WWSG Data Sheet

Contract or Licence #:_____ Location: _____

Precipitation Zone: _____

Water Input Operational Limits:

One hour: _____Shift end (12 hr) :_____ 24-hr_____ 48-hr_____

DIRECTIONS:

Measure temperature and precipitation from gauge at start and end of shift. Record these numbers. Start and end of shift numbers can be used as 12-hour precipitation totals even though work shift length is closer to 10 than 12 hours (so actual measured numbers are more like 14-hour and 10-hour totals).

Only consider one-hour precipitation and snowmelt totals if in the modified Average, Dry, or Identified Unstable zones, and if it is either **raining heavily** or **warm with snow on the ground.**

Add the two precipitation numbers from **end of last shift** and **start of new day's shift** together to determine today's 24 hour rainfall total.

Measure air temperature at **start and end of shift.** Determine snowmelt from air temperature. Record snowmelt values. As for precipitation, use yesterday's **end of shift** temperature and snowmelt and today's **start of shift** temperature and snowmelt to determine 24-hour total snowmelt. If there is no snow visible, snowmelt is assumed to be 0.

Add snowmelt and rainfall to determine total effective precipitation.

Add yesterday's 24 hour total to today's 24 hour total to determine today's 48 hour total.

Count number of Other Risk Factors checked and write down this number (0 to 3) as Zone Modifier. Add this number to Precipitation Zone to determine Modified Zone.

Other Risk Factors:

- **HW:** High winds (windspeed reported or predicted >60 km/h, or visibly breaking branches, or causing windthrow), at the job site;
- **VW:** Very wet conditions (applies during any period of three weeks (21 days) or longer, with precipitation recorded on every day)
- **HSF:** Visibly high stream flow (ditches full and overflowing onto roads, culverts discharging at capacity, culverts blocked by debris flow and diverting water to adjacent streams, floodwater present on adjacent highways, etc.)

If the presence of additional risk factors increases the zone beyond Zone, i.e. beyond the "identified unstable conditions" zone, work should shut down regardless of whether or not the rainfall shutdown value has been exceeded, and should remain shut down until the additional risk factors are no longer present.

Check 1-hour, 12-hour (start and end of shift), 24-hour, and 48 -hour effective precipitation (rainfall+snowmelt) totals against Modified Zone thresholds. Shut down if one or more totals exceed thresholds.

If precipitation is intense or during the work shift, it may be necessary to check the rain gauge hourly to determine if 1-hour or 12-hour shutdown threshold is exceeded. Do not empty the gauge on these extra checks without recording totals, or accurate 12-hour precipitation totals will be lost.

Resumption of Work Following Shut Down

Once 1-hour, 12-hour or 24-hour shutdown criteria have been exceeded, work should remain shut down for at least 24 hours after the hazardous conditions end. In the case of 48-hour rainfall criteria being exceeded, work should remain shut down for at least two days (48 hours) after shutdown criteria have been exceeded. If workers and supervisors believe it is safe for work to resume before the recommended 24- or 48-hour period is over, they should consult a qualified professional to confirm and document this before resuming work.

Table 1: Shutdown Criteria by Zone within the Southern Interior

Zone	Zone (annual precipitation)	Time Period			
		One hour	At start of or before end of shift (12-hr)	24-hr	48-hr
1	Very wet (1500 mm to 3000 mm)	**n/a**	**28 mm**	**35 mm**	**60 mm**
2	Wet (1100 mm to 1500 mm)	**n/a**	**25 mm**	**30 mm**	**50 mm**
3	Average (600 mm to 1100 mm)	**10 mm**	**22 mm**	**25 mm**	**40 mm**
4	Dry (100 mm to 600 mm)	**8 mm**	**18 mm**	**20 mm**	**30 mm**
5	Identified Unstable Conditions	**6 mm**	**10 mm**	**15 mm**	**20 mm**

Table 2: Estimated Snowmelt by Air Temperature

Air Temperature (°C)	Expected Melt Rate (mm)		
	Peak Hourly	12-Hour Total (Day)	24-Hour Total (Day+Night)
1	1	4	6
2		6	8
3		8	11
4		10	14
5		11	17
6		13	20
7		15	23
8	2	17	26
9		19	29
10		21	32
11		23	35
12		25	37
13	3	27	40
14		29	43
15		31	46
16		33	49
17		35	52
18	4	37	55
19		39	58
20		41	61
21		43	64
22		44	66
23	5	46	69
24		48	72
25		50	75
26		52	78
27		54	81
28		56	84
29	6	58	87
30		60	90

Wet Weather Shutdown Guidance Field Table

Date (Month/ Day)	Zone	Temperature (C)		Snowmelt (mm)		12-hour Rainfall (mm)		Other Risk Factors (check all that apply)			Max 1-hour Precip (mm)	12-hour Effective Precip (mm)		24-hour Precip		48-Hour Precip		Zone Modifier	Modified Zone	Shut Down? Y/N
		Start	End of Shift	Start	End	Start of Shift	End of Shift	HW	VW	HSF		Start of shift	End of shift	Start of shift	End of shift	Start of shift	End of shift			

Date (Month/ Day)	Zone	Temperature (C)		Snowmelt (mm)		12-hour Rainfall (mm)		Other Risk Factors (check all that apply)			Max 1-hour Precip (mm)	12-hour Effective Precip (mm)		24-hour Precip		48-Hour Precip		Zone Modifier	Modified Zone	Shut Down? Y/N
		Start	End of Shift	Start	End	Start of Shift	End of Shift	HW	VW	HSF		Start of shift	End of shift	Start of shift	End of shift	Start of shift	End of shift			