NOAA Technical Report NOS CS 32

THE EXTRATROPICAL SURGE AND TIDE OPERATIONAL FORECAST SYSTEM (ESTOFS) ATLANTIC IMPLEMENTATION AND SKILL ASSESSMENT

Silver Spring, Maryland
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noaa National Oceanic and Atmospheric Administration

U.S. DEPARTMENT OF COMMERCE
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Coast Survey Development Laboratory

Office of Coast Survey
National Ocean Service
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LIST OF ACRONYMS AND ABBREVIATIONS

ADCIRC	ADvanced CIRCulation model
CCS	Central Computing System
CO-OPS	Center for Operational Oceanographic Products and Services
CF	Central Frequency
CSDL	Costal Survey Development Laboratory
EC2001	East Coast 2001 modeled tidal database
EC2001_NOS	East Coast 2001 modeled tidal database updated by NOS
ETSS	Extratropical Storm Surge
ESTOFS	Extratropical Surge and Tide Operational Forecast System
GFS	Global Forecast System
EMC	Environmental Modeling Center
MSL	Mean Sea Level
NCEP	National Centers for Environmental Prediction
NHC	National Hurricane Center
NCO	NCEP Central Operations
NOF	Negative Outlier Frequency
NOS	National Ocean Service
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
NAVD 88	North American Vertical Datum of 1988
OPC	Ocean Prediction Center
POF	Positive Outlier Frequency
PRMSL	Pressure reduced to MSL [Pa]
RMSE	Root Mean Square Error
SLOSH	Sea Lake and Overland Surge from Hurricanes
TAFB	Tropical Analysis and Forecast Branch
UGRD	U-component of Wind [m/s]: 10 m above ground
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
UTC	Coordinated Universal Time
VGRD	V-component of wind [m/s]: 10 m above ground
WW3	WAVEWATCH III®

EXECUTIVE SUMMARY

The Coast Survey Development Laboratory (CSDL) of the National Ocean Service (NOS) and the Environmental Modeling Center (EMC) of the National Centers for Environmental Prediction (NCEP) have collaborated to establish an Extratropical Surge and Tide Operational Forecast System (ESTOFS) for the Western North Atlantic basin. The hydrodynamic model employed for ESTOFS is the ADvanced CIRCulation (ADCIRC) finite element model (Luettich et al. 1992; Luettich and Westerink 2004). The ADCIRC hydrodynamic model has several beneficial features for this system and has been demonstrated to be effective at predicting tidal circulation and storm surge propagation in complex coastal systems. Its unstructured grid methodology allow for the propagation of storm surges from offshore, across the shelf, and inland. This grid can also readily and accurately represent irregular shorelines including barrier islands, rivers and waterways.

The ESTOFS was implemented operationally by NCEP Central Operations (NCO) to provide forecasts of surge with tides, astronomical tides, and sub-tidal water levels (the isolated surge) throughout the domain. The ESTOFS provides the National Weather Service (NWS) with a second extratropical surge system in addition to the Extratropical Storm Surge (ETSS) that currently is based on the Sea Lake and Overland Surge from Hurricanes (SLOSH) model (Jelesnianski et al. 1992). The ESTOFS differs from ETSS by combining the surge with tides and utilizes unstructured grids which can provide better resolution at the coast. This capability serves the needs of NCEP's Ocean Prediction Center (OPC) and the National Hurricane Center's Tropical Analysis and Forecast Branch (NHC/TAFB), which are responsible for providing offshore marine forecasts. It also meets the needs of Weather Forecast Offices for putting out coastal inundation forecasts. The ESTOFS is also designed to provide the surge with tides to WAVEWATCHIII® (WW3) for coupling waves with coastal water levels. Therefore, ESTOFS set-up is patterned after WW3: it uses the same Global Forecast System (GFS) forcing and has the same forecast cycle and length, and runs concurrently at NCO.

As part of the establishment of ESTOFS, CSDL has evaluated application of the ADCIRC hydrodynamic model on the Western North Atlantic which is implemented to perform operational 180-hour forecasts. The model results are compared with observations at 69 stations using NOS's standard skill assessment software. The skill assessment focuses on the performance of the model in simulating water levels in three model run scenarios: 1) astronomical tide, 2) model hindcast, and 3) semi-operational forecast. The skill statistic criteria for water levels either pass or are close to the NOS criteria for the astronomical tide scenario. For the hindcast simulation scenario, which is a one year simulation, the skill scores for combined water levels are satisfied with the NOS criteria except for some stations which are located in complex geometries where the model grid doesn't have enough resolution. The semi-operational forecast scenario, which is a 2 week simulation, does not meet the NOS criteria. This might be attributed to a couple of different reasons. The first could be a river discharge inflow, and the second could be seasonal variation in water levels due to baroclinic effects. The ESTOFS does not incorporate them. Even though the ESTOFS includes these uncertainties, the model's water level forecasts are of good accuracy.

Keywords: extratropical, storm surge, coasts, astronomical tide, water level, forecast, skill assessment

1. INTRODUCTION

Impacts of extratropical storm surge can be far-reaching and catastrophic along the east coast of United States. The National Weather Service (NWS) Extratropical Storm Surge (ETSS) system is being successfully used by Weather Forecast Offices for extratropical storm surge forecasts (http://www.weather.gov/mdl/etsurge/). However, the lack of astronomical tide can cause challenges in producing accurate water level forecasts during storms. Thus an enhanced model would be valuable for local weather offices to more effectively prepare and respond to extratropical storm surge. Additionally, a model that produces water level fields that includes surge and tides is needed to couple to coastal wave models. Finally, an extratropical storm surge model that simulates surge and tides could be advantageous for providing boundary conditions to coastal hydrodynamic models.

In order to meet these needs the Coast Survey Development Laboratory (CSDL) of the National Ocean Service (NOS) and the Environmental Modeling Center (EMC) of the National Centers for Environmental Prediction (NCEP) have collaborated to establish an Extratropical Surge and Tide Operational Forecast System (ESTOFS) for the Western North Atlantic basin. The hydrodynamic model employed for the ESTOFS is the ADvanced CIRCulation (ADCIRC) finite element model (Luettich et al. 1992; Luettich and Westerink 2004). The ADCIRC hydrodynamic model has several beneficial features for this system and has been demonstrated to be effective at predicting tidal circulation and storm surge propagation in complex coastal systems. Its unstructured grid methodology allow for the propagation of storm surges from offshore, across the shelf, and inland. This grid can also readily and accurately represent irregular shorelines including barrier islands, rivers and waterways.

The ESTOFS was implemented operationally by NCEP Central Operations (NCO) to provide forecasts of surge with tides, astronomical tides, and sub-tidal water levels (the isolated surge) throughout the domain. The ESTOFS provides NWS with a second extratropical surge system in addition to the ETSS that currently is based on the Sea Lake and Overland Surge from Hurricanes (SLOSH) model (Jelesnianski et al. 1992). The ESTOFS provides surge with tides and utilizes unstructured grids which can provide better resolution at the coast. This capability serves the needs of NCEP's Ocean Prediction Center (OPC) and the National Hurricane Center's Tropical Analysis and Forecast Branch (NHC/TAFB), who are responsible for providing offshore marine forecasts. It also meets the needs of Weather Forecast Offices for putting out coastal inundation forecasts. The ESTOFS is also designed to provide surge with tides to the WAVEWATCHIII® (WW3) wave model for coupling these systems. Therefore, its set-up is designed to mimic WW3: it uses the same Global Forecast System (GFS) forcing and has the same forecast cycle and length, and runs concurrently on NCEP's Central Computing System.

The final step in the transition to operational implementation is to assess the performance of the model. This was done for ESTOFS by using standard NOS skill assessment criteria (Hess et al. 2003). NOS developed a software tool in order to perform model skill assessment according to these criteria (Zhang et al 2006), and the ESTOFS results are analyzed using this tool. Skill assessment score tables are compiled for each location where observations are available, and these tables are used to demonstrate the model is prepared for transition to an operational environment.

This report is broken into 6 sections, the first of which is this introduction. Section 2 of this report focuses on an overview of ESTOFS including a brief description of ADCIRC, the model grid for this application, the input files, and system interruption and recovery procedures. Section 3 describes the model run scenarios for an astronomical tide simulation, a hindcast simulation, and a semi-operational forecast simulation. A summary of the NOS skill assessment criteria and the NOS/Center for Operational Oceanographic Products and Services (CO-OPS) observation stations along the Atlantic and Gulf of Mexico coasts of United States are summarized in Section 4. Lastly, the performance of the model is examined using the skill assessment criteria in Section 5. Section 6 presents a summary of the ESTOFS skill assessment.

2. MODEL SYSTEM OVERVIEW

2.1. ADCIRC Hydrodynamic Model

The ADCIRC model was developed to perform high resolution simulations of coastal hydrodynamics (Luettich et al. 1992; Luettich and Westerink 2004). This model is a system of computational algorithms that solve time-dependent, free surface circulation and transport problems in two and three dimensions. The ADCIRC Two-Dimensional Depth Integrated (2DDI) version, used in the ESTOFS, is the barotropic version of the model. ADCIRC utilizes the finite element method in space, taking advantage of highly flexible, irregularly spaced grids. Numerous studies have shown this model to be accurate for computing the variation in water levels throughout the Western North Atlantic and Gulf of Mexico regions (Luettich et al. 1994; Mukai et al. 2001; Westerink et al. 2008)

ADCIRC solves the fully nonlinear governing shallow water equations through use of the generalized wave continuity equation formulation (Kolar et al. 1992). This formulation benefits from minimal existence of spurious oscillations without relying on excessive non-physical dissipation by propagating the shortest resolved ("so-called $2\Delta x$") waves. For efficient computation, the two dimensional depth-integrated form of the model is applied since surge and tide propagation consists of barotropic waves captured therein. ADCIRC uses a second order Galerkin finite element method to solve the governing equations to take advantage of an unstructured grid technique. While the semi-implicit time stepping scheme requires relatively small time steps that satisfy the Courant condition, extensive use of the model on multiple platforms has led to efficient coding and solution techniques. Furthermore, the model has been parallelized using the Message Passing Interface, demonstrating linear speed-up proportional to the number of processors.

2.2. Model Grid

The unstructured grid used in the ESTOFS for the Western North Atlantic domain is the East Coast 2001 tidal database (EC2001) grid version 2e (Mukai et al. 2001). The EC2001 uses a grid consisting of 254,565 nodes (Figure 1). Coastal resolution generally averages about 3 km. The open-ocean boundary is located at the 60^{o} W meridian, where harmonic tidal constituents from a global tidal model are used to specify tidal water surface fluctuations. The performance of EC2001 for astronomical tides was verified using tidal elevation data from over 100 observation stations throughout the domain (Mukai et al. 2001). The EC2001 grid was also used by CSDL to produce an updated tidal database, EC2001_NOS (Jesse Feyen, personal communication), which updated the boundary condition forcing as well as calculated CO-OPS standard suite of 37 tidal constituents from a 1 year simulation (versus the original calculation of 7 constituents over a 90 day simulation).

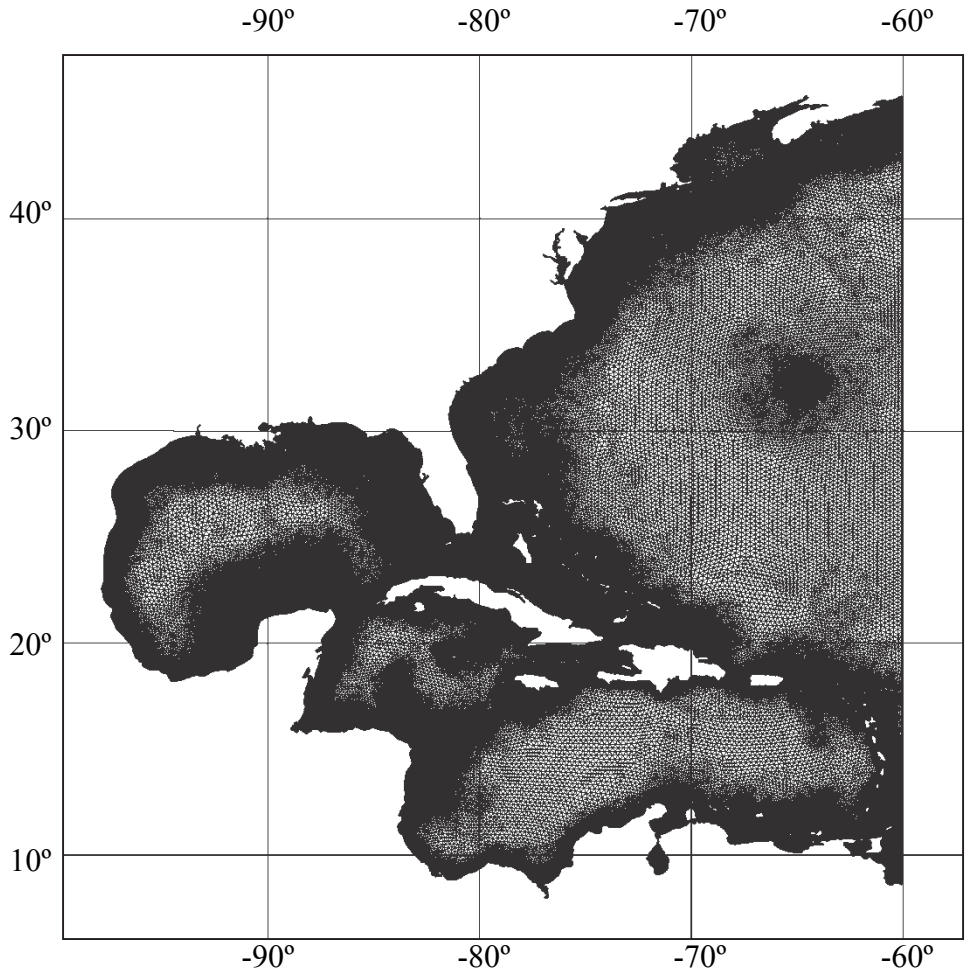

Figure 1. The EC2001 grid.

2.3. Model Input Files

ADCIRC is a FORTRAN-based program which requires at a minimum two input files, *fort.14* and *fort.15*, to run a simulation normally. *fort.14* is an ADCIRC grid and boundary information file which describes the structure of the unstructured grid (node locations, elevations, and element connectivity) and specifies the various boundary conditions (e.g. land, river, and ocean). *fort.15* is a model parameter and boundary condition file that contains the majority of the parameters (i.e. model runtime control parameters, output control, and external forcing functions) required to run ADCIRC, including the information to drive the model with tidal harmonic forcing.

In addition to these files, there are many optional files that may or may not be present depending upon which features the user wishes to incorporate into a model run. For example, *fort.22* is a surface forcing input file that provides meteorological forcing (wind velocity and atmospheric pressure). Another pairs used with the ESTOFS are *fort.67.nc* and *fort.68.nc* in order for ADCIRC to run consecutively via the hot start feature. Hot start information is written to

fort.67.nc and *fort.68.nc* on an alternating basis so that in case of file becomes corrupted, the other can be used. These files are written out in NetCDF format.

The following ADCIRC input files are used for ESTOFS.

1. *fort.14*: a grid and boundary information file.
2. *fort.15*: a model parameter and periodic boundary condition file. This file is reformatted every run cycle in order to update the run time parameters. This file contains the information for the tidal potential and open ocean boundary conditions.
3. *fort.22*: a surface forcing input file. The wind velocities and atmospheric pressure are converted to *fort.22* formatting for each run cycle.
4. *fort.67.nc* and *fort.67.nc*: NetCDF version of alternating hot start files.

2.4. System Interruption and Recovery Procedure

Hot start output is written to `fort.67` and `fort.68` on an alternating basis so that if the computer crashes in the processes of writing one of these files, the other will be unaffected and can be used to restart the model. Normally, the most current (in time) of the `fort.67` or `fort.68` files is used to hot start the model. If there are no hot start files, a cold start could be used to restart the ESTOFS.

The ESTOFS will operate normally as an automated job on the NCEP Central Computing System (CCS). Since the ESTOFS is designed to be coupled with WW3, it has same run cycle (4 times per day) and length (6 hours nowcast followed by 180 hours forecast) with WW3. Hot start files are recorded every 6 hours during the run, and one is written on completion of the 6 hours nowcast that is used to initialize the next forecast cycle simulation. In this way the ADCIRC simulation runs continuously, since the hot start information from the conclusion of the nowcast is used to initialize the next nowcast/forecast cycle.

3. MODEL RUN SCENARIO DEFINITION

In order to evaluate the performance of the ESTOFS, the NOS skill assessment criteria are applied to three model simulation scenarios. These include a simulation of the tides, a hindcast simulation, and a semi-operational simulation. Each is discussed in more detail below.

3.1. Astronomical Tide Simulation

In this simulation, the model is run in an astronomical tide scenario, where the model is forced with harmonically-predicted astronomical tides for the open boundary water levels and tidal potential water levels.

The EC2001_NOS uses the Oregon State University Global Inverse Tidal Model (TPXO 6.2) for the open-ocean boundary forcing (Egbert and Erofeeva 2002). The Newtonian tidal potential and corrections are forced within the ESTOFS domain (Reid 1990). There are no river discharge inflows and meteorological forcing. The harmonic tidal simulation is conducted for 2009. For operational runs, the harmonic tidal predictions in ESTOFS will be created by a superposition of the 37 harmonic tidal constituents derived from the EC2001_NOS.

3.2. Model Hindcast Simulation

In this simulation, model forcing is specified for astronomical tides and meteorological conditions during 2009, based on historical, best available gap-filled observational data for tidal harmonics, surface wind velocity and atmospheric pressure. The model time series is compared with available observations of water levels at the coast.

For the hindcast simulation, the open-ocean boundary forcing and Newtonian tidal potential and corrections are as same as ones used in the EC2001_NOS. There is no upstream boundary forcing, such as river discharge from a tributary, in the ESTOFS. Surface forcing consisting of wind velocities and atmospheric pressure is provided from GFS (http://www.emc.ncep.noaa.gov/GFS/). GFS output, at 0.5 degree resolution, of the east and north wind 10 m above ground (UGRD and VGRD) and pressure reduced to MSL (PRMSL) are used as the surface forcing. In the hindcast simulation, the surface forcing is provided every 6 hours across the model grid. The simulation is run for the entire year of 2009 because there are some significant events (i.e. Hurricane Ida and the Veteran's Day Nor'easter).

3.3. Semi-Operational Forecast Simulation

In this simulation, the model forcing is based on real-time operational forecast guidance from the GFS models. Initial conditions are generated from the nowcast. This run tests the ability of the model in an operational environment by using the operational implementation. This simulation is made for the two weeks from October 25 to November 8 2010.

The ESTOFS applies the forcing for the forecast simulation as done for the hindcast simulation, except for the surface forcing interval. The real-time GFS operational output provides surface forcing every 3 hours.

4. SKILL ASSESSMENT STATISTICS AND DATA

4.1. Skill Assessment Statistics

Skill assessment is an objective measurement of the performance of a model when systematically compared with observations. NOS skill assessment criteria were created for evaluating the performance of circulation models (Hess et al. 2003), and a software package was subsequently developed to evaluate these criteria using standard file formats output from the models (Zhang et al. 2006). The software can compute the skill assessment automatically using files containing observations, predictions, and model results. The standard suite of skill assessment statistics and criteria is defined Table 1. Most of the skill assessment statistics have criteria which are a benchmark for the acceptance of a modeling system into NOS operational use. These criteria are reported in Table 1. The acceptable error magnitude X is 0.20 m, and L is the time limit.

Table 1. Skill assessment statistics and operational acceptance criteria (Hess et al. 2003).

Variable	Explanation
Error	The error is defined as the predicted value, p, minus the reference (observed or astronomical tide value, r : $e_i = p_i - r_i$.
SM	Series Mean. The mean value of a series y. Calculated as $\bar{y} = \frac{1}{N}\sum_{i=1}^{N} y_i$.
RMSE	Root Mean Square Error. Calculated as $RMSE = \sqrt{\frac{1}{N}\sum_{i=1}^{N} e_i^2}$.
SD	Standard Deviation. Calculated as $SD = \sqrt{\frac{1}{N-1}\sum_{i=1}^{N} (e_i - \bar{e})^2}$
CF(X)	Central Frequency. Fraction (percentage) of errors that lie within the limits $\pm$X.
POF(X)	Positive Outlier Frequency. Fraction (percentage) of errors that are greater than X.
NOF(X)	Negative Outlier Frequency. Fraction (percentage) of errors that are less than -X.
MDPO(X)	Maximum Duration of Positive Outliers. A positive outlier event is two or more consecutive occurrences of an error greater than X. MDPO is the length of time (based on the number of consecutive occurrences) of the longest event.
MDNO(X)	Maximum Duration of Negative Outliers. A negative outlier event is two or more consecutive occurrences of an error less than -X. MDNO is the length of time (based on the number of consecutive occurrences) of the longest event.
WOF(X)	Worst Case Outlier Frequency. Fraction (percentage) of errors that, given an error of magnitude exceeding X, either (1) the simulated value of water level is greater than the astronomical tide and the observed value is less than the astronomical tide, or (2) the simulated value of water level is less than the astronomical tide and the observed value is greater than the astronomical tide.

Variable	SM	RMSE	SD	NOF(2x)	CF(X)	POF(2X)	MDPO(2X)	MDNO(2X)	WOF(2X)
Criterion	none	none	none	≤1%	≥90%	≤1%	≤ L	≤ L	≤ 0.5%

The skill assessment software deals with three types of data sets (as shown in Table 2): Group 1, a time series of values at uniform time intervals (such as water level observations); Group 2, a set of values representing the consecutive occurrences of an event (such as time of high water); and Group 3, a set of values representing a forecast valid at a given projection time.

Table 2. Skill assessment data series groups and the variables in each. Note that upper case letters indicate a prediction series (e.g. H), and lower case letters (e.g. h) indicate a reference series (observation or prediction) (Hess et al. 2003).

Group	Variable	Symbol
Group 1 (Time Series)	Water level	H, h
Group 2 (Values at a Tidal Stage)	Amplitude of high water	AHW,ahw
	Amplitude of low water	ALW,ahw
	Time of high water	THW,thw
	Time of low water	TLW,tlw
Group 3 (Values from a Forecast)	Water level at forecast projection time of nn hrs	Hnn, hnn

4.2. Data

In this report, skill assessment scores were computed for water levels at 62 stations along the Atlantic and Gulf coasts of the United States. These stations, which are operated by CO-OPS, are used by ETSS for its verification. Figures 2 and 3 show the observation locations used for skill assessment in the Northeast, Mid-Atlantic, Southeast, and Gulf of Mexico (http://www.nws.noaa.gov/mdl/etsurge/index.php?page=map&region=ne). In addition, 7 CO-OPS stations are included for Puerto Rico and the U.S. Virgin Islands, shown in Figure 4, (http://tidesonline.noaa.gov/coastline.shtml?region=pr) and Bermuda. Appendix A provides a list of the stations.

For the astronomical tide simulation skill assessment, harmonic constants were obtained from CO-OPS' website. Additionally, harmonic tidal predictions were obtained from CO-OPS' website. For the hindcast simulation skill assessment, the verified water level observations during 2009 were obtained from CO-OPS' website. For the skill assessment for semi-operational forecast simulations, the preliminary water level observations during November, 2010 were obtained from CO-OPS' website. The vertical reference datum of all observations was Local Mean Sea Level at each station. Some observation stations did not provide water level time series during either the hindcast and/or the semi-operational simulations periods.

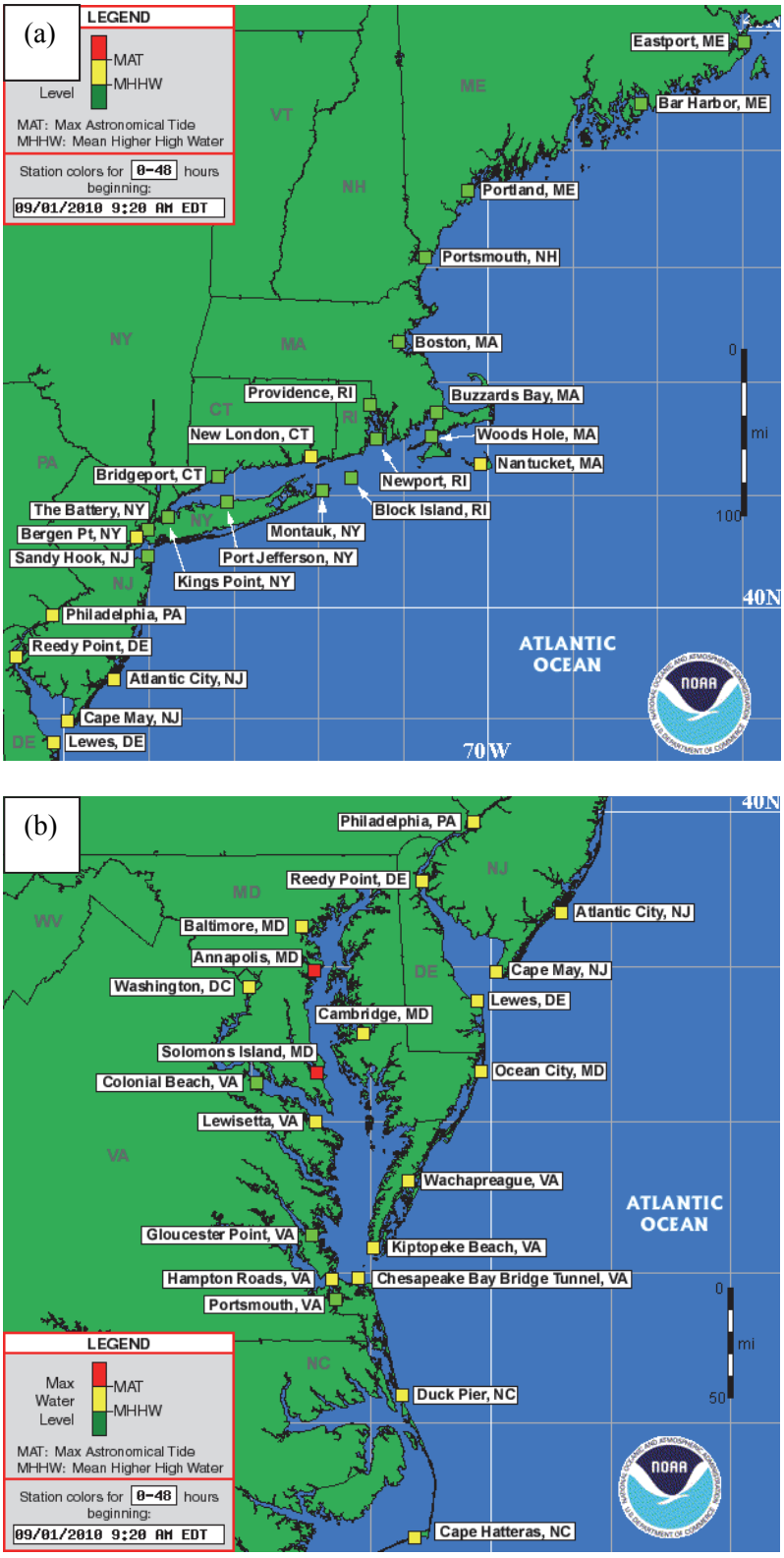

Figure 2. Observation locations which are used for skill assessment in the (a) Northeast and (b) Mid-Atlantic (from ETSS website; September 01 2010).

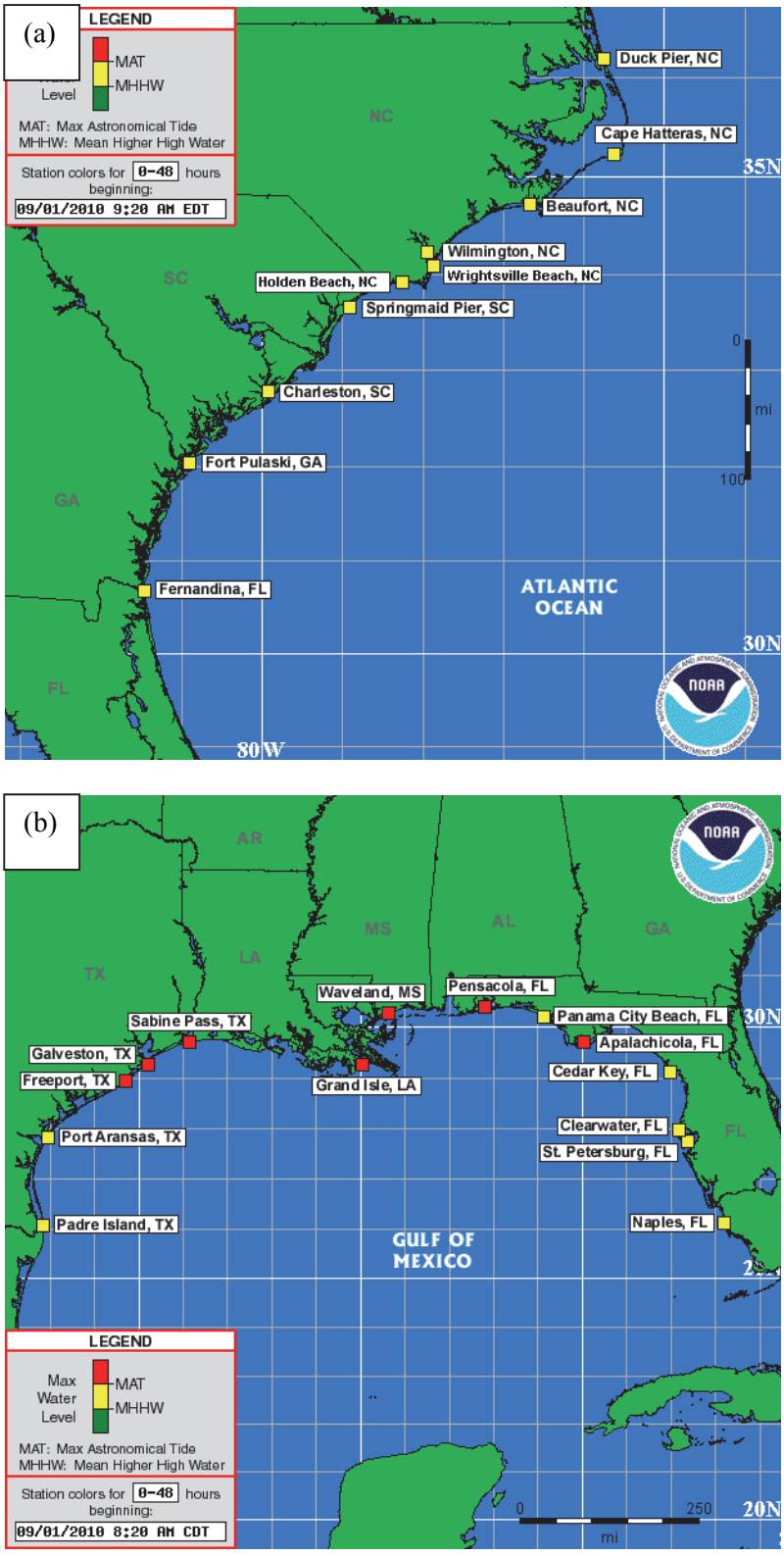

Figure 3. Observation locations which are used for skill assessment in the (a) Southeast and (b) Gulf of Mexico (from ETSS website; September 01 2010).

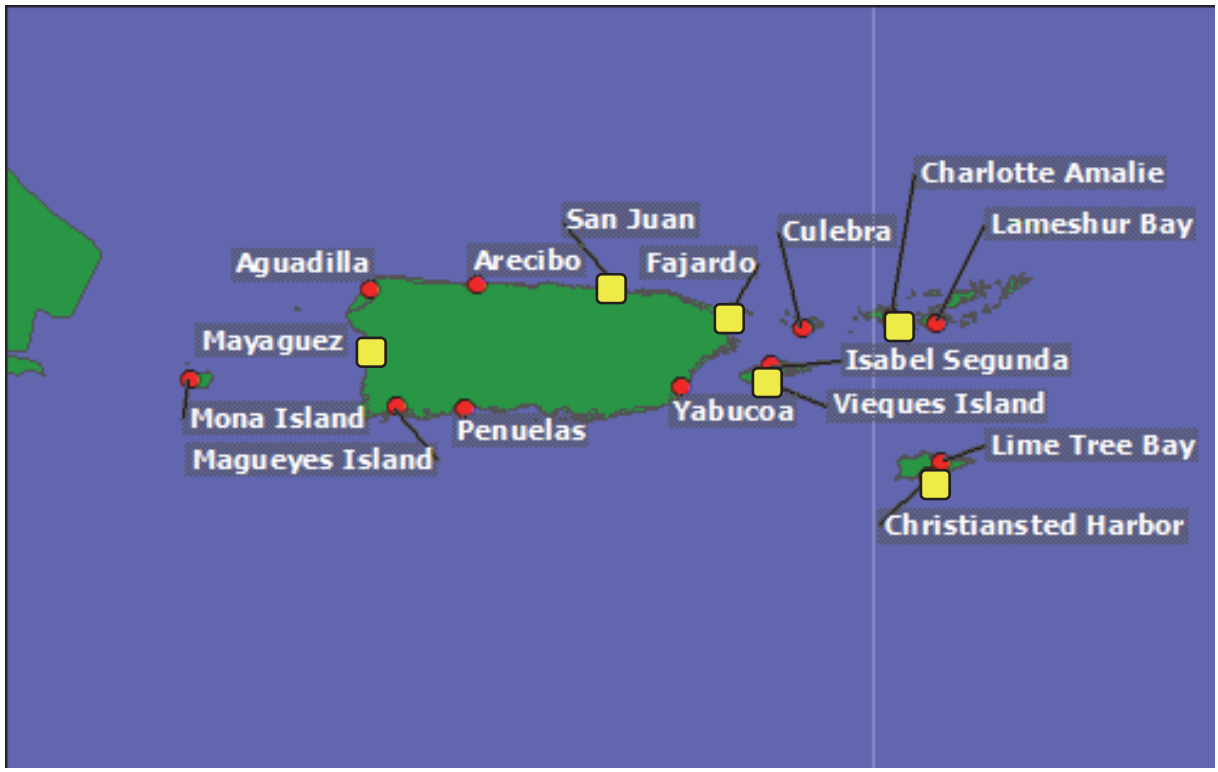

Figure 4. Observation locations (yellow squares) which are used for skill assessment in Puerto Rico and U.S. Virgin Islands (from CO-OPS website).

5. RESULTS FOR WATER LEVEL SKILL ASSESSMENT

Skill assessment statistics were calculated for each model scenario (astronomical tide, hindcast, and semi-operational forecast). The NOS skill assessment software was used to automatically generate skill assessment tables for each of the stations mentioned in Section 4.2. The challenge of using a consistent vertical reference datum is a common issue for combined water level comparisons of model simulations and observations. The ESTOFS model simulation has a single mean sea level datum. The mean sea level reported by the observations is a local value calculated from data which is generally not the same value of mean sea level as in the model because of fresh water effects, meteorological forcing, and baroclinic effects. Thus slight error or bias could be contained in skill assessment scores due to a datum difference.

An acceptable accuracy for the ESTOFS skill assessment is better than or equal to NOS's recommended criteria for a coastal operational model. But it is difficult for the ESTOFS to meet the NOS criteria because the NOS criteria were designed for the higher resolution local scale, three dimensional coastal forecast systems. Considering ESTOFS' large scale, the acceptable error magnitude, normally recommended as 0.15 m for a coastal operational forecast system, is increased to 0.20 m for all three scenarios. Although ESTOFS applies unstructured grid along the coast line, the grid doesn't have enough coastal resolution to incorporate sufficient reaches of rivers, small tributaries, and barrier island lagoons. These grid limitations affect skill assessment scores. Therefore the ESTOFS skill assessment isn't likely to pass the NOS criteria at all stations.

5.1. Astronomical Tide

For the astronomical tide simulation validation, water levels created by a superposition of harmonic tidal constituents derived from the EC2001_NOS were made for the entire year of 2009, and saved in hourly intervals at locations where observations were available. The EC2001_NOS was forced with harmonic tidal constituents derived from TPXO 6.2 at the open-ocean boundary and with the Newtonian tidal potential over the entire grid.

The reliability of the EC2001_NOS harmonic constants was evaluated by comparing CO-OPS accepted harmonic constants at 64 CO-OPS tide stations (no harmonic constants are available at five stations; see Appendix A). The 37 harmonic constants derived from the EC2001_NOS were compared with the 37 CO-OPS accepted harmonic constants, as shown Appendix B. For example, the M_2 amplitude error ranges from -0.31 to 0.17 m (maximum error is at Philadelphia), and M2 phase error ranges from -84.6 to 168.1 degrees (maximum error is also at Philadelphia). Most of the stations with largest errors are located outside the grid in a river (i.e. Philadelphia, PA and Washington DC) and or behind a barrier island (i.e. Wachapreague, VA).

The standard suite of statistics was computed by comparing harmonic tidal predictions from EC2001_NOS with CO-OPS tidal predictions and are presented in Appendix C (Scenario: Tidal Simulation). There are no tables at some stations because observations were not available during the simulation period (see Appendix A). The Root Mean Square Error (RMSE) varies from maximum of 0.99 m at Philadelphia, PA to minimum of 0.05 m at Charlotte Amalie, VI. Most stations pass or are close to Central Frequency (CF), Positive Outlier Frequency (POF), and Negative Outlier Frequency (NOF) criteria for the entire time series.

From this skill assessment, a total of 10 stations (station ID: 8518750, 8519483, 8545240, 8551910, 8594900, 8631044, 8658120, 8665530, 8670870, and 8720030; see Appendix A), which are mainly located on a upper river or, behind barrier islands, or inlets, have large RMS errors (over 0.20 m) and poorer CF statistics (less than 50 %). Figure 5 (a) and 5 (b) shows an example of a difference between actual observation location and the closest model observed point. As shown in Figure 5 (a), stations 8545240 and 8551910 are located on the upper Delaware River, and Station 8631044, shown in Figure 5 (b), is surrounding with small islands. Since the model selects the nearest element as the model observed point, it's difficult to fit the observation and satisfy against the NOS criteria. Based on the astronomical tide simulation scenario, these stations are considered unacceptable to provide water levels from ESTOFS.

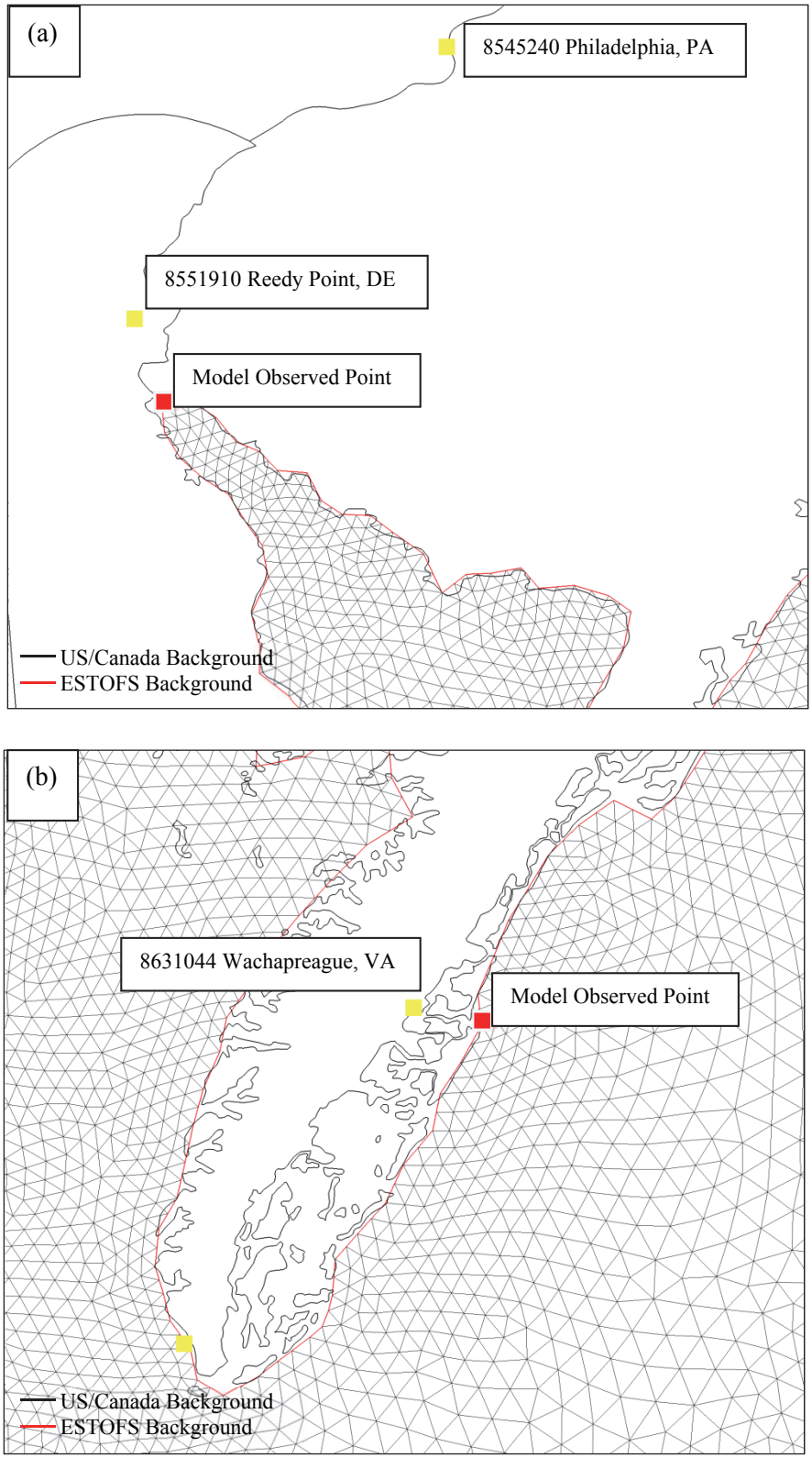

Figure 5. The difference between observation location and model observed point in a river (a) and behind a barrier island (b).

