

Sneak preview of the ICAO/ACI GRF online course

March 28th, 2019
Montreal, Canada

Jan Loncke

- ✓ > **Section 1 - Welcome**
- ✓ > **Section 2 - Overview**
- ✓ > **Section 3 - Background to the ICAO Global Reporting Format (GRF)**
- ✓ > **Section 4 - Runway Condition Assessment Matrix (RCAM)**
- ✓ > **Section 5 - Adjusted Runway Condition Codes**
- ✓ > **Section 6 - When to Conduct a Runway Condition Assessment**
- ✓ > **Section 7 - Conducting a Runway Condition Assessment**
- ✓ > **Section 8 - Runway Condition Worksheet**
- ✓ > **Section 9 - Example Scenarios**
- > **Assessment**





a similar example as scenario 3 of the ACT online course

- Makassar Airport (WAAA), Sulawesi Selatan, Indonesia
- RWY 03/21
- January 21th, 2019 at 17:10 UTC
- A thunderstorm has passed and a significant amount of rain is pouring down on the airport and surrounding region
- When driving down the runway which is completely covered by water, we estimate that the depth of the water layer is approximately 1 cm
- The OAT is 28° Celsius, dew point 28° Celsius

to flow
chart

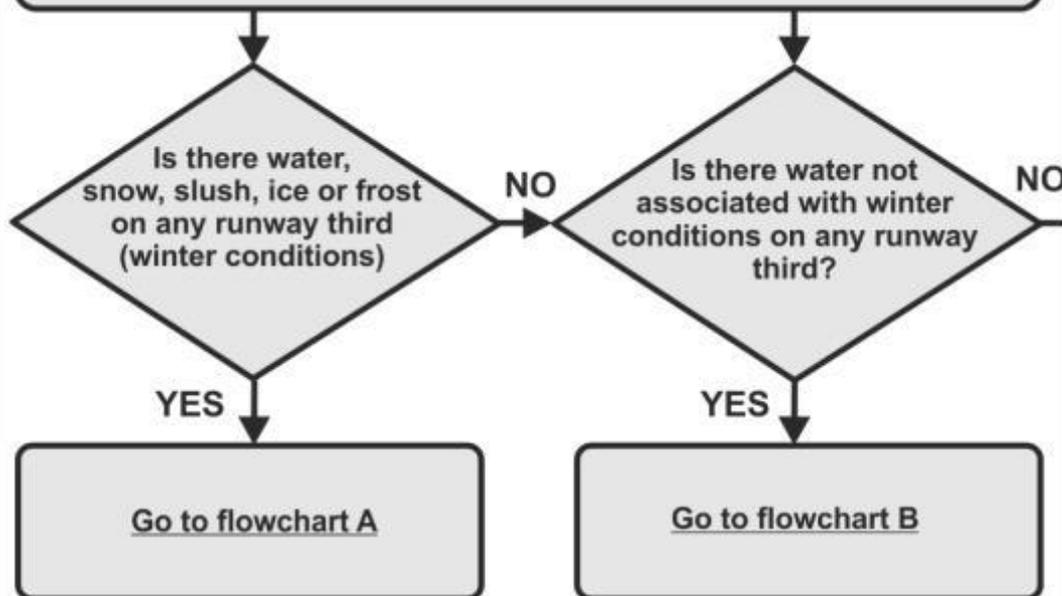


to work
sheet



Step 1: RCAM applicability

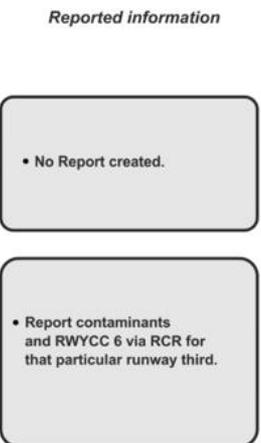
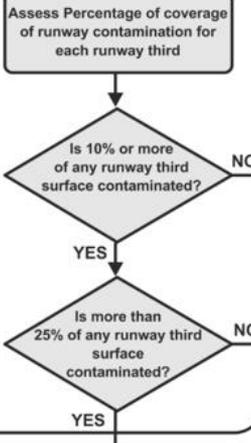
The philosophy of the RCR is that the aerodrome operator assesses the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway. Therefore the first step to assign the correct RWYCC is the assessment of the existing contaminants.



Reported information

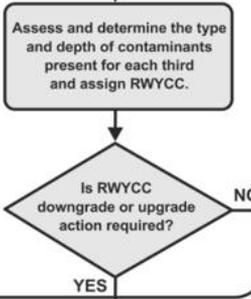
- No Report created.

