

TALPA FAA/ICAO/EASA Wet Runway Issues/Future Regulations

Presented to: SAPOE 2018 Meeting

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Date: November 15, 2018



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**Federal Aviation
Administration**

Topics

- **TALPA**
 - FAA status
 - Some FICON statistics
 - FAA TALPA activity
 - ICAO/EASA Global Reporting Format differences/status
- **Wet Runway**
 - Regulatory
 - Research



FAA TALPA

Takeoff and Landing Performance Assessment



TALPA - FAA

- **Statistics**

- Received all FICONs from 1 Oct. 2016 to 30 April 2017
 - First Fall/Winter/Spring of implementation
 - Following information based on these FICONs
- Total FICONs
 - 136,428
 - Coded FICONs – 107,889 – 79%



Mixed Contaminants

- **Early on discussions on mixed contaminants (*within third*) and multiple contaminants (*in different thirds*)**
 - As related to aircraft performance
 - At 2017 SAPOE meeting in ATL
 - At 2017 FAA SAPOE meeting in DC
 - Also an ICAO/EASA difference is a single contaminant listed in a runway third
- **Total of FICONS with mixed contaminants within a runway third**
 - 14015
 - 10.3% of total FICONS
- **Total of mixed contaminants within a runway third that received codes**
 - 11,725
 - 8.6% of total FICONS
 - 10.3% of total coded FICONS



Coded FICONS with consistent codes across all thirds – all cases (mixed or multiple)

- **Total Coded FICONS - 107889**

– 5/5/5 – 68,391 – 63.4%

– 4/4/4 – 3843 – 3.5%

– 3/3/3 – 23,863 – 22.1%

– 2/2/2 – 2262 – 2.1%

– 1/1/1 – 7304 – 6.8%



Inconsistent codes across thirds – all coded FICONS

2282 – 2.1% of all coded FICONS

- **Inconsistent contaminants where thirds are ± 1 code**
 - 1177 1.1% of coded FICONS
- **Inconsistent contaminants where thirds are ± 2 code**
 - 795 0.7% of coded FICONS
- **Inconsistent contaminants where thirds are ± 3 code**
 - 211 0.2%
- **Inconsistent contaminants where thirds are ± 4 code**
 - 99 0.1%



Summary

- In **98%** of coded FICONS the codes are consistent across thirds including mixed and multiple contaminants
- In **99%** of coded FICONS the codes are **± 1** TALPA code
- **1%** of the coded FICONS are **greater than ± 1** TALPA code



2017-18 Winter Data

- **Analysis being completed this month**
 - Data and reports will be finished in first qtr of 2019
 - Substantial PIREPS received from two airlines
 - PIREPs is assured to be after FICONs
 - Capability to filter on time after etc.
 - Looking at METAR data with upgrade/downgrade analysis
 - Hoping to look deeper into NIL and Poor PIREP's
 - More to come



Other FAA activity

- **Sunset SAFO 06012**
- **Replace with SAFO 18LPA (draft name)**
- **Release imminent**
 - **Subject:** Landing Performance Assessments at Time of Arrival
 - Places 8900.1 Vol. 4 Chap. 3 Operating Guidance into a more accessible location than FAA Orders where placed for initial release



Other activity

- **Sunset SAFO 15009**
- **Replace with SAFO 15009-2018 (draft name)**
- **Goal is to have published by year's end**



Other activity

- **Developing AC 91-TALPA**

- Will become the All-Things-TALPA AC (AFS)
- e.g. will incorporate SAFOs 06012 and 15009 replacements
 - 18LPA (draft name) and 15009-2018 (draft name)
 - They will sunset when AC 91-TALPA released
- AC 91-TALPA will go out for comment first
- Goal is to have comments resolved and published by December 31, year not determined yet.



Airport update

- **Airport**

- Re-introduction of the term “Patchy” for taxiways and aprons this winter season
 - Patchy cannot be used to describe runway contaminants
- Business rule changes *on the horizon* to address Wet reporting



ICAO

Global Reporting Format and Performance



ICAO “TALPA” – Global Reporting Format

- **ICAO Friction Task Force has been working to bring “TALPA principles” to ICAO Standards and Recommendations (SARPS)**
 - Global Reporting Format (GRF)
 - Consistent performance calculations with TALPA
 - Aeroplane Performance Manual
 - Introduce PIREPs on experienced aircraft braking
- **Effectivity 5 November 2020**



ICAO State Letters

- SL Adoption of Amendment 77 to Annex 3 March 31 2016
- SL Adoption of Amendment 39 to Annex 15 April 1 2016
- SL Adoption of Amendment 13 to Annex 14 Volume I April 5 2016
- SL Adoption of Amendment 105 to Annex 8 April 6 2016
- SL Adoption of Amendment 34 to Annex 6 Part II April 8 2016
- SL Adoption of Amendment 40 to Annex 6 Part I April 8 2016
- SL Approval of Amendment 1 to the PANS-Aerodromes May 5 2016
- SL Approval of Amendment 7 to the PANS-ATM June 23 2016
- SL PANS Aerodromes Amendment 2 July 10 2018
- SL Symposium on implementation of the new GRF for runway surface conditions August 14 2018



