



Airport Winter Maintenance Plan



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2024



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1. AMENDMENT CONTROL & REVIEW PROCEDURES

1.1 Amendment Procedures

The Airport Manager is responsible for the development, issuance and control of amendments to this manual. Once reviewed by the SMS committee, amendments will be properly inserted by the organization indicated on the distribution list. All manual holders will be responsible for the safe custody and maintenance of their manual or refer to the official plan published on the airport website; <https://www.citypa.ca/en/parking-streets-and-transportation/pilots.aspx#Winter-Maintenance-Plan>

- a) The entire manual will be reissued for any amendments beyond corrigenda.
- b) When the manual is in need of amendment from an annual review, copies will be sent out to the SMS Committee, which has a representative sample of air operators, at least one month prior to the winter season.
- c) The SMS Committee Minutes will be the record of consultation and reviewed amendments to the plan. The Northern Air Group (Dept Highways airports, YVC and YPA) will attempt to meet with the Airline(s) to coordinate plans within the airport network.
- d) All amendments will be shown by providing a vertical black line in the margin where changes in paragraphs or wording are made.

RECORD OF AMENDMENTS

No.	Date of Issue	Changes Made	Entered By
1	Oct-17-19	4.2 Aircraft Movement Surface Priorities 9.1 Contact Information Appendix A	Corey
2	Oct-15-20	1.2, 3, 4.1, 4.2, 4.3, 5.1, 6, 7, 9, 10	Corey
3	Oct -21-21	GRF, Hours of Operation, RVOP, Medevac Location	Corey
4	Oct-19 -22	Delete Reference to 16-34 & E	Corey
5	Sep-28-23	Address finding from the 2023 QA Audit	Corey
6	Oct-17-24	1.1, 4.3, 6	Mohammad

Corrigenda

Minor changes (ie. phone numbers, typos) can be accommodated by "pen and ink" amendments without SMS committee review. Distribution of the changes will be the same as above and a record of these changes will be recorded in the corrigenda in the same format as the Record of Amendments.

CORRIGENDA

No.	Date of Issue	Date Entered	Entered By

LIST OF MANUAL HOLDERS

No.	Title	Address	Telephone & Fax No.'s
Master	Airport Manager	181 Veterans Way Prince Albert, SK	Tel: (306) 953-4966 Fax: (306) 765-4026
1	Transport Canada, Inspector	1100-9700 Jasper Avenue Edmonton, AB	Tel: (403) 292-5213 Fax: NA
2	NAV Canada, YPA - FSS	188a Veterans Way Prince Albert, SK	Tel: (306) 765-8800 Fax: (306) 765-8803
3	Rise Air, SMS Manager	196 Veterans Way Prince Albert, SK	Tel: (306) 953-1314 Fax: NA
5	RCMP Air Services, NCO	125 - 32nd St W Prince Albert, SK	Tel: (306) 765-5564 Fax: (306) 765-5565
6	Good Spirit Air	Box 128 Yorkton, Sk S3N2V6	Tel: (306) 768-3352 Fax: NA
7	Sask. Air Ambulance Chief Pilot	17 Wayne Hicks Ln, Saskatoon, SK	1 888-782-8247
8	Prince Albert Airport Website	Pilots Tab	http://www.princealbertairport.com

1.2 Periodic Review and Amendment of the Plan

The Airport Manager will review the Winter Maintenance Plan, and amend it if required;

- before every winter season;
- if implementing new products equipment or maintenance procedures;
- each time the airport operator fails to clear a priority area in accordance with the plan, and;
- if any regulatory requirements affecting airport winter maintenance change.

This document is assessed for its required content against the Canadian Aviation Regulations Part III Division IV – Airport Winter Maintenance (effective May15, 2020), TP312 5th Ed Section 9.1.2.3., Advisory Circular 300-005 Changes to Runway Surface Conditions Reporting, Advisory Circular 300-013 Airport Winter Maintenance and Planning, & Advisory Circular 300-019 Global Reporting Format (GRF) for Runway Surface Condition Reporting

The annually revision of the Winter Maintenance Plan will be submitted to the SMS Committee at the 3rd Quarter or a special meeting for consultation on the development and issuance of the final draft. The SMS Committee is a representative sample of the air operators using YPA.

All airport stakeholders are invited to provide comment on the Winter Maintenance Plan, and to submit suggestions for improved efficiency of the winter operation. Questions and comments can be directed to the Airport Manager and/or can be raised at the Safety Management Committee Meetings where issues pertaining to snow removal and ice control are reviewed.

Any instance where the priority areas that were not cleared according to the plan or if winter conditions could have been contributed to an incident, an AIM Issue Report will be initiated by airport staff. The Airport Manager (SMS Manager) or their designate will use the SMS investigation process to determine the root cause and address corrective actions that may include the review and revision of this plan.

After any amendment of this plan the Airport Manager will, determine if the Canadian Flight Supplement (CFS) requires revision for level of services published. If so, a NOTAM is issued describing the level of service until the CFS is amended. CFS publications are reviewed by the Airport Manager every 56 days, for their accuracy, using SOP #5 Aeronautical Publications Review.

2. INTRODUCTION

Snow removal and ice control operations are the major functions conducted at Prince Albert Airport during the winter season. This plan is completed in accordance with Transport Canada regulations, standards, recommendations and industry practices.

This snow clearing plan of action is intended to optimize the use of personnel, equipment and materials resources to effectively clear snow and ice from aircraft, vehicle and pedestrian movement areas to provide safe, serviceable operation by airport users.

Snow removal and ice control refers to all actions taken to reduce and/or eliminate the potentially hazardous effects of snow and ice contamination on movement surfaces. Snow and ice control activities include either, or a combination of, plowing, sweeping, blowing, sanding and de-icing of movement surfaces. The ultimate objectives of airport winter maintenance planning are to minimize the effects of winter conditions and to establish requirements and procedures pursuant to the *Canadian Aviation Regulations* to prevent or eliminate hazardous conditions in order to maintain safe aircraft operations.

YPA provides services to air operators under subpart 4 & 5 of Part VII therefore the winter maintenance measures follow Standards 302.410 to 419. This document establishes the following:

- (a) procedures for identifying which airside areas are priority 1 areas, priority 2 areas or priority 3 areas during winter storm conditions;
- (b) a description of the winter maintenance operations to be carried out in an airside area once it is identified as a priority 1 area, priority 2 area or priority 3 area;
- (c) communication procedures that meet the requirements of subsection 322.411(2) of the Airport Standards — Airport Winter Maintenance;
- (d) procedures for publishing a NOTAM in the event of winter conditions that might be hazardous to aircraft operations or affect the use of movement areas and facilities used to provide services relating to aeronautics;
- (e) safety procedures for controlling the flow of ground vehicles during winter maintenance operations to ensure the safety of persons, vehicles and aircraft;
- (f) procedures for minimizing the risk of ice control chemicals — other than the ice control chemicals specified in subsection 322.415(1) of the Airport Standards — Airport Winter Maintenance — being tracked onto an airside area;
- (g) a description of the lines of authority and organizational relationships with respect to winter maintenance, including contact names and telephone numbers;
- (h) a description of how actions undertaken as part of winter maintenance will be coordinated;
- (i) a description of the arrangements for snow clearance;
- (j) a description of the process for reviewing and amending the plan;
- (k) a description of the administrative procedure for distributing the plan and its amendments;
- and
- (l) a list of all agreements respecting the provision of winter maintenance services for navigation aids at the airport, and signed copies of those agreements

3. DEFINITIONS

Aircraft - any machine capable of deriving support in the atmosphere from the reactions of the air.

Airport - an aerodrome in respect of which a Canadian aviation document issued pursuant to the Aeronautics Act is in force

Airport Manager - the person in charge of an airport or the authorized representative of that person.

AIM Issues Report – is a web based airfield information management system used to manage airport infrastructure maintenance, and safety management systems reporting.

Airside - that area of an airport intended to be used for activities related to aircraft operations and to which public access is normally restricted; all areas inside the airport perimeter fence or airside building security barrier which is marked with “Restricted Area” signs, as defined in the aerodrome security regulations.

AMSCR or Aircraft Movement Surface Condition Report means a report that details the surface conditions of all movement areas at an airport, including runways and taxiways.

