



PACIFIC REGION TECHNICAL NOTES

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VANCOUVER PUBLIC WEATHER SURVEY - 1985

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INTRODUCTION

A weather questionnaire was published in cooperation with the Vancouver Sun (daily newspaper) on February 2, 1985. The intent of the questionnaire was to gain insight into the degree to which the public uses and understands forecast information and to experiment with new terminology and procedures for writing the forecasts.

BACKGROUND

The readers were given a week to respond to 20 multiple choice questions. A total of 1536 replies were received. The data was processed by Marketrend Research, a company contracted by the Atmospheric Environment Service.

RESULTS

Consumer Useage:

The majority of the respondents (89%) came from the Lower Mainland. Of these respondents, most were keen about weather. Over 90% used the forecasts frequently or always, and less than .5% never used the forecasts. A large majority obtained their forecasts from the media. About 90% acquired weather information from the radio at least once a day, while 77% and 61% used television and the newspaper, respectively. The other information sources were much less popular.

Almost all of the respondents made use of the public forecasts. Significant numbers also claimed to utilize the marine and mountain forecasts (32% and 25%, respectively).

The respondents ranked precipitation as the most significant weather element in the public forecast. Temperature and sky condition were ranked as second and third most important, followed by wind and restrictions to visibility, which were ranked of equal importance. Humidity was ranked least important. A cross-analysis of the data by locality indicated some regional differences in the ranking of weather elements. (See Table 1 for a listing of the regions used in the cross-analysis and Figures 1a and 1b for reference maps.) Precipitation was of relatively greater importance to those from the Greater Vancouver area. Respondents from the Vancouver

Island region and the Islands region (Sunshine Coast, and the Gulf and Georgia Strait Islands) placed greater importance on winds, with significant numbers ranking wind as the most important weather element. Residents from the Northeast region (Pitt Meadows, Maple Ridge, Haney, Mission) placed relatively greater significance on sky conditions.

When asked to rank the importance of various weather warnings, the surveyed public ranked heavy snow and freezing rain warnings as the first and second most important weather warnings, followed by wind, severe thunderstorms, and frost warnings. A cross-analysis of the replies revealed regional differences. Residents from North region (North and West Vancouver) deviated from the average by ranking heavy rain warnings of greater significance than freezing rain warnings. On the other hand, residents from the Islands and the Vancouver Island regions gave wind warnings considerably greater than average significance. Heavy thunderstorm warnings were given a relatively greater significance by those from the Northeast region.

When asked which information pertaining to precipitation was most important, about half of the respondents indicated interest in knowing about the beginning and ending of precipitation. A lesser but significant number (35%) were most interested in knowing about the character and frequency of precipitation.

Given a choice of various probability descriptions of precipitation, most of the surveyed public preferred to know the percentage of the day during which precipitation was expected. A lesser but significant number (27%) chose the currently used Probability of Precipitation (POP).

About half of the respondents replied that winds were important in their daily lives. When asked which wind speeds they would like to hear about, a total of 78% of those that considered winds important were interested in wind speeds greater than 20 kph.

Forecast Terminology

Cloud terminology was reasonably well understood. Only the terms, "partly sunny" and "partly cloudy", received a wide range of interpretations. The terms "variable cloudiness" and "partial clearing" (not used in the PWC forecaster's vocabulary) were very well understood.

The respondents had considerably more difficulty with precipitation terminology. In particular, most had trouble grasping the areal extent of precipitation. Unqualified terms such as "rain" or "snow" were generally understood to mean precipitation continuous in time and space. Most qualified descriptions of rain or snow, such as "intermittent rain" or "occasional snow", seemed to convince the public that the precipitation would be discontinuous in space as well as in time. Only the term "periods of rain" was interpreted according to meteorological convention.

The surveyed public had particular difficulty with shower terminology. A significant number (30-40%) thought that the terms "snow flurry" and "snow shower" described widespread precipitation, and greater numbers associated steady precipitation with these terms than with any of the modified rain terms tested. When asked to give the likelihood of experiencing precipitation for various shower terms, respondents frequently gave a wide range of interpretations. It follows that a public that has difficulty grasping the areal extent of weather events would have difficulty with shower terminology.

Conclusions

1. The survey showed that the most significant weather elements to the public were precipitation, followed by temperature, sky condition, wind and restrictions to visibility.
2. The two most important weather warnings are heavy snow, followed by freezing rain. Both significantly affect transportation.
3. A cross-analysis of the data revealed regional differences in the ranking of the weather elements and weather warnings.
4. Cloud terminology was reasonably well understood.
5. Precipitation terminology was generally quite confusing to the surveyed public. Most confusion arose over whether precipitation terminology and its qualifiers dealt with time, space or both.

Table 1

Regions of the Lower Mainland and the localities included in the regions.