**Step 2:
Apply coverage criteria**



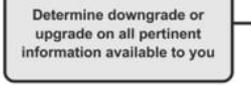
**Step 3:
Apply assessment criteria**

- Contaminant type & depth
- Temperature considerations
- Corresponding RWYCC for each runway third
- RWYCC identified by reviewing all Runway Surface description categories (Table 2)



**Step 4:
Apply downgrade/
upgrade criteria***

- Example of pertinent information:
- Prevailing weather conditions
 - Observations and measurement
 - AIREPs
 - Experience (local knowledge)
 - Results from friction measurements
 - Vehical deceleration or directional control
 - All other available information



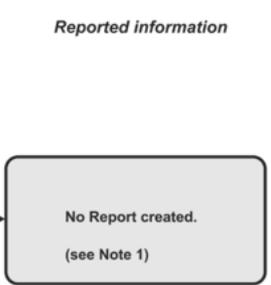
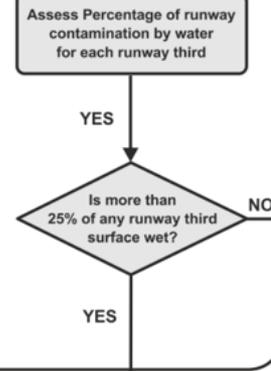
NOTE:
RWYCC causes aircraft operators to conduct landing performance assessment

*Procedures are described in PANS-AERODROMES (DOC 9981)

SC 1
SC 2
SC 3
SC 4
SC 5

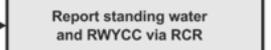
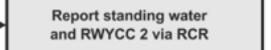
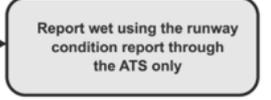
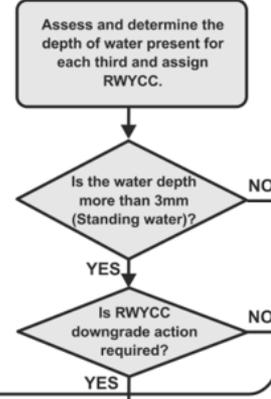


**Step 2:
Apply coverage criteria**



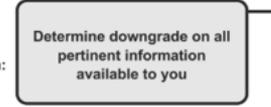
**Step 3:
Apply assessment criteria**

- Water depth
- Is „slippery wet“ NOTAM issued and relevant?
- Corresponding RWYCC for each runway third
- RWYCC identified by reviewing all Runway Surface description categories (Table 2)



**Step 4:
Apply downgrade/
upgrade criteria***

- Example of pertinent information:
- Prevailing weather conditions
 - Observations and measurement
 - AIREPs
 - Experience (local knowledge)
 - Results from friction measurement devices
 - Vehical deceleration or directional control
 - All other available information (e.g. ponding)



NOTE 1:
RWYCC 6/6/6 for all runway thirds may be used to indicate that the runway is no longer wet.

NOTE 2:
RWYCC causes aircraft operators to conduct landing performance assessment

*Procedures are described in PANS-AERODROMES (DOC 9981)

Runway Condition Assessment Worksheet

Aerodrome
 Date/Time (UTC) of assessment (MMDDhhmm)
 Lower Runway Designator
 Initials

Is more than 25% of any runway third surface wet or contaminated?

Yes - assign Runway Condition Codes for each third and complete RWY Condition Report (Blue Box)
 No - No report created

Note: RWYCC 6/6/6 for all runway thirds may be used to indicate that the runway is no longer wet

1st RWY Third		2nd RWY Third		3rd RWY Third	
For coverage 25% or less enter Code 6		For coverage 25% or less enter Code 6		For coverage 25% or less enter Code 6	
<input type="text" value="2"/> RWYCC		<input type="text" value="2"/> RWYCC		<input type="text" value="2"/> RWYCC	
- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right		- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right		- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right	
Dry <input type="text" value="6"/>		Dry <input type="text" value="6"/>		Dry <input type="text" value="6"/>	
Wet (Damp) <input type="text" value="5"/> % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="text" value="3"/> % Cov. 25/50/75/100	Wet (Damp) <input type="text" value="5"/> % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="text" value="3"/> % Cov. 25/50/75/100	Wet (Damp) <input type="text" value="5"/> % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="text" value="3"/> % Cov. 25/50/75/100
Standing water <input type="text" value="2"/> >3mm % Cov. 25/50/75/100		Standing water <input type="text" value="2"/> >3mm % Cov. 25/50/75/100		Standing water <input type="text" value="2"/> >3mm % Cov. 25/50/75/100	
Depth: <input type="text" value="4mm"/> Assessed depth (mm): <input type="text" value="10"/>		Depth: <input type="text" value="4mm"/> Assessed depth (mm): <input type="text" value="10"/>		Depth: <input type="text" value="4mm"/> Assessed depth (mm): <input type="text" value="10"/>	
For Standing water 4mm depth have to be reported as Minimum		For Standing water 4mm depth have to be reported as Minimum		For Standing water 4mm depth have to be reported as Minimum	

