

Winter Services at Copenhagen Airport



Local Snow Plan 2011/2012

Effective from: 01.11.11
Terminates: 31.10.12

Local Regulations/Appendix 8

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1. Applicability

The local snow plan for Copenhagen Airport refers to the national Danish snow plan located in Section AD1.2 in AIP Denmark. The local snow plan will be updated as necessary, though at least once every year (by 1 November). Every new edition replaces all previous issues. The date effective appears from each page.

2. Responsibility & authority

The day-to-day operational responsibility at Copenhagen Airport lies with the Traffic Manager while the superior responsibility lies with the Aerodrome Manager, including taking care that all parties involved (airline operators, ground handlers, service providers, and CPH departments, etc.) have, as far as possible, taken the steps necessary in order to maintain the airport open and fully operational during winter conditions. The Aerodrome Manager is entitled to order the parties involved to participate in the winter services at Copenhagen Airport, as per AIP Denmark.

While winter services are in force, Field Service's Snow Superintendent is the supreme authority regarding snow and ice combating at the airport. In concert with the Duty Airport Manager (VLC), the Snow Superintendent is entitled to decide about changing the snow clearing priorities or, if so required, the closing of vital parts of airport.

During critical conditions the Snow Superintendent may arrange with the Stand Allocation Unit to use certain areas of the ramp, e.g. aircraft stands, for temporary depositing of snow or equipment etc. while snow clearing takes place on the apron. Such areas must be vacated again as soon as the Snow Superintendent gives the word.

When heavy snowfall is forecasted the Snow Superintendent will see to it that the Snow Committee members are briefed about the weather situation. By arrangement with the Snow Superintendent or VLC, OC will take care of the summoning. The Snow Superintendent may instead summon the committee members for a (phone) conference in order to arrange the practical measures.

When extreme weather is forecasted, the ground handlers will be informed by CPH at a special meeting. Field Service also offers an SMS notification service about the winter readiness level expected at the moment. For further information, see Section 6 below. However, all airport users are still responsible for checking the public weather forecast themselves.

The Airport Snow Committee:

- CPH Snow Superintendent/Duty manager at Field Service Command Post ☎3231 3343
- CPH Duty traffic coordinator, Stand Allocation Unit ☎3231 2472 – 📞 2115 0726 (23-07)
- CPH Duty supervisor in OC ☎3231 2381 – 📞 2963 5948
- CPH Traffic Manager, alternatively VLC outside office hours – to be contacted via OC!
- Naviair ☎3289 2151 (APRON) – ☎3289 2140 (TOWER)
- SAS/OP ☎3232 2271
- SGH/KO ☎3232 3394
- CFS – Copenhagen Flight Services 📞 2181 2644 – 📞 3163 6706
- Novia A/S ☎3247 4730 & ☎3247 4718
- Airline Support Executive ApS 📞 2068 5928 (Executive & General Aviation traffic)
- DHL ☎ 3248 4835 / 3248 4836 (Operations) – alternatively ☎ 3248 4887 (Security)
- Cimber Sterling ☎3246 5332

Note! The duty weather forecaster at DMI ☎3915 7200, Naviair/SUP ☎3248 1933, and the duty officer in TVC ☎3231 3600 are formally also members of the Airport Snow Committee, but for practical reasons they are not summoned for committee meetings.

All functions/units involved are presupposed to be manned 24 hrs a day, or must, alternatively, keep the necessary staff on call at home in case extreme winter conditions are forecasted. Staff on call must not switch phonecalls to an answering machine.

3. Winter services

Winter services at Copenhagen Airport come into force when required or whenever winter conditions are forecasted. Winter services comprise:

- continuous inspection and reporting of snow and ice deposits,
- measuring of braking action (surface friction),
- submitting information to be issued by NOTAM/SNOWTAM, and
- initiating and coordinating snow and ice combating on areas within the airport.

Winter services will remain active as long as winter conditions prevail, which means:

- as long as ice, snow or slush is present,
- as long as thawing agents or gritting is used.

For information of the actual winter service status and expected changes, please contact the CPH Snow Superintendent.

4. Notification about winter conditions

Field Service always stays updated on the weather situation, partly via DMI (Danish Meteorological Institute) and partly via own monitoring equipment. DMI will normally notify Field Service 2 - 3 hours before such weather situations occur that are likely to cause initiation of winter services.

