Rural Training Center – Thailand (RTC-TH)



Community-based Environmental Education for the Self-sufficiency and Sustainability of Small Rural Family Farms

© 2010, rev 2012 RTC-TH. All rights reserved.

Advanced MEWS Weather Serving Lesson A3: Using Dew Point Temperature to Calculate Cloud Base Height



Advanced Temperature measurements are needed to

Dew Point TemperatureCloud Base Height

The topics below are covered in other Advanced MEWS lessons.

- Calculate Relative Humidity
- Heat Stress Index
- Wind Chill Temperature



All Rights Reserved

You may want to review MEWS Lesson B1 & A1 about temperature measurement before proceeding.

A Mobile Emergency Weather Station (MEWS) **Training Series** presentation





Rural Training Center-Thailand Emergency Communications Program Ready to serve and sustain our community For other lessons in the series e-mail hsØzhm@gmail.com www.neighborhoodlink.com/RTC-TH_Tech/pages

A part of the RTC-TH EmComm Program

The Rural Training Center-Thailand Emergency Communications program is a volunteer effort to provide emergency





amateur radio communications for local community self-sufficiency and sustainability in times of need.

The Rural Training Center-Thailand (RTC-TH) (SUSTAINABILITY FOR ONE IS AN ALL VOLUNTEER

ວ່

Family

is an all volunteer organization providing community-based environmental education for self-sufficiency and sustainability of small rural family farms

www.neighborhoodlink.com/org/rtcth

E-mail: rtc2k5@gmail.com



ficiency and

MEWS adapts weather lessons from two existing RTC-TH programs





Unless otherwise indicated, photos in this presentation are the exclusive property of the RTC-TH. Use of RTC-TH copyrighted materials are available for private / non-commercial educational use without written permission if no changes are made, no fee is charged, and proper attribution is made to the RTC-TH.

Commercial use of the materials is prohibited without written permission.

E-mail: rtc2k5@gmail.com www.neighborhoodlink.com/RTCTH_Tech/pages



The Rural Training Center-Thailand was created to honor the life and memory of Mr. Tang Suttisan, a father, farmer and former custodian of Ban Na Fa Elementary School who appreciated and valued education.

All Rights Reserved

MEWS Lesson B-5 showed how to estimate cloud base height



...using the height of a local mountain within sight of your location.

Important Note

For MEWS purposes, most relief flights will be concerned with the lowest cloud layer.

Record and report the height of the cloud base for the lowest clouds in your area.



Report a Flight Advisory any time cloud base height is *<u>near to</u>, <u>at</u>, <u>or less</u> than the warning limits listed on the Log Form.*

This Lesson will teach you to calculate the cloud base height using the Dew Point Temperature

Here's what you need in order to do this lesson.



Calculator, pencil, MEWS Handbook & log sheet, and Dew Point Table.

All Rights Reserved

Clouds can affect air flights into and out of the relief area.



Photo from the Internet; educational fair use clause



Helicopters fly using visual flight rules; they must see where they are going. Most helicopters do not have radar. Amateur radio operators with portable weather equipment can provide this information when there are no weather stations in the disaster area.

Knowing the relative humidity help you know the height of a cloud layer.

A low cloud ceiling (clouds that are close to the ground) can limit emergency relief flight operations. Knowing the Dew **Point Temperature** lets you calculate the height of the cloud base.





Calculating Cloud Base Height using the Dew Point Temperature

You need to know:

- the Air Temperature
- the Dew Point Temperature
- the dry lapse rate is 9.8°C / 1000m





You need to have the Dew Point Table

The chart can be found on p. 13 of the Handbook posted in PDF section of the the RTC-TH website (www.neighborhoodlink.com/RTC-TH_Tech/pages)

Calculating Cloud Base Height using the Dew Point Temperature

NOTE:

If you have measured the relative humidity, and you already know the Dew Point temperature, you can skip to Step 8 of the following procedure to calculate the cloud based height.



If you need to get the dew point temperature, go to the next slide.

Record the Dew Point Temperature in Section 2.5

Guide notes are on the front of the form

	-	144					er rroan	101 0 0 0 0	1 acron	9	
	M.E.	W.S.		Location							
Mo	(T	E A		Lat °	"	Long	0	" "Е			
bile	77	Stati	age	Lat	Ν	Long		E	Elev		m AMSL
E	allan	d anet	۱ <u>۳</u> ۲	Date			Wea	ther Obser	vations	Time	
	Senc	AMee	~`			Sun	rise	Mid-Afte	rnoon	Sur	nset
R ai	'eady i nd sus	to serve stain our		Local time 24-hr format	Hour→						
	comn	nunity.		Observer (init	ial; see back)						
	2.1	Air (Dry b	ulb)	Thermometer	in shade; 1.5		°C		°C		°C
dity	2.2	Wet Bu	lb	m above	ground		°C		°C		°C
Imi	2.3	Differen	ce	Subtract 2.	2 from 2.1;		°C		°C		°C
ive H	2.4	Rel. Hum	idity	Use 2.1, 2.3	; R H Table		%RH		%RH		%RH
Rela	2.5	Dew Po	int	Use 2.1, 2.3;	Dew Pt Table		°C		°C		°C
re/				Use 2.1, 2.4	; HSI Table	Heat Stress	°C	Heat Stress	°C	Heat Stress	s ⁰C
Dera		Heat Str	ess	Danger Leve Heat Stress	l (if any from Index table)	□Cautn □ Ex Cautn	□Danger □Ex Dangr	□Cautn n □ Ex Cautn n	⊐Danger ⊐Ex Dangr	□Cautn □ Ex Cautn	□Danger □Ex Dangr
emp				Use 2.1, 3.1;	Wind Chl Tbl	Wind Chill.	°C	Wind Chill.	°C	Wind Chill.	°C
2. T	2.7	Wind C	nill	Danger Leve Wind Ch	l (if any from ill chart)	□TrvI Dngr □TShltr Dgr □Frostbite	□Frstbte10 □Frstite30 □Frstbte5	□TrvI Dngr □TShltr Dgr □Frostbite	Frstbte10 Frstite30 Frstbte5	□TrvI Dngr □TShltr Dgr □Frostbite	□Frstbte10 □Frstite30 □Frstbte5
				Report	wind speed	in knots	to air cre	ws; km/h to	all others	S.	
ion		Averag	je	Get 3 reading	gs & average	Lun de	luste	Lun da	lute	lum (h	lute

H M E W S Weather Observation I

2.5 Dew Point Temperature: Use Dry Bulb Temp (2.1), Difference (2.3) and Dew Point Temp table to find Dew Point Temp.

More details notes are on the back of the form

See Handbook Section 2.5, pp. 12-13

		Direction	wind co	omes FROM	E SE	= 1	W NW	E SE	-	W NW	E	SE	W NW
	4.1	Cloud Cover	Use Defir Cov	nitions in Cloud ver Table	 Clear Scatter Broken 	red 🗆 (n	Cloudy Overcast	Clear Clear Scatte Broker	red c n	Cloudy Overcast	□ Cle □ Sc □ Br	ear attered oken	 Cloudy Overcast
]		Use local mou	ntain of know	wn elevation (abo	ove mean	sea le	evel) and	report clo	uds	above, at, o	or belo	w mou	untain top.
		Cloud Base Ht	Relative	e to local Mtn	Clouds	s above	e mtn	Clouds	s abo	ve mtn		ouds ak	oove mtn
	4.2	(Loc Rel)			Clouds	s at mtr	n top	Clouds	s at n	ntn top		ouds at	mtn top
			0.01/0	m AMSL	Clouds	s below	/ mtn	Clouds	s belo	ow mtn		ouds be	elow mtn
		m	DewCal (2.	1-2.5)/9.8x1000m			m AGL			m AGL			m AGL
		Mi	n. flight altitu	udes: Day = 160i	m AGL; N i	ight –	500 m A	GL; Low (clou	d ceiling =	No fli	ghts.	
ns			High	_	Cirrus		□CuNim	Cirrus			🗆 Cir	rus	CuNim
itio			Middle	Vertically	Altostra	at	Courtin	□ Altostr	at	Louinin	🗆 Alt	ostrat	Louin
puo	4.3	Cloud Type		Developed	Altocur	m		Altocu	m		□ Alt	ocum	4
C C			Low		Stratus	3	Cumul	□ Stratu:	S ,	Cumul	□ Str	atus	Cumul
Sky.	4.4	Deisfell	Maria			at			at	4 1		nstrat	
	4.4	Raintali	Measu	ire at 0900 nrs e	acn morni	Ing. R	eport am	ount for la	ist Z	4 nrs.			mm
4.			Name of	t 3.2 km mark	more	🗆 le	ss than	more		less than		ore d	less than
		Visual Danas			🗆 Kain		og	🗆 Kain		Fog		in c	⊐ Fog - Creales
		visual Range	N	(2.0.1	naze	0.0	токе	□ ⊓aze		Smoke	Па	ize c	3 Smoke
	4.5	(VISIDIIITY)	Name of	f 3.2 km mark	more		ss than	more		less than		ore d	i less than
					Kain		og maka	Rain		Fog Smoko		in c	= Fog = Smoko
		Holiaent	or paining una	uicibilitur Dou	2 2 km / 2	milee	Might	E km / 2 r		onoke		No fi	o o nuke
		Helicopte	er minimum	Visibility: Day = 3	5.2 KM / 2	miles,	Night =	<u>5 KM / 3 N</u>	nies	; LOW VISIL	muy =	= IVO III	gnts N
			Inun	iderstorms	I Yes	00.01		I Yes	05.0			S	
	4.6	Severe	Lightning	to been / 3	IN INE E C	5E 3 31	km		SE S	SW W NW		EEGE	S SW W NW
		weather		M/a	n air crei	we of	2011 6014	are weath	or ir				NII
				yy ai	nan cici	05 01	any seve	ne weaui	GT II.	i your aica			



Step 1: Get the air temperature from the MEWS log sheet (Section 2.1)



