Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

NATIONAL WEATHER SERVICE ALASKA SUPPLEMENT 09-2004
APPLICABLE TO NWSI 10-503
JULY 22, 2004

Operations and Services
Public Weather Services, NWSPD 10-5
WFO Public Weather Products Specification, NWSI 10-503

ALASKA REGION PUBLIC WEATHER PRODUCTS

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OPR: W/AR1x2 (A. Devaris) **Certified by:** W/AR1 (J. Partain)
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SUMMARY OF REVISIONS: This instruction supercedes Regional Operations Manual Letter A-18-00, "Zone Forecasts," dated November 16, 2000, filed with Weather Service Operations Manual Chapter C-11.

The section numbers in this supplement refer to the section numbers in NWSI 10-503. Section 10 of this supplement is an addition for the Alaska Region. There is no section 10 in NWSI 10-503.

Signed 7/8/04
Laura Furgione Date
Acting Regional Director

Public Weather Products

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1. Introduction. The public weather product procedures in this Supplement are described to augment the procedures in NWSI Instruction (NWSI) 10-503 (refer to http://www.nws.noaa.gov/directives/010/pd01005003a.pdf). These instructions are designed to meet the needs of Alaska Region customers while maintaining consistency with national guidelines.

2. Zone Forecast Product (product category ZFP). The following guidelines are to be used in conjunction with and in addition to the specifications in NWSI 10-503, section 2.

2.2 Issuance Guidelines.

2.2.3 Issuance Time. By memorandum from the Director, Office of Climate, Water and Weather Services, dated May 3, 2003, Alaska Region WFOs have been granted a two hour time extension to issue the morning ZFP. The morning ZFP will be issued no later than 6:00 a.m. local time. The afternoon issuance deadline remains at 4:00 p.m. local time as per NWSI 10-503.

2.3 Technical Description.

2.3.4 Format.

2.3.4.1 Combining Periods. Forecast periods may be combined (after the first period) during times when weather elements are similar in order to shorten product length and reduce repetitive or redundant text. The Alaska Region does not strictly define "similar weather elements"; WFOs are authorized to make that determination. It is recommended that thresholds for combining be more strict early in the forecast period (days 2-3), and more general later in the period (days 4-7). For example, periods could be combined if max/min temperatures are within 5 degrees in days 2-3, or within 5-10 degrees in days 4-7. Sky condition thresholds should be within one category of each other; probability of precipitation should be within the same category (based upon the qualifying terms listed in NWSI 10-503, section 2.3.5.3.c, Table 1) in order to be combined (i.e., LIKELY).

Zones with similar weather conditions, as determined locally, may be combined into discrete zone blocks within the ZFP product.

2.3.5 Content.

2.3.5.3 Precipitation and Probability of Precipitation (POP) Forecasts. The POP in the text portion of the zone forecast is an average POP expected across the zone area. This POP, therefore, can be different from the point POP in tabular point formats (e.g., the coded cities forecast, point forecast matrices, etc.).

There may be occasions when a single value or description of the POP does not adequately represent the precipitation regime in a zone. For example: when there is significantly higher chance for precipitation along neighboring mountains than in the valley. Significant is defined here as a different category of uncertainty, such as CHANCE (30%) versus LIKELY (60%). A second POP and/or qualifying term may be used to better represent the situation. Example wording is:

> CLOUDY. SNOW LIKELY ALONG THE MOUNTAINS...CHANCE OF SNOW ALONG THE COAST.

When including a single POP in combined periods, that POP is representative of each 12 hour period, not the entire combined period of time.

Snow totals should be included for any event expected to end by the 3rd period that is expected to meet advisory or warning criteria. For multi-day snow events that do not reach an advisory or warning threshold or do not end by the 3rd period, daily snowfall accumulations should be included, but an "event total" is not necessary.

2.3.5.4 Sky Condition. Per NWSI 10-503 section 2.3.5.4, each forecast period will include a predominant sky condition. In addition to the sky condition descriptions given in Table 2 of this instruction, terms that indicate a trend may be used, e.g., INCREASING CLOUDS, CLEARING, etc.

Exception: The sky condition element is optional in any forecast period when the POP is greater than or equal to 60% and precipitation is expected to occur for the majority of the forecast period. In addition, the sky condition element is optional in the extended portion of the forecast (days 4 through 7) when the probability of stratiform precipitation is 40% or greater.

2.3.5.5 Temperature. Due to complex terrain and coastal influences, it is not uncommon for large temperature variations to occur within a single zone. Where the temperature is forecast to vary beyond 10 to 15 degrees within a zone, the temperature should be forecast at several locations to properly represent the large variability. For example:

LOWS 10 ABOVE TO 15 BELOW...WARMEST IN THE HILLS.