DMI continually assesses the information available in the automatic VejVejr (slippery roads advisory) system to check if it provides a true view of the expected weather progress, and will contact Field Service daily before 10.30hrs for an updated weather briefing, if required.

In case particularly critical winter conditions are forecasted which are likely to cause operational problems, Field Service will notify the Snow Committee members via OC.

If the summoning of extra snow clearing staff requires the Maglebylille gate to be manned outside normal opening hours (04.30-18.30hrs, during weekends/public holidays 06.30-18.30hrs), Field Service will notify OC.

5. Request for winter services

Winter services can be requested from the Field Service command post (☎3231 3343).

In case the Field Service-telephone is out of reach*, contact TVC (☎3231 3600) instead.

**) In some remote parts of the airport the reception conditions for mobile phone and radio signals may often be poor.*

6. Execution of winter services

Field Service and TOWER will arrange mutually when inspections, friction measuring, and the initiating of winter services are required on the Manoeuvring Area.

During snowfall and sleet, Field Service will usually arrange with TOWER if Runway 12/30 should not be used for taxiing until swept and cleared. This helps to prevent the formation of frozen ruts and ridges on the runway surface which usually proves very hard to remove afterwards.

Braking action is measured by a SAAB Friction Tester vehicle using high-pressure measuring wheel. The measuring equipment is calibrated for a full runway length, and if the measuring process is interrupted, it must start again from the beginning.

In a normal snow clearing process Runway 04R/22L can be cleared to a width of 55 metres, whereas the runways 04L/22R and 12/30 can "only" be cleared to a width of 45 metres (i.e. full runway width, excluding shoulders). Typically, the shoulders of 04L/22R and 12/30 will not be cleared until later when time is available.

During snowfall and drifting snow ETG will inspect the inset edge lights on Runway 04R/22L once every hour. If the lights are covered by snow, ETG will report to TOWER and Field Service. Following each snow clearing, ETG will inspect the lights on the particular runway, before it is reopened.

Field Service must, as far as possible, take care that snow is not thrown into the ILS critical areas, and that visual aids (signs) are not covered by snow. If this cannot be avoided, clearing or levelling of the particular areas will be initiated immediately afterwards.

When passing the deicing platforms, the driver of the snow thrower must take care that snow is not thrown onto the platform surfaces, as large quantities of meltwater may cause the fluid collection tanks to run over, thereby closing the platform.

The Snow Superintendent arranges with Naviair/APRON and the Stand Allocation Unit when inspection, friction measuring and snow clearing is required on the aprons.

Arrangement of the order in which snow clearing takes place on aircraft stands is normally coordinated between the Snow Superintendent and the Stand Allocation Unit. Special requests should be directed to the Stand Allocation Unit, which then will forward them to the Snow Superintendent.

Use of apron sections for temporary storage of snow or equipment is arranged between the Stand Allocation Unit and Field Service. Depositing of snow must not take place on the deicing platforms.

Communication on FM Channel 3 is managed by Naviair/APRON.

When required by the weather conditions the ground handlers and airline operators must make arrangements to ensure that necessary staff will be available for removal of the aircraft and tidying up of stands. If this is not possible, the Stand Allocation Unit must be notified immediately.

Ground handling crews must tidy up the stands to prevent cables, wheelchocks or tipcones from being left behind. Such objects are likely to cause a major breakdown of a snow sweeper or snow blower, if ingested during the clearing process. Wheelchocks and tipcones must be placed at the fixed ground power unit island or in one of the shelves placed at the stand.

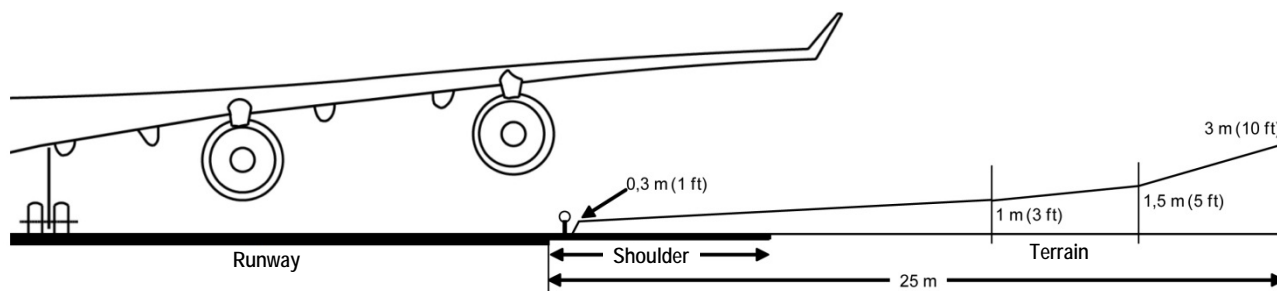
Winter Service notification by SMS:

Via notification by SMS users may be notified by CPH in case Field Service expects an increased winter service readiness level, which may require extraordinary summoning of ground staff. The SMS-notification service may be joined by e-mailing the Traffic Manager. As the SMS system may be unreliable at times, the users are reminded that they are still responsible themselves for keeping updated on current weather forecasts via the medias.

7. Snow profile

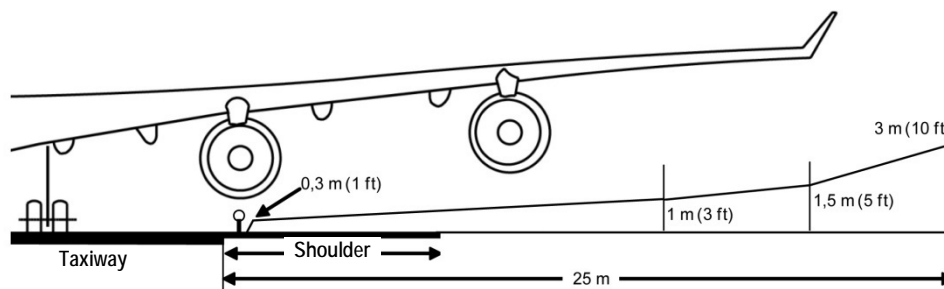
On areas along runways, taxiways or aprons the height of snow banks must be reduced so that wing-mounted aircraft engines can pass over without risk of ingesting foreign objects, including snow and ice. The illustrations below show the recommended snow profile used by Field Service when clearing snow on runways and taxiways. For further information see ICAO Airport Services Manual – Part 2, Chapter 7.

Snow profile – runways



In accordance with item 2.5.5 in the national snow plan the presence of snow banks must be reported in SNOWTAM, if their height exceeds 60 cm (2 ft) within a distance of 15 metres from the runway or taxiway edge. In practice the snow profiles shown here indicate the snow depths that are acceptable along runways and taxiways. Field Service will continuously measure the exact depth of the snow.

Snow profile – taxiways



8. Winter service tasks

Function/unit	Tasks
Ground handlers and airline operators	<ul style="list-style-type: none"> • The ground handlers are responsible for removal of aircraft and equipment prior to snow clearing on the stand, upon coordination with the Snow Superintendent and the Stand Allocation Unit. The ground handler must notify the Stand Allocation Unit if unable to move an aircraft. • The ground handlers (SGH, Novia, and CFS) are expected to appoint a coordinator who, during a continued snowfall, supervises removal of equipment/aircraft, tidying up, and other practical duties on the stand. • Sweeping of drifting snow from the bridge heads. • Notification of TVC if emergency stairs needed for arrival or departure operations are covered by ice or snow. • Notification of Field Service if snow needs to be cleared from equipment parking areas and in front of the baggage reclaim entry doors. • Preparing of own instructions for work tasks during winter conditions. • Airline operators without the appropriate staff on duty outside operational hours must make arrangements with a handling company or third party for the removal of their aircraft from a stand, if required for the clearing of the stand. If such arrangements are not made, Stand Allocation may choose permanent remote parking of the aircraft during ground stops. <p><i>Note! If aircraft and handling equipment are not removed upon request, the stand cannot be cleared sufficiently effective for preventing subsequent reformation of ice on the surface. Neither can the stand be expected to be cleared from snow before next arrival.</i></p>
CPH Snow Superintendent	<ul style="list-style-type: none"> • Notification of the Stand Allocation Unit about duty teamleader's and other relevant contact phone numbers. • Arranging with the Stand Allocation Unit which pier side or row of stands to be cleared, and notification of the snow clearing team. • Arranging with the Stand Allocation Unit which stands are to be used for overnight parking of aircraft. This must take place <u>as early</u> as possible. • Arranging with TOWER the priority order for the snow clearing on the Manoeuvring Area (which runway and which exits to be cleared, and when) and notification of TOWER if the order is changed.
CPH/Field Service	<ul style="list-style-type: none"> • Airside and landside winter services on behalf of the aerodrome manager. The Snow Superintendent is decision-taker. • Inspection of runways, taxiways, aprons, and visual aids during winter conditions, • Reporting of present status to TOWER. In case chemicals are used, notification of TVC once every day. • Reporting of runway, taxiway, and apron status to the AIS Briefing with intervals not exceeding 24 hours while winter conditions prevail. First report of the day no later than 06.00 hrs. If surface conditions remain unchanged, new friction test may be omitted, and TOWER notified. If the conditions have changed, a new report must be submitted to AIS Briefing. When winter conditions cease, terminating message is issued. • Reporting of winter conditions and use of chemicals via the SNOWTAM form which is forwarded to AIS Briefing and to TOWER. A copy of the SNOWTAM is forwarded to Naviair/SUP for information. • Reporting of runway conditions via special METAR form to DMI/Metobs. When winter conditions cease, terminating message is issued. • Notification of Snow Committee members via OC when critical winter conditions are expected. • Notification of Naviair/APRON on FM Channel 3 when aircraft stands have been cleared from snow and ice. • Extraordinary snow clearing on taxiways and assigned parking spots for aircraft in South Aerodrome upon special request from the CPH Stand Allocation unit, e.g. in case special parking of aircraft is needed. • Contacting TVC if the duty electrician is required (1 hrs prior notice)