	-	144			RTC-TH	M.E.V	V.S. 1	Weath	ner Obse	rvation	Log	
	M.E.	VV.S		Location								
Mo		E A E	1_1	Lat °	" " N	l Loi	ng	0	" "Е			
bile	11	Stati	acte	Lat	N	l Lor	g		E	Elev		m AMSL
E.	e liar	nd sto	말	Date			<u> </u>	Wea	ther Obse	rvations	Time	
	gend	A Mear	Under Overalitie Overalitie Overalitie Sunrise Mid-Afternoon Su Locat time 24 hr format Hour→ Sunrise Mid-Afternoon Su Vbulb) Thermoneter in shade: 1.5 °C °C °C Bulb m above ground °C °C °C ence Subtract 2.2 from 2.1; °C °C °C midity Use 2.1, 2.3; RH Table %RH %RH %RH Point Use 2.1, 2.3; RH Table °C Heat Stress °C Stress °C Heat Stress °C Heat Stress °C Heat Stress °C Heat Stress °C Fististe °C °C		nset							
R	Ready	Date Used in the second i		inter rec	omoon	04	1001					
a	nd sus	stain our	Serve Local t nour 24-hr for idy. Observ ir (Dry bulb) Therm Wet Bulb n Difference Sub Dew Point Use 2 Heat Stress Dang Heat Stress Re Subst Re Subst Re Direction Circle Direction Wind Cloud Cover Use 10 Cloud Cover Use 10 Cloud Cover Min flight J Cloud Type Mind Gusta Range Nan Severe Local Min Weather Inghth									
	comn	Stain our Locar time Hour → stain our 24-hr format Hour → Dobserver (initial; see back) Air (Dry bulb) Thermometer in shade: 1.5 Wet Bulb m above ground Difference Subtract 2.2 from 2.1; Rel. Humidity Use 2.1, 2.3; R H Table Dew Point Use 2.1, 2.4; HSI Table Heat Stress Danger Level (if any from Heat Stress Index table) Mind Chill Danger Level (if any from Heat Stress Index table) Wind Chill Danger Level (if any from Heat Stress Index table) Wind Chill Danger Level (if any from Heat Stress Index table) Wind Chill Danger Level (if any from Heat Stress Index table) Wind Speed Guidelines for Out thots / 18.5 km/h ideal; OK to fly Gusts Record highest gust Wind Speed Guidelines for 10 knots / 18.5 km/h ideal; OK to fly Gusts above 20 knots/ 37 km/h; No flights Steady Wind Circle direction steady wind Circle directions in Cloud Corer Table Clear Scatter Direction Wind comes FROM E SE Cloud Cover Use Definitions in Cloud Cover Table Clouds m DewCal (2.1-2.5)/9.8x1000m Mint flight atititudes: Day = 160m AGL: Mig (Loc Rel)										
	2.1	Air (Dry b	ulb)	Thermomete	erin shade: 1.5			°C		°C		°C
Â,	2.2	Wet Bu	lb	m abov	ve ground			°C		°C		°C
	2.3	Image: Serve and out out of the serve and out			2.2 from 2.1;			°C		°C		°C
e la	2.4	Rel. Hum	Lat 0 Lat Date Serve Local time 24-hr format Observer (initial Air (Dry bulb) Thermometer in Wet Bulb m above g Difference Subtract 2.2 Rel. Humidity Use 2.1, 2.3; D Dew Point Use 2.1, 2.3; D Danger Level (Heat Stress In Use 2.1, 2.3; D Danger Level (Heat Stress In Use 2.1, 2.3; D Wind Chill Danger Level (Wind Chill Vince Spect V Average Get 3 readings Gusts Gusts Record high Vince Spect V Average Gusts Boreve 20 knots/ Steady Wind Circle directon on wind comes Direction Wind Scheer 1 or more Cloud Base Ht Relative to Id (Loc Rel) m DewCal (2.1-2.5 Min flight altitudes Middle Low Cloud Type Middle <					%RH		%RH		%RH
elati	2.5	Dew Po	int	Use 2.1, 2.3	; Dew Pt Table			°C		°C		°C
e/R				Use 2.1, 2.	4 ; HSI Table	Heat Str	ess	°C	Heat Stress	°C	Heat Stress	s °C
atur	2.6	Heat Str	ess	Danger Lev	el (if any from	□Cautn	, DD	anger	□Cautn	Danger	□Cautn	Danger
npei				Heat Stres	s Index table)	🗆 Ex Ca	utn 🗆 E	x Dangr	Ex Cauth	Ex Dangr	Ex Cauth	Ex Dangr
Tel	2.7	Mind O		058 2.1, 3.1	, wind Oni Tbi	Wind Ch	ill. ir oE	rsthte10	Wind Chill.	©C □Ersthte10	Wind Chill.	©C ⊡Ersthte10
5	2.1	wind Ci	nill	Danger Lev	vel (if any from	DTShltr D	gr ⊡F	rstite30	TShltr Dgr	□Frstite30	□TShltr Dgr	□Frstite30
				wind C	min onarty	□Frostbite	e oF	rstbte5	□Frostbite	□Frstbte5	□Frostbite	□Frstbte5
				Repoi	rt wind speed	i in kno	ts to	air crev	ws; km/h to	all other	S.	
ction		Averag	e	Get 3 readi	ngs & average	km	/h	knts	km/h	knts	km/h	knts
Dire(3.1	Lat o tabeled and the second s			nighest gust	kre	/h	kato	km/h	keta	km/h	lanto
/ pc	•		Wind S	peed Guid	elines	for H	elicop	ter Flight	Operati	ons	Milla	
Spee		Image: Stain our munity. Date Local time 24-hr format Air (Dry bulb) Thermometer in shad Air (Dry bulb) Thermometer in shad Wet Bulb m above ground Difference Subtract 2.2 from 2 Rel. Humidity Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; Dew Pt Heat Stress Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Wind Chill Carls) Average Get 3 readings & ave Gusts Gusts Record highest gu Wind Speed of 10 knots / 18.5 km/h idea Gusts above 20 knots/ 37 kr Steady Wind Direction Cloud Cover Use Definitions in C Cover Table Use local mountain of known elevati Cloud Base Ht (Loc Rei) Relative to local M m DewCal (2.1-2.5)/9.8.th Min flight altitudes: Day High Middle Verial Devel Visual Range (Visual Range (Visibility) Name of 3.2 km ma Visual Range Weather Inderstorms Lightning Flash, cour to boord				to fly		Ał	bove 45 kn	ots / 83 k	m/h; No fli	ghts.
ind		Date Date to serve stain our munity. Local time 24-hr format Ho Observer (initial; see b Air (Dry bulb) Thermometer in shade Wet Bulb m above ground Difference Subtract 2.2 from 2. Rel. Humidity Use 2.1, 2.3; R H Ta Dew Point Use 2.1, 2.3; Dew Pt T Heat Stress Danger Level (if any f Heat Stress Index tai Wind Chill Danger Level (if any f Heat Stress Index tai Wind Chill Danger Level (if any f Wind Chill chart) Report wind s Record highest gus Average Get 3 readings & aver Gusts Record highest gus Wind Steady Wind Direction Circle direction steady Variable Wind Direction Circle 1 or more freed wind comes FROM Variable Wind Direction Circle 1 or more freed wind comes FROM Cloud Cover Use Definitions in Clo Cover Table Use local mountain of known elevatic Cloud Base Ht (Loc Rel) Min. flight atitudes: Day High Middle Visual Range (Visibility) Name of 3.2 km ma Visual Range Weather Lightning Flash, count Weather Flash, count to boom		s/ 37 km/h; N	lo flights	5	Max	tailwind 5	knots/ 6 k	m/hr; No t	ake off	
8		Date to serve stain our munity. Air (Dry bulb) Thermometer in shadd Wet Bulb Marce (Dry bulb) Thermometer in shadd Wet Bulb Difference Subtract 2.2 from 2 Rel. Humidity Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; Dew Pt Heat Stress Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Heat Stress Index ta Wind Chill Danger Level (if any Wind Chill Oute 2.1, 3.1; Wind Of Oute Stready Wind Cicle direction steady Wind Comes FROM Variable Wind Direction Wind Chill Direction Wind Chill Direction Wind Chill Direction Cloud Cover Use Definitions in Cloude ase Ht (Loc Rel) Min. flight altitud			on steady wind	N N	E S	SW	N NE	S SW	N NE	S SW
	3.2	Directio	come	s FROM	E SE		V NW	E SE	W NW	E SE	W NW	
		to serve stain our nunity. Local time 24-hr format Ho Air (Dry bulb) Thermometer in shade Met Air (Dry bulb) Thermometer in shade mabove ground Difference Subtract 2.2 from 2 Rel. Humidity Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; Dew Pt T Heat Stress Danger Level (if any 1 Heat Stress Index tal Wind Chill Danger Level (if any 1 Heat Stress Index tal Wind Chill Danger Level (if any 1 Heat Stress Index tal Wind Chill Danger Level (if any 1 Heat Stress Index tal Wind Chill Danger Level (if any 1 Heat Stress Index tal Average Get 3 readings & aver Gusts Record highest gut Vind Speed O 10 knots / 18.5 km/h idea Gusts above 20 knots/ 37 km Steady Wind Circle direction steady Circle direction steady Direction Circle 1 or more direct wind comes FROM Variable Wind Circle 1 or more direct wind comes FROM Cloud Cover Use Definitions in Cloud Cover Table Use local mountain of known elevatit Cloud Base Ht (Loc Rel) Min Tight atititudes: Day				E SE	= 8 E V	V NW	E SE	S SW W NW	E SE	S SW W NW
		Mumply. Observer (initial; see b) Air (Dry bulb) Thermometer in shade Wet Bulb m above ground Difference Subtract 2.2 from 2. Rel. Humidity Use 2.1, 2.3; R H Ta Dew Point Use 2.1, 2.3; CH Ta Heat Stress Danger Level (if any f Heat Stress Danger Level (if any f Wind Chill Danger Level (if any f Gusts Record highest gus Wind Speed C 10 knots / 18.5 km/h idea Gusts above 20 knots/ 37 km Steady Wind Direction Circle direction steady Direction Circle 1 or more direct Variable Wind Circle 4 inctions in Ck Cloud Cover Use Definitions in Ck Cloud Cover Use local mountain of known elevatic Cloud Base Ht Relative to local Mt (Loc Rel) </td <td>Clear</td> <td></td> <td>Cloudy</td> <td>Clear</td> <td>Cloudy</td> <td>Clear</td> <td>Cloudy</td>				Clear		Cloudy	Clear	Cloudy	Clear	Cloudy
	4.1	Variable Wind Direction Circle 1 or more directi wind comes FROM Cloud Cover Use Definitions in Clo Cover Table				Scatte	red 🗆 C	Overcast	Scattered	Overcast	Scattered	I 🗆 Overcast
		Direction comes FROM Variable Wind Direction Circle 1 or more direction wind comes FRO Cloud Cover Use Definitions in Clover Table Use local mountain of known elevati Cloud Base Ht				ove mean	sea le	vel) and	report clouds	above at	or below mo	untain top
		Cloud Bas	Relative	to local Mtn	Cloud:	above	mtn	Clouds ab	ove mtn	Clouds al	bove mtn	
	4.2	(Loc Re	el)			Cloud:	s at mtn	top	Clouds at	mtn top	Clouds at	t mtn top
			n	DewCal (2.1-	2.5)/9.8x1000m		woled	mth m AGI	Clouds be	m AGI		elow mth m AGI
		Use local mountain of known elevati Cloud Base Ht Relative to local M (Loc Rel) m m DewCal (2.1-2.5)/9.8x1 Min. flight altitudes: Day			les: Day = 160	n AGL; N	ight –	500 m A	GL; Low clou	ıd ceiling =	No flights.	
ns				High		Cirrus		CuNim	Cirrus	CuNim	Cirrus	CuNim
ditio	13	Cloud Ty	/ne	Middle	Vertically	Altostr	at i		Altostrat Altocum		Altocum	
Con	4.5	Oloud 1	pc	Laur	Developed	Stratu	3 ,	- Cumul	Stratus	- Cumul	Stratus	- Cumul
Sky		Dainfall		LOW		🗆 Nimstr	at	Jounna	Nimstrat	Gunu	Nimstrat	U Cumu
	4.4	Rainfa	11	Measur Name of	e at 0900 hrs e 3.2 km mark	ach morn	ing. Ri	eport am	ount for last 2	4 NrS. Jess than	more	n less than
4			Rainfall Measure at 0900 I Name of 3.2 km mark					g	□ Rain □	Fog	□ Rain	□ Fog
		Visual Ra	nge	N C	2.01	🗆 Haze	o Sn	noke	🗆 Haze 🗆	Smoke	🗆 Haze 🛛	Smoke
	4.5	(Visibilit	Ose 2.1, 0.1, wind Chill Danger Level (if any frowing Chill chart) Report wind sp Verage Get 3 readings & avera Gusts Record highest gust Gusts All the speed G 10 knots / 18.5 km/h ideal; Busts above 20 knots/ 37 km/h ady Wind Circle direction steady Wind rection Circle 1 or more directic wind Cover Use Definitions in Clou Cover Table e local mountain of known elevation Cover Table e local mountain of known elevation m Ah m DewCal (2.1-2.5)/9.8x100 Min. flight atitudes: Day = High widdle Vertical Develop Low Rainfall Measure at 0900 1 Name of 3.2 km mark Helicopter minimum visibility: Da Severe Lightning Flash, count of to boom? Verther Flash, count of to boom?			more Rain	n Eo	ss than	Bain C	Eless than	Bain I	less than
						🗆 Haze	□ Sn	noke	🗆 Haze 🗖	Smoke	🗆 Haze 🛛	□ Smoke
		Не	licq	oter minimum v	isibility: Day = 3	3.2 km / 2	miles;	Night =	5 km / 3 mile.	s; Low visi	bility = No fli	ights
		Sever	2	Thund	erstorms Flash, count secs	N NE F	SE S SM		N NE E SE S	SW W NW	N NE E SE	S SW W NW
	4.6	Weath	er	Lightning	to boom / 3	🗆 Yes		km	□ Yes	km	□ Yes	km
					Wai	rn air cre	ws of a	any seve	ere weather i	n your area	7.	