Runway condition assessment matrix

Assessment criteria		Downgrade assessment criteria	
Runway condition code	Runway surface description	Aeroplane (FAA Vehicle) deceleration or directional control observation	Pilot report of runway braking action
6	<ul style="list-style-type: none"> • DRY 	---	---
5	<ul style="list-style-type: none"> • FROST • WET (The runway surface is covered by any visible dampness or water up to and including 3 mm depth) (FAA <i>Includes Damp and 1/8 inch depth or less of water</i>) Up to and including 3 mm depth: (FAA <i>1/8 inch (3mm) depth or less of</i>) • SLUSH • DRY SNOW • WET SNOW 	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD
4	-15°C and Lower (FAA <i>Colder</i>) outside air temperature: <ul style="list-style-type: none"> • COMPACTED SNOW 	Braking deceleration OR directional control is between Good and Medium.	GOOD TO MEDIUM
3	<ul style="list-style-type: none"> • WET ("slippery wet" runway) (FAA <i>Slippery when wet</i>) wet runway • DRY SNOW or WET SNOW (any depth) ON TOP OF (FAA <i>over</i>) COMPACTED SNOW More than 3 mm depth: • DRY SNOW • WET SNOW Higher than (FAA <i>Warmer than</i>) -15°C outside air temperature¹: • COMPACTED SNOW 	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM
2	More than (FAA <i>Greater than</i>) 3 mm depth of water or slush: <ul style="list-style-type: none"> • STANDING WATER (FAA <i>no Standing</i>) • SLUSH 	Braking deceleration OR directional control is between Medium and Poor.	MEDIUM TO POOR
1	<ul style="list-style-type: none"> • ICE ² 	Braking deceleration is significantly reduced for the wheel braking effort applied OR directional control is significantly reduced.	POOR
0	<ul style="list-style-type: none"> • WET ICE ² • WATER ON TOP OF COMPACTED SNOW ² • DRY SNOW or WET SNOW ON TOP OF ICE ² 	Braking deceleration is minimal to non-existent for the wheel braking effort applied OR directional control is uncertain.	LESS THAN POOR (FAA NIL)

¹ Runway surface temperature should preferably be used where available.

² The aerodrome operator may assign a higher runway condition code (but no higher than code 3) for each third of the runway, provided the procedure in 1.1.3.15 is followed.



Example of Global Reporting Format

[COM header and Abbreviated header] (Completed by AIS)

GG EADBZQZX EADNZQZX EADSZQZX

070645 EADDYNYX

SWEA0151 EADD 02170055

SNOWTAM 0151

[Aeroplane performance calculation section]

EADD 02170055 09L 5/5/5 100/100/100 NR/NR/NR WET/WET/WET

EADD 02170135 09R 5/4/3 100/50/75 NR/06/06 WET/SLUSH/SLUSH

EADD 02170225 09C 3/2/1 75/100/100 06/12/12 SLUSH/WET SNOW/WET SNOW

[Situational awareness section]

**RWY 09L SNOWBANK R20 FM CL. RWY 09R ADJ SNOWBANKS. TWY B POOR.
APRON NORTH POOR.**

Source: PANS Aerodrome



Airplane Performance Information

KSEA	02170055	16L	5/5/5	100/100/100	NR/NR/NR	WET/WET/WET
KSEA	02170135	16R	5/2/2	100/50/75	NR/06/06	WET/SLUSH/SLUSH
KSEA	02170225	16C	2/3/1	75/100/100	06/12/12	SLUSH/WET SNOW/WET SNOW

Code Percent Depth

- ICAO single runway direction, reverse string for reciprocal runway
- Percentage and depth in numerical /// string by thirds
- Single contaminant per third
 - published contaminate decided by “...trained personnel, considering what contaminant will most likely be encountered by aeroplane and its likely effect on aeroplane’s performance.”
 - Guidance for training will be provided
- Codes assigned when any third exceeds 25% of coverage (should result in codes more often than FAA 25% of entire runway)

Does > 25% of any third result in an increase in code assignments?

- Review of previous discussed FICON data
- 672 more codes would have been assigned based on ICAO criteria of >25% in any third
- Results in an increase of **0.6%** in coded FICONS based on ICAO criteria
- As seen earlier, first year FAA FICON statistics showed mixed contaminants (with in third) occurred ~ **10%** of the time



Expectation of Pilot Reports

- **Air-Reports AIREP**

- The pilot-in-command shall report the runway braking action special air-report (AIREP) when the runway braking action encountered is not as good as reported.
(Annex 6 Part II, similar verbiage in PANS ATM)



Aeroplane Performance Manual

- **This manual is created because the revised Standards and Recommended Practices and associated Procedures for Air Navigation Services modify the information on the runway condition that will be reported to flight crew.** The information reported is directly relevant to aircraft performance. *Manufacturers should provide performance information that allows the flight crew to seamlessly use the information in their assessment of take-off and landing performance, in particular on winter contaminated runways.* **This manual presents the parameters that should be adopted by manufacturers in developing their performance models in order to make available information that fulfils the intent.** However, a limited number of contaminant types or braking action categories covered in the reporting format and the performance data will never reflect the complexity of the situations that can develop in active winter events. **The manual includes some aspects that flight crew should be aware of when assessing performance and how to use the available data to build their awareness of the situation and its potential development.**



ICAO Aeroplane Performance Manual

- Brings together Annex 6 – operations and Annex 8 certification for the purpose of airplane performance
- Incorporates the contents of AC 25-31/32 and -7() where appropriate (TALPA Takeoff and Landing, Time-of-Arrival Performance)
- Incorporates FAA Order 8900.1 information
 - Soon to be SAFO – 18LPA
 - Eventually AC 91-TALPA
- Provides guidance on interpretation and use of the performance information
- Goes beyond winter ops only
- State Letter should be released in 1st Qtr 2019



ICAO Symposium Montreal Canada March 26 – 28, 2019



ICAO/ACI Symposium on Implementation of the New Global Reporting Format for Runway Surface Condition (GRF2019)

Introduction

Runway excursions remain one of the top challenges to aviation. High on the list of associated risks concerns effective braking action, the assessment and reporting of which is addressed by ICAO through its Global Reporting Format (GRF). This new methodology provides a common language between all actors enabling:

1. A harmonized assessment and reporting of runway surface conditions;
2. Flight crew assessment of take-off and landing performance.

This new methodology is for global implementation, with an applicability date of November 2020.

Expected Participation

- 50+ States, including regulators, airport operators, aircraft manufactures and ANSPs
- 7+ International organizations
- 10+ Technology exhibitors
- 300+ people

Main Objectives

The main objectives of the symposium are to:

- Increase global awareness and knowledge of the GRF.
- Develop an awareness of implementation challenges and opportunities.
- Facilitate an exchange of best practices.
- Ensure an understanding of associated ICAO SARPs requirements and guidance material.
- Establish the role for ICAO, international organizations and industry in global implementation.
- Develop an understanding of the training and awareness needs.
- Explore the new technology and future developments.

The main symposium will be followed by half-day workshop dedicated to training aspects associated with the GRF.

Dates and Venue

26-28 March 2019, duration 2.5 days, at ICAO HQ, Montréal, Canada.