Apron - that part of an airport, other than the maneuvering area, intended to accommodate the loading and unloading of passengers and cargo, the refueling, servicing, maintenance and parking of aircraft and the movement of aircraft, vehicles and pedestrians to allow execution of those functions

Cleared Width: The narrowest portion of the runway width which has been cleared of contaminants and can be estimated by making reference to known widths such as plow blades, sweeper brooms or pavement markings. That width of the Aircraft Movement Surface that is being actively maintained for aeroplane operations

Compacted Snow; means snow that has been compacted into a solid mass such that aeroplane tires, at operating pressures and loadings, will run on the surface without significant further compaction or rutting of the surface

Contaminant means material that collects on a surface, including standing water, slush, snow, compacted snow, ice, frost, sand, and ice control chemicals.

CRFI or Canadian runway friction index means the average of the friction measurements taken on runway surfaces on which freezing or frozen contaminants are present.

Dry means a surface condition that is free of visible moisture, and has no observed contaminants;

Dry Snow means snow that does not contain sufficient water to allow the crystals to stick together or bond to a surface

Flight Service Station (FSS) a NavCanada operated facility from which aeronautical information and related aviation support services are provided to aircraft including airport and vehicle advisory services for designated uncontrolled airports.

Frost means ice crystals formed from airborne moisture on a surface whose temperature is below freezing. Frost differs from ice in that the frost crystals grow independently and therefore have a more granular texture

Groundside is that area of an airport not intended to be used for activities related to aircraft operations and to which the public normally has unrestricted access; the portion of an airport that is publicly accessible.

Ice - a frozen liquid of a continuous surface

Ice control chemicals means chemicals used to prevent ice formation, to prevent ice from bonding to a surface, or to break up or melt ice on a surface.

Maneuvering Area - that part of an airport ordinarily used for the take-off and landing of aircraft and for the movement of aircraft associated with taxiing, but does not include the apron.

Monitored Runway Conditions; for the purposes of this manual is interpreted to be, when qualified airport staff are available at the airport to report runway conditions. Staff availability should be assumed to be during the published hours of operation only.

Movement Area - that part of an aerodrome intended to be used for the surface movement of aircraft and includes the maneuvering areas and aprons.

Priority 1 area means an airside area that, based on prevailing winds and operational requirements, is necessary in order to maintain the operational capability of an airport, and includes the features referred to in paragraph 322.411(1)(a) of the Canadian Aviation Regulations — Airport Winter Maintenance.

Priority 2 area means an airside area that is necessary in order to provide additional runway availability should wind conditions or operational requirements change, and includes the features referred to in paragraph 322.411(1)(b) of the Canadian Aviation Regulations — Airport Winter Maintenance.

Priority 3 area means an airside area that is not a priority 1 area or a priority 2 area, and includes the features referred to in paragraph 322.411(1)(c) of the Canadian Aviation Regulations — Airport Winter Maintenance.

Runway or Taxiway Strip is an area adjacent to the maneuvering area that must remain clear of all obstacles that are not frangible.

Sand means small particles of crushed angular mineral aggregates or natural sand material meeting the specifications in AC 302-013 used to improve runway surface friction levels.

Significant Change means, with respect to runway surface condition includes but is not limited to: changes in type of contaminant, such as from dry snow to wet snow; measurable changes in depth of contaminant; following the application or removal of sand or chemicals; following snow removal or sweeping; changes in conditions caused by rapid increases or decreases in temperature;

Slippery When Wet • A wet runway where the surface friction characteristics of the runway have been determined to be degraded. Note: A runway or its portion is deemed as having degraded friction characteristics when friction measurements, as conducted in accordance with AC 302-017, are below the minimum friction levels specified in Section 9.1.2.2 of TP 312 5th Edition

Slush - means partially melted snow or ice, with a high water content, from which water readily flows

Standing Water means water of depth greater than 3 mm (1/8 inch);

Strip; An area beyond the edge of a movement surface intended to protect an aircraft operating on the movement surface and to reduce the risk of damage to an aircraft regarding wing overhang and or accidentally running off the surface.

Snow Bank means a ridge of snow that can vary in height and width and is created as snow falls off the outer edge of the plow or sweeper with its location off of the maneuvering surface as specified in the AMSCR Remarks column

Snow Drift - A heap or mound of snow created by action of the wind.

Traffic - all traffic on the maneuverable area of an airport and or all aircraft flying in the vicinity of the airport.

Unrestricted AVOP - An Airside Vehicle Operator's Permit authorizing a person to operate a vehicle on all airside areas, at the airport named.

Wet means a surface condition where there is any visible dampness or water up to and including 3 mm (1/8 inch) deep;

Wet Ice means ice with water on top of it or ice that is melting;

Wet Snow - means snow that will stick together when compressed but will not readily allow water to flow from it if squeezed

Windrow: A ridge of snow that can vary in height and width and is created as snow falls off the outer edge of the plow or sweeper. The height and width is reported as the approximate maximum height with its location within the maneuvering surface as specified in the AMSCR Remarks column

YPA – is the ICAO designator for the airport identification of the Prince Albert Airport.

4. LEVELS OF SERVICE

The basic objective of snow removal and ice control is to ensure that safe and efficient aircraft, vehicle and pedestrian movement surfaces exist in accordance with the desired level of service. The term “snow removal and ice control” includes all action taken to reduce and/or eliminate the effects of snow and ice on airport operations.

The content of the NOTAM is significantly restricted by the limitations of Transport Canada Civil Aviation’s Advisory Circulars and NavCanada’s NOTAM Entry System (NES) reporting software. Prince Albert airport is not responsible for the content or accuracy of surface conditions read out by FSS. The NOTAM posted on NES may have data or comments that identify conditions on various movement surfaces, which can affect a pilot’s decision to use them. When FSS is not in service the Airport NOTAM information will only be available on the Collaborative Flight Planning Services website, airport staff will not read out the surface conditions or other hazards.

The validity of an AMSCR – CRFI is limited to the airports published hours of operation or as documented on the report as “Valid To HH:MM” when the runway conditions are being monitored. The next planned observation should be documented on the final report but can be assumed to be the next day’s start of hours of operation as stated in the CFS.

The processes and procedures of this manual are in effect during the published winter maintenance operations hours, regardless of the existence of winter contaminants. Winter contaminants that occur outside of the published times will be addressed as is reasonably practicable for the staffing, equipment and products that may be available at the time.

Winter Operations Hours are as published in the CFS and changes published via NOTAM. Prince Albert Airport (Glass Field) has operational staff on site during published hours of operation that may change from time to time, as a business decision, to accommodate scheduled passenger activities and qualified staff availability. Normal winter operations are Monday to Friday excluding statutory holidays, 05:00 to 20:00 local.

Prince Albert Airport will endeavor to provide winter maintenance outside these published hours as follows;

- After published hour of operation; No runway conditions monitoring is planned. *AMSCR validity length may vary dependent on airport staff attendance at the airport to monitor runway conditions.* Winter maintenance as required for Priority 1 areas only.
- All other times outside the published operating times will require two (2) hours prior notice and will require acceptance of the fees for the requested service(s) before work will commence.

After consultation with the local airlines and NavCanada, Prince Albert Airport runway 08-26 will not be reported in thirds or with Runway Condition Codes (RCC). This runway is less than 6000’ and is not required by regulation to be reported in thirds.

4.2 Aircraft Movement Surface Priorities

The aircraft movement surface priority areas for Prince Albert Airport are as follows:

Priority 1 Area,

- 1) the full length of the primary runway 08-26,
- 2) the width of 24m (80') of the primary runway 08-26 required to support the operational requirement of the aircraft movements at the airport during a storm,
- 3) taxiway Alpha, including entrance and exit access areas, to accommodate traffic to and from the primary runway 08-26,
- 4) de-icing pads or areas, including entrance and exit access to accommodate traffic to the primary runway 08-26 and from the Apron I,
- 5) Apron I areas necessary to accommodate aircraft traffic, passengers and cargo,
- 6) access roads, groundside and airside, to accommodate the movement of emergency vehicles to the runway, taxiways and apron areas referred to in this paragraph including the designated Medevac area on Apron I, (Veterans Way from Gate #2 to Highway 55)
- 7) visibility of lights installed as visual aids,
- 8) visibility and legibility of signs, and
- 9) the areas adjacent to the approach aids, including glide path & Localizer site (per the OAOO/AFSA), that require the removal of snow in order to maintain the signal integrity of the approach aid and as agreed to by the airport operator and owner/operator of the approach aid;

Priority 2 area,

- 1) remaining width of 08-26
- 2) remaining taxiways, including entrance and exit access areas, to accommodate traffic to and from runway 08-26,
 - a. With the following priority; (1) Charlie, Delta (2) Bravo (3) Foxtrot
- 3) visibility of lights installed as visual aids,
- 4) visibility and legibility of signs, and

