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PNSWSH

TECHNICAL IMPLEMENTATION NOTICE 07-51 AMENDED
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC
825 AM EST WED NOV 14 2007

TO: FAMILY OF SERVICES /FOS/ SUBSCRIBERS
NOAA WEATHER WIRE SERVICE /NWS/ SUBSCRIBERS
EMERGENCY MANAGERS WEATHER INFORMATION NETWORK /EMWIN/
SUBSCRIBERS
NOAAPORT SUBSCRIBERS
OTHER NWS CUSTOMERS...PARTNERS AND EMPLOYEES

FROM: PAUL HIRSCHBERG
CHIEF...SCIENCE PLANS BRANCH
OFFICE OF SCIENCE AND TECHNOLOGY

SUBJECT: AMENDED: UPGRADE TO NOAA WAVE WATCH III MODEL IS DELAYED UNTIL
NOVEMBER 27 2007

REFER TO: [TECHNICAL IMPLEMENTATION NOTICE /TIN/ 07-51](#)...TRANSMITTED ON
AUGUST 2 2007...[AMENDED TIN 07-51](#)...TRANSMITTED ON SEPTEMBER 17
2007...[AMENDED TIN 07-51](#)...TRANSMITTED ON SEPTEMBER 18 2007 AND [AMENDED
TIN 07-51](#)...TRANSMITTED ON SEPTEMBER 25 2007

AMENDED TO POSTPONE THE IMPLEMENTATION DATE TO NOVEMBER 27 2007.

EFFECTIVE TUESDAY NOVEMBER 27 2007...WITH THE 1200 COORDINATED UNIVERSAL
TIME /UTC/ RUN...THE NATIONAL CENTERS FOR ENVIRONMENTAL PREDICTION /NCEP/
WILL UPGRADE THE NOAA WAVE WATCH III /NWW3/ MODEL.

EXPECTED DATA DELIVERY TIMING/VOLUME/CONTENT CHANGES:

- NOAAPORT DATA: AT THE CURRENT TIME...GRIDDED DATA SETS FOR THE FOLLOWING
DOMAINS ARE DISSEMINATED TO NOAAPORT/ADVANCED WEATHER INTERACTIVE
PROCESSING SYSTEM /AWIPS/ USERS:

GLOBAL...EASTERN NORTH PACIFIC...WESTERN NORTH ATLANTIC/GULF OF
MEXICO...NORTH ATLANTIC HURRICANE...NORTH PACIFIC HURRICANE AND ALASKA.
BUOY BULLETIN DATA IS ALSO DISSEMINATED FOR THE SAME DOMAINS.

- ALL OF THESE PRODUCTS WILL BE OUTPUT BY THE NEW MODELING SYSTEM...BUT
THE ONLY RESULTANT CHANGE WILL BE IN THE FORECAST QUALITY DUE TO THE
IMPROVED RESOLUTION OF THE MODEL WHICH PRODUCES THE DATA SET.

- IN THE COOK INLET REGION OF ALASKA...VALID GRID POINT INFORMATION WILL
REPLACE SOME OF THE MISSING VALUES WHICH CURRENTLY POPULATE GRID POINTS IN
THAT REGION.

- NO CHANGE IS EXPECTED IN THE CONTENT DELIVERY TIME.

- NO SIGNIFICANT CHANGES IN DATA VOLUMES ARE EXPECTED.

- NO CHANGE IN PRODUCT DEFINITION SECTION /PDS/ CONTENT IS EXPECTED.
- AT SOME FUTURE DATE...ANOTHER NWS TIN WILL BE ISSUED TO ALERT USERS THAT THE HIGHER RESOLUTION DATA WILL BECOME AVAILABLE ON NOAAPORT.

NCEP/NWS FILE TRANSFER PROTOCOL /FTP/ SERVERS:

- ALL OF THESE PRODUCTS WILL BE OUTPUT BY THE NEW MODELING SYSTEM...BUT THE ONLY RESULTANT CHANGE WILL BE IN THE FORECAST QUALITY DUE TO THE IMPROVED RESOLUTION OF THE MODEL WHICH PRODUCES THE DATA SET.
- IN THE COOK INLET REGION OF ALASKA...VALID GRID POINT INFORMATION WILL REPLACE SOME OF THE MISSING VALUES WHICH CURRENTLY POPULATE GRID POINTS IN THAT REGION.
- NO CHANGE IS EXPECTED IN THE CONTENT DELIVERY TIME.
- NO SIGNIFICANT CHANGES IN DATA VOLUMES ARE EXPECTED.
- NO CHANGE IN PDS CONTENT IS EXPECTED.
- NEW HIGHER RESOLUTION DATA SETS WILL BECOME AVAILABLE ON THE NCEP FTP SERVER.