The symposium to be followed by workshop dedicated to training in the afternoon of 28 March.



EASA

“TALPA/GRF Rulemaking Task



EASA TALPA Rulemaking

- **EASA Rulemaking Task RMT.0296**
 - Consideration of appropriate EASA material for “TALPA ARC”
 - Other items
 - Historical non-contentious changes from early 00’s
 - Eligible on demand operation
 - Note: Terms of Reference does not specifically call out ICAO FTF or State Letters
 - Team included manufacturers, FAA, IATA, EBAA, IFALPA, EASA
 - Addresses performance and operational requirements
 - Airport issues addressed by EASA RMT.704



NPA2016-11 – TALPA Issues Only

Review of aeroplane performance requirements for commercial air transport operations

- **Dated 30.9.2016**
- **Areas of Change**
 - CAT – Commercial Air Transport Operations
 - Adds “In-flight check of the landing distance at the time of arrival — aeroplanes”
 - Adds “Runway braking action reporting”
 - 115% time of landing distance
 - CS 25
 - CS 25.1591 Take-off Performance Information for Operations with Contaminated Runway Surface Conditions
 - CS-25.1592 Performance Information for Landing Distance Assessment
 - General definition of Landing Distance
 - Conditions to be considered
 - » atmos, runway, runway surface, speed, decel devices, etc.



NPA2016-11 – TALPA Issues Only

Review of aeroplane performance requirements for commercial air transport operations

- **Areas of Change – CS AMC's**
 - AMC 25.1591
 - Limits AMC 25.1591 to Take-off
 - Makes performance conditions consistent with AC 25-31
 - » Exception – ice wheel braking coefficient – 0.07
 - Creates AMC 25.1592
 - Moves existing landing information in AMC 25.1591 to new AMC 25.1592
 - Covers both dispatch and time-of-arrival
 - Includes equivalent material with AC 25-32
 - Exception – ice wheel braking coefficient – 0.07



Resultant NPA2016-11 – TALPA Issues Only

Review of aeroplane performance requirements for commercial air transport operations

- **Areas of Change – CAT.OP AMC/GM's**

- GM 13

- Adopts ICAO definition of contaminated runway based any third greater than 25% contaminated

- AMC1 CAT.OP.MPA.301

- Commander should determine most unfavourable runway condition to accept for safe landing
- Latest meteorological/runway condition information preferably less than 30 minutes old
- Generic factors

- GM1 CAT.OP.MPA.303

- Conditions to consider
- Autobrake setting when 115% of dry or wet grooved/PFC landing distance is adequate
- Dispatch criteria acceptable in dry or landing on wet grooved/PFC runways



NPA2016-11 – TALPA Issues Only

Review of aeroplane performance requirements for commercial air transport operations

- **Areas of Change – CAT.OP AMC/GM's**
 - GM1 CAT.OP.MPA.311
 - Runway braking action reporting



NPA2016-11 – TALPA Issues Only

Review of aeroplane performance requirements for commercial air transport operations

- **Status**

- The EASA Opinion is expected in Q1 of 2019
- Comment/Response process is being completed and the Comment/Response document will be published with the Opinion
- European Law will be created
- Target implementation



EASA RMT.0704

- **RMT.0704 has been conducted in close coordination with the OPS RMT.0296**
- **Updates Regulation 139/2014 for aerodromes on**
 - Definitions in use in ICAO Annex 14 Amdt. 13-B
 - Introduction of rwy surface condition assessment and reporting rule according to the global format
 - New rule on specially prepared winter runways for code upgrade (approval needed for the airport)



Wet Runway Proposed Regulation

Presented to:

By:

Date:



