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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...
OTHER NATIONAL WEATHER SERVICE /NWS/ CUSTOMERS AND
PARTNERS...NWS EMPLOYEES

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

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 /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. FIELD OUTPUT WILL BE AVAILABLE IN 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
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 9 FORECAST HOURS PRIOR TO THE ORIGINATING TIME OF THE CYCLE AS OPPOSED TO 6 HOURS PRIOR ALLOWING FOR 3 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:

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THIS AND OTHER NWS TECHNICAL IMPLEMENTATION NOTICES ARE AVAILABLE 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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