5.2. Hindcast

The hindcast simulation was made for the entire year of 2009, and ESTOFS water level time series were saved an hourly interval at locations where observations were available. The model used the same tidal forcing as done for the astronomical tide simulation. Wind velocities and atmospheric pressure obtained from the GFS were fed to the model every 6 hours (because the GFS analysis run output used for the hindcast simulation only has a 6 hour record, versus the 3 hour records produced during a forecast cycle).

The standard suite of statistics was computed for comparing the simulated and observed water level time series and is presented in Appendix C (Scenario: Hindcast (combined water level)). There are no tables at some stations because observations were not available during the hindcast period. Figure 6 shows the plot of the RMS errors; those listed with a station ID have RMS error larger than 0.2 m (except for stations in Puerto Rico and the U.S. Virgin Islands). The RMS errors vary from 1.15 m at Philadelphia, PA to 0.08 m at Charlotte Amalie, VI. Although errors could be due to inaccuracies, like lack of fresh water inflow and inadequate interval for surface forcing, a total of 14 stations (listed station ID: 8410140, 8516945, 8518750, 8519483, 8545240, 8551910, 8570283, 8594900, 8631044, 8656483, 8658120, 8665530, 8670870, and 8720030) have over 0.20 m RMS error. CF, NOF, and POF are unsatisfied for the NOS criteria for the entire time series at these stations. Most of these stations performed poorly in the astronomical tide skill assessment as well.

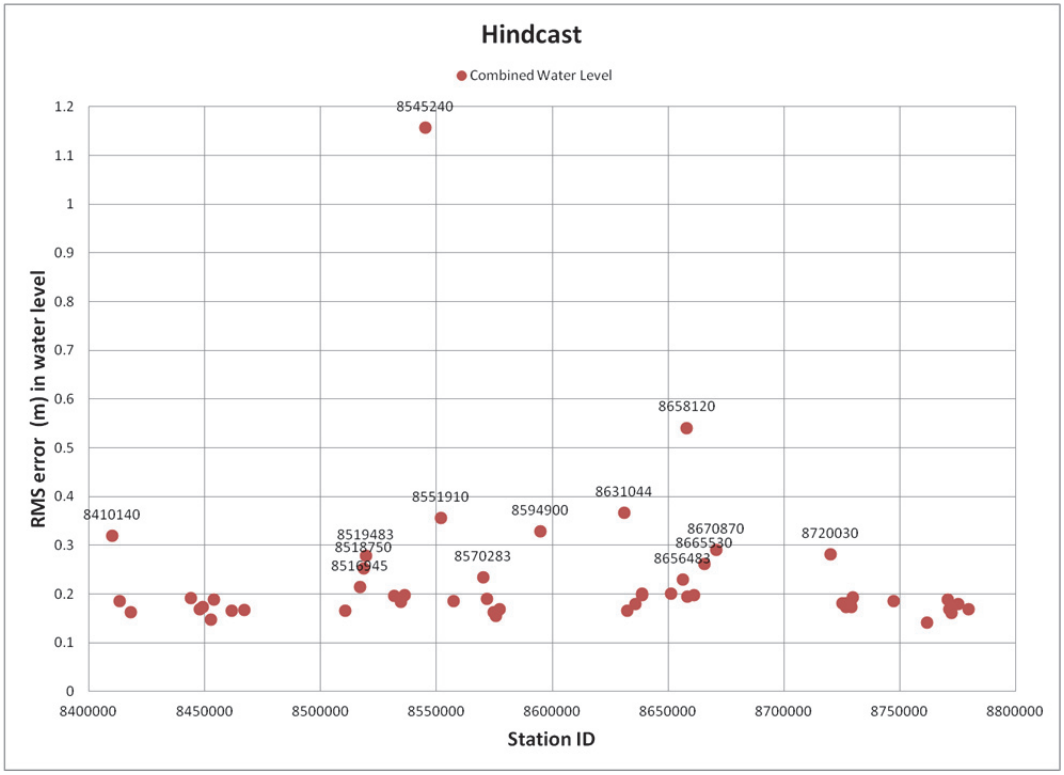

Figure 6. RMS errors in the combined water level from the hindcast; stations listed with ID have over 0.2 m RMS errors.

5.3. Semi-Operational Forecast

Semi-operational forecasts were made from October 25 2010 to November 8 2010. The ESTOFS applies the same forcing for the forecast simulation as done for the hindcast simulation, except for surface forcing interval. The GFS provides surface forcing every 3 hours its forecast cycle. The ESTOFS ran 4 times per day to make 180 hours forecasts and recorded water levels at 6 min intervals at station locations. The 180 hour forecast simulations were concatenated into a continuous time series for skill assessment analysis. The ESTOFS forecasts are compared to CO-OPS preliminary real-time water level observations, which are not quality-controlled data. Due to the standards for NOS skill assessment, only the first 96 hours of the forecasts are used to compute skill assessment scores.

The standard suite of statistics presented in Appendix C (Scenario: Semi-Operational Forecast). The large RMS errors computed at Eastport ME are due to a discontinuity in the observation on November 5, 2010. Most of the stations have RMS errors less than or close to 0.20 m except for the same 14 stations which have large RMS errors in the hindcast simulation. This result indicates that these stations are not suitable to provide water level forecasts. Thus the ESTOFS will eliminate these stations from its point forecast locations until further upgrade of the model grid to provide higher resolution around these areas.

The plot of the RMS error, except for the 14 stations mentioned above, is shown in Figure 7. The RMS errors slightly increase as the forecast progresses due to the increase in forecast uncertainty. However, the difference in RMS errors between the beginning of the forecast (H00-h00 forecasts) and after 96 hours (H96-h96 forecasts) appears to be a relatively small increment of around 0.1 m. These results show that the ESTOFS has the capability to provide accurate water level predictions.

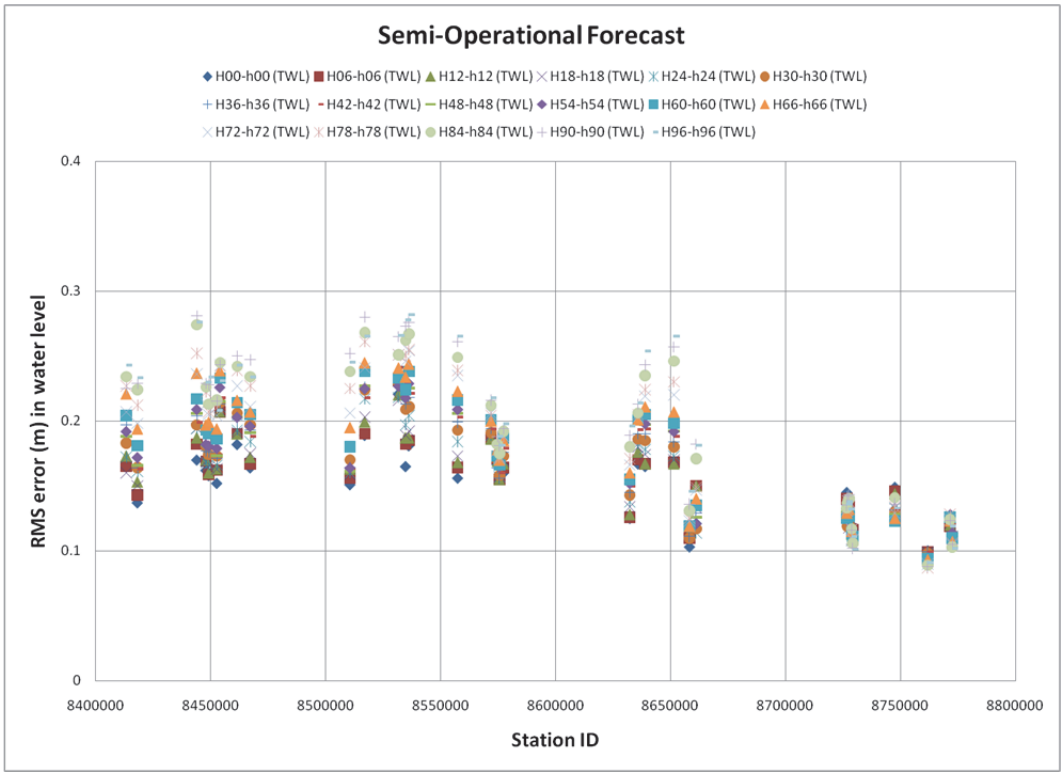

Figure 7. RMS errors in the semi-operational forecast.

6. CONCLUSIONS

As part of the establishment of ESTOFS, CSDL has evaluated an application of the ADCIRC hydrodynamic model on the Western North Atlantic basin which will be implemented to perform operational 180-hour forecasts. The model results are compared with the observations at 69 stations using the NOS standard skill assessment software. The skill assessment focused on the performance of the model in simulating water levels in three model run scenarios: 1) astronomical tide, 2) model hindcast, and 3) semi-operational forecast.

The skill assessment criteria for water levels either pass or are close to the NOS criteria for the astronomical tide scenario, with the notable exception of stations located in coastal features not included in the model grid. It is verified that EC2001_NOS can provide sufficient harmonic tidal predictions at most stations. For the hindcast simulation scenarios, the skill scores for combined water levels are satisfied with the NOS criteria, except for some stations which are again located in the complex geometries where the model grid doesn't have enough resolution. As the results of these skill assessments, these poorly performing stations are not suitable as point forecast locations for ESTOFS to provide water level forecasts in the operational set-up.

In the semi-operational forecast scenario, most of the stations have RMS errors less than or close to 0.20 m except for the same 14 stations which have large RMS errors in the hindcast simulation. Although the NOS criteria were designed for coastal forecast model with higher resolution, the reason the criteria aren't always met might be attributed to a couple of additional reasons. First is the lack of river discharge inflow. River discharges have an important impact on coastal water levels; this may explain why the astronomical tide simulation performed better than the hindcast simulation. Considering the model domain resolution, it is difficult for the ESTOFS to specify river discharge locations. Second could be the variation in water levels due to baroclinic effects. The ESTOFS is incapable of incorporating them as it is a two-dimensional, barotropic model. Even with these inaccuracies, the model's water level forecasts are of sufficient accuracy for operational implementation.

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APPENDIX A. LIST OF STATIONS

Station ID	Name	Longitude	Latitude	Period of record
8410140	Eastport, ME	-66.983	44.905	01/09-01/10, 10/25-11/8/10
8413320	Bar Harbor, ME	-68.205	44.392	01/09-01/10, 10/25-11/8/10
8418150	Portland, ME	-70.247	43.657	01/09-01/10, 10/25-11/8/10
8424003	Portsmouth, NH	-70.718	43.073	No harmonic constants No observations
8443970	Boston, MA	-71.053	42.355	01/09-01/10, 10/25-11/8/10
8447270	Buzzards Bay MA	-70.617	41.740	No observations
8447930	Woods Hole, MA	-70.672	41.523	01/09-01/10, 10/25-11/8/10
8449130	Nantucket Island, MA	-70.097	41.285	01/09-01/10, 10/25-11/8/10
8452660	Newport, RI	-71.327	41.505	01/09-01/10, 10/25-11/8/10
8454000	Providence, RI	-71.401	41.807	01/09-01/10, 10/25-11/8/10
8459338	Block Island, RI	-71.557	41.173	No harmonic constants No observations
8461490	New London, CT	-72.090	41.361	01/09-01/10, 10/25-11/8/10
8467150	Bridgeport, CT	-73.182	41.173	01/09-01/10, 10/25-11/8/10
8510560	Montauk, NY	-71.960	41.048	01/09-01/10, 10/25-11/8/10
8514560	Port Jefferson NY	-73.077	40.950	No harmonic constants No observations
8516945	Kings Point, NY	-73.765	40.810	01/09-01/10, 10/25-11/8/10
8518750	The Battery, NY	-74.014	40.701	01/09-01/10, 10/25-11/8/10
8519483	Bergen Point West Reach, NY	-74.142	40.637	01/09-01/10, 10/25-11/8/10
8531680	Sandy Hook, NJ	-74.009	40.467	01/09-01/10, 10/25-11/8/10
8534720	Atlantic City, NJ	-74.418	39.355	01/09-01/10, 10/25-11/8/10
8536110	Cape May, NJ	-74.960	38.968	01/09-01/10, 10/25-11/8/10
8545240	Philadelphia, PA	-75.142	39.933	01/09-01/10, 10/25-11/8/10
8551910	Reedy Point, DE	-75.573	39.558	01/09-01/10, 10/25-11/8/10
8557380	Lewes, DE	-75.120	38.782	01/09-01/10, 10/25-11/8/10
8570283	Ocean City Inlet, MD	-75.092	38.328	01/09-01/10, 10/25-11/8/10
8571892	Cambridge, MD	-76.068	38.573	01/09-01/10, 10/25-11/8/10
8574680	Baltimore, MD	-76.578	39.267	01/09-01/10, 10/25-11/8/10
8575512	Annapolis, MD	-76.482	38.983	01/09-01/10, 10/25-11/8/10
8577330	Solomons Island, MD	-76.452	38.317	01/09-01/10, 10/25-11/8/10
8594900	Washington, DC	-77.022	38.873	01/09-01/10, 10/25-11/8/10
8631044	Wachapreague, VA	-75.687	37.607	01/09-01/10, 10/25-11/8/10
8632200	Kiptopeke, VA	-75.988	37.165	01/09-01/10, 10/25-11/8/10
8635150	Colonial Beach, VA	-76.960	38.252	No observations
8635750	Lewisetta, VA	-76.464	37.996	01/09-01/10, 10/25-11/8/10
8637624	Gloucester Point, VA	-76.500	37.247	No observations
8638610	Hampton Road, VA	-76.330	36.947	01/09-01/10, 10/25-11/8/10

8638660	Portsmouth, VA	-76.293	36.822	No observations
8638863	Chesapeake Bay Bridge Tunnel, VA	-76.113	36.967	01/09-01/10, 10/25-11/8/10
8651370	Duck, NC	-75.747	36.183	01/09-01/10, 10/25-11/8/10
8654400	Cape Hatteras, NC	-75.635	35.223	No observations
8656483	Beaufort, NC	-76.670	34.720	01/09-01/10, 10/25-11/8/10
8658120	Wilmington, NC	-77.953	34.227	01/09-01/10, 10/25-11/8/10
8658163	Wrightsville Beach, NC	-77.787	34.213	01/09-01/10, 10/25-11/8/10
N/A	Holden Beach, NC	-78.267	33.917	No harmonic constants No observations
8661070	Springmaid Pier, SC	-78.918	33.655	01/09-01/10, 10/25-11/8/10
8665530	Charleston, SC	-79.925	32.782	01/09-01/10, 10/25-11/8/10
8670870	Fort Pulaski, GA	-80.902	32.033	01/09-01/10, 10/25-11/8/10
8720030	Fernandina Beach, FL	-81.465	30.672	01/09-01/10, 10/25-11/8/10
8725110	Naples, FL	-81.808	26.132	01/09-01/10, 10/25-11/8/10
8726520	St. Petersburg, FL	-82.627	27.761	01/09-01/10, 10/25-11/8/10
8726724	Clearwater Beach, FL	-82.832	27.978	01/09-01/10, 10/25-11/8/10
8727520	Cedar Key, FL	-83.032	29.135	01/09-01/10, 10/25-11/8/10
8728690	Apalachicola, FL	-84.982	29.727	01/09-01/10, 10/25-11/8/10
8729108	Panama City, FL	-85.667	30.152	01/09-01/10, 10/25-11/8/10
8729840	Pensacola, FL	-87.211	30.404	01/09-01/10, 10/25-11/8/10
8747437	Bay Waveland Yacht Club, MS	-89.326	30.326	01/09-01/10, 10/25-11/8/10
8761724	Grand Isle, LA	-89.957	29.263	01/09-01/10, 10/25-11/8/10
8770570	Sabine Pass North, TX	-93.870	29.728	01/09-01/10, 10/25-11/8/10
8771510	Galveston Pleasure Pier, TX	-94.789	29.285	01/09-01/10, 10/25-11/8/10
8772447	USCG Freeport, TX	-95.303	28.943	01/09-01/10, 10/25-11/8/10
8775237	Port Aransas, TX	-97.073	27.838	01/09-01/10, 10/25-11/8/10
8779770	Port Isabel, TX	-97.215	26.060	01/09-01/10, 10/25-11/8/10
9751364	Christiansted Harbor, St Croix, VI	-64.705	17.750	01/09-01/10, 10/25-11/8/10
9751639	Charlotte Amalie, VI	-64.920	18.335	01/09-01/10, 10/25-11/8/10
9752695	Vieques Island, PR	-65.470	18.093	01/09-01/10, 10/25-11/8/10
9753216	Fajardo, PR	-65.630	18.335	No harmonic constants No observations
9755371	San Juan, PR	-66.115	18.458	01/09-01/10, 10/25-11/8/10
9759394	Mayaguez, PR	-67.160	18.220	01/09-01/10, 10/25-11/8/10
2695540	Bermuda Esso Pier	-64.703	32.373	01/09-01/10, 10/25-11/8/10

APPENDIX B. COMPARISON OF HARMONIC CONSTANTS

Station: Eastport, ME
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	2.687	98.7	2.649	98.6	-0.038	-0.1
2	S(2)	0.420	139.3	0.390	140.3	-0.030	1.0
3	N(2)	0.543	69.4	0.505	68.9	-0.038	-0.5
4	K(1)	0.156	196.4	0.128	193.0	-0.028	-3.4
5	M(4)	0.060	86.5	0.048	315.9	-0.012	130.6
6	O(1)	0.119	176.9	0.108	184.7	-0.011	7.8
7	M(6)	0.051	277.2	0.017	222.9	-0.034	-54.3
8	MK(3)	0.000	0.0	0.006	322.3	0.000	0.0
9	S(4)	0.000	0.0	0.001	72.5	0.000	0.0
10	MN(4)	0.023	55.8	0.014	291.4	-0.009	124.4
11	NU(2)	0.126	73.5	0.027	83.1	-0.099	9.6
12	S(6)	0.000	0.0	0.000	181.9	0.000	0.0
13	MU(2)	0.020	163.9	0.102	223.8	0.082	59.9
14	2N(2)	0.065	46.5	0.036	178.5	-0.029	132.0
15	OO(1)	0.005	230.6	0.000	326.0	-0.005	95.4
16	LAMBDA(2)	0.053	122.8	0.018	124.7	-0.035	1.9
17	S(1)	0.010	110.2	0.000	316.4	-0.010	153.8
18	M(1)	0.006	206.8	0.000	173.6	-0.006	-33.2
19	J(1)	0.009	208.6	0.001	222.0	-0.008	13.4
20	MM	0.000	0.0	0.001	109.4	0.000	0.0
21	SSA	0.016	127.6	0.000	33.8	-0.016	-93.8
22	SA	0.000	0.0	0.000	146.0	0.000	0.0
23	MSF	0.000	0.0	0.002	44.8	0.000	0.0
24	MF	0.000	0.0	0.004	236.9	0.000	0.0
25	RHO(1)	0.003	154.0	0.000	91.0	-0.003	-63.0
26	Q(1)	0.020	163.0	0.019	168.0	-0.001	5.0
27	T(2)	0.037	115.8	0.001	328.9	-0.036	146.9
28	R(2)	0.009	356.5	0.004	220.1	-0.005	-136.4
29	2Q(1)	0.003	157.5	0.000	185.6	-0.003	28.1
30	P(1)	0.052	195.5	0.041	190.3	-0.011	-5.2
31	2SM(2)	0.005	83.9	0.006	27.6	0.001	-56.3
32	M(3)	0.000	0.0	0.003	232.4	0.000	0.0
33	L(2)	0.135	134.5	0.136	154.1	0.001	19.6
34	2MK(3)	0.005	331.6	0.010	311.0	0.005	-20.6
35	K(2)	0.116	138.3	0.120	141.1	0.004	2.8
36	M(8)	0.005	253.7	0.017	222.9	0.012	-30.8
37	MS(4)	0.018	131.9	0.013	16.3	-0.005	-115.6

Station: Bar Harbor, ME
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	1.580	92.9	1.582	94.5	0.002	1.6
2	S(2)	0.243	128.8	0.214	132.7	-0.029	3.9
3	N(2)	0.351	62.3	0.299	63.0	-0.052	0.7
4	K(1)	0.140	194.3	0.112	197.0	-0.028	2.7
5	M(4)	0.008	99.1	0.032	154.9	0.024	55.8
6	O(1)	0.110	176.1	0.095	189.9	-0.015	13.8
7	M(6)	0.012	47.5	0.025	30.0	0.013	-17.5
8	MK(3)	0.000	0.0	0.015	239.0	0.000	0.0
9	S(4)	0.000	0.0	0.003	265.4	0.000	0.0
10	MN(4)	0.000	0.0	0.024	144.4	0.000	0.0
11	NU(2)	0.073	67.5	0.017	89.7	-0.056	22.2
12	S(6)	0.000	0.0	0.000	16.1	0.000	0.0
13	MU(2)	0.006	38.3	0.071	230.9	0.065	167.4
14	2N(2)	0.046	40.4	0.027	187.5	-0.019	147.1
15	OO(1)	0.004	238.2	0.001	17.8	-0.003	139.6
16	LAMBDA(2)	0.029	132.4	0.015	125.1	-0.014	-7.3
17	S(1)	0.006	163.0	0.000	173.5	-0.006	10.5
18	M(1)	0.006	213.4	0.001	306.8	-0.005	93.4
19	J(1)	0.008	202.0	0.003	345.8	-0.005	143.8
20	MM	0.000	0.0	0.022	29.4	0.000	0.0
21	SSA	0.000	0.0	0.001	65.7	0.000	0.0
22	SA	0.000	0.0	0.000	344.7	0.000	0.0
23	MSF	0.000	0.0	0.016	37.1	0.000	0.0
24	MF	0.000	0.0	0.002	321.7	0.000	0.0
25	RHO(1)	0.004	168.2	0.002	116.4	-0.002	-51.8
26	Q(1)	0.020	160.3	0.016	181.7	-0.004	21.4
27	T(2)	0.022	103.5	0.001	316.9	-0.021	146.6
28	R(2)	0.003	346.2	0.003	227.6	0.000	-118.6
29	2Q(1)	0.003	171.0	0.000	197.3	-0.003	26.3
30	P(1)	0.046	193.6	0.032	190.8	-0.014	-2.8
31	2SM(2)	0.005	101.6	0.005	25.4	0.000	-76.2
32	M(3)	0.000	0.0	0.006	151.4	0.000	0.0
33	L(2)	0.079	135.0	0.098	156.3	0.019	21.3
34	2MK(3)	0.004	259.5	0.016	234.7	0.012	-24.8
35	K(2)	0.067	127.0	0.067	135.0	0.000	8.0
36	M(8)	0.000	0.0	0.025	30.0	0.000	0.0
37	MS(4)	0.000	0.0	0.017	207.6	0.000	0.0

Station: Portland, ME
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	1.365	102.5	1.430	102.7	0.065	0.2
2	S(2)	0.206	138.5	0.202	140.3	-0.004	1.8
3	N(2)	0.306	72.0	0.293	70.3	-0.013	-1.7
4	K(1)	0.141	202.2	0.121	195.6	-0.020	-6.6
5	M(4)	0.011	359.1	0.023	77.6	0.012	78.5
6	O(1)	0.112	182.4	0.105	188.6	-0.007	6.2
7	M(6)	0.014	130.4	0.005	182.7	-0.009	52.3
8	MK(3)	0.004	236.5	0.002	231.3	-0.002	-5.2
9	S(4)	0.000	0.0	0.000	122.6	0.000	0.0
10	MN(4)	0.006	343.1	0.007	41.9	0.001	58.8
11	NU(2)	0.065	79.5	0.015	104.0	-0.050	24.5
12	S(6)	0.000	0.0	0.000	34.1	0.000	0.0
13	MU(2)	0.010	43.6	0.053	243.2	0.043	160.4
14	2N(2)	0.040	49.6	0.019	197.0	-0.021	147.4
15	OO(1)	0.005	244.7	0.000	312.3	-0.005	67.6
16	LAMBDA(2)	0.022	139.4	0.009	147.1	-0.013	7.7
17	S(1)	0.008	216.8	0.000	30.2	-0.008	173.4
18	M(1)	0.006	219.2	0.001	184.3	-0.005	-34.9
19	J(1)	0.009	210.7	0.001	203.1	-0.008	-7.6
20	MM	0.000	0.0	0.002	177.6	0.000	0.0
21	SSA	0.020	105.8	0.000	52.3	-0.020	-53.5
22	SA	0.032	128.3	0.000	149.2	-0.032	20.9
23	MSF	0.000	0.0	0.001	48.6	0.000	0.0
24	MF	0.000	0.0	0.005	236.8	0.000	0.0
25	RHO(1)	0.003	158.3	0.000	100.8	-0.003	-57.5
26	Q(1)	0.019	164.2	0.019	171.1	0.000	6.9
27	T(2)	0.019	110.7	0.001	352.2	-0.018	118.5
28	R(2)	0.005	333.5	0.002	243.0	-0.003	-90.5
29	2Q(1)	0.003	162.8	0.000	156.9	-0.003	-5.9
30	P(1)	0.048	201.3	0.039	193.3	-0.009	-8.0
31	2SM(2)	0.004	96.9	0.003	63.0	-0.001	-33.9
32	M(3)	0.000	0.0	0.002	151.1	0.000	0.0
33	L(2)	0.059	147.1	0.069	175.8	0.010	28.7
34	2MK(3)	0.005	221.2	0.005	226.6	0.000	5.4
35	K(2)	0.056	137.3	0.062	143.3	0.006	6.0
36	M(8)	0.000	0.0	0.005	182.7	0.000	0.0
37	MS(4)	0.004	37.0	0.006	118.8	0.002	81.8

Station: Boston, MA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	1.398	109.4	1.400	109.1	0.002	-0.3
2	S(2)	0.213	146.2	0.199	147.1	-0.014	0.9
3	N(2)	0.309	78.9	0.287	76.6	-0.022	-2.3
4	K(1)	0.143	205.2	0.121	198.4	-0.022	-6.8
5	M(4)	0.023	25.9	0.035	91.2	0.012	65.3
6	O(1)	0.119	186.7	0.106	191.6	-0.013	4.9
7	M(6)	0.034	282.1	0.005	225.1	-0.029	-57.0
8	MK(3)	0.005	232.5	0.002	209.8	-0.003	-22.7
9	S(4)	0.000	0.0	0.001	138.6	0.000	0.0
10	MN(4)	0.011	14.6	0.012	53.7	0.001	39.1
11	NU(2)	0.067	85.5	0.014	110.5	-0.053	25.0
12	S(6)	0.000	0.0	0.000	205.1	0.000	0.0
13	MU(2)	0.010	69.0	0.052	249.3	0.042	179.7
14	2N(2)	0.039	55.0	0.018	202.9	-0.021	147.9
15	OO(1)	0.005	227.0	0.000	314.1	-0.005	87.1
16	LAMBDA(2)	0.022	143.2	0.008	154.2	-0.014	11.0
17	S(1)	0.004	122.8	0.000	46.7	-0.004	-76.1
18	M(1)	0.007	214.4	0.001	189.8	-0.006	-24.6
19	J(1)	0.010	213.5	0.001	209.0	-0.009	-4.5
20	MM	0.000	0.0	0.002	178.3	0.000	0.0
21	SSA	0.018	89.8	0.000	44.9	-0.018	-44.9
22	SA	0.032	126.3	0.000	158.6	-0.032	32.3
23	MSF	0.000	0.0	0.001	48.7	0.000	0.0
24	MF	0.000	0.0	0.005	237.0	0.000	0.0
25	RHO(1)	0.003	152.8	0.000	82.1	-0.003	-70.7
26	Q(1)	0.021	171.1	0.019	174.0	-0.002	2.9
27	T(2)	0.019	123.9	0.001	359.8	-0.018	124.1
28	R(2)	0.005	8.2	0.002	250.4	-0.003	117.8
29	2Q(1)	0.003	168.3	0.000	145.3	-0.003	-23.0
30	P(1)	0.047	202.1	0.039	196.3	-0.008	-5.8
31	2SM(2)	0.000	0.0	0.003	72.3	0.000	0.0
32	M(3)	0.000	0.0	0.002	146.4	0.000	0.0
33	L(2)	0.055	156.2	0.066	182.8	0.011	26.6
34	2MK(3)	0.007	207.9	0.005	219.8	-0.002	11.9
35	K(2)	0.059	144.5	0.061	150.2	0.002	5.7
36	M(8)	0.006	237.1	0.005	225.1	-0.001	-12.0
37	MS(4)	0.009	68.7	0.009	132.3	0.000	63.6

Station: Buzzards Bay, MA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.517	50.0	0.389	13.0	-0.128	-37.0
2	S(2)	0.096	65.2	0.088	28.5	-0.008	-36.7
3	N(2)	0.145	28.2	0.109	357.0	-0.036	31.2
4	K(1)	0.081	184.9	0.088	180.1	0.007	-4.8
5	M(4)	0.091	65.4	0.087	339.5	-0.004	85.9
6	O(1)	0.070	194.9	0.067	190.8	-0.003	-4.1
7	M(6)	0.021	292.4	0.007	324.2	-0.014	31.8
8	MK(3)	0.008	12.7	0.008	18.4	0.000	5.7
9	S(4)	0.009	20.5	0.001	77.5	-0.008	57.0
10	MN(4)	0.037	14.8	0.030	312.0	-0.007	62.8
11	NU(2)	0.027	35.6	0.005	163.2	-0.022	127.6
12	S(6)	0.005	320.1	0.000	60.7	-0.005	100.6
13	MU(2)	0.024	4.0	0.016	305.1	-0.008	58.9
14	2N(2)	0.023	15.7	0.006	257.2	-0.017	118.5
15	OO(1)	0.005	194.8	0.000	347.3	-0.005	152.5
16	LAMBDA(2)	0.003	126.0	0.003	208.6	0.000	82.6
17	S(1)	0.010	117.4	0.000	135.9	-0.010	18.5
18	M(1)	0.007	191.5	0.001	295.2	-0.006	103.7
19	J(1)	0.006	179.9	0.002	283.7	-0.004	103.8
20	MM	0.000	0.0	0.001	137.7	0.000	0.0
21	SSA	0.000	0.0	0.000	321.6	0.000	0.0
22	SA	0.000	0.0	0.000	160.4	0.000	0.0
23	MSF	0.000	0.0	0.001	45.4	0.000	0.0
24	MF	0.000	0.0	0.004	235.9	0.000	0.0
25	RHO(1)	0.004	185.1	0.000	17.9	-0.004	-167.2
26	Q(1)	0.015	185.1	0.014	178.5	-0.001	-6.6
27	T(2)	0.012	61.8	0.000	49.5	-0.012	-12.3
28	R(2)	0.001	65.8	0.001	296.8	0.000	129.0
29	2Q(1)	0.002	204.7	0.000	82.9	-0.002	-121.8
30	P(1)	0.031	185.4	0.026	177.2	-0.005	-8.2
31	2SM(2)	0.000	0.0	0.001	102.2	0.000	0.0
32	M(3)	0.007	43.0	0.003	287.3	-0.004	115.7
33	L(2)	0.003	90.3	0.021	234.1	0.018	143.8
34	2MK(3)	0.011	354.8	0.009	0.0	-0.002	5.2
35	K(2)	0.024	63.8	0.022	30.3	-0.002	-33.5
36	M(8)	0.006	229.1	0.007	324.2	0.001	95.1
37	MS(4)	0.025	143.4	0.022	35.2	-0.003	-108.2

Station: Woods Hole, MA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.243	34.6	0.304	18.7	0.061	-15.9
2	S(2)	0.061	35.6	0.070	28.8	0.009	-6.8
3	N(2)	0.080	19.4	0.091	2.5	0.011	-16.9
4	K(1)	0.071	189.0	0.086	182.9	0.015	-6.1
5	M(4)	0.054	355.1	0.074	339.8	0.020	-15.3
6	O(1)	0.066	203.7	0.069	192.8	0.003	-10.9
7	M(6)	0.020	45.5	0.001	265.0	-0.019	140.5
8	MK(3)	0.011	13.6	0.006	25.8	-0.005	12.2
9	S(4)	0.004	347.2	0.001	73.7	-0.003	86.5
10	MN(4)	0.024	315.4	0.026	313.5	0.002	-1.9
11	NU(2)	0.010	25.9	0.005	160.7	-0.005	134.8
12	S(6)	0.000	0.0	0.000	51.5	0.000	0.0
13	MU(2)	0.023	352.2	0.016	301.7	-0.007	-50.5
14	2N(2)	0.014	2.4	0.006	253.4	-0.008	109.0
15	OO(1)	0.003	174.2	0.000	350.5	-0.003	176.3
16	LAMBDA(2)	0.002	35.1	0.003	208.2	0.001	173.1
17	S(1)	0.007	117.2	0.000	129.5	-0.007	12.3
18	M(1)	0.004	182.9	0.001	288.9	-0.003	106.0
19	J(1)	0.006	212.4	0.001	280.8	-0.005	68.4
20	MM	0.000	0.0	0.003	41.4	0.000	0.0
21	SSA	0.000	0.0	0.000	338.9	0.000	0.0
22	SA	0.051	145.9	0.000	155.4	-0.051	9.5
23	MSF	0.000	0.0	0.003	36.5	0.000	0.0
24	MF	0.000	0.0	0.004	239.7	0.000	0.0
25	RHO(1)	0.003	184.9	0.000	120.2	-0.003	-64.7
26	Q(1)	0.015	185.1	0.014	179.5	-0.001	-5.6
27	T(2)	0.005	25.0	0.000	49.9	-0.005	24.9
28	R(2)	0.001	35.7	0.001	297.5	0.000	98.2
29	2Q(1)	0.002	218.2	0.000	77.5	-0.002	-140.7
30	P(1)	0.027	199.9	0.026	180.4	-0.001	-19.5
31	2SM(2)	0.000	0.0	0.001	108.6	0.000	0.0
32	M(3)	0.005	24.9	0.003	292.0	-0.002	92.9
33	L(2)	0.009	252.0	0.021	233.3	0.012	-18.7
34	2MK(3)	0.011	344.7	0.007	3.1	-0.004	18.4
35	K(2)	0.016	29.7	0.017	30.5	0.001	0.8
36	M(8)	0.004	165.8	0.001	265.0	-0.003	99.2
37	MS(4)	0.011	56.4	0.020	33.4	0.009	-23.0

Station: Nantucket Island, MA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.439	134.7	0.496	127.0	0.057	-7.7
2	S(2)	0.047	166.7	0.052	162.9	0.005	-3.8
3	N(2)	0.113	102.5	0.116	89.4	0.003	-13.1
4	K(1)	0.092	221.6	0.098	203.9	0.006	-17.7
5	M(4)	0.028	25.5	0.041	7.5	0.013	-18.0
6	O(1)	0.084	215.9	0.087	203.5	0.003	-12.4
7	M(6)	0.010	7.3	0.001	62.3	-0.009	55.0
8	MK(3)	0.000	0.0	0.005	109.1	0.000	0.0
9	S(4)	0.000	0.0	0.001	90.9	0.000	0.0
10	MN(4)	0.011	355.4	0.016	347.6	0.005	-7.8
11	NU(2)	0.023	114.7	0.007	144.9	-0.016	30.2
12	S(6)	0.000	0.0	0.000	245.7	0.000	0.0
13	MU(2)	0.008	23.2	0.028	282.8	0.020	100.4
14	2N(2)	0.016	77.9	0.009	233.1	-0.007	155.2
15	OO(1)	0.003	238.9	0.000	354.7	-0.003	115.8
16	LAMBDA(2)	0.006	183.9	0.003	200.1	-0.003	16.2
17	S(1)	0.000	0.0	0.000	111.3	0.000	0.0
18	M(1)	0.004	238.1	0.001	261.7	-0.003	23.6
19	J(1)	0.006	247.3	0.001	269.0	-0.005	21.7
20	MM	0.000	0.0	0.006	29.1	0.000	0.0
21	SSA	0.000	0.0	0.000	346.0	0.000	0.0
22	SA	0.037	165.7	0.000	150.8	-0.037	-14.9
23	MSF	0.000	0.0	0.007	31.2	0.000	0.0
24	MF	0.000	0.0	0.003	248.1	0.000	0.0
25	RHO(1)	0.003	213.4	0.000	102.4	-0.003	-111.0
26	Q(1)	0.016	204.4	0.017	187.3	0.001	-17.1
27	T(2)	0.005	147.0	0.000	46.7	-0.005	-100.3
28	R(2)	0.000	168.0	0.001	293.6	0.000	0.0
29	2Q(1)	0.002	210.1	0.000	195.0	-0.002	-15.1
30	P(1)	0.031	225.8	0.030	203.1	-0.001	-22.7
31	2SM(2)	0.000	0.0	0.001	125.6	0.000	0.0
32	M(3)	0.000	0.0	0.002	0.7	0.000	0.0
33	L(2)	0.019	183.4	0.027	223.9	0.008	40.5
34	2MK(3)	0.000	0.0	0.005	81.7	0.000	0.0
35	K(2)	0.012	166.3	0.016	170.3	0.004	4.0
36	M(8)	0.000	0.0	0.001	62.3	0.000	0.0
37	MS(4)	0.007	73.3	0.013	51.3	0.006	-22.0

Station: Newport, RI
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.518	2.2	0.460	356.1	-0.058	6.1
2	S(2)	0.110	24.3	0.097	19.3	-0.013	-5.0
3	N(2)	0.123	346.2	0.113	341.3	-0.010	-4.9
4	K(1)	0.065	166.6	0.085	174.9	0.020	8.3
5	M(4)	0.055	36.0	0.051	330.7	-0.004	65.3
6	O(1)	0.052	200.4	0.063	186.9	0.011	-13.5
7	M(6)	0.005	221.7	0.005	14.1	0.000	152.4
8	MK(3)	0.009	26.8	0.005	359.2	-0.004	27.6
9	S(4)	0.006	356.9	0.000	59.8	-0.006	62.9
10	MN(4)	0.024	348.8	0.018	300.9	-0.006	-47.9
11	NU(2)	0.023	348.4	0.002	173.8	-0.021	-174.6
12	S(6)	0.000	0.0	0.000	17.9	0.000	0.0
13	MU(2)	0.025	346.1	0.009	317.2	-0.016	-28.9
14	2N(2)	0.018	327.6	0.003	270.7	-0.015	-56.9
15	OO(1)	0.002	132.7	0.000	349.2	-0.002	143.5
16	LAMBDA(2)	0.003	12.4	0.002	220.1	-0.001	152.3
17	S(1)	0.011	129.5	0.000	143.5	-0.011	14.0
18	M(1)	0.005	238.8	0.001	295.1	-0.004	56.3
19	J(1)	0.006	194.8	0.001	279.7	-0.005	84.9
20	MM	0.000	0.0	0.002	173.0	0.000	0.0
21	SSA	0.020	61.8	0.000	336.7	-0.020	85.1
22	SA	0.061	140.5	0.000	164.5	-0.061	24.0
23	MSF	0.000	0.0	0.001	54.8	0.000	0.0
24	MF	0.000	0.0	0.004	236.9	0.000	0.0
25	RHO(1)	0.002	214.9	0.000	330.9	-0.002	116.0
26	Q(1)	0.015	177.6	0.013	174.9	-0.002	-2.7
27	T(2)	0.009	7.5	0.000	64.1	-0.009	56.6
28	R(2)	0.001	25.1	0.000	314.3	-0.001	70.8
29	2Q(1)	0.003	229.7	0.000	61.6	-0.003	-168.1
30	P(1)	0.023	181.7	0.025	172.2	0.002	-9.5
31	2SM(2)	0.000	0.0	0.001	115.5	0.000	0.0
32	M(3)	0.009	52.0	0.002	272.7	-0.007	139.3
33	L(2)	0.009	316.0	0.012	247.0	0.003	-69.0
34	2MK(3)	0.008	351.3	0.006	344.5	-0.002	-6.8
35	K(2)	0.032	28.4	0.026	19.8	-0.006	-8.6
36	M(8)	0.000	0.0	0.005	14.1	0.000	0.0
37	MS(4)	0.013	107.9	0.012	26.2	-0.001	-81.7