Priority 3 area,

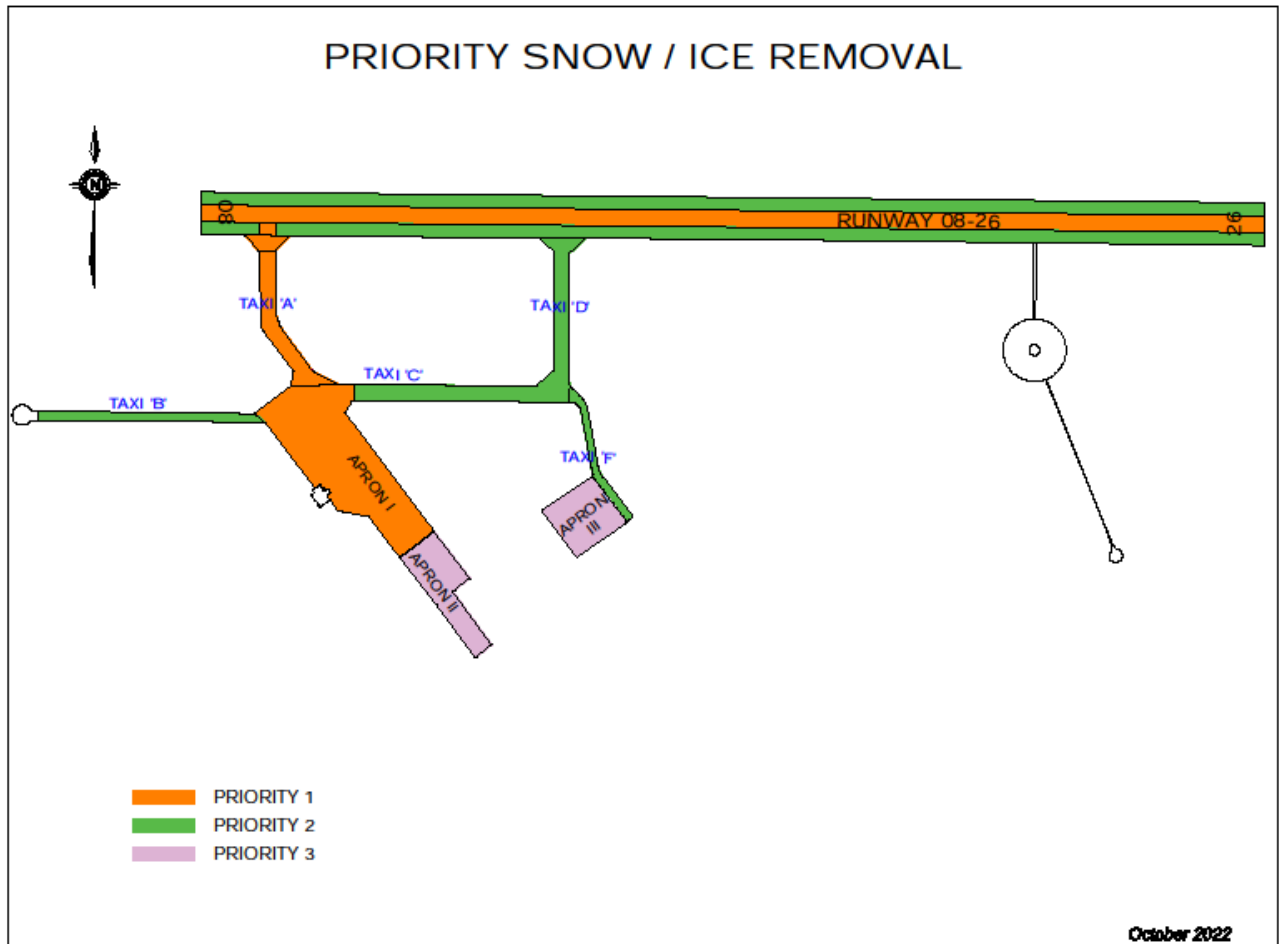
- 1) pre-threshold areas
- 2) Snow profile beyond runway and taxiway edge lights
- 3) remaining areas,
 - a. Apron II and Apron III
 - b. runway and taxiway shoulder areas,
 - c. apron shoulder areas,
 - d. airside service roads, including access roads to approaches, emergency vehicle and personnel gates,
 - e. remaining airside signage and lights.

The objectives of the airport operator to operate the airport during winter storm conditions are as follows:

- keep priority 1 areas clear at all times (during published hours of operation)
- keep priority 2 areas clear to the extent that doing so does not compromise the operator's ability to keep priority 1 areas clear; and

- clear priority 3 areas after the winter storm conditions have ended only after priority 1 & 2 areas are complete.

Priority Areas Map



Note:

The intent at all times during snow storms will be to clear the priority 1 areas to the maximum possible to maintain schedule air traffic and medevac service. The Guidelines to Accommodate Scheduled Traffic are in Appendix F.

It is recognized that maintaining full width may not be possible because of the site fixed resources or during severe storms. It is important to note that as cleared widths are reduced, the appropriate surface condition reports and NOTAMs are issued to advise pilots of these changing conditions.

As it is impossible to include all circumstances in this plan, a successful operation depends on the co-operation, initiative and sound judgment of all personnel involved.

Groundside

This manual does not fully address the snow removal of any groundside areas as it is not regulated by Transport Canada. The City of Prince Albert priority system will dictate snow removal priorities on groundside areas. At no time will a groundside area, other than Priority #1, take precedence over airport staff completing airside winter maintenance. City of Prince Albert - Streets Department staff can be brought in to address groundside snow clearing based on the City's streets priority system.

Priority;

1. Veterans Way from Highway #55 to Gate #2/Medevac area Stand #5 on Apron I
2. Veterans Way to the Terminal and Flight Service Station
3. Public and long term parking lots
4. Other public roadways

4.3 Snow Removal and Ice Control Procedures

General

Snow removal techniques at Prince Albert Airport is primarily via a combination unit of the plow truck, sweeper and blower. This has proven to be the most efficient and cost-effective method of snow removal. Note; that areas reported as "remaining" have not yet been cleared of contaminants and therefor may represent a hazard to aircraft. These areas of the surface reported should not be considered usable for aircraft.

Pedestrian walkway areas on airside of the terminal are the responsibility of the Airlines staff as indicated in the terminal lease agreement. Terminal groundside walkways & sidewalks are cleared by airport janitorial staff.

Airfield Lighting

Whenever possible, plowing pattern will be done so as to keep the windrows at least 3m (10') away from the edge lights. The windrow (not to exceed height limits) should be removed by snow blower during the first stages of priority 2 operations. Snow removal from around airfield lighting is done by a loader mounted cold air blower. Various mobile equipment is used for removal behind the lighting fixtures (runway / taxiway strip) during priority III stage of operations.

Surface edge lights must be on during winter maintenance operations. Warning flags must be installed on each edge/end light prior to the winter season and be maintained for the season.

Ice Control

Ice covered surfaces are treated with runway sand, sodium acetate and potassium acetate or a combination of these products. Sodium formate (SF) & potassium acetate (KA) are chemical products used as anti-icing and/or de-icing agents. These products vary in their effectiveness under various surfaces temperatures. These products are certified to be non-corrosive to aircraft metals. Sand and anti/de-icing chemicals are spread at minimal amounts to be effective under the given conditions. The materials are swept away as soon as practical after being used on the movement areas. The time ice control is applied and chemical residue or sand when present is reported on the AMSCR. After 24 hours from the last application of chemical, if the runway remains wet it may no longer be reported as chemical residue.

MATERIAL	USE	LIMITATIONS	APPLICATION	REMOVAL
Potassium Acetate (KA)	Anti-icer Added to sand SF De-icer for improved performance	Effective to –15 C	Truck Mounted Liquid Sprayer	Swept to centre to maintain anti-icing Swept when ice is melting. Report Chemical as contaminant and provide CRFI until surface is dry or 24 hours after application .
Sodium Formate (SF)	De-icer Anti-icer	Effective to -20 C	Truck Mounted Rotary Spreader	Swept to centre when a brine is created. Report Chemical as contaminant and provide CRFI until surface is dry or 24 hours after application.
Sand	Provides traction on ice when embedded	Below –10 C Not to be used unless all another ice	Towed Rotary Spreader	Swept off as soon as the surface is acceptable.

		control methods are ineffective.		
Urea	De-icer/ Anti-icer	Effective to –10 C, Slow Release	Towed or Truck Mounted Rotary Spreader	Swept to centre when a brine is created. Not used unless SF & KA is unavailable Report Chemical as contaminant and provide CRFI until surface is dry or 24 hours after application.

