

## **Student Transportation to School Related Activities**

### **Policy 5520**

### **January 12, 1999**

The Board encourages the use of school busses rather than the use of privately owned vehicles to transport students to and from school related activities. The Board recognizes that there may be a need for transporting students, on occasional or infrequent trips, in privately owned vehicles due to special circumstances.

#### Guidelines

1. The preferred form of travel is by school bus and it is expected that students will travel by school bus to the following activities:
    - 1.1 athletic competitions;
    - 1.2 field trips;
    - 1.3 special out of district events such as music festivals or drama and theatre productions.
  2. While travelling by school bus Principals must ensure that a list of all students and chaperones is filed at the school prior to departure.
  3. Where small numbers of students are being transported on District business, to zonal competitions or on field trips, travel may be in vehicles owned by an employee or volunteer providing:
    - 3.1 The school principal approves, in writing, that the specific activity concerned is a school sponsored activity and she/he recommends the use of a privately owned vehicle.
    - 3.2 The employee or parent volunteer carries:
      - 3.2.1 third party and passenger hazard liability insurance in an amount of not less than \$3,000,000;
      - 3.2.2 accident benefits as required by law;
      - 3.2.3 collision or upset coverage; and
      - 3.2.4 comprehensive coverage.
    - 3.3 A copy of a volunteer application form is to be completed and submitted to the Assistant Secretary Treasurer prior to the activity taking place.
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- 3.4 In all cases, the individual's insurance coverage is primary or first loss insurance.
  - 3.5 In all cases, the individual must advise her/his insurer of the possible use of the automobile in order for the insurer to determine the nature of exposure.
  - 3.6 Drivers of private vehicles being used to transport students must sign School District forms verifying additional insurance coverage.
4. Transportation costs, using any of the above mentioned methods, will be based on actual expenditures or School District mileage rates, to the extent budgetary restrictions allow.
  5. When traveling by road, Principals must ensure that weather and road conditions are conducive to travel prior to students leaving Fort Nelson, using the following guidelines:
    - 5.1 No student group shall travel if there are blizzard conditions enroute or blizzard conditons are forecast, as issued by Environment Canada.
    - 5.2 No student group shall travel if the RCMP has issued an advisory against travel on any enroute highway or Public Works Canada has issued an advisory against travel on any enroute highway.
    - 5.3 No student group shall travel if the temperature falls below -40° .
    - 5.4 No student group shall travel when windchill falls in the "Very High or Extreme"categories on the attached chart.
    - 5.5 On the return leg, sponsor teachers shall verify weather and road conditions in every case when winter conditions prevail.
  6. Sponsor teachers must ensure that students are appropriately clothed for travel by road during the winter months. In winter weather, for road travel, sleeping bags in the ratio of one (1) for every student must also be carried in the bus or motor vehicle.
  7. Any vehicles used to transport students must contain or have immediate access to a first aid kit. In the case of private vehicles traveling "in convoy" to another community, one vehicle must contain a first aid kit. In the case of a vehicle or vehicles traveling independently to other centres, each must be equipped with an emergency first aid kit.
    - 7.1 Any private vehicles used to carry students to communities along the Alaska Highway or beyond must be properly equipped to handle all road conditions, must appear to be in good running order, and must have appropriate emergency equipment (ie. spare tire, jack, emergency road tools and tow rope).

School District #81 (Fort Nelson)  
 Policy #5520 Student Transportation to School Related Activities

## WIND-CHILL FACTOR

*TEMPERATURE (°C)*

WIND (KMH)	0	-5	-10	-15	-20	-25	-30	-35
10	LOW	LOW	LOW	MDT	MDT	HIGH	HIGH	HIGH
20	LOW	LOW	MDT	MDT	HIGH	HIGH	HIGH	V. HIGH
30	MDT	MDT	MDT	HIGH	HIGH	HIGH	V.HIGH	XTRM
40	MDT	MDT	HIGH	HIGH	HIGH	V.HIGH	V.HIGH	XTRM
50	MDT	MDT	HIGH	HIGH	HIGH	V.HIGH	XTRM	XTRM
60	MDT	MDT	HIGH	HIGH	HIGH	V.HIGH	XTRM	XTRM