Station: Providence, RI
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.643	9.5	0.487	357.2	-0.156	12.3
2	S(2)	0.138	33.6	0.103	20.7	-0.035	-12.9
3	N(2)	0.152	354.6	0.119	342.8	-0.033	-11.8
4	K(1)	0.073	169.4	0.086	175.5	0.013	6.1
5	M(4)	0.103	62.1	0.064	332.2	-0.039	89.9
6	O(1)	0.056	202.2	0.064	187.4	0.008	-14.8
7	M(6)	0.027	312.7	0.023	23.8	-0.004	71.1
8	MK(3)	0.016	39.3	0.006	359.4	-0.010	39.9
9	S(4)	0.014	23.8	0.000	68.1	-0.014	44.3
10	MN(4)	0.044	12.7	0.023	302.1	-0.021	70.6
11	NU(2)	0.027	353.0	0.002	175.1	-0.025	-177.9
12	S(6)	0.000	0.0	0.000	11.9	0.000	0.0
13	MU(2)	0.031	358.6	0.009	321.9	-0.022	-36.7
14	2N(2)	0.022	343.2	0.003	276.4	-0.019	-66.8
15	OO(1)	0.002	136.5	0.000	353.2	-0.002	143.3
16	LAMBDA(2)	0.005	346.1	0.002	227.1	-0.003	-119.0
17	S(1)	0.016	125.0	0.000	145.9	-0.016	20.9
18	M(1)	0.005	247.6	0.001	295.6	-0.004	48.0
19	J(1)	0.006	197.1	0.001	281.0	-0.005	83.9
20	MM	0.000	0.0	0.002	175.9	0.000	0.0
21	SSA	0.000	0.0	0.000	336.4	0.000	0.0
22	SA	0.060	131.8	0.000	165.6	-0.060	33.8
23	MSF	0.000	0.0	0.001	57.4	0.000	0.0
24	MF	0.000	0.0	0.004	236.5	0.000	0.0
25	RHO(1)	0.002	216.2	0.000	331.1	-0.002	114.9
26	Q(1)	0.016	179.9	0.014	175.5	-0.002	-4.4
27	T(2)	0.013	14.1	0.000	65.5	-0.013	51.4
28	R(2)	0.004	216.5	0.000	315.6	-0.004	99.1
29	2Q(1)	0.001	234.6	0.000	59.0	-0.001	-175.6
30	P(1)	0.025	182.3	0.025	172.8	0.000	-9.5
31	2SM(2)	0.000	0.0	0.001	120.8	0.000	0.0
32	M(3)	0.012	68.3	0.003	272.9	-0.009	155.4
33	L(2)	0.012	321.4	0.013	251.2	0.001	-70.2
34	2MK(3)	0.012	11.5	0.008	345.3	-0.004	26.2
35	K(2)	0.038	29.7	0.027	21.3	-0.011	-8.4
36	M(8)	0.005	130.7	0.023	23.8	0.018	-106.9
37	MS(4)	0.026	147.4	0.015	28.8	-0.011	-118.6

Station: New London, CT
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.372	58.3	0.407	46.3	0.035	-12.0
2	S(2)	0.068	69.9	0.072	61.7	0.004	-8.2
3	N(2)	0.087	34.6	0.094	22.9	0.007	-11.7
4	K(1)	0.074	178.5	0.095	185.9	0.021	7.4
5	M(4)	0.026	343.7	0.030	330.1	0.004	-13.6
6	O(1)	0.053	209.0	0.068	196.0	0.015	-13.0
7	M(6)	0.012	206.1	0.004	312.0	-0.008	105.9
8	MK(3)	0.005	28.9	0.003	357.2	-0.002	31.7
9	S(4)	0.004	344.1	0.000	21.4	-0.004	37.3
10	MN(4)	0.014	313.3	0.012	302.5	-0.002	-10.8
11	NU(2)	0.017	44.8	0.002	116.7	-0.015	71.9
12	S(6)	0.000	0.0	0.000	285.6	0.000	0.0
13	MU(2)	0.014	347.7	0.011	272.9	-0.003	-74.8
14	2N(2)	0.012	13.4	0.004	233.1	-0.008	140.3
15	OO(1)	0.003	209.8	0.000	14.7	-0.003	164.9
16	LAMBDA(2)	0.006	113.2	0.002	142.2	-0.004	29.0
17	S(1)	0.007	145.5	0.000	176.9	-0.007	31.4
18	M(1)	0.005	253.9	0.001	315.7	-0.004	61.8
19	J(1)	0.006	215.6	0.002	313.5	-0.004	97.9
20	MM	0.000	0.0	0.001	109.1	0.000	0.0
21	SSA	0.018	69.4	0.000	344.2	-0.018	85.2
22	SA	0.055	135.3	0.000	163.8	-0.055	28.5
23	MSF	0.000	0.0	0.002	34.4	0.000	0.0
24	MF	0.000	0.0	0.004	238.3	0.000	0.0
25	RHO(1)	0.002	222.0	0.000	58.3	-0.002	-163.7
26	Q(1)	0.015	193.4	0.014	187.1	-0.001	-6.3
27	T(2)	0.007	52.4	0.000	303.8	-0.007	108.6
28	R(2)	0.001	70.4	0.000	185.8	-0.001	115.4
29	2Q(1)	0.003	233.8	0.000	184.9	-0.003	-48.9
30	P(1)	0.023	189.8	0.027	183.4	0.004	-6.4
31	2SM(2)	0.000	0.0	0.001	357.8	0.000	0.0
32	M(3)	0.004	66.4	0.001	280.7	-0.003	145.7
33	L(2)	0.011	127.1	0.011	158.5	0.000	31.4
34	2MK(3)	0.004	15.2	0.003	344.1	-0.001	31.1
35	K(2)	0.018	70.8	0.021	64.6	0.003	-6.2
36	M(8)	0.000	0.0	0.004	312.0	0.000	0.0
37	MS(4)	0.004	5.7	0.006	14.9	0.002	9.2

Station: Bridgeport, CT
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.991	109.6	0.989	103.2	-0.002	-6.4
2	S(2)	0.157	135.9	0.150	132.4	-0.007	-3.5
3	N(2)	0.200	87.6	0.195	83.3	-0.005	-4.3
4	K(1)	0.097	191.6	0.121	201.9	0.024	10.3
5	M(4)	0.012	127.4	0.027	141.9	0.015	14.5
6	O(1)	0.064	219.5	0.084	209.7	0.020	-9.8
7	M(6)	0.013	353.9	0.002	131.6	-0.011	137.7
8	MK(3)	0.007	198.8	0.007	216.5	0.000	17.7
9	S(4)	0.000	0.0	0.000	188.9	0.000	0.0
10	MN(4)	0.007	97.2	0.011	114.5	0.004	17.3
11	NU(2)	0.045	89.8	0.007	88.3	-0.038	-1.5
12	S(6)	0.000	0.0	0.000	112.1	0.000	0.0
13	MU(2)	0.000	0.0	0.029	250.8	0.000	0.0
14	2N(2)	0.023	65.6	0.010	209.9	-0.013	144.3
15	OO(1)	0.005	228.7	0.001	24.8	-0.004	156.1
16	LAMBDA(2)	0.021	131.1	0.007	115.4	-0.014	-15.7
17	S(1)	0.009	175.5	0.000	195.6	-0.009	20.1
18	M(1)	0.007	264.4	0.001	329.4	-0.006	65.0
19	J(1)	0.006	237.0	0.005	330.7	-0.001	93.7
20	MM	0.000	0.0	0.002	182.8	0.000	0.0
21	SSA	0.022	61.2	0.000	10.4	-0.022	-50.8
22	SA	0.063	132.0	0.000	209.1	-0.063	77.1
23	MSF	0.000	0.0	0.002	32.8	0.000	0.0
24	MF	0.000	0.0	0.004	236.1	0.000	0.0
25	RHO(1)	0.005	258.1	0.000	90.0	-0.005	-168.1
26	Q(1)	0.018	205.7	0.017	204.0	-0.001	-1.7
27	T(2)	0.016	106.4	0.000	286.6	-0.016	179.8
28	R(2)	0.001	136.9	0.001	175.0	0.000	38.1
29	2Q(1)	0.004	238.8	0.000	228.2	-0.004	-10.6
30	P(1)	0.030	204.1	0.034	200.5	0.004	-3.6
31	2SM(2)	0.000	0.0	0.003	344.3	0.000	0.0
32	M(3)	0.004	200.1	0.004	126.6	0.000	-73.5
33	L(2)	0.049	134.1	0.045	134.7	-0.004	0.6
34	2MK(3)	0.005	203.7	0.009	215.4	0.004	11.7
35	K(2)	0.046	134.7	0.045	129.2	-0.001	-5.5
36	M(8)	0.000	0.0	0.002	131.6	0.000	0.0
37	MS(4)	0.000	0.0	0.006	182.3	0.000	0.0

Station: Montauk, NY
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.302	46.8	0.298	47.7	-0.004	0.9
2	S(2)	0.065	56.6	0.058	58.0	-0.007	1.4
3	N(2)	0.079	22.2	0.075	22.3	-0.004	0.1
4	K(1)	0.074	178.7	0.092	189.3	0.018	10.6
5	M(4)	0.023	342.7	0.031	328.0	0.008	-14.7
6	O(1)	0.054	209.8	0.066	199.3	0.012	-10.5
7	M(6)	0.012	160.3	0.004	311.1	-0.008	150.8
8	MK(3)	0.006	16.9	0.004	345.4	-0.002	31.5
9	S(4)	0.003	327.7	0.000	19.8	-0.003	52.1
10	MN(4)	0.013	307.4	0.012	300.2	-0.001	-7.2
11	NU(2)	0.014	33.6	0.003	145.2	-0.011	111.6
12	S(6)	0.000	0.0	0.000	281.4	0.000	0.0
13	MU(2)	0.020	354.5	0.013	298.2	-0.007	-56.3
14	2N(2)	0.012	354.6	0.005	256.6	-0.007	-98.0
15	OO(1)	0.004	184.6	0.000	27.4	-0.004	-157.2
16	LAMBDA(2)	0.004	147.1	0.002	174.2	-0.002	27.1
17	S(1)	0.007	143.6	0.000	181.2	-0.007	37.6
18	M(1)	0.003	223.4	0.001	320.6	-0.002	97.2
19	J(1)	0.006	202.7	0.002	319.9	-0.004	117.2
20	MM	0.000	0.0	0.001	123.5	0.000	0.0
21	SSA	0.034	50.9	0.000	342.0	-0.034	68.9
22	SA	0.069	135.1	0.000	164.3	-0.069	29.2
23	MSF	0.000	0.0	0.002	36.4	0.000	0.0
24	MF	0.000	0.0	0.004	238.4	0.000	0.0
25	RHO(1)	0.004	228.1	0.000	57.0	-0.004	-171.1
26	Q(1)	0.015	192.6	0.014	189.5	-0.001	-3.1
27	T(2)	0.005	41.7	0.000	351.9	-0.005	49.8
28	R(2)	0.001	57.0	0.000	233.1	-0.001	176.1
29	2Q(1)	0.004	199.4	0.000	153.1	-0.004	-46.3
30	P(1)	0.023	193.7	0.026	186.5	0.003	-7.2
31	2SM(2)	0.000	0.0	0.001	36.1	0.000	0.0
32	M(3)	0.004	52.1	0.001	258.3	-0.003	153.8
33	L(2)	0.009	168.3	0.014	194.3	0.005	26.0
34	2MK(3)	0.005	6.2	0.005	335.5	0.000	30.7
35	K(2)	0.019	61.6	0.016	63.7	-0.003	2.1
36	M(8)	0.000	0.0	0.004	311.1	0.000	0.0
37	MS(4)	0.000	0.0	0.006	13.3	0.000	0.0

Station: Kings Point, NY
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	1.142	115.7	1.186	108.2	0.044	-7.5
2	S(2)	0.189	140.7	0.183	138.8	-0.006	-1.9
3	N(2)	0.241	92.6	0.232	89.0	-0.009	-3.6
4	K(1)	0.100	192.0	0.129	203.9	0.029	11.9
5	M(4)	0.036	145.5	0.067	138.5	0.031	-7.0
6	O(1)	0.066	220.6	0.088	211.2	0.022	-9.4
7	M(6)	0.080	159.9	0.004	314.2	-0.076	154.3
8	MK(3)	0.010	202.8	0.013	213.7	0.003	10.9
9	S(4)	0.004	152.3	0.001	198.5	-0.003	46.2
10	MN(4)	0.022	117.2	0.027	114.4	0.005	-2.8
11	NU(2)	0.052	92.0	0.008	88.3	-0.044	-3.7
12	S(6)	0.000	0.0	0.000	261.3	0.000	0.0
13	MU(2)	0.000	0.0	0.035	250.6	0.000	0.0
14	2N(2)	0.030	69.7	0.012	209.2	-0.018	139.5
15	OO(1)	0.007	224.5	0.001	25.3	-0.006	160.8
16	LAMBDA(2)	0.025	141.7	0.008	114.7	-0.017	-27.0
17	S(1)	0.009	121.9	0.000	196.7	-0.009	74.8
18	M(1)	0.005	228.4	0.001	330.9	-0.004	102.5
19	J(1)	0.008	252.1	0.005	332.4	-0.003	80.3
20	MM	0.000	0.0	0.003	191.3	0.000	0.0
21	SSA	0.024	60.1	0.000	110.3	-0.024	50.2
22	SA	0.065	135.5	0.000	278.4	-0.065	142.9
23	MSF	0.000	0.0	0.001	35.8	0.000	0.0
24	MF	0.000	0.0	0.005	234.8	0.000	0.0
25	RHO(1)	0.004	204.5	0.000	89.7	-0.004	-114.8
26	Q(1)	0.017	212.2	0.018	205.9	0.001	-6.3
27	T(2)	0.015	112.3	0.000	287.4	-0.015	175.1
28	R(2)	0.002	141.8	0.002	176.0	0.000	34.2
29	2Q(1)	0.002	249.1	0.000	228.8	-0.002	-20.3
30	P(1)	0.032	211.1	0.036	202.7	0.004	-8.4
31	2SM(2)	0.003	75.1	0.004	343.8	0.001	91.3
32	M(3)	0.007	181.4	0.006	127.9	-0.001	-53.5
33	L(2)	0.070	140.4	0.054	134.6	-0.016	-5.8
34	2MK(3)	0.009	202.4	0.015	214.0	0.006	11.6
35	K(2)	0.053	141.8	0.054	135.1	0.001	-6.7
36	M(8)	0.007	155.0	0.004	314.2	-0.003	159.2
37	MS(4)	0.008	160.9	0.016	174.2	0.008	13.3

Station: The Battery, NY
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.667	19.0	0.706	351.0	0.039	28.0
2	S(2)	0.128	43.3	0.135	19.0	0.007	-24.3
3	N(2)	0.155	0.0	0.162	335.5	0.007	24.5
4	K(1)	0.101	179.6	0.102	175.7	0.001	-3.9
5	M(4)	0.025	258.2	0.017	251.7	-0.008	-6.5
6	O(1)	0.052	176.3	0.071	175.4	0.019	-0.9
7	M(6)	0.026	151.2	0.001	20.2	-0.025	-131.0
8	MK(3)	0.008	71.6	0.007	12.6	-0.001	-59.0
9	S(4)	0.010	18.8	0.001	27.7	-0.009	8.9
10	MN(4)	0.012	262.7	0.007	283.8	-0.005	21.1
11	NU(2)	0.026	357.8	0.001	212.5	-0.025	-145.3
12	S(6)	0.000	0.0	0.000	97.7	0.000	0.0
13	MU(2)	0.021	10.0	0.008	34.5	-0.013	24.5
14	2N(2)	0.020	347.7	0.003	357.0	-0.017	9.3
15	OO(1)	0.005	220.1	0.000	335.0	-0.005	114.9
16	LAMBDA(2)	0.008	25.0	0.003	268.0	-0.005	117.0
17	S(1)	0.013	128.0	0.000	244.2	-0.013	116.2
18	M(1)	0.003	229.8	0.001	38.7	-0.002	168.9
19	J(1)	0.005	211.3	0.001	340.4	-0.004	129.1
20	MM	0.000	0.0	0.002	183.8	0.000	0.0
21	SSA	0.030	47.4	0.000	331.5	-0.030	75.9
22	SA	0.070	129.9	0.000	162.5	-0.070	32.6
23	MSF	0.000	0.0	0.000	136.1	0.000	0.0
24	MF	0.000	0.0	0.005	235.0	0.000	0.0
25	RHO(1)	0.002	174.9	0.000	54.3	-0.002	-120.6
26	Q(1)	0.011	190.7	0.013	171.5	0.002	-19.2
27	T(2)	0.011	30.5	0.000	76.1	-0.011	45.6
28	R(2)	0.001	44.4	0.000	318.8	-0.001	85.6
29	2Q(1)	0.001	172.9	0.000	157.4	-0.001	-15.5
30	P(1)	0.031	183.9	0.030	172.3	-0.001	-11.6
31	2SM(2)	0.000	0.0	0.001	133.2	0.000	0.0
32	M(3)	0.010	68.0	0.002	291.0	-0.008	137.0
33	L(2)	0.025	27.8	0.013	282.5	-0.012	105.3
34	2MK(3)	0.008	49.3	0.007	5.4	-0.001	-43.9
35	K(2)	0.035	43.9	0.036	20.2	0.001	-23.7
36	M(8)	0.004	326.7	0.001	20.2	-0.003	53.5
37	MS(4)	0.015	247.2	0.009	314.9	-0.006	67.7

Station: Bergen Point West Reach, NY
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.745	21.2	0.711	351.2	-0.034	30.0
2	S(2)	0.143	51.2	0.136	19.2	-0.007	-32.0
3	N(2)	0.166	5.1	0.163	335.8	-0.003	29.3
4	K(1)	0.106	182.9	0.103	175.8	-0.003	-7.1
5	M(4)	0.036	292.4	0.018	251.9	-0.018	-40.5
6	O(1)	0.053	179.3	0.071	175.5	0.018	-3.8
7	M(6)	0.021	174.3	0.002	20.0	-0.019	-154.3
8	MK(3)	0.010	72.8	0.007	13.1	-0.003	-59.7
9	S(4)	0.014	44.5	0.001	27.4	-0.013	-17.1
10	MN(4)	0.017	291.5	0.007	283.0	-0.010	-8.5
11	NU(2)	0.034	1.6	0.001	213.2	-0.033	148.4
12	S(6)	0.000	0.0	0.000	100.6	0.000	0.0
13	MU(2)	0.029	38.1	0.008	35.3	-0.021	-2.8
14	2N(2)	0.021	345.0	0.003	357.8	-0.018	12.8
15	OO(1)	0.003	204.5	0.000	335.3	-0.003	130.8
16	LAMBDA(2)	0.013	2.3	0.003	268.6	-0.010	93.7
17	S(1)	0.013	139.6	0.000	243.6	-0.013	104.0
18	M(1)	0.007	245.9	0.001	38.5	-0.006	152.6
19	J(1)	0.005	204.0	0.001	339.5	-0.004	135.5
20	MM	0.000	0.0	0.002	183.9	0.000	0.0
21	SSA	0.031	58.4	0.000	331.1	-0.031	87.3
22	SA	0.074	129.2	0.000	162.7	-0.074	33.5
23	MSF	0.000	0.0	0.000	138.8	0.000	0.0
24	MF	0.000	0.0	0.005	235.0	0.000	0.0
25	RHO(1)	0.003	181.5	0.000	54.2	-0.003	-127.3
26	Q(1)	0.011	191.3	0.013	171.6	0.002	-19.7
27	T(2)	0.013	30.4	0.000	76.4	-0.013	46.0
28	R(2)	0.005	270.2	0.000	319.1	-0.005	48.9
29	2Q(1)	0.001	175.7	0.000	157.8	-0.001	-17.9
30	P(1)	0.033	181.8	0.030	172.4	-0.003	-9.4
31	2SM(2)	0.000	0.0	0.001	133.7	0.000	0.0
32	M(3)	0.012	86.6	0.002	291.3	-0.010	155.3
33	L(2)	0.026	10.2	0.014	283.1	-0.012	87.1
34	2MK(3)	0.009	46.1	0.007	5.7	-0.002	-40.4
35	K(2)	0.040	47.9	0.036	20.4	-0.004	-27.5
36	M(8)	0.000	0.0	0.002	20.0	0.000	0.0
37	MS(4)	0.018	284.9	0.010	314.9	-0.008	30.0

Station: Sandy Hook, NJ
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.688	6.0	0.715	354.2	0.027	11.8
2	S(2)	0.134	32.6	0.137	22.5	0.003	-10.1
3	N(2)	0.158	348.6	0.164	338.8	0.006	-9.8
4	K(1)	0.103	175.7	0.103	177.2	0.000	1.5
5	M(4)	0.016	269.7	0.021	260.7	0.005	-9.0
6	O(1)	0.054	172.5	0.071	176.7	0.017	4.2
7	M(6)	0.017	83.8	0.003	38.4	-0.014	-45.4
8	MK(3)	0.005	52.4	0.007	21.9	0.002	-30.5
9	S(4)	0.010	11.4	0.001	27.8	-0.009	16.4
10	MN(4)	0.008	275.8	0.009	284.4	0.001	8.6
11	NU(2)	0.029	345.7	0.001	217.0	-0.028	-128.7
12	S(6)	0.000	0.0	0.000	116.5	0.000	0.0
13	MU(2)	0.024	14.5	0.008	40.2	-0.016	25.7
14	2N(2)	0.021	336.8	0.003	3.1	-0.018	26.3
15	OO(1)	0.005	218.7	0.000	339.5	-0.005	120.8
16	LAMBDA(2)	0.008	359.7	0.003	273.2	-0.005	-86.5
17	S(1)	0.010	124.9	0.000	243.3	-0.010	118.4
18	M(1)	0.004	220.8	0.001	39.7	-0.003	178.9
19	J(1)	0.005	209.2	0.001	340.0	-0.004	130.8
20	MM	0.000	0.0	0.003	184.6	0.000	0.0
21	SSA	0.028	42.9	0.000	158.1	-0.028	115.2
22	SA	0.067	129.1	0.000	163.1	-0.067	34.0
23	MSF	0.000	0.0	0.000	150.0	0.000	0.0
24	MF	0.000	0.0	0.005	235.0	0.000	0.0
25	RHO(1)	0.002	171.1	0.000	51.8	-0.002	-119.3
26	Q(1)	0.011	183.1	0.013	173.0	0.002	-10.1
27	T(2)	0.010	17.4	0.000	79.8	-0.010	62.4
28	R(2)	0.001	33.8	0.000	322.0	-0.001	71.8
29	2Q(1)	0.002	169.2	0.000	160.5	-0.002	-8.7
30	P(1)	0.031	180.2	0.030	173.8	-0.001	-6.4
31	2SM(2)	0.000	0.0	0.002	137.7	0.000	0.0
32	M(3)	0.011	56.4	0.002	297.8	-0.009	118.6
33	L(2)	0.027	359.8	0.014	287.2	-0.013	-72.6
34	2MK(3)	0.008	33.8	0.007	12.7	-0.001	-21.1
35	K(2)	0.038	31.5	0.036	23.8	-0.002	-7.7
36	M(8)	0.000	0.0	0.003	38.4	0.000	0.0
37	MS(4)	0.012	224.3	0.011	319.3	-0.001	95.0

Station: Atlantic City, NJ
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.594	355.4	0.572	352.1	-0.022	-3.3
2	S(2)	0.116	17.8	0.104	18.7	-0.012	0.9
3	N(2)	0.141	335.9	0.131	334.4	-0.010	-1.5
4	K(1)	0.110	183.2	0.098	179.5	-0.012	-3.7
5	M(4)	0.010	181.7	0.014	183.4	0.004	1.7
6	O(1)	0.075	166.1	0.079	177.4	0.004	11.3
7	M(6)	0.006	84.8	0.003	122.0	-0.003	37.2
8	MK(3)	0.000	0.0	0.002	37.5	0.000	0.0
9	S(4)	0.000	0.0	0.000	257.1	0.000	0.0
10	MN(4)	0.006	156.9	0.005	148.6	-0.001	-8.3
11	NU(2)	0.026	336.6	0.001	223.9	-0.025	-112.7
12	S(6)	0.000	0.0	0.000	232.5	0.000	0.0
13	MU(2)	0.020	341.1	0.002	33.8	-0.018	52.7
14	2N(2)	0.020	319.5	0.001	354.5	-0.019	35.0
15	OO(1)	0.003	203.7	0.000	325.5	-0.003	121.8
16	LAMBDA(2)	0.005	13.6	0.001	271.5	-0.004	102.1
17	S(1)	0.005	114.7	0.000	333.3	-0.005	141.4
18	M(1)	0.004	214.4	0.001	125.3	-0.003	-89.1
19	J(1)	0.006	174.2	0.000	135.5	-0.006	-38.7
20	MM	0.000	0.0	0.002	179.0	0.000	0.0
21	SSA	0.030	40.0	0.000	333.5	-0.030	66.5
22	SA	0.071	145.5	0.000	159.1	-0.071	13.6
23	MSF	0.000	0.0	0.001	60.4	0.000	0.0
24	MF	0.000	0.0	0.004	237.8	0.000	0.0
25	RHO(1)	0.003	158.8	0.000	115.5	-0.003	-43.3
26	Q(1)	0.012	168.7	0.013	166.5	0.001	-2.2
27	T(2)	0.009	0.2	0.000	87.4	-0.009	87.2
28	R(2)	0.001	18.7	0.000	339.4	-0.001	39.3
29	2Q(1)	0.002	149.0	0.000	190.5	-0.002	41.5
30	P(1)	0.033	178.5	0.029	175.6	-0.004	-2.9
31	2SM(2)	0.000	0.0	0.000	149.2	0.000	0.0
32	M(3)	0.006	37.5	0.001	316.9	-0.005	80.6
33	L(2)	0.019	6.3	0.005	291.9	-0.014	74.4
34	2MK(3)	0.003	33.2	0.003	29.2	0.000	-4.0
35	K(2)	0.031	18.7	0.028	19.9	-0.003	1.2
36	M(8)	0.000	0.0	0.003	122.0	0.000	0.0
37	MS(4)	0.000	0.0	0.003	228.5	0.000	0.0

Station: Cape May, NJ
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.714	28.6	0.709	26.5	-0.005	-2.1
2	S(2)	0.125	55.3	0.110	56.8	-0.015	1.5
3	N(2)	0.159	9.7	0.145	9.1	-0.014	-0.6
4	K(1)	0.105	200.4	0.103	192.4	-0.002	-8.0
5	M(4)	0.010	101.0	0.030	222.8	0.020	121.8
6	O(1)	0.084	185.6	0.086	193.1	0.002	7.5
7	M(6)	0.008	20.8	0.003	307.9	-0.005	72.9
8	MK(3)	0.000	0.0	0.002	61.6	0.000	0.0
9	S(4)	0.000	0.0	0.001	340.7	0.000	0.0
10	MN(4)	0.003	115.3	0.013	211.3	0.010	96.0
11	NU(2)	0.032	7.4	0.004	343.1	-0.028	24.3
12	S(6)	0.000	0.0	0.000	329.8	0.000	0.0
13	MU(2)	0.012	40.5	0.016	150.1	0.004	109.6
14	2N(2)	0.021	352.3	0.005	112.1	-0.016	119.8
15	OO(1)	0.004	215.0	0.000	1.4	-0.004	146.4
16	LAMBDA(2)	0.010	41.6	0.003	30.2	-0.007	-11.4
17	S(1)	0.009	134.7	0.000	352.9	-0.009	141.8
18	M(1)	0.004	243.4	0.001	200.0	-0.003	-43.4
19	J(1)	0.006	197.1	0.001	299.5	-0.005	102.4
20	MM	0.000	0.0	0.003	34.7	0.000	0.0
21	SSA	0.032	40.3	0.000	8.3	-0.032	-32.0
22	SA	0.058	147.7	0.000	146.8	-0.058	-0.9
23	MSF	0.000	0.0	0.004	32.3	0.000	0.0
24	MF	0.000	0.0	0.004	248.0	0.000	0.0
25	RHO(1)	0.003	179.3	0.000	122.8	-0.003	-56.5
26	Q(1)	0.013	184.1	0.015	181.3	0.002	-2.8
27	T(2)	0.012	33.7	0.000	188.5	-0.012	154.8
28	R(2)	0.001	56.5	0.001	77.9	0.000	21.4
29	2Q(1)	0.002	171.0	0.000	221.6	-0.002	50.6
30	P(1)	0.036	199.2	0.030	189.6	-0.006	-9.6
31	2SM(2)	0.000	0.0	0.002	258.3	0.000	0.0
32	M(3)	0.005	94.1	0.002	1.7	-0.003	-92.4
33	L(2)	0.037	43.9	0.024	41.7	-0.013	-2.2
34	2MK(3)	0.004	110.5	0.004	80.1	0.000	-30.4
35	K(2)	0.033	54.5	0.031	53.5	-0.002	-1.0
36	M(8)	0.000	0.0	0.003	307.9	0.000	0.0
37	MS(4)	0.005	128.1	0.009	268.7	0.004	140.6

Station: Philadelphia, PA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.839	185.8	0.530	353.9	-0.309	168.1
2	S(2)	0.093	225.5	0.094	19.6	0.001	154.1
3	N(2)	0.146	168.7	0.122	335.4	-0.024	166.7
4	K(1)	0.102	283.7	0.096	179.4	-0.006	-104.3
5	M(4)	0.084	256.4	0.011	194.6	-0.073	-61.8
6	O(1)	0.081	263.8	0.077	181.9	-0.004	-81.9
7	M(6)	0.052	248.4	0.001	132.7	-0.051	-115.7
8	MK(3)	0.022	332.4	0.001	45.2	-0.021	72.8
9	S(4)	0.000	0.0	0.000	281.7	0.000	0.0
10	MN(4)	0.033	240.0	0.004	166.9	-0.029	-73.1
11	NU(2)	0.047	163.2	0.000	210.5	-0.047	47.3
12	S(6)	0.000	0.0	0.000	272.4	0.000	0.0
13	MU(2)	0.045	309.1	0.001	18.3	-0.044	69.2
14	2N(2)	0.015	148.6	0.000	331.3	-0.015	177.3
15	OO(1)	0.003	303.5	0.000	339.0	-0.003	35.5
16	LAMBDA(2)	0.026	196.2	0.000	267.3	-0.026	71.1
17	S(1)	0.024	240.3	0.000	10.0	-0.024	129.7
18	M(1)	0.005	352.1	0.000	158.1	-0.005	166.0
19	J(1)	0.005	311.7	0.000	212.9	-0.005	-98.8
20	MM	0.029	27.0	0.002	182.3	-0.027	155.3
21	SSA	0.091	63.0	0.000	350.2	-0.091	72.8
22	SA	0.150	119.2	0.000	162.3	-0.150	43.1
23	MSF	0.027	17.7	0.001	71.0	-0.026	53.3
24	MF	0.000	0.0	0.004	236.4	0.000	0.0
25	RHO(1)	0.003	264.2	0.000	137.3	-0.003	-126.9
26	Q(1)	0.012	271.9	0.014	169.0	0.002	-102.9
27	T(2)	0.009	221.5	0.000	88.9	-0.009	-132.6
28	R(2)	0.001	227.2	0.000	344.4	-0.001	117.2
29	2Q(1)	0.002	244.1	0.000	210.5	-0.002	-33.6
30	P(1)	0.031	279.1	0.029	175.7	-0.002	-103.4
31	2SM(2)	0.003	119.8	0.000	155.1	-0.003	35.3
32	M(3)	0.004	262.8	0.001	326.6	-0.003	63.8
33	L(2)	0.093	197.3	0.002	290.4	-0.091	93.1
34	2MK(3)	0.023	295.6	0.002	38.1	-0.021	102.5
35	K(2)	0.030	221.7	0.026	21.0	-0.004	159.3
36	M(8)	0.016	335.6	0.001	132.7	-0.015	157.1
37	MS(4)	0.022	305.2	0.003	236.9	-0.019	-68.3

Station: Reedy Point, DE
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.773	109.0	1.038	76.2	0.265	-32.8
2	S(2)	0.100	143.2	0.152	120.8	0.052	-22.4
3	N(2)	0.141	93.4	0.194	67.6	0.053	-25.8
4	K(1)	0.089	244.4	0.110	216.4	0.021	-28.0
5	M(4)	0.055	132.5	0.132	85.9	0.077	-46.6
6	O(1)	0.068	224.3	0.089	215.0	0.021	-9.3
7	M(6)	0.033	51.8	0.023	281.0	-0.010	130.8
8	MK(3)	0.018	218.2	0.019	200.7	0.001	-17.5
9	S(4)	0.000	0.0	0.003	207.1	0.000	0.0
10	MN(4)	0.024	115.3	0.051	77.4	0.027	-37.9
11	NU(2)	0.041	87.7	0.015	3.6	-0.026	-84.1
12	S(6)	0.000	0.0	0.000	221.5	0.000	0.0
13	MU(2)	0.032	221.8	0.054	175.0	0.022	-46.8
14	2N(2)	0.016	76.1	0.018	138.0	0.002	61.9
15	OO(1)	0.003	264.4	0.001	44.6	-0.002	140.2
16	LAMBDA(2)	0.022	114.7	0.012	67.2	-0.010	-47.5
17	S(1)	0.022	200.8	0.000	237.5	-0.022	36.7
18	M(1)	0.005	302.6	0.000	170.0	-0.005	-132.6
19	J(1)	0.004	265.1	0.003	346.0	-0.001	80.9
20	MM	0.000	0.0	0.000	98.1	0.000	0.0
21	SSA	0.037	43.6	0.000	21.0	-0.037	-22.6
22	SA	0.096	120.1	0.000	337.5	-0.096	142.6
23	MSF	0.000	0.0	0.002	23.4	0.000	0.0
24	MF	0.000	0.0	0.004	255.0	0.000	0.0
25	RHO(1)	0.002	215.6	0.001	116.1	-0.001	-99.5
26	Q(1)	0.011	233.4	0.015	208.9	0.004	-24.5
27	T(2)	0.009	135.7	0.001	219.8	-0.008	84.1
28	R(2)	0.001	144.6	0.002	103.0	0.001	-41.6
29	2Q(1)	0.002	204.3	0.001	235.5	-0.001	31.2
30	P(1)	0.030	240.6	0.031	216.4	0.001	-24.2
31	2SM(2)	0.000	0.0	0.005	296.0	0.000	0.0
32	M(3)	0.003	184.8	0.005	82.2	0.002	-102.6
33	L(2)	0.075	120.0	0.079	71.5	0.004	-48.5
34	2MK(3)	0.019	185.9	0.018	182.7	-0.001	-3.2
35	K(2)	0.032	142.0	0.038	112.1	0.006	-29.9
36	M(8)	0.007	38.8	0.023	281.0	0.016	117.8
37	MS(4)	0.016	179.8	0.042	133.7	0.026	-46.1

Station: Lewes, DE
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.616	31.1	0.626	28.7	0.010	-2.4
2	S(2)	0.108	56.8	0.098	55.7	-0.010	-1.1
3	N(2)	0.134	10.6	0.131	8.7	-0.003	-1.9
4	K(1)	0.103	201.7	0.101	193.4	-0.002	-8.3
5	M(4)	0.013	186.3	0.030	212.4	0.017	26.1
6	O(1)	0.083	188.6	0.084	194.1	0.001	5.5
7	M(6)	0.006	349.5	0.004	293.9	-0.002	-55.6
8	MK(3)	0.000	0.0	0.001	44.8	0.000	0.0
9	S(4)	0.000	0.0	0.001	323.4	0.000	0.0
10	MN(4)	0.007	177.8	0.012	199.3	0.005	21.5
11	NU(2)	0.028	11.4	0.003	6.8	-0.025	-4.6
12	S(6)	0.000	0.0	0.000	294.7	0.000	0.0
13	MU(2)	0.012	16.9	0.011	172.3	-0.001	155.4
14	2N(2)	0.016	356.6	0.004	133.6	-0.012	137.0
15	OO(1)	0.004	239.3	0.000	6.7	-0.004	127.4
16	LAMBDA(2)	0.009	55.0	0.002	51.6	-0.007	-3.4
17	S(1)	0.008	133.1	0.000	7.9	-0.008	-125.2
18	M(1)	0.004	221.4	0.001	195.0	-0.003	-26.4
19	J(1)	0.007	194.7	0.001	296.0	-0.006	101.3
20	MM	0.000	0.0	0.002	46.2	0.000	0.0
21	SSA	0.031	41.3	0.000	7.6	-0.031	-33.7
22	SA	0.052	140.5	0.000	148.7	-0.052	8.2
23	MSF	0.000	0.0	0.003	34.5	0.000	0.0
24	MF	0.000	0.0	0.004	244.7	0.000	0.0
25	RHO(1)	0.003	177.4	0.000	132.6	-0.003	-44.8
26	Q(1)	0.013	182.9	0.014	181.0	0.001	-1.9
27	T(2)	0.011	30.5	0.000	207.8	-0.011	177.3
28	R(2)	0.003	280.3	0.001	99.0	-0.002	178.7
29	2Q(1)	0.002	175.5	0.000	227.5	-0.002	52.0
30	P(1)	0.034	199.1	0.029	190.1	-0.005	-9.0
31	2SM(2)	0.000	0.0	0.001	279.7	0.000	0.0
32	M(3)	0.003	110.0	0.002	18.3	-0.001	-91.7
33	L(2)	0.020	48.0	0.016	63.2	-0.004	15.2
34	2MK(3)	0.000	0.0	0.003	96.2	0.000	0.0
35	K(2)	0.030	51.9	0.028	54.2	-0.002	2.3
36	M(8)	0.000	0.0	0.004	293.9	0.000	0.0
37	MS(4)	0.004	205.9	0.009	255.5	0.005	49.6

Station: Ocean City Inlet, MD
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.322	8.2	0.485	357.8	0.163	10.4
2	S(2)	0.058	30.6	0.085	22.6	0.027	-8.0
3	N(2)	0.074	348.1	0.113	338.6	0.039	-9.5
4	K(1)	0.056	208.3	0.091	182.2	0.035	-26.1
5	M(4)	0.023	168.2	0.016	210.7	-0.007	42.5
6	O(1)	0.054	199.6	0.077	187.6	0.023	-12.0
7	M(6)	0.000	0.0	0.001	51.5	0.000	0.0
8	MK(3)	0.006	356.8	0.001	25.1	-0.005	28.3
9	S(4)	0.003	212.2	0.000	286.5	-0.003	74.3
10	MN(4)	0.010	155.3	0.007	186.1	-0.003	30.8
11	NU(2)	0.014	350.9	0.000	127.0	-0.014	136.1
12	S(6)	0.000	0.0	0.000	340.2	0.000	0.0
13	MU(2)	0.009	344.5	0.001	291.8	-0.008	-52.7
14	2N(2)	0.009	326.8	0.000	246.5	-0.009	-80.3
15	OO(1)	0.002	216.9	0.000	325.3	-0.002	108.4
16	LAMBDA(2)	0.003	35.3	0.000	220.4	-0.003	174.9
17	S(1)	0.003	135.0	0.000	59.7	-0.003	-75.3
18	M(1)	0.004	203.8	0.001	216.8	-0.003	13.0
19	J(1)	0.003	190.2	0.001	235.0	-0.002	44.8
20	MM	0.000	0.0	0.002	180.2	0.000	0.0
21	SSA	0.000	0.0	0.000	341.7	0.000	0.0
22	SA	0.000	0.0	0.000	164.0	0.000	0.0
23	MSF	0.000	0.0	0.001	59.8	0.000	0.0
24	MF	0.000	0.0	0.004	236.4	0.000	0.0
25	RHO(1)	0.002	195.8	0.000	192.2	-0.002	-3.6
26	Q(1)	0.007	186.9	0.014	170.3	0.007	-16.6
27	T(2)	0.006	14.8	0.000	63.1	-0.006	48.3
28	R(2)	0.000	31.6	0.000	284.9	0.000	0.0
29	2Q(1)	0.001	190.9	0.000	254.2	-0.001	63.3
30	P(1)	0.020	200.3	0.027	178.5	0.007	-21.8
31	2SM(2)	0.000	0.0	0.000	105.7	0.000	0.0
32	M(3)	0.000	0.0	0.001	347.1	0.000	0.0
33	L(2)	0.008	13.5	0.002	227.2	-0.006	146.3
34	2MK(3)	0.006	357.7	0.001	51.6	-0.005	53.9
35	K(2)	0.015	28.3	0.023	24.6	0.008	-3.7
36	M(8)	0.000	0.0	0.001	51.5	0.000	0.0
37	MS(4)	0.005	179.8	0.004	246.0	-0.001	66.2

