

User's Guide to the Marine Channels Forecast (MCF):

Tampa Bay and Mobile Bay

● Marine Channels

Forecast Stations

Sources of additional forecast and observation data

● TBOFS

● PORTS®

● NDBC

● NWS

About the Tampa Bay Marine Channels Forecast

TBOFS

Marine Channels Forecast

Operational Forecast System

TIME SERIES

Cut 'C' Channel Buoy 28

South Stack

Old Port Tampa

Alafia Entrance

Cut A and C Channels Buoy 12

Cut 'G' Channel Buoy 6G

Buoy G

Cut E Channel Buoy 4E

Near C-Cut

Port Manatee Current Predictions

Sunshine Skyway Bridge

Egmont Channel

Sea Buoy

OTHERS

MCF Graphics Archive

Tampa Bay MCF Status

NETCDF Archive

PORTS®

Tampa Bay PORTS®

Tampa Bay Marine Channels Forecast (MCF)

Point Forecast & Observations

Currents/Water Level
Cross-Sections

Waves/Precipitation
Cross-Sections

Visibility/Winds
Cross-Sections

Along-Channel
Cross-Sections

The Tampa Bay Marine Channel Forecast is designed to aid local pilots by providing them with meteorological and oceanographic forecasts at 13 stations located along the marine channels. Click on any station pins to view their data product.

The forecasts are provided by NOAA National Weather Service (NWS) Tampa Bay Area Weather Forecast Office and by the National Ocean Service (NOS) Center for Operational Oceanographic Products and Services (CO-OPS) Tampa Bay Operational Forecast System (TBOFS). The water level observation data is from the NOS/CO-OPS Tampa Bay PORTS®.

More information about NOAA/NWS forecast parameters, weather types and hazards, please visit [this page](#).

Disclaimer:

The Tampa Bay Operational Forecast System (TBOFS) and Tampa Bay Marine Channels Forecast (TBMCF) have been implemented by NOAA's National Ocean Service (NOS) and National Weather Service (NWS) to provide the maritime user community with short-term forecasts of water levels, winds, currents, significant wave height and period, probability of precipitation, probability of visibility less than 1 statute mile, weather and hazards of the Tampa Bay. TBOFS uses a numerical hydrodynamic model to generate the nowcast and forecast information; therefore, TBOFS and TBMCF should be considered as model-generated forecast guidance. For more detailed information related to the OFS disclaimer, please visit at the [Disclaimers web page](#).

During extreme weather conditions, water level forecast guidance data are released for public utility and should be used with appropriate caution.



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Tampa Bay and Mobile Bay

Marine Channels Forecast Stations
Sources of additional forecast and observation data

- NGOFS2
- PORTS®
- NDBC
- NWS

About the Mobile Bay Marine Channels Forecast

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NGOFS2 - Mobile Bay

Marine Channels Forecast

Operational Forecast System

TIME SERIES

- Cochrane Bridge
- Mobile State Dock Pier E
- Mobile State Docks
- APM Terminals
- USCG Channel
- Blakeley Pass Entrance
- Dog River Channel Entrance
- Theodore Channel Entrance
- Fowl River Channel Entrance
- N Gaillard
- Theodore Channel Cut
- Middle Bay Light
- Pass Aux Herons
- Dauphin Island Bridge
- MS Sound Bend
- Mobile Bay Point
- Sand Island Lighthouse
- Mobile Bay Entrance

Mobile Bay MCF Status

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Mobile Bay Marine Channels Forecast (MBMCF)

Point Forecast & Observations
Currents/Water Level Cross-Sections
Waves/Precipitation Cross-Sections
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Along-Channel Cross-Sections

The Mobile Bay Marine Channel Forecast is designed to aid local pilots by providing them with meteorological and oceanographic forecasts at 19 stations located along the marine channels. Click on any station pins to view their data product.

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The forecasts are provided by NOAA National Weather Service (NWS) Mobile Bay Area Weather Forecast Office and by the National Ocean Service (NOS) Center for Operational Oceanographic Products and Services (CO-OPS) Northern Gulf of Mexico Operational Forecast System (NGOFS)'s Mobile Bay subdomain. The water level observation data is from the NOS/CO-OPS Mobile Bay PORTS®.

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Stations

Each Marine Channels Forecast (MCF) is made up of a number of stations. The stations are located at strategic points along the marine channels of the bay and extend from the mouth, or entrance, of the bay, through the navigable channels in the bay, to the port(s).

On the home page, the stations can be accessed by:

- (1) clicking on the station name on the left-hand menu (listed in order of descending latitude),
- (2) clicking on the red MCF pin on the map,
- (3) or by clicking on the red MCF pin's label on the map.

Tampa Bay Marine Channels Forecast (MCF)

Point Forecast & Observations Currents/Water Level Cross-Sections Waves/Precipitation Cross-Sections Visibility/Winds Cross-Sections Along-Channel Cross-Sections

The Tampa Bay Marine Channel Forecast is designed to aid local pilots by providing them with meteorological and oceanographic forecasts at 13 stations located along the marine channels. Click on any station pins to view their data product.

