2021-2022 WINTER OPERATION

SNOW AND ICE CONTROL PLAN/DEICING

10/13/2021

NORFOLK AIRPORT AUTHORITY

NAC
NEUBERT AERO CORP.
AIRPORT PRODUCTS & SERVICES

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DYNAMICS

"DARK & SNOWY NIGHT?"
WHAT DOES THE PILOT SEE?

NAC Dynamics Training Presentation

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RUNWAY FRICTION SURVEY-VALUABLE TOOL

NAC Dynamics Training Presentation

Why do we measure Friction ?

DC-9 Aircraft Wet Runway Landing Veer-off Accident Reynosa, Mexico; October 6, 2000

Why do we measure Contaminates?

Aircraft Wet Runway Landing with Heavy Rubber Deposits, Tegucigalpa Airport , Honduras; May 30, 2008

AGENDA

LAST YEAR'S HIGHLIGHTS

- No Major Snow Storm
- Limited Opportunity to use the New Snow Equipment
- Initiated Testing of HISN Platform for airfield communications

REVIEW

- Field Condition Reporting (FICON)
- NOTAMS
- Braking Actions
- All Equipment
- Snow Control Center
- Communications
- Responsibilities
- Chemicals
- Airport Clearing Procedures
- Runway Conditions
- Commercial Apron
- Storing the Snow
- Deicing
- Comments

REMINDERS

- Storm Desk Telephone Number
  - 757-853-9217

OPERATIONS UPDATE

- Changes this year:
  - William (Bill) LaManque resigned
  - 24-hour Operation - Monday thru Friday
- Operations Supervisor
  - Steven Schell
- Operations Officers
  - 0630 - 1500 Morning Shift - Billy Conger
  - 1430 - 2300 Afternoon Shift - Johnny Pitt
  - 2230 - 0700 Night Shift - Lacyrose (Lacy) Dickinson
- Office Location
  - Concourse Bravo, under Gate 27
- Supervisor's Telephone Numbers and email address
  - 757-857-3324 (Office)
  - 757-386-7351 (Cell)
  - seschell@norfolkairport.com

CHEMICALS

Acceptable Products for airfield use

CHEMICALS

- Potassium Acetate – Runway anti-icing product (liquid) used by the Authority. We use Cryotech E36
- Sodium Formate and Sodium Acetate products are ok. We use Cryotech NAAC (Sodium Acetate) (solid)
- **No salt-based chemicals allowed (rock salt and other chlorides)**
- **Urea is not allowed. The Authority certifies in its permit that Urea is not used.**
- Reference AC 150/5200-30D, Section 4-6 Approved Chemicals.
- **Tenants should send SDS to Jeff Bass by November 1st.**

ALL SNOW REMOVAL EQUIPMENT

- Plows
- Brooms
- Trucks
- MISC EQUIPMENT

SNOW REMOVAL EQUIPMENT

Airfield Snow Equipment

AP#25 2018 Oshkosh Truck Broom
AP#26 2018 Oshkosh Truck Broom
AP#27 2018 Oshkosh Truck Broom
AP#28 2018 Oshkosh Truck Broom
AP#29 2018 Oshkosh Truck Broom
AP#45 1999 Oshkosk Sweepster
AP#47 1999 Oshkosk Sweepster
AP#65 2013 Oshkock Snow Plow
AP#66 2013 Oshkock Snow Plow
AP#67 1995 Oshkock Snow Plow
AP#68 1995 Oshkock Snow Plow

AP#81 2018 Wausau Snow Dozer Prime Mover Blower
AP# 82 2018 MB Snow Plow with Spreader
AP# 83 2018 MB Snow Plow with Spreader
AP# 84 2018 MB Snow Plow with Spreader
Continuous Friction Measurement Equipment

AIRPORT CLEARING PROCEDURES

Product applications on

Priority Surfaces 1, 2, 3

AIRPORT CLEARING PROCEDURES

Anti-icing agent applied only to those areas the Authority intends to maintain during the snowfall.

Snow removal priorities may change based on circumstances, however, generally are:

PRIORITY 1

Runway 5/23 (full length and width)

Taxiway “C” (full length and width) and Taxiway “C1”

Taxiways “A” and “V”

ARFF Station apron

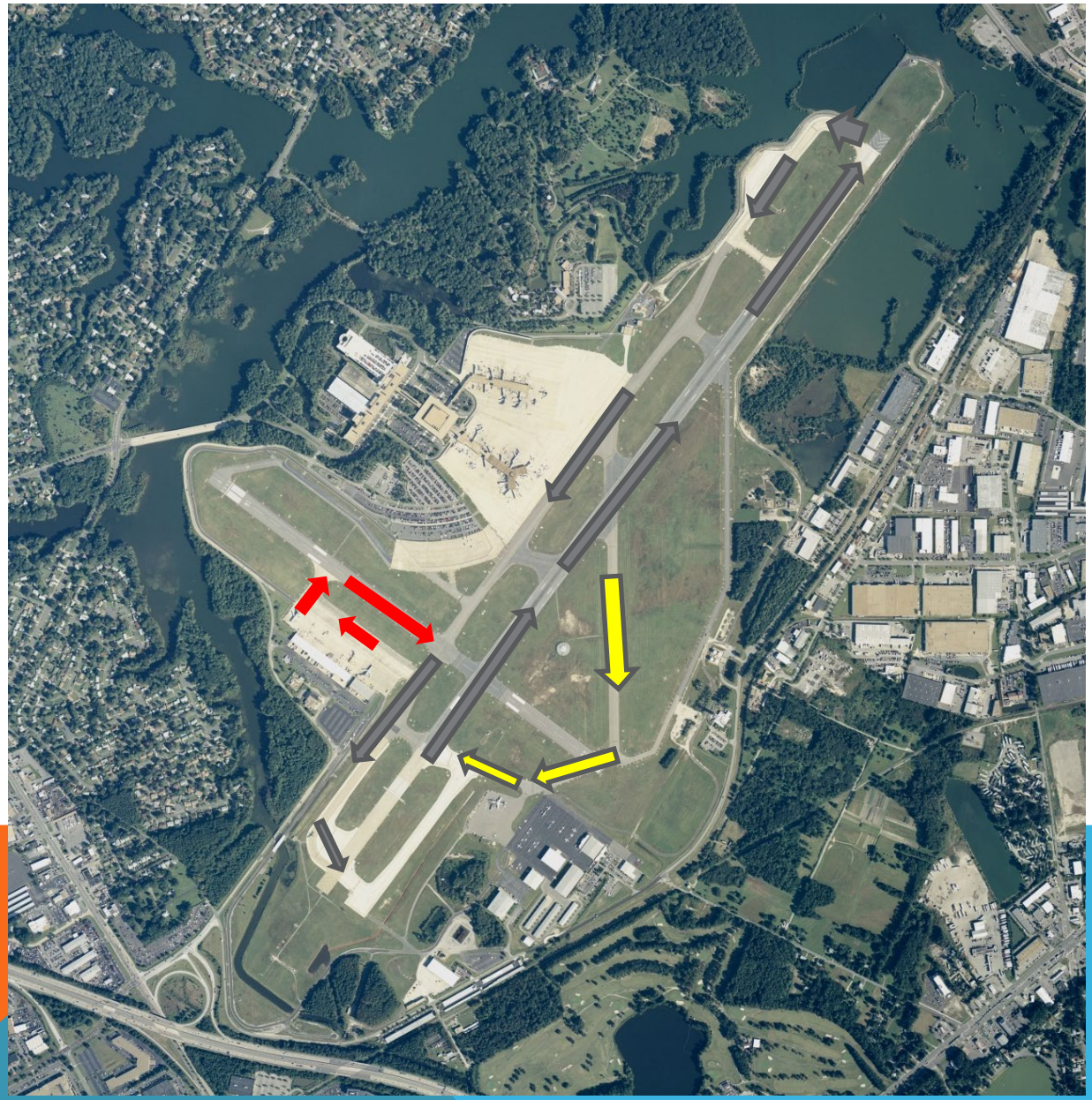
The Service Delivery Area and Baggage Delivery Service Area