Situational Awareness Section / Notes

RCAM Scenario data

TWY Poor
 Apron Poor
 Other

State approved

CFME Braking coefficient

Mu not to be transmitted in RWY Condition Report

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria

AIREP CFME Other

RCR WAAA 01211710 03 2 / 2 / 2 100 / 100 / 100 10 / 10 / 10
 Aerodrome Date & Time RWY RWYCC % Coverage Depth in mm
 STANDING WATER / STANDING WATER / STANDING WATER
 Contaminant Type 1st third Contaminant Type 2nd third Contaminant Type 3rd third
 Plain language remarks
 Reduced RWY width in m (if applicable)

downgrading?

Runway condition assessment matrix (RCAM)				
Assessment criteria		Downgrade assessment criteria		
Runway condition code	Runway surface description	Aeroplane 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) <p><i>Up to and including 3 mm depth:</i></p> <ul style="list-style-type: none"> • SLUSH • DRY SNOW • WET SNOW 	Braking deceleration is normal for the wheel braking effort applied AND directional control is normal.	GOOD	
4	<p><i>-15°C and Lower outside air temperature:</i></p> <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) • DRY SNOW or WET SNOW (any depth) ON TOP OF COMPACTED SNOW <p><i>More than 3 mm depth:</i></p> <ul style="list-style-type: none"> • DRY SNOW • WET SNOW <p><i>Higher than -15°C outside air temperature¹:</i></p> <ul style="list-style-type: none"> • COMPACTED SNOW 	Braking deceleration is noticeably reduced for the wheel braking effort applied OR directional control is noticeably reduced.	MEDIUM	
2	<p><i>More than 3 mm depth of water or slush:</i></p> <ul style="list-style-type: none"> • STANDING WATER • 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	

to last viewed slide



Runway Condition Assessment Worksheet

RCAM



WAAA

Aerodrome

01211710

Date/Time (UTC) of assessment (MMDDhhmm)

03

Lower Runway Designator

Initials

Is more than 25% of any runway third surface wet or contaminated?



Yes - assign Runway Condition Codes for each third and complete RWY Condition Report (Blue Box)



No - No report created

Note: RWYCC 6/6/6 for all runway thirds may be used to indicate that the runway is no longer wet



1st RWY Third For coverage 25% or less enter Code 6		2nd RWY Third For coverage 25% or less enter Code 6		3rd RWY Third For coverage 25% or less enter Code 6	
- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right		- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right		- Identify % coverage if more than 25% of the RWY third - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right	
Dry <input type="checkbox"/> 6		Dry <input type="checkbox"/> 6		Dry <input type="checkbox"/> 6	
Wet (Damp) <input type="checkbox"/> 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="checkbox"/> 3 % Cov. 25/50/75/100	Wet (Damp) <input type="checkbox"/> 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="checkbox"/> 3 % Cov. 25/50/75/100	Wet (Damp) <input type="checkbox"/> 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) <input type="checkbox"/> 3 % Cov. 25/50/75/100
Standing water <input type="checkbox"/> 2 >3mm % Cov. 25/50/75/100		Standing water <input type="checkbox"/> 2 >3mm % Cov. 25/50/75/100		Standing water <input type="checkbox"/> 2 >3mm % Cov. 25/50/75/100	
Depth: <input type="checkbox"/> 4mm Assessed depth (mm): <input type="checkbox"/> 10 <small>For Standing water 4mm depth have to be reported as Minimum</small>		Depth: <input type="checkbox"/> 4mm Assessed depth (mm): <input type="checkbox"/> 10 <small>For Standing water 4mm depth have to be reported as Minimum</small>		Depth: <input type="checkbox"/> 4mm Assessed depth (mm): <input type="checkbox"/> 10 <small>For Standing water 4mm depth have to be reported as Minimum</small>	

Situational Awareness Section / Notes

.....