Step 2: Get the difference between the dry and wet bulb temperatures (Section 2.3)

	. F	W.			RTC-TH	M.E.W.S	S. Weath	ier Obsei	rvation	Log	
	M.L	S.		Location							
	3 G	TAA E	5	Lat °	" " N	l Long	0	"Е			
		Stat	eact	Lat	N	Long		E	Elev		m AMSL
	Emerila	nd the	토	Date			Wea	ther Obser	vations	Time	
	'9en	ch Mea				Sun	rise	Mid-Afte	rnoon	Su	nset
	Ready	to serve	1	Sunrise Mid-Atternoon Surrise Uoal time Hour-> Surrise Mid-Atternoon Surrise Observer (initial; see back) Observer (initial; see back) Image: Comparison of the second							
	and su	Price y N° dy to serve sustain our mmunity. 1 Air (Dry bull 2 Wet Bulb 3 Difference 4 Rel. Humidi 5 Dew Point 6 Heat Stress 7 Wind Chill Average 1 Gusts 0 1 Cloud Cove Use local n Cloud Base F 2 3 Cloud Type 4 Rainfall 5 Visual Rang 5 Visual Rang 6 Severe Weather		24-hr format	Tiour 2						
	comi	nunity.	Serve in our mity. Local time 24-hr format Hour→ Air (Dry bulb) Thermometer in shade; 1.5 m above ground Thermometer in shade; 1.5 m above ground Difference Subtract 2.2 from 2.1; Rel. Humidity Use 2.1, 2.3; Dew Pt Table Dew Point Use 2.1, 2.3; Dew Pt Table Danger Level (if any from Heat Stress Index table) Heat Stress Use 2.1, 2.4; HSI Table Heat Stress Danger Level (if any from Heat Stress Index table) Wind Chill Danger Level (if any from Wind Chill chart) Wind Chill Danger Level (if any from Wind Chill chart) Report wind Speed Get 3 readings & average Gusts Record highest gust Wind Speed Guide OK 10 knots / 18.5 km/h ideal; OK Gusts above 20 knots/ 37 km/h; N Steady Wind Circle 1 or more directions teady wind comes FROM Cloud Cover Use Definitions in Cloud Cover Table Use local mountain of known elevation (abc Cloud Cover Middle Vertically Developed Min. flight atitudes: Day = 1600 Min. flight atitudes: Day = 1600 Karafall Measure at 0900 hrs e Name of 3.2 km mark Visual Range Name of 3.2 km mark <								
	2.1	ywww i Local time 24-hr format Hour→ hourity. Observer (initial; see back) Air (Dry bulb) Air (Dry bulb) Thermometer in shade; 1.5 m above ground m Difference Subtract 2.2 from 2.1; M Rel. Humidity Use 2.1, 2.3; R H Table H Dew Point Use 2.1, 2.3; Dew Pt Table H Heat Stress Idex 2.1, 2.3; R H Table H Heat Stress Idex 2.1, 2.4; HSI Table H Heat Stress Idex 2.1, 2.1; Wind Chi Tbl W Wind Chill Danger Level (if any from Heat Stress Index table) T Wind Chill Danger Level (if any from Wind Chill chari) T Average Get 3 readings & average T Gusts Record highest gust W Variable Wind Circle 1 or more directions M Direction Corcel 1 or more directions M Direction Wind Corcle 1 or more directions M Direction Wind Corcel 1 or more directions M Direction Middle Vertically D Use local mountain of known elevation (above C					°C		°C		°C.
Ę	2.2	Wet Bu	ılb	m abov	e ground		•C				
1 8	23	Differen	ice	Subtract 2	2.2 from 2.1:		0		0		0 00
	2.4	Image: New			3: R H Table		0/ DU		0/ DU		0/ DU
	2.4	Devi De	iuity	Use 2.1, 2.	Devis Di Tabla		%KH		%KH		%KH
	2.0	Dew Po	nrit	Use 2.1, 2.3	, Dew Pt Table		°C		°C		°C
ILD	26	Heat Str	000	Use 2.1, 2.	4;HSI Table	Heat Stress		Heat Stress	<u> </u>	Heat Stress	<u> </u>
orrati		nearou	633	Danger Lev Heat Stress	s Index table)	□ Ex Cautn	□Danger □Ex Dangr	□ Ex Cautn o	⊐Danger ⊐Ex Dangr	□ Ex Cauth	□Danger □Ex Dangr
duna		$ \begin{array}{c c c c c c } \hline $		Use 2.1, 3.1	; Wind Chl Tbl	Wind Chill	°C.	Wind Chill	°C	Wind Chill	°C
F	2.7	Wind C	hill	Dangar Lau	ial (if any from	□TrvI Dngr	□Frstbte10	□TrvI Dngr (=Frstbte10	□TrvI Dngr	□Frstbte10
~	i	Willia O		Wind C	hill chart)	□TShltr Dgr	□Frstite30	□TShltr Dgr	□Frstite30	□TShltr Dgr	□Frstite30
H				Papa	t wind cnoor	Frostbite	Frstbteb	Frostbite i	-Fristbteb		Erstoteo
	_			Repor	t wind speed	I III KHOIS	to all cre	ws , km/m to	all other	5.	
ction		Location Lat 0 Locat time 24-hr format Wind Difference Subtract 2.2 Rel. Humidity Use 2.1, 2.3; Dew Point Use 2.1, 2.4; Heat Stress Danger Level Wind Chill Danger Level Wind Spector Wind Spector 10 knots / 18.5 km/f Gusts above 20 knots/ Steady Wind Circle direction Direction Wind comes Variable Wind Circle direction Direction Wind comes Cloud Cover Use Definition Cloud Cover Use Definitior Cloud Base			ngs & average	km/h	knts	km/h	knts	km/h	knts
Diro	3.1	Gusts	Lat 0 1 1 Lat 0 1 1 Lat 1 Lat 1 Lat 1 Date Local time 4 Z4-hr format 4 Dobserver (initial; see b ir (Dry bulb) Thermometer in shade m above ground Difference Subtract 2.2 from 2 Rel. Humidity Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; RH Ta Dew Point Use 2.1, 2.3; RH Ta Danger Level (if any 1 Heat Stress Index tal Use 2.1, 2.4; HSI Ta Danger Level (if any 1 Heat Stress Index tal Use 2.1, 3.1; Wind Ch Wind Chill Danger Level (if any 1 Heat Stress Index tal Use 2.1, 3.1; Wind Ch Wind Chill Danger Level (if any 1 Heat Stress Index tal Use 2.1, 3.1; Wind Ch Wind Chill Danger Level (if any 1 Heat Stress Index tal Use 2.1, 3.1; Wind Ch Wind Chill Charls Report wind 3 Report wind 3 Report wind Streed O 10 knots / 18.5 km/h idea Gusts above 20 knots/ 37 km Steady Wind Circle 1 or more direct Direction wind comes FROM Circle 1 or more direct Direction Steady Cloud Cover Use Definitions in Cla Cover Table Use Iocal mountain of known elevatid Cloud Cover Use Definitions in Cla Cover Table Use Iocal mountain of known elevatid Cloud See Ht (Loc Rel) m// m DewCal (2.1-2.5)/9.8x10 Min. flight atitudes: Day High Cloud Type High Cloud Type Kiddle Vertic Develor Kainfall Measure at 0900 Name of 3.2 km ma fisual Range (Visibility) Name of 3.2 km ma fisual Range (Visibility) Name of 3.2 km ma Fish, count to boom			km/h	kata	km/h	kete	km/h	late
				Wind S	peed Guid	elines for	Helicop	ter Flight	Operati	ons	Kina
Show		10) kn	ots / 18.5 km	h ideal; OK	to fly	A	bove 45 knd	ots / 83 ki	m/h; No fli	ghts.
, pui	2	Gust	Image: Construct State Stress Image: Construct State Stress Image: Construct Stress Image: Construct Stresst			lo flights	Max	tailwind 5 l	knots/ 6 k	m/hr; No t	ake off
3		Steady V	Prve our Local time 24-hr format Ho Observer (initial; see b Mo (Dry bulb) Thermometer in shade m above ground Difference Subtract 2.2 from 2. I. Humidity Use 2.1, 2.3; R H Ta bew Point Use 2.1, 2.3; Dew Pt T later Point Use 2.1, 2.3; Dew Pt T bear Point Use 2.1, 2.4; HSI Ta bear Stress Danger Level (if any f Vind Chill Danger Level (if any f Wind Chill Danger Level (if any f Wind Chill Danger Level (if any f Wind Stress Report wind s Average Get 3 readings & aver Gusts Record highest gus Wind Speed C 10 knots / 18.5 km/h idea Gusts above 20 knots/ 37 km Corcle 1 or more direct Gud Cover Use Definitions in Clo Cover Table oud Cover Use Definitions in Clo Cover Table m DewCal (2.1-2.5)/9.8x10 Min. flight attitudes: Day Min. flight attitudes: Day Min. flight attitudes: Day High Min didle Vertic Low Name of 3.2 km ma <t< td=""><td>N NE</td><td>S SW</td><td>N NE</td><td>S SW</td><td>N NE</td><td>S SW</td></t<>			N NE	S SW	N NE	S SW	N NE	S SW
~	3.2	Average Get 3 Min (Dry bulb) Therm Wet Bulb Min Difference Sub Rel. Humidity Use 2. Heat Stress Dange Heat Stress Dange Wind Chill Dange Average Get 3 Gusts Re Min (Direction) Min Use 1 Dange Wind Chill Dange Gusts Re Min 10 knots / 18. Gusts Gusts above 201 Steady Wind Steady Wind Circle of Min Direction Wind Cloud Cover Use 1 Use local mountain of Circle of Min Mind Cloud Cover Use 1 Visual Range Mind Visual Range Mind Visual Range Min Visual Range Loover Weather Lightning			s FROM	E SE	W NW	E SE	W NW	E SE	W NW
		Gusts Wind Speed G 10 knots / 18.5 km/h ideal Gusts above 20 knots/ 37 km Steady Wind Circle direction steady W Direction Circle direction steady W Variable Wind Circle 1 or more direction Direction Wind comes FROM Cloud Cover Use Definitions in Clouc Cover Table Use local mountain of known elevation Cloud Base Ht (Loc Rel) m DewCal (2.1-2.5)/9.8x100			nore directions	F SE	S SW W NW	F SE	S SW W NW	F SE	S SW W NW
F	+	Direction	Susts Record highest gust Wind Speed G 10 knots / 18.5 km/h ideal usts above 20 knots/ 37 km dy Wind Circle direction steady w comes FROM ble Wind Circle 1 or more directi wind comes FROM d Cover Use Definitions in Clo Cover Table local mountain of known elevation d Base Ht oc Rel) Relative to local Mtr m m DewCal (2.1-2.5)/9.8x100 Min. flight altitudes: Day = High			Clear	Cloudy	□ Clear t	Cloudy	Clear	Cloudy
	4.1	Variable Wind Direction Cloud Cover Cloud Cover			r Table	Scattered	Overcast	Scattered	Overcast	Scattered	I 🗆 Overcast
		Line loos	ction wind comes FROM Cover Use Definitions in Clour Cover Table			Broken	have (lovel)	Broken	ahovo at .	Broken	untain ton
		Cloud Bas	se Ht	Relative	to local Mtn	Clouds ab	ove mtn	Clouds abo	ve mtn	Clouds al	bove mtn
	12	(Loc Re	el)			Clouds at	mtn top	Clouds at n	ntn top	Clouds at	t mtn top
	4.2			DawOal (2.1	m AMSL	Clouds be	low mtn	Clouds below	ow mtn	Clouds b	elow mtn
			- 11	Min flight altitud	2.5)/9.0x1000m les: Dav - 160	m AGL · Niah	t = 500 m A	GL · Low clou	d ceilina -	No flights	III AGL
S				High	100. Day - 1001	Cirrus		Cirrus	- Cohing -	Cirrus	-0.45
itior				Middle	Vertically	 Altostrat 		 Altostrat 		 Altostrat 	
puo	4.3	Cloud Ty	ype		Developed	Altocum Stratue	+	Altocum Stratus		Altocum Stratue	-
				Low		Nimstrat	Cumul	Nimstrat	Cumul	□ Nimstrat	Cumul
S	4.4	4 Rainfall Measure at 0900 Name of 3.2 km mar			e at 0900 hrs e	ach morning.	Report am	ount for last 2	4 hrs.		mm
4				Name of 3	3.2 km mark	more	less than	more Point	less than	more	□ less than
		Visual Range 5 (Visibility)				- Haze -	Smoke	- Haze -	Smoke	- Haze	⊐ Pog ⊐ Smoke
	4.5	(Visibili	ty)	Name of 3	3.2 km mark	nore n	less than	nore n	less than	nore a	less than
						□ Rain □	Fog Smoke	□ Rain □	Fog Smoke	□ Rain I	Fog Smoke
		He	elico	pter minimum v	isibility: Dav = 1	3.2 km / 2 mi	es: Niaht =	5 km / 3 miles	°C %RH °C @anger Cautn Danger Cautn ith Ex Dangr Ex Cautn ith Statts Frostbito gr Frstbe5 ith Coperations knots Km/h knots 83 km/h; No flight S knots / 83 km/h; No flight S knots / 6 km/hr; No tal S SW N NE W NW E SE S SW N NE W NW E SE Cloudy Clear Broken Broken uds above, at, or below moun a above mt Clouds aboo a totn top Clouds aboo a totn top Clouds aboo a totn top Clouds aboo a touring Nimstrat stating Curvia at Curvia at Curvia below mtn <td< td=""><td>iahts</td></td<>		iahts
				Thund	erstorms	- Yes	n No	□ Yes	🗆 No	□ Yes	n No
	4.6	Sever	е	Lightning	Flash, count secs	N NE E SE S	SW W NW	N NE E SE S	SWWNW	N NE E SE	S SW W NW
		Weath	er	5	to boom / 5	n air crews	of any seve	re weather in	km 1 Vour area	i n res	ĸm
					yy al	nun orews	or any 5000	no weather II	gour area		