Station: Cambridge, MD
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.239	263.2	0.169	230.4	-0.070	-32.8
2	S(2)	0.036	285.6	0.023	261.8	-0.013	-23.8
3	N(2)	0.047	240.6	0.033	209.0	-0.014	-31.6
4	K(1)	0.050	340.4	0.051	325.7	0.001	-14.7
5	M(4)	0.011	90.5	0.009	5.1	-0.002	-85.4
6	O(1)	0.039	355.9	0.040	323.4	0.001	-32.5
7	M(6)	0.000	0.0	0.002	193.2	0.000	0.0
8	MK(3)	0.005	82.0	0.004	340.2	-0.001	101.8
9	S(4)	0.000	0.0	0.000	85.6	0.000	0.0
10	MN(4)	0.004	58.1	0.004	346.3	0.000	71.8
11	NU(2)	0.011	245.1	0.001	226.7	-0.010	-18.4
12	S(6)	0.000	0.0	0.000	354.3	0.000	0.0
13	MU(2)	0.000	0.0	0.005	22.1	0.000	0.0
14	2N(2)	0.005	222.8	0.001	314.0	-0.004	91.2
15	OO(1)	0.002	324.8	0.000	238.5	-0.002	-86.3
16	LAMBDA(2)	0.006	287.0	0.002	236.9	-0.004	-50.1
17	S(1)	0.019	305.8	0.000	54.3	-0.019	108.5
18	M(1)	0.003	348.0	0.001	167.1	-0.002	179.1
19	J(1)	0.003	337.2	0.004	159.7	0.001	-177.5
20	MM	0.000	0.0	0.009	32.8	0.000	0.0
21	SSA	0.033	40.2	0.002	13.5	-0.031	-26.7
22	SA	0.086	133.4	0.000	127.1	-0.086	-6.3
23	MSF	0.000	0.0	0.008	52.5	0.000	0.0
24	MF	0.000	0.0	0.006	344.2	0.000	0.0
25	RHO(1)	0.002	2.4	0.000	274.7	-0.002	87.7
26	Q(1)	0.007	329.6	0.006	315.9	-0.001	-13.7
27	T(2)	0.004	269.3	0.000	39.1	-0.004	129.8
28	R(2)	0.000	286.6	0.000	289.0	0.000	0.0
29	2Q(1)	0.001	11.2	0.000	57.6	-0.001	46.4
30	P(1)	0.020	336.3	0.013	319.0	-0.007	-17.3
31	2SM(2)	0.000	0.0	0.001	105.3	0.000	0.0
32	M(3)	0.000	0.0	0.003	241.3	0.000	0.0
33	L(2)	0.019	289.7	0.008	261.5	-0.011	-28.2
34	2MK(3)	0.005	79.6	0.007	330.9	0.002	108.7
35	K(2)	0.012	283.8	0.008	256.7	-0.004	-27.1
36	M(8)	0.000	0.0	0.002	193.2	0.000	0.0
37	MS(4)	0.003	129.7	0.003	47.9	0.000	-81.8

Station: Baltimore, MD
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.159	337.0	0.232	314.6	0.073	-22.4
2	S(2)	0.023	8.1	0.027	345.9	0.004	22.2
3	N(2)	0.034	314.2	0.041	287.4	0.007	-26.8
4	K(1)	0.069	8.0	0.062	352.7	-0.007	15.3
5	M(4)	0.008	246.0	0.010	160.0	0.002	-86.0
6	O(1)	0.056	15.0	0.047	347.7	-0.009	27.3
7	M(6)	0.000	0.0	0.000	171.1	0.000	0.0
8	MK(3)	0.005	176.7	0.004	109.3	-0.001	-67.4
9	S(4)	0.000	0.0	0.000	240.1	0.000	0.0
10	MN(4)	0.003	215.5	0.004	138.2	0.001	-77.3
11	NU(2)	0.007	316.7	0.003	322.1	-0.004	5.4
12	S(6)	0.000	0.0	0.000	218.0	0.000	0.0
13	MU(2)	0.000	0.0	0.011	108.5	0.000	0.0
14	2N(2)	0.004	288.0	0.003	49.3	-0.001	121.3
15	OO(1)	0.005	94.9	0.001	259.7	-0.004	164.8
16	LAMBDA(2)	0.004	7.4	0.003	325.0	-0.001	42.4
17	S(1)	0.021	292.9	0.000	70.4	-0.021	137.5
18	M(1)	0.004	11.4	0.001	184.0	-0.003	172.6
19	J(1)	0.003	319.2	0.005	181.9	0.002	-137.3
20	MM	0.000	0.0	0.009	34.0	0.000	0.0
21	SSA	0.032	53.2	0.002	16.1	-0.030	-37.1
22	SA	0.108	127.9	0.000	124.2	-0.108	-3.7
23	MSF	0.000	0.0	0.008	54.1	0.000	0.0
24	MF	0.000	0.0	0.006	345.1	0.000	0.0
25	RHO(1)	0.002	17.9	0.001	294.1	-0.001	83.8
26	Q(1)	0.012	342.2	0.007	342.9	-0.005	0.7
27	T(2)	0.001	6.8	0.000	159.3	-0.001	152.5
28	R(2)	0.000	9.3	0.000	53.9	0.000	0.0
29	2Q(1)	0.002	21.8	0.001	76.2	-0.001	54.4
30	P(1)	0.022	1.3	0.016	346.0	-0.006	15.3
31	2SM(2)	0.000	0.0	0.001	202.2	0.000	0.0
32	M(3)	0.000	0.0	0.003	3.6	0.000	0.0
33	L(2)	0.007	355.7	0.017	1.2	0.010	5.5
34	2MK(3)	0.005	170.1	0.007	94.4	0.002	-75.7
35	K(2)	0.009	6.3	0.010	339.8	0.001	26.5
36	M(8)	0.000	0.0	0.000	171.1	0.000	0.0
37	MS(4)	0.000	0.0	0.002	203.4	0.000	0.0

Station: Annapolis, MD
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.139	291.6	0.174	285.0	0.035	-6.6
2	S(2)	0.022	319.5	0.022	313.5	0.000	-6.0
3	N(2)	0.029	270.5	0.033	258.3	0.004	-12.2
4	K(1)	0.059	356.7	0.057	342.6	-0.002	-14.1
5	M(4)	0.004	58.3	0.005	88.7	0.001	30.4
6	O(1)	0.048	6.0	0.043	338.4	-0.005	27.6
7	M(6)	0.003	159.6	0.000	345.3	-0.003	174.3
8	MK(3)	0.000	0.0	0.003	52.7	0.000	0.0
9	S(4)	0.000	0.0	0.000	164.0	0.000	0.0
10	MN(4)	0.000	0.0	0.002	68.4	0.000	0.0
11	NU(2)	0.006	268.5	0.002	309.3	-0.004	40.8
12	S(6)	0.000	0.0	0.000	104.3	0.000	0.0
13	MU(2)	0.000	0.0	0.007	88.0	0.000	0.0
14	2N(2)	0.004	246.7	0.002	25.9	-0.002	139.2
15	OO(1)	0.002	347.3	0.001	253.3	-0.001	-94.0
16	LAMBDA(2)	0.003	318.0	0.002	294.9	-0.001	-23.1
17	S(1)	0.020	290.5	0.000	65.3	-0.020	134.8
18	M(1)	0.003	1.2	0.001	179.0	-0.002	177.8
19	J(1)	0.003	340.9	0.004	174.5	0.001	-166.4
20	MM	0.000	0.0	0.009	33.4	0.000	0.0
21	SSA	0.036	44.5	0.002	15.1	-0.034	-29.4
22	SA	0.103	128.4	0.000	125.6	-0.103	-2.8
23	MSF	0.000	0.0	0.008	53.3	0.000	0.0
24	MF	0.000	0.0	0.006	344.9	0.000	0.0
25	RHO(1)	0.004	29.0	0.000	287.4	-0.004	101.6
26	Q(1)	0.008	331.6	0.006	332.3	-0.002	0.7
27	T(2)	0.001	318.3	0.000	134.4	-0.001	176.1
28	R(2)	0.000	320.6	0.000	32.8	0.000	0.0
29	2Q(1)	0.001	15.1	0.000	69.5	-0.001	54.4
30	P(1)	0.020	348.8	0.014	335.8	-0.006	-13.0
31	2SM(2)	0.000	0.0	0.001	167.3	0.000	0.0
32	M(3)	0.000	0.0	0.002	306.6	0.000	0.0
33	L(2)	0.010	308.1	0.010	335.2	0.000	27.1
34	2MK(3)	0.000	0.0	0.005	37.3	0.000	0.0
35	K(2)	0.006	317.9	0.008	310.5	0.002	-7.4
36	M(8)	0.000	0.0	0.000	345.3	0.000	0.0
37	MS(4)	0.000	0.0	0.001	130.5	0.000	0.0

Station: Solomons Island, MD
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.171	198.8	0.152	185.6	-0.019	-13.2
2	S(2)	0.026	225.9	0.021	217.3	-0.005	-8.6
3	N(2)	0.036	172.3	0.029	166.1	-0.007	-6.2
4	K(1)	0.027	315.6	0.041	311.3	0.014	-4.3
5	M(4)	0.005	276.5	0.006	278.3	0.001	1.8
6	O(1)	0.023	332.4	0.033	310.8	0.010	-21.6
7	M(6)	0.003	301.2	0.001	358.8	-0.002	57.6
8	MK(3)	0.003	331.8	0.002	270.1	-0.001	-61.7
9	S(4)	0.000	0.0	0.000	353.9	0.000	0.0
10	MN(4)	0.000	0.0	0.003	257.8	0.000	0.0
11	NU(2)	0.008	177.8	0.001	161.6	-0.007	-16.2
12	S(6)	0.000	0.0	0.000	232.9	0.000	0.0
13	MU(2)	0.000	0.0	0.005	327.3	0.000	0.0
14	2N(2)	0.004	149.6	0.001	271.7	-0.003	122.1
15	OO(1)	0.001	298.8	0.000	234.3	-0.001	-64.5
16	LAMBDA(2)	0.004	229.3	0.001	191.1	-0.003	-38.2
17	S(1)	0.014	290.5	0.000	55.6	-0.014	125.1
18	M(1)	0.002	324.0	0.001	168.9	-0.001	-155.1
19	J(1)	0.002	307.3	0.002	154.5	0.000	-152.8
20	MM	0.000	0.0	0.009	31.7	0.000	0.0
21	SSA	0.034	36.1	0.002	10.0	-0.032	-26.1
22	SA	0.087	131.4	0.000	134.4	-0.087	3.0
23	MSF	0.000	0.0	0.008	51.0	0.000	0.0
24	MF	0.000	0.0	0.005	343.7	0.000	0.0
25	RHO(1)	0.001	339.6	0.000	267.2	-0.001	-72.4
26	Q(1)	0.006	306.7	0.005	299.4	-0.001	-7.3
27	T(2)	0.002	224.7	0.000	350.9	-0.002	126.2
28	R(2)	0.000	227.0	0.000	243.7	0.000	0.0
29	2Q(1)	0.001	349.1	0.000	50.5	-0.001	61.4
30	P(1)	0.012	318.9	0.011	304.6	-0.001	-14.3
31	2SM(2)	0.000	0.0	0.001	60.2	0.000	0.0
32	M(3)	0.000	0.0	0.002	176.2	0.000	0.0
33	L(2)	0.012	233.8	0.008	212.0	-0.004	-21.8
34	2MK(3)	0.003	324.8	0.004	266.1	0.001	-58.7
35	K(2)	0.008	223.5	0.007	210.2	-0.001	-13.3
36	M(8)	0.000	0.0	0.001	358.8	0.000	0.0
37	MS(4)	0.000	0.0	0.002	316.6	0.000	0.0

Station: Washington, DC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.407	20.4	0.149	252.7	-0.258	127.7
2	S(2)	0.052	64.3	0.020	281.8	-0.032	142.5
3	N(2)	0.075	356.5	0.029	229.4	-0.046	-127.1
4	K(1)	0.046	357.0	0.052	334.0	0.006	-23.0
5	M(4)	0.042	320.9	0.007	32.4	-0.035	71.5
6	O(1)	0.035	22.6	0.040	330.8	0.005	51.8
7	M(6)	0.012	191.3	0.000	23.8	-0.012	-167.5
8	MK(3)	0.012	255.4	0.003	3.2	-0.009	107.8
9	S(4)	0.000	0.0	0.000	113.3	0.000	0.0
10	MN(4)	0.016	297.6	0.003	14.1	-0.013	76.5
11	NU(2)	0.017	1.3	0.001	277.3	-0.016	84.0
12	S(6)	0.000	0.0	0.000	60.9	0.000	0.0
13	MU(2)	0.008	117.7	0.005	54.6	-0.003	-63.1
14	2N(2)	0.007	323.6	0.001	345.5	-0.006	21.9
15	OO(1)	0.003	57.0	0.000	247.4	-0.003	169.6
16	LAMBDA(2)	0.013	45.4	0.002	260.5	-0.011	144.9
17	S(1)	0.012	326.3	0.000	61.0	-0.012	94.7
18	M(1)	0.002	9.7	0.001	174.6	-0.001	164.9
19	J(1)	0.003	344.3	0.004	168.0	0.001	-176.3
20	MM	0.000	0.0	0.009	33.0	0.000	0.0
21	SSA	0.038	40.0	0.002	14.1	-0.036	-25.9
22	SA	0.077	110.6	0.000	126.7	-0.077	16.1
23	MSF	0.000	0.0	0.008	52.8	0.000	0.0
24	MF	0.000	0.0	0.006	344.7	0.000	0.0
25	RHO(1)	0.001	33.6	0.000	281.6	-0.001	112.0
26	Q(1)	0.007	345.8	0.006	323.5	-0.001	-22.3
27	T(2)	0.005	104.1	0.000	73.9	-0.005	-30.2
28	R(2)	0.004	85.4	0.000	327.8	-0.004	117.6
29	2Q(1)	0.001	48.0	0.000	64.1	-0.001	16.1
30	P(1)	0.013	4.4	0.013	327.1	0.000	37.3
31	2SM(2)	0.000	0.0	0.001	128.4	0.000	0.0
32	M(3)	0.000	0.0	0.003	261.9	0.000	0.0
33	L(2)	0.027	33.5	0.007	292.6	-0.020	100.9
34	2MK(3)	0.011	266.7	0.006	351.6	-0.005	84.9
35	K(2)	0.018	62.2	0.007	278.6	-0.011	143.6
36	M(8)	0.004	106.3	0.000	23.8	-0.004	-82.5
37	MS(4)	0.011	9.2	0.002	75.6	-0.009	66.4

Station: Wachapreague, VA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.590	26.8	0.516	351.6	-0.074	35.2
2	S(2)	0.102	63.2	0.090	16.6	-0.012	-46.6
3	N(2)	0.126	16.9	0.121	333.1	-0.005	43.8
4	K(1)	0.084	204.0	0.096	177.8	0.012	-26.2
5	M(4)	0.025	221.8	0.015	217.2	-0.010	-4.6
6	O(1)	0.087	216.7	0.073	186.7	-0.014	-30.0
7	M(6)	0.025	106.6	0.002	202.3	-0.023	95.7
8	MK(3)	0.012	7.2	0.001	346.0	-0.011	21.2
9	S(4)	0.007	313.8	0.000	285.3	-0.007	-28.5
10	MN(4)	0.014	226.0	0.007	190.9	-0.007	-35.1
11	NU(2)	0.024	5.5	0.000	166.4	-0.024	160.9
12	S(6)	0.000	0.0	0.000	22.4	0.000	0.0
13	MU(2)	0.027	69.0	0.002	335.8	-0.025	93.2
14	2N(2)	0.018	17.8	0.000	290.3	-0.018	87.5
15	OO(1)	0.004	191.2	0.000	352.9	-0.004	161.7
16	LAMBDA(2)	0.014	357.3	0.001	240.3	-0.013	-117.0
17	S(1)	0.014	183.5	0.000	137.7	-0.014	-45.8
18	M(1)	0.006	274.3	0.001	299.5	-0.005	25.2
19	J(1)	0.005	245.3	0.001	298.0	-0.004	52.7
20	MM	0.000	0.0	0.002	184.2	0.000	0.0
21	SSA	0.038	40.3	0.000	300.1	-0.038	100.2
22	SA	0.061	155.3	0.000	156.0	-0.061	0.7
23	MSF	0.000	0.0	0.000	73.4	0.000	0.0
24	MF	0.000	0.0	0.005	235.0	0.000	0.0
25	RHO(1)	0.005	214.4	0.000	275.2	-0.005	60.8
26	Q(1)	0.019	203.0	0.015	171.9	-0.004	-31.1
27	T(2)	0.011	37.4	0.000	68.1	-0.011	30.7
28	R(2)	0.004	265.6	0.000	302.3	-0.004	36.7
29	2Q(1)	0.004	151.8	0.000	320.4	-0.004	168.6
30	P(1)	0.029	211.0	0.029	174.9	0.000	-36.1
31	2SM(2)	0.000	0.0	0.000	118.4	0.000	0.0
32	M(3)	0.005	118.4	0.000	316.9	-0.005	161.5
33	L(2)	0.034	1.8	0.003	252.3	-0.031	109.5
34	2MK(3)	0.012	9.7	0.001	30.6	-0.011	20.9
35	K(2)	0.027	59.0	0.024	18.4	-0.003	-40.6
36	M(8)	0.000	0.0	0.002	202.3	0.000	0.0
37	MS(4)	0.007	231.8	0.005	247.8	-0.002	16.0

Station: Kiptopeke, VA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.388	32.5	0.394	26.7	0.006	-5.8
2	S(2)	0.068	56.3	0.064	54.4	-0.004	-1.9
3	N(2)	0.088	12.3	0.086	9.1	-0.002	-3.2
4	K(1)	0.059	193.4	0.071	200.5	0.012	7.1
5	M(4)	0.005	295.9	0.012	345.1	0.007	49.2
6	O(1)	0.046	213.6	0.053	205.9	0.007	-7.7
7	M(6)	0.005	291.9	0.001	99.2	-0.004	167.3
8	MK(3)	0.003	79.4	0.003	33.5	0.000	-45.9
9	S(4)	0.000	0.0	0.000	53.6	0.000	0.0
10	MN(4)	0.003	271.5	0.005	321.5	0.002	50.0
11	NU(2)	0.018	12.0	0.000	277.0	-0.018	95.0
12	S(6)	0.000	0.0	0.000	282.3	0.000	0.0
13	MU(2)	0.009	21.8	0.003	148.9	-0.006	127.1
14	2N(2)	0.012	356.8	0.001	115.2	-0.011	118.4
15	OO(1)	0.003	215.1	0.000	82.8	-0.003	-132.3
16	LAMBDA(2)	0.005	54.1	0.002	13.2	-0.003	-40.9
17	S(1)	0.007	100.8	0.000	270.6	-0.007	169.8
18	M(1)	0.003	211.1	0.000	16.2	-0.003	165.1
19	J(1)	0.004	200.2	0.001	22.1	-0.003	-178.1
20	MM	0.000	0.0	0.006	29.7	0.000	0.0
21	SSA	0.039	37.6	0.001	1.9	-0.038	-35.7
22	SA	0.058	150.6	0.000	146.7	-0.058	-3.9
23	MSF	0.000	0.0	0.006	40.6	0.000	0.0
24	MF	0.000	0.0	0.003	297.8	0.000	0.0
25	RHO(1)	0.003	203.0	0.000	71.9	-0.003	-131.1
26	Q(1)	0.009	194.9	0.010	195.5	0.001	0.6
27	T(2)	0.006	44.2	0.000	152.9	-0.006	108.7
28	R(2)	0.001	57.4	0.000	30.6	-0.001	-26.8
29	2Q(1)	0.001	233.5	0.000	327.9	-0.001	94.4
30	P(1)	0.019	201.7	0.020	197.7	0.001	-4.0
31	2SM(2)	0.000	0.0	0.001	236.6	0.000	0.0
32	M(3)	0.003	72.0	0.002	310.2	-0.001	121.8
33	L(2)	0.018	47.4	0.007	23.0	-0.011	-24.4
34	2MK(3)	0.004	94.7	0.005	39.0	0.001	-55.7
35	K(2)	0.019	57.0	0.017	54.0	-0.002	-3.0
36	M(8)	0.000	0.0	0.001	99.2	0.000	0.0
37	MS(4)	0.000	0.0	0.004	14.3	0.000	0.0

Station: Colonial Beach
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.246	213.9	0.411	185.4	0.165	-28.5
2	S(2)	0.039	247.9	0.056	228.3	0.017	-19.6
3	N(2)	0.050	193.8	0.071	169.3	0.021	-24.5
4	K(1)	0.030	294.3	0.037	299.7	0.007	5.4
5	M(4)	0.006	333.1	0.016	10.5	0.010	37.4
6	O(1)	0.026	311.5	0.029	303.2	0.003	-8.3
7	M(6)	0.000	0.0	0.002	71.0	0.000	0.0
8	MK(3)	0.000	0.0	0.008	327.1	0.000	0.0
9	S(4)	0.000	0.0	0.000	100.7	0.000	0.0
10	MN(4)	0.000	0.0	0.006	350.8	0.000	0.0
11	NU(2)	0.010	170.9	0.005	139.9	-0.005	-31.0
12	S(6)	0.000	0.0	0.000	141.2	0.000	0.0
13	MU(2)	0.000	0.0	0.019	303.8	0.000	0.0
14	2N(2)	0.006	173.8	0.005	258.0	-0.001	84.2
15	OO(1)	0.001	276.9	0.000	173.7	-0.001	-103.2
16	LAMBDA(2)	0.002	229.6	0.005	184.3	0.003	-45.3
17	S(1)	0.009	286.6	0.000	56.6	-0.009	130.0
18	M(1)	0.002	302.9	0.000	156.1	-0.002	-146.8
19	J(1)	0.002	285.5	0.002	136.0	0.000	-149.5
20	MM	0.000	0.0	0.009	30.9	0.000	0.0
21	SSA	0.018	18.4	0.001	5.3	-0.017	-13.1
22	SA	0.086	124.3	0.000	147.6	-0.086	23.3
23	MSF	0.000	0.0	0.008	50.5	0.000	0.0
24	MF	0.000	0.0	0.005	344.1	0.000	0.0
25	RHO(1)	0.001	318.9	0.000	249.2	-0.001	-69.7
26	Q(1)	0.005	320.1	0.005	291.2	0.000	-28.9
27	T(2)	0.002	247.8	0.000	352.4	-0.002	104.6
28	R(2)	0.000	0.0	0.001	239.0	0.000	0.0
29	2Q(1)	0.001	328.8	0.000	42.6	-0.001	73.8
30	P(1)	0.011	316.0	0.010	293.5	-0.001	-22.5
31	2SM(2)	0.000	0.0	0.002	58.8	0.000	0.0
32	M(3)	0.000	0.0	0.007	226.1	0.000	0.0
33	L(2)	0.013	232.2	0.031	201.6	0.018	-30.6
34	2MK(3)	0.000	0.0	0.015	315.2	0.000	0.0
35	K(2)	0.013	254.4	0.017	214.7	0.004	-39.7
36	M(8)	0.000	0.0	0.002	71.0	0.000	0.0
37	MS(4)	0.000	0.0	0.004	50.3	0.000	0.0

Station: Lewisetta, VA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.184	176.4	0.249	168.6	0.065	-7.8
2	S(2)	0.028	200.0	0.032	203.6	0.004	3.6
3	N(2)	0.040	152.3	0.045	148.5	0.005	-3.8
4	K(1)	0.023	276.2	0.036	292.0	0.013	15.8
5	M(4)	0.004	204.4	0.004	281.9	0.000	77.5
6	O(1)	0.019	298.7	0.029	295.0	0.010	-3.7
7	M(6)	0.003	265.1	0.001	223.3	-0.002	-41.8
8	MK(3)	0.000	0.0	0.003	255.2	0.000	0.0
9	S(4)	0.000	0.0	0.000	336.6	0.000	0.0
10	MN(4)	0.000	0.0	0.002	257.7	0.000	0.0
11	NU(2)	0.008	151.3	0.002	147.3	-0.006	-4.0
12	S(6)	0.000	0.0	0.000	260.3	0.000	0.0
13	MU(2)	0.000	0.0	0.010	305.3	0.000	0.0
14	2N(2)	0.005	130.3	0.003	257.9	-0.002	127.6
15	OO(1)	0.001	253.5	0.000	199.4	-0.001	-54.1
16	LAMBDA(2)	0.004	203.8	0.002	172.4	-0.002	-31.4
17	S(1)	0.008	311.0	0.000	51.9	-0.008	100.9
18	M(1)	0.001	287.4	0.000	160.0	-0.001	-127.4
19	J(1)	0.002	264.9	0.002	136.2	0.000	-128.7
20	MM	0.000	0.0	0.009	30.8	0.000	0.0
21	SSA	0.038	35.7	0.001	6.1	-0.037	-29.6
22	SA	0.081	133.1	0.000	144.1	-0.081	11.0
23	MSF	0.000	0.0	0.008	49.9	0.000	0.0
24	MF	0.000	0.0	0.005	343.1	0.000	0.0
25	RHO(1)	0.001	308.4	0.000	250.1	-0.001	-58.3
26	Q(1)	0.004	287.1	0.005	281.9	0.001	-5.2
27	T(2)	0.002	199.1	0.000	347.5	-0.002	148.4
28	R(2)	0.000	201.0	0.000	238.7	0.000	0.0
29	2Q(1)	0.001	321.1	0.000	39.4	-0.001	78.3
30	P(1)	0.009	293.0	0.010	286.3	0.001	-6.7
31	2SM(2)	0.000	0.0	0.001	46.0	0.000	0.0
32	M(3)	0.000	0.0	0.002	168.7	0.000	0.0
33	L(2)	0.011	203.3	0.016	197.1	0.005	-6.2
34	2MK(3)	0.000	0.0	0.005	257.1	0.000	0.0
35	K(2)	0.008	201.3	0.010	193.0	0.002	-8.3
36	M(8)	0.000	0.0	0.001	223.3	0.000	0.0
37	MS(4)	0.000	0.0	0.001	319.1	0.000	0.0

Station: Gloucester Point
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.361	53.6	0.277	36.3	-0.084	-17.3
2	S(2)	0.064	80.0	0.047	66.8	-0.017	-13.2
3	N(2)	0.080	36.2	0.062	21.3	-0.018	-14.9
4	K(1)	0.051	198.2	0.049	212.4	-0.002	14.2
5	M(4)	0.005	68.9	0.015	26.2	0.010	-42.7
6	O(1)	0.038	221.0	0.036	218.8	-0.002	-2.2
7	M(6)	0.004	72.8	0.001	288.5	-0.003	144.3
8	MK(3)	0.004	117.3	0.003	16.8	-0.001	-100.5
9	S(4)	0.005	26.4	0.001	102.7	-0.004	76.3
10	MN(4)	0.000	0.0	0.007	5.9	0.000	0.0
11	NU(2)	0.015	33.1	0.001	260.9	-0.014	132.2
12	S(6)	0.000	0.0	0.000	230.4	0.000	0.0
13	MU(2)	0.011	50.1	0.003	110.9	-0.008	60.8
14	2N(2)	0.010	19.5	0.001	89.7	-0.009	70.2
15	OO(1)	0.002	175.3	0.000	50.2	-0.002	-125.1
16	LAMBDA(2)	0.007	66.4	0.002	6.6	-0.005	-59.8
17	S(1)	0.010	108.6	0.000	228.4	-0.010	119.8
18	M(1)	0.003	209.5	0.000	332.1	-0.003	122.6
19	J(1)	0.003	186.9	0.001	0.9	-0.002	174.0
20	MM	0.000	0.0	0.007	30.0	0.000	0.0
21	SSA	0.039	43.6	0.001	3.3	-0.038	-40.3
22	SA	0.063	147.0	0.000	146.1	-0.063	-0.9
23	MSF	0.000	0.0	0.007	43.9	0.000	0.0
24	MF	0.000	0.0	0.003	317.9	0.000	0.0
25	RHO(1)	0.002	230.7	0.000	68.9	-0.002	-161.8
26	Q(1)	0.008	202.5	0.007	208.3	-0.001	5.8
27	T(2)	0.006	68.7	0.000	130.5	-0.006	61.8
28	R(2)	0.001	81.1	0.000	13.6	-0.001	-67.5
29	2Q(1)	0.001	243.5	0.000	359.7	-0.001	116.2
30	P(1)	0.015	192.7	0.014	210.8	-0.001	18.1
31	2SM(2)	0.000	0.0	0.001	232.0	0.000	0.0
32	M(3)	0.003	141.5	0.003	303.1	0.000	161.6
33	L(2)	0.015	50.0	0.007	1.5	-0.008	-48.5
34	2MK(3)	0.000	0.0	0.006	28.8	0.000	0.0
35	K(2)	0.017	72.3	0.012	65.8	-0.005	-6.5
36	M(8)	0.000	0.0	0.001	288.5	0.000	0.0
37	MS(4)	0.003	196.9	0.005	61.9	0.002	-135.0

Station: Hampton Road
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.366	46.7	0.424	41.3	0.058	-5.4
2	S(2)	0.064	74.6	0.067	76.7	0.003	2.1
3	N(2)	0.081	28.3	0.090	28.9	0.009	0.6
4	K(1)	0.049	200.9	0.067	207.8	0.018	6.9
5	M(4)	0.004	295.6	0.010	61.3	0.006	125.7
6	O(1)	0.042	224.6	0.049	212.8	0.007	-11.8
7	M(6)	0.000	0.0	0.001	156.1	0.000	0.0
8	MK(3)	0.003	70.0	0.003	65.3	0.000	-4.7
9	S(4)	0.000	0.0	0.000	111.9	0.000	0.0
10	MN(4)	0.000	0.0	0.004	36.1	0.000	0.0
11	NU(2)	0.016	26.6	0.003	304.7	-0.013	81.9
12	S(6)	0.000	0.0	0.000	245.5	0.000	0.0
13	MU(2)	0.010	50.4	0.011	131.7	0.001	81.3
14	2N(2)	0.011	15.9	0.003	102.9	-0.008	87.0
15	OO(1)	0.002	177.1	0.000	39.7	-0.002	-137.4
16	LAMBDA(2)	0.007	55.9	0.003	17.6	-0.004	-38.3
17	S(1)	0.006	110.5	0.000	215.9	-0.006	105.4
18	M(1)	0.003	212.6	0.000	0.6	-0.003	148.0
19	J(1)	0.003	189.1	0.001	346.9	-0.002	157.8
20	MM	0.000	0.0	0.005	32.6	0.000	0.0
21	SSA	0.037	33.9	0.001	358.8	-0.036	35.1
22	SA	0.048	149.2	0.000	151.4	-0.048	2.2
23	MSF	0.000	0.0	0.005	42.1	0.000	0.0
24	MF	0.000	0.0	0.003	284.7	0.000	0.0
25	RHO(1)	0.002	234.8	0.000	59.6	-0.002	-175.2
26	Q(1)	0.009	210.3	0.010	205.0	0.001	-5.3
27	T(2)	0.006	59.9	0.000	161.1	-0.006	101.2
28	R(2)	0.001	75.7	0.001	43.5	0.000	-32.2
29	2Q(1)	0.001	248.1	0.000	272.6	-0.001	24.5
30	P(1)	0.015	199.1	0.019	206.3	0.004	7.2
31	2SM(2)	0.000	0.0	0.002	245.4	0.000	0.0
32	M(3)	0.003	125.1	0.003	327.9	0.000	157.2
33	L(2)	0.012	45.5	0.019	21.2	0.007	-24.3
34	2MK(3)	0.000	0.0	0.007	60.8	0.000	0.0
35	K(2)	0.018	67.7	0.017	71.7	-0.001	4.0
36	M(8)	0.000	0.0	0.001	156.1	0.000	0.0
37	MS(4)	0.000	0.0	0.003	96.2	0.000	0.0

Station: Portsmouth, VA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.413	53.7	0.443	44.3	0.030	-9.4
2	S(2)	0.073	83.7	0.070	81.0	-0.003	-2.7
3	N(2)	0.091	34.4	0.094	32.8	0.003	-1.6
4	K(1)	0.059	200.7	0.068	209.2	0.009	8.5
5	M(4)	0.008	22.4	0.014	69.2	0.006	46.8
6	O(1)	0.042	223.7	0.049	214.0	0.007	-9.7
7	M(6)	0.003	84.4	0.002	172.2	-0.001	87.8
8	MK(3)	0.004	85.9	0.003	76.7	-0.001	-9.2
9	S(4)	0.005	0.7	0.000	150.3	-0.005	149.6
10	MN(4)	0.006	338.4	0.005	47.9	-0.001	69.5
11	NU(2)	0.016	21.6	0.003	307.5	-0.013	74.1
12	S(6)	0.000	0.0	0.000	252.5	0.000	0.0
13	MU(2)	0.011	68.6	0.013	133.1	0.002	64.5
14	2N(2)	0.012	15.2	0.004	103.8	-0.008	88.6
15	OO(1)	0.002	177.5	0.000	40.6	-0.002	-136.9
16	LAMBDA(2)	0.003	67.5	0.004	19.7	0.001	-47.8
17	S(1)	0.012	97.8	0.000	217.1	-0.012	119.3
18	M(1)	0.003	212.1	0.000	1.5	-0.003	149.4
19	J(1)	0.003	189.2	0.002	347.1	-0.001	157.9
20	MM	0.000	0.0	0.004	32.7	0.000	0.0
21	SSA	0.044	41.6	0.001	358.7	-0.043	42.9
22	SA	0.059	161.9	0.000	151.9	-0.059	-10.0
23	MSF	0.000	0.0	0.005	42.2	0.000	0.0
24	MF	0.000	0.0	0.003	284.6	0.000	0.0
25	RHO(1)	0.002	233.6	0.000	62.3	-0.002	-171.3
26	Q(1)	0.010	217.8	0.010	206.7	0.000	-11.1
27	T(2)	0.005	83.6	0.000	164.2	-0.005	80.6
28	R(2)	0.001	83.7	0.001	46.2	0.000	-37.5
29	2Q(1)	0.001	246.7	0.000	265.2	-0.001	18.5
30	P(1)	0.017	195.8	0.019	207.9	0.002	12.1
31	2SM(2)	0.000	0.0	0.002	247.5	0.000	0.0
32	M(3)	0.004	152.8	0.003	333.7	-0.001	179.1
33	L(2)	0.018	65.7	0.021	23.4	0.003	-42.3
34	2MK(3)	0.004	124.2	0.007	67.4	0.003	-56.8
35	K(2)	0.021	85.3	0.017	75.7	-0.004	-9.6
36	M(8)	0.000	0.0	0.002	172.2	0.000	0.0
37	MS(4)	0.000	0.0	0.004	106.1	0.000	0.0

Station: Chesapeake Bay Bridge Tunnel, VA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.380	21.0	0.407	18.4	0.027	-2.6
2	S(2)	0.069	45.8	0.068	46.7	-0.001	0.9
3	N(2)	0.090	1.4	0.092	1.4	0.002	0.0
4	K(1)	0.058	184.9	0.074	195.4	0.016	10.5
5	M(4)	0.005	199.7	0.006	283.4	0.001	83.7
6	O(1)	0.045	208.9	0.054	201.1	0.009	-7.8
7	M(6)	0.006	293.4	0.002	61.1	-0.004	127.7
8	MK(3)	0.000	0.0	0.002	10.3	0.000	0.0
9	S(4)	0.000	0.0	0.000	354.5	0.000	0.0
10	MN(4)	0.003	199.2	0.004	258.4	0.001	59.2
11	NU(2)	0.017	359.2	0.001	258.8	-0.016	-100.4
12	S(6)	0.000	0.0	0.000	260.4	0.000	0.0
13	MU(2)	0.012	13.7	0.003	102.4	-0.009	88.7
14	2N(2)	0.013	347.4	0.001	83.9	-0.012	96.5
15	OO(1)	0.003	215.2	0.000	24.5	-0.003	169.3
16	LAMBDA(2)	0.003	35.7	0.001	350.5	-0.002	45.2
17	S(1)	0.011	83.3	0.000	202.9	-0.011	119.6
18	M(1)	0.004	204.0	0.000	356.5	-0.004	152.5
19	J(1)	0.004	201.5	0.001	345.6	-0.003	144.1
20	MM	0.000	0.0	0.003	39.7	0.000	0.0
21	SSA	0.042	34.0	0.000	358.4	-0.042	35.6
22	SA	0.055	152.0	0.000	153.1	-0.055	1.1
23	MSF	0.000	0.0	0.004	44.0	0.000	0.0
24	MF	0.000	0.0	0.003	265.3	0.000	0.0
25	RHO(1)	0.003	201.1	0.000	27.7	-0.003	-173.4
26	Q(1)	0.009	191.1	0.011	190.8	0.002	-0.3
27	T(2)	0.006	35.7	0.000	121.5	-0.006	85.8
28	R(2)	0.001	46.9	0.000	8.6	-0.001	-38.3
29	2Q(1)	0.001	232.6	0.000	354.7	-0.001	122.1
30	P(1)	0.018	188.1	0.022	192.9	0.004	4.8
31	2SM(2)	0.000	0.0	0.001	219.3	0.000	0.0
32	M(3)	0.000	0.0	0.002	297.2	0.000	0.0
33	L(2)	0.014	28.8	0.006	347.4	-0.008	41.4
34	2MK(3)	0.000	0.0	0.004	23.8	0.000	0.0
35	K(2)	0.019	46.4	0.018	45.9	-0.001	-0.5
36	M(8)	0.000	0.0	0.002	61.1	0.000	0.0
37	MS(4)	0.003	147.5	0.002	308.3	-0.001	160.8

Station: Duck, NC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.490	358.0	0.472	356.1	-0.018	-1.9
2	S(2)	0.088	22.1	0.080	21.9	-0.008	-0.2
3	N(2)	0.114	337.8	0.111	337.5	-0.003	-0.3
4	K(1)	0.087	172.9	0.096	181.1	0.009	8.2
5	M(4)	0.004	224.3	0.009	242.6	0.005	18.3
6	O(1)	0.059	192.6	0.071	184.5	0.012	-8.1
7	M(6)	0.010	228.1	0.002	200.4	-0.008	-27.7
8	MK(3)	0.000	0.0	0.001	21.8	0.000	0.0
9	S(4)	0.000	0.0	0.000	319.9	0.000	0.0
10	MN(4)	0.003	188.6	0.004	219.1	0.001	30.5
11	NU(2)	0.023	336.9	0.000	190.6	-0.023	-146.3
12	S(6)	0.000	0.0	0.000	223.2	0.000	0.0
13	MU(2)	0.017	343.9	0.001	353.9	-0.016	10.0
14	2N(2)	0.015	321.6	0.000	295.8	-0.015	-25.8
15	OO(1)	0.003	193.9	0.000	358.7	-0.003	164.8
16	LAMBDA(2)	0.004	14.9	0.000	245.1	-0.004	129.8
17	S(1)	0.011	96.8	0.000	227.8	-0.011	131.0
18	M(1)	0.003	194.1	0.000	40.8	-0.003	-153.3
19	J(1)	0.005	175.0	0.000	315.6	-0.005	140.6
20	MM	0.000	0.0	0.003	185.0	0.000	0.0
21	SSA	0.037	37.2	0.000	182.5	-0.037	145.3
22	SA	0.059	169.5	0.000	159.2	-0.059	-10.3
23	MSF	0.000	0.0	0.000	91.0	0.000	0.0
24	MF	0.000	0.0	0.005	233.4	0.000	0.0
25	RHO(1)	0.002	201.1	0.000	35.6	-0.002	-165.5
26	Q(1)	0.014	178.4	0.014	176.9	0.000	-1.5
27	T(2)	0.009	351.8	0.000	63.0	-0.009	71.2
28	R(2)	0.001	23.1	0.000	317.0	-0.001	66.1
29	2Q(1)	0.002	212.1	0.000	104.9	-0.002	-107.2
30	P(1)	0.028	173.7	0.028	178.4	0.000	4.7
31	2SM(2)	0.000	0.0	0.000	126.7	0.000	0.0
32	M(3)	0.004	36.7	0.000	332.3	-0.004	64.4
33	L(2)	0.009	22.3	0.003	266.3	-0.006	116.0
34	2MK(3)	0.000	0.0	0.001	48.2	0.000	0.0
35	K(2)	0.023	18.2	0.021	23.4	-0.002	5.2
36	M(8)	0.000	0.0	0.002	200.4	0.000	0.0
37	MS(4)	0.000	0.0	0.003	275.2	0.000	0.0