**Federal Aviation
Administration**

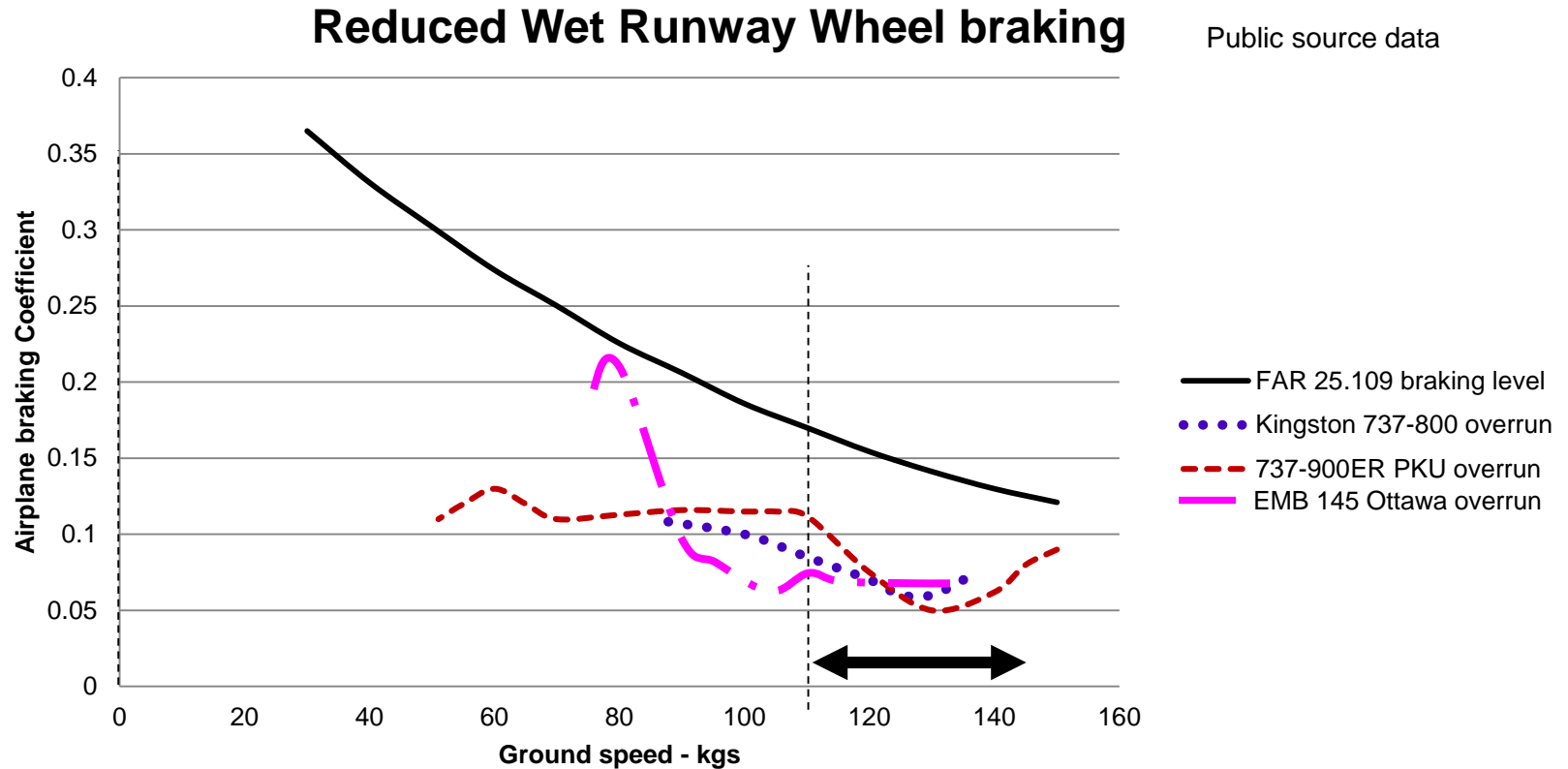
Wet runway regulation

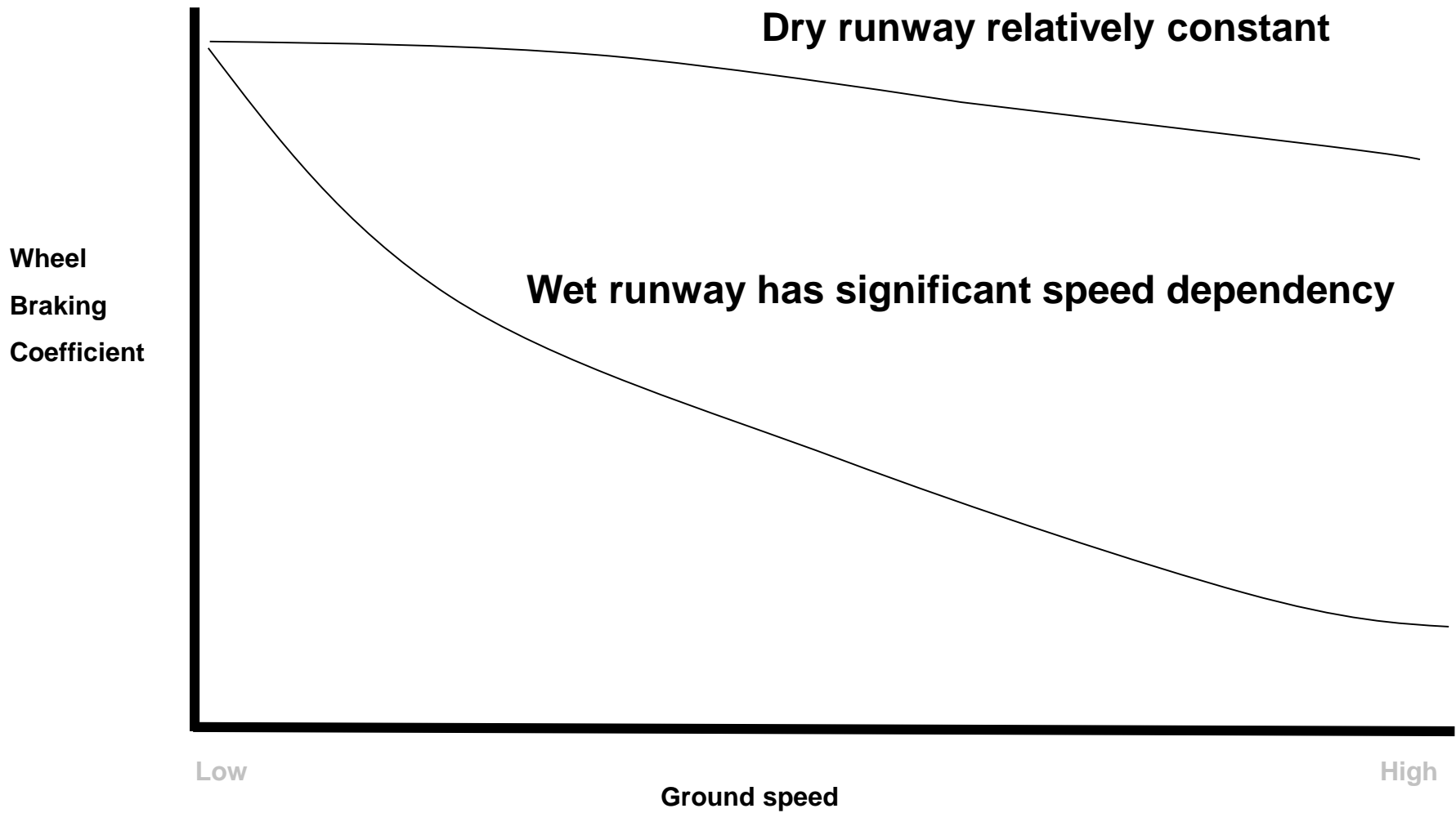
- **Proposed part 25 wet runway rule**

- Recently the Aviation Rulemaking Advisory Committee (ARAC) of the FAA has accepted a proposal for future part 25 certification of a *physics* based wet runway rule.
- Recommendation came from the Flight Test Harmonization Working Group (FTHWG)
- Issue was significant reduction in expected wet runway wheel braking observed in overruns