Sand on runways may cause FOD to aircraft. Very fine abrasives may cause erosion of turbine blades, and any material that is too coarse can cause damage to propellers or internal components of jet engines. Urea is a fertilizer with a limited capacity of effectiveness; for these reasons these products are not the preferred method of ice control.

Aircraft deicing chemical residue that falls onto a movement surface will not be reported as chemically treated but can be reported as a contaminant in the comments section.

Aircraft Parked on Apron

Snow is removed from the apron(s) using a plow, sweeper or loader as available. Windrows are removed using a blower. Blowing is the most cost effective method to reduce snowbanks within the Apron Strip and is used wherever possible.

Note: Snow removal equipment will not perform any winter maintenance operation closer than 3m (10') to any aircraft. Aircraft parked overnight during snow conditions may have windrows around them. The pilot will have to request snow removal from the airport staff. Snow removal will only be performed under the pilots' direct observation and may require a fee for service.

Refer to the Apron Management and Safety Plan for more details.

Private Aprons; snow and ice removal on leased land is not the responsibility of the airport to remove. Snow removed from these areas must remain on the leased property. At no time, may the private snow removal equipment be on an airport movement surfaces including the surfaces strip.

Windrows

During snow removal operations;

- Windrow heights should not exceed 36 inches (91 cm), in height on edges of manoeuvring areas, due to the danger to aircraft wings/propellers.
- Windrow heights should not exceed 2 inches (5 cm), in height across manoeuvring areas (i.e. transition between runway to taxiway or Taxiway to Apron), due to the danger to aircraft wheel/brake freezing.

Snow Bank Removal

Snow accumulations outside the lights are routinely cleared as part of the priority three clearance plan. Snow banks that have been identified outside the regular removal program are prioritized and cleared to grade a distance from the edge of the pavement of:

- Runway side 20 meters (65 feet);
- Runway end 60 meters (200 feet); and
- Apron edge 15 meters (50 feet) or as far as obstructions will allow.

If possible the cleared edge should be tapered.

Historic snow depths in Prince Albert have proven that these distances are adequate to maintain clearance.

Maximum Snow Accumulation Slope (%) in Pre-threshold Area and Beside Runways and Taxiways

Detailed Information on the maximum allowable snow accumulations in pre-threshold areas and beside runways and taxiways is contained in *SOP #13 (Appendix G)*.

There is no method to taper snow at varied depths as indicated in Diagram I & II of Division IV – Airport Winter Maintenance regulations. Snow will be removed to 0.05m in all areas when tolerance depths are accumulated for each area. The ILS and 08 Approach light visibility requirements exceed the pre-threshold requirements at certain distances. For example; SSLAR Bar #1, 60m from 08, would be obscured with 1m snow cover. The lowest tolerance depth or navigational aid function will always prevail.



Snow Depths Tolerance Chart – distance

SURFACE	AREA	Distance - Depth	Distance - Depth	Comments
RW 26	Pre-threshold	1 st 10m – 0.15m	Next 10m – 0.75m	LOC area C max 0.75m depth
RW 08	Pre-threshold	1 st 10m – 0.15m	Next 10m – 1m	GP area D max 1m depth
RW 08-26	Edge	1 st 10m – 0.15m	Next 10m – 1m	
TWY A	Edge	1 st 10m – 0.15m	Next 10m – 0.4m	GP area B max 0.4m depth
TWY C, D	Edge	1 st 10m – 0.15m	Next 10m – 1m	
TWY B, F	Edge	1 st 10m – 0.15m	Next 5m – 1.5m	

Note: When conditions do not allow for snow clearing as indicated, a NOTAM (AMSCR) will be issued, identifying actual conditions within the limitations of the NOTAM Entry System. For example, snow exceeding tolerance depths located on the edge of the runway is reported in the AMSCR as a snow bank at a specified distance from the edge and specified depth of snow.

Snow Dumps

Snow which has been cleared from movement area, strips or ILS areas, is dumped in locations which least interfere with airport operations and facilitate good drainage during melting. Snow dumps are situated at the following locations:

- West of Lot 6 (198 Veterans Way).
- West and South of the FEC. (Maximum 8 feet high)
- East of the Glide path between Runway 08-26, Taxiways C & D. (Maximum 8 feet high)
- South of Apron III

YPA- Snow Dump Areas



05/09/2018 - 06/05/2018

Snow Removal - Instruments Landing System (ILS)

Markers (wooden stakes or reflective tape on light fixture stands) have been placed to help determine snow depth in these ILS sensitive areas B & C.

NavCanada provides an annual ILS Winter Maintenance Presentation prior to each winter season.

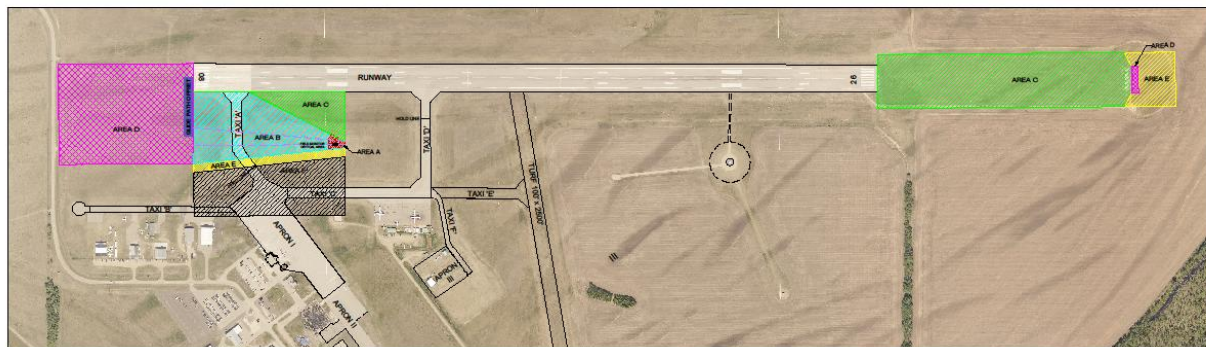
When snow removal needs to be completed or snow depth tolerances are exceeded within the ILS critical areas, the airport maintenance crew will call the Technical Operations Coordinators (TOC). TOC in turn approves the work to proceed, will shut down the instruments and will have the NOTAM issued.

A NOTAM may be given a recall time to have equipment removed from the ILS areas. Recall time is very rarely triggered, only in emergencies or abrupt and drastic changes in weather.

Maintenance within ILS sensitive areas will be controlled by FSS using normal ground vehicle control methods.

YPA

NAVIGATIONAL AID'S VEGETATION and SNOW CLEARING ZONES



GLIDE PATH:

AREA A: Average snow depth not to exceed 40cm. Vegetation does not exceed 30 cm in height

AREA B: Average snow depth not to exceed 40cm. Vegetation does not exceed 30 cm in height

AREA C: Average snow depth not to exceed 1.8m.

AREA D: Natural snow allowed. Snow cleared between the Glide Path and the runway threshold must not be deposited in this area.

AREA E: Snow depth must not exceed 1.8m. Snow banks must be tapered with a maximum angle of 50 degrees relative to the ground.

AREA F: Natural snow allowed. Dumped snow higher than 2.4m must be tapered with a maximum angle of 6 degrees (1m per 10m) relative to 2.4 m.



Note 1: Snow cleared from the runway or Taxiway deposited in the Glide Path Clearing zones.

Note 2: Snow banks on the edge of the cleared area between the Glide Path and the runway threshold must be tapered with a maximum angle of 50 degrees relative to ground.

