

Cold Temperature Restricted Airports

Cold Temperature Altitude Corrections

January 7, 2016

Subject: Cold temperature altitude corrections at airports with a published cold temperature restriction.

Purpose: To provide a list of 14 CFR Part 97 “Cold Temperature Restricted Airports” designated with a temperature restriction and guidance on when and how to calculate and apply altitude corrections to affected approach segment(s) during cold temperature operations. This list may also be found at the bottom of the, “Terminal Procedures Basic Search” page:

http://www.faa.gov/air_traffic/flight_info/aeronav/digital_products/dtpp/search/

Background: In response to aviation industry concerns over cold weather altimetry errors, the FAA conducted a risk analysis to determine if current 14 CFR Part 97 instrument approach procedures, in the United States National Airspace System, place aircraft at risk during cold temperature operations. This study applied the coldest recorded temperature at the given airports in the last five years and specifically determined if there was a probability that during these non-standard day operations, anticipated altitude errors in a barometric altimetry system could exceed the Required Obstacle Clearance (ROC) used on procedure segment altitudes. If a probability, of the ROC being exceeded, went above one percent on a segment of the approach, a temperature restriction was applied to that segment. In addition to the low probability that these procedures will be required, the probability of the ROC being exceeded precisely at an obstacle position is extremely low, providing an even greater safety margin.

Action:

Pilots must make an altitude correction to the published, “at”, “at or above” and “at or below” altitudes on all designated segment(s), for all published procedures and runways when the reported airport temperature is at or below the published airport cold temperature restriction. Pilots may correct on the other segments of the same approach if desired. Pilots must advise ATC with the corrected altitudes if the additional corrections are made on any segment of the approach with the exception of final.

Pilots may use Real Time Mesoscale Analysis (RTMA): Alternate Report of Surface Temperature, for computing altitude corrections, when airport temperatures are not available via normal reporting. See InFO 15006 for additional information. The RTMA website is:

http://nomads.ncep.noaa.gov/pub/data/nccf/com/rtna/prod/airport_temps/

Pilots **without** temperature compensating aircraft must calculate and make a manual cold temperature altitude correction to the designated segment(s) of the approach using the AIM 7-2-3, ICAO Cold Temperature Error Table.

NOTE: No extrapolation above the 5000 ft column required. Pilots may use the 5000 ft “height above airport in feet” column for calculating corrections of greater than 5000ft above reporting station. Pilots must add correction(s) from the table to the segment altitude(s) and fly at the new corrected altitude. **PILOTS MUST NOT MAKE AN ALTIMETER CHANGE** to accomplish an altitude correction.

Pilots **with** temperature compensating aircraft, and choosing to use this system, must ensure the system is on and operating for each segment requiring an altitude correction. Pilots may use the system for the entire approach if desired. Pilots must advise ATC when correcting on the intermediate and/or missed approach segment. Pilots must ensure they are flying at the corrected altitude. If the system is not operating, or not being used, the pilot must manually calculate and apply a cold weather altitude correction using the AIM 7-2-3 ICAO Cold Temperature Error Table. **PILOTS MUST NOT MAKE AN ALTIMETER CHANGE** to accomplish an altitude correction.

ICAO COLD TEMPERATURE ERROR TABLE
HEIGHT ABOVE AIRPORT IN FEET

REPORTED TEMP °C		200	300	400	500	600	700	800	900	1000	1500	2000	3000	4000	5000
	+10	10	10	10	10	20	20	20	20	20	30	40	60	80	90
	0	20	20	30	30	40	40	50	50	60	90	120	170	230	280
	-10	20	30	40	50	60	70	80	90	100	150	200	290	390	490
	-20	30	50	60	70	90	100	120	130	140	210	280	420	570	710
	-30	40	60	80	100	120	140	150	170	190	280	380	570	760	950
	-40	50	80	100	120	150	170	190	220	240	360	480	720	970	1210
	-50	60	90	120	150	180	210	240	270	300	450	590	890	1190	1500

Pilots must report cold temperature corrected altitudes to Air Traffic Control (ATC) whenever applying a cold temperature correction on an intermediate segment and/or a published missed approach final altitude. This should be done on initial radio contact with the ATC facility issuing approach clearance. ATC requires this information in order to ensure appropriate vertical separation between known traffic. ATC will not apply a cold temperature correction to Minimum Vectoring Altitudes (MVA). Pilots must be cleared by ATC to apply a cold temperature compensation to an ATC assigned altitude or when flying on a radar vector in lieu of a published missed approach procedure. Pilots should query ATC when vectored altitudes to an intermediate segment are lower than the requested intermediate segment altitude, corrected for temperature, on initial contact with ATC. Pilots are encouraged to self-announce corrected altitude when flying into non-towered airfields.

