

# Snow and Ice Control Plan

## Carson City Airport (CXP)

Prepared by:

Rick Lee, Airport Operations and Maintenance

[rlee@flycarsoncity.com](mailto:rlee@flycarsoncity.com)

775-443-7288

And

Corey Jenkins, ACE, Airport Manager

[cjenkins@flycarsoncity.com](mailto:cjenkins@flycarsoncity.com)

775-841-2255

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## Phase #1

# Pre- and Post-Winter Season Topics

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## **Chapter 1. Pre-Season Actions**

### **1.1 Airport Preparation**

#### **a) Airport Management Meetings**

The Airport Manager will typically initiate a meeting in October to discuss equipment status and material inventory, repair needs, staffing, budget, training, previous years issues, and any other topics associated with the Snow and Ice Control Plan.

#### **b) Personnel Training**

All airport personnel receive annual, recurrent snow removal training. Training records are maintained by the Airport Manager or Airport Operations and Maintenance Technician. Training will include the following:

- i) Familiarization with equipment operation
- ii) Familiarization with airfield clearing priorities

#### **c) Equipment Preparation**

60 days prior to snow season Airport Operations and Maintenance Technician will inspect and prepare each piece of snow removal equipment. Required fluids, replacement parts, and snow removal equipment components will be inventoried and stockpiled or ordered.

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## **Chapter 2. Post-Event/Season Actions**

### **2.1 Post Event.**

After each snow event, airport management may host a meeting and invite Airport Authority Chair or designated representative to discuss any issues that have arisen from the event.

During the snow season, winter operations is included in the Airport Managers Report at the Airport Authority Board Meeting, which is held every third Wednesday of each month.

### **2.2 Post Season.**

After each snow season an Airport Management meeting will be held, typically in April to review the snow season issues and recommendations for changes. The same topics as pre-season should be reviewed.

Provide actions for each department post season, i.e., Maintenance-inspect and repair equipment, Airport Management – update SICP.

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## Phase #2

# Winter Storm Actions and Procedures

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### Chapter 3. Snow Removal Action Criteria

#### 3.1 Activating Snow Removal Personnel.

The Airport Manager and Airport Operations and Maintenance Technician are responsible for determining when snow removal operations shall begin.

**a) Weather Forecasting**

- The Airport Operations and Maintenance Technician is responsible to monitor the current and/or forecast weather conditions during business hours. The Airport Manager is responsible on weekends.
- Recommended sources for monitoring weather
  - Airport Cameras
  - Airport AWOS
  - [www.aviationweather.gov](http://www.aviationweather.gov)
  - [www.noaa.gov](http://www.noaa.gov)

**b) Chain of Command**

- The Airport Operations and Maintenance Technician is responsible for monitoring the airfield during regular business hours.
- The Airport Manager is responsible on the weekends.
- The Airport Manager is responsible to initiate a Snow Alert Callout on the weekends.
- A Snow Alert Callout is executed by phone call.

**c) Triggers for Initiating Snow Removal Operations**

The runway condition will be checked continually for snow depth, slush, and braking during normal business hours. If there are forecasted conditions for snow accumulation over the weekend, the Airport Manager will monitor the cameras for any sign of accumulation and report to the airport to measure accumulation if a hazard is present. When snow depth reaches two inches a Notice to Airmen (NOTAM) and AWOS message will be issued, and snow removal will begin as soon as possible.

The Airport Manager should use discretion to determine the most efficient use of airport staff and equipment for keeping the airport open depending on the overall situation.

As an example: Snowplow operations should not be initiated if snow accumulation reaches two inches at 3 PM, snow accumulation will continue, and below minimum IFR conditions are expected to persist. Based on this example situation, snowplowing would begin early the next morning since plowing would be no benefit to opening the airport to

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incoming/outgoing aircraft and would not be the best use of airport staff and equipment. Additionally, this would avoid excessive overtime expense and equipment wear.

<b><u>Precipitation</u></b>	<b><u>Depth in Inches</u></b>
Slush	2
Wet Snow	2
Dry Snow	2

### **3.2 Personnel Responsible.**

Both the Airport Manager and the Airport Operations and Maintenance Technician are responsible for snow removal operations as soon as possible.

### **3.3 Airfield Clearing Priorities.**

The snow removal priorities have been developed to achieve an open and safe runway as quickly as possible.

- a) **Priority 1**
  - Runway 09/27
  
- b) **Priority 2**
  - Parallel Taxiways A and D to include the connector Taxiways at each end
  - The midfield connector (A-3/D-3)
  
- c) **Priority 3**
  - Remaining connector Taxiways (A-2, D-2, A-4)
  - Taxiways B and C
  - Airfield access from north-west ramp to Taxiway C
  - Taxi lanes from hangars to taxiways.
  