Wind chill values will be included in the forecast when advisory, watch, or warning criteria are met. They should also be included at less severe thresholds in the first two periods when considered locally significant. Including "less severe" wind chill values beyond the second period may add undesirable length to the ZFP. WFOs should make this determination based upon expressed customer/partner needs and document their local policy in the WFO Station Duty Manual (SDM).

2.3.5.6 Wind. Wind forecasts may be omitted in mountain zones unless conditions are forecast to be locally significant (in most cases, sustained $\geq$25 mph and/or gusts $\geq$40 mph). When combining periods, the wind forecast may be preceded by descriptors such as "DAYTIME" or "AFTERNOON" to better describe significant winds without implying that they continue throughout the period.

The descriptive terms in NWSI 10-503, section 2.3.5.6, Table 4 may be altered as necessary for climatologically windy areas. For example, if a location routinely experiences 15 to 25 mph winds, including the term "BREEZY" in every forecast period adds unnecessary length and redundancy and does not add value to the forecast. In some locales, it may not be considered "WINDY" until speeds reach 35 mph or more. Adjustments in the use of descriptive wording for winds will be documented in the WFO SDM. Do not limit the use of the descriptors for high wind speeds, e.g., STRONG WINDS, DAMAGING WINDS, HURRICANE FORCE WINDS, etc.

10. Travelers Forecast (product category TVL).

10.1 Mission Connection. The Travelers Forecast (TVL) is a seasonal product issued by WFO Juneau that provides weather conditions for customers planning to travel along the Haines and/or Klondike Highways during the winter season. These highways link Southeast Alaska to the only major land-based shipping route into Canada and the rest of Alaska.

10.2 Issuance Guidelines. Although the TVL should provide greater detail than the associated ZFP, these products must be well coordinated. Also, changes to the Canadian section of the forecast should not be made without coordination and approval with the issuing office of the Meteorological Services of Canada (MSC). The TVL will adhere to the guidelines as described in the following sections.

10.2.1 Creation Software. The TVL is composed using the AWIPS text editor or other commercial text editor.

10.2.2 Issuance Criteria. The TVL is a scheduled seasonal product issued in conjunction with the MSC in both metric and English units during the winter season (October 15 through April 30). The TVL is issued early in the morning and late in the afternoon to provide detailed information relevant to customers for travel planning purposes.

10.2.3 Issuance Time. The TVL is a scheduled product generally issued at least three times a day – twice in accordance with scheduled public forecast packages and updated once with the scheduled reception of road reports during the winter season.

10.2.4 Valid Time. The TVL is valid from the time of release (scheduled or non-scheduled) through Day 2.

10.3 Technical Description. The TVL format and content are based on customer requirements.

10.3.1 UGC Type. Universal Geographic Code (UGC) Type. The TVL uses the (Z) form of the UGC.

10.3.2 Mass News Dissemination (MND) Broadcast Instruction Line. There is no MND Broadcast Instruction Line associated with this product.

10.3.3 MND Product Type Line. The Travelers Forecast Product MND line describes the product type and the area it covers, i.e., “MOTORING FORECAST FOR SOUTH KLONDIKE AND HAINES HIGHWAYS.”

10.3.4 Content. The TVL will contain the following weather elements:

a. Snow Levels. The forecast snow level should be included in any period when it is expected to affect travel on the highways.

b. Snowfall. Forecast snowfall amounts above sea level only when advisory and/or warning criteria are met or expected to be met. If advisory or warning criteria snowfall is expected at 800 ft. or lower, put elevation in headline and issue the advisory/warning; otherwise just mention snow level in the forecast, without giving specific amounts. One could say, For example: "TODAY...RAIN, WITH SNOW...LOCALLY HEAVY...ABOVE 2000 FEET."

c. Fog. Ceilings below 3,000 feet may require the mention of fog. Use descriptive wording such as, “PATCHY FOG,” “AREAS OF DENSE FOG,” etc.

d. Temperatures. If the temperature range is expected to be 10 degrees or greater, use specific references to sea level and 3,000 feet, such as, “HIGHS FROM NEAR 40 AT SEA LEVEL TO NEAR 28 AT 3000 FT.” When there is not much variation in temperature through 3,000 feet, a statement like, “HIGHS FROM 8 TO 12 DEGREES.” is sufficient.

e. Winds and Wind Chill. For winds, the general zone-wide expected winds will be forecast, with significant exceptions. When the magnitude of a significant wind or wind chill at higher elevations is not known (which is often the case), use descriptive terms such as, “SOUTH WINDS 10 TO 20 MPH, EXCEPT STRONGER NEAR WHITE PASS.”

It is not necessary to mention Wind Chills at higher elevations unless advisory or warning criteria is met or expected.