TIME SERIES

- Cut 'C' Channel Buoy 28
- South Stack
- Old Port Tampa
- Alafia Entrance
- Cut A and C Channels Buoy 12
- Cut 'G' Channel Buoy 6G
- Buoy G
- Cut E Channel Buoy 4E
- Near C-Cut
- Port Manatee Current Predictions
- Sunshine Skyway Bridge
- Egmont Channel
- Sea Buoy

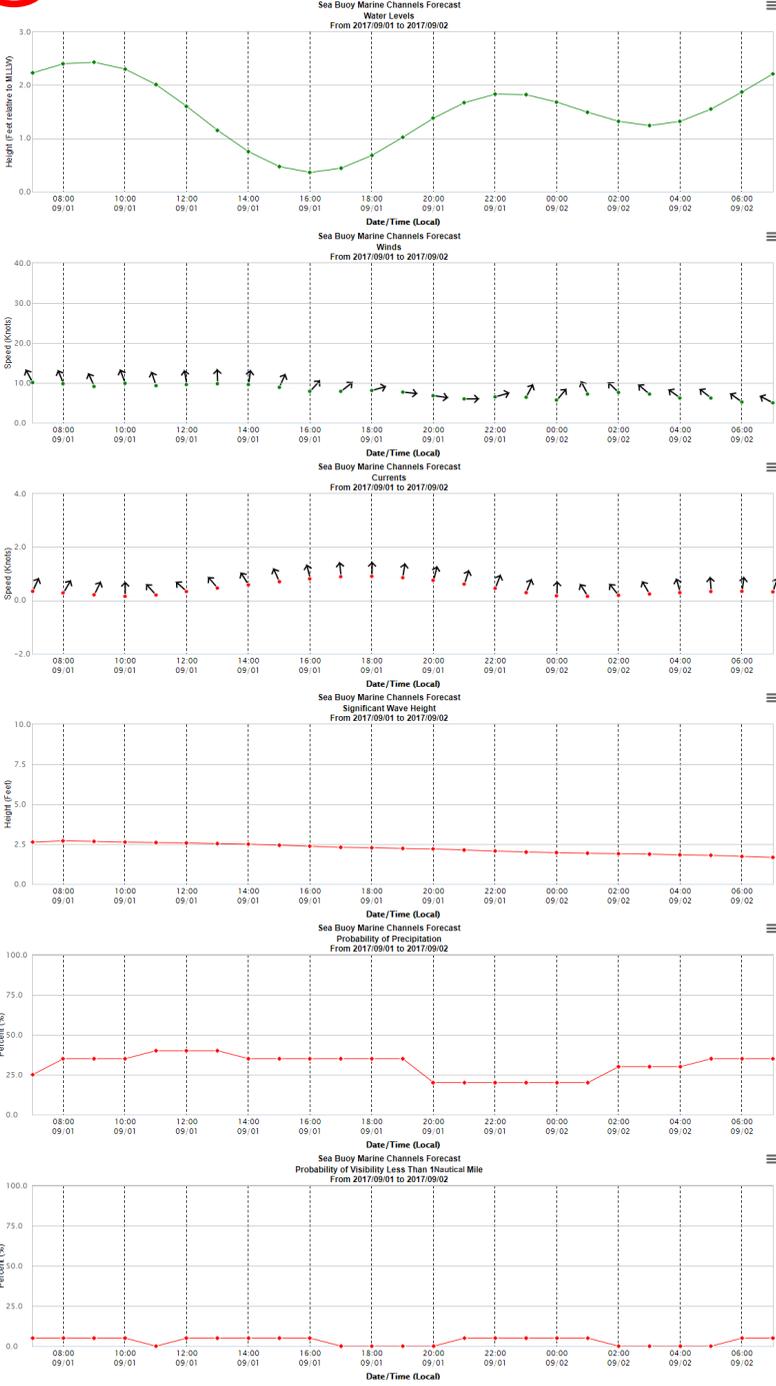
OTHERS

- MCF Graphics Archive
- Tampa Bay MCF Status
- NETCDF Archive

PORTS®

- Tampa Bay PORTS®

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Station Pages

Clicking on a station name, pin or label will open a station page. Each station page has two tabs: a Plots Tab (shown left) and a Data Tab (shown below).

The Plots Tab contains time series graphics of water levels, winds, currents, significant wave height, probability of precipitation and probability of visibility of less than one nautical mile. Each time series extends out to 24 hours in the future. When the user places the mouse over the plot, a small pop-up will appear with the forecast value and all available additional information.

The Data Tab contains a table, or chart, listing the same forecast data shown in the time series (water levels, winds, currents, significant wave height, probability of precipitation and probability of visibility of less than one nautical mile) as well as the weather forecast (showers, or fog, for example) and marine hazards (hurricane watch, or tropical storm warning, for example). The table lists the forecasts out to 24 hours in the future.

Sea Buoy

Tampa Bay Marine Channels Forecast
 NOAA/NOS & NOAA/NWS
 730 AM EDT FRI SEP 1 2017