NCEP ENCOURAGES ALL USERS TO ENSURE THEIR DECODERS ARE FLEXIBLE AND ARE ABLE TO ADEQUATELY HANDLE CHANGES IN CONTENT ORDER...PARAMETER FIELDS CHANGING ORDER...CHANGES IN THE SCALING FACTOR COMPONENT WITHIN THE PDS OF THE GRIB FILES AND ANY VOLUME CHANGES THAT MAY BE FORTHCOMING. THESE ELEMENTS MAY CHANGE WITH FUTURE NCEP MODEL IMPLEMENTATIONS. NCEP WILL MAKE EVERY ATTEMPT TO ALERT USERS TO THESE CHANGES PRIOR TO ANY IMPLEMENTATIONS.

MODELING SYSTEM CHANGES:

1. A MULTI-GRID GLOBAL MODEL THAT PROVIDES FORECAST PRODUCTS ON SEVERAL DIFFERENT GRIDS. ALL 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 /U.S./ 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 U.S. EAST/WEST COASTS. THE U.S. WEST COAST GRID ALSO INCLUDES THE COASTAL WATERS OF THE HAWAIIAN ISLANDS.
 - E. AN ALASKAN COASTAL GRID WITH A RESOLUTION OF EIGHT MINUTES IN LONGITUDE AND FOUR MINUTES IN LATITUDE.
2. FIELD OUTPUT WILL BE AVAILABLE IN GRIDDED BINARY VERSION TWO /GRIB2/ FORMAT.
3. THE ENERGY SPECTRUM WILL BE PROPERLY PARTITIONED. THE FOLLOWING ADDITIONAL OUTPUT GRIDS WILL BE AVAILABLE:

- A. PARTITIONED WAVE HEIGHT DATA FOR WIND SEAS-KPDS ID = 102 PRIMARY SWELLS-KPDS ID = 105-LEVEL 1 SECONDARY SWELLS-KPDS ID = 105-LEVEL 2.
- B. PARTITIONED PEAK PERIOD DATA FOR WIND SEAS-KPDS ID = 103 PRIMARY SWELLS-KPDS ID = 106-LEVEL 1 SECONDARY SWELLS-KPDS ID = 106-LEVEL 2.
- C. PARTITIONED MEAN DIRECTION FOR WIND SEAS-KPDS ID = 101 PRIMARY SWELLS-KPDS ID = 104-LEVEL 1.
- D. SECONDARY SWELLS-KPDS ID = 104-LEVEL 2.

4. MINOR CHANGES TO THE PHYSICS INCLUDING:

- A. LINEAR WAVE GROWTH TERM TO IMPROVE INITIAL WAVE GROWTH RESULTS.
- B. A SURF ZONE BREAKING TERM TO PROVIDE MORE REALISTIC ESTIMATES OF WAVE HEIGHT FOR LAND FALLING TROPICAL SYSTEMS.

5. THE FORECAST RUN WILL NOW START NINE FORECAST HOURS PRIOR TO THE ORIGINATING TIME OF THE CYCLE AS OPPOSED TO SIX HOURS PRIOR...ALLOWING FOR THREE ADDITIONAL HOURS OF ASSIMILATION. FORECAST OUTPUT CONTINUES OUT TO 180 HOURS.

THIS UPGRADED FORECAST SYSTEM WILL BE USED TO REPLACE THE CURRENT GRIDDED OUTPUT OF THE NOAA WAVEWATCH III MODELING SYSTEM. THE FOLLOWING GRIDS...WHICH ARE AVAILABLE ON NOAAPORT...WILL BE IMPACTED BY THE UPGRADE MODELING SYSTEM:

EASTERN NORTH PACIFIC /ENP/
WESTERN NORTH ATLANTIC /WNA/
ALASKAN WATERS /AKW/

THE PRODUCTS/GRIDS WHICH ARE DISSEMINATED TO NOAAPORT AND/OR THE SATELLITE BROADCAST NETWORK /SBN/ WILL NOT BE CHANGED IN VOLUME OR CONTENT.

IF YOU HAVE ANY QUESTIONS CONCERNING THESE CHANGES...PLEASE CONTACT:

HENDRIK TOLMAN
NCEP/EMC...CHIEF MARINE MODELING BRANCH
CAMP SPRINGS MARYLAND
PHONE: 301-763-8000 X 7253
EMAIL: HENDRIK.TOLMAN@NOAA.GOV

FOR QUESTIONS CONCERNING THE DATAFLOW ASPECTS OF THIS IMPLEMENTATION...EMAIL THE NCEP/NCO/PMB DATAFLOW HELPDESK: /USE UPPER CASE LETTERS FOR THE NCEP.PMB.D PORTION OF EMAIL ADDRESS AND LOWER CASE LETTERS FOR THE REMAINDER/:

NCEP.PMB.DATAFLOW@NOAA.GOV

NATIONAL TECHNICAL IMPLEMENTATION NOTICES ARE ONLINE AT /USE LOWER CASE/:

[HTTPS://WWW.WEATHER.GOV/NOTIFICATION/ARCHIVE](https://www.weather.gov/notification/archive)

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