The following are examples of appropriate pilot-to-ATC communication when applying cold-temperature altitude corrections.

- On initial check-in with ATC providing approach clearance: Hayden, CO (example below).
 - Intermediate segment: “Require 10600 ft. for cold temperature operations until BEEAR”,
 - Missed Approach segment: “Require final holding altitude, 10600 ft. on missed approach for cold temperature operations”
- Pilots cleared by ATC for an instrument approach procedure; “Cleared the RNAV RWY 28 approach (from any IAF)”. Hayden, CO (example below).
 - Intermediate Segment: “Level 10600 ft. for cold temperature operations inside HIPNA to BEEAR”
- Pilots are not required to advise ATC with the altitude correction in the final segment. Hayden, CO and Elko, NV (example below).

Pilots must use the corrected MDA or DA/DH as the minimum for an approach. Pilots must meet the requirements in 14 CFR Part 91.175 in order to operate below the corrected MDA or DA/DH. Pilots must see and avoid obstacles when descending below the MDA.

The temperature restriction at a “Cold Temperature Restricted Airport” (snowflake ICON or “textual” on non-government publications), is mutually exclusive from the charted temperature restriction published for “uncompensated baro-VNAV systems” on 14 CFR Part 97 RNAV (GPS) and RNAV (RNP) approach plates. The charted temperature restriction for uncompensated baro-VNAV systems is applicable to the final segment LNAV/VNAV minima. Aircraft without a compensating baro-VNAV system may not use the LNAV/VNAV line of minima when actual temperature is below the charted temperature restriction for this procedure.

However, the affected segments must still be corrected if the airport is a Cold Temperature Restricted Airport and the temperature restriction is warmer than the temperature published for the RNAV or RNP approach.

Cold temperature restrictions are not affected by runway length. However, the risk analysis was only performed on airports of 2500 ft and greater due to database constraints. Pilots must calculate a cold temperature altitude correction at any airport included in the airports list below. Pilots operating into an airport with a runway length less than 2,500 feet may make a cold temperature altitude correction in cold temperature conditions, if desired. Pilots applying altitude corrections to any segment but final must advise ATC with the corrected altitude.

For additional information contact Kel Christianson, AFS-470, at 202-267-8838.

Cold Temperature Restricted Airports: Airports are listed by ICAO code, Airport Name, Temperature Restriction in Celsius/Fahrenheit and affected Segment. One temperature may apply to multiple segments. *Italicized airports have two affected segments, each with a different temperature restrictions.* The warmest temperature will be indicated on Airport IAPs next to a snowflake symbol, ❄️ –XX°C/XX°F in the United States Terminal Procedure Publication (TPP). The ICON is being added to the TPPs, incrementally, which started in the March 2015 charting cycle.

SEGMENTS

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
<u>Alaska</u>					
PABL	Buckland	-36C/-33F	X		
PABR	Wiley Post-Will Rogers	-41C/-42F	X		
PABT	Bettles	-37C/-35F	X	X	
PACE	Central	-25C/-13F	X	X	
PACH	Chuathbaluk	-35C/-31F	X	X	
PACI	Chalkyitsik	-32C/-26F	X		
<i>PACM</i>	<i>Scammon Bay</i>	-20C/-4F		X	
<i>PACM</i>	<i>Scammon Bay</i>	-35C/-31F	X		
PACV	Merle K (Mudhole) Smith	-21C/-6F	X		
PACX	Coldfoot	-10C/14F	X	X	X
PADE	Deering	-24C/-11F	X	X	
PADK	Adak	-17C/1F		X	
PADM	Marshall Don Hunter Sr	-21C/-6F	X	X	
PAEG	Eagle	-15C/5F	X		
PAEN	Kenai	-31C/-24F	X		
PAFA	Fairbanks Intl	-20C/-4F	X	X	
PAFM	Ambler	-43C/-45F	X		
PAFS	Nikolai	-22C/-8F	X		
PAGA	Edward G. Pitka Sr.	-33C/-27F	X		
PAGH	Shungnak	-19C/-2F	X		
PAGK	Gulkana	-37C/-35F	X		
<i>PAGL</i>	<i>Golovin</i>	-20C/-4F	X		
<i>PAGL</i>	<i>Golovin</i>	-29C/-20F			X
PAGM	Gambell	-26C/-15F		X	
PAHC	Holy Cross	-25C/-13F	X	X	
PAHL	Huslia	-31C/-24F	X		
PAHO	Homer	-24C/-11F	X		
PAHX	Shageluk	-36C/-33F	X		

