NOTES

ocean areas can flow northward over the Arctic causing cloudiness and precipitation.

During the summer, the area becomes more humid and milder. The largest amount of cloudiness occurs inland during the summer season.

FRONTS

Occluded fronts are the rule. Fronts are much more frequent over coastal areas than over the interior. Weather conditions associated with these fronts are typical for an occluded front, low clouds, precipitation, poor visibility, and fog.

TEMPERATURE INVERSION

Intense low-level temperature inversions exist over the Arctic in the winter. Sun light rays are bent as they pass through the temperature inversion. This bending can cause objects beyond the horizon to appear to be above the horizon.

SNOW COVERED SURFACES

Snow covered surfaces reflect light more than darker surfaces. Snow often reflects Arctic sunlight sufficiently to blot out shadows, so there can be a marked decrease in contrast between objects.

HAZARDS

Fog is the most common restriction in the Arctic. Ice fog is common. This fog forms in winter, in moist, cold, calm conditions. Visibility is reduced much more in ice fog when looking towards the sun. Ice fog can last from a few minutes to as long as days.

Steam fog forms in winter when cold, dry air flows from the land over warmer, moist oceans. The cold air can only hold a small amount of water vapor and so condensation takes place just above the water surface. This fog is composed of water droplets that freeze quickly and fall back to the water as ice particles. Low-level turbulence can occur in the area above the water surface and icing can become hazardous.

Advection fog is most common in winter and can be persistent. Advection fog forms along coastal areas when warm, moist oceanic air moves over the colder land. If the land area is hilly a combination of low stratus cloud and fog may form. Icing in advection fog may become quite severe.

Blowing snow is a common hazard during fall and winter. Winds greater than 10 knots may raise the snow several feet off the ground and obscure objects such as runway signs and markings. Sudden increases in surface winds can cause good visibility to drop to near zero quickly. Stronger winds can lift snow to above 1,000 feet. Icing is most likely in spring and fall.