The Fuel Loading Island Facility Service Road

AOA Gate 4 Access (for airfield emergency access and controlled by electronic key card

NAVAID Service Roads (upon request by the FAA)

Portions of Departures Terminal and cargo ramps



Gray = 5/23 and Twy C Loop (includes Twy C1)

Red = Twy V and 14/32 loop

Yellow = Twy G and Twy A loop

PRIORITY 2

Holding Apron at Runway 5 and 23 Approach Ends
Taxiways “A” and “G“ east of Runway 5/23
Taxiway “H”
Perimeter Road – Departures to FBO only
Taxiway “C2”

The PSA taxiway between Twy A and the hangar will be treated as circumstances allow.

PRIORITY 3

Portions of Departures Terminal ramp and Cargo Ramps not addressed in Priority 1

Taxiways “E” and “G” west of Runway 5/23

Taxiways “B”, ”J” and “F”

Runway 14/32

Portions of Perimeter Road not addressed in Priority 2

The PSA taxiway between Twy A and the hangar will be treated as circumstances allow.

COMMERCIAL APRON

- Preparation
- Clearing

COMMERCIAL APRON

Apron will be plowed when personnel/equipment are available and will be given higher priority when snow accumulation greater than 4”.

Authority will give some priority to exposing lead-in lines.

Authority will push snow into unleased space.

Authority will email notifications when clearing ramp.

Large snowstorms result in prolonged deployments usually causing decreased manpower after the main event. Follow up treatments may be delayed.

STORING THE SNOW

- Plowing
- Storage
- Removal

STORING THE SNOW

- Plan where to store snow. Snow piles shall not disrupt operations of any tenant. Pile the snow in a location where it can be stored for extended time (few days) within your lease limits or beyond the edge of the apron. Snow will be removed when personnel and equipment are available.

- Field Maintenance cannot “plow” snow piles. This requires front end loaders and dump trucks which requires additional manpower.

DEICING AND S.W.P.P.P. REQUIREMENTS

- Process
- Procedures
- Storage

DEICING

Call Airport Police Dispatcher prior to deicing (give as much notice as possible) 857-3344

- Dispatch notifies NAA Maintenance for recovery vehicle
- Signature Flight Support is required to notify APD
- Recovery vehicle must be on site **before** deicing efforts begin.
- In accordance with the Airport's Storm Water Pollution Prevention Permit (SWPPP) Monthly activity reports must be submitted to the Director of Operation by the 5th of the following month. **Please email report to** sward@norfolkairport.com
- Monthly Deicing Report

  - **Airline staff or their contractor must record all deicing events! The report shall include the start and stop time of their de-icing activity, and an estimate of the amount of chemicals used.**
- See distributed map for location of drains.
- **Must not perform any deicing activity within 100 ft of drain. If deicing chemicals are spilled within 100 ft of a drain it should be treated similar to a hydraulic leak, oil leak or fuel spill to prevent deicing chemicals from entering the storm system.**

Deicing Limits.pdf

DRAINAGE MAP (1).pdf

No Deicing Markings.pdf

DEICING CONT'D

- Each drain has 12" yellow stripe around the inlet for easy identification.
  - Image
- No deicing on FBO Apron, nor Outer GA Apron.
- May deice on cargo apron, must remain clear of the perimeter road and Twy V.
- Do not park ramp equipment in the deicing fluid footprint after the aircraft has departed.
- There are four marked deicing locations located on the apron between the end of concourse A and the airfield. The locations are marked 1-4.
- If tenant needs to empty a tank (i.e. for tank maintenance), disposal of the chemical is the responsibility of that tenant. The product cannot be added to the recovery tank or discharged onto the ground. The product should be emptied into an empty container.

DEICING CONT'D

FIELD CONDITION REPORTING
FICON

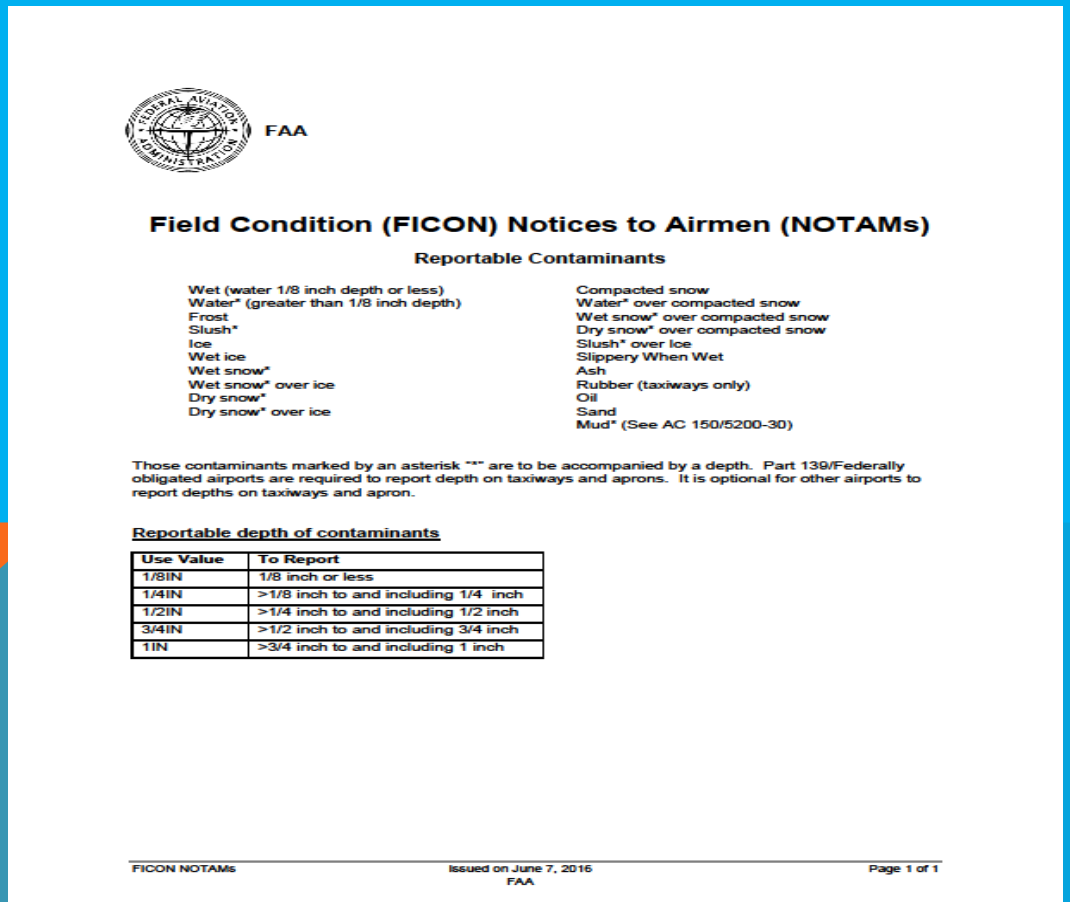
- FICON
- RWY CC
- NOTAMS
- PIREPS

FIELD CONDITION REPORTING (FICON)

FICONS reported by Operations or ARFF will contain Runway Condition Codes along with surface contaminants.