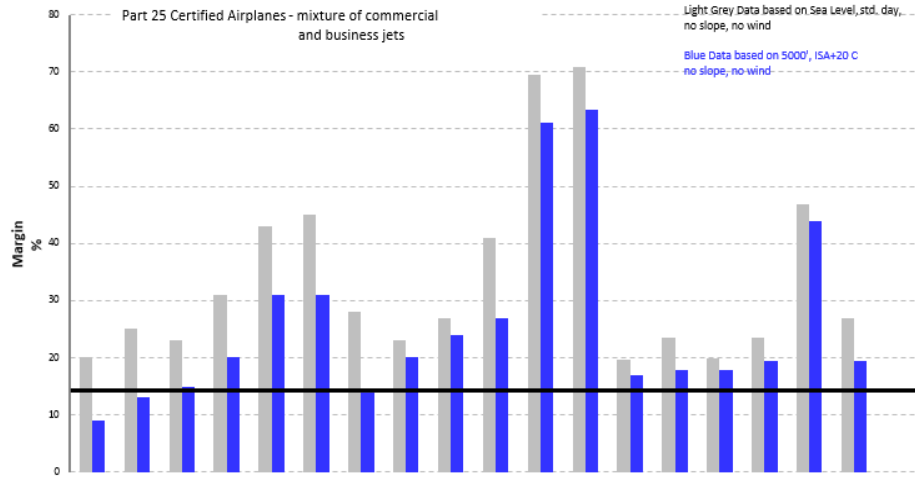


- Impetus – Several wet runway overruns that have occurred demonstrated significant reduced wet runway wheel braking from what is expected.





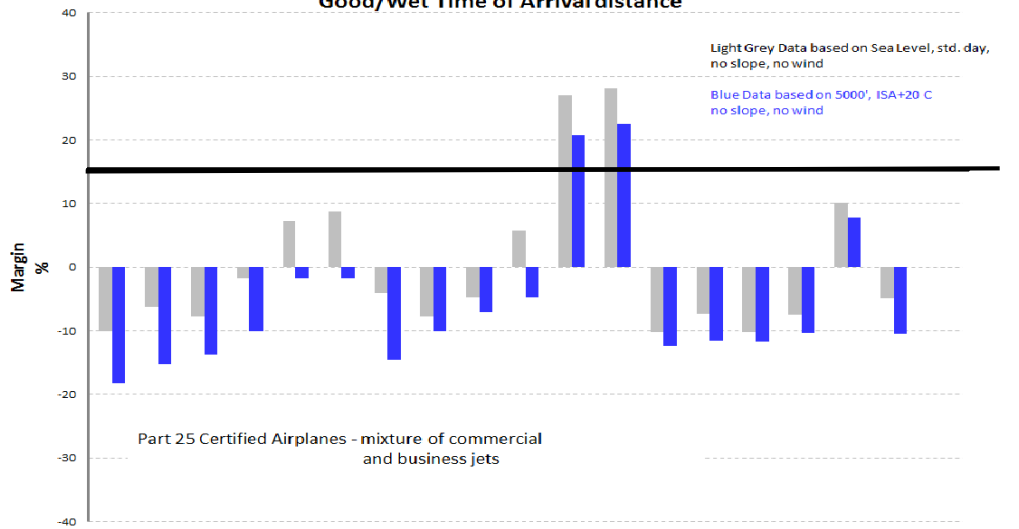
Current Regulatory Wet Margin (%) based on 1.92*CFR 25.125 dry to Good/Wet Time of Arrival distance



121.195 and 121.385 basic rules

Possible 135EOD interpretation and 91K rules

Current Regulatory Wet Margin (%) based on 1.44*CFR 25.125 dry to Good/Wet Time of Arrival distance



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FTHWG recommendations

- **Define a new wet runway part 25 landing distance which accounts for the physics involved in stopping an airplane on a wet runway**
 - Based on realistic air distance (**may** not be currently done certified dry)
 - Based on reverse thrust credit
 - Current method results in significant margin reductions when:
 - 3 engine airplanes have 1 thrust reverser
 - 4 engine airplanes have 2 thrust reversers
 - Poor thrust reverser designs
 - No reverse thrust airplane designs
 - Temperature accountability
 - Full engine failure accountability (at or after 50 feet)
 - Part of current FAR's
 - 10% factor in part 25 all engine landing distance



Operational Rule Recommendations

- **Recommend operational factors for wet runway landing distance**
 - Should be the same for all operations (except possibly pure CFR 91)
 - Adequate to cover the reduced wet runway wheel braking observed in incidents.
- **Recommended all operating rules be based on a 15% increase on part 25 wet runway landing distance (25.126 proposed)**
 - Results in total wet runway landing distance margin at dispatch of 26.5% ($1.10 * 1.15 = 1.265$) on wet runway all engine landing distance
 - Results in total wet runway landing distance margin at dispatch of 15% if an engine fails at/after 50 feet
 - Results in landing distance necessary to account for reduced wet runway wheel braking observed in overruns (no additional margin added)



Current Regulations

§ 25.125 Dry Demonstration

67% Dry
Operating
Factor

X

15% Wet
Operating
Factor

= 1.92 x § 25.125 Dry

121.195(d) and 135.385(d)