<p>Naviair</p>	<ul style="list-style-type: none"> • TOWER: coordination with Field Service regarding snow clearing and ice combating on the Manoeuvring Area. • TOWER: ordering of ad hoc snow clearing on the Manoeuvring Area, e.g. based upon pilot reportings. • TOWER: broadcasting of information about present clearing status on runways and taxiways, via radiotelephony or ATIS. In order to limit the length of the ATIS-message the lowest values measured on the taxiways adjoining the runway-in-use will be used as basis for the information about their general operative status. • SUP: during daily CDM briefings notification of the other parties about the influence from the winter conditions on the in- & outbound flights. • APRON: coordination between Field Service, Stand Allocation, and the handlers during winter conditions that may influence on aircraft movements on aprons, and relaying clear-messages to Stand Allocation Unit when aircraft stands have been snow cleared. • TMC: notification of Field Service about snow clearing around ILS- and meteorology installations. • TMC: operation and maintenance of ILS and MET installations (transmissometers, ceilometers, etc.). • TMC: initiating NOTAMs issued when the operational status for these installations have changed.
<p>AIS Briefing (Naviair)</p>	<ul style="list-style-type: none"> • Dissemination of snow and ice occurrence information via AFTN to other airports worldwide, based upon the SNOWTAM-messages received from Field Service.
<p>Danish Meteorological Institute (DMI)</p>	<ul style="list-style-type: none"> • Dissemination of actual weather information etc. via the meteorological telecommunication network. Information about runway conditions is included in the METAR-messages if required and available. • Updated weather briefing to Field Service by 10.30hrs, if information in the automatic VejVejr-advisory system does not provide a true view of the expected weather progress. • Notification about impending weather conditions likely to cause initiation of the winter services. • Providing slippery roads data to Field Service.
<p>CPH/Electrotechnics Group (ETG)</p>	<ul style="list-style-type: none"> • Inspection of runway systems (edge-lights, centreline-lights, approach-lights, touchdown zone-lights, endlights, stopbars, PAPI, etc), and issue NOTAMs as required, if systems are inoperative. • Manning of the runway light inspection vehicle during snow clearance. • Repairing of damages/missing lights observed during the routine runway inspections. • Requesting of snow clearing at PAPI-lights and in front of signs. • Monitoring of damages to runway lights etc. due to snow clearing. Notification of TOWER about reduced or lacking visibility of the lights. • Repairing of damages as necessary or, if required, let TVC issue a NOTAM about unserviceable light systems.
<p>CPH/Stand Allocation Unit (TRX)</p>	<ul style="list-style-type: none"> • Ordering of winter services in apron areas. • Notification of ground handlers if equipment must be moved: <i>SGH/KR – Duty Manager ☎3232 2016</i> <i>Novia – ☎3247 4730 / 3247 4718</i> <i>CFS – Copenhagen Flight Services ☎2181 2644 – ☎3163 6706</i> <i>DHL – OPS ☎3248 4835 / 3248 4836, Security ☎3248 4887</i> <i>Imber Air ☎3246 5332</i> • Information to Naviair/APRON about the priority array for snow clearing on aprons/stands. • Updating of STAFF Page 50 (about use of chemicals, etc.) and Page 41 about aircraft deicing, waiting times, queueing, etc. • Contacting the Snow Superintendent if the priority order needs to be changed or emergency stairs need to be cleared from ice and snow. • Temporary closure of aircraft stands for depositing of snow, in coordination with the Snow Superintendent and duty team leader from MAR. • Notification of the ground handlers if handling equipment and/or aircraft* need to be moved from stands. <p><i>*) If a parked aircraft cannot be moved the handling company must immediately notify the Stand Allocation Unit!</i></p>