Primary means of disseminating FICONs will be by NOTAM. NOTAM system calculates Runway Condition Codes, based on surface contaminants entered.

Definitions of contaminants are listed in Section 3.7 of SICP.



FAA

Field Condition (FICON) Notices to Airmen (NOTAMs)

Reportable Contaminants

Wet (water 1/8 inch depth or less)
Water* (greater than 1/8 inch depth)
Frost
Slush*
Ice
Wet ice
Wet snow*
Wet snow* over ice
Dry snow*
Dry snow* over ice
Compacted snow
Water* over compacted snow
Wet snow* over compacted snow
Dry snow* over compacted snow
Slush* over ice
Slippery When Wet
Ash
Rubber (taxiways only)
Oil
Sand
Mud* (See AC 150/5200-30)

Those contaminants marked by an asterisk "*" are to be accompanied by a depth. Part 139/Federally obligated airports are required to report depth on taxiways and aprons. It is optional for other airports to report depths on taxiways and apron.

Reportable depth of contaminants

Use Value	To Report
1/8IN	1/8 inch or less
1/4IN	>1/8 inch to and including 1/4 inch
1/2IN	>1/4 inch to and including 1/2 inch
3/4IN	>1/2 inch to and including 3/4 inch
1IN	>3/4 inch to and including 1 inch

FICON NOTAMs Issued on June 7, 2016 FAA Page 1 of 1

RUNWAY CONDITION CODES

Range 0-6

0 = worst, 6=Dry

A code is applied to each third of the runway:

- Touchdown, Midpoint, Rollout (ex: 3/4/3)

If condition code is 0 or 1, NAA may upgrade to a code of not more than 3, provided specific procedures are followed.

- Observations support higher RCC
- Mu readings are above 40 for the affected third of rwy
- NAA continuously monitors runway. Consider factors such as: changing temps, precipitation conditions, wind effects, type of aircraft using runway, frequency of runway use.
- Continuously monitors effectiveness of sand and other treatments.

CONDITION CODES

Assessment Criteria	
Runway Condition Description	**Code**
• Dry	6
• Frost • Wet (Includes Damp and 1/8 inch depth or less of water) ***1/8 inch (3mm) depth or less of:*** • Slush • Dry Snow • Wet Snow	5
5° F (-15°C) and Colder outside air temperature: • Compacted Snow	4
• Slippery When Wet (wet runway) • Dry Snow or Wet Snow (Any depth) over Compacted Snow ***Greater than 1/8 inch (3mm) depth of:*** • Dry Snow • Wet Snow ***Warmer than 5° F (-15°C) outside air temperature:*** • Compacted Snow	3
Greater than 1/8 (3mm) inch depth of: • Water • Slush	2
• Ice [2]	1
• Wet Ice [2] • Slush over Ice • Water over Compacted Snow [2] • Dry Snow or Wet Snow over Ice [2]	0

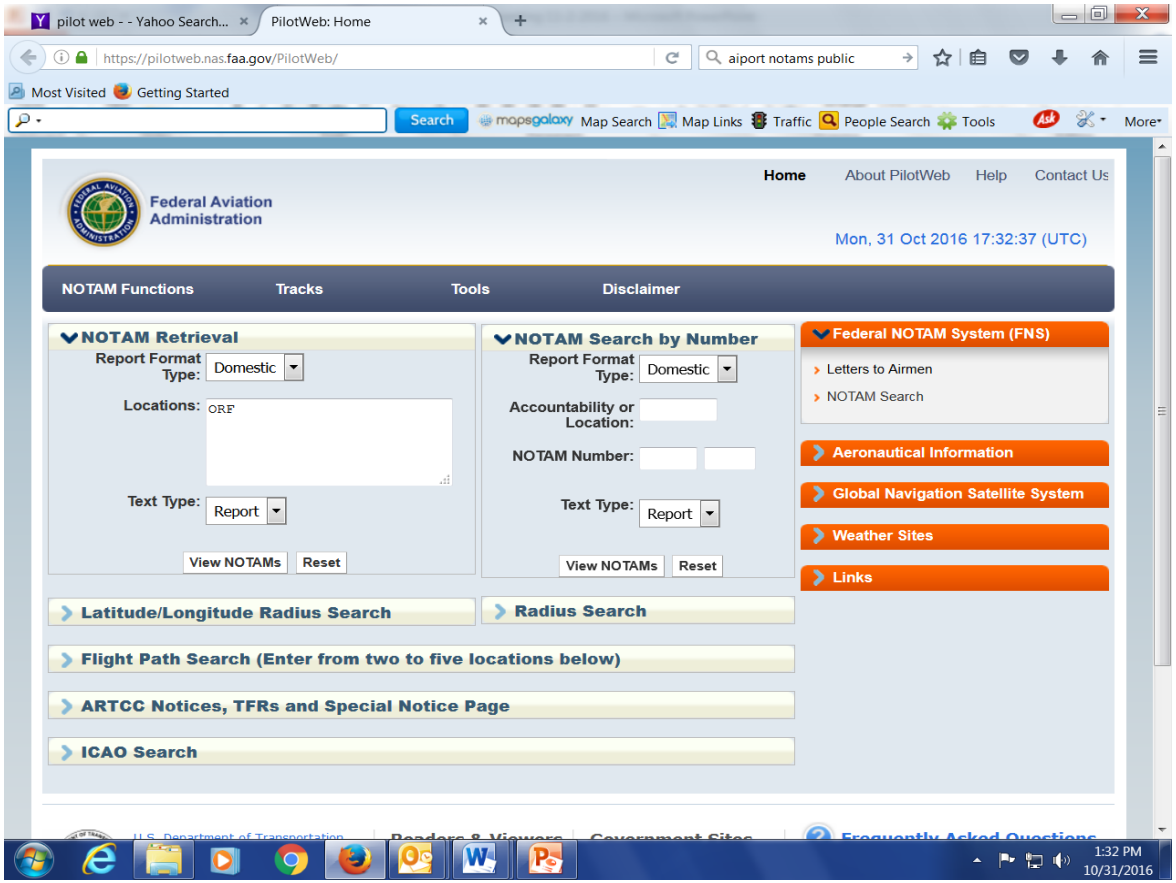
Crosswind Limitations:

- Airlines, when the Runway Condition Code is low, such as a 1, what is your crosswind threshold?

