

**National Weather Service  
Product Description Document (PDD)**

**Tampa Bay Marine Channels Forecast**

**Part I - Mission Connection**

*Product Description*

The Tampa Bay Marine Channels Forecast was developed as part of WFO Tampa Bay's Weather Ready Nation Pilot objective. The Tampa Bay Marine Channels Forecast utilizes gridded forecast data routinely produced in GFE for six of the seven weather elements including winds, gusts, waves, weather, rain chance, and hazards. For the seventh element, water level relative to mean sea level, Tampa Bay Marine Channels Forecast populates data from the Extratropical Surge and Tide Operational Forecast System (ESTOFS) model produced by the Ocean Prediction Center (OPC). Forecasts are produced at 13 points along the Tampa Bay channel. These 13 points were considered by a diverse group of mariners to be critical points of weather information along the channel. The Tampa Bay Marine Channels Forecast forecasts are displayed on a static Google map with the Tampa Bay channel and the forecast points overlaid. Users can click on any point to view the forecast.

*Purpose / Intended Use*

The need for consolidated and enhanced marine data for the Tampa Bay channel was identified at Tampa Bay Harbor Safety and Security meetings and at Vessel Movement Committee meetings. The Tampa Bay Marine Channels Forecast was developed to address weather concerns from various mariners of the Tampa Bay channel, including the United States Coast Guard and the Tampa Bay Harbor Pilots. The Tampa Bay Marine Channels Forecast provides decision support services to these mariners by providing high resolution weather forecasts throughout the channel to ensure safe navigation. Benefits from the Tampa Bay Marine Channels Forecast include more precise forecasts to warrant safe navigation conditions and to limit vessel delays caused by low visibility, high winds, or other high impact weather events.

*Audience*

The Tampa Bay Marine Channels Forecast can be used by emergency managers, United States Coast Guard, researchers (NOAA, universities, Florida Fish and Wildlife), Tampa Bay Harbor Pilots, towing or tug boat operators, recreational boaters, and any customer or partner with interest in the respective environmental data for Tampa Bay.

*Presentation Format*

The Tampa Bay Marine Channels Forecast is available on the internet at:

<http://www.srh.noaa.gov/tbw/?n=marinechannelsforecast>

Users may click individual points on the map to receive the forecast in a table format. Forecasts are provided every hour for 18 hours from time of issuance. Figure 1 shows an example of the Tampa Bay Marine Channels Forecast webpage layout.

*Feedback Method / Period*

Comments and suggestions regarding the Tampa Bay Marine Channels Forecast should be directed to:

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Emergency Response Meteorologist  
National Weather Service- Tampa Bay Area  
2525 14<sup>th</sup> Ave SE  
Ruskin, FL 33570  
813-645-2323

[Todd.Barron@noaa.gov](mailto:Todd.Barron@noaa.gov)

The evaluation period will run through December 2016.

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

## **Part II – Technical Description**

### *Format and Science Basis*

A GFE formatter (see figure 2) was created to extract gridded data from the aforementioned weather elements. For water level relative to mean sea level, ESTOFS data is ingested into GFE and the water level element is created by running a procedure to add the model's harmonic tide to the model's surge. The forecast is then automatically uploaded to the Tampa Bay Marine Channels Forecast website. Forecasts are valid 18 hours from the time of issuance and are routinely updated four times daily (0430, 1030, 1630, 2230) or as necessary.

### *Availability*

The direct link to the Tampa Bay Marine Channels Forecast is:

<http://www.srh.noaa.gov/tbw/?n=marinechannelsforecast>

Future links will be added to the WFO's home page and decision support page.

### *Additional Information*

Future additions for the Tampa Bay Marine Channels Forecast include cross-sections of forecasts, a navigation planner (similar to the Activity Planner), and the addition of the National Ocean Service's Tampa Bay Operational Forecast System (TBOFS).

## NAVIGATION SAFETY FORECAST



Click Forecast

### Hazardous Weather Conditions

- [Hazardous Weather Outlook](#)
- [Short Term Forecast](#)

### Local Spot Forecast

- [Macdill AFB \(KMCF\)](#)
- [St. Pete/Clea \(KPIE\)](#)
- [St. Petersburg \(KSPG\)](#)
- [Tampa \(KTPA\)](#)
- [Tampa \(KTPF\)](#)

### Links

- [Simulating WAVes Nearshore \(SWAN\)](#)
- [Port Manatee Visibility Sensor](#)
- [USF Comps](#)
- [Tampa Bay Pilots](#)

Figure 1: NavSaF main webpage layout.

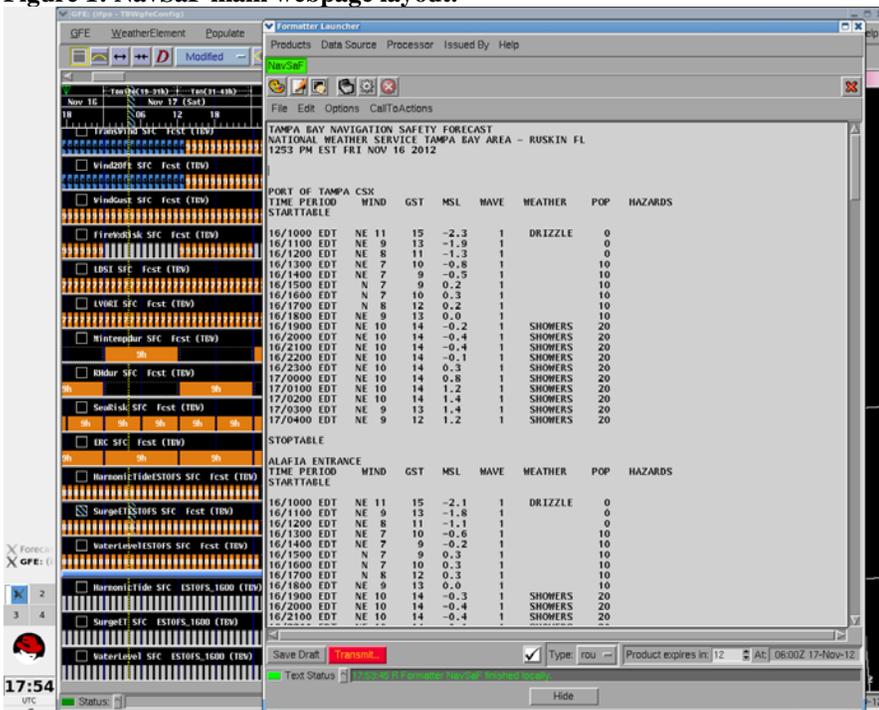


Figure 2: GFE NavSaF formatter example. This forecast is uploaded to the NavSaF webpage.