Sea Buoy Time Period	Wind Speed & Direction (knot, °T)	Gust (knot)	Water Level (ft)	Significant Wave Height (ft)	Current Speed & Direction (knot, °T)	Probability of Precipitation (%)	Probability of Visibility Less Than 1 Nautical Mile (%)	Weather	Hazards
2017/09/01 0700 EDT	SSE 10	15	2.23	2.6	0.34 25	25	5	TSTMS	SHOWERS
2017/09/01 0800 EDT	SSE 10	14	2.40	2.7	0.28 31	35	5	SHOWERS	TSTMS
2017/09/01 0900 EDT	SSE 9	13	2.43	2.7	0.21 26	35	5	SHOWERS	TSTMS
2017/09/01 1000 EDT	SSE 10	14	2.30	2.6	0.15 0	35	5	SHOWERS	TSTMS
2017/09/01 1100 EDT	SSE 9	14	2.01	2.6	0.20 319	40	0	TSTMS	SHOWERS
2017/09/01 1200 EDT	S 10	14	1.60	2.6	0.33 312	40	5	TSTMS	SHOWERS
2017/09/01 1300 EDT	S 10	14	1.15	2.5	0.46 320	40	5	TSTMS	SHOWERS
2017/09/01 1400 EDT	S 10	14	0.75	2.5	0.58 329	35	5	TSTMS	SHOWERS
2017/09/01 1500 EDT	SSW 9	13	0.47	2.4	0.70 337	35	5	TSTMS	SHOWERS
2017/09/01 1600 EDT	SW 8	12	0.36	2.4	0.81 346	35	5	TSTMS	SHOWERS
2017/09/01 1700 EDT	SW 8	12	0.44	2.3	0.89 354	35	0	TSTMS	SHOWERS
2017/09/01 1800 EDT	WSW 8	12	0.68	2.3	0.90 2	35	0	TSTMS	SHOWERS
2017/09/01 1900 EDT	W 8	11	1.02	2.2	0.85 9	35	0	TSTMS	SHOWERS
2017/09/01 2000 EDT	W 7	10	1.38	2.2	0.75 15	20	0	TSTMS	SHOWERS
2017/09/01 2100 EDT	W 6	9	1.67	2.1	0.61 19	20	5	TSTMS	SHOWERS
2017/09/01 2200 EDT	WSW 6	10	1.83	2.1	0.45 21	20	5	TSTMS	SHOWERS
2017/09/01 2300 EDT	SSW 6	10	1.82	2.0	0.29 22	20	5	TSTMS	SHOWERS
2017/09/02 0000 EDT	SW 6	9	1.68	2.0	0.17 1	20	5	TSTMS	SHOWERS
2017/09/02 0100 EDT	SSE 7	11	1.49	1.9	0.15 328	20	5	TSTMS	SHOWERS
2017/09/02 0200 EDT	SE 8	11	1.32	1.9	0.19 321	30	0	SHOWERS	TSTMS
2017/09/02 0300 EDT	SE 7	11	1.24	1.9	0.24 330	30	0	SHOWERS	TSTMS
2017/09/02 0400 EDT	SE 6	9	1.32	1.8	0.29 345	30	0	SHOWERS	TSTMS
2017/09/02 0500 EDT	SE 6	9	1.55	1.8	0.33 356	35	0	SHOWERS	TSTMS
2017/09/02 0600 EDT	SE 5	8	1.87	1.7	0.34 9	35	5	SHOWERS	TSTMS
2017/09/02 0700 EDT	ESE 5	8	2.21	1.7	0.32 20	35	5	SHOWERS	TSTMS



Currents/Water Levels Cross-Section

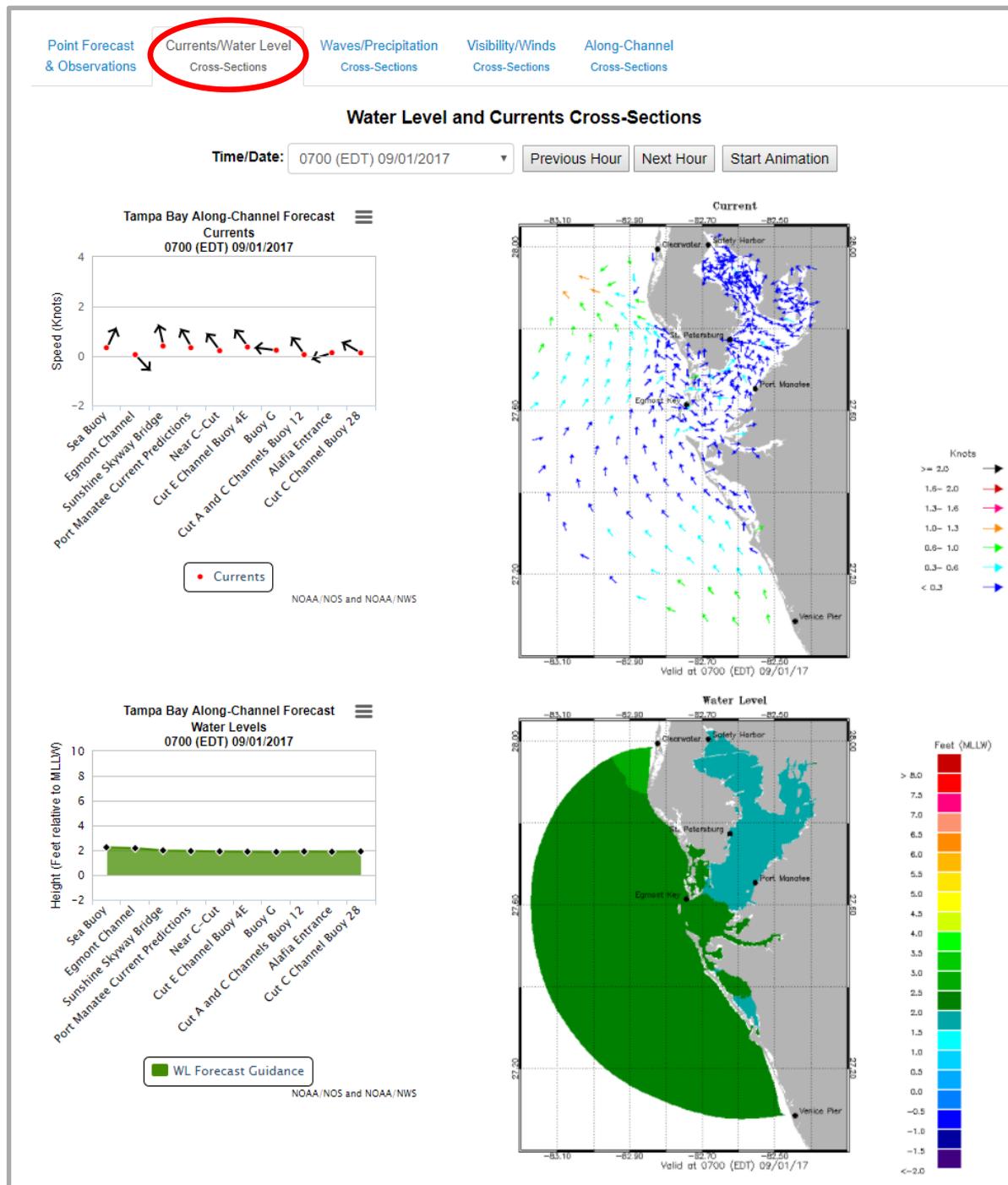
The Currents/Water Levels Cross-Section Tab contains four graphics.