- d) **Priority 4**
  - South ramp apron
  
- e) **Priority 5**
  - Perimeter vehicle access roads
  - terminal parking lot

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**3.4 Snow Equipment List.**

<b>Equipment Type</b>	<b>Primary Area of Use</b>
1984 Autocar 10-wheel dump truck with 11 ft. plow	Runway and Taxiways
2000 GMC 3500 flatbed truck with 9ft. plow	Taxiway intersections, taxi lanes, perimeter road, south ramp, parking lot
2019 Case tractor with 1yrd. bucket	Taxi lanes, south ramp

\*As of November 2021

**3.5 Storage of Snow and Ice Control Equipment.**

Outside of the snow season, the equipment is stored at the maintenance yard. During the snow season, the equipment is stored near the Airport Operations office and is plugged into block heaters and battery chargers to maintain preparedness.

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## **Chapter 4. Snow Clearing Operations**

### **4.1 Snow Clearing Principals.**

#### **a) Runway and Taxiways**

The 1984 Autocar 10-wheel dump truck with 11ft. plow is the primary equipment used for the Runways. All runways and taxiways are cleared by plowing from the center line working towards the pavement edge. The 2000 GMC 3500 flatbed truck with 9ft. plow is used to clear areas in turns or smaller sections missed by the larger plow. The minimum acceptable clearance is all the pavement up to the pavement edge.

#### **b) Ramp and Terminal**

All fixed base operators (FBO) and, or, leased premises will be responsible for snow removal on their ramp areas. The Airport must ensure access to the leased areas and make an effort to minimize the berms that would negatively impact airport access.

### **4.2 Surface Incident/Runway Incursion Mitigation Procedures.**

To reduce the possibility of a Surface Incident/Runway Incursion, all pavement areas actively undergoing snow clearing operations will be closed. A NOTAM will be issued and the recording on the AWOS will be updated.

All snow removal vehicles operating on any aircraft movement area will be equipped with an amber beacon and two-way VHF radio, which must be always monitored by the vehicle operator.

No ground vehicle will operate beyond the existing ramp areas without first being cleared by the Airport Manager.

#### **a) Driver Fatigue**

Snow removal operations can last extremely long hours. To avoid Driver Fatigue and ensure a safe operating environment, everyone operating snow removal equipment will be allowed a 15-minute break in the morning, a 1-hour lunch break, and a 15-minute break in the afternoon. Total driving hours will not exceed 10 hours in a single workday.

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## **Chapter 5. Runway and Taxiway Closures**

### **5.1 Requirements for Closures.**

Runways receiving a NIL braking (either pilot reported or by assessment by the airport) are unsafe for aircraft operations and will be closed immediately when this unsafe condition exists.

Runways and Taxiways will be closed if snow depth exceeds two inches. A NOTAM and AWOS message will be issued.

The airport will open for operations when priority areas 1-3 have been cleared.

### **5.2 Surface Conditions Not Being Monitored/Reported**

Runway and Taxiway conditions are not monitored after dark.

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## Chapter 6. Definitions

### Compacted Snow.

Snow that has been compressed and consolidated into a solid form that resists further compression such that an airplane will remain on its surface without displacing any of it. If a chunk of compressed snow can be picked up by hand, it will hold together or can be broken into smaller chunks rather than falling away as individual snow particles.

Note: A layer of compacted snow over ice must be reported as compacted snow only.

Example: When operating on the surface, significant rutting or compaction will not occur. Compacted snow may include a mixture of snow and embedded ice; if it is more ice than compacted snow, then it should be reported as either ice or wet ice, as applicable.

### Contaminant.

A deposit such as frost, any snow, slush, ice, or water on an aerodrome pavement where the effects could be detrimental to the friction characteristics of the pavement surface.

### Dry (Pavement).

Describes a surface that is neither wet nor contaminated.

### Dry Snow.

Snow that has insufficient free water to cause it to stick together. This generally occurs at temperatures well below 32° F (0° C). If when making a snowball, it falls apart, the snow is considered dry.

### Frost.

Frost consists of ice crystals formed from airborne moisture that condenses 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.

Note: Heavy frost that has noticeable depth may have friction qualities similar to ice and downgrading the runway condition code accordingly should be considered. If driving a vehicle over the frost does not result in tire tracks down to bare pavement, the frost should be considered to have sufficient depth to consider a downgrade of the runway condition code.

### Ice.

The solid form of frozen water to include ice that is textured (i.e., rough or scarified ice).

A layer of ice over compacted snow must be reported as ice only.

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Mud.

Wet, sticky, soft earth material.

Oil.

A viscous liquid, derived from petroleum or synthetic material, especially for use as a fuel or lubricant.

Sand.

A sedimentary material, finer than a granule and coarser than silt.

Slush.

Snow that has water content exceeding a freely drained condition such that it takes on fluid properties (e.g., flowing and splashing). Water will drain from slush when a handful is picked up. This type of water-saturated snow will be displaced with a splatter by a heel and toe slap-down motion against the ground.

Slush over Ice.

See individual definitions for each contaminant.

Water.

The liquid state of water. For purposes of condition reporting and airplane performance, water is greater than 1/8-inch (3mm) in depth.

Wet Ice.

Ice that is melting, or ice with a layer of water (any depth) on top.

Wet Snow.

Snow that has grains coated with liquid water, which bonds the mass together, but that has no excess water in the pore spaces. A well-compacted, solid snowball can be made, but water will not squeeze out.