Step 3: Get the Dew Point Temperature Table from the MEWS Handbook

						DE	W POIN	T TEMP	ERATUR	E CHAR	RT (°C)						
						Dr	y Buib te	emperatu	re minus	s Wet Bu	ib tempe	rature in	°C				
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
	-20	-25	-33														
	-17.5	2	-27	-38													
	-15	-19	-23	-28													
	-12.5	-15	-18	-22	-29												
	-10	-12	-14	-18	-21	-27	-36										
0	-7.5	-9	-11	-14	-17	-20	-26	-34									
v.	-5	-7	÷9	-10	-13	-16	-19	-24	4								
2	-2.5	4	-6	-7	-9	-11	-14	-17	-22	-28	-41						
1	0	-1	-3	4	-6	-8	-10	-12	-15	-19	-24						
- De	2.5	1	0	-1	-3	4	-6	-8	-10	-13	-16						
문	5	4	3	2	0	-1	-3	4	-6	-8	-10	-48					
ē	7.5	6	6	4	3	2	1	-	-2	4	-6	-22					
5	10	9	8	7	6	5	4	2	1	0	-2	-13					
R	12.5	12	11	10	9	8	7	6	4	3	2	-7	-28				
æ	15	14	13	12	12	11	10	9	8	7	5	-2	-14				
5	17.5	17	16	15	14	13	12	12	11	10	8	2	-7	-35			
2	20	19	18	18	17	16	15	14	14	13	12	6	-1	-15			
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	22.5	22	21	20	20	19	18	17	16	16	5	10	3	-6	-38		
e	25	24	24	23	22	21	21	20	19	18	18	3	7	0	-14		
	27.5	27	26	26	25	24	23	23	22	21	20	16	11	5	-5	-32	
=	- 30	29	29	28	27	27	26	25	25	24	23	19	14	9	2	-11	
8	32.5	32	31	31	30	29	29	28	27	26	26	22	18	13	7	-2	
S.	- 35	34	34	33	32	32	31	31	30	29	28	25	21	16	11	4	
5	37.5	37	36	36	35	34	34	33	32	- 32	31	28	24	20	15	9	0
	40	39	39	38	38	37	36	36	35	34	34	- 30	27	23	18	13	6
	42.5	42	41	41	40	40	39	38	38	37	36	33	30	26	22	17	11
	45	44	44	43	43	42	42	41	40	40	39	- 36	33	29	25	21	15
	47.5	47	46	46	45	45	44	44	43	42	42	- 39	35	32	28	24	19
	50	49	49	48	48	47	47	45	45	45	44	41	38	35	31	28	23
:	Use the h Subtract t	ygromete ihe Wet B	er to get th Sulb tempe	ie Dry Bu trature fr	lb and the om the Dr	e Wet Bul y Bulb ter	b Tempe nperature	rature. Ex e. Examp	xample, D le, 30°C	)ry Bulb = - 28•C =	30°C, W 2°C.	et Bulb =	28°C.				

Find the column for 2°C across the top of the chart. Locate 30°C in the Air Temperature column at the left side of the chart. Find the intersection of the

column and row to get the Dew Point Temperature. For the example of 2°C and 30°C, the Dew Point Temperature is 27°C

Divide 27°C by 10°C = 2.7 X 1000 m = 2700 m (the altitude of the bottom of the clouds)

See Handbook p 13



# Step 4: Find the dry bulb temperature in the left most column.



Subtract the Wet Bulb temperature from the Dry Bulb temperature. Example, 30°C - 28°C = 2°C.

Find the column for 2°C across the top of the chart. Locate 30°C in the Air Temperature column at the left side of the chart. Find the intersection of the column and row to get the Dew Point Temperature. For the example of 2°C and 30°C, the Dew Point Temperature is 27°C.

Divide 27°C by 10°C = 2.7 X 1000 m = 2700 m (the altitude of the bottom of the clouds)

For this example, let's use 30° C



# Step 5: Find the dry bulb / wet bulb temperature difference in the row across the top.

For this example, let's use 2° C.



						DE	W POIN	T TEMP	ERATUR	RE CHAR	₹T (°C)						
					_	D	ry Buib t	emperati	ire minus	s Wet Bu	ib tempe	rature in	•c				
		0.5	1.0	15	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
	-20	-25	-33														
	17.5		-21	-36													
		-19	-23	-28													
	-12.5	-15	-18	-22	-29												
	-10	-12	-14	-18	-21	-27	-36										
0	-7.5	-9	-11	-14	-17	-20	-26	-34									
š	-5	-7	-8	-10	-13	-16	-19	-24	-31								
2	-2.5	4	-6	-7	-9	-11	-14	-17	-22	-28	-41						
16	0	-1	-3	4	-6	-8	-10	-12	-15	-19	-24						
東	2.5	1	0	-1	-3	4	-6	-8	-10	-13	-16						
Ē	5	4	3	2	0	-1	-3	4	-6	-8	-10	-48					
-Te	7.5	6	6	4	3	2	1	-1	-2	-4	-6	-22					
14	10	9	8	7	6	5	4	2	1	0	-2	-13					
₹.	12.5	12	11	10	9	8	7	6	4	3	2	-7	-2B				
₽	15	14	13	12	12	11	10	9	8	7	5	-2	-14				
릚	17.5	17	16	15	14	13	12	12	11	10	8	2	-7	-35			
<u>s</u>	20	19	18	18	17	16	15	14	14	13	12	6	-1	-15			
문	22.5	22	21	20	20	19	18	17	16	16	5	10	3	-6	-38		
, e	25	24	24	23	22	21	21	20	19	18	18	3	7	0	-14		
5	27.5	27	26	26	25	24	23	23	22	21	20	16	11	5	-5	-32	
2	30	29	29	28	27	27	26	25	25	24	23	19	14	9	2	-11	
~	32.5	32	31	31	30	29	29	28	27	26	26	22	18	13	7	-2	
ā	ು	34	- 34	35	- 52	32	- ১1	31	-30	29	26	25	21	16	11	4	
	37.5	37	36	36	35	34	34	33	32	32	31	28	24	20	15	9	0
	40	39	39	38	38	37	36	36	35	34	34	- 30	27	23	18	13	6
	42.5	42	41	41	40	40	39	38	38	37	36	33	30	26	22	17	11
	45	44	44	43	43	42	42	41	40	40	- 39	30	33	29	25	21	15
	47.5	47	46	46	45	45	44	44	43	42	42	- 39	35	32	28	24	19
	50	49	49	46	48	4/	4/	46	45	40	44	41	36	35	រា	26	23
•	Use the h	rygromete	er to get fr	he Dry Bu	lb and th	e Wet Bu	lb Tempe	rature. E	xample, D	)ry Bulb =	30°C, W	et Bulb =	28•C.				
•	Subtract t	the Wet B	Sulb temp	erature fro	om the D	ry Bulb te	mperatur	e. Exemp	ole, 30°C	– 28°C =	2°C.						
•	Find the o	column fo	r 2°C acr	oss the to	p of the o	shart. Loo	cate 30°C	in the Ai	r Tempers	sture colu	mn at the	left side (	of the cha	rt. Find t	he interse	ection of t	1e
	column ar	nd row to	get the D	ew Point	Tempera	ture. For	the exam	nple of 2*	C and 30	•C, the D	ew Point	Temperat	ure is 27•	C.			

Divide 27°C by 10°C = 2.7 X 1000 m = 2700 m (the altitude of the bottom of the clouds)

Step 6: Find the dew point temperature in the chart where the row / column meet.

The Dew Point Temperature is 27° C.



<b>—</b>																	
						DE	W POIN	TTEMP	ERATUR	E CHAR	кт (°С)						
					_	D	ry Buib te	emperatu	re minus	s Wet Bu	ib tempe	rature in	•c				
		0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	7.5	10.0	12.5	15.0	17.5	20.0
	-20	-25	-33														
	-17.5	2	-27	-38													
	-15	-19	-23	-28													
	-12.5	-15	-18	-22	-29												
	-10	-12	-14	-18	21	-27	-36										
0	-7.5	-9	-11	-14	-17	-20	-26	-34									
*	-5	-7	-8	-10	-13	-16	-19	-24	-31								
8	-2.5	4	-6	-7	-9	-11	-14	-17	-22	-28	-41						
16	0	-1	-3	4	-6	-8	-10	-12	-15	-19	-24						
1	2.5	1	0	-1	-3	4	-6	-8	-10	-13	-16						
Ē	5	4	3	2	0	-1	-3	4	-6	-8	-10	-48					<u> </u>
-∎		6	6	4	3	2	1	-1	-2	-4	-6	-22					<u> </u>
5	10	9	8	7	6	5	4	2	1	0	-2	-13		L			<b> </b>
শ্র	12.5		11	10	9	8	7	6	4	3	2	-7	-2B	<u> </u>	L		──
2	15	- 14	13	12	12	11	10	9	8	7	5	-2	14				
a a	17.5	17	- 16	15	14	13	12	12	11	10	8	2	-7	-35			
÷.	20	19	18	18	17	16	15	14	14	13	12	6	-1	-15			L
물	22.5	22	21		20	19	18	17	16	16	5	10	3	-6	-38		<u> </u>
ē	25	24	24	_	22	21	21	20	19	18	18	3	7	0	-14		<b> </b>
0						24	23	23	72	21	20	16	11	5	-5	-32	—
2	30	29	29	28	77	27	26	25	25	24	23	19	14	9	2	-11	—
ž	32.5	32	্য	31	- 30	29	29	28	2/	20	26	22	18	13	1	-2	<u> </u>
à	<u></u>	34	34	33	32	32	- ১1	31	30	29	26	25	21	16	11	4	<u> </u>
	37.5	37	36	35	35	34	- 34	33	32	- 32	31	28	24	20	15	9	0
	40	39	39	35	38	3/	30	35	35	- 34	- 34	- 30	27	23	18	13	<u>ь</u>
	42.5	42	41	41	40	40	- 39	35	- 38	- 3/	30	- 33	30	26	72	1/	11
	40	44	44	43	43	42	42	41	40	40	- 39	- 30	33	29	25	21	15
	4/.5	4/	46	45	45	45	44	44	43	42	42	-39	35	32	28	24	19
	-50	49	49	40	48	4/	4/	40	45	40	44	41	30	35	- ১1	26	23
•	Use the h	rygromete	er to get fr	he Dry Bu	ib and the	: Wet Bu	b Tempe	rature. Ei	xample, D	ry Bulb =	: 30°C, W	et Bulb =	28°C.				
•	Subtract t	ine Wet B	uib tempe	erature fr	om the Dr	y buib te	mperature	e. Examp	ie, 30°C -	- 28°C =	240.					-	
•	Find the o	column fo	r 2°C acr	oss the to	op of the o	hart. Loo	ate 30 °C	in the Air	Tempere	sture colu	mn at the	left side (	of the cha	rt. Find t	he interse	ection of t	ne
	column ar	nd row to	act the D	ew Point	Temperat	hure Ear	the exam	nde of 2ª	C and 30*	C like D.	ew Point 1	Temperat	ure is 27•	·C			

Divide 27 °C by 10 °C = 2.7 X 1000 m = 2700 m (the altitude of the bottom of the clouds)

