

# **PRODUCT DESCRIPTION DOCUMENT**

## **NWPS Model Experimental Output**

**Approved:**  
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**Chief, Operations and Requirements Division**

**Date:**

## NWPS Model Output

### Part I - Mission Connection

- a. Product Description - The Nearshore Wave Prediction System (NWPS) wave model is run locally and used operationally at many coastal WFOs. NWPS output includes winds, wave height, ocean depth, wave period, wave length, swell, and currents. Display of this output is now available on an experimental basis on the webpages of Southern Region Coastal WFOs, Southern Region Headquarters (SRH), and WFO Wakefield, VA in Eastern Region. Other WFOs may make these displays available in the near future.
- b. Purpose – This high-resolution model can be used for operational forecasting and research. The NWPS output is used as guidance to produce marine forecasts at the coastal WFOs. The web pages are a convenient way for users to view the same meteorological forecast data as the forecaster.
- c. Audience – The main audience is NWS coastal offices and the general public.
- d. Presentation Format – NWPS output is displayed on WFO web pages with static images in 3 hourly forecast time steps out to 132 hours. Some of the WFO web pages have loop views. At present the NWPS model output is displayed at the following web sites:

Southern Region (SR coastal WFOs and SRH)

<http://innovation.srh.noaa.gov/swan/>

WFO Wakefield, Virginia

<http://www.erh.noaa.gov/er/akq/nwps.php>

Corpus Christi, Texas

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=CRP>

Houston/Galveston, Texas

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=HGX>

Jacksonville, Florida

<http://innovation.srh.noaa.gov/swan/swanloop.php?sid=JAX>

Key West, Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=KEY>

Lake Charles, Louisiana

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=LCH>

Melbourne, Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=MLB>

Miami-South Florida, Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=MFL>

Mobile/Pensacola, Alabama/Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=MOB>

New Orleans/Baton Rouge, Louisiana

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=LIX>

San Juan, Puerto Rico

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=SJU>

Southern Region Headquarters, Texas

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=SRH>

Tallahassee, Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=TAE>

Tampa Bay, Florida

<http://innovation.srh.noaa.gov/swan/nwpsloop.php?sid=TBW>

- e. Feedback Method - Most feedback will come from Internet users through emails to local WFO web masters and through an electronic survey:

<http://www.nws.noaa.gov/survey/nws-survey.php?code=SWNMO>

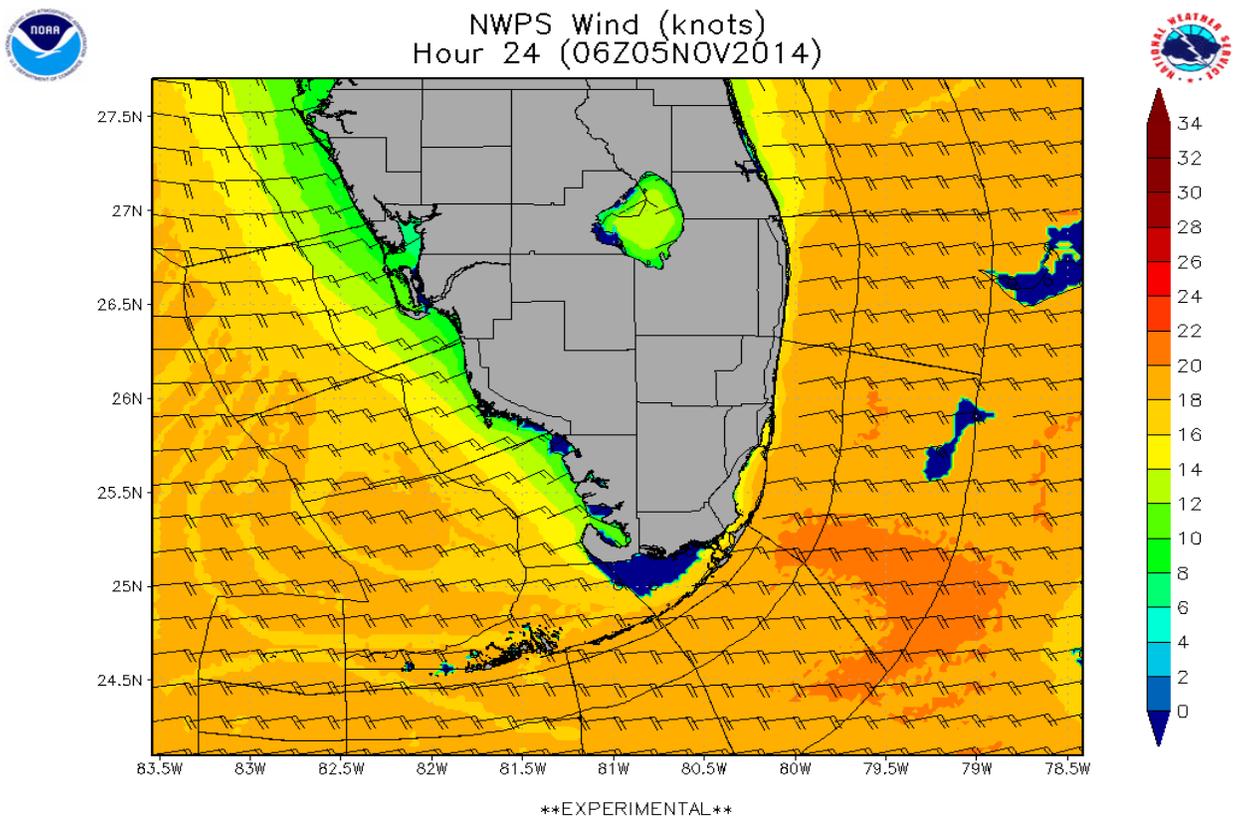
Additionally comments can be sent to:

National Weather Service (NWS)  
Attn: Richard May  
W/OS21  
Marine and Coastal Weather Services Branch  
1325 East West Highway  
Silver Spring, MD 20910

or e-mail to: [richard.may@noaa.gov](mailto:richard.may@noaa.gov)

NWS is seeking user comments on the NWPS Model Experimental Output through September 30, 2015.