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
PAIK	Bob Baker Memorial	-21C/-6F	X		
PAIL	Iliamna	-18C/0F	X		
PAIW	Wales	-12C/10F		X	
PAJN	Juneau Intl	-13C/9F	X		
PAKA	Tatitlek	-19C/-2F	X	X	
PAKK	Koyuk Alfred Adams	-34C/-29F	X		
PAKN	King Salmon	-31C/-24F	X		
PAKP	Anaktuvuk	-6C/21F	X		
PAKT	Ketchikan Intl	-11C/12F	X		
PAKV	Kaltag	-20C/-4F	X	X	
PAKW	Klawock	-11C/12F		X	
PALG	Kalskag	-41C/-42F	X		
PALP	Alpine Airstrip	-40C/-40F	X		
PAMB	Manokotak	-33C/-27F	X		
PAMC	McGrath	-24C/-11F	X		
PAMC	McGrath	-42C/-44F		X	
PAMH	Minchumina	-24C/-11F	X		
PAMH	Minchumina	-38C/-36F		X	
PAMY	Mekoryuk	-33C/-27F	X		
PANA	Napakiaik	-37C/-35F	X		
PANI	Aniak	-23C/-9F		X	
PANI	Aniak	-33C/-27F	X		
PANN	Nenana Muni	-33C/-27F	X		
PANO	Nondalton	-12C/10F	X		
PANO	Nondalton	-29C/-20F		X	
PANU	Nulato	-28C/-18F	X		
PANU	Nulato	-44C/-47F		X	
PANV	Anvik	-31C/-24F	X		
PAOB	Kobuk	-45C/-49F		X	
PAOM	Nome	-26C/-15F	X		
PAOR	Northway	-19C/-2F	X		
PAOT	Ralph Wien Memorial	-43C/-45F	X		
PAPE	Perryville	-11C/12F		X	
PAPG	Petersburg James A Johnson	-11C/12F	X		
PAQH	Quinhagak	-16C/3F	X	X	
PAQH	Quinhagak	-32C/-26F			X
PAQT	Nuiqsut	-41C/-42F	X		
PARC	Artic Village	-29C/-20F	X	X	
PARS	Russian Mission	-14C/7F	X	X	
PARS	Russian Mission	-35C/-31F			X
PARY	Ruby	-33C/-27F	X		
PARY	Ruby	-43C/-44F		X	
PASA	Savoonga	-27C/-17F	X		
PASC	Deadhorse	-45C/-49F	X		
PASD	Sand Point	-16C/3F	X		
PASH	Shishmaref	-40C/-40F	X		
PASI	Sitka Rocky Gutierrez	-12C/10F		X	
PASK	Selawik	-35C/-31F	X		
PATA	Ralph M Calhoun Memorial	-32C/-26F	X		