§ 25.125 Dry Demonstration

25% Dry
Operating
Factor

X

15% Wet
Operating
Factor

= 1.44 x § 25.125 Dry

91k some have interpreted
135 EOD this way

§ 25.126 Wet – All Engine

Includes 10% Factor

15% Wet
Operating
Factor

Determine the longer of

- All Engine (or)
- One Engine Inoperative

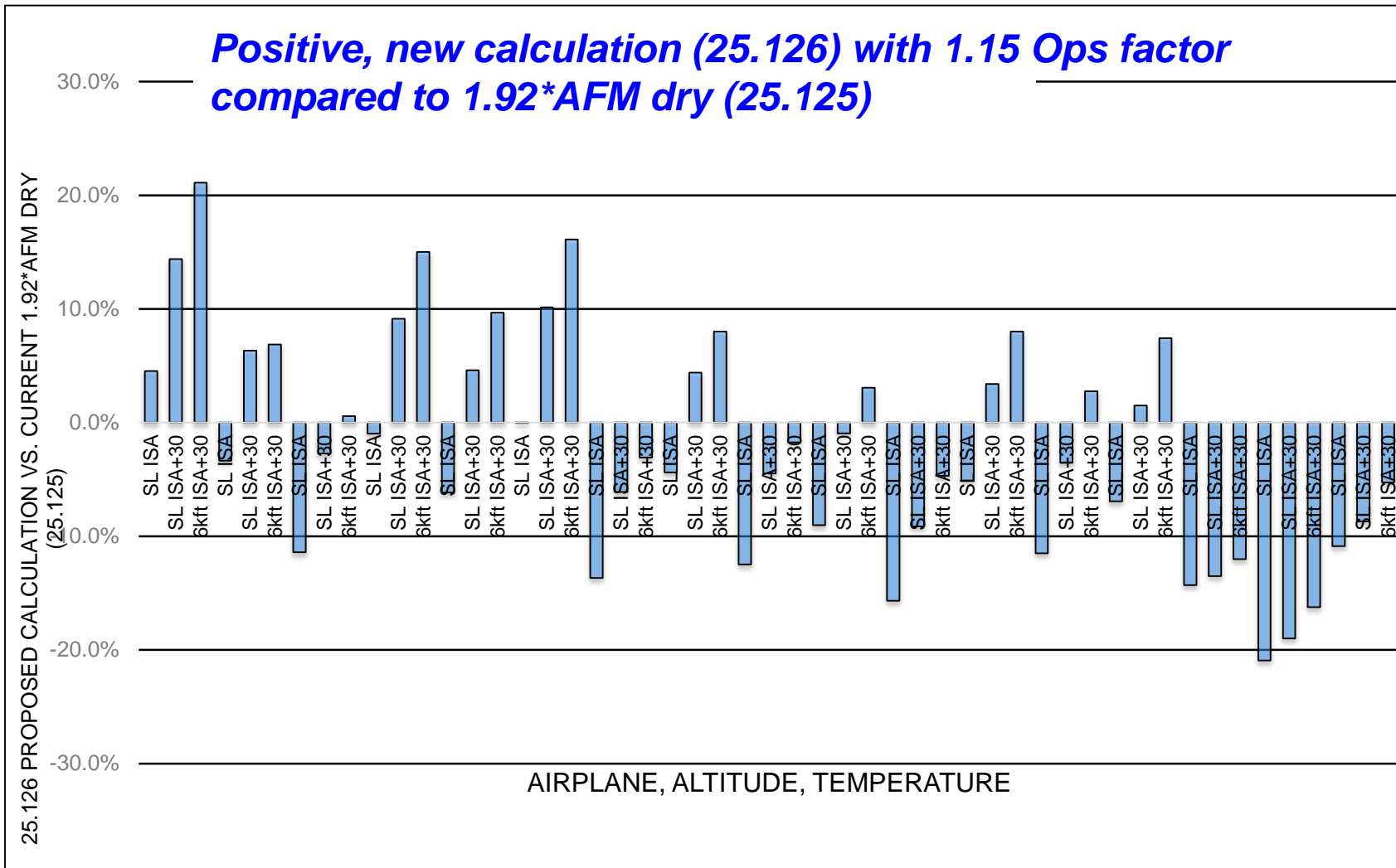
§ 25.126 Wet – One Engine Inoperative

15% Wet
Operating
Factor

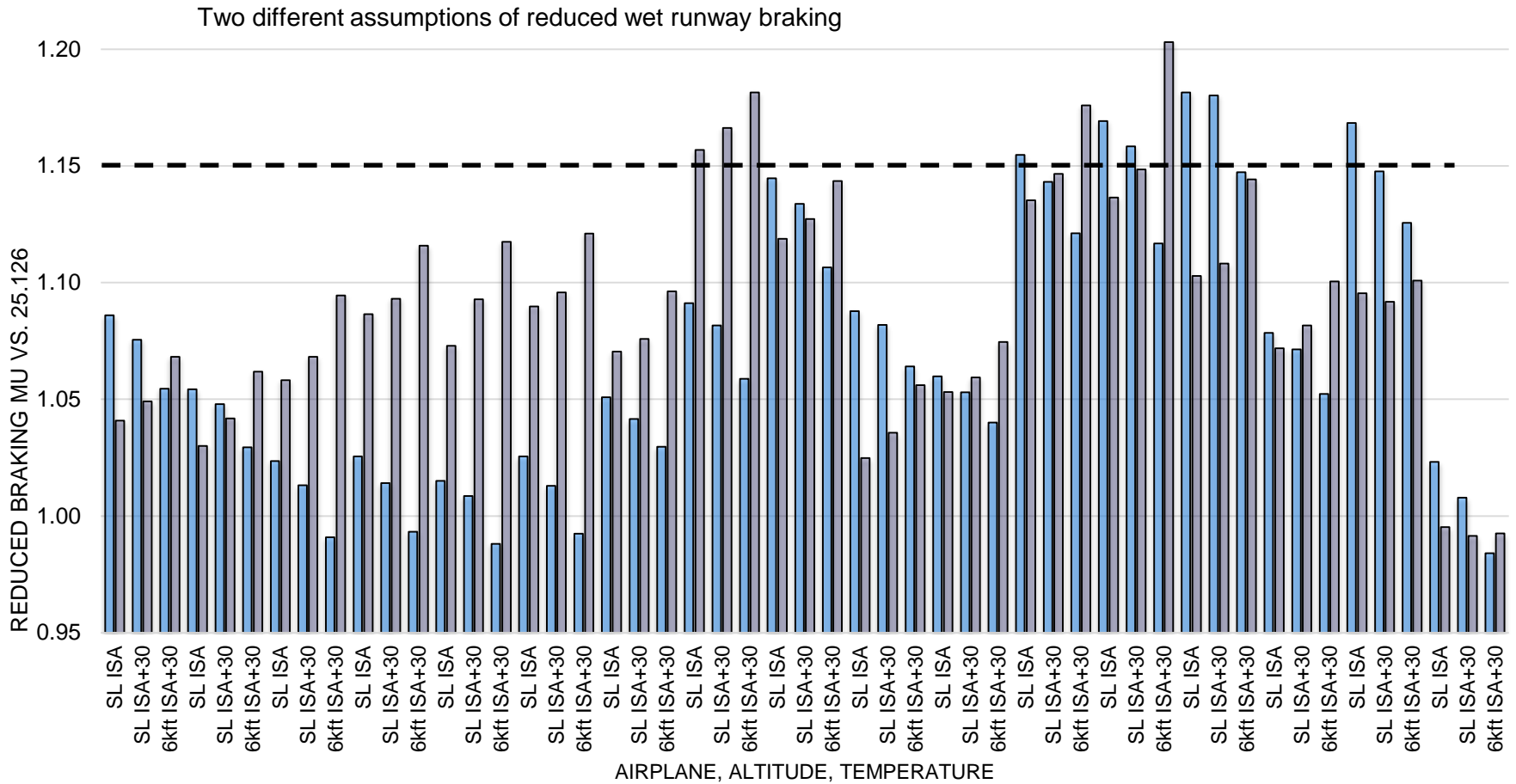


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Positive, new calculation (25.126) with 1.15 Ops factor compared to 1.92*AFM dry (25.125)