### WIND-CHILL CATEGORIES:

- LOW = Work and travel become uncomfortable unless properly clothed
- MODERATE = Work and travel become more hazardous unless properly clothed. Heavy outer clothing required
- HIGH = Unprotected skin will freeze with direct exposure over prolonged periods. Heavy outer clothing mandatory.
- VERY HIGH = Unprotected skin will freeze in one minute with direct exposure. Multiple layers of clothing mandatory. Work and travel alone not advisable.
- EXTREME = Adequate face protection becomes mandatory. Work and travel alone prohibited.

# WIND CHILL FACTOR

## WIND CHILL FACTOR

Nearly everyone is aware of how much colder it feels outdoors on a windy day as compared to when there is no wind, particularly in the winter. This apparent 'coldness' is due to the more rapid cooling effect produced by the wind to make it feel colder than it really is. The combined effect of wind and low temperatures is experienced by most Canadians in just about every part of Canada. The effect can produce serious and often dangerous conditions.

*Wind Chill Factor* as described in this pamphlet is a measure of the combined chilling effect of wind and temperature. Although the actual calculation of the factor is based upon how fast water will cool with the combination of low temperature and wind, it has been found to be equally applicable to the cooling effect experienced by the human body and by an inanimate object.

The advantage of *Wind Chill Factor* over other measurements methods is that it represents a real rate of cooling, in other words how fast an object cools. For example, the combination of a specific temperature and wind speed can be related to how fast exposed flesh will freeze. On the average the value of 1625 watts per square meter represents the condition where exposed flesh will freeze. It also gives an indication of how difficult it is to maintain an object, for example a house, at a given temperature.

In the past it has been common practice to use an equivalent temperature (wind chill temperature) to relate wind and temperature. Unfortunately the values obtained by this method often have been beyond the experience of most people. For example,  $-50^{\circ}\text{C}$  occurs in relatively unpopulated areas of Canada. More importantly the equivalent temperature still does not relate to the combined effect of wind and temperature on the human body. It also is too easily confused with the actual temperature.

## EXAMPLES OF THE EFFECT OF WIND CHILL FACTOR

1. Water will freeze more quickly at high wind chill factors than at low.

2. The ability of an engine block heater to keep a car engine warm decreases with increasing wind chill factor.

3. The length of time a car can be left turned off before reaching the surrounding air temperature decreases with increasing wind chill factor.

4. With increasing wind chill factor there is an increase in the fuel needed to heat buildings, particularly when the building is poorly insulated.

5. Exposed flesh freezes more rapidly with higher wind chill factors.

## EXAMPLES OF WIND CHILL FACTOR

<i>Wind Chill Factor</i>	<i>Comments</i>
700	Conditions considered comfortable when dressed for skiing.
1200	Conditions no longer pleasant for outdoor activities on overcast days.
1400	Conditions no longer pleasant for outdoor activities on sunny days.
1600	Freezing of exposed skin begins for most people depending on the degree of activity and the amount of sunshine.
2300	Conditions for outdoor travel such as walking become dangerous. Exposed areas of the face freeze in less than 1 minute for the average person.
2700	Exposed flesh will freeze within half a minute for the average person.