Station: Cape Hatteras, NC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.453	353.2	0.425	350.8	-0.028	-2.4
2	S(2)	0.082	16.2	0.070	15.1	-0.012	-1.1
3	N(2)	0.106	331.3	0.100	331.8	-0.006	0.5
4	K(1)	0.094	184.6	0.099	183.1	0.005	-1.5
5	M(4)	0.000	0.0	0.001	217.1	0.000	0.0
6	O(1)	0.075	186.4	0.078	188.5	0.003	2.1
7	M(6)	0.004	170.1	0.002	69.1	-0.002	-101.0
8	MK(3)	0.000	0.0	0.001	36.1	0.000	0.0
9	S(4)	0.000	0.0	0.000	305.7	0.000	0.0
10	MN(4)	0.000	0.0	0.001	189.1	0.000	0.0
11	NU(2)	0.021	335.1	0.000	170.1	-0.021	-165.0
12	S(6)	0.000	0.0	0.000	164.2	0.000	0.0
13	MU(2)	0.016	333.0	0.001	318.6	-0.015	-14.4
14	2N(2)	0.014	312.3	0.000	263.5	-0.014	-48.8
15	OO(1)	0.003	205.9	0.000	44.8	-0.003	-161.1
16	LAMBDA(2)	0.004	2.4	0.000	220.4	-0.004	142.0
17	S(1)	0.008	192.3	0.000	103.6	-0.008	-88.7
18	M(1)	0.004	196.6	0.000	268.9	-0.004	72.3
19	J(1)	0.006	192.2	0.000	184.1	-0.006	-8.1
20	MM	0.000	0.0	0.003	188.5	0.000	0.0
21	SSA	0.039	56.9	0.000	145.9	-0.039	89.0
22	SA	0.063	171.7	0.000	160.9	-0.063	-10.8
23	MSF	0.000	0.0	0.000	121.7	0.000	0.0
24	MF	0.000	0.0	0.005	233.3	0.000	0.0
25	RHO(1)	0.004	192.3	0.000	236.8	-0.004	44.5
26	Q(1)	0.015	180.8	0.015	173.0	0.000	-7.8
27	T(2)	0.007	358.9	0.000	52.5	-0.007	53.6
28	R(2)	0.001	17.1	0.000	304.2	-0.001	72.9
29	2Q(1)	0.002	188.2	0.000	268.0	-0.002	79.8
30	P(1)	0.031	186.3	0.030	179.5	-0.001	-6.8
31	2SM(2)	0.000	0.0	0.000	111.6	0.000	0.0
32	M(3)	0.000	0.0	0.000	328.0	0.000	0.0
33	L(2)	0.009	31.2	0.002	244.9	-0.007	146.3
34	2MK(3)	0.000	0.0	0.001	51.9	0.000	0.0
35	K(2)	0.021	16.7	0.019	16.9	-0.002	0.2
36	M(8)	0.000	0.0	0.002	69.1	0.000	0.0
37	MS(4)	0.000	0.0	0.000	244.8	0.000	0.0

Station: Beaufort, NC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.444	7.3	0.524	346.8	0.080	20.5
2	S(2)	0.071	31.8	0.085	11.2	0.014	-20.6
3	N(2)	0.101	349.7	0.123	328.9	0.022	-20.8
4	K(1)	0.080	198.5	0.101	183.6	0.021	-14.9
5	M(4)	0.000	0.0	0.009	256.6	0.000	0.0
6	O(1)	0.061	204.7	0.078	188.1	0.017	-16.6
7	M(6)	0.009	57.8	0.001	188.1	-0.008	130.3
8	MK(3)	0.003	2.0	0.001	356.3	-0.002	5.7
9	S(4)	0.005	305.0	0.000	329.5	-0.005	24.5
10	MN(4)	0.000	0.0	0.005	235.5	0.000	0.0
11	NU(2)	0.020	345.9	0.000	191.5	-0.020	-154.4
12	S(6)	0.000	0.0	0.000	234.5	0.000	0.0
13	MU(2)	0.011	15.2	0.002	4.2	-0.009	-11.0
14	2N(2)	0.014	338.5	0.001	326.8	-0.013	-11.7
15	OO(1)	0.003	192.2	0.000	326.9	-0.003	134.7
16	LAMBDA(2)	0.007	19.6	0.001	239.2	-0.006	140.4
17	S(1)	0.009	179.8	0.000	183.1	-0.009	3.3
18	M(1)	0.004	230.0	0.000	37.8	-0.004	167.8
19	J(1)	0.005	211.0	0.000	268.6	-0.005	57.6
20	MM	0.000	0.0	0.003	191.8	0.000	0.0
21	SSA	0.036	57.1	0.000	162.9	-0.036	105.8
22	SA	0.066	166.0	0.000	169.1	-0.066	3.1
23	MSF	0.000	0.0	0.000	168.6	0.000	0.0
24	MF	0.000	0.0	0.005	229.5	0.000	0.0
25	RHO(1)	0.003	188.3	0.000	62.8	-0.003	-125.5
26	Q(1)	0.012	203.4	0.015	177.6	0.003	-25.8
27	T(2)	0.007	10.7	0.000	61.7	-0.007	51.0
28	R(2)	0.004	250.1	0.000	310.2	-0.004	60.1
29	2Q(1)	0.002	210.8	0.000	111.5	-0.002	-99.3
30	P(1)	0.027	198.4	0.030	180.5	0.003	-17.9
31	2SM(2)	0.000	0.0	0.000	108.9	0.000	0.0
32	M(3)	0.005	31.2	0.001	314.3	-0.004	76.9
33	L(2)	0.023	12.1	0.004	263.3	-0.019	108.8
34	2MK(3)	0.005	3.2	0.001	28.5	-0.004	25.3
35	K(2)	0.019	29.3	0.023	12.8	0.004	-16.5
36	M(8)	0.000	0.0	0.001	188.1	0.000	0.0
37	MS(4)	0.005	141.4	0.003	278.6	-0.002	137.2

Station: Wilmington, NC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.623	63.1	0.577	350.6	-0.046	72.5
2	S(2)	0.079	97.7	0.092	14.9	0.013	-82.8
3	N(2)	0.126	51.0	0.135	332.8	0.009	78.2
4	K(1)	0.080	229.8	0.104	186.8	0.024	-43.0
5	M(4)	0.054	6.9	0.014	294.7	-0.040	72.2
6	O(1)	0.060	233.5	0.079	191.3	0.019	-42.2
7	M(6)	0.033	284.2	0.001	0.1	-0.032	75.9
8	MK(3)	0.013	109.8	0.002	17.6	-0.011	-92.2
9	S(4)	0.004	126.8	0.000	357.9	-0.004	128.9
10	MN(4)	0.023	355.8	0.008	273.1	-0.015	-82.7
11	NU(2)	0.028	41.5	0.000	202.8	-0.028	161.3
12	S(6)	0.000	0.0	0.000	21.8	0.000	0.0
13	MU(2)	0.023	150.3	0.002	22.7	-0.021	-127.6
14	2N(2)	0.014	44.5	0.001	346.8	-0.013	57.7
15	OO(1)	0.003	245.4	0.000	327.9	-0.003	82.5
16	LAMBDA(2)	0.019	56.6	0.001	253.1	-0.018	163.5
17	S(1)	0.021	199.3	0.000	133.6	-0.021	-65.7
18	M(1)	0.003	221.8	0.000	270.2	-0.003	48.4
19	J(1)	0.005	263.6	0.000	271.4	-0.005	7.8
20	MM	0.023	16.3	0.003	192.3	-0.020	176.0
21	SSA	0.051	24.9	0.000	168.3	-0.051	143.4
22	SA	0.000	0.0	0.000	169.6	0.000	0.0
23	MSF	0.020	36.6	0.000	174.8	-0.020	138.2
24	MF	0.000	0.0	0.005	228.9	0.000	0.0
25	RHO(1)	0.002	235.1	0.000	101.5	-0.002	-133.6
26	Q(1)	0.013	237.5	0.015	180.3	0.002	-57.2
27	T(2)	0.009	82.5	0.000	74.0	-0.009	-8.5
28	R(2)	0.001	99.2	0.000	321.2	-0.001	138.0
29	2Q(1)	0.002	237.2	0.000	160.4	-0.002	-76.8
30	P(1)	0.028	236.6	0.031	183.9	0.003	-52.7
31	2SM(2)	0.000	0.0	0.000	121.0	0.000	0.0
32	M(3)	0.008	147.6	0.001	329.2	-0.007	178.4
33	L(2)	0.057	58.9	0.005	277.0	-0.052	141.9
34	2MK(3)	0.015	100.4	0.002	43.0	-0.013	-57.4
35	K(2)	0.023	95.0	0.025	16.5	0.002	-78.5
36	M(8)	0.005	253.6	0.001	0.1	-0.004	106.5
37	MS(4)	0.018	30.0	0.005	314.5	-0.013	75.5

Station: Wrightsville Beach, NC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.591	353.2	0.578	350.4	-0.013	-2.8
2	S(2)	0.103	15.6	0.092	14.7	-0.011	-0.9
3	N(2)	0.136	336.3	0.135	332.7	-0.001	-3.6
4	K(1)	0.095	186.7	0.104	186.6	0.009	-0.1
5	M(4)	0.008	294.7	0.014	291.9	0.006	-2.8
6	O(1)	0.067	195.9	0.079	191.1	0.012	-4.8
7	M(6)	0.007	23.5	0.001	343.0	-0.006	40.5
8	MK(3)	0.003	57.5	0.002	16.4	-0.001	-41.1
9	S(4)	0.012	304.6	0.000	355.9	-0.012	51.3
10	MN(4)	0.008	238.9	0.008	270.3	0.000	31.4
11	NU(2)	0.027	333.4	0.000	202.0	-0.027	-131.4
12	S(6)	0.001	164.2	0.000	17.2	-0.001	-147.0
13	MU(2)	0.021	342.6	0.002	21.6	-0.019	39.0
14	2N(2)	0.020	319.1	0.001	345.7	-0.019	26.6
15	OO(1)	0.004	187.0	0.000	328.2	-0.004	141.2
16	LAMBDA(2)	0.005	5.1	0.001	252.5	-0.004	112.6
17	S(1)	0.007	121.5	0.000	132.1	-0.007	10.6
18	M(1)	0.005	227.0	0.000	269.7	-0.005	42.7
19	J(1)	0.007	184.4	0.000	271.4	-0.007	87.0
20	MM	0.000	0.0	0.003	192.3	0.000	0.0
21	SSA	0.053	50.1	0.000	168.5	-0.053	118.4
22	SA	0.083	170.9	0.000	169.8	-0.083	-1.1
23	MSF	0.000	0.0	0.000	174.7	0.000	0.0
24	MF	0.000	0.0	0.005	228.9	0.000	0.0
25	RHO(1)	0.004	184.4	0.000	100.9	-0.004	-83.5
26	Q(1)	0.016	180.4	0.015	180.2	-0.001	-0.2
27	T(2)	0.009	5.0	0.000	73.4	-0.009	68.4
28	R(2)	0.004	214.3	0.000	320.6	-0.004	106.3
29	2Q(1)	0.002	272.3	0.000	158.7	-0.002	-113.6
30	P(1)	0.034	185.1	0.031	183.7	-0.003	-1.4
31	2SM(2)	0.004	19.9	0.000	120.5	-0.004	100.6
32	M(3)	0.009	31.4	0.001	328.2	-0.008	63.2
33	L(2)	0.012	329.9	0.005	276.3	-0.007	-53.6
34	2MK(3)	0.002	109.0	0.002	42.1	0.000	-66.9
35	K(2)	0.027	12.4	0.025	16.3	-0.002	3.9
36	M(8)	0.001	56.9	0.001	343.0	0.000	73.9
37	MS(4)	0.008	132.5	0.005	311.8	-0.003	179.3

Station: Springmaid Pier, SC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

N	Constituent	Observed Amplitude	Observed Phase	Modeled Amplitude	Modeled Phase	Difference Amplitude	Difference Phase
1	M(2)	0.741	357.6	0.699	354.4	-0.042	-3.2
2	S(2)	0.126	18.6	0.110	19.1	-0.016	0.5
3	N(2)	0.178	338.4	0.162	337.5	-0.016	-0.9
4	K(1)	0.100	188.8	0.109	189.2	0.009	0.4
5	M(4)	0.006	262.8	0.014	22.8	0.008	120.0
6	O(1)	0.073	192.9	0.082	193.7	0.009	0.8
7	M(6)	0.003	317.7	0.003	1.6	0.000	43.9
8	MK(3)	0.000	0.0	0.004	40.9	0.000	0.0
9	S(4)	0.006	31.1	0.000	104.0	-0.006	72.9
10	MN(4)	0.006	282.8	0.008	358.7	0.002	75.9
11	NU(2)	0.033	335.9	0.001	219.0	-0.032	-116.9
12	S(6)	0.000	0.0	0.000	198.0	0.000	0.0
13	MU(2)	0.025	350.9	0.005	42.2	-0.020	51.3
14	2N(2)	0.026	320.3	0.002	7.1	-0.024	46.8
15	OO(1)	0.005	198.8	0.000	343.3	-0.005	144.5
16	LAMBDA(2)	0.005	12.2	0.002	265.4	-0.003	106.8
17	S(1)	0.019	145.4	0.000	175.4	-0.019	30.0
18	M(1)	0.004	185.7	0.000	320.7	-0.004	135.0
19	J(1)	0.007	186.2	0.001	295.5	-0.006	109.3
20	MM	0.000	0.0	0.003	192.4	0.000	0.0
21	SSA	0.053	50.1	0.000	177.4	-0.053	127.3
22	SA	0.083	170.9	0.000	180.5	-0.083	9.6
23	MSF	0.000	0.0	0.000	169.6	0.000	0.0
24	MF	0.000	0.0	0.006	229.8	0.000	0.0
25	RHO(1)	0.003	194.7	0.000	96.3	-0.003	-98.4
26	Q(1)	0.016	185.1	0.016	183.2	0.000	-1.9
27	T(2)	0.013	2.3	0.000	81.5	-0.013	79.2
28	R(2)	0.003	250.1	0.000	328.5	-0.003	78.4
29	2Q(1)	0.003	114.6	0.000	199.2	-0.003	84.6
30	P(1)	0.034	188.2	0.032	186.5	-0.002	-1.7
31	2SM(2)	0.004	27.9	0.001	129.8	-0.003	101.9
32	M(3)	0.020	59.1	0.001	0.3	-0.019	-58.8
33	L(2)	0.026	3.9	0.010	289.7	-0.016	74.2
34	2MK(3)	0.006	64.3	0.003	66.1	-0.003	1.8
35	K(2)	0.032	21.9	0.029	20.6	-0.003	-1.3
36	M(8)	0.000	0.0	0.003	1.6	0.000	0.0
37	MS(4)	0.012	240.0	0.003	56.8	-0.009	176.8

Station: Charleston, SC
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.783	10.4	0.675	351.0	-0.108	19.4
2	S(2)	0.119	36.1	0.103	14.6	-0.016	-21.5
3	N(2)	0.172	354.9	0.157	333.8	-0.015	-21.1
4	K(1)	0.105	199.7	0.109	189.2	0.004	-10.5
5	M(4)	0.033	209.6	0.008	345.9	-0.025	136.3
6	O(1)	0.079	203.4	0.083	193.9	0.004	-9.5
7	M(6)	0.006	135.3	0.002	41.0	-0.004	-94.3
8	MK(3)	0.008	4.4	0.003	95.3	-0.005	90.9
9	S(4)	0.000	0.0	0.000	100.3	0.000	0.0
10	MN(4)	0.014	201.4	0.003	346.4	-0.011	145.0
11	NU(2)	0.035	351.4	0.001	212.8	-0.034	-138.6
12	S(6)	0.000	0.0	0.000	79.3	0.000	0.0
13	MU(2)	0.025	40.0	0.004	34.7	-0.021	-5.3
14	2N(2)	0.022	343.3	0.002	359.7	-0.020	16.4
15	OO(1)	0.005	217.3	0.000	336.4	-0.005	119.1
16	LAMBDA(2)	0.013	356.1	0.002	258.1	-0.011	-98.0
17	S(1)	0.018	173.9	0.000	180.7	-0.018	6.8
18	M(1)	0.005	243.3	0.000	322.2	-0.005	78.9
19	J(1)	0.005	213.5	0.001	296.0	-0.004	82.5
20	MM	0.000	0.0	0.003	193.1	0.000	0.0
21	SSA	0.053	50.5	0.000	185.5	-0.053	135.0
22	SA	0.078	176.3	0.000	194.2	-0.078	17.9
23	MSF	0.000	0.0	0.000	187.0	0.000	0.0
24	MF	0.000	0.0	0.006	231.9	0.000	0.0
25	RHO(1)	0.004	198.0	0.000	91.0	-0.004	-107.0
26	Q(1)	0.017	198.9	0.016	183.4	-0.001	-15.5
27	T(2)	0.015	19.9	0.000	76.1	-0.015	56.2
28	R(2)	0.005	263.8	0.000	322.9	-0.005	59.1
29	2Q(1)	0.002	207.1	0.000	204.2	-0.002	-2.9
30	P(1)	0.036	198.3	0.033	186.5	-0.003	-11.8
31	2SM(2)	0.000	0.0	0.001	123.2	0.000	0.0
32	M(3)	0.017	114.8	0.001	37.6	-0.016	-77.2
33	L(2)	0.034	5.0	0.009	283.0	-0.025	82.0
34	2MK(3)	0.005	30.6	0.004	106.9	-0.001	76.3
35	K(2)	0.030	37.1	0.027	16.1	-0.003	-21.0
36	M(8)	0.000	0.0	0.002	41.0	0.000	0.0
37	MS(4)	0.010	237.7	0.003	37.6	-0.007	159.9

Station: Fort Pulaski, GA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	1.013	17.9	0.815	359.6	-0.198	18.3
2	S(2)	0.158	45.8	0.117	25.8	-0.041	-20.0
3	N(2)	0.219	2.2	0.174	344.2	-0.045	18.0
4	K(1)	0.110	200.7	0.109	190.4	-0.001	-10.3
5	M(4)	0.042	248.1	0.069	346.1	0.027	98.0
6	O(1)	0.079	206.5	0.086	192.4	0.007	-14.1
7	M(6)	0.006	60.4	0.007	66.0	0.001	5.6
8	MK(3)	0.009	33.1	0.012	187.5	0.003	154.4
9	S(4)	0.007	49.4	0.002	54.3	-0.005	4.9
10	MN(4)	0.020	241.9	0.033	332.0	0.013	90.1
11	NU(2)	0.044	355.4	0.001	261.6	-0.043	-93.8
12	S(6)	0.000	0.0	0.000	351.3	0.000	0.0
13	MU(2)	0.032	50.2	0.011	104.3	-0.021	54.1
14	2N(2)	0.028	349.1	0.005	77.0	-0.023	87.9
15	OO(1)	0.005	213.3	0.000	105.2	-0.005	-108.1
16	LAMBDA(2)	0.018	5.6	0.005	325.5	-0.013	40.1
17	S(1)	0.019	168.1	0.000	234.1	-0.019	66.0
18	M(1)	0.006	249.2	0.001	165.4	-0.005	-83.8
19	J(1)	0.006	228.0	0.001	90.0	-0.005	-138.0
20	MM	0.000	0.0	0.025	20.9	0.000	0.0
21	SSA	0.060	51.8	0.000	344.4	-0.060	67.4
22	SA	0.084	176.0	0.000	120.4	-0.084	-55.6
23	MSF	0.000	0.0	0.018	21.5	0.000	0.0
24	MF	0.000	0.0	0.003	301.0	0.000	0.0
25	RHO(1)	0.003	204.7	0.001	27.9	-0.002	-176.8
26	Q(1)	0.017	198.9	0.015	178.9	-0.002	-20.0
27	T(2)	0.019	30.7	0.000	127.8	-0.019	97.1
28	R(2)	0.011	285.6	0.000	6.2	-0.011	80.6
29	2Q(1)	0.002	212.2	0.000	308.7	-0.002	96.5
30	P(1)	0.039	199.8	0.031	190.0	-0.008	-9.8
31	2SM(2)	0.003	122.4	0.002	176.1	-0.001	53.7
32	M(3)	0.024	152.1	0.003	127.9	-0.021	-24.2
33	L(2)	0.044	12.2	0.023	346.0	-0.021	26.2
34	2MK(3)	0.005	77.0	0.009	202.4	0.004	125.4
35	K(2)	0.041	45.9	0.030	24.4	-0.011	-21.5
36	M(8)	0.000	0.0	0.007	66.0	0.000	0.0
37	MS(4)	0.023	274.4	0.021	16.2	-0.002	101.8

Station: Fernandina Beach, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.898	32.9	0.829	10.0	-0.069	-22.9
2	S(2)	0.136	61.2	0.123	35.8	-0.013	-25.4
3	N(2)	0.197	14.7	0.190	352.8	-0.007	21.9
4	K(1)	0.106	208.0	0.115	198.8	0.009	-9.2
5	M(4)	0.030	193.6	0.006	126.7	-0.024	-66.9
6	O(1)	0.078	215.9	0.087	203.1	0.009	-12.8
7	M(6)	0.006	124.7	0.001	116.8	-0.005	-7.9
8	MK(3)	0.013	28.3	0.005	164.5	-0.008	136.2
9	S(4)	0.006	339.7	0.000	233.4	-0.006	-106.3
10	MN(4)	0.016	192.9	0.002	85.6	-0.014	-107.3
11	NU(2)	0.038	11.7	0.001	250.1	-0.037	121.6
12	S(6)	0.000	0.0	0.000	210.8	0.000	0.0
13	MU(2)	0.026	69.4	0.006	74.4	-0.020	5.0
14	2N(2)	0.026	350.6	0.003	39.5	-0.023	48.9
15	OO(1)	0.005	208.9	0.000	352.9	-0.005	144.0
16	LAMBDA(2)	0.014	10.2	0.003	296.0	-0.011	74.2
17	S(1)	0.015	177.5	0.000	198.3	-0.015	20.8
18	M(1)	0.004	261.7	0.000	334.0	-0.004	72.3
19	J(1)	0.005	245.1	0.001	314.0	-0.004	68.9
20	MM	0.000	0.0	0.003	193.1	0.000	0.0
21	SSA	0.070	54.7	0.000	184.4	-0.070	129.7
22	SA	0.086	196.6	0.000	178.3	-0.086	-18.3
23	MSF	0.000	0.0	0.000	258.1	0.000	0.0
24	MF	0.000	0.0	0.007	235.2	0.000	0.0
25	RHO(1)	0.003	234.4	0.000	98.6	-0.003	-135.8
26	Q(1)	0.016	210.0	0.017	193.8	0.001	-16.2
27	T(2)	0.015	49.4	0.000	109.8	-0.015	60.4
28	R(2)	0.010	290.4	0.000	355.3	-0.010	64.9
29	2Q(1)	0.002	223.6	0.000	206.6	-0.002	-17.0
30	P(1)	0.037	206.4	0.034	196.4	-0.003	-10.0
31	2SM(2)	0.004	99.1	0.001	162.1	-0.003	63.0
32	M(3)	0.010	171.9	0.002	111.9	-0.008	-60.0
33	L(2)	0.040	37.8	0.014	320.0	-0.026	77.8
34	2MK(3)	0.005	46.2	0.005	171.5	0.000	125.3
35	K(2)	0.030	67.3	0.032	37.1	0.002	-30.2
36	M(8)	0.004	288.2	0.001	116.8	-0.003	-171.4
37	MS(4)	0.016	223.4	0.001	178.0	-0.015	-45.4

Station: Naples, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.286	144.2	0.294	125.2	0.008	-19.0
2	S(2)	0.096	156.1	0.109	134.0	0.013	-22.1
3	N(2)	0.057	130.6	0.051	116.4	-0.006	-14.2
4	K(1)	0.158	9.9	0.156	11.7	-0.002	1.8
5	M(4)	0.017	123.5	0.017	96.0	0.000	-27.5
6	O(1)	0.143	2.8	0.149	10.8	0.006	8.0
7	M(6)	0.008	124.8	0.000	145.3	-0.008	20.5
8	MK(3)	0.009	322.0	0.012	258.0	0.003	-64.0
9	S(4)	0.004	235.2	0.001	188.1	-0.003	-47.1
10	MN(4)	0.008	88.4	0.006	76.1	-0.002	-12.3
11	NU(2)	0.013	142.3	0.003	116.5	-0.010	-25.8
12	S(6)	0.000	0.0	0.000	108.4	0.000	0.0
13	MU(2)	0.009	55.2	0.015	285.7	0.006	129.5
14	2N(2)	0.008	109.4	0.001	322.1	-0.007	147.3
15	OO(1)	0.005	22.3	0.000	109.8	-0.005	87.5
16	LAMBDA(2)	0.002	149.7	0.003	150.6	0.001	0.9
17	S(1)	0.017	104.0	0.000	338.6	-0.017	125.4
18	M(1)	0.008	34.0	0.000	188.0	-0.008	154.0
19	J(1)	0.010	7.9	0.001	117.0	-0.009	109.1
20	MM	0.000	0.0	0.003	216.8	0.000	0.0
21	SSA	0.030	66.7	0.000	243.1	-0.030	176.4
22	SA	0.075	167.9	0.000	233.7	-0.075	65.8
23	MSF	0.000	0.0	0.000	8.5	0.000	0.0
24	MF	0.000	0.0	0.006	269.8	0.000	0.0
25	RHO(1)	0.006	359.5	0.000	303.5	-0.006	-56.0
26	Q(1)	0.030	349.4	0.033	357.7	0.003	8.3
27	T(2)	0.005	147.7	0.000	30.4	-0.005	-117.3
28	R(2)	0.001	156.7	0.000	207.6	-0.001	50.9
29	2Q(1)	0.004	327.6	0.001	8.1	-0.003	40.5
30	P(1)	0.052	8.8	0.047	10.9	-0.005	2.1
31	2SM(2)	0.000	0.0	0.003	22.0	0.000	0.0
32	M(3)	0.000	0.0	0.003	155.1	0.000	0.0
33	L(2)	0.008	186.8	0.008	170.6	0.000	-16.2
34	2MK(3)	0.009	301.6	0.012	238.6	0.003	-63.0
35	K(2)	0.027	149.4	0.036	131.3	0.009	-18.1
36	M(8)	0.000	0.0	0.000	145.3	0.000	0.0
37	MS(4)	0.008	152.2	0.010	138.9	0.002	-13.3

Station: St. Petersburg, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.175	197.0	0.267	180.0	0.092	-17.0
2	S(2)	0.057	211.7	0.101	190.2	0.044	-21.5
3	N(2)	0.030	191.3	0.041	175.6	0.011	-15.7
4	K(1)	0.167	49.9	0.178	39.2	0.011	-10.7
5	M(4)	0.003	230.8	0.004	267.9	0.001	37.1
6	O(1)	0.155	37.7	0.167	36.6	0.012	-1.1
7	M(6)	0.000	0.0	0.000	186.9	0.000	0.0
8	MK(3)	0.004	129.0	0.006	107.8	0.002	-21.2
9	S(4)	0.000	0.0	0.001	273.4	0.000	0.0
10	MN(4)	0.000	0.0	0.001	249.7	0.000	0.0
11	NU(2)	0.009	198.7	0.006	170.2	-0.003	-28.5
12	S(6)	0.000	0.0	0.000	175.4	0.000	0.0
13	MU(2)	0.009	20.7	0.028	338.5	0.019	42.2
14	2N(2)	0.004	193.5	0.003	130.6	-0.001	-62.9
15	OO(1)	0.006	62.0	0.004	170.4	-0.002	108.4
16	LAMBDA(2)	0.004	226.2	0.005	196.6	0.001	-29.6
17	S(1)	0.017	138.5	0.000	333.3	-0.017	165.2
18	M(1)	0.005	79.3	0.002	226.6	-0.003	147.3
19	J(1)	0.008	91.1	0.004	146.4	-0.004	55.3
20	MM	0.000	0.0	0.002	298.5	0.000	0.0
21	SSA	0.033	41.0	0.002	190.4	-0.031	149.4
22	SA	0.092	150.8	0.000	163.2	-0.092	12.4
23	MSF	0.000	0.0	0.005	355.9	0.000	0.0
24	MF	0.000	0.0	0.009	231.3	0.000	0.0
25	RHO(1)	0.005	4.2	0.001	345.4	-0.004	18.8
26	Q(1)	0.029	26.2	0.034	24.9	0.005	-1.3
27	T(2)	0.004	187.1	0.000	78.1	-0.004	-109.0
28	R(2)	0.000	212.4	0.000	239.0	0.000	0.0
29	2Q(1)	0.005	9.5	0.003	61.4	-0.002	51.9
30	P(1)	0.049	57.6	0.050	44.5	0.001	-13.1
31	2SM(2)	0.000	0.0	0.004	38.3	0.000	0.0
32	M(3)	0.000	0.0	0.001	50.8	0.000	0.0
33	L(2)	0.011	219.8	0.012	216.3	0.001	-3.5
34	2MK(3)	0.000	0.0	0.005	123.8	0.000	0.0
35	K(2)	0.025	215.0	0.040	189.3	0.015	-25.7
36	M(8)	0.000	0.0	0.000	186.9	0.000	0.0
37	MS(4)	0.000	0.0	0.003	269.0	0.000	0.0

Station: Clearwater Beach, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.246	123.1	0.257	129.7	0.011	6.6
2	S(2)	0.096	141.0	0.109	136.4	0.013	-4.6
3	N(2)	0.046	120.3	0.044	123.6	-0.002	3.3
4	K(1)	0.158	12.4	0.168	13.4	0.010	1.0
5	M(4)	0.009	76.0	0.007	22.4	-0.002	-53.6
6	O(1)	0.151	3.6	0.158	12.4	0.007	8.8
7	M(6)	0.000	0.0	0.001	34.3	0.000	0.0
8	MK(3)	0.003	331.7	0.007	299.8	0.004	-31.9
9	S(4)	0.000	0.0	0.001	99.6	0.000	0.0
10	MN(4)	0.005	51.0	0.003	15.9	-0.002	-35.1
11	NU(2)	0.010	121.6	0.003	138.4	-0.007	16.8
12	S(6)	0.000	0.0	0.000	60.3	0.000	0.0
13	MU(2)	0.000	0.0	0.013	296.5	0.000	0.0
14	2N(2)	0.005	110.1	0.001	42.6	-0.004	-67.5
15	OO(1)	0.005	4.7	0.001	117.5	-0.004	112.8
16	LAMBDA(2)	0.002	131.4	0.003	168.9	0.001	37.5
17	S(1)	0.013	93.8	0.000	230.3	-0.013	136.5
18	M(1)	0.007	15.7	0.000	182.4	-0.007	166.7
19	J(1)	0.010	20.8	0.000	99.0	-0.010	78.2
20	MM	0.000	0.0	0.003	217.5	0.000	0.0
21	SSA	0.037	48.2	0.000	277.5	-0.037	130.7
22	SA	0.091	151.9	0.000	256.6	-0.091	104.7
23	MSF	0.000	0.0	0.000	35.9	0.000	0.0
24	MF	0.000	0.0	0.006	278.0	0.000	0.0
25	RHO(1)	0.005	341.8	0.000	270.9	-0.005	-70.9
26	Q(1)	0.032	348.0	0.034	358.7	0.002	10.7
27	T(2)	0.007	119.1	0.000	77.7	-0.007	-41.4
28	R(2)	0.001	141.7	0.000	231.5	-0.001	89.8
29	2Q(1)	0.005	340.8	0.001	5.9	-0.004	25.1
30	P(1)	0.053	12.5	0.052	12.3	-0.001	-0.2
31	2SM(2)	0.000	0.0	0.003	32.9	0.000	0.0
32	M(3)	0.003	298.6	0.002	207.6	-0.001	-91.0
33	L(2)	0.007	143.1	0.007	196.1	0.000	53.0
34	2MK(3)	0.004	309.0	0.008	281.3	0.004	-27.7
35	K(2)	0.027	134.6	0.036	140.3	0.009	5.7
36	M(8)	0.000	0.0	0.001	34.3	0.000	0.0
37	MS(4)	0.006	90.5	0.006	42.6	0.000	-47.9

Station: Cedar Key, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.386	189.5	0.406	188.2	0.020	-1.3
2	S(2)	0.135	218.1	0.164	204.3	0.029	-13.8
3	N(2)	0.062	185.3	0.063	182.2	0.001	-3.1
4	K(1)	0.177	34.6	0.194	33.2	0.017	-1.4
5	M(4)	0.009	254.2	0.008	200.2	-0.001	-54.0
6	O(1)	0.163	27.6	0.175	30.2	0.012	2.6
7	M(6)	0.004	197.3	0.001	271.5	-0.003	74.2
8	MK(3)	0.007	173.4	0.010	177.8	0.003	4.4
9	S(4)	0.000	0.0	0.002	294.2	0.000	0.0
10	MN(4)	0.003	234.4	0.003	197.4	0.000	-37.0
11	NU(2)	0.016	182.9	0.006	173.8	-0.010	-9.1
12	S(6)	0.000	0.0	0.000	41.0	0.000	0.0
13	MU(2)	0.014	301.4	0.036	335.8	0.022	34.4
14	2N(2)	0.007	173.1	0.004	163.8	-0.003	-9.3
15	OO(1)	0.006	44.8	0.003	163.7	-0.003	118.9
16	LAMBDA(2)	0.007	218.3	0.008	209.1	0.001	-9.2
17	S(1)	0.015	120.2	0.000	306.1	-0.015	174.1
18	M(1)	0.008	66.8	0.001	208.1	-0.007	141.3
19	J(1)	0.007	41.8	0.003	141.6	-0.004	99.8
20	MM	0.000	0.0	0.002	283.5	0.000	0.0
21	SSA	0.000	0.0	0.000	181.0	0.000	0.0
22	SA	0.096	136.4	0.000	176.8	-0.096	40.4
23	MSF	0.000	0.0	0.006	5.5	0.000	0.0
24	MF	0.000	0.0	0.005	276.1	0.000	0.0
25	RHO(1)	0.010	7.4	0.001	344.2	-0.009	23.2
26	Q(1)	0.033	12.1	0.036	17.6	0.003	5.5
27	T(2)	0.006	214.8	0.000	98.1	-0.006	-116.7
28	R(2)	0.007	166.6	0.000	262.7	-0.007	96.1
29	2Q(1)	0.005	14.5	0.002	37.2	-0.003	22.7
30	P(1)	0.053	28.5	0.056	35.6	0.003	7.1
31	2SM(2)	0.004	78.3	0.006	58.1	0.002	-20.2
32	M(3)	0.003	55.5	0.002	87.0	-0.001	31.5
33	L(2)	0.020	189.3	0.015	230.6	-0.005	41.3
34	2MK(3)	0.009	165.9	0.010	174.9	0.001	9.0
35	K(2)	0.042	211.4	0.059	206.6	0.017	-4.8
36	M(8)	0.000	0.0	0.001	271.5	0.000	0.0
37	MS(4)	0.006	287.9	0.009	242.3	0.003	-45.6

Station: Apalachicola, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.116	255.3	0.126	292.4	0.010	37.1
2	S(2)	0.037	281.4	0.044	312.7	0.007	31.3
3	N(2)	0.018	248.8	0.018	281.8	0.000	33.0
4	K(1)	0.130	53.6	0.163	69.6	0.033	16.0
5	M(4)	0.006	86.5	0.006	82.2	0.000	-4.3
6	O(1)	0.112	46.8	0.152	62.7	0.040	15.9
7	M(6)	0.000	0.0	0.001	13.5	0.000	0.0
8	MK(3)	0.008	260.7	0.016	317.7	0.008	57.0
9	S(4)	0.000	0.0	0.000	204.7	0.000	0.0
10	MN(4)	0.000	0.0	0.002	45.5	0.000	0.0
11	NU(2)	0.006	237.2	0.004	283.8	-0.002	46.6
12	S(6)	0.000	0.0	0.000	220.7	0.000	0.0
13	MU(2)	0.006	51.5	0.020	99.0	0.014	47.5
14	2N(2)	0.002	242.3	0.013	195.8	0.011	-46.5
15	OO(1)	0.005	90.4	0.004	196.3	-0.001	105.9
16	LAMBDA(2)	0.001	267.4	0.004	316.9	0.003	49.5
17	S(1)	0.004	90.2	0.000	203.7	-0.004	113.5
18	M(1)	0.007	119.6	0.001	174.1	-0.006	54.5
19	J(1)	0.004	70.8	0.004	166.0	0.000	95.2
20	MM	0.000	0.0	0.002	303.5	0.000	0.0
21	SSA	0.036	28.7	0.003	168.6	-0.033	139.9
22	SA	0.075	145.1	0.000	213.1	-0.075	68.0
23	MSF	0.000	0.0	0.005	8.5	0.000	0.0
24	MF	0.000	0.0	0.010	216.4	0.000	0.0
25	RHO(1)	0.005	12.3	0.002	34.0	-0.003	21.7
26	Q(1)	0.023	33.1	0.030	46.9	0.007	13.8
27	T(2)	0.002	280.3	0.000	82.5	-0.002	162.2
28	R(2)	0.000	0.0	0.000	16.0	0.000	0.0
29	2Q(1)	0.003	40.0	0.003	86.9	0.000	46.9
30	P(1)	0.043	56.1	0.043	72.3	0.000	16.2
31	2SM(2)	0.000	0.0	0.004	179.4	0.000	0.0
32	M(3)	0.000	0.0	0.004	251.6	0.000	0.0
33	L(2)	0.009	273.6	0.009	335.7	0.000	62.1
34	2MK(3)	0.007	254.6	0.019	315.6	0.012	61.0
35	K(2)	0.016	255.5	0.031	284.7	0.015	29.2
36	M(8)	0.000	0.0	0.001	13.5	0.000	0.0
37	MS(4)	0.000	0.0	0.003	128.9	0.000	0.0