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
<i>PATA</i>	<i>Ralph M Calhoun Memorial</i>	-49C/-56F		X	
<i>PATE</i>	Teller	-25C/-13F		X	
<i>PATG</i>	Togiak	-26C/-15F	X		
<i>PATK</i>	Talkeetna	-26C/-15F	X		
<i>PATQ</i>	Atkasuk Edward Burnell Sr. Mem	-35C/-31F	X		
<i>PAUN</i>	Unalakleet	-38C/-36F	X		
<i>PAUO</i>	Willow	-22C/-8F		X	
<i>PAVC</i>	King Cove	-13C/9F	X		
<i>PAVD</i>	Valdez Pioneer Field	-4C/25F	X		
<i>PAVE</i>	Venetie	-42C/-43F	X		
<i>PAVL</i>	Kivalina	-33C/-27F	X		
<i>PAWB</i>	Beaver	-41C/-42F	X		
<i>PAWD</i>	Seward	-3C/27F	X		
<i>PAWG</i>	Wrangell	-5C/23F	X	X	
<i>PAWI</i>	Wainwright	-41C/-42F	X		
<i>PAWM</i>	White Mountain	-40C/-40F	X		
<i>PFAL</i>	Allakaket	-34C/-29F	X		
<i>PFCL</i>	Clarks Point	-34C/-29F	X		
<i>PFEL</i>	<i>Elim</i>	-14C/7F		X	
<i>PFEL</i>	<i>Elim</i>	-27C/-17F	X		
<i>PFKK</i>	Kokhanok	-16C/3F	X		
<i>PFKT</i>	<i>Brevig Mission</i>	-23C/-9F	X		
<i>PFKT</i>	<i>Brevig Mission</i>	-29C/-20F		X	
<i>PFKW</i>	Kwethluk	-37C/-35F	X		
<i>PFNO</i>	Robert (Bob) Curtis Memorial	-16C/3F	X		
<i>PFSH</i>	Shaktoolik	-24C/-11F	X		
<i>PFTO</i>	Tok Junction	-19C/-2F	X		
<i>PFYU</i>	<i>Fort Yukon</i>	-45C/-49F	X		
<i>PFYU</i>	<i>Fort Yukon</i>	-51C/-60F		X	
<i>PPIZ</i>	Point Lay LRRS	-33C/-27F	X		
<u>California</u>					
<i>KACV</i>	Arcata	-5C/23F	X		
<i>KMMH</i>	Mammoth Yosemite	-25C/-13F		X	
<i>KBIH</i>	Eastern Sierra Rgnl	-9C/16F		X	
<i>KSVE</i>	Susanville Muni	-19C/-2F		X	
<i>KTRK</i>	<i>Truckee – Tahoe</i>	-13C/9F		X	
<i>KTRK</i>	<i>Truckee – Tahoe</i>	-23C/-9F	X		
<i>KTVL</i>	Lake Tahoe	-21C/-6F	X		
<u>Colorado</u>					
<i>KAEJ</i>	Central Colorado Rgnl	-18C/0F		X	
<i>KANK</i>	Harriet Alexander Field	-21C/-6F	X		
<i>KASE</i>	Aspen-Pitkin County/Sardy Field	-21C/-6F	X		
<i>KCAG</i>	Craig-Moffat	-26C/-15F	X	X	
<i>KEEO</i>	<i>Meeker Coulter Field</i>	-17C/1F		X	
<i>KEEO</i>	<i>Meeker Coulter Field</i>	-28C/-18F	X		
<i>KEGE</i>	<i>Eagle County Rgnl</i>	-17C/1F	X		

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
KEGE	Eagle County Rgnl	-25C/-13F			X
KGUC	Gunnison-Crested Butte Rgnl	-28C/-18F	X		
KGUC	Gunnison-Crested Butte Rgnl	-34C/-29F			X
KHDN	Yampa Valley	-26C/-15F	X	X	X
KLXV	Lake County	-26C/-15F		X	
KRIL	Garfield County Rgnl	-15C/5F	X	X	
KSBS	Steamboat Springs/Bob Adams Fld	-31C/-24F	X		
KTAD	Perry Stokes	-26C/-15F	X		
KTEX	Telluride Rgnl	-12C/10F		X	
20V	McElroy Airfield	-25C/-13F	X		
33V	Walden-Jackson County	-24C/-11F	X		
<u>Connecticut</u>					
KBDL	Bradley Intl	-23C/-9F		X	
<u>Idaho</u>					
KBOI	Boise Air Terminal/Gowen Field	-23C/-9F	X		
KJER	Jerome County	-22C/-8F		X	
KLWS	Lewiston-Nez Perce County	-16C/3F	X		
KMYL	McCall Muni	-20C/-4F	X		
KSMN	Lemhi County	-11C/12F	X		
KSZT	Sandpoint	-21C/-6F	X		
65S	Boundary County	-8C/18F		X	
<u>Indiana</u>					
KSMD	Smith Field	-22C/-8F		X	
<u>Iowa</u>					
KAMW	Ames Muni	-27C/-17F	X		
KIKV	Ankeny Rgnl	-26C/-15F	X		
<u>Kansas</u>					
3JC	Freeman Field	-25C/-13F		X	
<u>Kentucky</u>					
KBYL	Williamsburg-Whitley County	-21C/-6F		X	
<u>Maine</u>					
KCAR	Caribou Muni	-27C/-17F	X		
KIZG	Eastern Slopes Rgnl	-18C/0F	X		
KMLT	Millinocket Muni	-24C/-11F	X		
KPQI	Northern Maine Rgnl	-25C/-13F	X		
B19	Buddeford Muni	-31C/-24F	X		
3B1	Greenville Municipal	-21C/-6F		X	
<u>Maryland</u>					
KCBE	Greater Cumberland Rgnl	-13C/9F		X	
<u>Massachusetts</u>					
KBAF	Westfield-Barnes Regional	-20C/-4F		X	
KGBR	Walter J. Koladza	-21C/-6F	X	X	
KORE	Orange Muni	-21C/-6F	X		
KPSF	Pittsfield Muni	-24C/-11F		X	