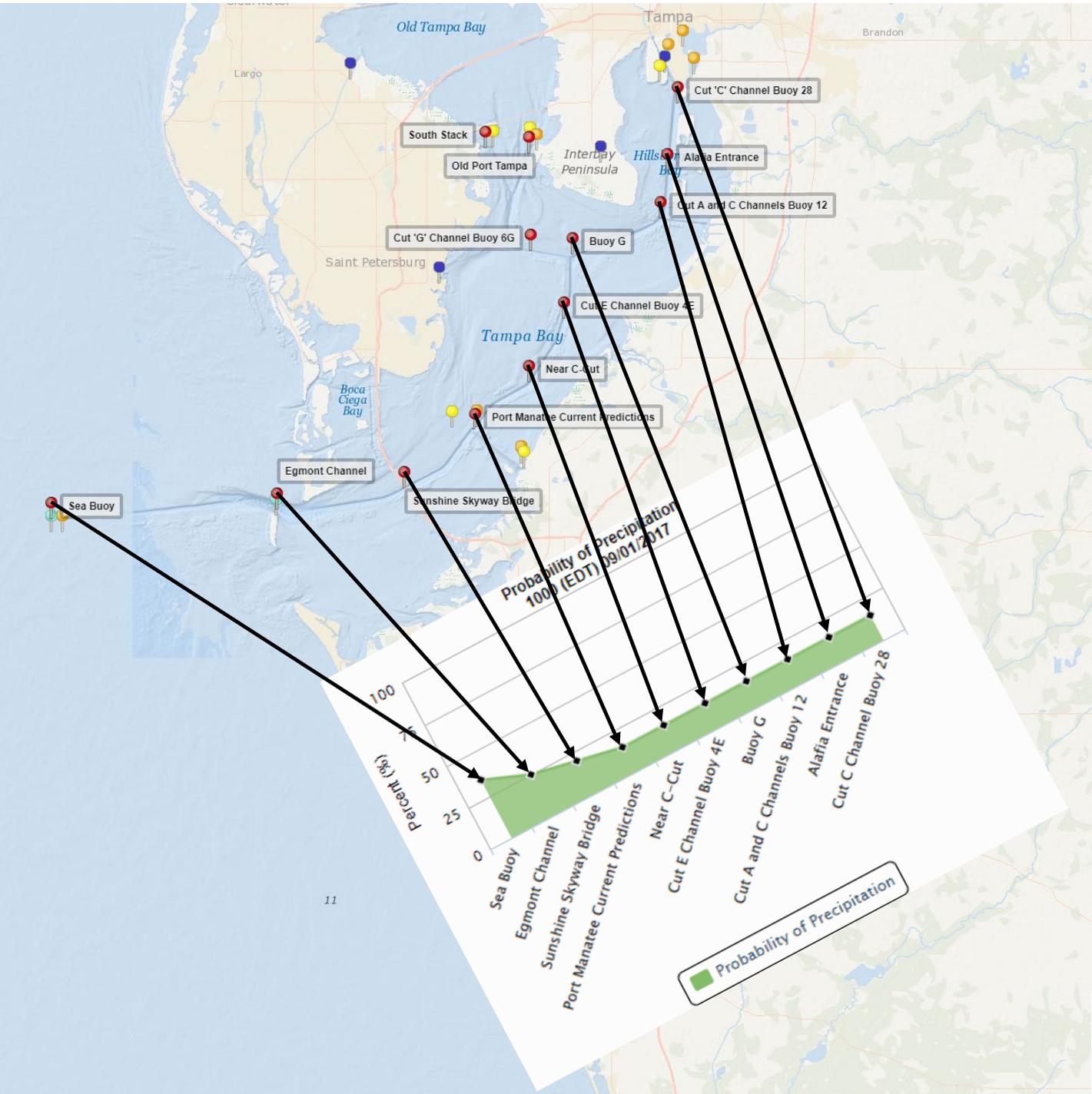
On the left-hand side, there are two along-channel cross-sections. These are cross-sections which depict the currents and the water level forecast along the marine channels from the entrance of the bay to the port. See the next page for a detailed explanation and example of an along-channel cross-section. When the user places the mouse over the plot, a small pop-up will appear with the forecast value and all available additional information.

On the right-hand side, there are two map-view graphics depicting the currents and water levels forecasts throughout the bay.

The top two graphics are for currents and the bottom two graphics are for water levels.

The user has the option of advancing or reversing through 24-hours of graphics by clicking on the Previous Hour or Next Hour button located above the four graphics. By clicking on Start Animation, the user can view the next 24 hours of graphics as they advance automatically.





Along-Channel Cross-Sections

The MCF is designed to aid local pilots by providing them with meteorological and oceanographic forecasts at strategic locations along the marine channels.