.....

.....

- TWY Poor
- Apron Poor
- Other

State approved

CFME Braking coefficient

Mu not to be transmitted in RWY Condition Report

Adjusted RWYCC

1 1 1

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria

- AIREP
- CFME
- Other

RCR

WAAA
Aerodrome

01211710
Date & Time

03
RWY

1 / 1 / 1
RWYCC

100 / 100 / 100
% Coverage

10 / 10 / 10
Depth in mm

STANDING WATER

STANDING WATER

STANDING WATER

Contaminant Type 1st third

Contaminant Type 2nd third

Contaminant Type 3rd third

Plain language remarks

Reduced RWY width in m (if applicable)

- Runway 07R/25L at Brussels Airport (EBBR), Belgium
- December 1, 2018 at 09:30 UTC
- It has been snowing lightly
- The runway has been plowed and swept continuously (last sweep at 09:00)
- There is still a very thin layer of snow covering the runway entirely. The snow is too flakey to form into a dense ball.
- You estimate the depth of the remaining snow on each RWY third to be less than 3 mm deep
- The OAT is -10°C

to flow chart



to work sheet



Runway Condition Assessment Worksheet

RCAM

EBBR Aerodrome
12010930 Date/Time (UTC) of assessment (MMDDhhmm)
07R Lower Runway Designator
- 10°C Outside Air Temperature
 Initials

Assess the % coverage of runway contamination for each runway third

< 10% coverage RWYCC - 6 for that third. No contaminant is reported	≥ 10% - ≤ 25% coverage RWYCC - 6 for that third. Report contaminant at 25% coverage	> 25% coverage Assign RWYCC based on contaminant present & temperature considerations
---	--	--

NOTE: RCR not required if all RWY thirds have <10% coverage (unless making a final report to advise the RWY is no longer contaminated)