Cold Temp – Restricted Airports

Notices to Airmen

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
0B5	Turners Falls	-22C/-8F	X		
7B2	Northampton	-24C/-11F	X		
<u>Michigan</u>					
KIWD	Gogebic-Iron County	-27C/-17F		X	
KPLN	Pellston Rgnl of Emmet County	-30C/-22F	X	X	
KTVC	Cherry Capital	-14C/7F		X	
Y31	West Branch Community	-34C/-29F		X	
<u>Minnesota</u>					
KBDE	Baudette Intl	-28C/-18F		X	
KBFW	Silver Bay Municipal	-32C/-26F	X	X	
KCKC	Grand Marais/Cook County	-30C/-22F			X
KCQM	Cook Muni	-37C/-35F	X		
KELO	Ely Muni	-38C/-36F	X		
KEVM	Eveleth-Virginia Muni	-37C/-35F	X		
KFSE	Fosston Muni	-38C/-36F	X		
KGDB	Granite Falls Muni	-35C/-31F	X		
KHIB	Range Rgnl	-30C/-22F	X		
KINL	Falls Intl	-30C/-22F	X		
KPNM	Princeton Muni	-34C/-29F	X		
KRGK	Red Wing Rgnl	-30C/-22F	X		
KRRT	Warroad Intl Memorial	-36C/-33F	X		
KRST	Rochester Intl	-27C/-17F	X		
KSTP	St Paul Downtown Holman Fld	-29C/-20F	X		
KTOB	Dodge Center	-42C/-44F	X		
KVVV	Ortonville Muni-Martinson Field	-33C/-27F	X		
12D	Tower Municipal	-38C/-36F	X		
<u>Montana</u>					
KBTM	Bert Mooney	-19C/-2F	X	X	
KBZN	Bozeman Yellowstone Intl	-33C/-27F	X		
KDLN	Dillon	-18C/0F	X		
KEKS	Ennis-Big Sky	-15C/5C		X	
KEKS	Ennis-Big Sky	-26C/-15F	X		
KGPI	Glacier Park Intl	-12C/10F	X		
KGTF	Great Falls Intl	-33C/-27F	X		
KHLN	Helena Rgnl	-16C/3F	X	X	
KHVR	Havre City-County	-38C/-36F	X		
KHVR	Havre City-County	-30C/-22F			X
KLVM	Mission Field	-21C/-6F	X		
KMSO	Missoula Intl	-10C/14F	X		
KMSO	Missoula Intl	-26C/-15F		X	
KOLF	L M Clayton	-30C/-22F	X		
KSBX	Shelby	-36C/-33F	X		
KWYS	Yellowstone	-18C/0F	X	X	
M46	Colstrip	-31C/-24F	X	X	
M75	Malta	-37C/-35F	X		

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
S59	Libby	-15C/5F	X		
3U3	Bowman Field	-32C/-26F	X		
6S5	Ravalli County	-23C/-9F	X		
6S8	Laurel Municipal	-25C/-13F	X		
7S0	Ronan	-27C/-17F	X		
8S1	Polson	-19C/-2F	X	X	
32S	Stevensville	-20C/-4F	X		
<u>Nebraska</u>					
KCDR	Chadron Muni	-31C/-24F	X		
KVTN	Miller Field	-20C/-4F		X	
<u>Nevada</u>					
KCXP	Carson	-19C/-2F		X	
KEKO	Elko Rgnl	-20C/-4F		X	
KEKO	Elko Rgnl	-27C/-17F	X		
KELY	Ely (Yelland Field)	-18C/0F	X		
KLOL	Derby Field	-24C/-11F	X		
KMEV	Minden-Tahoe	-19C/-2F	X		X
KRNO	Reno/Tahoe Intl	-18C/0F	X		
KRTS	Reno/Stead	-15C/5F		X	
KWMC	Winnemucca Muni	-22C/-8F			X
05U	Eureka	-17C/1F		X	
<u>New Hampshire</u>					
KBML	Berlin Rgnl	-22C/-8F	X	X	
KCNH	Claremont Muni	-24C/-11F		X	
KEEN	Dillant-Hopkins	-28C/-18F		X	
KHIE	Mount Washington Rgnl	-29C/-20F	X	X	
KLEB	Lebanon Muni	-20C/-4F	X	X	
<u>New Jersey</u>					
KFWN	Sussex	-24C/-11F	X		
<u>New Mexico</u>					
KAXX	Angel Fire	-22C/-8F		X	
KAXX	Angel Fire	-30C/-22F	X		
KSKX	Taos Rgnl	-31C/-24F	X		
<u>New York</u>					
KART	Watertown Intl	-36C/-33F	X		
KCZG	Tri-Cities	-15C/5F		X	
KDSV	Dansville Muni	-18C/0F		X	
KELM	Elmira/Corning Rgnl	-16C/3F		X	
KELM	Elmira/Corning Rgnl	-27C/-17F	X		
KGFL	Floyd Bennett Memorial	-17C/1F	X	X	
KHTF	Hornell Muni	-21C/-6F		X	
KITH	Ithaca Tompkins Rgnl	-19C/-2F		X	
KLKP	Lake Placid	-11C/12F	X		
KLKP	Lake Placid	-21C/-6F		X	
KMSS	Massena Intl-Richards Field	-33C/-27F		X	
KPBG	Plattsburgh Intl	-28C/-18F	X		
KSCH	Schenectady County	-21C/-6F	X		
KSLK	Adirondack Rgnl	-23C/-9F	X	X	
KVGC	Hamilton Muni	-25C/-13F	X	X	