10.3.5 Format. The TVL format is based on customer requirements. Because the TVL is essentially a subset of the ZFP, the format generally follows the guidelines of the Day 1 and Day 2 portions of the ZFP. The TVL is divided into four sections; two sections correspond to the U.S. (Alaska) portion of each highway, and the other two sections correspond to the Canadian side of each highway. Each of these sections is divided into three distinct 12-hour periods for the morning issuances and two distinct 12-hour periods for the evening issuance. The Canadian sections follow Canadian public forecast policies for format and content, so they are slightly different than the Alaska sections. WFO Juneau issues the combined U.S./Canadian forecast product in English units, and MSC issues a metric version of the same combined product. See Appendix B for an example in English Units.

10.4 Updates, Amendments, Corrections. Forecasts should be updated and corrected between scheduled issuances when the on-duty forecast team believes the current forecast is not representative, or a typographical, informational, grammatical, or format error is detected. When the ZFP for the associated zone is updated within the Day 1 to Day 2 forecast time frame, an update to the TVL should also be made.

Appendix A

Waiver for the Issuance Time Requirement for the ZFP

U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL WEATHER SERVICE
1325 East-West Highway
Silver Spring, Maryland 20910-3283

MAY 3 2003

MEMORANDUM FOR: Richard C. Przywarty
Regional Director
/s/ Gregory A. Mandt

FROM: Gregory A. Mandt
Director, Office of Climate, Water,
and Weather Services

SUBJECT: Waiver for Mandatory Morning Zone Forecast Product (ZFP) Issuance Time

Your request for a waiver from the mandatory morning issuance deadline for the Zone Forecast Product (ZFP) per National Weather Service Instruction 10-503 is approved.

Alaska Region WFOs are granted a two hour time extension to issue the morning ZFP. The morning ZFP will be issued no later than 6:00 a.m. local time, while the afternoon issuance deadline remains at 4:00 p.m local time as per 10-503 policy.

cc: W/OS22 - G. Austin
W/OS22 - D. Young
W/AR1 - A. Devaris

Appendix B

Sample Travelers Forecast

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FPAK87 PAJK 211750
TVLAJK
AKZ018-019-220100-
MOTORING FORECAST FOR SOUTH KLONDIKE AND HAINES HIGHWAYS
ISSUED JOINTLY BY NATIONAL WEATHER SERVICE JUNEAU AK
AND ENVIRONMENT CANADA VANCOUVER BC
1000 AM ADT WED APR 21 2004

SOUTH KLONDIKE HIGHWAY - SKAGWAY TO WHITE PASS
.TODAY...PARTLY CLOUDY. HIGHS AROUND 49...RANGING TO AROUND 43 NEAR WHITE
PASS. SOUTH WINDS AROUND 10 MPH
.TONIGHT...BECOMING MOSTLY CLOUDY. LOWS AROUND 37...RANGING TO AROUND 26 NEAR
WHITE PASS. SOUTHWEST WINDS AROUND 10 MPH IN THE EVENING SHIFTING TO THE
NORTHEAST LATE.
.THURSDAY...CLOUDY. RAIN DEVELOPING IN THE AFTERNOON. HIGHS AROUND
47...RANGING TO AROUND 38 NEAR WHITE PASS. NORTHEAST WINDS TO 15 MPH.
PROBABILITY OF RAIN 90 PERCENT.


SOUTH KLONDIKE HIGHWAY - WHITE PASS TO CARCROSS
.TODAY...A MIX OF SUN AND CLOUD. HIGH MIDDLE 40S.
.TONIGHT...A FEW CLOUDS. LOW IN THE UPPER 20S.
.THURSDAY...INCREASING CLOUD IN THE MORNING WITH A FEW SHOWERS BEGINNING IN
THE AFTERNOON. HIGH IN THE LOW 40S.


HAINES ROAD - HAINES TO PLEASANT CAMP
.TODAY...PARTLY CLOUDY. HIGHS AROUND 52. NORTH WINDS AROUND 10 MPH IN THE
MORNING SHIFTING TO THE SOUTHEAST IN THE AFTERNOON.
.TONIGHT...BECOMING MOSTLY CLOUDY. LOWS AROUND 36. NORTH WINDS 10 TO 15 MPH.
.THURSDAY...CLOUDY. RAIN DEVELOPING IN THE AFTERNOON. HIGHS AROUND 48. EAST
WINDS 10 TO 15 MPH. PROBABILITY OF RAIN NEAR 100 PERCENT.


HAINES ROAD - PLEASANT CAMP TO HAINES JUNCTION
.TODAY...A MIX OF SUN AND CLOUD. HIGH MIDDLE 40S.
.TONIGHT...A FEW CLOUDS. LOW IN THE UPPER 20S.
.THURSDAY...BECOMING CLOUDY IN THE MORNING THEN RAIN BEGINNING IN THE
AFTERNOON. HIGH IN THE LOW 40S.

FOR HAINES AND KLONDIKE HIGHWAY CONDITIONS IN ALASKA PLEASE CALL 907-983-2333
AND IN CANADA PLEASE CALL 867-456-7623.
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