CPH/Traffic & Operations Dept. (TRO)	<p><u>Mondays-Fridays at 08-16 hrs</u> Issuing of NOTAM if vital parts of the airport are expected to remain closed for more than 1 hour.</p>
CPH/Duty Airport Manager (VLC)	<ul style="list-style-type: none"> • <u>Mondays-Fridays at 16-08 hrs, Saturdays, Sundays and public holidays at 00-24 hrs</u> Issuing of NOTAM if vital parts of the airport are expected to remain closed for more than 1 hour. (VLC will receive this information via OC)
CPH/Operational Centre (OC)	<ul style="list-style-type: none"> • Notification of VLC/VDC about status reports from Field Service and when operational NOTAMs need to be issued. • Warning or summoning of the airport Snow Committee if required by VLC or the Snow Superintendent. • Designating staff for manning of the Maglebylille gate when snow clearing crews need to be summoned outside normal opening hours (upon request from Field Service). See section 4. • Securing quick access to CSRA for the procession of snow clearing vehicles in critical weather – e.g. glaze or freezing rain – where rapid intervention is required. Designating staff as required for screening of the snow clearing vehicles at TWY F1 (upon request from Field Service). • Notification of the Stand Allocation Unit if Field Service is using chemicals for snow & ice combating on the apron (for STAFF Page 50). • Notification of TVC if the Snow Committee has been summoned.
CPH/Technical Monitoring Central (TVC)	<ul style="list-style-type: none"> • Forwarding of error reports to Field Service, e.g. when passenger loading bridges cannot move due to snow/ice on the ramp. • Notification of CPH maintenance personnel etc. when chemicals are used for snow & ice combating on the apron. • Summoning of electricians/technicians when damages or missing lights etc. are reported. • Ensuring that the necessary CPH technicians will be readily available in case of critical weather situations. • Notification of Field Service about extraordinary requests for snow clearing from airport users/tenants and handlers.

9. Snow clearing priorities

1. priority

- Primary runway and deicing platforms expected to be used, as well as adjoining holding positions and taxiways. Access road for deicing vehicles between the fluid tanks and the platforms.
- Access roads from fire stations to the runway system (including new rescue road).
- Aircraft stands (including bus-served stands and stands without airbridges), apron taxiways and areas where airline passengers walk on the apron.

The exact clearing order will be arranged between the Snow Superintendent and the Stand Allocation Unit, and subsequently coordinated with Naviair/Apron during the snow clearing process.

On Apron East the clearing process will be arranged based upon the actual traffic information available.

- The operational area on each aircraft stand, i.e. an elongated area along the stand centreline which must be swept and cleared in order to ensure that the aircraft and the pushback tug can manoeuvre, and that ground handling can take place securely.

2. priority

- Secondary runway with adjoining holding positions and taxiways.
- Access road to collecting tanks at Deicing Platforms A and B/V.

3. priority

- Third runway.
- Remaining taxiways.
- Secondary aprons and maintenance areas.
- Other areas for pedestrians.

NOTE 1. If need should arise, the Snow Superintendent may decide to temporarily transfer runway sweepers for clearing of apron taxiways etc. before initiating clearing of the secondary runway.

NOTE 2. Cleaning of emergency stairs is carried out as required, but the other tasks in this group will always have higher priority. Until the clearing staff arrives the ground handling crew present may remedy the situation themselves by using the yellow sand containers, ref. section 11.

