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TECHNICAL IMPLEMENTATION NOTICE 07-51  
NATIONAL WEATHER SERVICE HEADQUARTERS WASHINGTON DC  
236 PM EDT THU AUG 2 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: UPGRADE TO NOAA WAVE WATCH III MODEL: EFFECTIVE SEPTEMBER 18 2007

EFFECTIVE TUESDAY SEPTEMBER 18 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.

THE FOLLOWING CHANGES WILL BE INCORPORATED INTO THE NWW3 MODEL SYSTEM:

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  
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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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