NOTAMS

- Airport Ops or Storm Desk will issue NOTAMS as field conditions change
- NOTAMS are posted on pilotweb.com for you to view
- Need to update your agency's point of contact for receiving and monitoring NOTAMS.
- The airport will generally NOTAM all surfaces Work in Progress – Snow Removal
- NAA will also NOTAM surface markings obscured when snow has accumulated on the airfield pavements.
- Operations will monitor the RWY Condition Codes issued in the NOTAMs against the most current PILOT REPORTS (Pireps) to measure upgrades or downgrades in Condition Codes.
- Updates will be made in FICON NOTAMs to list times of product applications and type material used to apply to surfaces.
- Airport will issue NOTAMs on condition of main ramp and taxiways as needed
- All NOTAMS will be updated in HISN Platform for your view.

Example of FAA - PILOTWEB.COM



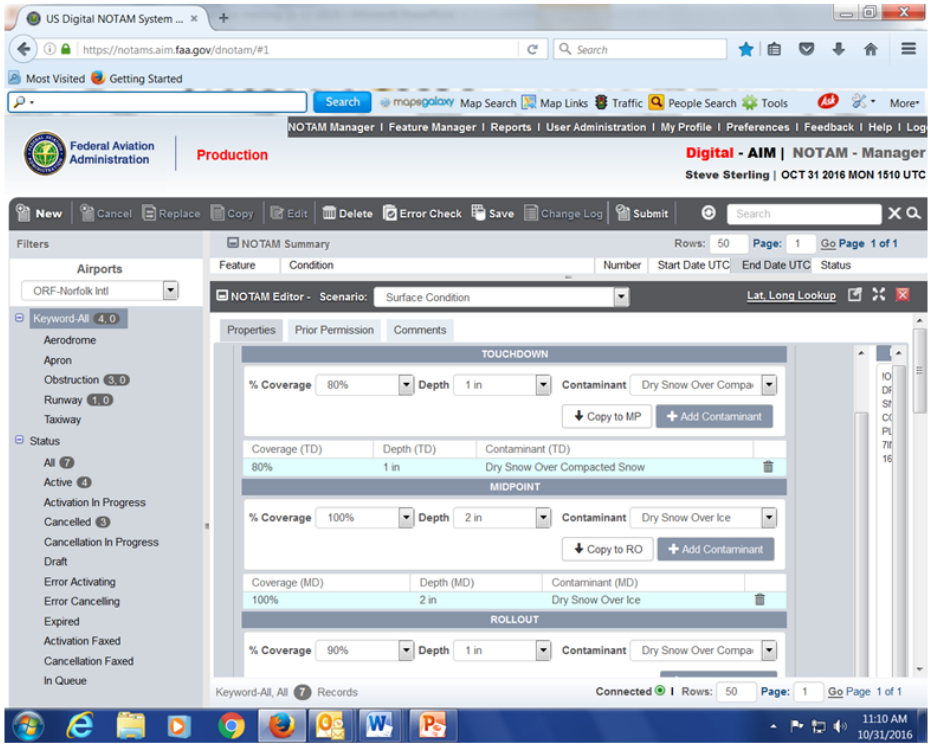
EXAMPLE - FICON NOTAM

!ORF XX/XXX ORF RWY 05 FICON 3/0/3 80 PRCT 1IN DRY SN OVER COMPACTED SN, 100 PRCT 2IN DRY SN OVER ICE, 90 PRCT 1IN DRY SN OVER COMPACTED SN DEICED LIQUID 150FT WID AND PLOWED AND SWEPT AND SANDED 150FT WID 7IN BERMS OBSERVED AT 1610311506. 1610311505-1611011505

• EXAMPLE OF NOTAM MANAGER SITE

sample Ficon Notam - Microsoft Word

!ORF XX/XXX ORF RWY 05 FICON 3/0/3 80 PRCT 1IN DRY SN OVER COMPACTED SN, 100 PRCT 2IN DRY SN OVER ICE, 90 PRCT 1IN DRY SN OVER COMPACTED SN DEICED LIQUID 150FT WID AND PLOWED AND SWEPT AND SANDED 150FT WID 7IN BERMS OBSERVED AT 1610311506. 1610311505-1611011505



Words: 48

100%

OTHER FREQUENT NOTAMS

!ORF 02/026 ORF RWY 14/32 CLSD EXC TAX 1602150744-1602151700EST

!ORF 02/027 ORF TWY B, E, F, H, J CLSD 1602150748-1602151700EST

!ORF 02/028 ORF APRON ALL FICON 1/2IN DRY SN OBSERVED AT 1602150732. 1602150752-1602151700EST

!ORF 02/029 ORF TWY A, C, G, V FICON 1/4IN DRY SN DEICED LIQUID OBSERVED AT 1602150755. 1602150755-1602151700EST

!ORF 01/074 ORF AD ALL SURFACES WORK IN PROGRESS SNOW REMOVAL 1401282342-1401292100

!ORF 02/034 ORF RWY 05/23 SFC MARKINGS OBSC 1602151028-1602151700EST

RUNWAY CONDITIONS

- Runway Closures
  - NIL PIREP or NIL assessment by airport operator requires closure of runway until NIL condition no longer exists
- Runway Continuous Monitoring
  - When previous PIREPS have indicated GOOD or Medium braking action, two consecutive POOR PIREPs require an assessment of the surface conditions by airport operator before the next operation.
  - Two consecutive PIREPs of glide slope signal malfunctions generally result in a raised minimum. NOTAM must be issued by the owner of the NAVAID.
  - If a surface becomes unsafe due to a NIL (by braking action of other assessment) or otherwise unsafe hazard or condition, the surface will be closed until the condition no longer exists.

BRAKING ACTIONS

- DECELEROMETER
- CFME

BRAKING ACTION

- Operations/ARFF responsibility
- Decelerometer is Neubert Aero Corporation Decelerometer (NAC DFD) and is recertified by manufacture every two years.
  - reports in Mu values (coefficient of friction)
  - Mu values have no significant meaning, other than to track the condition changes in surface friction
- Can only be used to upgrade/downgrade Runway Assessment.
- Can be used by NAA to track FICON trends
- Cannot be relayed to pilots – Does not apply to them for measuring stopping distance or runway conditions.

CFME - CONTINUOUS FRICTION MEASURING EQUIPMENT

10/13/2021

NORFOLK AIRPORT AUTHORITY

Measurement, Construction and Maintenance of Skid-Resistant Airport Pavement Surfaces

U.S. Department
of Transportation

**Federal Aviation
Administration**

Advisory Circular

Subject: MEASUREMENT, CONSTRUCTION, AND MAINTENANCE OF SKID-RESISTANT AIRPORT PAVEMENT SURFACES

Date: 3/18/97
Initiated by: AAS-100

AC No: 150/5320-12C
Change:

NAC Dynamics Training Presentation

When is Friction Testing Required by the FAA?