1st RWY Third	2nd RWY Third	3rd RWY Third																																				
For coverage 25% or less enter Code 6	For coverage 25% or less enter Code 6	For coverage 25% or less enter Code 6																																				
5 RWYCC	5 RWYCC	5 RWYCC																																				
- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right	- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right	- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right																																				
<table style="width: 100%; text-align: center;"> <tr> <td>Dry 6</td> <td>Wet (Damp) 5</td> <td>Frost 5</td> <td>Slippery Wet (Below Min Friction Level Classification) 3</td> </tr> <tr> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> </table>	Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	<table style="width: 100%; text-align: center;"> <tr> <td>Dry 6</td> <td>Wet (Damp) 5</td> <td>Frost 5</td> <td>Slippery Wet (Below Min Friction Level Classification) 3</td> </tr> <tr> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> </table>	Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	<table style="width: 100%; text-align: center;"> <tr> <td>Dry 6</td> <td>Wet (Damp) 5</td> <td>Frost 5</td> <td>Slippery Wet (Below Min Friction Level Classification) 3</td> </tr> <tr> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> </table>	Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100												
Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3																																			
% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3																																			
% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
Dry 6	Wet (Damp) 5	Frost 5	Slippery Wet (Below Min Friction Level Classification) 3																																			
% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
<table style="width: 100%; text-align: center;"> <tr> <td>Standing Water/Slush 2</td> <td>Slush 5</td> <td>Wet snow or Dry snow 3 5</td> <td>Dry or wet snow on compacted snow 3</td> </tr> <tr> <td>>3mm % Cov. 25/50/75/100</td> <td>3mm or less % Cov. 25/50/75/100</td> <td>>3mm 3mm or less % Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> <tr> <td colspan="2">Depth: 3mm or less</td> <td colspan="2">Assessed depth (mm):</td> </tr> </table>	Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3	>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100	Depth: 3mm or less		Assessed depth (mm):		<table style="width: 100%; text-align: center;"> <tr> <td>Standing Water/Slush 2</td> <td>Slush 5</td> <td>Wet snow or Dry snow 3 5</td> <td>Dry or wet snow on compacted snow 3</td> </tr> <tr> <td>>3mm % Cov. 25/50/75/100</td> <td>3mm or less % Cov. 25/50/75/100</td> <td>>3mm 3mm or less % Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> <tr> <td colspan="2">Depth: 3mm or less</td> <td colspan="2">Assessed depth (mm):</td> </tr> </table>	Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3	>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100	Depth: 3mm or less		Assessed depth (mm):		<table style="width: 100%; text-align: center;"> <tr> <td>Standing Water/Slush 2</td> <td>Slush 5</td> <td>Wet snow or Dry snow 3 5</td> <td>Dry or wet snow on compacted snow 3</td> </tr> <tr> <td>>3mm % Cov. 25/50/75/100</td> <td>3mm or less % Cov. 25/50/75/100</td> <td>>3mm 3mm or less % Cov. 25/50/75/100</td> <td>% Cov. 25/50/75/100</td> </tr> <tr> <td colspan="2">Depth: 3mm or less</td> <td colspan="2">Assessed depth (mm):</td> </tr> </table>	Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3	>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100	Depth: 3mm or less		Assessed depth (mm):	
Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3																																			
>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
Depth: 3mm or less		Assessed depth (mm):																																				
Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3																																			
>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
Depth: 3mm or less		Assessed depth (mm):																																				
Standing Water/Slush 2	Slush 5	Wet snow or Dry snow 3 5	Dry or wet snow on compacted snow 3																																			
>3mm % Cov. 25/50/75/100	3mm or less % Cov. 25/50/75/100	>3mm 3mm or less % Cov. 25/50/75/100	% Cov. 25/50/75/100																																			
Depth: 3mm or less		Assessed depth (mm):																																				
<table style="width: 100%; text-align: center;"> <tr> <td>-15°C or below % Cov. 25/50/75/100</td> <td>Compacted snow 4</td> <td>Above -15°C % Cov. 25/50/75/100</td> <td>Compacted snow 3</td> </tr> </table>	-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3	<table style="width: 100%; text-align: center;"> <tr> <td>-15°C or below % Cov. 25/50/75/100</td> <td>Compacted snow 4</td> <td>Above -15°C % Cov. 25/50/75/100</td> <td>Compacted snow 3</td> </tr> </table>	-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3	<table style="width: 100%; text-align: center;"> <tr> <td>-15°C or below % Cov. 25/50/75/100</td> <td>Compacted snow 4</td> <td>Above -15°C % Cov. 25/50/75/100</td> <td>Compacted snow 3</td> </tr> </table>	-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3																								
-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3																																			
-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3																																			
-15°C or below % Cov. 25/50/75/100	Compacted snow 4	Above -15°C % Cov. 25/50/75/100	Compacted snow 3																																			
<table style="width: 100%; text-align: center;"> <tr> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 1</td> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 0</td> </tr> </table>	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0	<table style="width: 100%; text-align: center;"> <tr> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 1</td> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 0</td> </tr> </table>	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0	<table style="width: 100%; text-align: center;"> <tr> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 1</td> <td>Ice % Cov. 25/50/75/100</td> <td>Wet ice, Water on compacted snow, snow on ice 0</td> </tr> </table>	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0																								
Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0																																			
Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0																																			
Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 1	Ice % Cov. 25/50/75/100	Wet ice, Water on compacted snow, snow on ice 0																																			

Situational Awareness Section

RWY Reduced length LDA m

RWY Drifting snow RWY Loose sand

RWY Snowbanks L of CL m / R of CL m

TWY Snowbanks L of CL m / R of CL m

Asymm. reduced RWY width R/L m FM CL

TWY Poor

Apron Poor

Other

Scenario data

RWY Treatment Used? Time Applied: 0900

Chem. Treatment Plowed Swept Sanded Scarified

Liquid Solid

Notes

State approved

CFME Braking coefficient

Mu not to be transmitted in RWY Condition Report

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria

AIREP CFME Other

RCR

EBBR 12010930 07R 5 / 5 / 5 100 / 100 / 100 03 / 03 / 03

Aerodrome Date & Time RWY RWYCC % Coverage Depth in mm

DRY SNOW / DRY SNOW / DRY SNOW

Contaminant Type 1st third Contaminant Type 2nd third Contaminant Type 3rd third

Plain language remarks: RWY 07R PLOWED AND SWEEPED FULL LENGTH AND WIDTH AT 0900,

Reduced RWY width in m (if applicable)

- Runway 03/21 at Kiruna Airport (ESNQ), Sweden (Lapland)
- November 25th, 2018 at 07:40 UTC
- The runway is completely covered by compacted snow
- The OAT is -14°C
- The operations vehicle, equipped with a continuous friction measuring device, experienced no difficulties with either directional control or braking effectiveness
- The measured $M\mu$ values are : 50/45/50
- A pilot reported at 7:36 UTC the braking performance as Good

to flow chart



to work sheet



Runway Condition Assessment Worksheet



RCAM



Assess the % coverage of runway contamination for each runway third

ESNQ Aerodrome

11250740 Date/Time (UTC) of assessment (MMDDhhmm)

03 Lower Runway Designator

-14°C Outside Air Temperature

Initials

< 10% coverage

RWYCC - 6 for that third.
No contaminant is reported

≥ 10% - ≤ 25% coverage

RWYCC - 6 for that third.
Report contaminant at 25% coverage

> 25% coverage

Assign RWYCC based on contaminant present & temperature considerations

NOTE: RCR not required if all RWY thirds have <10% coverage (unless making a final report to advise the RWY is no longer contaminated)