#### Record the Dew Point Temperature

Step 7: Write the Dew Point Temperature in Section 2.5



	E	147			RTC-TH	M.E.W.S	6. Weath	her Obse	rvation	Log	
	N.E.	VV.S.		Location							
Mo		E A		Lat °	" " [	Long	0	" Е			
bile	77	Stat	acte	Lat	Ν	I Long		E	Elev		m AMSL
5	allar	nd met	≚[	Date			Wea	ther Obser	vations	Time	
	gend	A Meg.	<del></del>			Sun	ise	Mid-Afte	ernoon	Sur	nset
F	eady?	to serve	†	Local time	Hour						
a	nd sus	stain our		24-hr format	TIOUT						
	comn	nunity.		Observer (i	nitial; see back)						
	2.1	Air (Dry b	ulb)	Thermome	ter in shade: 1.5		°C		°C		°C
Ξź	2.2	Wet Bu	ılb	m abo	ove ground		°C.		°C.		°C
imid	2.3	Differen	ice	Subtract	2.2 from 2.1:		°C.				0°
보	2.4	Rel. Hum	iditv	Use 2.1.3	2.3: R H Table		%RH		%RH		%RH
l la	2.5	Dew Po	oint	Use 2.1, 2.	3; Dew Pt Table		0°		0°		0°
				Use 2.1.2	4 · HSI Table	Hoot Stropp	۰ د	Heat Stress	°C	Hoat Street	• •C
	2.6	Heat Str	ess	Danger Le	vel (if any from	Cautn	Danger	Cautn i	Danger	Cautn	Danger
pera				Heat Stre	ss Index table)	Ex Cautn	□Ex Ďangr	🗆 Ex Cautn	⊐Ex Ďangr	🗆 Ex Cautn	□Ex Dangr
Tem				Use 2.1, 3.	1; Wind Chl Tbl	Wind Chill.	°C	Wind Chill.	°C	Wind Chill.	°C
Ι.	2.7	Wind C	hill	Danger Le	vel (if any from	□TrvI Dngr	□Frstbte10	TrvI Dngr	Frstbte10	□Trvl Dngr	□Frstbte10
2				Wind	Chill chart)	□Frostbite	□Frstbte5	□Frostbite	=Frstbte5	□Frostbite	□Frstbte5
				Repo	ort wind speed	l in <b>knots t</b>	o air cre	ws; km/h to	all other	S.	
ioi		Averag	je	Get 3 read	lings & average						
rect		Cuete		Descul	high and must	km/h	Krits	Km/h	Knts	km/h	Knts
Di	3.1	Gusts	5	Record	nignest gust	km/h	knts	km/h	knts	km/h	knts
peed		4.0		wind a	speed Guid	elines for	непсор	ter Flight	Operati	ons w/lex No. 41	u la é a
ls pu		Guete	s ab	ots / 18.5 Ki	te/ 27 km/b: N	to flights	Max	toilwind 5	us / 83 Ki knote / 6 k	m/n, No Iliq m/br: No t	gnis. Iako off
N.		Steady V	S ab Vind	Circle direct	tion steady wind	N NE	S SW	N NE	S SW	IN NE	S SW
	2.2	Directio	on	com	es FROM	E SE	W NW	E SE	W NW	E SE	W NW
	3.2	to serve stain our munity.       Local time 24-hr format       Hou Observer (initial; see ba dir (Dry bulb)         Air (Dry bulb)       Thermometer in shade m above ground         Difference       Subtract 2.2 from 2.1         Rel. Humidity       Use 2.1, 2.3; R H Tat         Dew Point       Use 2.1, 2.3; R H Tat         Dew Point       Use 2.1, 2.3; R H Tat         Heat Stress       Danger Level (if any fr Heat Stress Index tab         Wind Chill       Danger Level (if any fr Heat Stress Index tab         Wind Chill       Danger Level (if any fr Wind Chill chart)         Report wind s       Report wind s         Average       Get 3 readings & avera         Gusts       Record highest gus         Wind Speed G       10 knots / 18.5 km/h ideal         Gusts above 20 knots/ 37 km       Steady Wind         Direction       Circle direction steady V         Direction       Circle direction steady Wind         Direction       Circle direction steady V         Direction       Wind Chill         Use local mountain of known elevatio         Cloud Cover       Use Definitions in Clo Cover Table         Use local mountain of known elevatio       Cloud Spae Ht (Loc Rel)         Min       Might atitudes: Day = High         Cloud Type			more directions	N NE	S SW	N NE	S SW	N NE	S SW
-		Directio	on	wind co	mes FROM	E SE	W NW	E SE	W NW	E SE	W NW
	4.1	Steady Wind Direction         Circle alrection steady comes FROM           Variable Wind Direction         Circle 1 or more direct wind comes FROM           Cloud Cover         Use Definitions in Cloud Cover Table			itions in Cloud	□ Scattered	<ul> <li>Overcast</li> </ul>	Scattered (	<ul> <li>Overcast</li> </ul>	□ Crear	d 🗆 Overcast
		Variable Wind Direction Circle 1 or more direct wind comes FROI Cloud Cover Use Definitions in Cli Cover Table Use local mountain of known elevatii			eriaple	🗆 Broken		Broken		Broken	
		Use loca	al mo	Puntain of know	vn elevation (ab	ove mean sea	level) and	report clouds	above, at, o	or below mou	untain top.
		(Loc Re	en. el)	T C Iduve		Clouds at r	ntn top	Clouds at r	ntn top	Clouds at	t mtn top
	4.2				m AMSL	Clouds bel	ow mtn	Clouds bel	ow mtn	Clouds be	elow mtn
		Use local mountain of known elevati Cloud Base Ht Relative to local M (Loc Rel) m DewCal (2.1-2.5)/9.8x1 Min flight attitudes: Day			1-2.5)/9.8x1000m	m A CL · Night	m AGL	CL: Low clou	m AGL	No flighte	m AGL
S			n	High	1003. Day - 100	Cirrus	- 00 MA	Cirrus	- O. M	Cirrus	-0.15
litior				Middle	Vertically	<ul> <li>Altostrat</li> </ul>	CuNim	<ul> <li>Altostrat</li> </ul>	GCUNIM	<ul> <li>Altostrat</li> </ul>	
puo	4.3	Cloud T	ype		Developed	Altocum     Stratue	ł	Altocum     Stratus		Altocum     Stratus	4
ky C				Low		<ul> <li>Nimstrat</li> </ul>	Cumul	Nimstrat	Cumul	<ul> <li>Nimstrat</li> </ul>	Cumul
S	4.4	Rainfall Measure at 0900 Name of 3.2 km mark			ire at 0900 hrs e	ach morning.	Report am	ount for last 2	4 hrs.		mm
4.		Rainfall         Measure at 0900           Name of 3.2 km mark           Visual Range				more     Rain	less than	more     Rain	less than	more     Rain	less than Eco
		Visual Ra	ange			- Haze -	Smoke		Smoke	- Haze	□ Smoke
	4.5	(Visibili	ty)	Name of	3.2 km mark	nore n	less than	nore n	less than	in more	less than
						⊡ Kain ⊡ ⊡ Haze ⊡	⊦og Smoke	□ Kain □ □ Haze □	Fog Smoke	□ Kain t □ Haze	.⊐ Fog □ Smoke
		Не	elic oj.	, pter minimum	visibility: Day = .	3.2 km / 2 mile	es; Night =	5 km / 3 miles	; Low visit	bility = No fil	ights
		_		Thun	derstorms	🗆 Yes	D No	🗆 Yes	n No	🗆 Yes	D No
	4.0	Sever	е	Lightning	Flash, count secs	N NE E SE S	SWWNW	N NE E SE S	SW W NW	N NE E SE	S SW W NW
	4.0	Weath	or.	0 0	10 000117 3	83	P	the second se			
	4.0	Weath	er		Wa	rn air crews (	of any seve	ere weather in	n your area	1.	KIII

#### Calculating Cloud Base Height using the Dew Point Temperature

#### NOTE:

Once you have the Dew Point temperature, you can use the dry lapse rate to calculate the height of the cloud base above the ground level.



The Cloud Base Height is recorded in Section 4.2.

Guide notes are on the front of the form

DewCal (2.1-2.5)/9.8 x 1000m

		-	144			RTC-TH	M.E.	W.S	. Weath	ner Obs	ervation	Log	
		N.E.	W.S.		Location								
r Raco	Mo		TAN 5		Lat °	"	l Lo	ong	0	" " E			
	bile	77	Stat	eacte	Lat	Ν	l Lo	ng		E	Elev		m AMSL
	6	allar	nd anot	±[	Date				Wea	ther Obs	ervations	Time	
		Send	y Wee	<i>-</i> .				Sunri	ise	Mid-Af	ternoon	Sur	ıset
n babno		leady l	to serve		Local time	Hour→							
	d	ria sus comn	nunity	-	Observer (								
		comm	iannay.		Observer (initi	ial; see back)							
10		2.1	Air (Dry I	oulb)	Thermometer	in shade; 1.5			°C		°C		°C
	lidity	2.2	Wet Bi	ılb	m above	ground			°C		°C		°C
	L III	2.3	Differer	nce	Subtract 2.	2 from 2.1;			°C		°C		°C
	tive	2.4	Rel. Hurr	nidity	Use 2.1, 2.3	; R H Table			%RH		%RH		%RH
	Rela	2.5	Dew Po	pint	Use 2.1, 2.3;	Dew Pt Table			°C		°C		°C
	re/				Use 2.1, 2.4	; HSI Table	Heat S	tress	°C	Heat Stres	s ⁰C	Heat Stress	°C
	aratu	2.6	Heat Str	ess	Danger Leve	l (if any from	□Cautr	1 ⊏ auta c	Danger	□Cautn	Danger	□Cautn □ Ex Cautn	□Danger □Ex Dangr
on the front	dus				Use 2.1. 3.1:	Wind Chl Tbl	Wind C	sill	ILA Daligi	Wind Chill	۰ ۱۵۲۸ Dangi	Wind Chill	
	μĔ	2.7	Wind C	hill	Denneslaus	1 /if any frame	□Trvl Dr	niii. ngr c	∋Frstbte10	□TrvI Dngr	□Frstbte10	□TrvI Dngr	□Frstbte10
	2.	2.7	Willia C		Wind Ch	ill chart)	□TShltr	Dgr t	□Frstite30	DTShltr Dgr	□Frstite30	□TShltr Dgr	□Frstite30
					Report	wind sneed	in kn	te c	-Frstbteb	Frostbite	The all other	-Frostbite	□Frstbteb
	Ę		Avera	**	Cot 2 reading			01011	o un oron	<b>13</b> , KIII/II	to an other.		
	ectic		Avera	je	Get 5 reading	js or average	k	m/h	knts	km/h	knts	km/h	knts
	Dir	3.1	Gust	S	Record hig	ghest gust	k	m/h	knts	km/h	knts	km/h	knts
	eed				Wind Sp	eed Guid	elines	for	Helicop	ter Fligh	t Operati	ons	
	d Sp		10	) kno	ots / 18.5 km/	h ideal; OK	to fly		At	bove 45 k	nots / 83 ki	m/h; No flig	ghts.
	Win		Gust Steady V	s ab Vind	Ove 20 knots	/ 37 km/h; h	lo fligh	ts JE	Max	tailwind t	s sw	m/hr; No ta	ake off
100m			Directi	on	comes	FROM	ES	SE	W NW	E SE	W NW	E SE	W NW
		3.Z	Variable	Wind	Circle 1 or mo	ore directions	N N	١E	S SW	N NE	S SW	N NE	S SW
			Directi	on	wind com	es FROM	E 8	SE	W NW	E SE	W NW	E SE	W NW
		4.1	Sloud C	over	Use Definitio	ons in Cloud	Scatt	tered ⊏	Overcast	Scattered	d 🗆 Overcast	Scattered	Overcast
			III		- Cover		- Brok	en	laval) as 1	🗆 Broken	a abava of	🗆 Broken	and a line down
			Cloud Bas	sein	Relative to	local Mtn	□ Cloue	n sea ds abo	ve mtn	Clouds a	s above, at, ( bove mtn	Clouds ab	nitain top.
		4.2	(Loc R	el) 🦰			Cloue	ds at m	ntn top	□ Clouds a	t mtn top	□ Clouds at	mtn top
				m	DewCal (2.1-2	51/9 8x1000m		ds beic	m AGI	Clouds b	elow mtn m AGI	Clouds be	m AGI
				N	lin. flight altitude	es: Day = 160	m AGL; I	Night	- 500 m A	GL; Low clo	oud ceiling =	No flights.	INFIGE
	suc				riign		L Cinu	5	□CuNim	L Cirrus	CuNim	L Cirrus	□CuNim
	ditic	4.3	Cloud T	vne	Middle	Vertically	Altos     Altoc	trat um		Altostrat     Altocum		Altostrat     Altocum	
	Con		cicua i	,	l ow	Developed	Strat	us	Cumul	<ul> <li>Stratus</li> </ul>	- Cumul	Stratus	Cumul
	Sky	4.4	Painf	all	Moacuro	at 0900 brc o	ach mor	strat	Report am	Nimstrat Ount for last	24 hrs	Nimstrat	mm
	4.	4.4	rtairlia	arit .	Name of 3.	2 km mark	more	ning. e ol	less than	more	□ less than	i more i	less than
			Viewel D				Rain		Fog	□ Rain	Fog	Rain	Fog
		4.5	Visual Ra (Visibili	ange tv)	Name of 3	2 km mark	Haze more		отоке less than	more	□ Smoke □ less than	in more	i Iess than
			(110.010									-	
Brief notes on the	h	้อ	ck c	)f	the fo	orm	aiv	'e	mo	rec	letai	S	_
	~	-					3''	-		.00			

Warn air crews of any severe weather in your area



4.6 Severe Lightning Flash, count sec to boom / 3

#### Additional brief guide notes are on the back of the form

Full instructions and all needed reference tables are in the MEWS Weather Observer Handbook. (See Section 4.2.2, pp. 23-24 All weather observers write their initials and clearly print their name using block letters

#### M.E.W.S. Summary Weather Observation Log Instructions

Ready to sen

and sustain or

community;

ocation

Local time

24-hr format

D0390V9f (mitial: see bar

Hour-

Header

- Location: Local Place Name
- Latitude, Longitude from GPS, survey records or
- map measurement.
- Elevation: Survey records or map measurement

(GPS elevations are not reliable).