Operating factor required to account for reduced wet runway braking scenario - proposed 25.126 basis



Operational Rule Recommendation

135EOD/91k

- **In recognition of reduced landing distances of 135EOD/91K Fractional Ownership**
 - **Recommend the 15% factor above**
 - If recommendation rejected, recommend minimum operational factor of 1.05 – total factor of 1.155 (15.5%)
 - However if this is done, reduced wet braking scenario is being ignored



Wet Grooved / PFC Improved Performance

- **Recommended codifying wet grooved/PFC or possibly other improved surface performance in 25.126**
 - Discretion of the administrator as to airport and operational requirements
- **Considerations**
 - Manufacturer – AFM information
 - Runway construction – crowning, RESA
 - Weather conditions – Visibility, Rain Rates
 - Runway condition / maintenance – aircraft monitoring of friction capability
 - TOA assessment – PIREPs, aircraft monitoring of friction capability
 - Operator conditions - training
 - Deviations from Criteria – equivalent safety if deviations of criteria occur



Wet runway research

- **FAA is starting research into contributors to significantly reduced wet runway wheel braking**
 - Runway issues
 - Drainage
 - Cross-slope effects
 - Macro-texture
 - Heavy rain
 - Micro-texture
 - Speed effects
 - Verification or not of current CFR level and other modeling



Friction Research

- **MIT starting a “big data” project**
 - Requested a query of airlines as to possible access to operational data
 - Basically will be trying to take all available information and run it in a program looking for dependencies
 - FICON
 - RADAR
 - Weather
 - Airplane data
 - Airport data





- **Following slides provide more detail on wet grooved runway airport and operational criteria proposed for advisory material**



Manufacturer / AFM

- The AFM should contain a statement to the effect that: "The landing performance of this airplane has been established under CFR §25.126(f)(3)(i) or §25.126(f)(3)(ii) respectively and found suitable for specific Wet performance on specific runways with specific surface improving wet friction and satisfying all eligibility criteria, weather and runway condition restrictions specified below
- This finding does not constitute operational approval to base the landing performance requirements at Dispatch, or to base the TOA landing performance assessments, on these distances.



Runway Eligibility

- Be declared with specific improving friction surfaces (Grooved or overlaid with PFC, or overlaid/treated with improving friction surface declared and approved equivalent), on all declared length and width in the Aeronautical Information Publication (AIP) Aerodrome (AD) section issued by, or under the responsibility of, the relevant State.
- Be of crown transverse slope with minimum 1% value, with deviations allowed locally at intersections (with other runways or taxiways).



