12/2021				
FFZ (1200-1300 PDT)	8/4/2021				
GCN (0900-1000 PDT)	4/5/2021				
HND (1300-1400 PDT)	TBD				
HNL (1300-1500 PDT)	7/20/2021		Q	TBA	
HWD (1000-1200 PDT)	8/17/2021			2nd Thursday	
IWA (1000-1130 PDT)	6/10/2021			TBA	
LAS (0900-1100 PDT)	6/08/2021		M		
LAX (0900-1100 PDT)	5/18/2021		Q		
OAK (1000-1200 PDT)	8/18/2021				
PHX (0900-1200 PDT)	8/26/2021				
RNO (1000-1200 PDT)	6/24/2021				
SAN (0900-1200 PST)	1/12/2021				
SFO (0900-1500 PDT)	6/15/2022		M	3rd Tuesday	
VGT (1000-1200 PDT)	7/16/2021				

Core-30

Scheduled Planning Completed Red Text – New or Changed Dates

BOLD DATE – Save-the-Date Forwarded to RRST
Bold Facility ID – Invitation Forwarded to RRST

For More Information:

Joe Santoro
Western-Pacific Regional, Runway Safety Program Manager
joe.santoro@faa.gov / 424-405-7766

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Published by AWP Regional Runway Safety Team