For the Tampa Bay MCF, specifically, 10 of the 13 stations are included in the along-channel cross-sections which indicate the forecast conditions along the marine channels from the entrance of the bay (Sea Buoy) to the Port of Tampa (Cut "C" Channel Buoy 28).

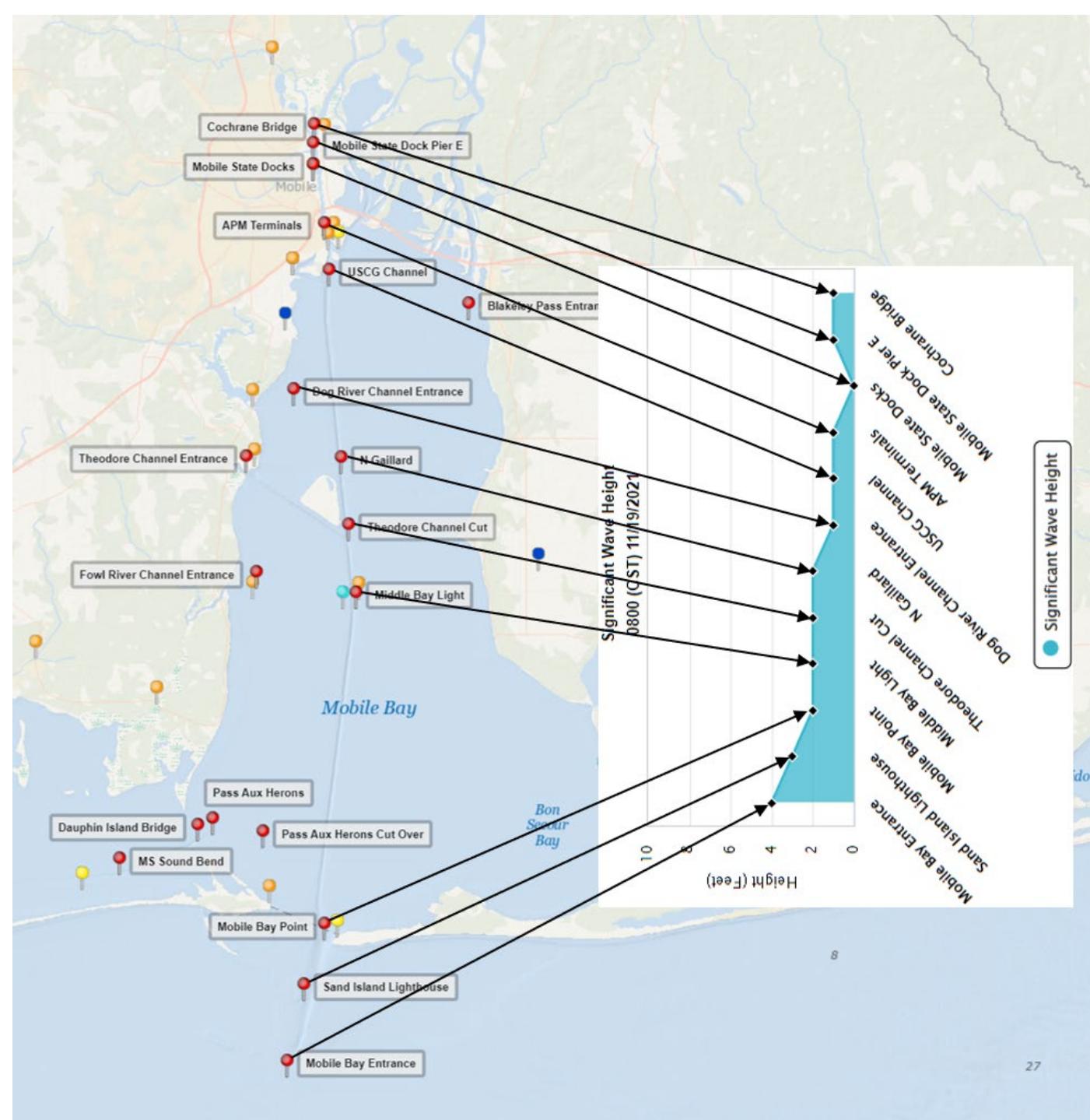
The graphic shown on the left indicates how the along-channel cross-sections display the forecast conditions along the marine channels.

The various along-channel cross-sections along with corresponding map-view graphics are accessed by clicking on the second, third and fourth tabs located above the map. The fifth tab contains all the along-channel cross-sections, allowing the pilots to view the changing conditions for all forecast parameters along the marine channels.



Along-Channel Cross-Sections

For the Mobile Bay MCF, specifically, 12 of the 19 stations are included in the along-channel cross-sections which indicate the forecast conditions along the marine channels from the entrance of the bay (Mobile Bay Entrance) to the Port of Mobile (Cochrane Bridge).