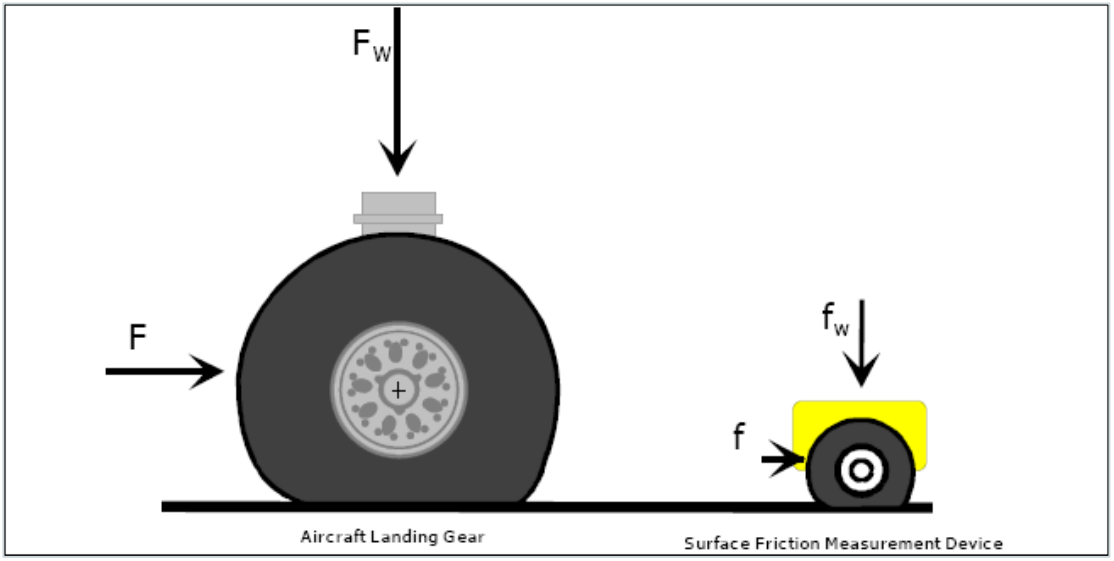
TABLE 3-1 MINIMUM FRICTION SURVEY FREQUENCY

NUMBER OF DAILY MINIMUM TURBOJET AIRCRAFT LANDINGS PER RUNWAY END	MINIMUM FRICTION SURVEY FREQUENCY
LESS THAN 15	1 YEAR
16 TO 30	6 MONTHS
31 TO 90	3 MONTHS
91 TO 150	1 MONTH
151 TO 210	2 WEEKS
GREATER THAN 210	1 WEEK

Ref : FAA 150/5320-12C Page 19

NAC - DYNAMIC FRICTION TESTING UNIT

WHAT IS MU?



- *MU is a "non-dimensional number" that* relates horizontal force to vertical load.

- CFME equipment measures the ratio of Horizontal force divided by the Vertical force, which would give a value between 0 to 1.0

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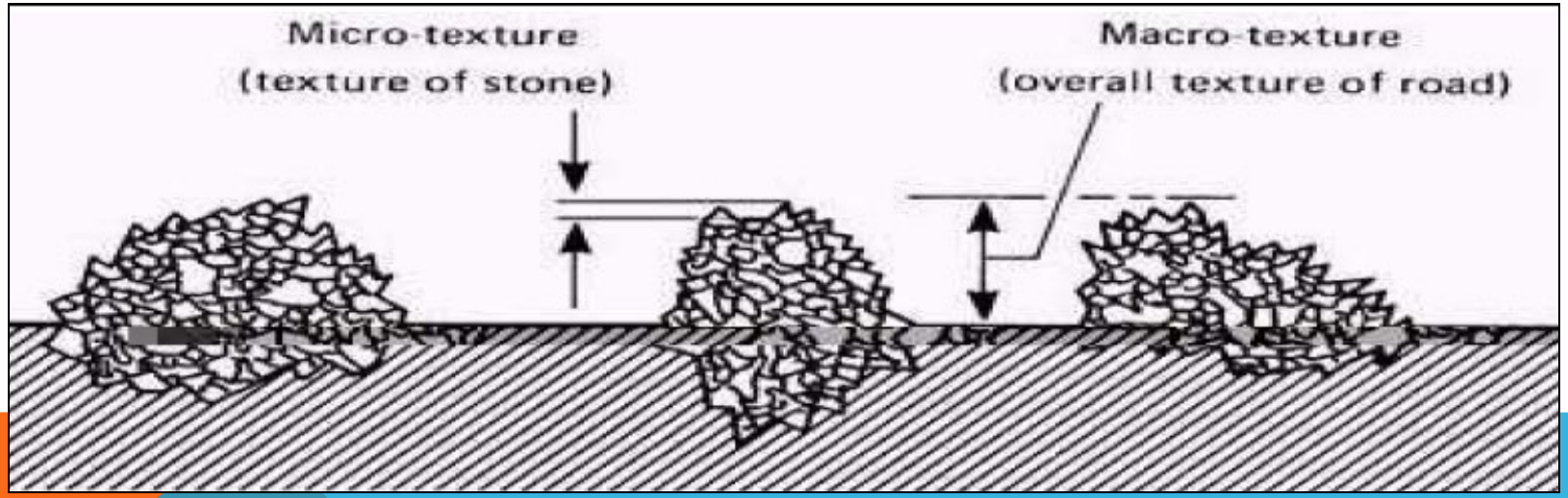
Proper Nozzle Position

NAC DYNAMICS

1mm Water Flow Rate

Why Does Speed Matter?

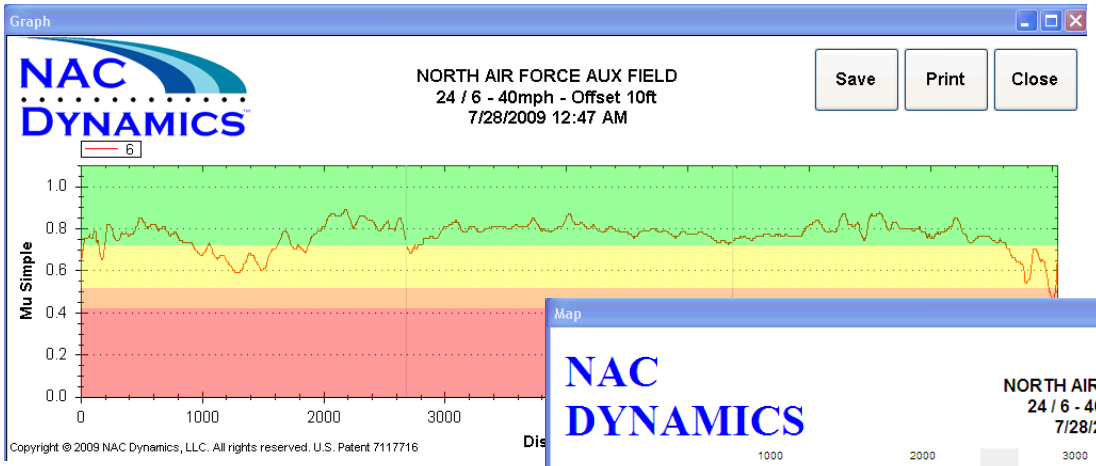
- 40mph Testing determines the overall Macro-texture Contaminant / Drainage condition of the Pavement Surface.
- 60mph Testing determines the overall Micro-texture of the Pavement Surface



Tests give a good indication of the runway drainage ability during rain conditions