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
N03	Cortland County-Chase Field	-25C/-13F	X		
N23	Sidney Muni	-20C/-4F		X	
N89	Joseph Y Resnick	-15C/5F		X	
06N	Randall	-20C/-4F	X		
20N	Kingston-Ulster	-21C/-6F	X		
<u>North Carolina</u>					
KRHP	Western Carolina Rgnl	-6C/21F		X	
1A5	Macon County	-16C/3F	X		
<u>North Dakota</u>					
KBIS	Bismarck Muni	-35C/-31F	X		
KDIK	Dickison-Theodore Roosevelt Rgnl	-30C/-22F	X		
KFAR	Hector Intl	-25C/-13F	X		
KISN	Sloulin Field Intl	-36C/-33F	X		X
KPMB	Pembina Muni	-30C/-22F	X		
S25	Watford City Muni	-35C/-31F	X		
<u>Ohio</u>					
KBKL	Burke Lakefront	-23C/-9F		X	
KILN	Wilmington Air Park	-21C/-6F	X		
<u>Oregon</u>					
KAST	Astoria Rgnl	-11C/12F	X		
KBDN	Bend Muni	-22C/-8F	X		
KBKE	Baker City Muni	-25C/-13F	X		
KBNO	Burns Muni	-27C/-17F	X		
KLGD	La Grande/Union County	-12C/10F		X	
KLKV	Lake County	-27C/-17F	X		
KLMT	Klamath Falls	-27C/-17F	X		
KMFR	Rogue Valley Intl-Medford	-5C/24F	X		
KPDT	Eastern Oregon Rgnl at Pendleton	-18C/0F	X		
KRDM	Roberts Field	-19C/-2F	X		
S39	Prineville	-26C/-15F	X		
3S8	Grants Pass	-16C/3F	X		
<u>Pennsylvania</u>					
KAVP	Wilkes-Barre/Scranton Intl	-21C/-6F	X		
KIPT	Williamsport Rgnl	-10C/14F		X	
KIPT	Williamsport Rgnl	-18C/0F	X		
KLHV	William T. Piper	-15C/5F	X		
KMDT	Harrisburg Intl	-17C/1F		X	
KRVL	Mifflin County	-22C/-8F		X	
N27	Bradford County	-24C/-11F	X		
N96	Bellefonte	-21C/-6F	X		
<u>South Dakota</u>					
KEFC	Belle Fourche Muni	-26C/-15F	X		
KIEN	Pine Ridge	-33C/-27F		X	
KMBG	Mobridge Muni	-30C/-22F	X		
KSPF	Black Hills-Clyde Ice Field	-27C/-17F	X		