1st RWY Third				2nd RWY Third				3rd RWY Third			
For coverage 25% or less enter Code 6				For coverage 25% or less enter Code 6				For coverage 25% or less enter Code 6			
- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right				- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right				- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right			
3 RWYCC				3 RWYCC				3 RWYCC			
Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100	Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100	Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100
Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow or Dry snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 5 3mm or less % Cov. 25/50/75/100	Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow or Dry snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 5 3mm or less % Cov. 25/50/75/100	Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow or Dry snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 5 3mm or less % Cov. 25/50/75/100
Depth: 3mm or less Assessed depth (mm):				Depth: 3mm or less Assessed depth (mm):				Depth: 3mm or less Assessed depth (mm):			
Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow				Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow				Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow			
-15°C or below % Cov. 25/50/75/100 4 Compacted snow Above -15°C % Cov. 25/50/75/100 3				-15°C or below % Cov. 25/50/75/100 4 Compacted snow Above -15°C % Cov. 25/50/75/100 3				-15°C or below % Cov. 25/50/75/100 4 Compacted snow Above -15°C % Cov. 25/50/75/100 3			
% Cov. 25/50/75/100 1 Ice Wet ice, Water on compacted snow, snow on ice % Cov. 25/50/75/100 0				% Cov. 25/50/75/100 1 Ice Wet ice, Water on compacted snow, snow on ice % Cov. 25/50/75/100 0				% Cov. 25/50/75/100 1 Ice Wet ice, Water on compacted snow, snow on ice % Cov. 25/50/75/100 0			

Situational Awareness Section

RWY Reduced length LDA m

RWY Drifting snow RWY Loose sand

RWY Snowbanks L of CL m / R of CL m

TWY Snowbanks L of CL m / R of CL m

Asymm. reduced RWY width R/L m FM CL

TWY Poor

Apron Poor

Other

Scenario data

RWY Treatment Used? Time Applied: _____

Chem. Treatment Plowed Swept Sanded Scarified

Liquid Solid

Notes

State approved

CFME Braking coefficient

50 45 50

Mu not to be transmitted in RWY Condition Report

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used

Downgrade/ Upgrade Criteria

AIREP CFME Other

RCR ESNQ 11250740 03 3 / 3 / 3 100 / 100 / 100 NR / NR / NR

Aerodrome Date & Time RWY RWYCC % Coverage Depth in mm

COMPACTED SNOW / **COMPACTED SNOW** / **COMPACTED SNOW**

Contaminant Type 1st third Contaminant Type 2nd third Contaminant Type 3rd third

Plain language remarks

Reduced RWY width in m (if applicable)

- Runway 12/30 at Hobart International Airport (YMHB), Tasmania, Australia
- July 2nd, 2018 at 12:30 UTC
- Light snow is covering the runway surface evenly; it's possible to make a snow ball with this kind of snow. But the snow is quickly becoming more water saturated.
- The OAT is 0°C and a temperature rise is forecast
- The depth of the snow layer is estimated at 5 mm
- An A318 pilot reported the braking performance as medium to poor

to flow chart



to work sheet



Runway Condition Assessment Worksheet

RCAM



Assess the % coverage of runway contamination for each runway third

YMHB Aerodrome
07021230 Date/Time (UTC) of assessment (MMDDhhmm)
12 Lower Runway Designator
0 °C Outside Air Temperature
 Initials

< 10% coverage
 RWYCC - 6 for that third.
 No contaminant is reported

≥ 10% - ≤ 25% coverage
 RWYCC - 6 for that third.
 Report contaminant at 25% coverage

> 25% coverage
 Assign RWYCC based on contaminant present & temperature considerations

NOTE: RCR not required if all RWY thirds have <10% coverage (unless making a final report to advise the RWY is no longer contaminated)