SOFTWARE

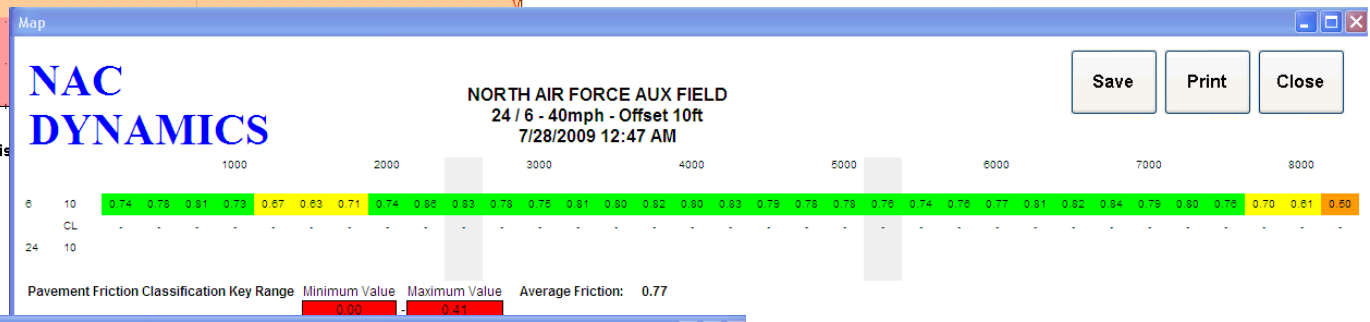
Graph Results: Single OR Dual Run

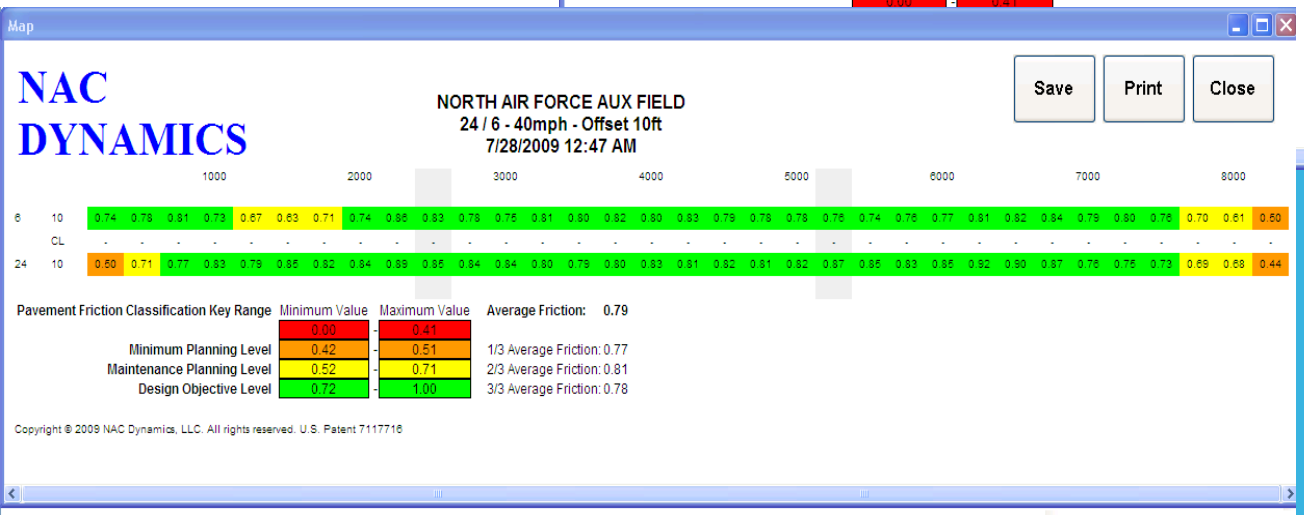


RUNWAY DATA REPORTING

THIRDS

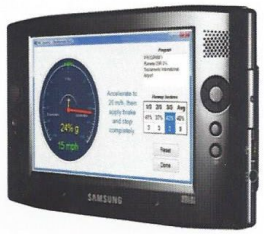
TOUCHDOWN / MID FIELD / ROLL OUT





DECELEROMETER UNIT VS CFME UNIT

Decelerometer – NAC DFD



Optional Computer System

Operators Manual
Version 1.1

NAC DYNAMICS
Specializing in Friction Measurement Technologies
ISO 9001:2000 CERTIFIED

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NAC DYNAMICS

Is a CFME the same as a Decelerometer? NO!

Both Mu Value and Braking Action reporting is acceptable for reporting pavement conditions.

To date there is no correlation between CFME (mu) and a Decelerometer (gravity) [1]

FACT

CFME is more accurate and reliable than a decelerometer due to the number of uncontrolled variables influencing the measurements and operation of Decelerometers. (braking technique, vehicle condition, etc.) .

NAC Dynamics Training Presentation

Info : FAA CERTALERT No. 05-01

CFME

What are the differences between CFMEs and Decelerometers?

A decelerometer (DFD) is used to measure a short section of the runway; this is sometimes called a spot check. The decelerometer is a small device that is mounted inside a suitable ops vehicle. The vehicle is brought up to 20mph and then the brakes are applied resulting in the vehicle inducing a full locked wheel skid. The decelerometer then measures the peak horizontal g force during the skid. In low friction surface conditions, typical values would be less than 40% g.

A CFME (DFT) is a completely different device that has been specifically designed to measure PEAK friction from a tire which is partially locked (between 12 to 20%); The forces on the tire are measured. The horizontal force is then divided by the vertical force which gives the MU value (which has no units). This type of system is capable of continuously measuring values in both winter contaminate and maintenance (summer) testing at 40 mph and 60 mph the full length of the runway averaging every 250 feet of surface measurement

Can Decelerometers be used for Maintenance testing as per AC 150/5320-12C?

No. A decelerometer can only be used during contaminated surface conditions (winter). If you use a decelerometer on a dry surface, the results you will generate will only show the efficiency of the vehicle's braking system and not the tire-to-runway friction.

When does runway friction deterioration occur?

Over time skid-resistance of runway pavement deteriorates due to jet aircraft rolling or braking on the pavement and the accumulation of contaminants, chiefly rubber, on the pavement surface. The effect of these two factors is directly dependent on the volume and type of aircraft traffic.
Contaminants include rubber deposits, water (rainfall), snow, ice, and slush -- all cause friction loss on runway surfaces. Removal and runway treatment for snow, ice, and slush are covered in AC 150/5200-30C. The most persistent contaminant problem is deposit of rubber from tires of landing jet aircraft. Rubber deposits occur at the touchdown areas on runways and can be quite extensive. Heavy rubber deposits can completely cover the pavement surface texture causing loss of aircraft braking capability and directional control, particularly when runways are wet .

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NAC DYNAMICS

Winter Testing

- CFME are to be performed down the full length of the runway at a Safe Speed depending on runway conditions.

- Decelerometer, a minimum of Three(3) Braking tests in each zone are required in determining the average friction value for that zone. A total of 9 braking tests are performed.