Station: Panama City, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.026	139.1	0.027	87.5	0.001	-51.6
2	S(2)	0.011	147.6	0.017	75.9	0.006	-71.7
3	N(2)	0.005	165.4	0.006	103.8	0.001	-61.6
4	K(1)	0.141	37.5	0.159	20.9	0.018	-16.6
5	M(4)	0.000	0.0	0.008	293.6	0.000	0.0
6	O(1)	0.135	28.1	0.154	17.4	0.019	-10.7
7	M(6)	0.000	0.0	0.000	279.3	0.000	0.0
8	MK(3)	0.000	0.0	0.001	289.2	0.000	0.0
9	S(4)	0.000	0.0	0.000	2.8	0.000	0.0
10	MN(4)	0.000	0.0	0.003	267.7	0.000	0.0
11	NU(2)	0.001	161.9	0.000	273.1	-0.001	111.2
12	S(6)	0.000	0.0	0.000	201.9	0.000	0.0
13	MU(2)	0.000	0.0	0.002	78.0	0.000	0.0
14	2N(2)	0.001	191.7	0.000	290.0	-0.001	98.3
15	OO(1)	0.007	17.5	0.000	63.9	-0.007	46.4
16	LAMBDA(2)	0.000	143.0	0.000	303.7	0.000	0.0
17	S(1)	0.007	142.7	0.000	95.4	-0.007	-47.3
18	M(1)	0.007	62.9	0.000	285.5	-0.007	137.4
19	J(1)	0.007	53.7	0.000	258.4	-0.007	155.3
20	MM	0.000	0.0	0.003	221.5	0.000	0.0
21	SSA	0.034	48.9	0.000	321.4	-0.034	87.5
22	SA	0.095	150.6	0.000	278.6	-0.095	128.0
23	MSF	0.000	0.0	0.000	152.6	0.000	0.0
24	MF	0.000	0.0	0.006	291.8	0.000	0.0
25	RHO(1)	0.005	12.3	0.000	136.6	-0.005	124.3
26	Q(1)	0.028	17.3	0.034	1.8	0.006	-15.5
27	T(2)	0.001	147.3	0.000	189.5	-0.001	42.2
28	R(2)	0.000	0.0	0.000	345.9	0.000	0.0
29	2Q(1)	0.003	18.8	0.000	8.2	-0.003	-10.6
30	P(1)	0.045	38.8	0.049	18.1	0.004	-20.7
31	2SM(2)	0.000	0.0	0.000	150.4	0.000	0.0
32	M(3)	0.000	0.0	0.000	205.2	0.000	0.0
33	L(2)	0.001	112.8	0.001	319.8	0.000	153.0
34	2MK(3)	0.000	0.0	0.001	292.0	0.000	0.0
35	K(2)	0.008	124.5	0.004	64.4	-0.004	-60.1
36	M(8)	0.000	0.0	0.000	279.3	0.000	0.0
37	MS(4)	0.000	0.0	0.003	335.8	0.000	0.0

Station: Pensacola, FL
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.025	170.3	0.028	85.7	0.003	-84.6
2	S(2)	0.009	163.7	0.017	77.8	0.008	-85.9
3	N(2)	0.005	184.1	0.005	100.2	0.000	-83.9
4	K(1)	0.154	52.2	0.158	22.3	0.004	-29.9
5	M(4)	0.000	0.0	0.006	300.5	0.000	0.0
6	O(1)	0.151	42.3	0.154	19.1	0.003	-23.2
7	M(6)	0.000	0.0	0.000	208.5	0.000	0.0
8	MK(3)	0.000	0.0	0.000	275.9	0.000	0.0
9	S(4)	0.000	0.0	0.000	5.8	0.000	0.0
10	MN(4)	0.000	0.0	0.002	275.3	0.000	0.0
11	NU(2)	0.001	182.3	0.000	272.4	-0.001	90.1
12	S(6)	0.000	0.0	0.000	231.2	0.000	0.0
13	MU(2)	0.000	0.0	0.001	81.5	0.000	0.0
14	2N(2)	0.001	197.9	0.000	308.3	-0.001	110.4
15	OO(1)	0.016	29.6	0.000	166.4	-0.016	136.8
16	LAMBDA(2)	0.000	167.2	0.000	306.0	0.000	0.0
17	S(1)	0.003	93.7	0.000	104.5	-0.003	10.8
18	M(1)	0.003	103.2	0.000	339.6	-0.003	123.6
19	J(1)	0.007	78.3	0.000	284.9	-0.007	153.4
20	MM	0.000	0.0	0.003	221.8	0.000	0.0
21	SSA	0.048	43.2	0.000	323.3	-0.048	79.9
22	SA	0.087	148.3	0.000	280.6	-0.087	132.3
23	MSF	0.000	0.0	0.000	168.5	0.000	0.0
24	MF	0.000	0.0	0.006	295.2	0.000	0.0
25	RHO(1)	0.006	22.5	0.000	143.8	-0.006	121.3
26	Q(1)	0.033	30.1	0.034	3.6	0.001	-26.5
27	T(2)	0.001	164.0	0.000	133.5	-0.001	-30.5
28	R(2)	0.000	0.0	0.000	338.0	0.000	0.0
29	2Q(1)	0.003	11.6	0.000	36.4	-0.003	24.8
30	P(1)	0.046	54.9	0.048	19.5	0.002	-35.4
31	2SM(2)	0.000	0.0	0.000	146.3	0.000	0.0
32	M(3)	0.000	0.0	0.000	193.3	0.000	0.0
33	L(2)	0.001	156.5	0.000	312.5	-0.001	156.0
34	2MK(3)	0.000	0.0	0.000	281.8	0.000	0.0
35	K(2)	0.009	188.0	0.004	73.0	-0.005	-115.0
36	M(8)	0.000	0.0	0.000	208.5	0.000	0.0
37	MS(4)	0.000	0.0	0.002	337.9	0.000	0.0

Station: Bay Waveland Yacht Club, MS
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.031	213.2	0.026	183.2	-0.005	-30.0
2	S(2)	0.026	225.0	0.020	183.9	-0.006	-41.1
3	N(2)	0.007	240.1	0.004	222.3	-0.003	-17.8
4	K(1)	0.174	63.7	0.154	66.0	-0.020	2.3
5	M(4)	0.007	226.8	0.006	225.6	-0.001	-1.2
6	O(1)	0.167	49.6	0.144	60.3	-0.023	10.7
7	M(6)	0.000	0.0	0.000	248.6	0.000	0.0
8	MK(3)	0.008	219.5	0.013	231.4	0.005	11.9
9	S(4)	0.003	15.5	0.000	15.8	-0.003	0.3
10	MN(4)	0.003	171.4	0.002	183.9	-0.001	12.5
11	NU(2)	0.001	236.5	0.000	355.0	-0.001	118.5
12	S(6)	0.000	0.0	0.000	299.5	0.000	0.0
13	MU(2)	0.000	0.0	0.000	147.5	0.000	0.0
14	2N(2)	0.001	267.0	0.006	114.4	0.005	-152.6
15	OO(1)	0.018	41.7	0.009	37.7	-0.009	-4.0
16	LAMBDA(2)	0.000	0.0	0.001	114.6	0.000	0.0
17	S(1)	0.018	144.1	0.000	358.1	-0.018	146.0
18	M(1)	0.012	56.6	0.002	238.0	-0.010	178.6
19	J(1)	0.013	70.7	0.005	227.7	-0.008	157.0
20	MM	0.007	258.4	0.002	301.6	-0.005	43.2
21	SSA	0.059	57.0	0.004	170.1	-0.055	113.1
22	SA	0.079	139.3	0.000	134.5	-0.079	-4.8
23	MSF	0.005	59.2	0.008	348.2	0.003	71.0
24	MF	0.009	106.0	0.011	232.7	0.002	126.7
25	RHO(1)	0.006	43.5	0.001	72.4	-0.005	28.9
26	Q(1)	0.037	35.2	0.030	44.4	-0.007	9.2
27	T(2)	0.002	225.0	0.000	183.1	-0.002	-41.9
28	R(2)	0.000	0.0	0.000	74.7	0.000	0.0
29	2Q(1)	0.005	35.5	0.007	310.9	0.002	84.6
30	P(1)	0.049	63.6	0.045	65.3	-0.004	1.7
31	2SM(2)	0.000	0.0	0.001	319.1	0.000	0.0
32	M(3)	0.000	0.0	0.002	158.1	0.000	0.0
33	L(2)	0.001	186.3	0.001	125.3	0.000	-61.0
34	2MK(3)	0.006	195.7	0.011	225.1	0.005	29.4
35	K(2)	0.013	210.5	0.015	183.9	0.002	-26.6
36	M(8)	0.000	0.0	0.000	248.6	0.000	0.0
37	MS(4)	0.000	0.0	0.003	326.9	0.000	0.0

Station: Grand Isle, LA
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.013	163.0	0.010	136.6	-0.003	-26.4
2	S(2)	0.007	154.6	0.007	106.5	0.000	-48.1
3	N(2)	0.005	176.1	0.003	163.3	-0.002	-12.8
4	K(1)	0.114	37.4	0.141	32.2	0.027	-5.2
5	M(4)	0.000	0.0	0.003	319.9	0.000	0.0
6	O(1)	0.114	30.8	0.139	28.6	0.025	-2.2
7	M(6)	0.000	0.0	0.000	253.3	0.000	0.0
8	MK(3)	0.000	0.0	0.001	164.0	0.000	0.0
9	S(4)	0.000	0.0	0.000	31.9	0.000	0.0
10	MN(4)	0.000	0.0	0.001	299.9	0.000	0.0
11	NU(2)	0.001	174.2	0.000	311.6	-0.001	137.4
12	S(6)	0.000	0.0	0.000	277.7	0.000	0.0
13	MU(2)	0.000	0.0	0.000	72.2	0.000	0.0
14	2N(2)	0.001	189.1	0.000	65.9	-0.001	-123.2
15	OO(1)	0.006	33.5	0.002	54.1	-0.004	20.6
16	LAMBDA(2)	0.000	0.0	0.000	34.0	0.000	0.0
17	S(1)	0.005	4.6	0.000	0.9	-0.005	-3.7
18	M(1)	0.005	42.1	0.001	248.0	-0.004	154.1
19	J(1)	0.006	41.2	0.001	241.3	-0.005	159.9
20	MM	0.000	0.0	0.002	269.0	0.000	0.0
21	SSA	0.060	49.7	0.002	176.2	-0.058	126.5
22	SA	0.087	149.7	0.000	147.7	-0.087	-2.0
23	MSF	0.000	0.0	0.002	351.6	0.000	0.0
24	MF	0.000	0.0	0.007	230.5	0.000	0.0
25	RHO(1)	0.005	17.3	0.000	72.3	-0.005	55.0
26	Q(1)	0.025	19.2	0.030	12.5	0.005	-6.7
27	T(2)	0.000	154.9	0.000	184.4	0.000	0.0
28	R(2)	0.000	0.0	0.000	339.7	0.000	0.0
29	2Q(1)	0.003	3.6	0.002	329.3	-0.001	34.3
30	P(1)	0.036	37.2	0.043	29.6	0.007	-7.6
31	2SM(2)	0.000	0.0	0.000	203.8	0.000	0.0
32	M(3)	0.000	0.0	0.000	64.1	0.000	0.0
33	L(2)	0.001	149.8	0.000	352.1	-0.001	157.7
34	2MK(3)	0.000	0.0	0.001	153.4	0.000	0.0
35	K(2)	0.002	153.8	0.002	109.8	0.000	-44.0
36	M(8)	0.000	0.0	0.000	253.3	0.000	0.0
37	MS(4)	0.000	0.0	0.001	341.9	0.000	0.0

Station: Sabine Pass North, TX
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.123	275.5	0.102	274.4	-0.021	-1.1
2	S(2)	0.039	271.5	0.036	273.7	-0.003	2.2
3	N(2)	0.033	254.4	0.024	261.3	-0.009	6.9
4	K(1)	0.132	40.7	0.136	29.7	0.004	-11.0
5	M(4)	0.005	318.9	0.003	274.1	-0.002	-44.8
6	O(1)	0.123	34.6	0.126	25.6	0.003	-9.0
7	M(6)	0.000	0.0	0.001	187.1	0.000	0.0
8	MK(3)	0.007	141.2	0.002	262.9	-0.005	121.7
9	S(4)	0.000	0.0	0.000	309.1	0.000	0.0
10	MN(4)	0.000	0.0	0.001	250.3	0.000	0.0
11	NU(2)	0.007	269.5	0.000	312.4	-0.007	42.9
12	S(6)	0.000	0.0	0.000	123.5	0.000	0.0
13	MU(2)	0.005	210.3	0.002	91.1	-0.003	-119.2
14	2N(2)	0.005	220.4	0.003	102.7	-0.002	-117.7
15	OO(1)	0.006	61.4	0.001	239.1	-0.005	177.7
16	LAMBDA(2)	0.001	273.6	0.000	78.2	-0.001	164.6
17	S(1)	0.012	306.3	0.000	97.7	-0.012	151.4
18	M(1)	0.006	36.9	0.000	225.7	-0.006	171.2
19	J(1)	0.007	47.1	0.000	81.5	-0.007	34.4
20	MM	0.000	0.0	0.002	336.1	0.000	0.0
21	SSA	0.077	52.0	0.001	152.0	-0.076	100.0
22	SA	0.065	135.7	0.000	171.0	-0.065	35.3
23	MSF	0.000	0.0	0.002	9.3	0.000	0.0
24	MF	0.000	0.0	0.003	298.2	0.000	0.0
25	RHO(1)	0.006	23.8	0.000	207.8	-0.006	176.0
26	Q(1)	0.026	21.8	0.027	9.3	0.001	-12.5
27	T(2)	0.002	271.7	0.000	211.5	-0.002	-60.2
28	R(2)	0.000	271.3	0.000	31.1	0.000	0.0
29	2Q(1)	0.003	28.5	0.000	149.6	-0.003	121.1
30	P(1)	0.040	33.1	0.042	27.0	0.002	-6.1
31	2SM(2)	0.000	0.0	0.001	290.2	0.000	0.0
32	M(3)	0.000	0.0	0.000	202.2	0.000	0.0
33	L(2)	0.004	5.1	0.001	14.2	-0.003	9.1
34	2MK(3)	0.006	132.8	0.002	266.0	-0.004	133.2
35	K(2)	0.008	338.5	0.009	246.8	0.001	-91.7
36	M(8)	0.000	0.0	0.001	187.1	0.000	0.0
37	MS(4)	0.000	0.0	0.002	307.6	0.000	0.0

Station: Galveston Pleasure Pier, TX
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.139	276.1	0.111	284.2	-0.028	8.1
2	S(2)	0.034	267.9	0.038	283.2	0.004	15.3
3	N(2)	0.036	254.6	0.025	270.2	-0.011	15.6
4	K(1)	0.171	28.0	0.187	32.5	0.016	4.5
5	M(4)	0.006	203.3	0.005	182.1	-0.001	-21.2
6	O(1)	0.161	20.3	0.176	27.7	0.015	7.4
7	M(6)	0.000	0.0	0.000	93.5	0.000	0.0
8	MK(3)	0.000	0.0	0.001	163.8	0.000	0.0
9	S(4)	0.000	0.0	0.000	259.1	0.000	0.0
10	MN(4)	0.000	0.0	0.002	158.0	0.000	0.0
11	NU(2)	0.008	270.9	0.001	338.9	-0.007	68.0
12	S(6)	0.000	0.0	0.000	88.8	0.000	0.0
13	MU(2)	0.005	197.1	0.003	130.8	-0.002	-66.3
14	2N(2)	0.006	228.8	0.001	127.1	-0.005	-101.7
15	OO(1)	0.006	46.2	0.000	326.0	-0.006	80.2
16	LAMBDA(2)	0.001	272.2	0.000	18.0	-0.001	105.8
17	S(1)	0.014	327.0	0.000	12.1	-0.014	45.1
18	M(1)	0.008	24.2	0.000	202.3	-0.008	178.1
19	J(1)	0.010	34.5	0.000	170.3	-0.010	135.8
20	MM	0.000	0.0	0.003	230.9	0.000	0.0
21	SSA	0.090	55.2	0.000	351.4	-0.090	63.8
22	SA	0.077	157.4	0.000	319.1	-0.077	161.7
23	MSF	0.000	0.0	0.001	182.2	0.000	0.0
24	MF	0.000	0.0	0.004	304.2	0.000	0.0
25	RHO(1)	0.007	4.0	0.000	359.5	-0.007	4.5
26	Q(1)	0.036	7.0	0.038	11.2	0.002	4.2
27	T(2)	0.002	268.1	0.000	281.2	-0.002	13.1
28	R(2)	0.000	267.5	0.000	61.9	0.000	0.0
29	2Q(1)	0.004	349.5	0.000	287.6	-0.004	-61.9
30	P(1)	0.051	24.3	0.057	29.9	0.006	5.6
31	2SM(2)	0.000	0.0	0.000	270.2	0.000	0.0
32	M(3)	0.000	0.0	0.000	313.0	0.000	0.0
33	L(2)	0.004	352.1	0.001	12.4	-0.003	20.3
34	2MK(3)	0.000	0.0	0.000	83.0	0.000	0.0
35	K(2)	0.006	275.6	0.011	274.8	0.005	-0.8
36	M(8)	0.000	0.0	0.000	93.5	0.000	0.0
37	MS(4)	0.004	224.7	0.002	224.5	-0.002	-0.2

Station: USCG Freeport, TX
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.095	275.3	0.081	283.0	-0.014	7.7
2	S(2)	0.027	276.0	0.027	281.9	0.000	5.9
3	N(2)	0.025	252.1	0.019	268.9	-0.006	16.8
4	K(1)	0.153	26.5	0.178	31.0	0.025	4.5
5	M(4)	0.004	162.4	0.003	149.2	-0.001	-13.2
6	O(1)	0.145	18.1	0.170	26.2	0.025	8.1
7	M(6)	0.001	257.3	0.000	97.0	-0.001	-160.3
8	MK(3)	0.001	7.7	0.001	105.8	0.000	98.1
9	S(4)	0.001	277.7	0.000	219.8	-0.001	-57.9
10	MN(4)	0.002	137.3	0.001	125.3	-0.001	-12.0
11	NU(2)	0.005	238.1	0.000	341.7	-0.005	103.6
12	S(6)	0.000	0.0	0.000	93.5	0.000	0.0
13	MU(2)	0.003	180.1	0.002	137.6	-0.001	-42.5
14	2N(2)	0.004	194.1	0.000	137.3	-0.004	-56.8
15	OO(1)	0.005	41.9	0.000	342.7	-0.005	59.2
16	LAMBDA(2)	0.001	358.6	0.000	0.5	-0.001	1.9
17	S(1)	0.010	309.2	0.000	59.5	-0.010	110.3
18	M(1)	0.005	42.8	0.000	236.0	-0.005	166.8
19	J(1)	0.007	46.3	0.000	203.3	-0.007	157.0
20	MM	0.000	0.0	0.003	231.4	0.000	0.0
21	SSA	0.074	64.3	0.000	352.3	-0.074	72.0
22	SA	0.057	173.5	0.000	321.3	-0.057	147.8
23	MSF	0.000	0.0	0.001	187.5	0.000	0.0
24	MF	0.000	0.0	0.004	302.8	0.000	0.0
25	RHO(1)	0.006	355.6	0.000	67.4	-0.006	71.8
26	Q(1)	0.036	2.2	0.037	9.4	0.001	7.2
27	T(2)	0.001	309.0	0.000	270.5	-0.001	-38.5
28	R(2)	0.002	271.9	0.000	59.6	-0.002	147.7
29	2Q(1)	0.007	339.9	0.000	329.6	-0.007	-10.3
30	P(1)	0.046	25.9	0.054	28.1	0.008	2.2
31	2SM(2)	0.002	341.6	0.000	248.8	-0.002	-92.8
32	M(3)	0.003	38.0	0.000	328.2	-0.003	69.8
33	L(2)	0.005	326.9	0.001	13.5	-0.004	46.6
34	2MK(3)	0.002	359.2	0.001	69.4	-0.001	70.2
35	K(2)	0.006	276.8	0.008	279.6	0.002	2.8
36	M(8)	0.001	12.5	0.000	97.0	-0.001	84.5
37	MS(4)	0.003	152.0	0.002	193.5	-0.001	41.5

Station: Port Aransas, TX
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.051	256.7	0.067	269.3	0.016	12.6
2	S(2)	0.018	271.8	0.023	267.4	0.005	-4.4
3	N(2)	0.012	241.6	0.015	257.3	0.003	15.7
4	K(1)	0.095	39.3	0.177	28.2	0.082	-11.1
5	M(4)	0.005	110.6	0.003	83.5	-0.002	-27.1
6	O(1)	0.097	31.6	0.172	24.1	0.075	-7.5
7	M(6)	0.001	280.3	0.000	163.1	-0.001	-117.2
8	MK(3)	0.000	0.0	0.001	87.7	0.000	0.0
9	S(4)	0.000	0.0	0.000	169.5	0.000	0.0
10	MN(4)	0.000	0.0	0.001	58.1	0.000	0.0
11	NU(2)	0.002	267.5	0.000	331.3	-0.002	63.8
12	S(6)	0.000	0.0	0.000	12.5	0.000	0.0
13	MU(2)	0.002	176.8	0.002	133.7	0.000	-43.1
14	2N(2)	0.006	212.5	0.000	320.5	-0.006	108.0
15	OO(1)	0.006	67.0	0.000	106.6	-0.006	39.6
16	LAMBDA(2)	0.001	308.4	0.000	351.5	-0.001	43.1
17	S(1)	0.002	148.5	0.000	95.4	-0.002	-53.1
18	M(1)	0.006	21.7	0.000	326.2	-0.006	55.5
19	J(1)	0.006	53.7	0.000	278.4	-0.006	135.3
20	MM	0.000	0.0	0.003	235.1	0.000	0.0
21	SSA	0.102	57.1	0.000	349.5	-0.102	67.6
22	SA	0.033	155.8	0.000	320.7	-0.033	164.9
23	MSF	0.000	0.0	0.001	200.4	0.000	0.0
24	MF	0.000	0.0	0.003	295.5	0.000	0.0
25	RHO(1)	0.005	8.1	0.000	142.8	-0.005	134.7
26	Q(1)	0.022	15.8	0.038	7.2	0.016	-8.6
27	T(2)	0.000	298.9	0.000	175.0	0.000	0.0
28	R(2)	0.001	6.9	0.000	43.3	-0.001	36.4
29	2Q(1)	0.002	300.2	0.000	28.7	-0.002	88.5
30	P(1)	0.028	38.2	0.054	25.0	0.026	-13.2
31	2SM(2)	0.000	0.0	0.000	214.2	0.000	0.0
32	M(3)	0.000	0.0	0.000	339.0	0.000	0.0
33	L(2)	0.001	274.3	0.001	2.5	0.000	88.2
34	2MK(3)	0.000	0.0	0.001	79.4	0.000	0.0
35	K(2)	0.002	343.3	0.006	272.2	0.004	-71.1
36	M(8)	0.001	270.5	0.000	163.1	-0.001	-107.4
37	MS(4)	0.000	0.0	0.001	130.7	0.000	0.0

Station: Port Isabel, TX
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.062	277.4	0.062	265.8	0.000	-11.6
2	S(2)	0.019	289.5	0.022	262.6	0.003	-26.9
3	N(2)	0.014	260.8	0.014	254.9	0.000	-5.9
4	K(1)	0.137	39.5	0.172	27.9	0.035	-11.6
5	M(4)	0.000	0.0	0.002	85.4	0.000	0.0
6	O(1)	0.137	31.8	0.168	24.1	0.031	-7.7
7	M(6)	0.000	0.0	0.000	11.3	0.000	0.0
8	MK(3)	0.000	0.0	0.001	90.1	0.000	0.0
9	S(4)	0.000	0.0	0.000	168.2	0.000	0.0
10	MN(4)	0.000	0.0	0.001	60.3	0.000	0.0
11	NU(2)	0.003	262.9	0.000	331.7	-0.003	68.8
12	S(6)	0.000	0.0	0.000	150.4	0.000	0.0
13	MU(2)	0.000	0.0	0.001	134.4	0.000	0.0
14	2N(2)	0.002	244.1	0.000	323.0	-0.002	78.9
15	OO(1)	0.006	47.2	0.000	115.5	-0.006	68.3
16	LAMBDA(2)	0.000	0.0	0.000	352.9	0.000	0.0
17	S(1)	0.004	44.5	0.000	99.5	-0.004	55.0
18	M(1)	0.010	35.5	0.000	330.2	-0.010	65.3
19	J(1)	0.011	43.4	0.000	282.3	-0.011	121.1
20	MM	0.000	0.0	0.002	238.4	0.000	0.0
21	SSA	0.069	58.8	0.000	347.9	-0.069	70.9
22	SA	0.055	196.1	0.000	322.8	-0.055	126.7
23	MSF	0.000	0.0	0.000	211.8	0.000	0.0
24	MF	0.000	0.0	0.003	284.6	0.000	0.0
25	RHO(1)	0.005	28.5	0.000	144.9	-0.005	116.4
26	Q(1)	0.030	24.1	0.037	7.3	0.007	-16.8
27	T(2)	0.001	289.5	0.000	184.2	-0.001	-105.3
28	R(2)	0.000	0.0	0.000	43.6	0.000	0.0
29	2Q(1)	0.004	24.1	0.000	30.2	-0.004	6.1
30	P(1)	0.045	45.7	0.052	24.6	0.007	-21.1
31	2SM(2)	0.000	0.0	0.000	214.5	0.000	0.0
32	M(3)	0.000	0.0	0.000	341.0	0.000	0.0
33	L(2)	0.002	293.9	0.001	3.0	-0.001	69.1
34	2MK(3)	0.004	105.0	0.001	82.5	-0.003	-22.5
35	K(2)	0.005	289.4	0.006	267.2	0.001	-22.2
36	M(8)	0.000	0.0	0.000	11.3	0.000	0.0
37	MS(4)	0.000	0.0	0.001	129.6	0.000	0.0

Station: Christiansted Harbor, St Croix, VI
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.035	346.3	0.020	2.1	-0.015	15.8
2	S(2)	0.011	24.7	0.012	358.9	0.001	25.8
3	N(2)	0.006	307.1	0.002	28.8	-0.004	81.7
4	K(1)	0.082	228.5	0.087	227.3	0.005	-1.2
5	M(4)	0.002	265.4	0.001	350.3	-0.001	84.9
6	O(1)	0.060	222.2	0.064	222.8	0.004	0.6
7	M(6)	0.000	0.0	0.000	269.4	0.000	0.0
8	MK(3)	0.001	216.0	0.000	208.8	-0.001	-7.2
9	S(4)	0.001	158.3	0.000	162.4	-0.001	4.1
10	MN(4)	0.002	160.2	0.001	320.3	-0.001	160.1
11	NU(2)	0.003	342.6	0.000	270.3	-0.003	-72.3
12	S(6)	0.000	0.0	0.000	260.1	0.000	0.0
13	MU(2)	0.001	209.6	0.000	86.2	-0.001	-123.4
14	2N(2)	0.002	170.6	0.000	108.5	-0.002	-62.1
15	OO(1)	0.004	230.9	0.000	120.2	-0.004	-110.7
16	LAMBDA(2)	0.001	307.3	0.000	255.9	-0.001	-51.4
17	S(1)	0.002	277.6	0.000	259.5	-0.002	-18.1
18	M(1)	0.003	244.8	0.000	332.3	-0.003	87.5
19	J(1)	0.005	223.9	0.000	339.2	-0.005	115.3
20	MM	0.000	0.0	0.001	239.8	0.000	0.0
21	SSA	0.000	0.0	0.000	286.4	0.000	0.0
22	SA	0.000	0.0	0.000	319.7	0.000	0.0
23	MSF	0.000	0.0	0.000	274.4	0.000	0.0
24	MF	0.000	0.0	0.006	287.8	0.000	0.0
25	RHO(1)	0.002	207.8	0.000	128.9	-0.002	-78.9
26	Q(1)	0.012	205.0	0.011	204.7	-0.001	-0.3
27	T(2)	0.003	87.8	0.000	147.6	-0.003	59.8
28	R(2)	0.002	159.6	0.000	345.7	-0.002	173.9
29	2Q(1)	0.000	0.0	0.000	33.7	0.000	0.0
30	P(1)	0.025	232.1	0.026	224.9	0.001	-7.2
31	2SM(2)	0.001	24.8	0.000	78.8	-0.001	54.0
32	M(3)	0.001	37.8	0.000	97.9	-0.001	60.1
33	L(2)	0.005	36.8	0.000	311.9	-0.005	84.9
34	2MK(3)	0.001	105.9	0.000	171.3	-0.001	65.4
35	K(2)	0.003	17.5	0.003	355.2	0.000	22.3
36	M(8)	0.000	0.0	0.000	269.4	0.000	0.0
37	MS(4)	0.001	359.5	0.000	56.0	-0.001	56.5

Station: Charlotte Amalie, VI
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.042	24.6	0.027	2.8	-0.015	-21.8
2	S(2)	0.009	12.8	0.013	359.2	0.004	13.6
3	N(2)	0.009	14.8	0.004	8.6	-0.005	-6.2
4	K(1)	0.080	231.0	0.086	226.9	0.006	-4.1
5	M(4)	0.002	302.0	0.001	349.8	-0.001	47.8
6	O(1)	0.061	222.5	0.063	223.0	0.002	0.5
7	M(6)	0.000	0.0	0.000	258.3	0.000	0.0
8	MK(3)	0.000	0.0	0.000	186.2	0.000	0.0
9	S(4)	0.000	0.0	0.000	163.0	0.000	0.0
10	MN(4)	0.000	0.0	0.001	320.1	0.000	0.0
11	NU(2)	0.002	4.1	0.000	273.4	-0.002	90.7
12	S(6)	0.000	0.0	0.000	335.9	0.000	0.0
13	MU(2)	0.000	0.0	0.000	97.3	0.000	0.0
14	2N(2)	0.001	5.0	0.000	109.9	-0.001	104.9
15	OO(1)	0.004	231.0	0.000	120.6	-0.004	-110.4
16	LAMBDA(2)	0.000	7.2	0.000	244.5	0.000	0.0
17	S(1)	0.002	129.3	0.000	238.7	-0.002	109.4
18	M(1)	0.003	244.5	0.000	329.7	-0.003	85.2
19	J(1)	0.005	229.3	0.000	329.6	-0.005	100.3
20	MM	0.007	333.6	0.000	34.6	-0.007	61.0
21	SSA	0.019	47.2	0.000	280.9	-0.019	126.3
22	SA	0.061	181.8	0.000	334.0	-0.061	152.2
23	MSF	0.000	0.0	0.000	222.6	0.000	0.0
24	MF	0.013	352.4	0.004	300.0	-0.009	-52.4
25	RHO(1)	0.002	204.9	0.000	117.4	-0.002	-87.5
26	Q(1)	0.011	207.8	0.011	205.2	0.000	-2.6
27	T(2)	0.001	13.4	0.000	162.1	-0.001	148.7
28	R(2)	0.000	0.0	0.000	208.5	0.000	0.0
29	2Q(1)	0.002	214.3	0.000	30.1	-0.002	175.8
30	P(1)	0.025	233.6	0.025	224.5	0.000	-9.1
31	2SM(2)	0.000	0.0	0.000	70.4	0.000	0.0
32	M(3)	0.001	31.8	0.000	77.9	-0.001	46.1
33	L(2)	0.002	29.6	0.000	2.4	-0.002	-27.2
34	2MK(3)	0.000	0.0	0.000	163.9	0.000	0.0
35	K(2)	0.003	5.1	0.003	356.2	0.000	8.9
36	M(8)	0.000	0.0	0.000	258.3	0.000	0.0
37	MS(4)	0.001	3.7	0.000	56.6	-0.001	52.9

Station: Vieques Island, PR
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.028	343.5	0.004	0.2	-0.024	16.7
2	S(2)	0.014	1.7	0.012	349.6	-0.002	12.1
3	N(2)	0.006	320.5	0.003	117.0	-0.003	156.5
4	K(1)	0.082	236.4	0.087	227.9	0.005	-8.5
5	M(4)	0.001	244.6	0.001	349.3	0.000	104.7
6	O(1)	0.062	222.5	0.063	223.8	0.001	1.3
7	M(6)	0.000	319.9	0.000	303.1	0.000	0.0
8	MK(3)	0.000	0.0	0.000	211.8	0.000	0.0
9	S(4)	0.002	147.4	0.000	161.3	-0.002	13.9
10	MN(4)	0.000	0.0	0.001	320.1	0.000	0.0
11	NU(2)	0.001	323.6	0.000	272.5	-0.001	-51.1
12	S(6)	0.000	348.2	0.000	223.3	0.000	0.0
13	MU(2)	0.001	194.3	0.000	86.7	-0.001	-107.6
14	2N(2)	0.001	297.5	0.000	107.5	-0.001	170.0
15	OO(1)	0.003	250.2	0.000	117.6	-0.003	-132.6
16	LAMBDA(2)	0.000	352.0	0.000	254.4	0.000	0.0
17	S(1)	0.000	0.0	0.000	294.1	0.000	0.0
18	M(1)	0.004	229.5	0.000	329.6	-0.004	100.1
19	J(1)	0.005	243.2	0.000	337.1	-0.005	93.9
20	MM	0.000	0.0	0.000	180.0	0.000	0.0
21	SSA	0.000	0.0	0.000	21.2	0.000	0.0
22	SA	0.000	0.0	0.000	329.2	0.000	0.0
23	MSF	0.000	0.0	0.000	246.3	0.000	0.0
24	MF	0.000	0.0	0.006	281.5	0.000	0.0
25	RHO(1)	0.002	216.6	0.000	127.1	-0.002	-89.5
26	Q(1)	0.012	215.7	0.011	205.8	-0.001	-9.9
27	T(2)	0.001	1.0	0.000	151.7	-0.001	150.7
28	R(2)	0.000	2.5	0.000	351.0	0.000	0.0
29	2Q(1)	0.002	208.8	0.000	28.6	-0.002	179.8
30	P(1)	0.027	235.3	0.026	225.4	-0.001	-9.9
31	2SM(2)	0.000	0.0	0.000	76.2	0.000	0.0
32	M(3)	0.000	0.0	0.000	104.3	0.000	0.0
33	L(2)	0.001	6.5	0.000	312.5	-0.001	54.0
34	2MK(3)	0.000	0.0	0.000	174.6	0.000	0.0
35	K(2)	0.004	3.2	0.003	344.8	-0.001	18.4
36	M(8)	0.001	337.2	0.000	303.1	-0.001	-34.1
37	MS(4)	0.000	0.0	0.000	53.7	0.000	0.0

Station: San Juan, PR
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.159	20.2	0.161	9.7	0.002	-10.5
2	S(2)	0.021	46.6	0.025	44.7	0.004	-1.9
3	N(2)	0.037	0.5	0.036	346.1	-0.001	14.4
4	K(1)	0.090	227.9	0.088	216.9	-0.002	-11.0
5	M(4)	0.000	0.0	0.000	145.2	0.000	0.0
6	O(1)	0.077	227.3	0.070	214.5	-0.007	-12.8
7	M(6)	0.000	0.0	0.000	215.7	0.000	0.0
8	MK(3)	0.000	0.0	0.000	148.4	0.000	0.0
9	S(4)	0.000	0.0	0.000	184.1	0.000	0.0
10	MN(4)	0.000	0.0	0.000	161.2	0.000	0.0
11	NU(2)	0.008	358.8	0.000	207.3	-0.008	-151.5
12	S(6)	0.000	0.0	0.000	347.3	0.000	0.0
13	MU(2)	0.005	21.3	0.000	348.1	-0.005	33.2
14	2N(2)	0.005	347.7	0.000	280.0	-0.005	-67.7
15	OO(1)	0.004	225.4	0.000	148.0	-0.004	-77.4
16	LAMBDA(2)	0.001	32.4	0.000	249.0	-0.001	143.4
17	S(1)	0.005	144.4	0.000	206.8	-0.005	62.4
18	M(1)	0.005	261.1	0.000	54.4	-0.005	153.3
19	J(1)	0.006	220.2	0.000	3.1	-0.006	142.9
20	MM	0.007	335.0	0.000	296.1	-0.007	-38.9
21	SSA	0.021	37.1	0.000	247.3	-0.021	149.8
22	SA	0.055	186.9	0.000	322.3	-0.055	135.4
23	MSF	0.000	0.0	0.000	272.8	0.000	0.0
24	MF	0.014	352.8	0.003	308.2	-0.011	-44.6
25	RHO(1)	0.003	227.1	0.000	172.2	-0.003	-54.9
26	Q(1)	0.014	212.6	0.013	198.5	-0.001	-14.1
27	T(2)	0.001	45.5	0.000	96.5	-0.001	51.0
28	R(2)	0.000	0.0	0.000	338.0	0.000	0.0
29	2Q(1)	0.002	226.9	0.000	112.4	-0.002	-114.5
30	P(1)	0.029	230.0	0.026	214.4	-0.003	-15.6
31	2SM(2)	0.000	0.0	0.000	114.2	0.000	0.0
32	M(3)	0.000	0.0	0.000	25.6	0.000	0.0
33	L(2)	0.005	11.6	0.000	275.6	-0.005	96.0
34	2MK(3)	0.000	0.0	0.000	118.5	0.000	0.0
35	K(2)	0.006	46.9	0.006	46.4	0.000	-0.5
36	M(8)	0.000	0.0	0.000	215.7	0.000	0.0
37	MS(4)	0.000	0.0	0.000	161.3	0.000	0.0

Station: Mayaguez, PR
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.149	16.2	0.119	2.8	-0.030	-13.4
2	S(2)	0.019	32.3	0.023	34.1	0.004	1.8
3	N(2)	0.034	347.7	0.025	341.0	-0.009	-6.7
4	K(1)	0.055	205.9	0.086	219.3	0.031	13.4
5	M(4)	0.004	1.7	0.000	55.0	-0.004	53.3
6	O(1)	0.046	210.3	0.065	215.1	0.019	4.8
7	M(6)	0.001	237.8	0.000	228.5	-0.001	-9.3
8	MK(3)	0.003	358.7	0.000	274.7	-0.003	-84.0
9	S(4)	0.001	254.1	0.000	181.8	-0.001	-72.3
10	MN(4)	0.003	326.4	0.000	310.4	-0.003	-16.0
11	NU(2)	0.005	346.7	0.000	232.7	-0.005	-114.0
12	S(6)	0.001	76.5	0.000	332.1	-0.001	104.4
13	MU(2)	0.003	13.7	0.000	27.6	-0.003	13.9
14	2N(2)	0.006	312.5	0.000	283.5	-0.006	-29.0
15	OO(1)	0.003	234.5	0.000	126.1	-0.003	-108.4
16	LAMBDA(2)	0.002	5.0	0.000	266.1	-0.002	98.9
17	S(1)	0.013	251.8	0.000	168.0	-0.013	-83.8
18	M(1)	0.002	178.6	0.000	33.7	-0.002	-144.9
19	J(1)	0.004	226.0	0.000	304.8	-0.004	78.8
20	MM	0.005	286.0	0.001	228.6	-0.004	-57.4
21	SSA	0.068	189.4	0.000	356.8	-0.068	167.4
22	SA	0.157	258.8	0.000	341.1	-0.157	82.3
23	MSF	0.002	73.4	0.000	278.8	-0.002	154.6
24	MF	0.012	337.7	0.006	298.8	-0.006	-38.9
25	RHO(1)	0.002	207.7	0.000	167.3	-0.002	-40.4
26	Q(1)	0.009	200.3	0.012	197.7	0.003	-2.6
27	T(2)	0.003	337.7	0.000	105.4	-0.003	127.7
28	R(2)	0.004	99.5	0.000	344.2	-0.004	115.3
29	2Q(1)	0.002	236.4	0.000	82.3	-0.002	-154.1
30	P(1)	0.016	205.3	0.025	216.9	0.009	11.6
31	2SM(2)	0.001	54.0	0.000	106.9	-0.001	52.9
32	M(3)	0.002	334.5	0.000	341.6	-0.002	7.1
33	L(2)	0.005	69.3	0.001	290.5	-0.004	138.8
34	2MK(3)	0.004	21.6	0.000	106.7	-0.004	85.1
35	K(2)	0.007	61.2	0.006	34.6	-0.001	-26.6
36	M(8)	0.000	0.0	0.000	228.5	0.000	0.0
37	MS(4)	0.001	69.2	0.000	114.2	-0.001	45.0

Station: Bermuda Esso Pier
Observation:CO-OPS Accepted Harmonic Constants
Model: EC2001_NOS
amplitudes are in meters, and Phase is in degrees (GMT)

		Observed		Modeled		Difference	
N	Constituent	Amplitude	Phase	Amplitude	Phase	Amplitude	Phase
1	M(2)	0.369	358.9	0.347	355.5	-0.022	-3.4
2	S(2)	0.084	26.2	0.072	23.0	-0.012	-3.2
3	N(2)	0.085	337.2	0.079	335.5	-0.006	-1.7
4	K(1)	0.066	185.6	0.068	183.5	0.002	-2.1
5	M(4)	0.000	0.0	0.000	197.0	0.000	0.0
6	O(1)	0.053	192.2	0.054	189.3	0.001	-2.9
7	M(6)	0.000	0.0	0.000	290.3	0.000	0.0
8	MK(3)	0.000	0.0	0.000	58.4	0.000	0.0
9	S(4)	0.000	0.0	0.000	270.4	0.000	0.0
10	MN(4)	0.000	0.0	0.000	175.4	0.000	0.0
11	NU(2)	0.016	338.6	0.000	155.8	-0.016	177.2
12	S(6)	0.000	0.0	0.000	136.3	0.000	0.0
13	MU(2)	0.013	339.3	0.000	295.5	-0.013	-43.8
14	2N(2)	0.013	318.8	0.000	247.9	-0.013	-70.9
15	OO(1)	0.003	197.9	0.000	94.9	-0.003	-103.0
16	LAMBDA(2)	0.003	21.0	0.000	199.5	-0.003	178.5
17	S(1)	0.005	302.8	0.000	130.6	-0.005	-172.2
18	M(1)	0.003	209.1	0.000	320.8	-0.003	111.7
19	J(1)	0.005	190.1	0.000	291.1	-0.005	101.0
20	MM	0.000	0.0	0.004	338.9	0.000	0.0
21	SSA	0.012	83.1	0.000	292.5	-0.012	150.6
22	SA	0.062	180.2	0.000	325.3	-0.062	145.1
23	MSF	0.000	0.0	0.000	250.7	0.000	0.0
24	MF	0.000	0.0	0.008	25.1	0.000	0.0
25	RHO(1)	0.002	195.0	0.000	23.5	-0.002	-171.5
26	Q(1)	0.011	184.5	0.011	176.7	0.000	-7.8
27	T(2)	0.006	13.6	0.000	46.8	-0.006	33.2
28	R(2)	0.001	27.2	0.000	293.1	-0.001	94.1
29	2Q(1)	0.002	198.8	0.000	50.1	-0.002	-148.7
30	P(1)	0.020	188.0	0.020	179.6	0.000	-8.4
31	2SM(2)	0.000	0.0	0.000	98.4	0.000	0.0
32	M(3)	0.000	0.0	0.000	345.1	0.000	0.0
33	L(2)	0.011	12.9	0.001	226.5	-0.010	146.4
34	2MK(3)	0.000	0.0	0.000	76.8	0.000	0.0
35	K(2)	0.021	24.9	0.020	24.5	-0.001	-0.4
36	M(8)	0.000	0.0	0.000	290.3	0.000	0.0
37	MS(4)	0.000	0.0	0.000	229.9	0.000	0.0

APPENDIX C. SKILL ASSESSMENT SCORE TABLES

In the Appendice tables, water level units are in meters, time is in hours referenced to UTC.