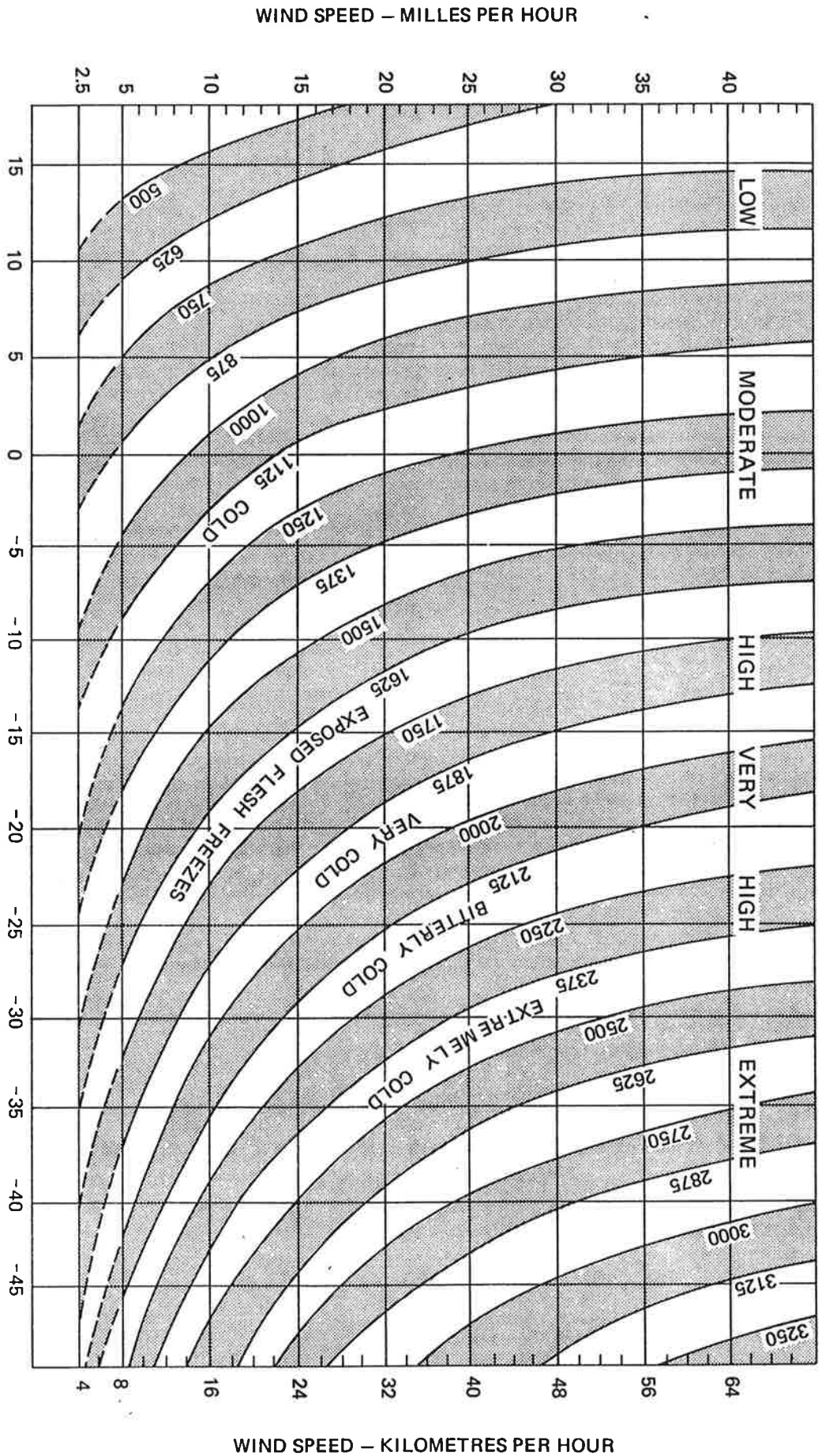
The units of *Wind Chill Factor* used in this pamphlet are watts per square meter.

## ACKNOWLEDGEMENT:

Saskatchewan Research Council has assisted in providing information contained in this pamphlet.

Refer to diagram on opposite page for graph to calculate *Wind Chill Factor*.

# WIND CHILL COOLING RATES (Watts Per Square Meter)



To determine the *wind chill factor* follow the temperature across and the wind speed up until the two lines intersect. The value of the wind chill factor can be interpolated using the labeled wind chill factor curves.

## AIR TEMPERATURE – DEGREES CELSIUS

For example, at  $-10^{\circ}\text{C}$  with a wind speed of 20 miles per hour the point of intersection lies between 1500 and 1625, or approximately 1570.

It is not recommended that wind chill factors be calculated for wind speeds below 5 miles an hour, since it is difficult to determine wind chill factors at these wind speeds and because other factors such as relative humidity become important.

## WIND SPEED – KILOMETRES PER HOUR