- Friction surveys will be reliable as long as the depth of dry snow does not exceed 1 inch (25mm), or the depth of wet snow/slush does not exceed 1/8” (3mm) [1]

Info : FAA 150/5200-30

REFER TO ADVISORY CIRCULAR FOR SPECIFICS

SNOW CONTROL CENTER

- GENERAL ROLE

STORM DESK

- Generally activated by the Director of Operations upon a forecast by the National Weather Service of imminent snow or ice conditions.
- Located in the ARFF Station
- Serves as the “communications hub” for winter operations.
- Can be contacted at (757) 853-9217
- Assist Operations in collecting field condition reports and can issues NOTAMs
- Compiles incoming airport data to enter in the HISN Platform

Do not call police control for non-emergency storm-related concerns

COMMUNICATION

- Organizational Structure
- Contact Information
- Introduction to HISN Platform

STORM DESK COMMUNICATION DYNAMICS

COMMUNICATIONS

Storm Desk 853-9217, fax 857-3252

Ground Control 121.9

Tower 120.8

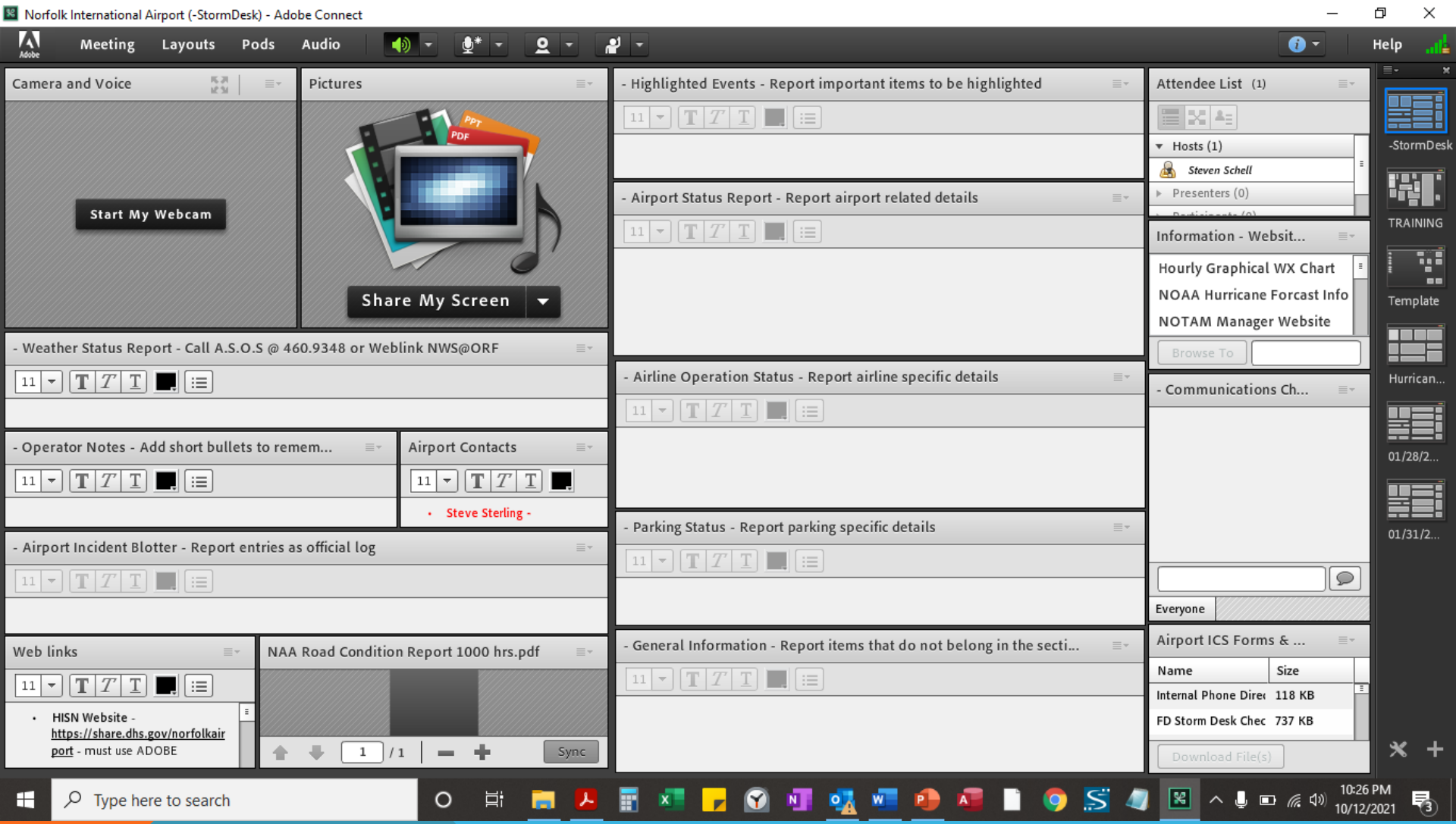
NAA Snow Clearing Operations UHF Channel MNT2

Airport One – Overall NAA Command for Winter Ops during active events

If Communications with ATC fail, can use 800 mHz radio on channel NA FDDSP to communicate with PD Dispatch, Snow Desk and Airport One. Will likely switch to an alternate channel upon contact.

Whiteout Conditions – Snow Team Leaders account for their individual team members.

COMMUNICATIONS – HISN PLATFORM



COMMUNICATIONS – HISN PLATFORM

STORM DESK ROLE

- Initiate platform and send out invitations to tenants
- Accept status input from NAA Departments
- Update LIVE SitRep with current airport status
- Manage platform participants
- Answer questions in chat room

TENANT ROLE

- Accept invitation from Storm Desk.
- Log into HISN Platform as “GUEST”
- Communicate company status via online chat room
- Monitor LIVE SitRep updates
- Ask questions
- Inform your operations team
- Inform your Corporate HQ

HISN PLATFORM

HISN Website - https://share.dhs.gov/norfolkairport

- Must be invited by Strom Desk to access platform
- Limited access to POD Data input.
- Able to access chat room to ask questions or post operational updates
- Able to include various levels of leadership or Ops Desks to monitor
- Accessible by smart phone, desk-top or iPads.
- No special program needed – Web access required.
- Log in or out as needed. No limit to access time. Free to use – no membership

RESPONSIBILITIES

Department Roles:

- Administration
- Police
- Fire
- Field
- Building
- Operations
- Tenants

NAA ADMIN

Director of Operations

- activates the Storm Desk at appropriate time.
- Monitors coordination and communications efforts between Airport Ops, snow removal team, Storm Desk and the FAA ATCT
- Monitors HISN Platform for updated information and helps answer tenant questions as needed.
- Issues NOTAMS as needed.

Director of Facilities

- Responsible for the coordination of snow and ice removal operations with the Field Maintenance and Building Maintenance Departments.
- Will monitor HISN Platform for current information and help address questions from tenants as needed.

Deputy Executive Director

- Media relations - and press releases as needed.
- Monitors HISN to remain knowledgeable of airport conditions and operations to help keep the social media platforms updated and information flowing to airport users.

AIRPORT POLICE

- Contacts the Director of Operations at the first detection of frozen or freezing precipitation.
- Monitors landside for hazards and issues Road Condition Report update into HISN Platform
- Issues NOTAMs in absence of Operation/ARFF/Admin.

AIRPORT FIRE (ARFF)

- Responsible for operating the Storm Desk,
- Provides communications between the snow removal team the FAA ATCT, and various air carrier and airport tenants
- Assist Airport Operations in conducting field condition inspections and braking action surveys, as needed.
- Disseminates field condition reports and braking action reports from Ops to enter in HISN Platform

FIELD MAINTENANCE DEPT.

- Responsible for the removal of snow and ice from airfield.
- Maintains appropriate stockpiles of sand and chemicals

Staff = 15

BUILDING MAINTENANCE DEPT.

- Responsible for the removal of snow and ice from the ARFF Station roadways, the Departures Terminal Service/Delivery Area, the baggage delivery roadway to the Arrivals Terminal, the Fuel Loading Island facility roadway, and the inner perimeter road.
- Responsible for ensuring AOA Gate 4 is passable.
- Responsible for snow and ice removal on the roadways and walkways on the landside.