Waves/Precipitation Cross-Section

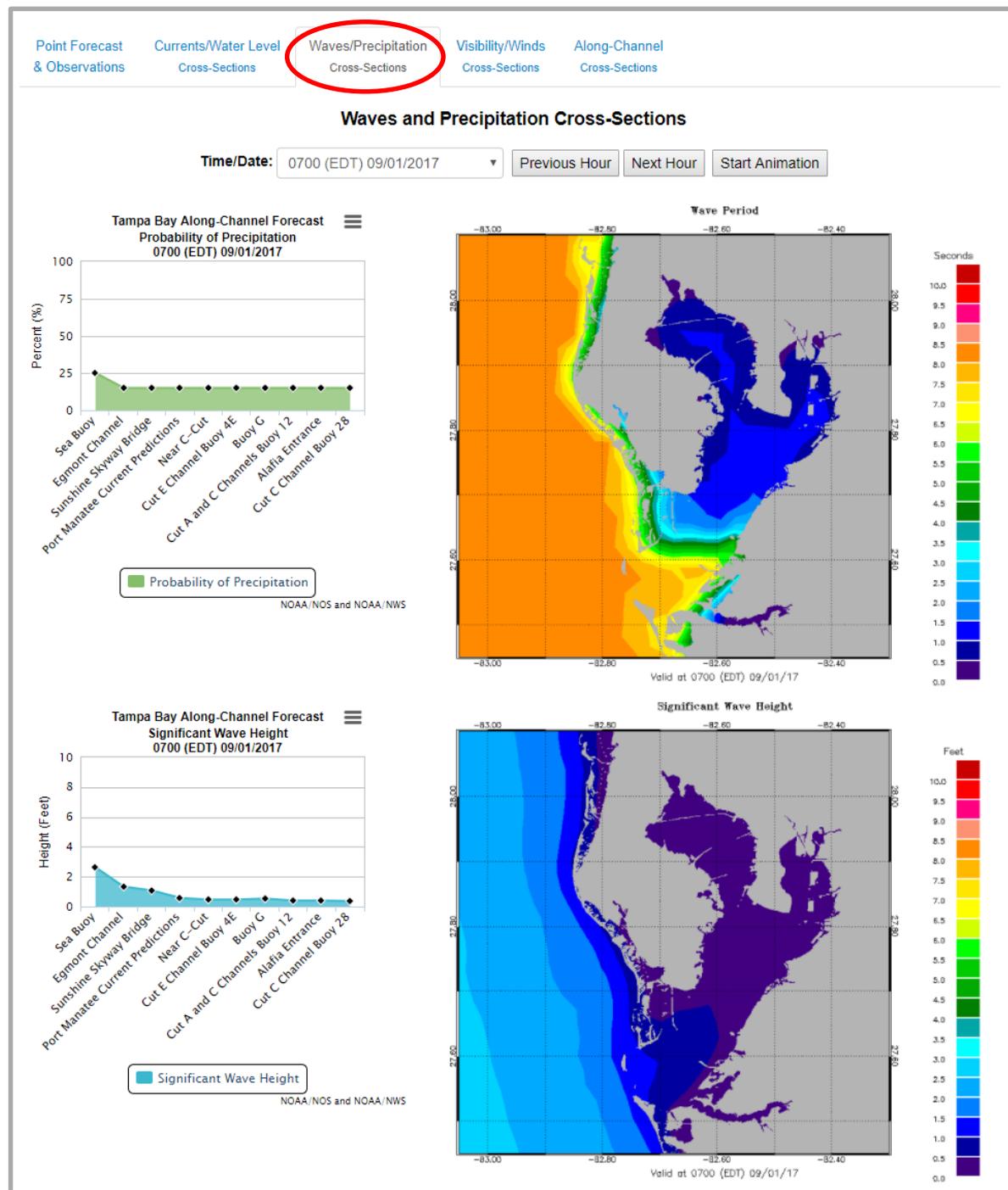
The Waves/Precipitation Cross-Section Tab contains four graphics.

On the left-hand side, there are two along-channel cross sections. The cross-sections indicate the probability of precipitation and the significant wave height forecast along the marine channels. When the user places the mouse over the plot, a small pop-up will appear with the forecast value and all available additional information.

On the right-hand side, there are two map-view graphics depicting wave period and significant wave height forecasts throughout the bay.

The top-left graphic is for the probability of precipitation, the top-right graphic is for wave period and the bottom two graphics are for significant wave height.

The user has the option of advancing or reversing through 24-hours of graphics by clicking on the Previous Hour or Next Hour button located above the four graphics. By clicking on Start Animation, the user can view the next 24 hours of graphics as they advance automatically.