NOTE 3. Clearing of the Terminal- and pier roads is carried out as soon as it can be accommodated within the other clearing tasks. If urgent, contact Field Service (alternatively via FM Channel 3 or 13 or via TVC).

NOTE 4. In order to maintain runway & taxiway systems operational, an access road to the relevant powerstation may be cleared in urgent situations. As this will be considered as an emergency situation, it will be done only by request by ETG.

NOTE 5. The Snow Superintendent may, if required and in close coordination with Naviair and/or Stand Allocation, elect to temporarily move one of the above snow clearing tasks from one priority to another.

10. Use of chemicals etc.

Primarily formiate-based thawing agents are used for combating snow and ice on runways and taxiways. This includes:

- Aviform L50, a liquid potassium-formiate product which is used for deicing of runway, taxiway, and apron surfaces, as well as humidifying of granulate. CAS-No. 590-29-4*.
- Aviform S–Solid, a granulated sodium-formiate product which is used for deicing of runway and taxiway surfaces, and which is humidified with Aviform L50. CAS-No. 141-53-7.

Both agents comply with the international SAE AMS 1431B/1435A standard.

**) For the record the CPH practice regarding use of Aviform L50 takes fully into account the potential risk of reduced holdover time for aircraft anti-icing agents when mixed with runway deicing fluids, as discussed in EASA Safety Bulletin No. 2010-26, dated 14.9.2010.*

Furthermore, the following can be used:

- Quartz sand. In accordance with the national snow plan in AIP Denmark, AD1.2, section 2.4.3.2, the grain size of the sand used must not exceed 3.5 millimetres. Yellow sand containers for common use are distributed all over the apron area.
- Ordinary road salt (sodium chloride). Salt may still be used on some isolated parts of the airport which are properly screened-off from areas with aircraft traffic.

Note: Road salt must not be used on airside roads and open spaces situated within 50 metres from the edge of areas with aircraft operations, and where there is an obvious risk that vehicles may drag saline particles onto aircraft stands, taxiways, or runways.

11. Winter accessories

For driving outside on airside at Copenhagen Airport use of studded tyres and snow chains is permitted on common passenger cars and ramp tractors. The ground handlers must ensure that all their necessary ground equipment is prepared for use in winter conditions.

However, due to the risk of damage to centreline lights etc. studded tyres and snow chains is not permitted on pushback tractors or aircraft tow tugs.

Before the winter season the ground handlers must check that all their relevant vehicles and handling equipment is ready and useable for daily operations during normal winter conditions.

12. Other information

Outdoor draining of water on aprons is forbidden during the winter season or whenever outdoor temperatures below +2°C are forecasted.

The ground handlers must also ensure that water is not spilled on aprons during filling or draining of aircraft tanks etc. due to malfunctioning equipment or use of inappropriate practice.

In case routine maintenance procedures require water to be drained or let out from the aircraft, e.g. in order to prevent frost damages to internal pipes or tanks during night stops, a spillage container must be placed underneath.

Violation of these rules are treated in accordance with the CPH Catalogue of Sanctions (Appendix 16).



Other abbreviations used:

AIS (Aeronautical Information Service)
AMS (Aerospace Material Specifications)
CAS (Chemical Abstracts Service)
CDM (Collaborative Decision-Making)
CPH (Copenhagen Airports A/S)
DMI (Danish Meteorological Institute)
ETG (CPH Electro-Technical maintenance section)
ICAO (International Civil Aviation Organisation)
ILS (Instrument Landing System)
MAR (CPH Field Service)
NOTAM (Notice To AirMen)
OC (CPH Operational Centre)
SAE (Society of Automotive Engineers)
SAU (CPH Stand Allocation Unit)
SNOWTAM (Snow NOTAM)
SUP (Supervisor)
TMC (Previously Naviair/TCC)
TVC (CPH Technical Surveillance Centre)
VLC (Duty Airport Manager)

Advisory map regarding depositing of snow within Apron North

Red colour = restricted areas (taxiways) where snow must not be deposited.

Orange colour = aircraft stands which the Snow Superintendent, upon prior arrangement with Stand Allocation, can withdraw temporarily for depositing of snow (Stands A50, A7, F1, and E60).