Station: Eastport, ME
Observed data time period from: / 1/ 8/2009 to / 1/ 3/2010 with gaps of 5.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	-0.001								
h			8761	-0.001								
H-h	15	cm 24h	8761	0.000	0.155	0.155	2.4	67.7	3.2	2.0	3.0	0.00
AHW-ahw	15	cm 24h	705	-0.080	0.146	0.123	3.8	70.2	0.0	87.0	0.0	
ALW-alw	15	cm 24h	705	0.057	0.149	0.137	0.1	71.8	5.1	0.0	75.0	
THW-thw	0.50	h 25h	705	0.149	0.386	0.356	0.0	85.1	2.8	0.0	12.0	
TLW-tlw	0.50	h 25h	705	-0.113	0.357	0.339	1.1	87.2	0.0	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8456	0.052								
h			8456	0.060								
H-h	15	cm 24h	8456	-0.009	0.319	0.319	18.1	32.9	18.9	8.0	5.0	23.79
AHW-ahw	15	cm 24h	677	-0.271	0.310	0.152	41.4	21.6	0.0	222.0	0.0	
ALW-alw	15	cm 24h	677	0.437	0.468	0.166	0.0	4.0	79.5	0.0	596.0	
THW-thw	0.50	h 25h	677	-0.069	0.346	0.339	1.0	88.0	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	677	-0.284	0.535	0.454	4.6	71.3	0.1	12.0	0.0	

Station: Eastport, ME
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.142	0.795	0.789	25.0	30.0	16.7	0.0	0.0	25.00
H06-h06	15	cm 24h	60	-0.133	0.805	0.801	21.7	31.7	18.3	0.0	0.0	21.67
H12-h12	15	cm 24h	60	-0.150	0.807	0.799	23.3	30.0	18.3	0.0	0.0	25.00
H18-h18	15	cm 24h	60	-0.146	0.814	0.807	25.0	33.3	18.3	0.0	0.0	25.00
H24-h24	15	cm 24h	60	-0.155	0.812	0.803	23.3	33.3	18.3	0.0	0.0	26.67
H30-h30	15	cm 24h	60	-0.159	0.824	0.815	21.7	30.0	15.0	0.0	0.0	25.00
H36-h36	15	cm 24h	59	-0.156	0.830	0.822	28.8	33.9	15.3	0.0	0.0	27.12
H42-h42	15	cm 24h	58	-0.156	0.839	0.832	27.6	34.5	19.0	0.0	0.0	29.31
H48-h48	15	cm 24h	57	-0.152	0.842	0.836	26.3	31.6	15.8	0.0	0.0	28.07
H54-h54	15	cm 24h	56	-0.155	0.850	0.843	25.0	32.1	16.1	0.0	0.0	25.00
H60-h60	15	cm 24h	55	-0.157	0.856	0.850	25.5	36.4	14.5	0.0	0.0	25.45
H66-h66	15	cm 24h	54	-0.177	0.887	0.878	29.6	35.2	14.8	0.0	0.0	27.78
H72-h72	15	cm 24h	53	-0.171	0.887	0.879	22.6	34.0	17.0	0.0	0.0	26.42
H78-h78	15	cm 24h	52	-0.193	0.897	0.884	28.8	32.7	15.4	0.0	0.0	30.77
H84-h84	15	cm 24h	51	-0.192	0.900	0.888	23.5	37.3	15.7	0.0	0.0	29.41
H90-h90	15	cm 24h	50	-0.211	0.904	0.888	32.0	28.0	14.0	0.0	0.0	32.00
H96-h96	15	cm 24h	49	-0.213	0.914	0.898	30.6	30.6	16.3	0.0	0.0	30.61
AHW-ahw	15	cm 24h	29	-0.391	0.740	0.640	37.9	13.8	0.0			
ALW-alw	15	cm 24h	28	0.367	0.422	0.212	0.0	17.9	57.1			
THW-thw	0.50	h 25h	29	0.217	0.559	0.524	0.0	96.6	3.4			
TLW-tlw	0.50	h 25h	28	-0.161	0.243	0.185	0.0	89.3	0.0			