<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
<u>Tennessee</u>					
0A9	Elizabethton Muni	-11C/12F		X	
6A4	Mountain City/Johnson County	-5C/23F		X	
<u>Utah</u>					
KBCE	Bryce Canyon Airport	-30C/-22F	X		
KENV	Wendover	-11C/12F	X		
KLGU	Logan-Cache	-22C/-8F	X	X	
KRIF	Richfield Muni	-26C/-15F	X	X	
KSGU	St George Muni	-13C/9F	X		
<u>Identifier</u>					
<u>Airport Name</u>					
<u>Temperature</u>					
<u>Intermediate</u>					
<u>Final</u>					
<u>Missed Appr</u>					
KSGU	St George Muni	-25C/-13F		X	
U52	Beaver Municipal	-27C/-17F	X		
U55	Panguitch Municipal	-27C/-17F		X	
74V	Roosevelt Municipal Airport	-25C/-13F	X		
<u>Vermont</u>					
KBTX	Burlington Intl	-14C/7F	X		
KDDH	William H. Morse State	-17C/1F		X	
KDDH	William H. Morse State	-24C/-11F	X		
KEFK	Newport State	-22C/-8F	X		
KMLV	Morrisville-Stowe State	-15C/5F	X	X	
KRUT	Rutland-Southern Vermont Rgnl	-4C/25F		X	
KRUT	Rutland-Southern Vermont Rgnl	-18C/0F	X		
KVSF	Hartness State (Springfield)	-24C/-11F	X	X	
<u>Virginia</u>					
KFRR	Front Royal-Warren County	-10C/14F	X		
KLUA	Luray Caverns	-16C/3F	X	X	
KROA	Roanoke Rgnl/Woodrum Field	-9C/16F		X	
KSHD	Shenandoah Valley Rgnl	-23C/-9F	X		
KVBW	Bridgewater Air Park	-15C/5F	X		
W13	Eagle's Nest	-18C/0F	X		
8W2	New Market	-24C/-11F	X		
<u>Washington St.</u>					
KDEW	Deer Park	-26C/-15F			X
KEAT	Pangborn Memorial	-7C/19F	X		
KELN	Bowers Field	-17C/1F	X		
KMWH	Grant County Intl	-22C/-8F	X		
KOMK	Omak	-13C/9F		X	
KRLD	Richland	-19C/-2F	X		
KYKM	Yakima Air Terminal/McAllister Field	-23C/-9F	X		
<u>West Virginia</u>					
KEKN	Elkins-Randolph County Jennings Randolph Field	-10C/14F	X	X	
W22	Upshur County Regional	-15C/5F	X		
W35	Potomac Airpark	-22C/-8F		X	

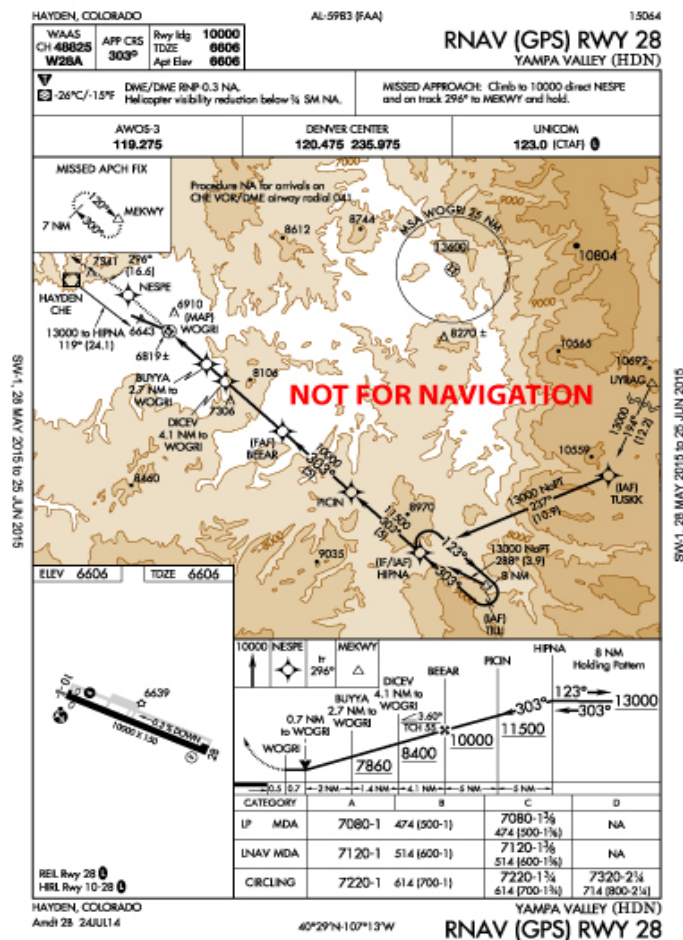
<u>Identifier</u>	<u>Airport Name</u>	<u>Temperature</u>	<u>Intermediate</u>	<u>Final</u>	<u>Missed Appr</u>
W99	Grant County	-9C/16F	X	X	
3I2	Point Pleasant/Mason County	-18C/0F		X	
<u>Wisconsin</u>					
KASX	John F. Kennedy Memorial	-31C/-24F	X		
KCMY	Sparta/Fort McCoy	-33C/-27F	X		
KLNR	Tri County Rgnl	-26C/-15F	X	X	
KLSE	La Crosse Muni	-19C/-2F		X	
KLSE	La Crosse Muni	-29C/-20F	X		
KOVS	Boscobel	-28C/-18F		X	
KPDC	Prairie du Chien Muni	-27C/-17F		X	
KRHI	Rhineland-Oneida County	-30C/-22F	X		
KRPD	Rice Lake Rgnl-Carl's Field	-35C/-31F	X		
4R5	Major Gilbert Field	-29C/-20F	X		
87Y	Blackhawk Airfield	-24C/-11F	X		
93C	Richland	-29C/-20F	X		
C29	Middleton Municipal-Morey Field	-24C/-11F	X		
<u>Wyoming</u>					
KAFO	Afton Municipal Airport	-22C/-8F	X	X	
KCOD	Yellowstone Rgnl	-31C/-24F	X		
KDGW	Converse County	-26C/-15F	X		
KGCC	Gillette-Campbell County	-25C/-13F		X	
KGEY	South Big Horn County	-32C/-26F	X	X	
KJAC	Jackson Hole	-26C/-15F	X	X	X
KLAR	Laramie Rgnl	-35C/-31F	X		
KRWL	Rawlins Muni/Harvey Field	-35C/-31F		X	
KSHR	Sheridan County	-22C/-8F	X		
U68	North Big Horn County	-34C/-29F	X		