- f. Example – See below:



## **Part II - Technical Description**

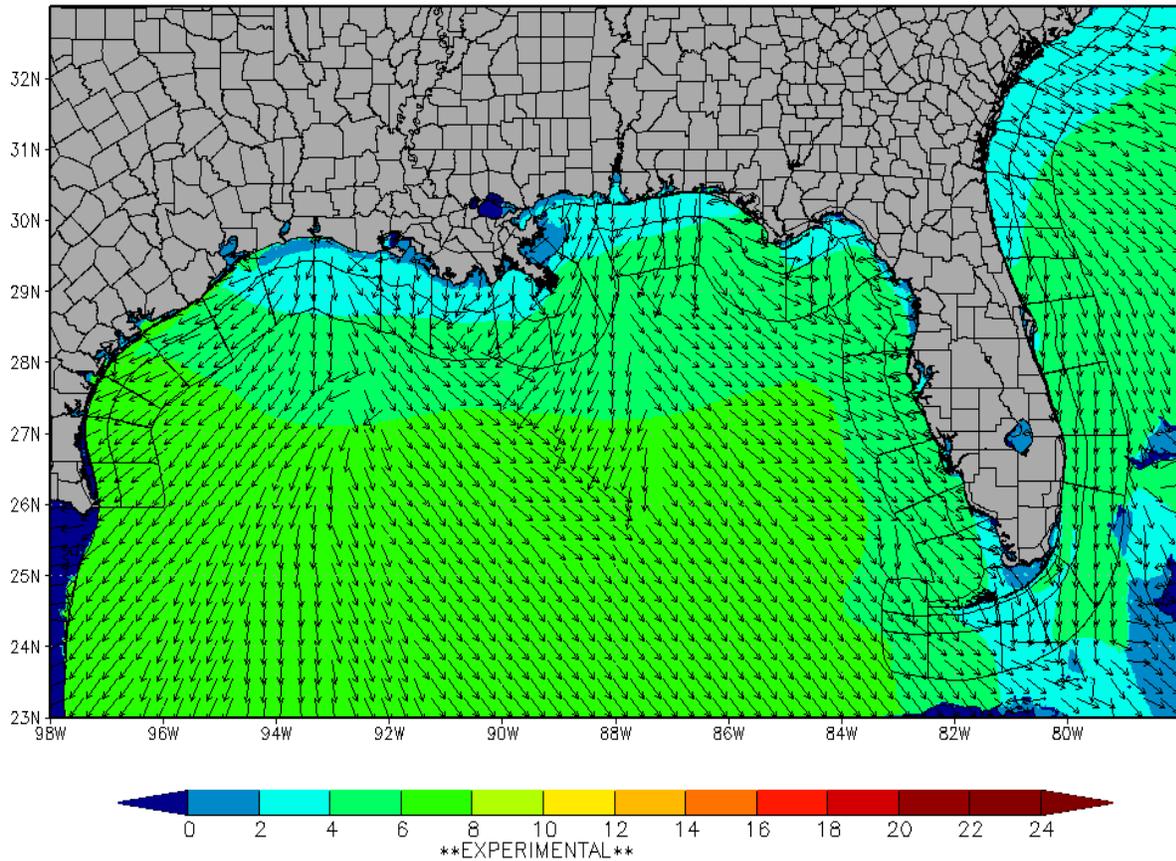
- a. Format & Science Basis - The NWPS model is a high-resolution, locally run model fully integrated with the Interactive Forecast Preparation System (IFPS)/Graphical Forecast Editor (GFE). NWPS will perform in waters as shallow as one meter. The model takes into account deep to shallow water effects on wave propagation and surf zone forecasting and enables WFOs to more accurately predict the nearshore environment (within 5 miles of shore). GFE wind grids are used to drive the wave model and the output is piped back into the GFE as wave grids.

The experimental NWPS output products are displayed graphically.

The GRIB2, netCDF, and HDF5 output of the SRH (GMEX) model run can be downloaded from links on [innovation.srh.noaa.gov/swan/](http://innovation.srh.noaa.gov/swan/). Note: This model data is experimental and may not be available at all times.

In addition to Florida and Gulf coastal waters, NWPS also covers a large part of the Gulf of Mexico offshore waters and a small part of the southwest North Atlantic waters. See below:

NWPS Peak Wave Period (s) and Direction  
Hour 132 (06Z10NOV2014)



- b. Product Availability – The NWPS model is run on-demand, twice per day for the afternoon and early morning forecasts, and more often if conditions evolve differently from forecasts.

The output is available on the web pages of Southern Region Coastal WFOs, Southern Region Headquarters (SRH), and WFO Wakefield, VA in Eastern Region (see Part 1d). The NWPS output is experimental and therefore may not be available at all times.

- c. Additional Information – NWPS is an NCEP-developed wave modeling system which uses the best of regional implementations of the Simulating Waves Nearshore (SWAN) model and a localized version of NOAA’s Wavewatch III. The following offices are already participating as NWPS alpha-testing sites: Eureka, Miami, Charleston, Gray/Maine, and SRH. The NWPS is currently being set for testing at Houston, NHC/TAFB, Morehead City, and Anchorage.