Date/Hour: Use local Thai standard time in Observer: initials in box. Full name (print clearly) on top/back of form 24-hour format.

#### Temperature / Relative Humidity

- 2.1 Air (Dry Bulb) Temp: Read thermometer kept in the shade, 1.5 m above the ground.
- 2.2 Wet Bulb Temp from hyrgrometer kept in the shade, 1.5 m above the ground.
- 2.3 Difference between Dry and Wet Bulb temperatures.

	2.1	Air (Dry bulb)	Thermometer in shade; 1.5	°C	*C	°C
2	2.2	Wet Bulb	m above ground	٩C	C	°C
	2.3	Difference	Subtract 2.2 from 2.1;	°C	3°	°C
2	2.4	Rel. Humidity	Use 2.1, 2.3; R H Table	%RH	%RH	%RH
100.00	2.5	Dew Point	Use 2.1, 2.3; Dew Pt Table	°C	°C	°C
5			Use 2.1, 2.4 ; HSI Table	Heat Stress °G	Heat Stress *C	Heat Stress °C
100 00	2.6	Heat Stress	Danger Level (if any from Heat Stress Index table)	oCautn oBanger o Ex Cautn oEx Bangr	o Cautin o Dangar o Ex Cautin o Ex Dangr	o Cauth oBanger o Ex Cauth oEx Dangr
			Use 2.1, 3.1; Wind Chi Tbi	Wind Chill C	Wind Chill. C	Wind Chill °C
- 2	2.7	Wind Chill	Danger Level (if any from Wind Chill chart)	Tril Drigr      GFratble10     TShitr Dgr      GFratble30     GFratble6	oTrvi Dingr oFrstbte10 oTStvilr Dgr oFrstite30 oFrostbite oFrstbte6	a Trvi Drigr a Fratbie 10 a TShitr Dgr a Fratbie 30 a Frastbite a Fratbie 5

Weather Observations Time Mid-Afternoon

2.4 Relative Humidity: Use Dry Bulb Temp (2.1), Difference (2.3) and Relative Humidity table to find % Relative Humidity.

2.5 Dew Point Temperature: Use Dry Bulb Temp (2.1), Difference (2.3) and Dew Point Temp table to find Dew Point Temp.

- 2.6 Heat Stress Temperature: Use Dry Bulb Temp (2.1), % Relative Humidity (2.4) and Heat Stress Index Table to find Heat Stress Temperature and relevant advisory warning.
- Wind Chill: Use the Dry Bulb Temp (2.1) and Wind Speed (3.1) and Wind Chill Table to find the Wind Chill Temperature and relevant advisory warning.

#### Wind Speed / Direction

3.1 Average and Gust Wind speeds: Use Beaufort Table or direct measurements 3 times and average results. Gusts are short, strong blasts of wind. *Report wind speeds in knots to air crews. Advise air crews when wind speeds are close to affecting helicopter flight operations.* 

-						_		_							
_				_											
			Report wind speed	i in A	nots	to ai	ir crei	ws; k	ami'n t	lia ol	other	8.			
ction		Average	Get 3 readings & average		km/h		kris		in/h		krits.		km/h		krta
Ê.	3.1	Guete	Record highest gust		km/h		knts		inh		krts		km/t		krts
8			Wind Speed Guid	eline	is fo	r He	licop	ter i	ligh	t Op	erati	ons			
õ,		10 kno	ts / 18.5 km/h ideal; OK	to fly			Al	ove	45 ki	nats /	83 k	m/h; h	ilo fii	ghts.	
E		Gusts abo	ve 20 knots/ 37 km/h; N	lo flic	hts		Max	taily	rind S	i knol	ts/ 6 k	rm∕hr;	No:	take c	ff
2		Steady Wind	Circle direction steady wind	N	NE	3	SW	N	NE	9	SW	N	NE	9	SW
-	3.1	Direction	comes FROM	E	SE	W	NW	E	SE	-W	NW	E	SE	W	NW
	95.	Variable Wind	Circle 1 or more directions	N	NE	S	SW	N	NE	S	SW	N	NE	.5	SW
		Diraction	wind comes FROM	E	SE	W	NW	E	SE	- W	NW	E	SE	W	NW

3.2 Steady or Variably blowing winds. If steady, circle letter for direction. If variable, circle all appropriate letters for directions.

Sky Conditions

- 4.1 Cloud cover: Look at the sky and follow the definitions for each cloud cover classification.
- 4.2 Cloud Base Height: If relative to a local mountain, give its name and elevation above mean sea level. Note Local Relief in meters. If using the Dew Point method, subtract Dew point temp (2.5) from Dry temp (2.1) and divide result by 9.8; multiply quotient by 1000m. Advise air crews when cloud base height (ceiling) are close to affecting helicopter flight operations.



based on cloud description in the guide book

- 4.4 Rainfall: Measure water in rain gauge each day at 0900 hrs. Rain gauge should be in open area, away from tall objects, with top of gauge 50 cm above ground to avoid splash water from entering gauge.
- 4.5 Visual Range: Pick landmarks 3.2 km and 5 km from your observation site. Report when visual range is more or less than the known distances to these landmarks. Advise air crews when visual range is close to affecting helicopter flight operations. Check appropriate boxes for reasons of reduced visibility.
- 4.6 Severe Weather: Primary concerns and thunderstorms and lightning. Check the appropriate boxes. If lighting, watch for flash, count seconds until you hear the thunder, divide by 3 = approximate distance in km. Circle direction to storm.



#### Using the Dew Point Temperature

Step 8. Find the difference between the air temperature and the Dew Point temperature.



Air Temp -Dew Pt Temp = (Difference)

	-	147			RTC-TH	M.E.W.S	S. Weath	her Obsei	rvation	Log	
	M.E.	VV.S		Location							
Mo		E A		Lat °	""	Long	0	" Е			
bile	コン	Stati Stati	acte	Lat	Ν	I Long		E	Elev		m AMSL
E	allar	d sta	말	Date			Wea	ther Obser	vations	Time	
	genc	y Wear	<del></del>			Sun	rise	Mid-Afte	rnoon	Sur	nset
R	eady i	to serve	†	Local time	Llaur	Juli	1100	inita / tree	1110011	- Our	1001
a	nd sus	stain our		24-hr format	Hour						
	comn	nunity.		Observer (in	itial; see back)						
	2.1	Air (Dry b	ulb)	Thermomete	erin shade: 1.5		°C		°C		°C
	2.2	Wet Bu	ılb	m abov	ve ground		°C		°C		°C
	2.3	Differen	ice	Subtract 2	2.2 from 2.1;		°C		°C		°C
ve H	2.4	Rel. Hum	idity	Use 2.1, 2	.3; R H Table		%RH		%RH		%RH
e la	2.5	Dew Po	int	Use 2.1, 2.3	; Dew Pt Table		°C		°C		°C
				Use 2.1, 2.	4;HSITable	Heat Stress	°C	Heat Stress	°C	Heat Stress	s °C
6	2.6	Heat Str	ess	Danger Lev	el (if any from	□Cautn	□Danger	⊡Cautn c	Danger	□Cautn	□Danger
uper				Heat Stres	s Index table)	🗆 Ex Cautn	□Ex Dangr	🗆 Ex Cautn 🛛	∃Ex Dangr	🗆 Ex Cautn	□Ex Dangr
Ten				Use 2.1, 3.1	; Wind Chi Tbi	Wind Chill.	°C	Wind Chill.	°C	Wind Chill.	°C
~i	2.7	Wind Cl	hill	Danger Lev	el (if any from	TShltr Dar	□Frstite30	TShltr Dar	□Frstbte10 □Frstite30	TShltr Dar	□Frstbte10
				Wind C	hill chart)	□Frostbite	□Frstbte5	□Frostbite	⊐Frstbte5	□Frostbite	□Frstbte5
				Repoi	rt wind speed	d in <b>knots</b>	to air cre	ws; km/h to	all other	S.	
tion		Averag	je	Get 3 readir	ngs & average	km/h	knts	km/h	knts	km/h	knts
lirec	2.1	Gusts		Record h	iahest aust	KIIIII		KIIIII			
d / D	3.1	0000		Wind S	need Guid	km/h	knts Helicon	ter Elight	Operati	km/h	knts
bee		10	) kn	ots / 18.5 km	h ideal: OK	to fly		hove 45 knr	operation te / 83 ki	m/h: No flir	ahts
Dd S		Guste	s ab	ove 20 knot	s/ 37 km/h ⁻ N	lo flights	Max	tailwind 5 k	mots/ 6 k	m/hr: No t	ake off
N.		Steady W	Vind	Circle direction	on steady wind	N NE	S SW	N NE	S SW	N NE	S SW
	3.2	Directio	on	come	s FROM	E SE	W NW	E SE	W NW	E SE	W NW
	5.2	Variable V	Vind	Circle 1 or n	nore directions	N NE	S SW	N NE	S SW	N NE	S SW
		Directio	on	wind cor	nes from	E SE	Cloudy	E SE	VV NW	E SE	W NW
	4.1	Variable Wind Direction Direction Direction Cloud Cover Cloud Cover Cover T			ions in Cloud	□ Scattered	<ul> <li>Overcast</li> </ul>	Scattered	0vercast	□ Scattered	I □ Overcast
				Cove	riable	🗆 Broken		🗆 Broken		🗆 Broken	
		Use loca	i mo	untain of know	n elevation (ab	ove mean se	a level) and	report clouds	above, at, i	or below mou	untain top.
		(Loc Re	en. el)	Reiduve	to local with	Clouds at Clouds at	mtn top	□ Clouds abo	ntn top	Clouds at	mtn top
	4.2	(	,		m AMSL	Clouds be	low mtn	Clouds belo	ow mtn	Clouds be	elow mtn
			m	DewCal (2.1-	2.5)/9.8x1000m	1.01.11.1	m AGL		m AGL		m AGL
			Λ	Ain. flight altitud High	iles: Day = 160i	m AGL; Nigh	$t = 500 \ m A$	GL; LOW CIOU	d ceiling =	No tlights.	
tion				Midalla	Verticellu	□ Altostrat	□CuNim	□ Altostrat	□CuNim	Altostrat	□CuNim
ondi	4.3	Cloud Ty	уре	Iviladie	Developed	Altocum	1	Altocum		Altocum	_
y C				Low		Stratus	Cumul	Stratus	Cumul	Stratus	Cumul
Sk	4.4	Rainfa		Measur	e at 0900 hrs e	ach morning	Report am	ount for last 2	4 hrs.	arminordi	mm
4.				Name of \$	3.2 km mark	n more	less than	more	less than	in more	less than
		Visual Da	nae			□ Rain □	i Fog i Smoke	□ Rain □	Fog Smoke	□ Rain t	⊐ Fog ⊐ Smoke
	4.5	(Visibilit	ty)	Name of 3	3.2 km mark		less than		less than		less than
			· ·			🗆 Rain 🛛 🗠	Fog	🗆 Rain 🛛 🗆	Fog	🗆 Rain 🛛 🗠	⊐ Fog
		H	lice	nter minimum u	isihility: Day-	2 2 km / 2 mi	os: Night -	5 km / 2 miles	Smoke	hility = Modi	abts
		ne ne	nc q	Thund	erstorms	□ Yes	$\square No$	□ Yes		□ Yes	gnis □ No
	4.6	Sever	е	Lightning	Flash, count secs	N NE E SE S	SWWNW	N NE E SE S	SW W NW	N NE E SE	S SW W NW
	4.0	Weathe	er	Lighting	to boom / 3	The Yes	km	□ Yes	km	□ Yes	km
					Wai	mair crews	or any seve	ere weather II	i your area	a la	

#### Calculating Cloud Base Height using the Dew Point Temperature

Step 9. Divide the temperature difference by 9.8°C (the dry lapse rate).