See the following examples for identifying and applying altitude corrections.

Examples:

Hayden/Yampa Valley. Hayden, CO, Reported Temperature -26° C: Cold weather temperature restriction is -26° C / -15° F for the intermediate, final and missed approach segments. RNAV (GPS) RWY 28:

1. Intermediate altitude (FAF) (BEEAR) = 10000 ft.
2. Airport elevation = 6606 ft.
3. Difference: 10000 ft. – 6606 ft. = 3394 ft.
4. AIM 7-2-3 ICAO Cold Temperature Error Table: Interception of 3394 ft. and -26° C ≈ 550ft. Add correction to altitudes inside of IF thru FAF. IF HIPNA; 13,000. Stepdown fix PICIN; 11500 + 550 = 12050 (12100). FAF BEEAR; 10000 + 550 = 10550 (10600).
5. Fly new altitudes leaving HIPNA.
6. Final segment altitude (LP MDA) = 7080 ft.
7. Difference: 7080 ft. – 6606 ft. = 474 ft
8. AIM 7-2-3 Table: 474 ft at -26° C ≈ 80 ft.
9. Add corrections to altitudes at DICEV; 8400 + 80 = 8480, BUYYA; 7860 + 80 = 7940.
LP MDA; 7080 + 80 = 7160. May round up in final segment but not down.
10. Missed approach altitude. Follow steps 1 thru 4 to calculate and apply correction. New holding altitude is 10600 ft.



Elko Rgnl. Elko, NV, Reported Temperature -20° C: Cold weather temperature restriction is -20° C / -4° F on the final segment and -27° C / -17° F on the intermediate segment. GPS RWY 5:

1. Final segment altitude (MDA) = 6220 ft.
2. Airport elevation = 5140 ft.
3. Difference: 6220 ft. – 5140 ft. = 1080 ft.
4. AIM 7-2-3 ICAO Cold Temperature Error Table: Interception of 1080 ft. and -20° C ≈ 140 ft.
5. Add correction to altitudes inside of FAF to MDA, Stepdown fix; 6720 + 140 = 6860 (6900). MDA; 6220 + 140 = 6360 (6400 if rounding). Rounding down in final segment is not allowed. Pilots may use either the corrected MDA or rounded MDA.
6. Fly new altitudes leaving EGOLY. No other segment on the approach requires correction at -20° C.
7. Continue monitoring required corrections on final segment at temperatures below -20° C and make changes to MDA and Stepdown if needed.
8. Reported temperature is -27° C: Final segment correction is now ≈ 190 ft. Stepdown fix; 6720 + 190 = 6910 (6900). MDA; 6220 + 190 = 6410. Rounding down in final segment is not allowed. Pilots may use either the corrected MDA or rounded MDA. The intermediate segment must now be corrected. Correction is ≈ 360 ft. Round to 400. Cross EGOLY at 7700.

