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National Weather Service Product Description Document (PDD)
Experimental Beach Forecast Webpage
August 2020

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Part 1 - Mission Connection

1. Service Description:
The experimental Beach Forecast Webpage provides beach and surf zone information, which includes forecasts of rip currents, waves, weather, water temperature, links to local radar, ultraviolet index, and beach preparedness/safety information within a Weather Forecast Office's (WFO's) forecast area.

2. Purpose/Intended Use:
The experimental Beach Forecast Webpage is designed for beach goers to easily view, on one webpage, beach/surf zone forecasts and hazard information provided by WFOs.

3. Audience:
This page is designed for a wide audience, ranging from the general public (especially recreational beach goers) to NWS core partners and customers.

4. Presentation Format:
A webpage highlighting beach/surf zone forecast and hazard information.

A national map linking all of the experimental Beach Forecast Webpages can be seen by going to: https://www.weather.gov/beach.

Clicking on an area of interest takes a user to https://www.weather.gov/beach/(WFO site ID).

An NWS web-based GIS viewer, currently under development, is planned to host an operational version of the webpages. The webpages will remain in experimental status until the operational version is available.

5. Feedback Method:
Direct questions, comments, or suggestions about the website to:

John Kuhn
NWS Marine, Tropical, and Tsunami Services Branch
Silver Spring, MD 20910
E-mail: john.f.kuhn@noaa.gov

Part 2 – Technical

1. Format and Science Basis:

The Beach Forecast Webpage was built using Javascript, JQuery, and the OpenLayers application programming interface (API), which utilizes the ESRI Maps layer. Rip current risk information (Experimental Rip Current Risk Graphic) is displayed on the map via color-coded polygons. These polygons are provided via a Keyhole Markup Language (KML) file created at the local office from a script triggered when a Surf Zone Forecast is created. This script also provides the rip current risk, ultraviolet (UV) Index (if applicable), and water temperature (if applicable) for the WFO's prominent beach points in the form of a printable beach forecast webpage.

This information is supplied by a JavaScript Object Notation (JSON)-formatted file that is also created by the Perl script running on the Advanced Weather Information Processing System (AWIPS) at the local office. The Webpage also provides a forecast for those points (marked on the map by beach umbrella icons), which are supplied by the forecast.weather.gov server. The local script also creates a timestamp label image that is used by the KML file. This timestamp will display on the map itself or when the KML file is viewed stand-alone in a KML-compatible application. The content on the right side of the page is site-defined via a configuration file. Additional links, such as radar, ultraviolet index (UVI) maps, safety links, etc. may be added to this area.

2. Availability:

A national map with all of the offices participating in the experiment is located at:
https://www.weather.gov/beach.

The WFOs participating in the experiment are as follows:

Boston/Norton, MA	Los Angeles/Oxnard, CA
Brownsville, TX	Marquette, MI
Buffalo, NY	Melbourne, FL
Caribou, ME	Miami, FL
Charleston, SC	Milwaukee/Sullivan, WI
Chicago, IL	Mobile/Pensacola, AL
Cleveland, OH	Newport/Morehead City, NC
Corpus Christi, TX	New York/Upton, NY
Detroit/Pontiac, MI	Northern Indiana, IN
Duluth, MN	Philadelphia/Mount Holly, NJ
Gaylord, MI	San Diego, CA
Grand Rapids, MI	Tallahassee, FL
Gray/Portland, ME	Tampa Bay, FL
Green Bay, WI	Wakefield, VA
Jacksonville, FL	Wilmington, NC

The page will update each time new information is available (e.g. a new forecast product is issued, new UV index is calculated, safety information is updated)

Additional Notes:
The Beach Forecast Webpage is expected to remain experimental until implementation of NWS GIS web-based viewer to host an operational version of the product.