For example: Air temperature =  $30^{\circ}$ C Dew Pt Temp =  $27^{\circ}$ C Temp Difference =  $3^{\circ}$ C



 $3^{\circ}$ C divided by 9.8 = 0.306122

The dry lapse rate is the temperature decrease of air rising from the surface of the earth into the atmosphere per 1000 m of altitude.

#### Calculating Cloud Base Height using the Dew Point Temperature

Step 10. Multiply the result from Step 9 by 1000 m to get the estimated height of the cloud base above the ground.

> For example: 3°C divided by 9.8 = 0.306122 0.306122 X 1000 = 306.1224 m



You may round the result to the nearest whole meter when recording this on the log form and reporting to flight crews. Record the calculated cloud base height from the Dew Pont method in the space provided in the lower part of Section 4.2



Report the cloud base height to flight crews as "calculated by dew point method" so they know the origin of the information.

	5 14			RTC-TH M.E.W.S. Weather Observation Log							
	M.E	vv.s.		Location					_		
i i	alifow Mappine			Lat °	" "N	l Long	0	" Е			
1000			eacte	Lat	Ν	Long		E	Elev		m AMSL
	Emerila	nd	±[	Date			Wea	ther Obser	vations	Time	
	'9en	ch Mee				Sur	nrise	Mid-Afte	rnoon	Su	nset
	Ready to serve			Local time	Hour→						
é	and su	and sustain our community.		24-hr tormat							
	com			Observer (in	itial; see back)						
	2.1	2.1 Air (Dry bul 2.2 Wet Bulb		Thermometer in shade; 1.5			°C		°C		°C
e / Relative Humidity	2.2			m abov	ground		°C		°C		°C
	2.3	Difference		Subtract 2.2 from 2.1;		°C			°C	°C	
	2.4	4 Rel. Humidity 5 Dew Point		Use 2.1, 2	.3; R H Table		%RH		%RH		%RH
	2.5			Use 2.1, 2.3; Dew Pt Table			°C		°C		°C
				Use 2.1, 2.	4 ; HSI Table	Heat Stress	s °C	Heat Stress	°C	Heat Stress	s °C
atur	2.6	Heat Str	ess	Danger Level (if any from		□Cautn	Danger	□Cautn c	Danger	□Cautn	Danger
. Tempera	<u></u>			Heat Stres	s Index table)	Ex Cautr	□Ex Dangr	Ex Cauto d	Ex Dangr	🗆 Ex Cautn	□Ex Dangr
	3				; Wind Chl Tbl	Wind Chill.	<u>0°</u>	Wind Chill.	<u>0°</u>	Wind Chill.	<u>0°</u>
	2.7	Wind Chill		Danger Lev	el (if any from	DTShltr Dar	□Frstbte10 □Frstite30	TShltr Dar	=Frstbte10	TShltr Dar	□Frstbte10 □Frstite30
	1			Wind Chill chart)		□Frostbite	□Frstbte5	□Frostbite a	Frstbte5	□Frostbite	□Frstbte5
				Repo	rt wind speed	d in <b>knots</b>	to air cre	ws; km/h to	all others	s.	
ion		Averag	Average		ngs & average	km/h	keta	km/h	kato	km/h	lanta
irect		Guete		Pecord highest quet		MIG	Krits	NIIIAI	Krits	NII/II	Krits
	3.1	Gusts		Mind C	ngnesi gusi	km/h	knts	km/h	knts Omereti	km/h	knts
Deed	22	10 knots / 18.5 km/h ideal: OK				to fly Above 45 knots / 83 km/h; No flights					
Spu	2	Gusts above 20 knots/ 37 km/h: N				Vo flights Max tailwind 5 knots/ 6 km/hr; No take off					
,		Steady Wind		Circle directi	on steady wind	N NE	S SW	N NE	S SW	N NE	S SW
~	32	Direction		comes FROM		E SE	W NW	E SE	W NW	E SE	W NW
	0.2	Variable Wind		Circle 1 or more directions		N NE	S SW	N NE	S SW	N NE	S SW
		Directio	on	wind comes FROM		E OE		E OE	Cloudy	E OE	
		Cloud Cover		Use Definitions in Cloud		Scattered      Overcast		Scattered	0vercast	Scattered	I   Overcast
						Broken		🗆 Broken		Broken	
		Cloud Bas	ai mo	Kelative to local Mith		bve mean sea level) and I		Teport clouds above; at, (		I Glouds apove min	
	4.2	(Loc Rel)				Clouds at mtn top		Clouds at mtn top		Clouds at mtn top	
	4.2					E Cloudo bolow mian		E Cicado bolow man		m ACI	
				Min flight altitu	2.5)/9.0x1000m des: <b>Dav</b> - 160	m A GL · Nial	m AGL m = 500 m A	GL: Low clou	m AGL d ceilina -	No flights	MAGL
22				nin. nign annac	100. Day - 100		- Cullin		-Cublim		- Cublina
itior		01 I.T		Middle	Vertically	<ul> <li>Altostrat</li> </ul>		Altostrat	DCulvim	<ul> <li>Altostrat</li> </ul>	
litic	4.0	Olavel T		Middle	Vertically			A.11		1 414	
conditio	4.3	Cloud Ty	ype	Middle	Vertically Developed	Altocum     Stratus	_	Altocum     Stratus		Altocum     Stratus	
ky Conditio	4.3	Cloud Ty	ype	Middle Low	Vertically Developed	<ul> <li>Altocum</li> <li>Stratus</li> <li>Nimstrat</li> </ul>	🗆 Cumul	Altocum     Stratus     Nimstrat	Cumul	<ul> <li>Altocum</li> <li>Stratus</li> <li>Nimstrat</li> </ul>	Cumul
Sky Conditio	4.3	Cloud Ty Rainfa	ype all	Middle Low Measur	Vertically Developed	□ Altocum □ Stratus □ Nimstrat ach morning	Cumul	Altocum     Stratus     Nimstrat     ount for last 2	Cumul	□ Altocum □ Stratus □ Nimstrat	Cumul
4. Sky Conditio	4.3	Cloud Ty Rainfa	ype all	Middle Low Measur Name of 3	Vertically Developed e at 0900 hrs e 3.2 km mark	<ul> <li>Altocum</li> <li>Stratus</li> <li>Nimstrat</li> <li>ach morning</li> <li>more</li> <li>Rain</li> </ul>	Cumul Report am	Altocum Stratus Nimstrat Ount for last 2- more Rain	Cumul 4 hrs. less than Eog	Altocum     Stratus     Nimstrat     more     Rain	Cumul mm less than
4. Sky Conditio	4.3	Cloud Ty Rainfa Visual Ra	ype III	Middle Low Measur Name of 3	Vertically Developed e at 0900 hrs e 3.2 km mark	Altocum Stratus Nimstrat ach morning more Rain Haze	Cumul Cumul Report am I less than Fog Smoke	Altocum Stratus Nimstrat Ount for last 2: Rain Haze	Cumul 4 hrs. less than Fog Smoke	Altocum Stratus Nimstrat more Rain Haze	Cumul mm less than Fog Smoke
4. Sky Condition	4.3	Cloud Ty Rainfa Visual Ra (Visibili	ype all ange ty)	Middle Low Measur Name of 3	Vertically Developed e at 0900 hrs e 3.2 km mark	Altocum Stratus Nimstrat ach morning Rain Haze more Rain	Cumul Cumul less than Fog Smoke	Altocum Stratus Nimstrat Ount for last 2 Rain Haze More Rain Haze	Cumul Cumul Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content Content	Altocum Stratus Nimstrat Rain Haze Roi	Cumul mm less than Fog Smoke
4. Sky Conditio	4.3	Cloud Ty Rainfa Visual Ra (Visibili	ype all ange ty)	Middle Low Measur Name of 3	e at 0900 hrs e 3.2 km mark	Altocum     Stratus     Nimstrat     Arnorning     more     Rain     Haze     Rain     Haze	Cumul Cumul Report am less than Smoke less than So	Altocum Stratus Nimstrat Ount for last 2 Rain Haze Rain Rain Rain Haze Rain Haze	Cumul 4 hrs. less than Fog Smoke less than Fog Smoke	Altocum Stratus Nimstrat more Rain Haze Rain Haze Haze	Cumul mm less than Fog Smoke less than Fog Smoke
4. Sky Conditio	4.3	Cloud Ty Rainfa Visual Ra (Visibili	ype all ange ty)	Middle Low Measur Name of Name of	Vertically Developed 3.2 km mark 3.2 km mark isibility: Day = .	Altocum Stratus Nimstrat ach morning more Rain Haze Rain Haze 2.2 km / 2 m	Cumul Report am less than Smoke less than less than Smoke Smoke	Altocum Stratus Nimstrat ount for last 2 more Rain Maze Rain Kain Kain Kain Kain Kain Kain Kain K	Cumul 4 hrs. less than Fog Smoke less than Fog Smoke : Low visil	Altocum Stratus Nimstrat Rain Rain Haze Rain Haze Stratus Rain Haze Rain Rain Rain Rain Rain Rain Rain Rain	Cumul mm less than Fog Smoke less than Fog Smoke Smoke Smoke ghts
4. Sky Conditio	4.3	Cloud Ty Rainfa Visual Ra (Visibili	ype all ange ty)	Middle Low Measur Name of Name of Name of Thund	Vertically Developed 3.2 km mark 3.2 km mark 3.2 km mark isibility: Day = .	<ul> <li>Altocum</li> <li>Stratus</li> <li>Nimstrat</li> <li>ach morning</li> <li>more</li> <li>Rain</li> <li>Haze</li> <li>more</li> <li>Rain</li> <li>Haze</li> <li>More</li> <li>Rain</li> <li>Haze</li> <li>Yes</li> <li>NAS 5 2 2</li> </ul>	Cumul Cumul Concentration Concentratio Concentration Concentration Concentration Concentration Conce	Altocum Stratus Nimstrat ount for last 2: more Rain Haze Rain Haze Status Yes	Cumul 4 hrs. less than Fog Smoke less than Fog Smoke : Low visil No	Altocum     Stratus     Nimstrat     more     Rain     Haze     more     Rain     Haze     Joility = No fill     Yes	Cumul mm less than Fog Smoke less than Fog Smoke moke one Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke Smoke
4. Sky Conditio	4.3 4.4 4.5 4.6	Cloud Ty Rainfa Visual Ra (Visibili He Seven	ype all ange ty) e er	Middle Low Measur Name of Name of ter minimum v Thund Lightning	Vertically - Developed a 10900 hrs e 3.2 km mark 3.2 km mark a.2 km mark isibility: Day = . erstorms Flash, count secs to boom / 3	Altocum Stratus Nimstrat ach morning more Rain Haze Nore Rain Haze Nore Rain Haze NEESE NEESE Yes	□ Cumul ■ Cumul ■ less than ■ Fog ■ Smoke ■ less than ■ Fog ■ Smoke ■ less than ■ Fog ■ Smoke ■ Smoke ■ No \$ SWW NW	Altocum Stratus Nimstrat ount for last 2- more Rain Haze Rain Haze Stain Yes NNE ESES Yes Yes	Cumul 4 hrs. less than Fog Smoke less than Fog Smoke <i>Low visit</i> No SW W NW km	Altocum     Altocum     Attocum     Nimstrat     Nimstrat     Rain     Haze     Rain     Haze     Haze     Nimstrat     Nore     Rain     Naze     Nimstrat     Nore     Solution     Nore     Solution     Yes     Yes	Cumul mm Fog Smoke Smoke Smoke Smoke Smoke
4. Sky Condition	4.3 4.4 4.5 4.6	Cloud Ty Rainfa Visual Ra (Visibili He Seven Weath	ype all ange ty) e <i>lico</i> e er	Middle Low Measur Name of Name of ter minimum v Thund Lightning	Vertically Developed 3.2 km mark 3.2 km mark 3.2 km mark 3.2 km mark 3.2 km mark 3.2 km mark 15 <i>ibility: Day</i> = . restorms Flash, count secs to boom / 3 <i>Wa</i>	Altocum Stratus Nimstrat ach morning more Rain Haze Rain Haze NNE ESE Yes mair crews	Cumul Report am less than Fog Smoke Somoke Somoke Somoke No S SW W NW km	Altocum Stratus Nimstrat Ount for last 2 Rain Haze Rain Haze Stratus NNE SES Yes Reserve weather in	Cumul 4 hrs. less than Fog Smoke less than Fog Smoke . Low visit No SW W NW km h your area	Altocum Altocum Stratus Nimstrat Rain Haze Haze Haze Nifty = No fil Yes NNE SE Yes	Cumul mm less than Fog Smoke less than Fog Smoke Some Some Km No S SW W NW Km

Brief notes on the form remind you of cloud base heights affecting helicopter flight operations

> Min. flight altitudes: **Day** = 160m AGL; **Night** = 500 m AGL; **Low cloud ceiling** = *No flights*



All Rights Reserved

Advise flight crews when conditions are approaching minimum operating limits.