Staff = 16

OPERATIONS

- Perform field condition inspections every hour, at a minimum; however, weather conditions will dictate frequency increases/decreases.
- Inspect active taxiways and aprons, unless otherwise directed
- Upon completion of a runway inspection, report results to the Storm Desk
- Issue Field Condition NOTAMS
- Ensure that the airport remains in compliance with Part 139
- Ensure edge lights, snowbanks, and signage are within standard
- Monitor airfield condition, report discrepancies, and issue the appropriate NOTAM, if applicable
- Assist with escorts and storm desk operations
- Provide communication to airport tenants and contractors to initiate procedures for storm preparation.
- Inspect and evaluate equipment and materials that must be secured prior to weather events.

OPERATIONS (CONT)

- Inspect and evaluate equipment and materials that must be secured prior to weather events.
- Initiate runway friction testing to gather baseline data prior to the weather event.
- Communicate airfield conditions to administration and offer proposed solutions
- Assist tenants with special requests regarding aircraft ground operations and parking.

AIRFIELD TENANTS

- Each airfield tenant (air carriers, air cargo, and general aviation) is advised to read their lease to determine exactly what their responsibilities for snow and ice removal are in their leased areas.
- The Airport Authority will not conduct snow and ice removal operations within any area which is exclusively the responsibility of the tenant to clear.
- Retract all equipment and non-operational items to the storage areas under the concourse before all snow removal operations begin.
- Retract the Jet Bridges not in current use to allow for snow removal vehicles to safely clear the gate areas.
- Shovel the walkways and areas around the Jet Bridge to avoid walking hazards to personnel.
- Use only approved deicing chemicals on the aircraft apron.

TENANTS CONT'D

- Contractors driving on the apron or other non-movement area must either be escorted or have the appropriate driver access level. Contractor must also meet insurance requirements ($10,000,000) if not under escort.
- Airlines are responsible for snow removal operation within their operations not accessible to the Authority's snow plows using twenty-foot blades.
- The tenant is responsible for snow removal on the following aprons: Cargo, FBO, PSA

Winter Operation Reminders

2021 Snow and Ice Plan

- Process
- Procedures
- Storage

WINTER OPS REMINDERS!

Equipment Storage – Snow planning is much like Storm Planning.

- Ramp equipment must be stowed in leased areas to allow the plows to move snow with the least amount of contamination as possible.
- Snow will not be cleared around equipment.
- All station managers need to pull back Jet Bridges as far as possible to clear the ramp.

WINTER OPS REMINDERS!

FOD control – Control ice packs and ridges from forming.

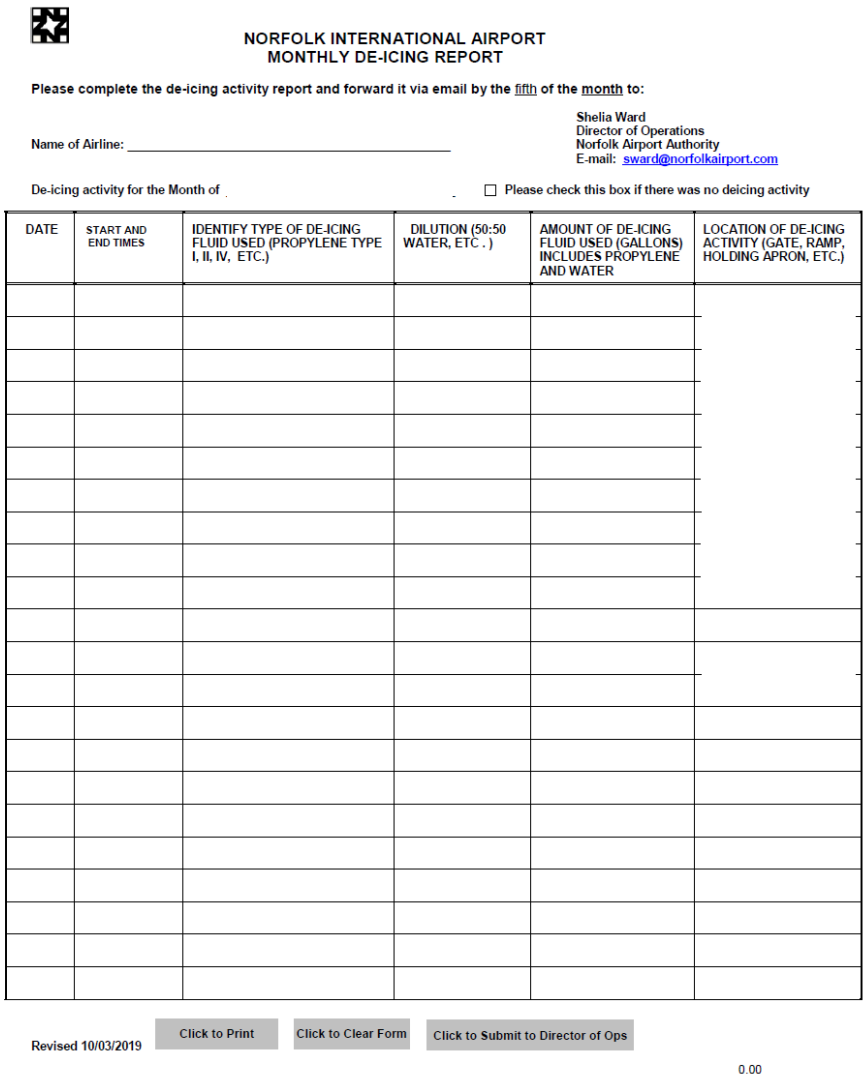
- Don’t dump ice on ramps
- Don’t drain the potable water ports on the ramp
- Work to clean up ridges and loose ice clumps during the day to avoid them re-freezing at night.

WINTER OPS REMINDERS CONTINUED

Gate Assignments – Stick to your gate assignments or let Operations know you need to change.

- Common use Jet Bridges managed by Airport Operations
- Snow removal will be based on scheduled operations for each gate
- If your schedule changes let us know

WINTER OPS REMINDERS - CONTINUED



NORFOLK INTERNATIONAL AIRPORT
MONTHLY DE-ICING REPORT

Please complete the de-icing activity report and forward it via email by the fifth of the month to:

Shelia Ward
Director of Operations
Norfolk Airport Authority
E-mail: sward@norfolkairport.com

Name of Airline: _____

De-icing activity for the Month of _____ ☐ Please check this box if there was no deicing activity

DATE	START AND END TIMES	IDENTIFY TYPE OF DE-ICING FLUID USED (PROPYLENE TYPE I, II, IV, ETC.)	DILUTION (50:50 WATER, ETC .)	AMOUNT OF DE-ICING FLUID USED (GALLONS) INCLUDES PROPYLENE AND WATER	LOCATION OF DE-ICING ACTIVITY (GATE, RAMP, HOLDING APRON, ETC.)

Revised 10/03/2019

Click to Print | Click to Clear Form | Click to Submit to Director of Ops

0.00

- Monthly Glycol Report – MANDATORY
- Complete the form completely and total.
- Must be sent in before the 5th of each month – NO LATER.

CONCLUDING COMMENTS

Feedback is solicited after each event.

SICP (Snow Plan) is located in Section 313 of ACM

Will send pdf copies of this presentation deicing report forms, and Snow Plan to all attendees.

QUESTIONS