1st RWY Third				2nd RWY Third				3rd RWY Third			
For coverage 25% or less enter Code 6				For coverage 25% or less enter Code 6				For coverage 25% or less enter Code 6			
- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right				- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right				- Identify any contaminant that covers more than 25% of the RWY third - Identify % coverage - Identify depth (if applicable) - Identify Runway Condition Code - Record the most restrictive code in the box to the right			
Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100	Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100	Dry 6	Wet (Damp) 5 % Cov. 25/50/75/100	Frost 5 % Cov. 25/50/75/100	Slippery Wet (Below Min Friction Level Classification) 3 % Cov. 25/50/75/100
Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow on compacted snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 3 % Cov. 25/50/75/100	Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow on compacted snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 3 % Cov. 25/50/75/100	Standing Water/Slush 2 >3mm % Cov. 25/50/75/100	Slush 5 3mm or less % Cov. 25/50/75/100	Wet snow on compacted snow 3 >3mm 3mm or less % Cov. 25/50/75/100	Dry or wet snow on compacted snow 3 % Cov. 25/50/75/100
Depth: 3mm or less Assessed depth (mm): 05				Depth: 3mm or less Assessed depth (mm): 05				Depth: 3mm or less Assessed depth (mm): 05			
Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow				Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow				Mark depth only for: Standing Water, Slush, Wet or Dry Snow, Any snow on top of compacted snow			
-15°C or below % Cov. 25/50/75/100 4		Above -15°C Compacted snow 3 % Cov. 25/50/75/100		-15°C or below % Cov. 25/50/75/100 4		Above -15°C Compacted snow 3 % Cov. 25/50/75/100		-15°C or below % Cov. 25/50/75/100 4		Above -15°C Compacted snow 3 % Cov. 25/50/75/100	
% Cov. 25/50/75/100 1		Wet ice, Water on compacted snow, snow on ice 0 % Cov. 25/50/75/100		% Cov. 25/50/75/100 1		Wet ice, Water on compacted snow, snow on ice 0 % Cov. 25/50/75/100		% Cov. 25/50/75/100 1		Wet ice, Water on compacted snow, snow on ice 0 % Cov. 25/50/75/100	

Situational Awareness Section

RWY Reduced length LDA m
 RWY Drifting snow RWY Loose sand
 RWY Snowbanks L of CL m / R of CL m
 TWY Snowbanks L of CL m / R of CL m
 Asymm. reduced RWY width R/L m FM CL
 TWY Poor
 Apron Poor
 Other

RWY Treatment Used?

Time Applied: _____
 Chem. Treatment Plowed Swept Sanded Scarified
 Liquid Solid
 Notes: _____

State approved

CFME Braking coefficient

 Mu not to be transmitted in RWY Condition Report

Adjusted RWYCC

ONLY if Downgrade/ Upgrade Assessments used
 Downgrade/ Upgrade Criteria
 AIREP CFME Other

Scenario data

RCR

YMHB Aerodrome **07021230** Date & Time **12** RWY **2 / 2 / 2** RWYCC **100 / 100 / 100** % Coverage **05 / 05 / 05** Depth in mm

WET SNOW
Contaminant Type 1st third

WET SNOW
Contaminant Type 2nd third

WET SNOW
Contaminant Type 3rd third

Plain language remarks

Reduced RWY width in m (if applicable)

- RWY 08/26 at Oostende (EBOS), Belgium, Febr. 2nd 2018 06:35 UTC
- It has been snowing all night. Snow plowing and sweeping has been done and liquid de-icer was applied at 06:00 on a part of the RWY
- The northern half of the RWY is cleared from the centreline up to the edge, but the southern half is only cleared up to 20m from the centreline, where a snowbank is formed
- On the treated part of the runway, the surface is still covered with slush up to 1 cm thick
- Where no treatment was done, the surface is still covered with 5 cm of snow; snow of the kind you can make a solid snow ball with
- Full RWY length is not available – landing distance RWY 26 is 2600 m
- Wind 250°/5 kts OAT -1°C