NORMARC/WILCOX (LOC) LOCALIZER

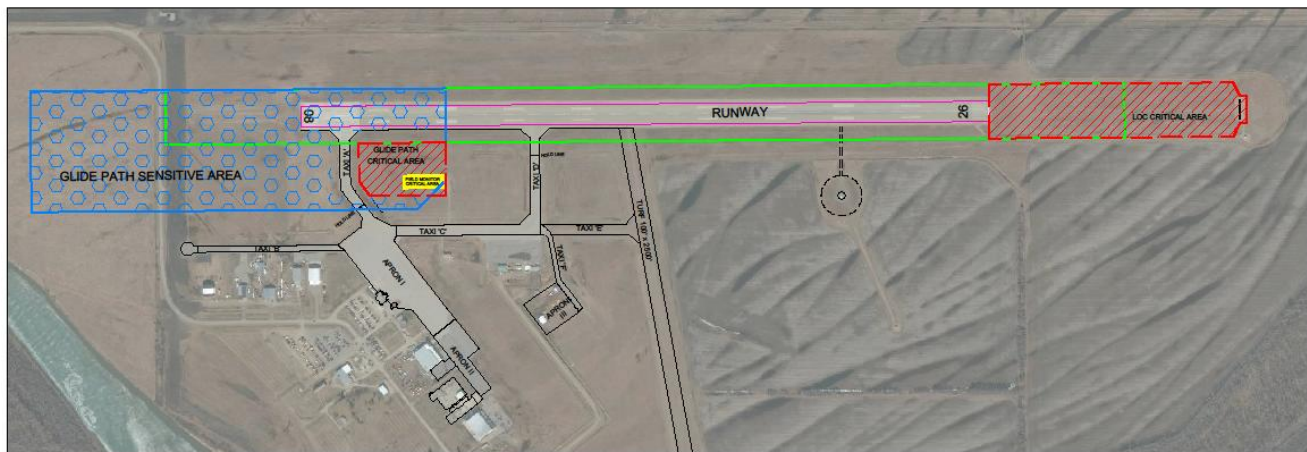
AREA C: The zone delimited by the front of the Array and the runway end. Snow tolerance of 0.75 meters. Vegetation does not exceed 50cm in height.

AREA D: The zone at the back of the Array that needs to be cleared. Snow tolerance of 1.00 meter.





AREA E: Snow naturally accumulating can be tolerated and snow removal is not required in this area. This area cannot be used as a dumping site for snow cleared from the runway or any other area. However, if there is a road in this area, snow removal is permitted to allow access.

Note 1: Snow banks on the edge of the cleared area between the Localizer and the runway stop end must be tapered with a maximum angle of 50 degrees relative to ground. Height of the snow bank should be limited to the height of the array.

CAT 1 ILS CRITICAL AREAS



Permission Requirements Per Area:

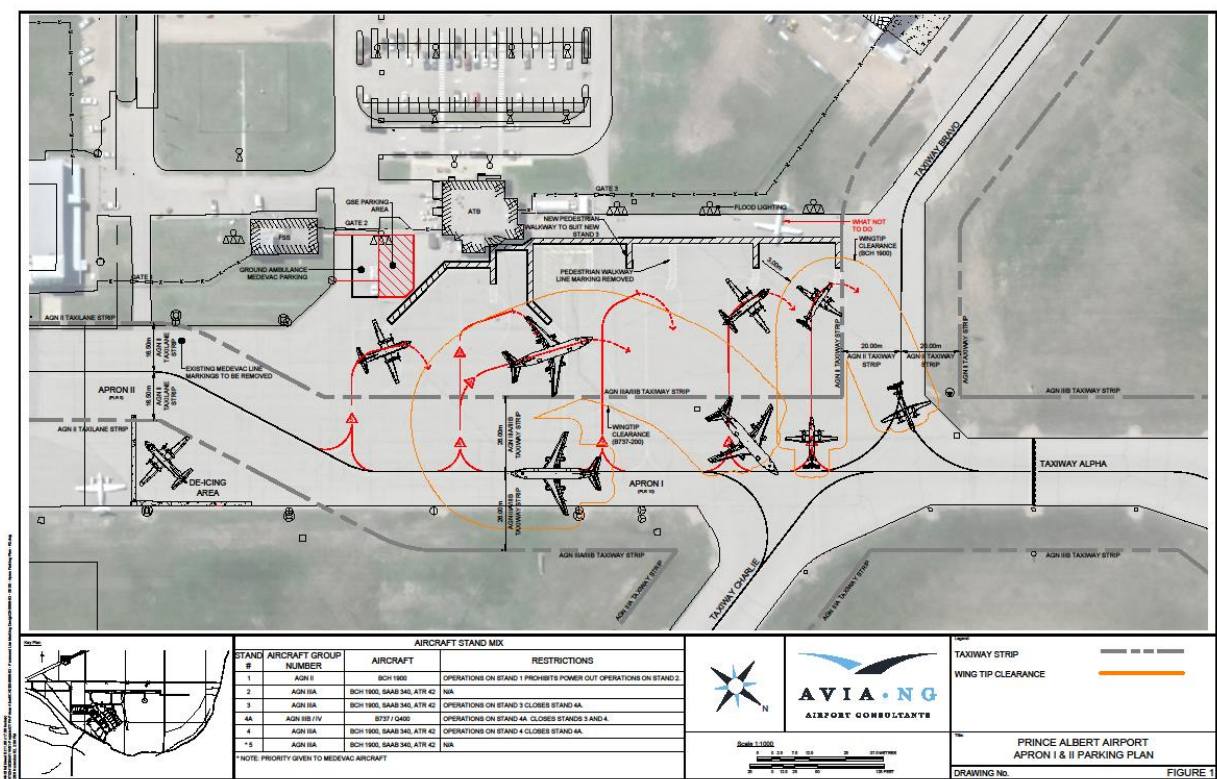
FSS Control		RPA area
		Sensitive area
5 hr notice to TOC Winnipeg NOTAM		Critical area
		Field Monitor Critical area

NOTE:

- **Runway Protected Area (RPA)** must be kept clear of all vehicles, obstacles and personnel during Aircraft operations. The RPA overlaps some ILS areas and requires separate permission to occupy.
- The **Field Monitor Critical Area** where no objects are permitted during all Glide Path operation: this includes people and vehicles
- The **Critical Area** is an area where vehicles, including aircraft, are **not permitted** during all Glide Path operations. This area is protected because the presence of vehicles and/or aircraft inside its boundaries would likely cause unacceptable disturbance to the Glide Path signal.
- The **Sensitive Area** is the area extending beyond the critical area where the parking and or movement of aircraft (and very large objects such as heavy construction equipment) is **not permitted**. This area must be controlled to prevent the possibility of unacceptable interference to the Glide Path signal during Glide Path operation.

Glycol Usage and Mitigation - Environmental Protection

Prince Albert Airport is committed to the protection of the environment. Discharge of glycol (aircraft de-icing fluids) can have potentially negative environmental effects on the nearby surface water. Therefore, the only approved area for de-icing at the Prince Albert Airport is on the Apron I dedicate aircraft deicing area. The deicing location can be found in the CAP. Any deviation requires written authorization from the Airport Manager prior to any operations, and the provision of highly detailed mitigation plans and measures. The run-off from this area flows to the self-contained catch basins on the apron, through the surface drainage system, and is collected and disposed of by an environmental waste management company. Airport staff monitor this location daily during the de-icing season (and other times as required)



5 COMMUNICATION PROCEDURES FOR THE CONDUCT OF WINTER MAINTENANCE

Vehicle operators will monitor and operate on the MF 122.6 MHz when on maneuvering areas and inform FSS (broadcast) of their maintenance intentions (location, activities, duration, etc).

During published winter maintenance hours:

- Crew Observation and AMSCR-CRFI reporting every (8 hours with a minimum of 2 during published hours) or more frequently depending on weather and maintenance operations.
- FSS will call the airport crew (on channel 122.6 or phone 953-4966) if there are any known safety hazards, lighting or communication failures or severe weather forecasts per the APOA. (Appendix C)

After Published winter maintenance hours:

- FSS will call the crew via the Duty Forman at 961-6190, if the following conditions are observed:
 - When there has been a snowfall of 1 inch or more and/or high winds causing drifting of 6 inches or more;
 - Known or forecast freezing precipitation or considerable frost build-up;
 - Suspicion of wildlife or other intrusion airside;
 - Any other condition/situation that the FSS feels could impact the safe operation of Prince Albert Airport.
- The Duty Forman is the Primary contact after hours. This phone is monitored from 5pm to 8am weekdays and all day on weekends and statutory holidays.

Process:

- Duty Forman takes FSS call
- Duty Foreman calls crew by seniority, then APM or Designate.
- If no answer, the Duty Foreman is to try to address the issue if qualified.
- If not qualified to perform the task, will at least observe the condition and will repeat the call out list.
- After hours Call Backs to perform Checks and or Maintenance:
 - FFS will advise the Pilot requesting the Checks and Maintenance that there may be a fee associated or confirm that it is an emergency aircraft (medivac, police emergency etc.) Call out charges can be found by calling the Airport Operator, on the YPA website and Appendix D.
 - FSS should relay to the pilot that the Airport Operator requires two (2) hours' notice if the pilot wishes maintenance.