REGION	LOCALITIES
City (Vancouver)	Vancouver
North	North Vancouver, West Vancouver
South	Richmond, Delta, White Rock, Surrey
East	Burnaby, New Westminster, Port Moody, Coquitlam, Port Coquitlam
Northeast	Pitt Meadows, Maple Ridge, Haney, Mission
Fraser Valley	Langley, Chilliwack, Abbotsford
Other-Lower Mainland	Squamish, other

Other sub-regions and localities (outside of the Lower Mainland area)

REGION	LOCALITIES
Vancouver Island	Victoria, Nanaimo, Campbell River, Courtenay
Islands	Gulf Islands, Saltspring Island, Powell River
Interior	Kamloops, William Lake, Kimberley, other

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FIGURE 1A
MAP OF THE PROVINCE OF B.C.

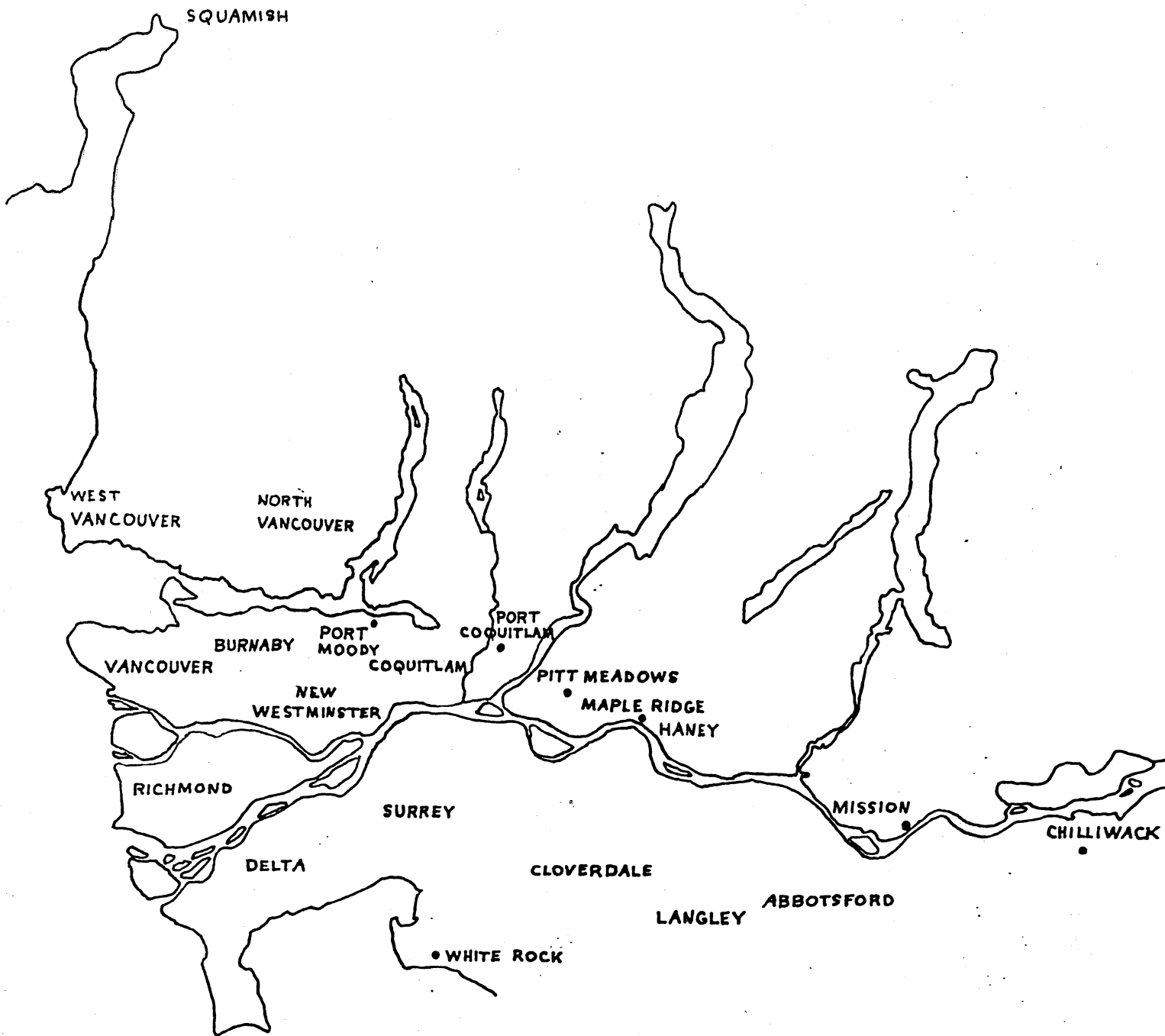


FIGURE 1B
MAP OF THE GREATER VANCOUVER AREA