

Appendix B – Heat Stress Risk Assessment Worksheet

Date(yy/mm/dd)/Time: _____

Department/Division: _____

Task: _____

Location: _____

- First Complete the Heat Stress Risk Assessment chart below
- After, determine the appropriate response plan from Table B3 using your adjusted humidex value.

Heat Stress Risk Assessment - Humidex	
Air Temperature	
Relative Humidity	
Calculated Humidex Value (from Table B1)	
Additions to Humidex Value	
Coveralls worn over regular clothes:	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 5 °C)
Hardhats worn:	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 1 °C)
Gloves worn:	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 1 °C)
Apron / Vest worn:	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 1 °C)
Direct sunlight (between 10 am to 4 pm):	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 2 - 3 °C)
Indoor heat source:	<input type="checkbox"/> No <input type="checkbox"/> Yes (add 2 - 3 °C)
Adjusted Humidex Value (Initial Humidex value plus additions)	TOTAL
Worker Acclimatized?	<input type="checkbox"/> Yes <input type="checkbox"/> No
Work Rate (physical exertion) (refer to Table B2)	<input type="checkbox"/> Heavy <input type="checkbox"/> Moderate <input type="checkbox"/> Light

Table B1: Humidex Value Calculator

Heat stress reference chart

TEMPERATURE (°C)	RELATIVE HUMIDITY (%)																			
	100%	95%	90%	85%	80%	75%	70%	65%	60%	55%	50%	45%	40%	35%	30%	25%	20%	15%	10%	
49																			50	49
48																			50	48
47																		49	47	47
46																		49	46	46
45																	50	47	45	45
44																	49	46	44	44
43																	49	47	45	43
42																	50	48	46	43
41																	48	46	44	41
40																	49	47	45	41
39																	49	47	45	41
38																	49	47	45	41
37																	49	47	45	41
36																	49	47	45	41
35																	49	47	45	41
34																	49	47	45	41
33																	49	47	45	41
32																	49	47	45	41
31																	49	47	45	41
30																	49	47	45	41
29																	49	47	45	41
28																	49	47	45	41
27																	49	47	45	41
26																	49	47	45	41
25																	49	47	45	41
24																	49	47	45	41
23																	49	47	45	41
22																	49	47	45	41
21																	49	47	45	41

Table B2: Guidelines for Determining Work Rate

Section 1 – Determine Workload of Work Activities			
Classification of Workload	Types of Activity	Examples of Activity	
Light Work that generates a metabolic rate of less than 200 kcal/hr	Sitting, with moderate movement of arms and legs Standing doing light work, with mostly arm movement Casual walking	Desk work; typing; Driving in traffic Traffic Control Supervising a worksite, bylaw inspections	<input type="checkbox"/>
Moderate Work that generates a metabolic rate of between 200 and 350 kcal/hr	Normal to brisk walking Sitting, with vigorous arm and leg movements, standing, doing light to moderate work, Moderate lifting or pushing	Driving heavy machinery Tending shrub beds Warehouse work; loading and unloading of trucks	<input type="checkbox"/>
Heavy Work that generates a metabolic rate of greater than 350 kcal/hr	Construction tasks Intermittent heavy lifting, pushing or pulling Climbing stairs with heavy gear	Sawing; planting; digging; shoveling; sledgehammer work; roofing Asphalt crew	<input type="checkbox"/>

Table B3. Humidex Based Heat Response Plan

Work Rate	Humidex		Response (Apply all lower level controls cumulatively)
	Acclimatized	Unacclimatized	
Heavy	25 - 29		Workers to drink water on an "as needed" basis.
Moderate	32 - 35	25 - 29	
Light		32 - 35	
Heavy	30 - 33		Post heat stress alert, encourage workers to drink extra water; start recording the hourly temperature and relative humidity (Humidex Value) in the table below.
Moderate	36 - 39	30 - 33	
Light		36 - 39	
Heavy	34 - 37		Post heat stress alert, notify workers that they need to drink extra water; ensure workers are trained to recognize symptoms
Moderate	40 - 42	34 - 37	
Light		40 - 42	
Heavy	38 - 39		Work with 15 minutes relief per hour can continue; provide adequate cool (10-15°C) water; at least 1 cup (240 mL) of water every 20 minutes. Worker with symptoms should seek medical attention
Moderate	43 - 44	38 - 39	
Light		43 - 44	
Heavy	40 - 41		Work with 30 minutes relief per hour can continue in addition to the provisions listed previously
Moderate	45 - 46*	40 - 41	
Light		45 - 46*	
Heavy	42 - 44		If feasible, work with 45 minutes relief per hour can continue in addition to the provisions listed above
Moderate	47 - 49*	42 - 44	
Light		47 - 49*	
Heavy	45* or over		Only medically supervised work can continue
Moderate	50* or over	45* or over	
Light		50* or over	

Hourly Readings Required

HEAT STRESS ALERT

Hourly Humidex Log							
Time:							
Reading:							