

NOUS41 KWBC 201710
PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 08-23
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
1210 PM EDT THU MAR 20 2008

TO: SUBSCRIBERS:
-FAMILY OF SERVICES
-NOAA WEATHER WIRE SERVICE
-EMERGENCY MANAGERS WEATHER INFORMATION NETWORK
OTHER NWS PARTNERS...USERS AND EMPLOYEES

FROM: JASON TUELL
CHIEF...SCIENCE PLANS BRANCH
OFFICE OF SCIENCE AND TECHNOLOGY /OST/

SUBJECT: ADDITION OF NOAA WAVEWATCH III MODEL GRIDS TO
SBN/NOAAPORT: EFFECTIVE APRIL 29 2008

EFFECTIVE TUESDAY APRIL 29 2008...WITH THE 1200 COORDINATED
UNIVERSAL TIME /UTC/ RUN...NEW WAVEWATCH III /NWW3/ MODEL GRIDS
PRODUCED BY THE NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION
/NCEP/ WILL BE ADDED TO THE NOAAPORT TG2 CHANNEL. THESE NEW GRIDS
WILL BE DISSEMINATED IN GRIB2 FORMAT. THE LEGACY GRIB1 NWW3 GRIDS
WILL CONTINUE TO BE AVAILABLE OVER NOAAPORT.

CHARACTERISTICS OF THE NEW GRIB2 GRIDS INCLUDE:

1. THE GRIDS HAVE INTERNAL TWO-WAY COUPLING AND EXCHANGE
INFORMATION DURING THE COMPUTATION CYCLE. THE NEW GRIDS ARE:
 - A. A 30 MINUTE RESOLUTION GLOBAL GRID.
 - B. THREE 10 MINUTE RESOLUTION REGIONAL GRIDS COVERING THE
UNITED STATES /US/...EAST/WEST COASTS AND EASTERN
PACIFIC ISLANDS INCLUDING HAWAII.
 - C. AN ALASKA REGIONAL GRID WITH A 15 MINUTE RESOLUTION IN
LONGITUDE AND A 10 MINUTE RESOLUTION IN LATITUDE.
 - D. TWO 4 MINUTE RESOLUTION COASTAL GRIDS FOR THE US
EAST/WEST COASTS. THE US WEST COAST GRID ALSO
INCLUDES THE COASTAL WATERS OF THE HAWAIIAN ISLANDS.
 - E. AN ALASKAN COASTAL GRID WITH A RESOLUTION OF 8 MINUTES
IN LONGITUDE AND 4 MINUTES IN LATITUDE.
2. DOMAIN OF THE GLOBAL GRID IS EXTENDED FROM 78 N TO 90 N. FOR
NOW THE DATA IN THE ADDITIONAL GRID POINTS WILL BE MARKED AS
UNDEFINED. THE GRID POINTS WILL BE POPULATED WITH DATA IN A
LATER NWW3 UPDATE.
3. THE ENERGY SPECTRUM IS NOW PROPERLY PARTITIONED. ASSOCIATED
WITH THIS ARE ADDITIONAL OUTPUT FIELDS IN THE GRIB FILES
INCLUDING:
 - A. PARTITIONED WAVE HEIGHT DATA FOR WIND SEAS...PRIMARY
SWELLS AND SECONDARY SWELLS.

B. PARTITIONED PEAK PERIOD DATA FROM WIND SEAS...PRIMARY SWELLS AND SECONDARY SWELLS.

C. PARTITIONED MEAN DIRECTION FOR WIND SEAS...PRIMARY SWELLS AND SECONDARY SWELLS.

THESE NEW FIELDS REPLACE THE EARLIER MEAN WAVE PERIOD ...MEAN WAVE DIRECTION...PEAK FREQUENCY...PEAK DIRECTION AND WIND SEA PEAK FREQUENCY AND WIND SEA DIRECTION.

4. THE MODEL PHYSICS INCLUDES A LINEAR WAVE GROWTH TERM TO IMPROVE INITIAL WAVE GROWTH RESULTS AND A SURF ZONE BREAKING TERM TO PROVIDE MORE REALISTIC ESTIMATES OF WAVE HEIGHTS FOR LANDFALLING HURRICANES.

5. THE FORECAST INTERVAL FOR 0 TO 72 HOURS WILL BE 3 HOURS. FORECAST INTERVAL FROM 72 TO 180 HOURS WILL BE 6 HOURS.

THERE WILL BE 4 MODEL DISTRIBUTIONS DAILY CORRESPONDING TO THE 0000...0600...1200 AND 1800 UTC MODEL RUN. THE TIMING OF THE DELIVERY ON NOAAPORT WILL BE APPROXIMATELY FIVE HOURS AFTER THE FOUR MODEL RUN TIMES.

THE PER CYCLE DATA VOLUME WILL BE APPROXIMATELY 275 MEGABYTES /MB/ OR APPROXIMATELY 1.1 GIGABYTES /GB/ PER DAY.

THE WMO HEADINGS FOR THESE PRODUCTS WILL BE OF THE FORM:

T1: DATA FORMAT OF GRIB2 /E/
T2: PARAMETER CODE /ONE OF ABCJKLMNOPYR/
A1: GRID CODE /ONE OF ABCDEFGH/
A2: FORECAST TIME /ONE OF ABCDEFGHIJKLMNOPQRSTUVWXYZ/
II: LAYER OR LEVEL /88/
CCCC: KWBJ

A COMPLETE DESCRIPTION AND LIST OF WMO HEADINGS IS ONLINE AT /USE LOWER CASE LETTERS/:

[HTTP://WWW.WEATHER.GOV/OS/NOTIFICATION/RESOURCES/WMO_HEADINGS.PDF](http://www.weather.gov/os/notification/resources/wmo_headings.pdf)

FOR QUESTIONS RELATED TO MODEL CHANGES...PLEASE CONTACT:

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NWS TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT
/USE LOWER CASE LETTERS/:

[HTTP://WWW.NWS.NOAA.GOV/OM/NOTIF.HTM](http://www.nws.noaa.gov/om/notif.htm)

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