5.1 Aircraft Manoeuvring Area Closure and Opening

The Airport Operators' objective is to maintain priority 1 areas operational during published operating hours. Ongoing weather conditions that continue to deteriorate the movement surface conditions are not grounds for closure of those movement surfaces. Continued reporting of the changing movement surfaces conditions as per SOP #13 (Appendix G) procedures will be followed. Pilots will determine if the runway and other movement surface are acceptable for their operation based on the AMSCR/CFRI data and their operating procedures.

Safety of Operations	Circumstances for closure of a maneuvering surface could be the operators' inability to maintain runway 08-26 at or above 0.2 CRFI & priority 1 areas cleared for use, as defined in Section 4, for more than 2 hours. Or closure could be the operators' inability to maintain priority 2 & 3 areas after a storm for more than 8 hours: Winter maintenance activity will be suspended when extreme weather conditions impede visibility for operators to perform maintenance activities safely. (i.e. below RVR 1200)
Aircraft Movements	When unnecessary aircraft movements (i.e. training circuits) are being conducted that interfere with snow and ice removal operations the surface will be closed.
Personnel	When sufficient personnel, deicing product or equipment are unavailable to ensure snow and ice control can be conducted in a safe and efficient manner.
Air Carrier Operations	Air Carrier schedules will not be seriously disrupted
Consultation	FSS Operations personnel have been consulted to determine operational impact on existing operations.
Length of closure	Closure is to be in effect only until aircraft operations can safely resume.

Closure

If a runway/taxiway is to be closed due to surface conditions, the Airport Manager, (or designate with the assistance of airport maintenance personnel) shall make the final decision. A NOTAM describing the closure will be issued. Lighted barricades are not required.

Opening

The Airport Manager (or designate with the assistance of airport maintenance personnel) will determine when surfaces may be returned to service. The NOTAM issued closing the movement surface will be cancelled only once a new AMSCR is issued with conditions conducive for safe flight operations.

Special Note:

Snowmaking activities at the Kinsmen Ski Hill can create reduced visibilities that affects operations at the Prince Albert Airport (CYPA), Appendix E is the procedure in place to address this potential operational impact.

6 PROCEDURES FOR THE PUBLICATION OF A NOTAM

Reporting procedures will comply with all Transport Canada requirements and the data entry will follow the Canadian NOTAM Operating Procedures manual Section 8 Procedures for RSC NOTAM.

The ACMSCR with CRFI report will be entered into the NES via Tracr NG or NES directly. The crew undertaking the inspection and testing has the Tracr NG system and NES link installed on the inspection vehicle(s) computer, during the observation and testing to expedite reporting.

If the inspection truck computer mobile connection fails, the data will be entered into Tracr NG or NES on the airport iPad or office computer(s) as soon as is reasonably possible.

If the computerized systems fail, the data will be entered onto the AMSCR Report form and faxed (780) 980-8593 or phoned (866) 541-4102 into the FIC Edmonton.

If all the above methods fail, the data will be provided to the FSS and the FSS will report the conditions from the paper report to the pilots as required.

Pilot Reports (PIREPs) of braking action are sometimes available to the airport operator and may be used to initiate additional runway inspections but will not be used to downgrade the report because YPA is not issuing Runway Condition Codes (RCC) GRF system. Also, to satisfy a pilot's urgent requirement and/or to facilitate manoeuvring area maintenance, Verbal updates from the airport operator of a full AMSCR can be provided to Flight Services via radio or telephone to update pilots. These reports are not necessarily entered into the NES but should be documented by the operator as soon as possible with a written note on the previous AMSCR.

Runway 08-26 is regularly wet-friction tested for friction characteristics in accordance with AC 302-017, current results exceed the minimum friction levels specified in Section 9.1.2.2 of TP 312 5th Edition, thus "Slippery When Wet" will not be reported for 08-26.

Prince Albert airport will endeavor to report wet or standing water conditions not associated with winter contaminants, outside the winter reporting period when practicable.

Standard Operation Procedure #13 (SOP#13) – Winter Airfield Maintenance Inspection Procedure addresses in detail for trained airport personnel:

- how to inspect the airfield for the development of an AMSCR
- Standard terminology to be use in an AMSCR
- how CRFI is obtained,
- specific conditions for providing a CRFI,
- decelerometer procedures including calibration,
- vehicle requirements for conducting CRFI measurements,
- AMSCR - CRFI documentation requirements,
- related quality control for the provision of an AMSCR - CRFI

Important AMSCR-CRFI Information:

A CRFI of 0.40 or less will be immediately communicated to FSS for issuance of a verbal NOTAM.

A CRFI of 0.41 and 24m (80') clear width is YPA's operational objective to maintain and further maintenance/resources might not be used to achieve a higher friction as part of priority #1 work. It is understood that under certain wind/weather conditions, this friction and or cleared width may not be adequate for all aircraft types using YPA. Therefore it is incumbent upon the airline/pilot to indicate their requirements for the weather conditions, request further maintenance and accept any additional fees for service. Further friction or cleared width maintenance will be performed as a first priority of priority #2 items.

A CRFI is only representative of the friction within 10m (32') of either side of the centerline at 1000' intervals.

A CRFI will not be reported when it is counter indicated. For example;

- The friction is >0.50 of a representative sample, (a statement will be made in AMSCR comments that "CRFI is greater than 0.5")
- Wet with no other contaminant present,
- Slush with no other contaminant present,
- wet snow,
- dry snow exceeding 2.5cm (1 inch).

The airport operator should cancel a current AMSCR by calling the FIC if:

- Conditions have changed significantly, and air traffic will not permit inspectors access on the runway to report within a reasonable period.

7 SAFETY PROCEDURES FOR CONTROLLING THE FLOW OF GROUND VEHICLES

All vehicle operators with access to the movement area are required to have a valid Unrestricted - Airside Vehicle Operators Permit (AVOP). All ground vehicle access on the maneuvering areas will be controlled by FSS on MF 122.6. Operator's will follow FSS direction and established procedures within the Airport Traffic Directives – AVOP Manual.

Multiple Vehicle Operations; A maximum of 2 pieces of snow removal equipment will be working on a given surface at one time. They will travel in the same direction during these joint operations and remain in contact with the maintenance portable radios frequency 166.545.

Deicing activities with SA or SF will commence after clearing the runway full width. Sand may be applied after the priority 1 area is completely cleared. Deicing and Strip snow removal may be carried out at the same time.

Runway conditions inspections and CRFI testing should be done while the runway is clear of all other ground traffic when possible.

Vehicle access control for snow removal in ILS critical areas will follow the procedures in Section 4.3.

Winter maintenance activities are curtailed during the implementation of RVOP to;

- Only inspections as described in the RVOP will be conducted and no equipment will be on airside when the RVR is > 1200 RVR other than emergency response.
- Only critical winter maintenance activities of priority 1 area will be performed to achieve a >0.40 CRFI when the RVR is < 2600, if able. The combination of weather and snow removal activity may impair visibility condition for the operator to safely continue.

Winter maintenance coordination:

Winter maintenance activities are primarily performed by employees of the airport and no arrangements for snow clearing are required beyond staff scheduling in accordance with the collective bargaining agreement.

Passenger pathways maintenance is described within the airline's lease agreement and monitored by the airport manager or their designate.

Coordination of winter maintenance actions is done by the airport manager or their designate. Due to a limited staffing contingent. All airport staff assigned to a critical shift are fully qualified in all winter maintenance duties.

Coordination of airline/pilot requirements is performed by the airport manager or their designate.

Coordination of activities with NavCanada is described in the Airfield Traffic Directives and AVOP manual.