to flow chart



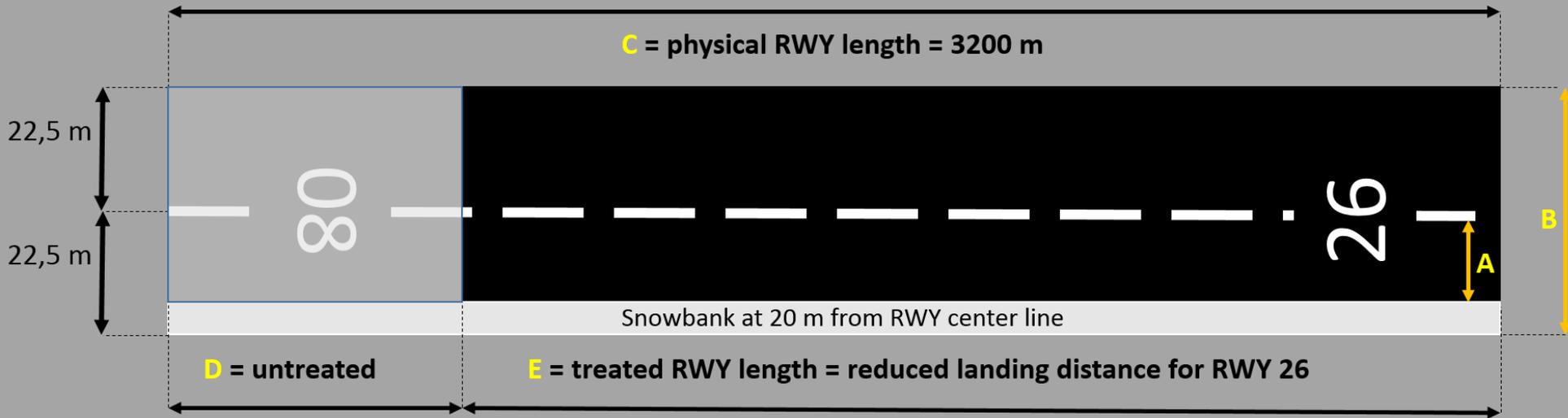
to work sheet



to EBOS situation
sketch



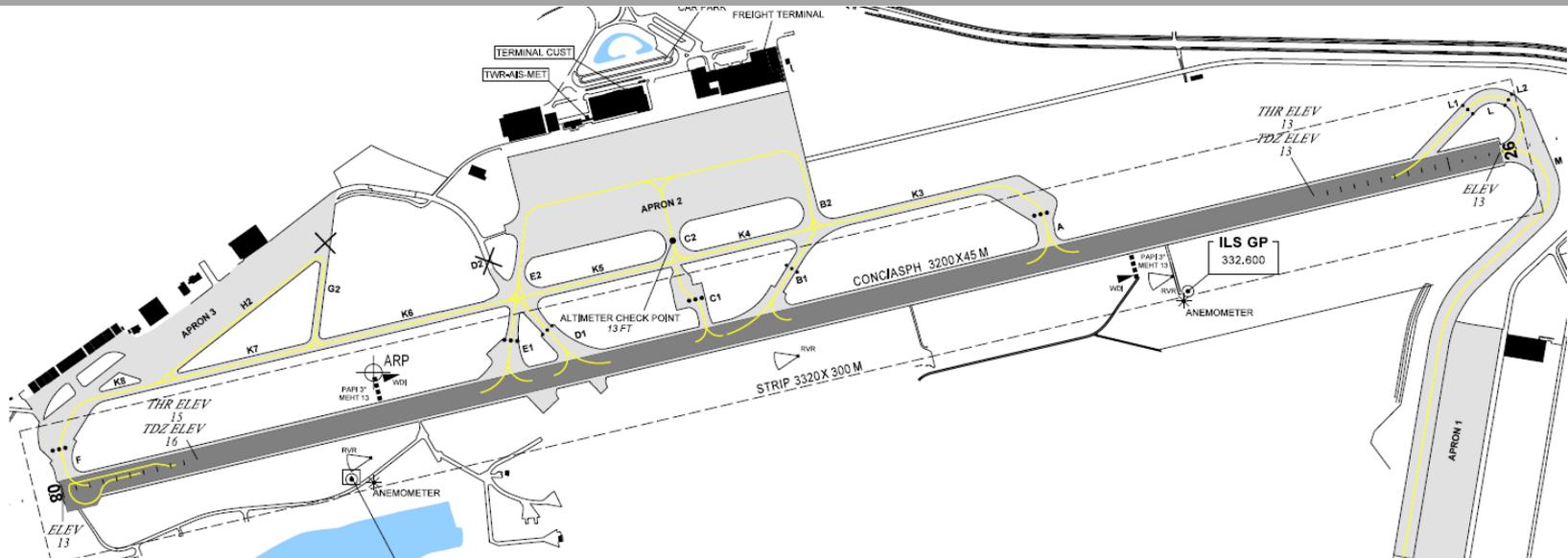
North side of the RWY



A = 20 m

South side of the RWY

B = 45 m which is the physical RWY width





Any Questions?



GLOBAL TRAINING

training@aci.aero

aci.aero/Global-Training