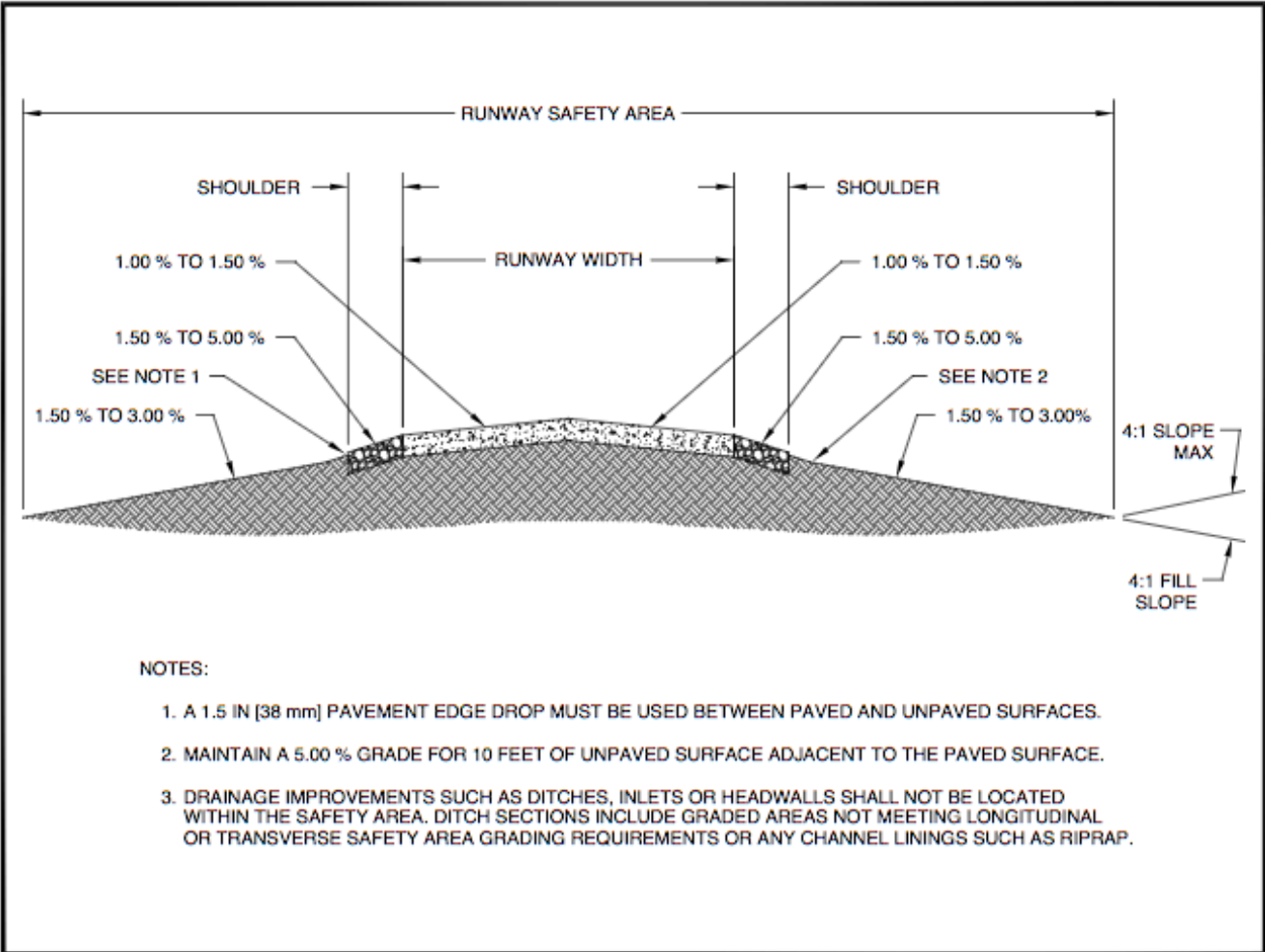


Figure 3-40. Transverse Grade Limitations for Aircraft Approach Categories C, D, & E



Runway Eligibility

- **Be maintained under an approved program equivalent to the criteria in AC 150/5320-12D.**
- **For foreign airports, an agreement should be obtained between the Operator and the airport Operator specifying the equivalent minimum level of runway surface maintenance to be accomplished.**
- **These agreements should specify:**
 - Inspection and maintenance frequencies, and notification to the Operator and to Dispatchers / Crews through an adequate text in NOTAM if the required friction levels might not be maintained, in which case specific landing performance credit when Wet is no longer applicable (e.g drainage deficiency, surface texture deficiency, groove wear or filling, runway not Grooved, or specific performance credit when wet no longer applicable or an equivalent wording to satisfy same objective of safe information to Dispatchers / Crews).



Runway Eligibility

- Be equipped with serviceable runway and touchdown markings for daytime operations and serviceable lighting systems if night operations are authorized. Either an approved approach path indicator (such as Precision Approach Path Indicator, PAPI) or an electronic glide path which provides an acceptable threshold crossing height for the aircraft used should be installed and serviceable.



Runway Eligibility

- **Be equipped with the effective capability to know precipitation intensity falling on the airport:**
 - in order to identify when reaching or overshooting heavy rain threshold,
 - with ATC reporting when heavy rain is present to aircraft in approach.
- **Be fitted with standard RESA/RSA defined in Part 139.309 or recommended by ICAO Annex 14, 3.4 for Code 3 and 4 Precision Instrument Runway (i.e. 1000 ft/300 m) or alternative standard EMAS.**
- **Management / Documentation of runway eligibility:**
 - To be an eligible runway, Airport and/or Operator should demonstrate that all eligibility criteria are met.



Weather

- **Specific landing performance credit when Wet on eligible runway should not be used unless the following specific weather requirements can be met:**
 - Windshear: There should be no significant windshear reported:
 - (i) By Airport Low Level Windshear Alert System
 - (ii) By Pilot Reports.
 - Rain intensity: There should be no report of HEAVY rain by ATC.
 - Visibility / RVR: The reported visibility / Runway Visual Range (RVR) shall not be less than 1 statute mile (5000 ft / 1600 m).



Runway Condition

- **Specific landing performance credit when Wet on eligible runway should not be used unless the following specific requirements can be met:**
 - Contamination: There should be no frost, snow, standing water, slush, ice (other than isolated patches which do not impact braking action) observed or reported over full runway length within the width necessary for safe operations.
 - Pilot Reports and Operator aircraft performance monitoring:
 - There should be no current Pilot Report of Braking Action less than "good" and no current Pilot Report of hydroplaning or slippery runway surface.
 - There should be no alert in Operator FOM saying that aircraft Performance monitoring has detected an abnormal runway friction when Wet.



TOA assessment

- AC 25-32 does not define TOA assessment prior to landing on a WET runway with specific credit at Dispatch.
- Prior to landing on a wet runway which includes wet grooved/PFC or other performance credit at Dispatch per this AC, a valid TOA assessment should be performed in accordance with AC 25-32, but with the improved friction of §25.126(f)(3)(i) or §25.126(f)(3)(ii) respectively used in AFM.
- A minimum 15% margin should be added to the distance for the TOA assessment.



Operator responsibilities

- The Operator approved Training program and Operating manual should specify the requirements necessary to assure that flight crews and dispatchers are cognizant of the runway eligibility, weather and runway condition requirements of this AC (or more restrictive per Operator choice) for specific Dispatch computation and TOA assessment when Wet.
- The Operator should define and keep current in its Operating Manual a list of specific airports/runways eligible to specific landing performance credit when Wet satisfying requirements of this AC, and inform Dispatchers / Crews when specific Dispatch computation and TOA assessment when Wet are no longer applicable.
- The Operator should define, as part of a necessary Safety Management System for specific landing performance credit on eligible runways, **an aircraft braking performance monitoring program** allowing to monitor if the aircraft Braking Action on the eligible runway falls significantly below the level of 25.126 associated with GOOD for Wet smooth runway, over partial or full landing roll. If such condition occurs, the Operator should:
 - Inform Airport.
 - Subject to confirmed analysis, remove the runway from the Operator Manual list of runways eligible to specific landing performance credit when Wet used in AFM, until corrective actions from Airport.
 - In absence of corrective action plan communicated by the Airport, inform Operational Authority and Manufacturer.



Deviations from Runway Eligibility Criteria

- If an applicant seeks operational credit for specific landing performance that **deviates from the runway eligibility criteria above, it must be demonstrated to the authorities that an acceptable level of safety to this AC is maintained.** These deviations may be general or specific to a certain runway. The demonstration may require manufacturer involvement because of the complexity of the testing and/or analysis. The performance for such operations is typically included as an AFM supplement for *Operation on Specific Landing Distances When Wet on Eligible Runways*, and is included as part of Operator Flight Operating Manual. **Approval for deviations specific to a certain runway may not be applied as general eligibility on other runways.**
- This **finding does not constitute operational approval** to base the landing performance requirements at Dispatch, or to base the TOA landing performance assessments on these distances.