Visibility/Winds Cross-Section

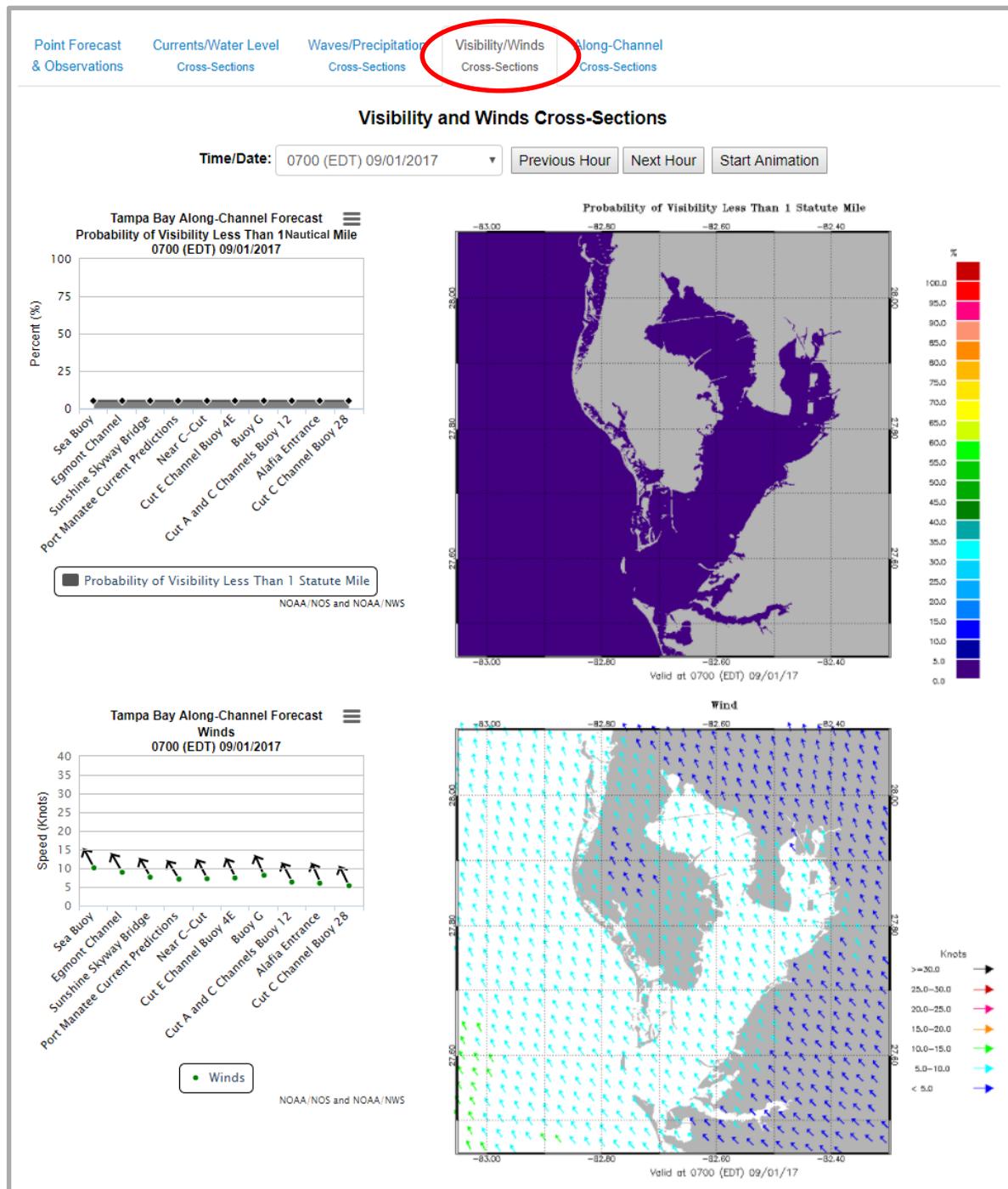
The Visibility/Winds Cross-Section Tab contains four graphics.

On the left-hand side, there are two along-channel cross sections. The cross-sections indicate the probability of visibility less than one nautical mile and the winds forecast along the marine channels. When the user places the mouse over the plot, a small pop-up will appear with the forecast value and all available additional information.

On the right-hand side, there are two map-view graphics depicting the probability of visibility less than one nautical mile and the winds forecasts throughout the bay.

The top two graphics are for probability of visibility less than one nautical mile and the bottom two graphics are for winds.

The user has the option of advancing or reversing through 24-hours of graphics by clicking on the Previous Hour or Next Hour button located above the four graphics. By clicking on Start Animation, the user can view the next 24 hours of graphics as they advance automatically.