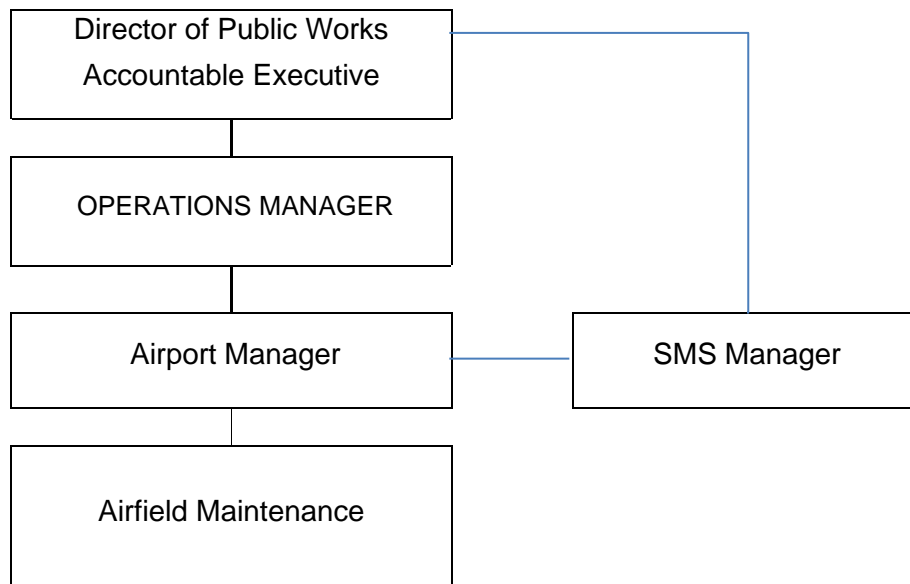
8 CONTROL OF OTHER THAN ICE CHEMICALS BEING TRACKED ONTO AIRSIDE

Procedures for the control of ice control chemical other than the ice control chemicals specified in section 322.415, from being tracked onto airside;

- Only runway ice control chemicals will be applied on the road from the maintenance garage to the aprons.
- Only runway ice control chemicals will be applied on the sidewalks at the terminal.
- Use of salted sand on the roads will be kept to main access roads only.
- Road traffic accessing airside will be kept to an absolute minimum, and restricted to Aprons as much as possible.
- Crew trucks that access public roads will be washed as frequently as possible.
- The entrance to gate #1 & 2 will be swept clean frequently.

9 AUTHORITY AND ORGANIZATIONAL RELATIONSHIPS

Organizational Chart



Duties and Responsibilities

ACCOUNTABLE EXECUTIVE (AE) DIRECTOR OF PUBLIC WORKS

The AE is the Director of Public Works, whom reports directly to the City Manager, is responsible for the City landfill, sewage treatment plant, water treatment plant, garbage pickup, airport, transit, roadways, sidewalks, underground infrastructure (all pipes) and traffic. This department also manages all of the City's fleet equipment, ensuring that it is repaired and maintained, including police, fire and airport equipment/vehicles. The AE is responsible for operations or activities authorized under the certificate and accountable on their behalf for meeting the requirements of the Canadian Aviation Regulations.

OPERATIONS MANAGER

The Operations Manager whom reports directly to the Director of Public Works, is responsible for the; Airport, Sanitation and Roadways as well as review of all new private development applications as related to Public Works. The Operations Manager is the most direct upper management representative that oversees the operations of the airport and acts as the APM designate during absences

Note; The Airport Manager is assigned to perform SMS Manager's duties and responsibilities in accordance with CARS 302.505(3).

AIRPORT MANAGER (APM)

The Airport Manager reports directly to the Director of Public Works (AE). The Airport Manager is responsible for all aspects of the airport operation;

- directing / training airport maintenance staff, including the SMS Manager, in daily operations,
- establishing and maintaining contractual agreements with users and service providers,
- establishing and maintaining operating and capital budget,
- management of all projects on airport,
- development and maintenance of operation manuals, policies and procedures,
- performs any other role as identified in the operations manuals, ensuring compliance to all applicable regulations and City policies.
- The opening and closing of airport facilities (when necessary)
- During the winter operations environmental awareness and due diligence are practiced and are given high priority. The Airport Manager is responsible for ensuring that the methods or product used to control ice meet the recommended specifications and that they are applied correctly and are removed as soon as possible to limit the overall FOD exposure to aircraft.
- Monitoring effectiveness and compliance of this Winter Maintenance Plan

AIRFIELD MAINTENANCE

Airport Maintenance report directly to the Airport Manager; and is responsible for maintaining all airfield surfaces, lighting, electrical systems, facilities and mobile equipment in the Airport Operators control. They are responsible for the implementation and related reporting of the airport's safety plans including but not limited to the compliance to relevant TP312 standards and practices, Wildlife Management and Winter Maintenance plans. The Airfield Maintenance staff are charged with issuing aircraft movement surface condition reporting and liaising with airport users.

The Airfield Maintenance Technicians inspect, measure contaminants and report surface conditions; advises Nav Canada regarding snow removal/ice control status; and controls overall airport snow removal on a given shift. He/she can assume operational responsibilities of the Airport Manager or their designate during his/her absence after hours of administration.

NAVCANADA

Provides ground traffic control, notice of weather conditions and issuance of NOTAM's as per the APOA (Appendix C).

AIRLINES AND GROUND HANDLERS

Airlines and Ground Handlers are responsible for the preparation of their work areas prior to snow or ice conditions becoming prevalent. Airlines and Ground Handlers must ensure they are aware of current and forecasted conditions and ensure they maintain their work areas in such a manner to expedite snow and ice control by Airfield Maintenance. Airlines and Ground Handlers must also maintain a clear line of communication with airfield maintenance. Airlines and Ground Handlers are also responsible for regularly inspecting all airside areas utilized by airline passengers to ensure safety during the loading or unloading of aircraft. When necessary, airline and ground handler personnel should apply sand or chemical to the pedestrian walkways using the materials supplied by Prince Albert Airport, in accordance with their terminal space Lease Agreement.

SNOW AND ICE REMOVAL ON LEASED AREAS

Tenants are fully responsible for snow and ice control on their leased areas. Tenants may however, arrange with the Prince Albert Airport to have their areas cleared on a cost recovery basis. In these cases, Tenant areas are normally treated as Priority 3 areas and cleared after all other airside work has been completed. Airport staff must record times spent and the equipment and materials used to clear tenant areas. Tenants shall be invoiced for all work done by the airport on leased areas. *Tenants are required to sign a work request form prior to any work beginning.*

9.1 Contact Information

	Work	Fax	Cell
Airport Manager *	953-4966	765-4026	980-7123
Airport Maintenance Staff	953-4966		960-7372 **
Duty Forman			961-6190
Mohammad Kraishan (Operations Manager)	953-4909		961-6191
Jeff DaSilva (Accountable Executive)	953-4910		960-8296
Flight Service Station	Freq; 122.6		
Garry Prokop (Supervisor)	765-8802	765-8803	
Heather Bonnell (Site Manager)	514-2279		

* Airport Manager position is currently vacant; the Operations Manager is providing coverage in the interim.

** Only in primary inspection vehicle.

Communication procedures between the Airport Operator/Winter Maintenance Staff and the Flight Service Station will follow the procedures laid out in the Airport Traffic Directives and Airside Vehicle Operating Procedures Manual and this Winter Maintenance Plan.

10 ASSESSMENT OF PERSONNEL AND EQUIPMENT

The Airport Manager will ensure that personnel and equipment are adequate to meet the operational requirements of the Prince Albert *Airport Winter Maintenance Plan*.

Current minimum staffing and equipment are: 1 Airport Manager, 2 Airport Maintenance Staff, 1 plow truck, 1 sweeper, 1 blower, 1 deicer truck, 1 loader, 1 staff vehicle and 1 decelerometer, 1 computer to input the AMSCR to NES.

A review of the adequacy of personnel qualifications is conducted annually during the Training Matrix update and also every three years within the SMS Quality Assurance Program and any time it is required by SMS finding. A review of the equipment adequacy to perform the work is done as per the City of Prince Albert's Equipment Inspection / Preventative Maintenance Policies.

Training required for performing all the objectives of this Winter Maintenance Plan:

- Human & Organizational Factors
- SMS Indoctrination
- Unrestricted AVOP, Radio License
- Emergency Response Plan - Roles & Responsibilities
- Airfield Inspections (AIM software)
- AMSCR – CRFI (GRF) observation & reporting
- NES & Tracr NG software use
- Winter Maintenance Plan review including;
 - snow and ice control for airside lighting, markers and signage;
 - Maximum height of snow profile beyond runway and taxiway edge lights
 - the inspection, storage and application of airside ice control chemicals and sand;
- NavCanada's; ILS Winter Maintenance Presentation
- City of Prince Albert Power Mobile Equipment Training

After receiving initial or indoctrination training, all staff receive recurrent and updated training as per the Training Matrix schedule. Additional training may be held throughout the year if deemed appropriate by the Airport Manager. Training can be conducted by the Airport Manager however, depending on the existing level of expertise, it may be necessary to obtain some assistance from external specialists in order to provide this training.