	E M			RTC-TH M.E.W.S. Weather Observation Log								
	W.L.	E.W.S		Location								
Mohile				Lat °	" " N	l Long	0	" "Е				
			age	Lat	N	Llona		F	Flev		m AMSI	
5	enter C Leave			Date			Wea	ther Obse	vations	Time		
				Dato		Cumrico		Mid Afternoon			ncot	
R	Peadv	to serve		Localtimo		Sui	IIISe	IVIIG-ATE	110011	Sui	Iset	
a	nd sus	stain our		24-hr format	Hour→							
	comn	nunitv.		Obsorver (init	ial: and hadk)							
				ODSERVER (initial; see back)								
	2.1	Air (Dry b	ulb)	Thermometer in shade; 1.5			°C		°C		°C	
umidity	2.2	Wet Bulb		m above ground		°C		°C		°C		
	2.3	Difference		Subtract 2.2 from 2.1;			°C		°C	°C		
E H	2.4	Rel Humi	iditv	Use 2.1.23	Ilso 21 23: R H Table		04.RH		04.RH	0/DU		
ativ	2.4	Dow Do	int	Use 2.1, 2.3, KTI Table			70111		70111	701.11		
Rel	2.5	Dew Po	Int	0se 2.1, 2.3,	Dew Pt Taple		°C		°C		°C	
Ire /	2.0	Heat Stress		Use 2.1, 2.4 ; HSI Table		Heat Stress	Heat Stress C Heat Stress		°C	C Heat Stress °C		
ratu	2.6			Danger Level (if any from		□Cautn	Danger	□Cautn i	□Danger	□Cautn	Danger	
Ibel				Heat Stress	Mind Chi Thi	Ex Cauth	Ex Dangr		□Ex Dangr	Ex Cauth	DEX Dangr	
Ter				Use 2.1, 3.1;	wind Chi Tbi	Wind Chill.	°C	Wind Chill.	°C	Wind Chill.	°C	
	2.7	Wind Ch	nill	Danger Leve	el (if any from	DTShltr Dar	Erstite30	□ Irvi Ungr I □TSbltr Dar	□Frstbte10 □Erstite30	DTShltr Dar	□Frstbte10 □Frstite30	
2				Wind Chill chart)		Frostbite	□Frstbte5	Frostbite	□Frstbte5	Frostbite	□Frstbte5	
				Report	t wind speed	l in <b>knots</b>	to air cre	ws; km/h to	all other	S.		
E		Augrege		Cat 2 madings 8 average								
ctic	3.1	Average		Get 5 readings & average		km/h	knts	km/h	knts	km/h	knts	
Dire		Gusts		Record hi	ghest gust	km/h	knts	km/h	knts	km/h	knts	
/ pc				Wind St	Wind Speed Guidelines for Helicopter Flight Operations							
Spe(		10 knots / 18.5 km/h ideal: OK to fly Above 45 knots / 83 km/h: No flig							ahts			
pu		Gusts above 20 knots/ 37 km/h: 1			lo fliahts	Max	tailwind 5	knots/ 6 k	m/hr: No t	ake off		
N N		Steady Wind		Circle directio	Circle direction steady wind		S SW	N NE	S SW	N NE	S SW	
	3.2	Directio	n	comes	FROM	E SE	W NW	E SE	W NW	E SE	W NW	
		Variable V	Vind	Circle 1 or more directions		N NE	S SW	N NE	S SW	N NE	S SW	
		Directio	n	wind comes FROM		E SE	W NW	E SE	W NW	E SE	W NW	
	4.1	Cloud Cover		Use Definitions in Cloud Cover Table		Clear     Cloudy     Scattered      Overcast     Broken		Clear Cloudy Cloudy Scattered Overcast Roken		Clear Cloudy Clear Cloudy Clo		
	4.1											
		Use local mou		untain of known	elevation (abo	ove mean sea level) and		report clouds above, at, o		or below mountain top.		
		Cloud Base Ht (Loc Rel)		Relative to local Mtn		<ul> <li>□ Clouds above mtn</li> <li>□ Clouds at mtn top</li> </ul>		Clouds above mtn Clouds at mtn top		Clouds above mtn Clouds at mtn top Clouds halow entr		
	4.2											
				m AMSL DewCal (2:1-2:5)/9.8v1000m		□ Clouds below mtn		Clouds below mtn		Clouds below mth		
				Min flight altitud	es: <b>Dav</b> - 160r	m AGL · Nial	ht = 500 m A	GL: Low clou	d ceilina -	No flights	III AGL	
- 22	-1		- '	riign	00. <b>Duy</b> - 1001				a coning -		0.15	
itior				Middle	Vertically	<ul> <li>Altostrat</li> </ul>	Cuivim	<ul> <li>Altostrat</li> </ul>	CUNIM	<ul> <li>Altostrat</li> </ul>	CuNim	
puq	4.3	Cloud Type	Wilduic	Developed	Altocum	_	Altocum		Altocum	4		
C C				Low		<ul> <li>Stratus</li> <li>Nimetrat</li> </ul>	Cumul	Stratus	🗆 Cumul	Stratus	🗆 Cumul	
Sk	4.4	Rainfa		Measure	at 0900 brs e	ach morning	Report am	ount for last 2	4 hrs		mm	
4.		Runna		Name of 3.2 km mark		more	less than	more n	less than	in more	less than	
	4.5	Visual Range (Visibility)				Rain	🗆 Fog	🗆 Rain 🗆	Fog	🗆 Rain 🛛	🗆 Fog	
				N	0.1	Haze	Smoke	🗆 Haze 🗆	Smoke	🗆 Haze 🛛	Smoke	
				Name of 3	Name of 3.2 km mark		Iess than	Rain	less than	D more	Iess than	
						Haze	□ Smoke		Smoke		⊐ Smoke	
			Helicont		ter minimum visibility: Dav = 3			= 1 ( a	1			
		He	lica	oter minimum vis	sibility: Day = 3	3.2 km / 2_m	iles; Night =	5 km / 3 miles	; LOW VISH	bility = No fil	ghts	
		He	licq	oter minimum vis Thunde	<i>sibility: Day = 3</i> erstorms	3 <i>.2 km / 2 m</i> □ Yes	<i>iles; Night =</i> □ No	5 km / 3 miles □ Yes	<i>; LOW VISI</i> □ No	bility = No tli □ Yes	<i>ghts</i> □ No	
	4.6	He Severe	e <i>lic q</i>	<u>ter minimum vis</u> Thunde Lightning	sibility: Day = 3 erstorms lash, count secs to beem (3	3.2 km / 2 m □ Yes N NE E SE	iles; Night = □ No S SW W NW	5 km / 3 miles Yes	SW W NW	Dility = No th Pes N NE E SE	ights □ No S SW W NW	
	4.6	<i>He</i> Severe Weathe	e <i>lic q</i> e er	o <u>ter minimum vis</u> Thunde Lightning	sibility: Day = 3 erstorms lash, count secs to boom / 3	3.2 km / 2 m □ Yes □ N NE E SE □ Yes	<i>iles; Night =</i> □ No S SW W NW km s of any serve	5 km / 3 miles Pes N NE E SE S Yes Pre weather in	SW W NW SW W NW km	bility = No fli Pes N NE E SE Yes	ghts □ No S SW W NW km	
	4.6	He Severe Weathe	e <i>lic q</i> e er	oter minimum vis Thunde Lightning	sibility: Day = 3 erstorms lash, count secs to boom / 3 War	3.2 km / 2 m Yes N NE E SE Yes Yes	iles; Night = □ No S SW W NW km s of any seve	5 km / 3 miles Pes N NE E SE S Pes Pere weather in	s; LOW VISH □ No SW W NW km n your area	Dility = No fil Pes N NE E SE Yes A	ights □ No S SW W NW km	

# For flight operations, be aware of mountain elevations in your area. Advise flight crews as needed.

For the example we completed, the Cloud Base Height was 306 m. Doi Phu Kha (elevation 1980 m AMSL) is close to station HSØZHM. It would be appropriate for HSØZHM to report "Cloud Base Height 306 m calculated by Dew Point. Be advised, this is well below peak elevation of Doi Phu Kha 1700 m AGL."



Weather observations to support flight operations are critical for safety of flight crew and LZ area.

## **Important Note**

Normally MEWS observations are made 3 times a day. However, if flight operations are in progress, try to provide flight crews with weather updated prior to landings and take-offs for flight safety.



Report a Flight Advisory any time cloud base height is <u>near to</u>, <u>at</u>, <u>or less</u> than the warning limits listed on the Log Form.

#### For flight operations, make and report observations to flight crews before landings and take-offs

Cross out the headings Weather Observations Time for Sunrise, Mid-Sunnse sunset WIGEATTELLIOU 1430 Afternoon, Sunset Hour→ HSØZHM al: see b **Record the specific** °C °C n shade: 1.5 local time of your around °C °C observations from 2.1 °C °C

E.W.S. upper state of the state

If a HAM, print your call sign (or name if no call sign) Record the Cloud Base Height in Section 4.2 °C

°C

°C

Weather observations to support flight operations are critical for safety of flight crew and LZ area.

If more frequent observations are done to support flight operations...

> ...cross out the headings "Sunrise", etc. and record the time of the observations in the space provided.





All Rights Reserved

#### For flight operations, make and report observations to flight crews before landings and take-offs

Advanced Weather Reports for Flight Crews

- 2.1 Temperature
- 2.4 Relative Humidity
- 3.1 Wind Speed
- 3.2 Wind Direction
- 4.1 Cloud Cover
- 4.2 Cloud Base Height
- 4.3 Cloud Type
- 4.4 Rainfall
- 4.5 Visual Range
- 4.6 Severe Weather

Weather observations to support flight operations are critical for safety of flight crew and LZ area.



Another Use of Dew Point Temperature Often early morning temperature = the Dew point temperature. This means dew forms and can be collected for survival drinking water.





Plan ahead to have fog catching materials as part of your emergency preparedness kit.

G. K. Lee HS0ZHM All Rights Reserved Another Use of Dew Point Temperature If dew forms. tents and, people sleeping outdoors, and uncovered supplies/equipment will get wet.



This means they may feel colder in the morning.





All Rights Reserved.

If dew in expected, warn people and make preparations to keep thngs dry.

#### The EP Lesson Series



EP-1



EP-3





EP-5

EP-6



EP-8





www.neighborhoodlink.com/RTC-TH_Tech/pages

You have completed the Advanced MEWS Lesson A3: Using Dew Point Temperature to Calculate Cloud Base Height





You are now ready for Advanced MEWS Lesson A4: Measuring Rainfall

#### **Questions or Comments**

Refer to the MEWS Weather Observer Handbook for more details on any of the procedures in this lesson.





You may also contact us by e-mail: hsØzhm@gmail.com We are always trying to improve our lessons. Your comments and suggestions are welcomed.

#### Free Self-Study Materials by Internet

 RTC-TH Weather Observer manual
 Illustrated PDF topical lessons

All of the lessons have been classroom and field proven.

Send e-mail to hsØzhm@gmail.com to request free training materials for noncommercial use only.



#### M.E.W.S. WEATHER OBSERVER HANDBOOK





©2010, rev 2012. G. K. Lee HSØZHM All rights reserved. These materials are in English. Volunteer assistance for Thai translation to is welcome and will be acknowledged and cited.

### **Advanced MEWS PDF Lessons**

A 1: Measuring Relative Humidity and Heat Stress

- A 2: Measuring Wind Speed and Wind Chill
- A 3: Using Dew Point Temperature to Calculate Cloud Base Height
- A 4: Measuring Rainfall
- A 5: Reporting Severe Weather

A 6: Weather Forecasting

Be sure to check <u>www.neighborhoodlink.com/RTC-TH_Tech/pages</u> for the latest updated editions of MEWS lessons



### **Advanced MEWS PDF Lessons**





All Rights Reserved.

Six slide show lessons; Some show how to build your own weather equipment

#### The EP Lesson Series



EP-1



EP-3





EP-5

EP-6

EP-7

EP-8



Comm © 2012, G.K Lee

www.neighborhoodlink.com/RTC-TH_Tech/pages

#### For More Information about M.E.W.S.

#### Contact Greg, HSØZHM MEWS Creator / Mentor







#### Via E-mail hsØzhm@gmail.com

Via Skype video conference call: rtc_th

#### Community-based Environmental Education for



#### The End www.neighborhoodlink.com/org/rtcth E-mail: rtc2k5@gmail.com