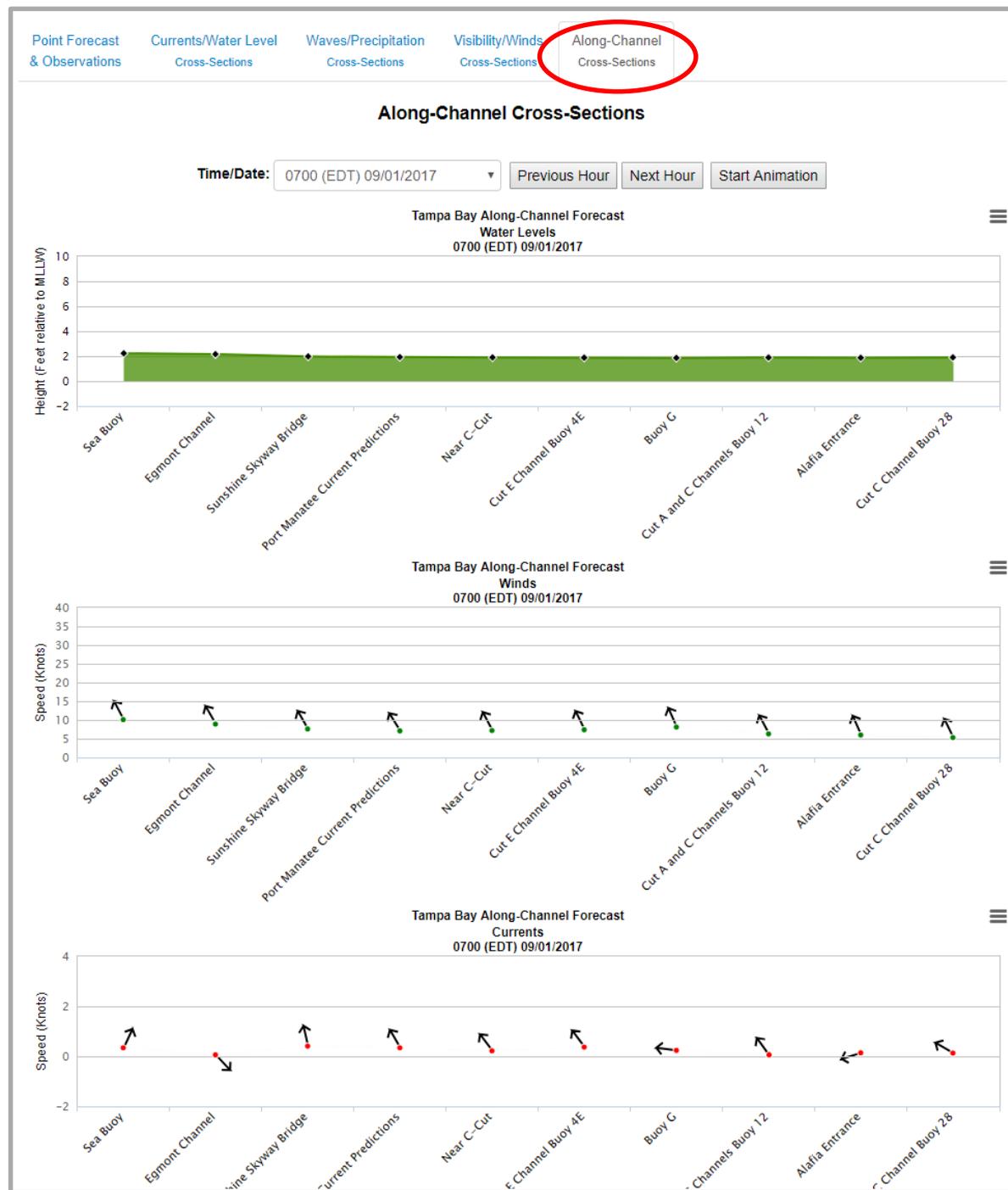
Along-Channel Cross-Sections

The Along-Channel Cross-Sections Tab contains six graphics.

The graphics are all the along-channel cross sections found in the previous three tabs. When the user places the mouse over the plot, a small pop-up will appear with the forecast value and any available additional information.

The along-channel cross-sections are water levels, winds, currents, significant wave height, probability of precipitation and probability of visibility of less than one nautical mile. The first three are shown left.

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User's Guide to the MCF
 The User's Guide can be accessed by clicking on "About the Tampa Bay Marine Channels Forecast."

About NOAA/NWS Forecast Parameters, Weather Types and Hazards
 More information can be found on the About NOAA/NWS Forecast Parameters, Weather Types and Hazards page accessible by clicking "visit this page."

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TBOFS

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About NOAA/NWS Forecast Parameters, Weather Types and Hazards

The additional information on forecast parameters, weather types and hazards is divided into three tables.

The first table lists the units, definitions and sources of the NWS forecast parameters displayed throughout the MCF site.

The second table contains the definitions of various weather types that the NWS forecasts. On the MCF site, these are listed on second-to-last column of the Data Tab of the Station Pages.

The third table contains the definitions of the various hazards that the NWS forecasts. These include coastal flood warnings, frost advisories, and severe thunderstorm watches. On the MCF site, these are listed on the last column of the Data Tab of the Station Pages.

About NOAA/NWS Forecast Parameters, Weather Types and Hazards

This site includes various forecasts developed and disseminated by the NOAA/National Weather Service (NWS). Below are the definitions of those parameters, weather types and hazards included in this site. Also listed are the models used to generate said forecasts.

NWS Forecasts

Parameter Name	Units	Description	Source Information
Gust	knot	A rapid fluctuation of wind speed with variations of 10 knots or more between peaks and lulls.	Source: NOAA/NWS National Digital Forecast Database (http://www.nws.noaa.gov/ndfd/).
Hazards		A narrative statement produced by the National Weather Service, frequently issued on a routine basis, to provide information regarding the potential of significant weather expected during the next 1 to 5 days.	Source: NOAA/NWS National Digital Forecast Database (http://www.nws.noaa.gov/ndfd/).
Probability of Visibility Less Than 1 Nautical Mile	%	Experimental probabilistic fog visibility forecast.	Source: NWS/WFO Tampa Bay

Weather Types

Blowing Dust or Sand	Strong winds over dry ground, that has little or no vegetation, can lift particles of dust or sand into the air. These airborne particles can reduce visibility, cause respiratory problems, and have an abrasive affect on machinery. A concentration reducing the visibility to 1/4 mile or less often poses hazards for travelers.
Drizzle	Precipitation consisting of numerous minute droplets of water less than 0.5 mm (500 micrometers) in diameter.
Fog	Water droplets suspended in the air at the Earth's surface. Fog is often hazardous when the visibility is reduced to ¼ mile or less.
Freeze	A freeze is when the surface air temperature is expected to be 32°F or below over a widespread area for a climatologically significant period of time. Use of the term is usually restricted to advective situations or to occasions when wind or other conditions prevent frost. "Killing" may be used during the growing season when the temperature is expected to be low enough for a sufficient duration to kill all but the hardiest herbaceous crops.
Freezing Drizzle	A drizzle that falls as a liquid but freezes into glaze or rime upon contact with the cold ground or surface structures.
Freezing Fog	A fog the droplets of which freeze upon contact with exposed objects and form a coating of rime and/or glaze.

Hazards

Advisory	Highlights special weather conditions that are less serious than a warning. They are for events that may cause significant inconvenience, and if caution is not exercised, it could lead to situations that may threaten life and/or property.
Warning	A warning is issued when a hazardous weather or hydrologic event is occurring, is imminent, or has a very high probability of occurring. A warning is used for conditions posing a threat to life or property.
Watch	A watch is used when the risk of a hazardous weather or hydrologic event has increased significantly, but its occurrence, location, and/or timing is still uncertain. It is intended to provide enough lead time so that those who need to set their plans in motion can do so.
Beach Hazards Statement	A beach hazards statement is issued when threats such as rip currents, longshore currents, and other hazards create life-threatening conditions in the surf zone. Caution should be used when in or near the water.
Coastal Flood Advisory	Minor flooding is possible (i.e., over and above normal high tide levels). Coastal Flood Advisories are issued using the Coastal Hazard Message (CFW) product.