To validate the effectiveness of the training, all participants complete a test to confirm their understanding of the processes. Externally provided training requires:

- Signed/dated certificate identifying the trainee, provided by the training organization.
- Course curriculum

A copy of the completed test or certificate is kept on file by the Airport Manager and Human Resources department.

Staff training requirements (records retention and recurrent frequency) are listed in a training matrix which is updated annually by the Airport Manager and kept at the Airport Maintenance Garage and Human Resources Department.

11 QUALITY CONTROL

Deicer Products;

- a) Procurement: the specifications from AC 302.014 indicating properties meeting the most current applicable Society of Automotive Engineers (SAE) Aerospace Material Specification (AMS) will be included in the purchase order along with the requirement to supply a Safety Data Sheet and proof the product meets SAE – AMS specifications with the delivery.

Storage: Chemical will be stored in a designated area out of the weather to be kept warm and dry.

Urea will not be used unless other deicing products are unavailable.

Sand Product;

Procurement: these specifications will be included in the purchase order along with the requirement to supply an analysis that meet the blow requirements from a 3rd party with the delivery.

- a) be an abrasive material for airside ice control consisting of either crushed angular mineral aggregated or natural sand;
- b) be free from chlorides and corrosive materials, clays, debris, cementation, organic matter and other non-friction material;
- c) the pH of the water solution containing the material should be approximately neutral (pH 7);
- d) have a stable physical and chemical structure that is unaffected by water or the elements;
- e) not be softer than and including 3.5 up to and including 7 on the MOHS hardness scale; and
- f) be of a granular size that falls within the following parameters:
- g) to promote visual awareness and absorption of solar heat, it is preferable to use abrasive material that is dark in colour

Minimum specification:	Percent Passing by Weight
Sieve Size (U.S. Standard)	
No. 4 (4.75 millimetres)	100 %
No. 80 (0.180 millimetres)	0 % to 2 %

Storage: Sand will be stored in a designated area out of the weather to be kept warm and dry. If suspected not to be compliant, prior to storage, a representative sample will be taken and compared against the specification and sieve analysis.

AMSCR;

The Airport Manager or their designate will review a random selection of AMSCR reports for accuracy. The printout of the reviewed AMSCR will be placed in a binder by the Airport Manager and an email to the crew of any improvements needed on future reports. Any inaccuracies noted will be communicated to the AMSCR issuer in writing. A new AMSCR will be completed, if applicable.

APPENDICES

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX A

Advisory Circulars (hard copies only)

- 300-005 Changes to Runway Surface Condition Reporting
- 302-017 Runway Friction Measurement
- 300-019 Global Reporting Format (GRF) for Runway Surface Conditions
- 302-026 Decelerometer Performance Specifications

Canadian Aviation Regulations & Standards (hard copies only)

- Division IV – Airport Winter Maintenance
 - 302.401-419
 - 322.401-419
- TP312 5th Ed. (hard copies only)
 - Section 9.1.2

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX B

AFSA (hard copy only)

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX C

APOA (hard copy only)

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX D

CALL OUT CHARGES

Dependent on Weather / Runway Conditions

The type of maintenance performed is at the airport operator's discretion based on the conditions of the movement surfaces, active/forecasted weather and resources available to make the priority 1 area safe.

PRIORITY 1 & 2 SNOW REMOVAL OPERATIONS				
RESOURCES	Unit Cost per Hour	Estimated Hours per Application	Materials per Application	Total
Operator	\$ 84.00	2.75		\$ 231.00
Plow Truck & Sweeper	\$ 130.00	1.50		\$ 195.00
Grader	\$ 125.00	0.50		\$ 62.50
Snow Blower	\$ 150.00	0.50		\$ 75.00
Loader	\$ 100.00	0.25		\$ 25.00
TOTAL		2.75		\$ 588.50
AMSCR-CRFI Check				\$ 90.00
Administration	15%			
PRIORITY 1 DE-ICING OPERATIONS			Actual Cost Recovery	
RESOURCES	Unit Cost per Hour	Estimated Hours per Application	Materials per Application	Total
Operator	\$ 84.00	0.50		\$ 42.00
Granular De-icer	\$ 90.00	0.50	\$6,000.00	\$6,087.00
Liquid De-icer	\$ 90.00	0.50	\$ 2,750.00	\$2,837.00
Sand	\$ 90.00	0.50	\$ 950.00	\$1,037.00

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX E

KINSMEN SKI HILL PROCEDURES

Airport Operations Impact

- (1) Purpose;
- a) Snowmaking activities at the Kinsmen Ski Hill can create reduced visibilities that affects operations at the Prince Albert Airport (CYPA),
 - b) A reduction in visibility to 3nm requires the aircraft to use an instrument IFR approach. A reduction in visibility to less than ½ mile or RVR of 2600 stops all aircraft movements.
- (2) The Contractor agrees to abide by all rules established by the CYPA Airport Operator and NAV CANADA as follows:
- a) The Contractor shall provide the Airport Operator and Flight Service Station (FSS), with the snowmaking season schedule; November through to February each year. -20 or colder.
 - b) The Contractor shall ensure that they coordinate snowmaking activities with the Airport Operator and FSS,
 - c) The contractor shall provide notice to FSS at least one(1) hour before the planned snowmaking and obtain clearance prior to commencement,
 - d) The Contractor is required to obtaining the current local weather conditions from the FSS and obtaining regular updates while snowmaking procedures continue,
 - e) No snow making will be authorized when the wind direction is inside of the parameters of 260 degrees to 290 degrees,
 - f) If the visibility is reduced to 3 nm or upon notice by the FSS, the Contractor must cease all snowmaking immediately,
 - g) The contractor shall ensure that they have an emergency contact available at all times during snowmaking,

Contact	Phone No.
Nathan Stregger	(306) 981-4716

- h) Airport Contact Information;
- 1. FSS (306)765-8801
 - 2. Airport Operator (306)953-4966
- Airport Manager;
- Cell; (306) 980-7123
 - Email; princealbertairport@citypa.com

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX F

GUIDELINES TO ACCOMMODATE SCHEDULED TRAFFIC

Objective; *to have the runway 08-26 ready for landing/takeoff of the airline scheduled traffic.*

- *Achieve at minimum a CRFI of 0.40 on 24m (80") wide on the full length of 08-26. Issue an AMSCR and (CRFI if applicable) 30 minutes prior to their arrival time so that airline(s) can plan their flights from YXE to YPA. Have the remainder of the Priority 1 area maintenance completed before the airlines scheduled arrival time. At a minimum maintain the Priority 1 area for the duration of scheduled flights. To respond to the needs of emergency flights, such as Air Medivacs, as soon as is possible.*

***** If the forecast calls for contaminant that would be reasonably expected to require extensive maintenance to achieve the objective or if Flight Services calls to inform the Airport Operator of contaminants that are reportable under the APOA agreement; the maintenance staff should start the maintenance activities an hour earlier as the situation requires, vs. the normal hours of operation. *****

(Typical Weekday morning)

5:00am Airfield Inspection items ONLY (Other items can be inspected later)

5:30am AMSCR with possible CRFI issued (*No Later Than*)

5:30am Priority 1 area Snow and or Ice removal

- Make a pass on way to 08-26 in front of ATB and down Taxiway A
- RW 08-26 23m (80') wide full length
- Make a pass on way back from 08-26 down Taxiway A and in front of ATB

6:30am Updated AMSCR with CRFI issued if applicable (*No Later Than*)

- If CRFI is <0.4;
 1. Notify FSS immediately and call APM
 2. Call in a second airport maintenance worker for assistance (use APM or Duty Foreman to do call ins)
 3. Continue maintenance on 08-26 only until contaminants are sufficiently removed
 4. Second staff member to assist in maintenance but priority is on frequent AMSCR inspections , CRFI testing and reporting updates
 5. APM to advise the airlines logistics of maintenance status and plan
 6. APM to call in City Streets Department to plow groundside roads
- If CRFI is >0.4;
 1. Continue to complete Priority 1 area and file report updates or (verbally to FSS, dependent on maintenance operation completion of Priority 1 area are achievable before 7:00am)
 2. Complete maintenance of Priority 2 areas. Issue an AMSCR

AIRPORT WINTER MAINTENANCE PLAN -YPA

3. Complete all other priority areas as per the Winter Maintenance Plan
4. Issue updated AMSCR as per the Winter Maintenance Plan

AIRPORT WINTER MAINTENANCE PLAN -YPA

APPENDIX G

SOP #13 WINTER AIRFIELD INSPECTION PROCEDURES (hard copy only)

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