Station: Bar Harbor, ME
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 5.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%

```
     SCENARIO: TIDAL SIMULATION
H                     8761  -0.001
h                     8761  -0.001
H-h        15 cm 24h  8761   0.000  0.116  0.116   0.4  81.9   1.2    1.0  2.0  0.00
AHW-ahw    15 cm 24h   705   0.043  0.091  0.080   0.0  89.4   0.0    0.0  0.0
ALW-alw    15 cm 24h   705   0.038  0.149  0.144   0.0  73.0   5.8    0.0 49.0
THW-thw  0.50  h 25h   705   0.096  0.345  0.332   0.0  88.1   2.1    0.0 12.0
TLW-tlw  0.50  h 25h   705   0.140  0.393  0.368   0.0  84.5   2.4    0.0 12.0
     SCENARIO: HINDCAST (combined water level)
H                     8758   0.040
h                     8758   0.053
H-h        15 cm 24h  8758  -0.013  0.185  0.184   6.1  58.8   4.2   12.0 10.0  8.14
AHW-ahw    15 cm 24h   705  -0.063  0.162  0.150   5.4  65.1   0.6   49.0  0.0
ALW-alw    15 cm 24h   704   0.121  0.197  0.155   0.4  57.4  12.6   13.0 62.0
THW-thw  0.50  h 25h   705   0.068  0.413  0.407   0.1  83.0   1.8    0.0  0.0
TLW-tlw  0.50  h 25h   704  -0.003  0.494  0.495   1.8  75.6   1.7   12.0  0.0

Station: Bar Harbor, ME
Observed data time period from: /10/25/2010  to /11/10/2010 with gaps of    0.00 days
Data gap is filled using SVD method
Data are not filtered
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VARIABLE    X     N   IMAX    SM    RMSE    SD     NOF   CF    POF   MDNO  MDPO  WOF
CRITERION   -     -     -     -      -      -     <1%  >90%   <1%    <N    <N  <.5%
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     SCENARIO: SEMI-OPERATIONAL FORECAST
H00-h00    15 cm 24h    55  -0.066  0.169  0.157   5.5  54.5   1.8    0.0  0.0  3.64
H06-h06    15 cm 24h    54  -0.070  0.165  0.151   7.4  64.8   0.0    0.0  0.0  5.56
H12-h12    15 cm 24h    54  -0.071  0.173  0.159   7.4  59.3   0.0    0.0  0.0  7.41
H18-h18    15 cm 24h    55  -0.063  0.160  0.148   7.3  69.1   0.0    0.0  0.0  7.27
H24-h24    15 cm 24h    55  -0.070  0.172  0.158  12.7  58.2   0.0    0.0  0.0 10.91
H30-h30    15 cm 24h    54  -0.074  0.183  0.169  11.1  53.7   0.0    0.0  0.0  9.26
H36-h36    15 cm 24h    53  -0.089  0.197  0.177  15.1  52.8   1.9    0.0  0.0 13.21
H42-h42    15 cm 24h    51  -0.069  0.188  0.177  13.7  56.9   2.0    6.0  0.0  9.80
H48-h48    15 cm 24h    51  -0.073  0.188  0.175  11.8  54.9   0.0    0.0  0.0 11.76
H54-h54    15 cm 24h    51  -0.079  0.192  0.177  11.8  54.9   2.0    0.0  0.0  5.88
H60-h60    15 cm 24h    49  -0.080  0.204  0.190  18.4  53.1   0.0    0.0  0.0 16.33
H66-h66    15 cm 24h    48  -0.106  0.221  0.196  18.8  54.2   0.0    0.0  0.0 16.67
H72-h72    15 cm 24h    47  -0.109  0.207  0.178  14.9  51.1   0.0    0.0  0.0 12.77
H78-h78    15 cm 24h    46  -0.118  0.227  0.196  21.7  52.2   2.2   12.0  0.0 21.74
H84-h84    15 cm 24h    46  -0.116  0.234  0.205  21.7  47.8   0.0    0.0  0.0 21.74
H90-h90    15 cm 24h    44  -0.123  0.225  0.191  20.5  45.5   0.0   12.0  0.0 18.18
H96-h96    15 cm 24h    43  -0.130  0.243  0.208  20.9  58.1   0.0   12.0  0.0 18.60
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Station: Portland, ME
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   5.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	-0.001								
h			8761	-0.001								
H-h	15	cm 24h	8761	0.000	0.098	0.098	0.0	87.4	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.067	0.102	0.078	0.0	85.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	706	-0.075	0.108	0.077	0.0	83.4	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.030	0.313	0.312	0.6	90.2	0.3	0.0	0.0	
TLW-tlw	0.50	h 25h	706	0.074	0.353	0.346	0.1	87.5	2.0	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.036								
h			8760	0.064								
H-h	15	cm 24h	8760	-0.028	0.163	0.160	4.9	65.1	1.7	19.0	9.0	5.54
AHW-ahw	15	cm 24h	705	-0.132	0.187	0.132	10.9	57.0	0.1	86.0	0.0	
ALW-alw	15	cm 24h	705	0.023	0.134	0.132	1.4	74.0	1.1	37.0	12.0	
THW-thw	0.50	h 25h	705	0.040	0.402	0.400	0.1	83.8	1.3	0.0	0.0	
TLW-tlw	0.50	h 25h	705	0.067	0.371	0.365	0.7	86.2	1.6	0.0	0.0	

Station: Portland, ME
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.066	0.137	0.120	1.7	75.0	1.7	0.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.069	0.143	0.126	1.7	68.3	1.7	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.078	0.153	0.133	5.0	65.0	1.7	0.0	0.0	6.67
H18-h18	15	cm 24h	60	-0.076	0.150	0.131	3.3	70.0	1.7	0.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.083	0.161	0.139	3.3	61.7	1.7	0.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.085	0.164	0.142	5.0	63.3	1.7	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.087	0.164	0.140	5.1	64.4	1.7	0.0	0.0	6.78
H42-h42	15	cm 24h	58	-0.082	0.163	0.143	5.2	63.8	1.7	0.0	0.0	6.90
H48-h48	15	cm 24h	57	-0.083	0.166	0.144	7.0	66.7	1.8	0.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.082	0.172	0.153	7.1	62.5	1.8	0.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.090	0.181	0.158	9.1	54.5	1.8	12.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.099	0.194	0.168	9.3	57.4	1.9	12.0	0.0	11.11
H72-h72	15	cm 24h	53	-0.106	0.198	0.169	11.3	60.4	0.0	12.0	0.0	9.43
H78-h78	15	cm 24h	52	-0.115	0.212	0.180	13.5	59.6	1.9	12.0	0.0	11.54
H84-h84	15	cm 24h	51	-0.126	0.224	0.186	15.7	62.7	2.0	12.0	0.0	11.76
H90-h90	15	cm 24h	50	-0.134	0.229	0.188	16.0	52.0	2.0	12.0	0.0	14.00
H96-h96	15	cm 24h	49	-0.135	0.233	0.192	18.4	53.1	0.0	12.0	0.0	14.29
AHW-ahw	15	cm 24h	29	-0.181	0.201	0.089	10.3	41.4	0.0			
ALW-alw	15	cm 24h	28	-0.027	0.148	0.148	0.0	60.7	0.0			
THW-thw	0.50	h 25h	29	0.110	0.230	0.206	0.0	96.6	0.0			
TLW-tlw	0.50	h 25h	28	0.082	0.221	0.209	0.0	92.9	0.0			

Station: Boston, MA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	-0.001								
h			8761	-0.001								
H-h	15	cm 24h	8761	0.000	0.090	0.090	0.0	89.7	0.1	0.0	1.0	0.00
AHW-ahw	15	cm 24h	705	-0.011	0.083	0.082	0.0	92.3	0.0	0.0	0.0	
ALW-alw	15	cm 24h	706	0.019	0.084	0.082	0.0	92.6	0.4	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.023	0.353	0.353	1.0	87.5	0.4	0.0	0.0	
TLW-tlw	0.50	h 25h	706	0.135	0.382	0.358	0.0	85.4	2.1	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8522	0.014								
h			8522	0.092								
H-h	15	cm 24h	8522	-0.079	0.191	0.174	10.7	58.6	0.9	32.0	8.0	9.65
AHW-ahw	15	cm 24h	685	-0.219	0.259	0.138	27.4	31.2	0.0	224.0	0.0	
ALW-alw	15	cm 24h	686	0.006	0.142	0.142	2.0	72.4	1.5	37.0	12.0	
THW-thw	0.50	h 25h	685	-0.512	0.726	0.515	7.3	47.3	0.1	12.0	0.0	
TLW-tlw	0.50	h 25h	686	-0.122	0.452	0.435	3.2	79.6	0.6	12.0	0.0	

Station: Boston, MA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.092	0.170	0.144	5.0	61.7	0.0	0.0	0.0	5.00
H06-h06	15	cm 24h	60	-0.107	0.182	0.149	8.3	53.3	0.0	0.0	0.0	8.33
H12-h12	15	cm 24h	60	-0.103	0.187	0.158	8.3	51.7	0.0	0.0	0.0	8.33
H18-h18	15	cm 24h	60	-0.113	0.194	0.159	8.3	55.0	0.0	0.0	0.0	8.33
H24-h24	15	cm 24h	60	-0.104	0.194	0.166	13.3	50.0	0.0	0.0	0.0	13.33
H30-h30	15	cm 24h	60	-0.112	0.197	0.163	11.7	53.3	0.0	0.0	0.0	11.67
H36-h36	15	cm 24h	59	-0.114	0.204	0.171	11.9	50.8	1.7	0.0	0.0	10.17
H42-h42	15	cm 24h	58	-0.110	0.199	0.167	12.1	58.6	0.0	0.0	0.0	12.07
H48-h48	15	cm 24h	57	-0.105	0.206	0.179	10.5	54.4	0.0	0.0	0.0	10.53
H54-h54	15	cm 24h	56	-0.113	0.209	0.177	8.9	51.8	0.0	0.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.124	0.217	0.179	12.7	49.1	0.0	12.0	0.0	10.91
H66-h66	15	cm 24h	54	-0.132	0.237	0.199	11.1	51.9	1.9	12.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.144	0.236	0.189	15.1	49.1	0.0	12.0	0.0	11.32
H78-h78	15	cm 24h	52	-0.149	0.252	0.206	13.5	42.3	0.0	12.0	0.0	9.62
H84-h84	15	cm 24h	51	-0.175	0.274	0.213	23.5	47.1	0.0	12.0	0.0	17.65
H90-h90	15	cm 24h	50	-0.181	0.281	0.218	20.0	40.0	0.0	12.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.172	0.276	0.218	22.4	51.0	0.0	12.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.249	0.260	0.076	27.6	6.9	0.0			
ALW-alw	15	cm 24h	28	-0.029	0.164	0.164	0.0	57.1	0.0			
THW-thw	0.50	h 25h	29	-0.559	0.595	0.208	0.0	44.8	0.0			
TLW-tlw	0.50	h 25h	28	-0.057	0.332	0.333	0.0	85.7	0.0			

Station: Woods Hole, MA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.088	0.088	0.0	91.2	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.068	0.087	0.055	0.0	93.2	0.0	0.0	0.0	
ALW-alw	15	cm 24h	699	-0.048	0.066	0.045	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.475	0.689	0.500	7.5	52.5	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	699	-0.206	0.617	0.582	6.3	68.4	1.0	25.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.008								
h			8760	0.083								
H-h	15	cm 24h	8760	-0.091	0.168	0.141	6.2	62.5	0.5	23.0	7.0	5.37
AHW-ahw	15	cm 24h	700	-0.007	0.134	0.134	1.7	77.0	1.4	62.0	13.0	
ALW-alw	15	cm 24h	677	-0.179	0.212	0.114	12.6	39.9	0.1	64.0	0.0	
THW-thw	0.50	h 25h	700	-0.187	0.596	0.567	4.4	70.9	0.9	12.0	13.0	
TLW-tlw	0.50	h 25h	677	-0.682	1.058	0.809	22.0	30.6	2.1	89.0	0.0	

Station: Woods Hole, MA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.114	0.162	0.117	8.3	70.0	0.0	0.0	0.0	5.00
H06-h06	15	cm 24h	60	-0.116	0.169	0.123	13.3	63.3	0.0	0.0	0.0	8.33
H12-h12	15	cm 24h	60	-0.124	0.170	0.117	10.0	60.0	0.0	0.0	0.0	6.67
H18-h18	15	cm 24h	60	-0.124	0.169	0.116	6.7	60.0	0.0	0.0	0.0	3.33
H24-h24	15	cm 24h	60	-0.120	0.168	0.119	10.0	60.0	0.0	0.0	0.0	6.67
H30-h30	15	cm 24h	60	-0.128	0.180	0.127	10.0	60.0	0.0	0.0	0.0	5.00
H36-h36	15	cm 24h	59	-0.124	0.177	0.127	13.6	62.7	0.0	0.0	0.0	6.78
H42-h42	15	cm 24h	58	-0.129	0.181	0.129	13.8	56.9	0.0	0.0	0.0	6.90
H48-h48	15	cm 24h	57	-0.124	0.181	0.134	8.8	56.1	0.0	0.0	0.0	7.02
H54-h54	15	cm 24h	56	-0.124	0.182	0.133	12.5	57.1	0.0	0.0	0.0	7.14
H60-h60	15	cm 24h	55	-0.132	0.193	0.143	16.4	60.0	0.0	0.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.146	0.197	0.134	16.7	53.7	0.0	0.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.157	0.213	0.145	20.8	58.5	0.0	0.0	0.0	13.21
H78-h78	15	cm 24h	52	-0.163	0.222	0.153	23.1	51.9	0.0	12.0	0.0	15.38
H84-h84	15	cm 24h	51	-0.168	0.226	0.153	19.6	58.8	0.0	0.0	0.0	13.73
H90-h90	15	cm 24h	50	-0.171	0.229	0.154	22.0	46.0	0.0	6.0	0.0	20.00
H96-h96	15	cm 24h	49	-0.171	0.230	0.155	20.4	49.0	0.0	0.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.016	0.084	0.084	0.0	93.1	0.0			
ALW-alw	15	cm 24h	29	-0.199	0.213	0.077	6.9	27.6	0.0			
THW-thw	0.50	h 25h	29	-0.124	0.297	0.275	0.0	89.7	0.0			
TLW-tlw	0.50	h 25h	29	-0.659	0.863	0.568	24.1	27.6	0.0			

Station: Nantucket Island, MA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.081	0.081	0.0	94.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.052	0.066	0.040	0.0	99.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	706	-0.057	0.080	0.056	0.0	95.3	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.084	0.382	0.373	1.3	85.4	0.1	12.0	0.0	
TLW-tlw	0.50	h 25h	706	-0.263	0.519	0.447	3.8	73.1	0.1	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.001								
h			8760	0.090								
H-h	15	cm 24h	8760	-0.090	0.174	0.149	7.5	60.0	0.4	67.0	6.0	6.78
AHW-ahw	15	cm 24h	704	-0.105	0.158	0.117	4.5	65.5	0.1	61.0	0.0	
ALW-alw	15	cm 24h	706	-0.103	0.158	0.120	5.9	67.3	0.0	62.0	0.0	
THW-thw	0.50	h 25h	704	-0.835	0.968	0.490	16.3	21.2	0.1	36.0	0.0	
TLW-tlw	0.50	h 25h	706	-0.565	0.765	0.516	9.3	42.8	0.1	12.0	0.0	

Station: Nantucket Island, MA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.093	0.158	0.129	0.0	56.7	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.093	0.159	0.130	0.0	55.0	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.097	0.160	0.129	0.0	56.7	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.098	0.164	0.133	0.0	48.3	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.096	0.166	0.136	1.7	51.7	0.0	0.0	0.0	1.67
H30-h30	15	cm 24h	60	-0.105	0.174	0.140	3.3	46.7	0.0	0.0	0.0	3.33
H36-h36	15	cm 24h	59	-0.112	0.176	0.138	5.1	49.2	0.0	0.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.114	0.179	0.139	3.4	43.1	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.113	0.180	0.142	1.8	45.6	0.0	0.0	0.0	1.75
H54-h54	15	cm 24h	56	-0.118	0.181	0.139	3.6	48.2	0.0	0.0	0.0	3.57
H60-h60	15	cm 24h	55	-0.126	0.190	0.144	5.5	40.0	0.0	0.0	0.0	5.45
H66-h66	15	cm 24h	54	-0.132	0.199	0.151	14.8	42.6	0.0	0.0	0.0	14.81
H72-h72	15	cm 24h	53	-0.138	0.205	0.154	17.0	43.4	0.0	6.0	0.0	16.98
H78-h78	15	cm 24h	52	-0.142	0.207	0.153	15.4	38.5	0.0	6.0	0.0	15.38
H84-h84	15	cm 24h	51	-0.155	0.213	0.147	15.7	39.2	0.0	12.0	0.0	15.69
H90-h90	15	cm 24h	50	-0.162	0.228	0.161	20.0	38.0	0.0	6.0	0.0	20.00
H96-h96	15	cm 24h	49	-0.174	0.234	0.158	20.4	38.8	0.0	12.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.130	0.144	0.065	3.4	69.0	0.0			
ALW-alw	15	cm 24h	28	-0.113	0.142	0.088	0.0	64.3	0.0			
THW-thw	0.50	h 25h	29	-0.962	1.015	0.331	44.8	6.9	0.0			
TLW-tlw	0.50	h 25h	28	-0.607	0.711	0.377	14.3	46.4	0.0			

Station: Newport, RI
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.091	0.091	0.1	89.3	0.0	1.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.051	0.081	0.063	0.0	96.5	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.056	0.082	0.060	0.0	93.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.416	0.645	0.493	5.5	58.4	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	0.292	0.593	0.516	0.1	67.4	5.2	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.011								
h			8760	0.072								
H-h	15	cm 24h	8760	-0.060	0.147	0.134	3.9	71.1	0.5	18.0	8.0	3.41
AHW-ahw	15	cm 24h	703	-0.088	0.153	0.126	5.0	67.4	0.3	62.0	0.0	
ALW-alw	15	cm 24h	704	-0.071	0.143	0.124	3.8	73.6	0.6	15.0	11.0	
THW-thw	0.50	h 25h	703	-0.462	0.711	0.540	7.4	52.1	0.4	24.0	0.0	
TLW-tlw	0.50	h 25h	704	0.521	0.833	0.651	0.7	47.2	12.6	0.0	37.0	

Station: Newport, RI
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.119	0.152	0.096	3.3	65.0	0.0	6.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.124	0.162	0.105	5.0	65.0	0.0	6.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.130	0.163	0.099	3.3	58.3	0.0	6.0	0.0	1.67
H18-h18	15	cm 24h	60	-0.131	0.163	0.098	5.0	56.7	0.0	6.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.131	0.166	0.103	6.7	55.0	0.0	6.0	0.0	3.33
H30-h30	15	cm 24h	60	-0.137	0.173	0.108	8.3	55.0	0.0	12.0	0.0	5.00
H36-h36	15	cm 24h	59	-0.134	0.171	0.108	6.8	57.6	0.0	6.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.136	0.174	0.109	6.9	58.6	0.0	6.0	0.0	5.17
H48-h48	15	cm 24h	57	-0.133	0.173	0.111	7.0	61.4	0.0	6.0	0.0	5.26
H54-h54	15	cm 24h	56	-0.134	0.179	0.121	12.5	55.4	0.0	12.0	0.0	7.14
H60-h60	15	cm 24h	55	-0.143	0.186	0.119	14.5	56.4	0.0	6.0	0.0	7.27
H66-h66	15	cm 24h	54	-0.155	0.194	0.118	14.8	53.7	0.0	24.0	0.0	11.11
H72-h72	15	cm 24h	53	-0.166	0.204	0.119	13.2	47.2	0.0	6.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.172	0.210	0.122	21.2	48.1	0.0	12.0	0.0	17.31
H84-h84	15	cm 24h	51	-0.175	0.216	0.128	15.7	49.0	0.0	6.0	0.0	13.73
H90-h90	15	cm 24h	50	-0.176	0.215	0.125	20.0	46.0	0.0	24.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.171	0.208	0.120	16.3	42.9	0.0	12.0	0.0	16.33
AHW-ahw	15	cm 24h	29	-0.161	0.177	0.076	0.0	48.3	0.0			
ALW-alw	15	cm 24h	29	-0.128	0.156	0.090	0.0	58.6	0.0			
THW-thw	0.50	h 25h	29	-0.383	0.461	0.262	0.0	62.1	0.0			
TLW-tlw	0.50	h 25h	29	0.279	0.539	0.469	0.0	65.5	3.4			

Station: Providence, RI
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.181	0.181	7.9	56.4	1.0	3.0	1.0	0.00
AHW-ahw	15	cm 24h	705	-0.153	0.170	0.074	4.0	49.2	0.0	25.0	0.0	
ALW-alw	15	cm 24h	705	0.169	0.189	0.085	0.0	40.7	4.7	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.553	0.744	0.498	8.7	44.7	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	0.505	0.815	0.640	0.7	45.1	10.8	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.061								
h			8760	0.076								
H-h	15	cm 24h	8760	-0.016	0.188	0.187	7.1	57.8	3.9	6.0	3.0	7.63
AHW-ahw	15	cm 24h	701	-0.128	0.188	0.138	10.1	54.5	0.3	62.0	0.0	
ALW-alw	15	cm 24h	692	0.067	0.152	0.137	1.2	69.8	4.2	12.0	49.0	
THW-thw	0.50	h 25h	701	-0.573	0.805	0.565	10.3	43.4	0.1	24.0	0.0	
TLW-tlw	0.50	h 25h	692	0.551	1.157	1.019	3.6	28.9	24.9	25.0	38.0	

Station: Providence, RI
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.115	0.208	0.175	15.0	50.0	0.0	24.0	0.0	10.00
H06-h06	15	cm 24h	60	-0.117	0.207	0.172	13.3	55.0	0.0	24.0	0.0	10.00
H12-h12	15	cm 24h	60	-0.125	0.207	0.167	16.7	50.0	0.0	24.0	0.0	13.33
H18-h18	15	cm 24h	60	-0.122	0.208	0.170	16.7	50.0	0.0	24.0	0.0	13.33
H24-h24	15	cm 24h	60	-0.122	0.211	0.174	16.7	50.0	0.0	24.0	0.0	13.33
H30-h30	15	cm 24h	60	-0.127	0.214	0.174	20.0	50.0	0.0	24.0	0.0	15.00
H36-h36	15	cm 24h	59	-0.121	0.213	0.176	16.9	52.5	0.0	24.0	0.0	13.56
H42-h42	15	cm 24h	58	-0.123	0.218	0.182	17.2	48.3	0.0	24.0	0.0	12.07
H48-h48	15	cm 24h	57	-0.116	0.215	0.183	15.8	49.1	1.8	24.0	0.0	14.04
H54-h54	15	cm 24h	56	-0.119	0.226	0.194	17.9	44.6	0.0	24.0	0.0	12.50
H60-h60	15	cm 24h	55	-0.126	0.233	0.197	16.4	40.0	0.0	24.0	0.0	10.91
H66-h66	15	cm 24h	54	-0.141	0.239	0.195	22.2	42.6	0.0	24.0	0.0	16.67
H72-h72	15	cm 24h	53	-0.150	0.243	0.193	28.3	41.5	0.0	36.0	0.0	18.87
H78-h78	15	cm 24h	52	-0.156	0.242	0.187	26.9	40.4	0.0	24.0	0.0	19.23
H84-h84	15	cm 24h	51	-0.155	0.245	0.192	25.5	43.1	0.0	24.0	0.0	15.69
H90-h90	15	cm 24h	50	-0.152	0.243	0.192	26.0	50.0	0.0	36.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.144	0.231	0.182	24.5	55.1	0.0	24.0	0.0	16.33
AHW-ahw	15	cm 24h	29	-0.236	0.251	0.087	24.1	17.2	0.0			
ALW-alw	15	cm 24h	29	-0.044	0.127	0.122	0.0	69.0	0.0			
THW-thw	0.50	h 25h	29	-0.448	0.514	0.256	3.4	58.6	0.0			
TLW-tlw	0.50	h 25h	29	0.345	0.944	0.894	3.4	31.0	27.6			

Station: New London, CT
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.083	0.083	0.0	93.5	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.028	0.066	0.060	0.0	98.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.025	0.055	0.049	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.488	0.699	0.500	7.5	51.2	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.423	0.650	0.494	7.5	57.7	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.041								
h			8760	0.094								
H-h	15	cm 24h	8760	-0.052	0.165	0.157	5.6	63.0	1.2	16.0	6.0	5.14
AHW-ahw	15	cm 24h	705	0.013	0.120	0.119	0.6	80.7	0.9	12.0	25.0	
ALW-alw	15	cm 24h	705	-0.126	0.167	0.110	5.1	60.0	0.1	23.0	0.0	
THW-thw	0.50	h 25h	705	-0.652	0.883	0.596	13.9	33.5	0.4	49.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.678	0.865	0.538	13.5	34.5	0.3	12.0	0.0	

Station: New London, CT
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.114	0.182	0.143	15.0	55.0	0.0	0.0	0.0	6.67
H06-h06	15	cm 24h	60	-0.122	0.190	0.146	15.0	53.3	0.0	0.0	0.0	6.67
H12-h12	15	cm 24h	60	-0.128	0.190	0.141	13.3	48.3	0.0	0.0	0.0	8.33
H18-h18	15	cm 24h	60	-0.130	0.191	0.141	15.0	50.0	0.0	0.0	0.0	8.33
H24-h24	15	cm 24h	60	-0.132	0.193	0.142	11.7	51.7	0.0	0.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.139	0.206	0.153	15.0	50.0	0.0	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.136	0.201	0.149	13.6	47.5	0.0	0.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.135	0.203	0.152	13.8	46.6	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.130	0.203	0.158	14.0	43.9	0.0	0.0	0.0	5.26
H54-h54	15	cm 24h	56	-0.131	0.203	0.156	16.1	46.4	0.0	0.0	0.0	5.36
H60-h60	15	cm 24h	55	-0.142	0.214	0.162	20.0	54.5	0.0	12.0	0.0	10.91
H66-h66	15	cm 24h	54	-0.152	0.216	0.155	22.2	53.7	0.0	0.0	0.0	11.11
H72-h72	15	cm 24h	53	-0.161	0.227	0.161	22.6	50.9	0.0	0.0	0.0	13.21
H78-h78	15	cm 24h	52	-0.168	0.239	0.172	25.0	48.1	0.0	0.0	0.0	15.38
H84-h84	15	cm 24h	51	-0.175	0.242	0.169	27.5	51.0	0.0	12.0	0.0	17.65
H90-h90	15	cm 24h	50	-0.174	0.250	0.182	28.0	48.0	0.0	6.0	0.0	20.00
H96-h96	15	cm 24h	49	-0.170	0.243	0.175	26.5	49.0	0.0	0.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.049	0.099	0.088	0.0	82.8	0.0			
ALW-alw	15	cm 24h	29	-0.199	0.211	0.070	3.4	31.0	0.0			
THW-thw	0.50	h 25h	29	-0.693	0.776	0.356	17.2	31.0	0.0			
TLW-tlw	0.50	h 25h	29	-0.607	0.656	0.253	6.9	37.9	0.0			

Station: Bridgeport, CT
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.106	0.106	0.0	84.1	0.1	0.0	1.0	0.00
AHW-ahw	15	cm 24h	705	0.001	0.077	0.077	0.0	95.3	0.0	0.0	0.0	
ALW-alw	15	cm 24h	706	0.021	0.070	0.067	0.0	95.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.274	0.523	0.446	3.8	72.6	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	706	-0.181	0.432	0.393	2.8	81.3	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.053								
h			8760	0.051								
H-h	15	cm 24h	8760	0.001	0.167	0.167	3.2	61.8	3.4	16.0	8.0	4.34
AHW-ahw	15	cm 24h	705	-0.051	0.146	0.137	2.7	68.8	1.1	25.0	13.0	
ALW-alw	15	cm 24h	705	0.055	0.139	0.127	0.7	74.2	2.7	0.0	25.0	
THW-thw	0.50	h 25h	705	-0.260	0.526	0.458	3.8	72.3	0.1	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.224	0.497	0.444	2.6	75.3	0.3	12.0	0.0	

Station: Bridgeport, CT
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.114	0.164	0.119	5.0	56.7	0.0	0.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.118	0.167	0.118	5.0	55.0	0.0	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.128	0.172	0.116	3.3	51.7	0.0	0.0	0.0	1.67
H18-h18	15	cm 24h	60	-0.128	0.175	0.120	3.3	51.7	0.0	0.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.139	0.184	0.122	6.7	48.3	0.0	6.0	0.0	3.33
H30-h30	15	cm 24h	60	-0.145	0.197	0.134	11.7	43.3	0.0	6.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.143	0.193	0.131	10.2	42.4	0.0	6.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.134	0.188	0.134	10.3	50.0	0.0	12.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.133	0.191	0.138	7.0	40.4	0.0	12.0	0.0	3.51
H54-h54	15	cm 24h	56	-0.135	0.196	0.143	10.7	48.2	0.0	18.0	0.0	3.57
H60-h60	15	cm 24h	55	-0.145	0.205	0.146	16.4	50.9	0.0	12.0	0.0	5.45
H66-h66	15	cm 24h	54	-0.153	0.207	0.141	16.7	48.1	0.0	12.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.158	0.211	0.141	18.9	43.4	0.0	12.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.168	0.227	0.154	23.1	38.5	0.0	12.0	0.0	13.46
H84-h84	15	cm 24h	51	-0.178	0.234	0.154	21.6	41.2	0.0	12.0	0.0	13.73
H90-h90	15	cm 24h	50	-0.179	0.247	0.171	24.0	48.0	0.0	12.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.172	0.234	0.161	16.3	42.9	0.0	12.0	0.0	16.33
AHW-ahw	15	cm 24h	29	-0.157	0.177	0.084	6.9	48.3	0.0			
ALW-alw	15	cm 24h	28	-0.083	0.114	0.080	0.0	78.6	0.0			
THW-thw	0.50	h 25h	29	-0.210	0.263	0.161	0.0	96.6	0.0			
TLW-tlw	0.50	h 25h	28	-0.125	0.218	0.182	0.0	96.4	0.0			

Station: Montauk, NY
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.065	0.065	0.0	98.7	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.022	0.071	0.067	0.0	98.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.004	0.061	0.060	0.0	98.9	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.081	0.534	0.528	2.8	71.9	1.4	12.0	13.0	
TLW-tlw	0.50	h 25h	705	0.030	0.339	0.338	0.7	88.5	1.3	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.010								
h			8760	0.104								
H-h	15	cm 24h	8760	-0.114	0.166	0.121	5.7	61.2	0.2	42.0	2.0	4.16
AHW-ahw	15	cm 24h	703	-0.107	0.160	0.119	5.7	64.6	0.1	63.0	0.0	
ALW-alw	15	cm 24h	704	-0.149	0.188	0.114	7.4	51.7	0.1	61.0	0.0	
THW-thw	0.50	h 25h	703	-0.017	0.780	0.781	4.4	51.1	6.4	12.0	25.0	
TLW-tlw	0.50	h 25h	704	-0.199	0.589	0.555	5.0	67.5	0.6	12.0	0.0	

Station: Montauk, NY
Observed data time period from: /11/ 1/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	32	-0.128	0.151	0.081	0.0	65.6	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	32	-0.135	0.156	0.080	0.0	65.6	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	33	-0.143	0.163	0.080	3.0	60.6	0.0	0.0	0.0	3.03
H18-h18	15	cm 24h	34	-0.140	0.159	0.077	2.9	61.8	0.0	0.0	0.0	2.94
H24-h24	15	cm 24h	35	-0.136	0.160	0.086	8.6	68.6	0.0	6.0	0.0	8.57
H30-h30	15	cm 24h	36	-0.141	0.170	0.096	8.3	66.7	0.0	6.0	0.0	5.56
H36-h36	15	cm 24h	36	-0.138	0.164	0.090	8.3	72.2	0.0	6.0	0.0	5.56
H42-h42	15	cm 24h	36	-0.134	0.163	0.094	11.1	69.4	0.0	12.0	0.0	8.33
H48-h48	15	cm 24h	36	-0.130	0.161	0.097	5.6	63.9	0.0	6.0	0.0	5.56
H54-h54	15	cm 24h	36	-0.133	0.164	0.097	8.3	72.2	0.0	6.0	0.0	5.56
H60-h60	15	cm 24h	36	-0.150	0.180	0.102	8.3	63.9	0.0	6.0	0.0	5.56
H66-h66	15	cm 24h	36	-0.166	0.195	0.104	11.1	55.6	0.0	6.0	0.0	8.33
H72-h72	15	cm 24h	36	-0.176	0.206	0.110	13.9	50.0	0.0	6.0	0.0	11.11
H78-h78	15	cm 24h	36	-0.188	0.225	0.124	16.7	41.7	0.0	6.0	0.0	11.11
H84-h84	15	cm 24h	36	-0.200	0.238	0.129	22.2	41.7	0.0	12.0	0.0	16.67
H90-h90	15	cm 24h	36	-0.213	0.252	0.137	30.6	47.2	0.0	24.0	0.0	16.67
H96-h96	15	cm 24h	36	-0.210	0.245	0.128	33.3	44.4	0.0	36.0	0.0	33.33
AHW-ahw	15	cm 24h	15	-0.138	0.151	0.064	6.7	60.0	0.0			
ALW-alw	15	cm 24h	16	-0.138	0.160	0.083	0.0	62.5	0.0			
THW-thw	0.50	h 25h	15	-0.087	0.382	0.385	0.0	86.7	0.0			
TLW-tlw	0.50	h 25h	16	-0.137	0.232	0.193	0.0	93.8	0.0			

Station: Kings Point, NY
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	-0.001								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.148	0.148	1.2	64.1	1.3	1.0	4.0	0.00
AHW-ahw	15	cm 24h	705	0.100	0.129	0.083	0.0	72.9	0.3	0.0	0.0	
ALW-alw	15	cm 24h	706	-0.078	0.106	0.071	0.0	85.3	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.323	0.635	0.547	5.1	59.7	0.6	12.0	0.0	
TLW-tlw	0.50	h 25h	706	-0.204	0.623	0.589	4.1	61.2	1.4	12.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.026								
h			8760	0.083								
H-h	15	cm 24h	8760	-0.057	0.214	0.206	11.2	53.0	4.7	10.0	8.0	10.94
AHW-ahw	15	cm 24h	705	-0.019	0.146	0.145	1.8	70.2	2.3	24.0	13.0	
ALW-alw	15	cm 24h	704	-0.112	0.176	0.136	7.0	60.5	0.1	62.0	0.0	
THW-thw	0.50	h 25h	705	-0.380	0.719	0.610	8.7	52.2	0.6	24.0	0.0	
TLW-tlw	0.50	h 25h	704	-0.244	0.617	0.567	5.0	61.9	0.6	12.0	0.0	

Station: Kings Point, NY
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.114	0.189	0.152	13.3	55.0	0.0	6.0	0.0	8.33
H06-h06	15	cm 24h	60	-0.120	0.190	0.148	10.0	53.3	0.0	0.0	0.0	5.00
H12-h12	15	cm 24h	60	-0.134	0.199	0.149	8.3	48.3	0.0	0.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.133	0.203	0.154	11.7	48.3	0.0	12.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.149	0.217	0.159	18.3	45.0	0.0	18.0	0.0	10.00
H30-h30	15	cm 24h	60	-0.150	0.224	0.168	21.7	40.0	0.0	18.0	0.0	13.33
H36-h36	15	cm 24h	59	-0.150	0.226	0.170	18.6	44.1	1.7	18.0	0.0	11.86
H42-h42	15	cm 24h	58	-0.136	0.218	0.171	19.0	46.6	1.7	18.0	0.0	10.34
H48-h48	15	cm 24h	57	-0.140	0.227	0.180	19.3	40.4	1.8	18.0	0.0	10.53
H54-h54	15	cm 24h	56	-0.144	0.225	0.174	21.4	48.2	1.8	18.0	0.0	12.50
H60-h60	15	cm 24h	55	-0.153	0.238	0.183	20.0	47.3	1.8	12.0	0.0	12.73
H66-h66	15	cm 24h	54	-0.164	0.245	0.183	24.1	42.6	1.9	18.0	0.0	14.81
H72-h72	15	cm 24h	53	-0.170	0.241	0.173	26.4	47.2	1.9	18.0	0.0	18.87
H78-h78	15	cm 24h	52	-0.179	0.261	0.192	26.9	42.3	1.9	12.0	0.0	19.23
H84-h84	15	cm 24h	51	-0.190	0.268	0.191	29.4	41.2	2.0	12.0	0.0	21.57
H90-h90	15	cm 24h	50	-0.193	0.280	0.205	28.0	42.0	0.0	12.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.187	0.265	0.191	30.6	38.8	0.0	24.0	0.0	22.45
AHW-ahw	15	cm 24h	29	-0.062	0.114	0.097	0.0	79.3	0.0			
ALW-alw	15	cm 24h	28	-0.202	0.219	0.085	7.1	32.1	0.0			
THW-thw	0.50	h 25h	29	-0.369	0.571	0.444	3.4	37.9	0.0			
TLW-tlw	0.50	h 25h	28	-0.350	0.480	0.334	0.0	60.7	0.0			

Station: The Battery, NY
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.249	0.249	14.3	30.4	12.7	4.0	4.0	0.00
AHW-ahw	15	cm 24h	705	0.058	0.093	0.073	0.0	88.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.012	0.075	0.074	0.0	96.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-1.088	1.176	0.447	27.4	6.0	0.0	62.0	0.0	
TLW-tlw	0.50	h 25h	705	-1.116	1.181	0.385	26.8	2.3	0.0	87.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.032								
h			8760	0.088								
H-h	15	cm 24h	8760	-0.057	0.253	0.247	18.8	41.8	6.5	6.0	6.0	17.13
AHW-ahw	15	cm 24h	703	0.050	0.143	0.134	0.4	74.4	4.0	0.0	25.0	
ALW-alw	15	cm 24h	700	-0.067	0.148	0.131	3.6	70.0	0.4	25.0	0.0	
THW-thw	0.50	h 25h	703	-0.694	0.889	0.556	14.1	32.4	0.1	25.0	0.0	
TLW-tlw	0.50	h 25h	700	-0.833	1.022	0.593	18.7	23.4	0.1	37.0	0.0	

Station: The Battery, NY
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.158	0.286	0.241	38.3	31.7	0.0	6.0	0.0	25.00
H06-h06	15	cm 24h	60	-0.169	0.293	0.241	35.0	35.0	0.0	0.0	0.0	20.00
H12-h12	15	cm 24h	60	-0.160	0.292	0.246	36.7	30.0	0.0	0.0	0.0	23.33
H18-h18	15	cm 24h	60	-0.153	0.289	0.248	35.0	31.7	1.7	0.0	0.0	25.00
H24-h24	15	cm 24h	60	-0.156	0.292	0.249	40.0	31.7	1.7	0.0	0.0	28.33
H30-h30	15	cm 24h	60	-0.159	0.301	0.257	40.0	33.3	1.7	6.0	0.0	28.33
H36-h36	15	cm 24h	59	-0.160	0.298	0.254	39.0	33.9	1.7	6.0	0.0	28.81
H42-h42	15	cm 24h	58	-0.167	0.309	0.263	44.8	27.6	1.7	12.0	0.0	31.03
H48-h48	15	cm 24h	57	-0.158	0.298	0.254	38.6	33.3	1.8	12.0	0.0	29.82
H54-h54	15	cm 24h	56	-0.154	0.296	0.256	39.3	37.5	3.6	12.0	0.0	32.14
H60-h60	15	cm 24h	55	-0.160	0.290	0.244	38.2	30.9	1.8	12.0	0.0	29.09
H66-h66	15	cm 24h	54	-0.172	0.303	0.251	42.6	29.6	1.9	12.0	0.0	31.48
H72-h72	15	cm 24h	53	-0.179	0.306	0.250	41.5	30.2	1.9	12.0	0.0	28.30
H78-h78	15	cm 24h	52	-0.180	0.313	0.258	44.2	28.8	1.9	12.0	0.0	28.85
H84-h84	15	cm 24h	51	-0.171	0.303	0.253	37.3	33.3	2.0	6.0	0.0	27.45
H90-h90	15	cm 24h	50	-0.174	0.324	0.276	32.0	30.0	2.0	6.0	0.0	26.00
H96-h96	15	cm 24h	49	-0.175	0.315	0.264	40.8	34.7	0.0	6.0	0.0	24.49
AHW-ahw	15	cm 24h	29	-0.003	0.093	0.094	3.4	96.6	0.0			
ALW-alw	15	cm 24h	29	-0.175	0.195	0.087	10.3	41.4	0.0			
THW-thw	0.50	h 25h	29	-0.700	0.794	0.382	10.3	24.1	0.0			
TLW-tlw	0.50	h 25h	29	-0.717	0.826	0.416	13.8	34.5	0.0			

Station: Bergen Point West Reach, NY
Observed data time period from: / 1/ 1/2009 to /12/ 3/2009 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.284	0.284	17.7	30.1	18.0	4.0	4.0	0.00
AHW-ahw	15	cm 24h	705	-0.017	0.070	0.068	0.0	98.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.051	0.093	0.078	0.0	88.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-1.017	1.099	0.416	22.3	7.8	0.0	37.0	0.0	
TLW-tlw	0.50	h 25h	705	-1.183	1.263	0.442	32.5	2.3	0.0	63.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8075	0.042								
h			8075	0.127								
H-h	15	cm 24h	8075	-0.084	0.278	0.265	22.8	40.6	7.0	6.0	6.0	19.12
AHW-ahw	15	cm 24h	649	-0.024	0.133	0.131	0.6	73.8	1.7	0.0	13.0	
ALW-alw	15	cm 24h	644	-0.047	0.143	0.135	2.3	70.8	0.6	24.0	0.0	
THW-thw	0.50	h 25h	649	-0.673	0.910	0.612	15.6	34.8	0.2	25.0	0.0	
TLW-tlw	0.50	h 25h	644	-0.893	1.087	0.621	23.0	20.5	0.2	75.0	0.0	

Station: Bergen Point West Reach, NY
Observed data time period from: /11/ 1/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	32	-0.142	0.306	0.276	40.6	31.2	3.1	0.0	0.0	18.75
H06-h06	15	cm 24h	32	-0.147	0.309	0.276	37.5	37.5	6.2	0.0	0.0	21.88
H12-h12	15	cm 24h	33	-0.153	0.323	0.289	39.4	36.4	3.0	0.0	0.0	24.24
H18-h18	15	cm 24h	34	-0.136	0.319	0.293	41.2	29.4	5.9	0.0	0.0	26.47
H24-h24	15	cm 24h	35	-0.139	0.320	0.293	42.9	25.7	8.6	0.0	0.0	28.57
H30-h30	15	cm 24h	36	-0.130	0.326	0.303	38.9	25.0	8.3	0.0	0.0	27.78
H36-h36	15	cm 24h	36	-0.133	0.319	0.294	36.1	27.8	8.3	0.0	0.0	27.78
H42-h42	15	cm 24h	36	-0.133	0.330	0.306	41.7	30.6	8.3	0.0	0.0	27.78
H48-h48	15	cm 24h	36	-0.128	0.316	0.293	38.9	30.6	5.6	0.0	0.0	27.78
H54-h54	15	cm 24h	36	-0.121	0.320	0.300	38.9	36.1	8.3	0.0	0.0	30.56
H60-h60	15	cm 24h	36	-0.143	0.316	0.285	38.9	22.2	8.3	0.0	0.0	27.78
H66-h66	15	cm 24h	36	-0.154	0.331	0.297	41.7	30.6	11.1	0.0	0.0	33.33
H72-h72	15	cm 24h	36	-0.172	0.338	0.295	38.9	27.8	5.6	0.0	0.0	30.56
H78-h78	15	cm 24h	36	-0.174	0.347	0.304	41.7	33.3	8.3	0.0	0.0	30.56
H84-h84	15	cm 24h	36	-0.180	0.347	0.301	41.7	30.6	8.3	0.0	0.0	30.56
H90-h90	15	cm 24h	36	-0.187	0.372	0.326	38.9	33.3	5.6	6.0	0.0	30.56
H96-h96	15	cm 24h	36	-0.190	0.354	0.303	44.4	30.6	5.6	6.0	0.0	27.78
AHW-ahw	15	cm 24h	15	-0.023	0.071	0.069	0.0	100.0	0.0			
ALW-alw	15	cm 24h	16	-0.088	0.117	0.080	0.0	87.5	0.0			
THW-thw	0.50	h 25h	15	-0.593	0.653	0.282	13.3	26.7	0.0			
TLW-tlw	0.50	h 25h	16	-1.156	1.205	0.352	68.8	6.2	0.0			

Station: Sandy Hook, NJ
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.124	0.124	0.1	74.6	0.3	1.0	1.0	0.00
AHW-ahw	15	cm 24h	705	0.028	0.073	0.067	0.0	95.6	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.012	0.071	0.070	0.0	97.4	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.485	0.697	0.500	7.9	51.5	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.424	0.651	0.495	5.8	57.6	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.004								
h			8760	0.113								
H-h	15	cm 24h	8760	-0.116	0.196	0.157	10.8	54.6	0.7	29.0	7.0	7.90
AHW-ahw	15	cm 24h	703	-0.031	0.136	0.133	1.4	74.0	1.6	24.0	13.0	
ALW-alw	15	cm 24h	705	-0.124	0.181	0.132	7.7	56.7	0.1	62.0	0.0	
THW-thw	0.50	h 25h	703	-0.098	0.535	0.526	3.0	74.0	1.4	12.0	12.0	
TLW-tlw	0.50	h 25h	705	-0.150	0.652	0.635	4.8	63.4	2.3	12.0	12.0	

Station: Sandy Hook, NJ
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.180	0.221	0.130	20.0	41.7	0.0	12.0	0.0	13.33
H06-h06	15	cm 24h	60	-0.190	0.231	0.132	21.7	41.7	0.0	12.0	0.0	16.67
H12-h12	15	cm 24h	60	-0.180	0.220	0.127	18.3	43.3	0.0	6.0	0.0	15.00
H18-h18	15	cm 24h	60	-0.175	0.216	0.129	18.3	41.7	0.0	6.0	0.0	15.00
H24-h24	15	cm 24h	60	-0.177	0.218	0.128	13.3	36.7	0.0	6.0	0.0	11.67
H30-h30	15	cm 24h	60	-0.184	0.229	0.137	18.3	33.3	0.0	6.0	0.0	16.67
H36-h36	15	cm 24h	59	-0.187	0.230	0.136	16.9	33.9	0.0	12.0	0.0	13.56
H42-h42	15	cm 24h	58	-0.191	0.241	0.148	25.9	32.8	0.0	12.0	0.0	17.24
H48-h48	15	cm 24h	57	-0.185	0.232	0.142	21.1	38.6	0.0	18.0	0.0	17.54
H54-h54	15	cm 24h	56	-0.177	0.227	0.144	19.6	39.3	0.0	18.0	0.0	16.07
H60-h60	15	cm 24h	55	-0.188	0.233	0.139	23.6	38.2	0.0	24.0	0.0	16.36
H66-h66	15	cm 24h	54	-0.197	0.241	0.141	29.6	31.5	0.0	24.0	0.0	20.37
H72-h72	15	cm 24h	53	-0.206	0.251	0.145	28.3	35.8	0.0	12.0	0.0	16.98
H78-h78	15	cm 24h	52	-0.204	0.251	0.148	25.0	32.7	0.0	12.0	0.0	17.31
H84-h84	15	cm 24h	51	-0.199	0.251	0.155	21.6	37.3	0.0	6.0	0.0	13.73
H90-h90	15	cm 24h	50	-0.200	0.265	0.175	26.0	44.0	0.0	12.0	0.0	18.00
H96-h96	15	cm 24h	49	-0.206	0.266	0.171	26.5	32.7	0.0	6.0	0.0	22.45
AHW-ahw	15	cm 24h	29	-0.045	0.096	0.086	3.4	89.7	0.0			
ALW-alw	15	cm 24h	29	-0.200	0.215	0.081	10.3	24.1	0.0			
THW-thw	0.50	h 25h	29	-0.159	0.397	0.370	3.4	75.9	0.0			
TLW-tlw	0.50	h 25h	29	-0.004	0.446	0.454	0.0	69.0	0.0			

Station: Atlantic City, NJ
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.072	0.072	0.0	97.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.031	0.072	0.065	0.0	96.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.022	0.069	0.065	0.0	96.9	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.128	0.380	0.359	2.3	85.5	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.115	0.363	0.345	1.6	86.8	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.024								
h			8760	0.102								
H-h	15	cm 24h	8760	-0.125	0.184	0.134	8.5	53.5	0.3	52.0	9.0	5.11
AHW-ahw	15	cm 24h	705	-0.137	0.191	0.134	10.1	50.6	0.6	99.0	0.0	
ALW-alw	15	cm 24h	705	-0.117	0.175	0.131	7.4	59.9	0.3	73.0	13.0	
THW-thw	0.50	h 25h	705	0.033	0.534	0.533	2.0	72.8	2.7	0.0	12.0	
TLW-tlw	0.50	h 25h	705	-0.081	0.509	0.503	2.0	74.5	1.7	12.0	0.0	

Station: Atlantic City, NJ
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.147	0.165	0.075	3.3	48.3	0.0	0.0	0.0	1.67
H06-h06	15	cm 24h	60	-0.166	0.182	0.074	5.0	45.0	0.0	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.172	0.187	0.073	5.0	41.7	0.0	6.0	0.0	3.33
H18-h18	15	cm 24h	60	-0.175	0.189	0.073	5.0	40.0	0.0	0.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.181	0.197	0.079	8.3	40.0	0.0	12.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.188	0.209	0.092	15.0	40.0	0.0	12.0	0.0	8.33
H36-h36	15	cm 24h	59	-0.192	0.213	0.094	13.6	40.7	0.0	12.0	0.0	8.47
H42-h42	15	cm 24h	58	-0.194	0.217	0.098	13.8	39.7	0.0	12.0	0.0	6.90
H48-h48	15	cm 24h	57	-0.196	0.217	0.093	17.5	31.6	0.0	24.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.196	0.218	0.096	14.3	37.5	0.0	24.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.201	0.224	0.098	18.2	34.5	0.0	24.0	0.0	7.27
H66-h66	15	cm 24h	54	-0.209	0.234	0.107	22.2	33.3	0.0	24.0	0.0	11.11
H72-h72	15	cm 24h	53	-0.220	0.246	0.112	26.4	28.3	0.0	18.0	0.0	11.32
H78-h78	15	cm 24h	52	-0.225	0.250	0.112	25.0	32.7	0.0	18.0	0.0	15.38
H84-h84	15	cm 24h	51	-0.232	0.262	0.123	29.4	25.5	0.0	12.0	0.0	23.53
H90-h90	15	cm 24h	50	-0.235	0.273	0.139	28.0	26.0	0.0	18.0	0.0	28.00
H96-h96	15	cm 24h	49	-0.240	0.278	0.142	30.6	26.5	0.0	18.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.181	0.194	0.071	6.9	34.5	0.0			
ALW-alw	15	cm 24h	29	-0.155	0.171	0.075	3.4	41.4	0.0			
THW-thw	0.50	h 25h	29	0.052	0.282	0.282	0.0	86.2	0.0			
TLW-tlw	0.50	h 25h	29	-0.031	0.319	0.323	0.0	86.2	0.0			

Station: Cape May, NJ
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.070	0.070	0.0	96.5	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.049	0.079	0.062	0.0	94.8	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.024	0.063	0.059	0.0	98.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.031	0.306	0.305	1.0	90.6	0.6	0.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.016	0.299	0.299	0.7	91.1	0.6	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.013								
h			8760	0.126								
H-h	15	cm 24h	8760	-0.139	0.198	0.141	11.2	49.8	0.2	46.0	7.0	7.07
AHW-ahw	15	cm 24h	705	-0.203	0.238	0.124	22.0	30.1	0.0	123.0	0.0	
ALW-alw	15	cm 24h	705	-0.158	0.209	0.138	13.2	46.0	0.3	136.0	13.0	
THW-thw	0.50	h 25h	705	0.055	0.431	0.428	1.3	81.8	1.7	0.0	0.0	
TLW-tlw	0.50	h 25h	705	0.177	0.484	0.450	0.6	76.6	3.5	0.0	12.0	

Station: Cape May, NJ
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.157	0.181	0.091	11.7	53.3	0.0	12.0	0.0	8.33
H06-h06	15	cm 24h	60	-0.161	0.185	0.093	13.3	51.7	0.0	12.0	0.0	10.00
H12-h12	15	cm 24h	60	-0.164	0.187	0.090	11.7	51.7	0.0	0.0	0.0	6.67
H18-h18	15	cm 24h	60	-0.169	0.192	0.092	11.7	48.3	0.0	0.0	0.0	6.67
H24-h24	15	cm 24h	60	-0.179	0.204	0.097	15.0	43.3	0.0	12.0	0.0	10.00
H30-h30	15	cm 24h	60	-0.186	0.211	0.100	15.0	41.7	0.0	12.0	0.0	10.00
H36-h36	15	cm 24h	59	-0.191	0.218	0.106	15.3	42.4	0.0	12.0	0.0	11.86
H42-h42	15	cm 24h	58	-0.193	0.221	0.108	17.2	37.9	0.0	12.0	0.0	10.34
H48-h48	15	cm 24h	57	-0.196	0.225	0.111	14.0	33.3	0.0	12.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.199	0.229	0.113	17.9	39.3	0.0	18.0	0.0	12.50
H60-h60	15	cm 24h	55	-0.207	0.238	0.119	23.6	36.4	0.0	12.0	0.0	16.36
H66-h66	15	cm 24h	54	-0.212	0.244	0.122	22.2	33.3	0.0	18.0	0.0	16.67
H72-h72	15	cm 24h	53	-0.222	0.254	0.126	24.5	30.2	0.0	12.0	0.0	18.87
H78-h78	15	cm 24h	52	-0.225	0.255	0.121	25.0	25.0	0.0	24.0	0.0	19.23
H84-h84	15	cm 24h	51	-0.240	0.267	0.119	33.3	23.5	0.0	24.0	0.0	27.45
H90-h90	15	cm 24h	50	-0.242	0.276	0.134	32.0	24.0	0.0	18.0	0.0	26.00
H96-h96	15	cm 24h	49	-0.244	0.282	0.143	34.7	28.6	0.0	18.0	0.0	30.61
AHW-ahw	15	cm 24h	29	-0.231	0.239	0.063	10.3	6.9	0.0			
ALW-alw	15	cm 24h	29	-0.197	0.212	0.081	10.3	27.6	0.0			
THW-thw	0.50	h 25h	29	0.114	0.241	0.217	0.0	93.1	0.0			
TLW-tlw	0.50	h 25h	29	0.262	0.387	0.290	0.0	86.2	0.0			

Station: Philadelphia, PA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.997	0.998	42.8	7.4	42.3	6.0	6.0	0.00
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.039								
h			8760	0.093								
H-h	15	cm 24h	8760	-0.132	1.157	1.150	46.5	6.2	39.7	7.0	6.0	46.16
AHW-ahw	15	cm 24h	705	-0.283	0.372	0.242	50.5	23.3	1.7	186.0	13.0	
ALW-alw	15	cm 24h	705	0.081	0.244	0.230	3.8	47.9	15.2	50.0	74.0	
THW-thw	0.50	h 25h	705	-2.479	5.891	5.348	70.4	0.0	29.6	260.0	100.0	
TLW-tlw	0.50	h 25h	705	4.206	5.359	3.324	9.4	0.0	90.6	13.0	806.0	

Station: Philadelphia, PA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.106	1.210	1.216	46.7	8.3	41.7	0.0	0.0	40.00
H06-h06	15	cm 24h	60	-0.138	1.206	1.208	46.7	8.3	40.0	0.0	0.0	36.67
H12-h12	15	cm 24h	60	-0.127	1.195	1.198	45.0	8.3	38.3	0.0	0.0	35.00
H18-h18	15	cm 24h	60	-0.138	1.194	1.196	45.0	6.7	38.3	0.0	0.0	36.67
H24-h24	15	cm 24h	60	-0.128	1.176	1.179	43.3	5.0	38.3	0.0	0.0	33.33
H30-h30	15	cm 24h	60	-0.143	1.183	1.184	45.0	8.3	38.3	0.0	0.0	35.00
H36-h36	15	cm 24h	59	-0.130	1.181	1.184	44.1	6.8	39.0	0.0	0.0	33.90
H42-h42	15	cm 24h	58	-0.151	1.192	1.192	43.1	6.9	37.9	0.0	0.0	32.76
H48-h48	15	cm 24h	57	-0.140	1.198	1.201	42.1	8.8	38.6	0.0	0.0	33.33
H54-h54	15	cm 24h	56	-0.139	1.208	1.211	42.9	8.9	39.3	0.0	0.0	33.93
H60-h60	15	cm 24h	55	-0.137	1.222	1.225	41.8	9.1	41.8	0.0	0.0	32.73
H66-h66	15	cm 24h	54	-0.147	1.233	1.236	42.6	7.4	40.7	0.0	0.0	33.33
H72-h72	15	cm 24h	53	-0.156	1.241	1.243	45.3	7.5	43.4	0.0	0.0	33.96
H78-h78	15	cm 24h	52	-0.147	1.254	1.258	44.2	9.6	44.2	0.0	0.0	34.62
H84-h84	15	cm 24h	51	-0.163	1.260	1.261	47.1	7.8	43.1	0.0	0.0	33.33
H90-h90	15	cm 24h	50	-0.162	1.271	1.273	46.0	4.0	46.0	0.0	0.0	38.00
H96-h96	15	cm 24h	49	-0.173	1.287	1.289	49.0	6.1	44.9	6.0	0.0	40.82

Station: Reedy Point, DE
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.427	0.427	35.6	13.2	32.2	6.0	5.0	0.00
AHW-ahw	15	cm 24h	705	0.339	0.360	0.122	0.0	6.8	60.6	0.07	45.0	
ALW-alw	15	cm 24h	704	-0.242	0.261	0.099	32.0	20.2	0.0	410.0	0.0	
THW-thw	0.50	h 25h	705	-1.279	1.360	0.462	38.9	0.6	0.0	62.0	0.0	
TLW-tlw	0.50	h 25h	704	-0.979	1.040	0.351	18.9	7.2	0.0	111.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.004								
h			8760	0.092								
H-h	15	cm 24h	8760	-0.096	0.356	0.343	37.7	19.2	15.6	6.0	6.0	35.07
AHW-ahw	15	cm 24h	704	0.202	0.265	0.171	0.0	38.9	25.7	0.01	73.0	
ALW-alw	15	cm 24h	704	-0.288	0.317	0.134	47.6	14.1	0.0	235.0	0.0	
THW-thw	0.50	h 25h	704	-0.955	1.059	0.460	20.6	12.9	0.0	37.0	0.0	
TLW-tlw	0.50	h 25h	704	-0.781	0.914	0.475	14.2	24.6	0.0	36.0	0.0	

Station: Reedy Point, DE
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.113	0.342	0.326	43.3	16.7	18.3	6.0	0.0	35.00
H06-h06	15	cm 24h	60	-0.129	0.349	0.326	45.0	15.0	13.3	6.0	0.0	31.67
H12-h12	15	cm 24h	60	-0.144	0.346	0.318	46.7	18.3	8.3	6.0	0.0	28.33
H18-h18	15	cm 24h	60	-0.149	0.348	0.317	48.3	15.0	8.3	6.0	0.0	30.00
H24-h24	15	cm 24h	60	-0.146	0.348	0.318	48.3	20.0	6.7	12.0	0.0	30.00
H30-h30	15	cm 24h	60	-0.149	0.350	0.320	48.3	16.7	5.0	6.0	0.0	28.33
H36-h36	15	cm 24h	59	-0.149	0.355	0.325	49.2	16.9	8.5	18.0	0.0	28.81
H42-h42	15	cm 24h	58	-0.146	0.352	0.323	48.3	20.7	10.3	18.0	0.0	29.31
H48-h48	15	cm 24h	57	-0.149	0.360	0.331	49.1	17.5	12.3	18.0	0.0	29.82
H54-h54	15	cm 24h	56	-0.148	0.352	0.323	48.2	19.6	10.7	18.0	0.0	26.79
H60-h60	15	cm 24h	55	-0.146	0.355	0.326	49.1	16.4	9.1	18.0	0.0	27.27
H66-h66	15	cm 24h	54	-0.143	0.347	0.319	48.1	20.4	13.0	18.0	0.0	27.78
H72-h72	15	cm 24h	53	-0.159	0.355	0.320	47.2	24.5	13.2	18.0	0.0	28.30
H78-h78	15	cm 24h	52	-0.155	0.355	0.323	50.0	19.2	7.7	18.0	0.0	28.85
H84-h84	15	cm 24h	51	-0.172	0.365	0.325	49.0	19.6	9.8	12.0	0.0	29.41
H90-h90	15	cm 24h	50	-0.168	0.365	0.328	46.0	20.0	8.0	6.0	0.0	30.00
H96-h96	15	cm 24h	49	-0.168	0.374	0.338	46.9	24.5	8.2	6.0	0.0	28.57
AHW-ahw	15	cm 24h	29	0.167	0.506	0.486	3.4	24.1	27.6			
ALW-alw	15	cm 24h	28	-0.365	0.371	0.068	85.7	0.0	0.0			
THW-thw	0.50	h 25h	29	-0.890	0.943	0.319	17.2	3.4	0.0			
TLW-tlw	0.50	h 25h	28	-0.668	0.697	0.202	3.6	17.9	0.0			

Station: Lewes, DE
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.060	0.060	0.0	99.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.013	0.056	0.054	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.028	0.060	0.053	0.0	99.4	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.014	0.341	0.341	1.1	88.4	1.4	0.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.044	0.330	0.328	1.1	89.1	0.6	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.015								
h			8760	0.110								
H-h	15	cm 24h	8760	-0.125	0.186	0.138	8.9	54.3	0.2	70.0	7.0	4.50
AHW-ahw	15	cm 24h	705	-0.156	0.201	0.127	11.9	44.7	0.0	111.0	0.0	
ALW-alw	15	cm 24h	705	-0.141	0.199	0.141	11.1	51.2	0.3	136.0	13.0	
THW-thw	0.50	h 25h	705	-0.027	0.460	0.459	1.8	79.7	1.8	0.0	12.0	
TLW-tlw	0.50	h 25h	705	0.023	0.458	0.458	1.1	80.3	2.4	0.0	12.0	

Station: Lewes, DE
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.134	0.156	0.080	1.7	60.0	0.0	0.0	0.0	1.67
H06-h06	15	cm 24h	60	-0.145	0.164	0.077	1.7	60.0	0.0	0.0	0.0	1.67
H12-h12	15	cm 24h	60	-0.150	0.168	0.076	3.3	53.3	0.0	0.0	0.0	1.67
H18-h18	15	cm 24h	60	-0.156	0.173	0.076	1.7	55.0	0.0	0.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.165	0.184	0.083	5.0	51.7	0.0	0.0	0.0	3.33
H30-h30	15	cm 24h	60	-0.171	0.193	0.089	10.0	46.7	0.0	0.0	0.0	8.33
H36-h36	15	cm 24h	59	-0.176	0.199	0.094	10.2	45.8	0.0	12.0	0.0	8.47
H42-h42	15	cm 24h	58	-0.179	0.203	0.097	12.1	46.6	0.0	12.0	0.0	8.62
H48-h48	15	cm 24h	57	-0.181	0.206	0.098	12.3	38.6	0.0	12.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.184	0.209	0.100	14.3	39.3	0.0	12.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.190	0.216	0.105	14.5	34.5	0.0	12.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.194	0.223	0.111	18.5	33.3	0.0	12.0	0.0	12.96
H72-h72	15	cm 24h	53	-0.204	0.235	0.117	24.5	34.0	0.0	12.0	0.0	18.87
H78-h78	15	cm 24h	52	-0.209	0.239	0.116	23.1	34.6	0.0	18.0	0.0	19.23
H84-h84	15	cm 24h	51	-0.222	0.249	0.114	25.5	29.4	0.0	12.0	0.0	21.57
H90-h90	15	cm 24h	50	-0.228	0.261	0.130	32.0	30.0	0.0	18.0	0.0	28.00
H96-h96	15	cm 24h	49	-0.230	0.265	0.134	26.5	22.4	0.0	18.0	0.0	22.45
AHW-ahw	15	cm 24h	29	-0.187	0.196	0.063	3.4	27.6	0.0			
ALW-alw	15	cm 24h	29	-0.166	0.182	0.074	3.4	37.9	0.0			
THW-thw	0.50	h 25h	29	-0.134	0.291	0.262	0.0	89.7	0.0			
TLW-tlw	0.50	h 25h	29	0.155	0.303	0.265	0.0	89.7	0.0			

Station: Ocean City Inlet, MD
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.137	0.137	0.0	67.6	0.9	0.0	1.0	0.00
AHW-ahw	15	cm 24h	705	0.167	0.181	0.071	0.0	43.1	1.1	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.154	0.162	0.048	0.0	38.7	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.570	0.755	0.495	8.8	43.0	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.187	0.433	0.390	2.6	81.3	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.023								
h			8760	0.099								
H-h	15	cm 24h	8760	-0.122	0.234	0.200	18.9	45.6	1.9	45.0	6.0	15.83
AHW-ahw	15	cm 24h	703	0.076	0.166	0.148	0.4	65.4	8.4	26.0	62.0	
ALW-alw	15	cm 24h	705	-0.318	0.354	0.155	57.0	13.9	0.0	524.0	0.0	
THW-thw	0.50	h 25h	703	-0.390	0.687	0.566	7.5	57.0	0.1	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.118	0.537	0.524	4.0	72.9	0.6	12.0	0.0	

Station: Ocean City Inlet, MD
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.151	0.242	0.190	30.0	45.0	0.0	0.0	0.0	25.00
H06-h06	15	cm 24h	60	-0.168	0.255	0.194	33.3	41.7	1.7	0.0	0.0	26.67
H12-h12	15	cm 24h	60	-0.171	0.254	0.190	31.7	45.0	0.0	0.0	0.0	25.00
H18-h18	15	cm 24h	60	-0.178	0.259	0.190	33.3	41.7	0.0	0.0	0.0	26.67
H24-h24	15	cm 24h	60	-0.184	0.262	0.188	30.0	38.3	0.0	0.0	0.0	23.33
H30-h30	15	cm 24h	60	-0.192	0.270	0.191	36.7	31.7	0.0	0.0	0.0	30.00
H36-h36	15	cm 24h	59	-0.195	0.271	0.190	33.9	30.5	0.0	0.0	0.0	28.81
H42-h42	15	cm 24h	58	-0.201	0.277	0.192	34.5	31.0	0.0	0.0	0.0	27.59
H48-h48	15	cm 24h	57	-0.202	0.278	0.192	31.6	29.8	0.0	0.0	0.0	24.56
H54-h54	15	cm 24h	56	-0.203	0.278	0.192	35.7	26.8	0.0	0.0	0.0	30.36
H60-h60	15	cm 24h	55	-0.205	0.279	0.192	32.7	32.7	0.0	0.0	0.0	27.27
H66-h66	15	cm 24h	54	-0.212	0.289	0.198	33.3	33.3	0.0	0.0	0.0	27.78
H72-h72	15	cm 24h	53	-0.221	0.299	0.203	34.0	37.7	0.0	0.0	0.0	32.08
H78-h78	15	cm 24h	52	-0.227	0.305	0.205	34.6	36.5	0.0	0.0	0.0	32.69
H84-h84	15	cm 24h	51	-0.238	0.314	0.207	37.3	33.3	0.0	0.0	0.0	35.29
H90-h90	15	cm 24h	50	-0.242	0.327	0.221	38.0	32.0	0.0	6.0	0.0	36.00
H96-h96	15	cm 24h	49	-0.247	0.331	0.222	38.8	30.6	0.0	6.0	0.0	36.73
AHW-ahw	15	cm 24h	29	0.082	0.129	0.102	0.0	75.9	3.4			
ALW-alw	15	cm 24h	29	-0.420	0.425	0.063	100.0	0.0	0.0			
THW-thw	0.50	h 25h	29	-0.421	0.541	0.346	3.4	48.3	0.0			
TLW-tlw	0.50	h 25h	29	-0.197	0.406	0.361	3.4	82.8	0.0			

Station: Cambridge, MD
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.119	0.119	0.0	75.8	0.4	0.0	1.0	0.00
AHW-ahw	15	cm 24h	705	-0.073	0.100	0.069	0.0	89.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.066	0.097	0.071	0.0	84.5	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-1.182	1.255	0.424	32.3	1.6	0.0	112.0	0.0	
TLW-tlw	0.50	h 25h	705	-1.132	1.241	0.509	30.6	7.2	0.0	49.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.009								
h			8760	0.088								
H-h	15	cm 24h	8760	-0.097	0.190	0.164	10.8	53.9	0.9	20.0	7.0	9.20
AHW-ahw	15	cm 24h	697	-0.188	0.225	0.124	18.1	35.6	0.0	87.0	0.0	
ALW-alw	15	cm 24h	701	-0.016	0.125	0.124	1.3	76.6	1.0	13.0	25.0	
THW-thw	0.50	h 25h	697	-0.996	1.262	0.776	34.4	19.1	0.3	75.0	0.0	
TLW-tlw	0.50	h 25h	701	-0.882	1.097	0.654	24.3	25.4	0.1	49.0	0.0	

Station: Cambridge, MD
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.113	0.189	0.152	10.0	56.7	0.0	0.0	0.0	6.67
H06-h06	15	cm 24h	60	-0.109	0.187	0.153	10.0	56.7	0.0	0.0	0.0	6.67
H12-h12	15	cm 24h	60	-0.116	0.186	0.147	10.0	56.7	0.0	0.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.119	0.189	0.148	10.0	55.0	0.0	0.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.121	0.189	0.146	10.0	55.0	0.0	0.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.122	0.191	0.147	10.0	53.3	0.0	0.0	0.0	5.00
H36-h36	15	cm 24h	59	-0.123	0.194	0.151	11.9	55.9	0.0	0.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.124	0.194	0.150	8.6	53.4	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.131	0.198	0.150	12.3	52.6	0.0	0.0	0.0	7.02
H54-h54	15	cm 24h	56	-0.132	0.200	0.151	10.7	50.0	0.0	0.0	0.0	5.36
H60-h60	15	cm 24h	55	-0.136	0.201	0.149	9.1	47.3	0.0	0.0	0.0	3.64
H66-h66	15	cm 24h	54	-0.134	0.200	0.150	9.3	50.0	0.0	0.0	0.0	3.70
H72-h72	15	cm 24h	53	-0.138	0.206	0.155	13.2	50.9	0.0	0.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.138	0.204	0.153	9.6	50.0	0.0	0.0	0.0	3.85
H84-h84	15	cm 24h	51	-0.144	0.212	0.157	15.7	45.1	0.0	6.0	0.0	9.80
H90-h90	15	cm 24h	50	-0.147	0.216	0.160	16.0	48.0	0.0	0.0	0.0	10.00
H96-h96	15	cm 24h	49	-0.151	0.218	0.159	14.3	36.7	0.0	0.0	0.0	8.16
AHW-ahw	15	cm 24h	29	-0.193	0.216	0.099	13.8	34.5	0.0			
ALW-alw	15	cm 24h	29	-0.035	0.105	0.100	0.0	82.8	0.0			
THW-thw	0.50	h 25h	29	-1.055	1.194	0.568	58.6	17.2	0.0			
TLW-tlw	0.50	h 25h	29	-0.817	0.933	0.459	34.5	20.7	0.0			

Station: Baltimore, MD
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.114	0.114	0.0	79.6	0.1	0.0	1.0	0.00
AHW-ahw	15	cm 24h	705	0.066	0.106	0.083	0.0	76.6	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.074	0.112	0.084	0.0	83.4	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.749	0.872	0.447	11.5	25.7	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.834	0.991	0.535	17.2	24.0	0.0	25.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.075								
h			8760	0.080								
H-h	15	cm 24h	8760	-0.005	0.163	0.162	2.6	67.1	3.8	29.0	32.0	4.24
AHW-ahw	15	cm 24h	677	0.036	0.153	0.149	0.6	72.7	5.0	13.0	40.0	
ALW-alw	15	cm 24h	676	-0.060	0.156	0.144	3.8	66.0	1.6	26.0	23.0	
THW-thw	0.50	h 25h	677	-0.548	0.876	0.683	12.1	40.6	1.2	25.0	0.0	
TLW-tlw	0.50	h 25h	676	-0.556	0.997	0.828	16.1	33.4	2.7	12.0	0.0	

Station: Baltimore, MD
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.091	0.172	0.148	6.7	63.3	0.0	12.0	0.0	6.67
H06-h06	15	cm 24h	60	-0.093	0.171	0.144	6.7	63.3	0.0	12.0	0.0	6.67
H12-h12	15	cm 24h	60	-0.101	0.169	0.137	10.0	63.3	0.0	12.0	0.0	6.67
H18-h18	15	cm 24h	60	-0.105	0.170	0.135	10.0	63.3	0.0	12.0	0.0	6.67
H24-h24	15	cm 24h	60	-0.104	0.170	0.136	10.0	61.7	0.0	12.0	0.0	6.67
H30-h30	15	cm 24h	60	-0.104	0.170	0.136	10.0	63.3	0.0	12.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.101	0.164	0.130	8.5	62.7	0.0	12.0	0.0	5.08
H42-h42	15	cm 24h	58	-0.105	0.168	0.133	8.6	65.5	0.0	12.0	0.0	5.17
H48-h48	15	cm 24h	57	-0.108	0.171	0.134	7.0	64.9	0.0	12.0	0.0	5.26
H54-h54	15	cm 24h	56	-0.110	0.172	0.133	7.1	62.5	0.0	12.0	0.0	5.36
H60-h60	15	cm 24h	55	-0.110	0.173	0.134	10.9	67.3	0.0	12.0	0.0	7.27
H66-h66	15	cm 24h	54	-0.110	0.178	0.142	9.3	63.0	0.0	12.0	0.0	5.56
H72-h72	15	cm 24h	53	-0.107	0.177	0.142	7.5	62.3	0.0	12.0	0.0	5.66
H78-h78	15	cm 24h	52	-0.108	0.180	0.145	7.7	65.4	0.0	12.0	0.0	5.77
H84-h84	15	cm 24h	51	-0.108	0.182	0.148	7.8	58.8	0.0	12.0	0.0	5.88
H90-h90	15	cm 24h	50	-0.110	0.188	0.155	10.0	66.0	0.0	12.0	0.0	6.00
H96-h96	15	cm 24h	49	-0.110	0.188	0.154	8.2	61.2	0.0	12.0	0.0	6.12
AHW-ahw	15	cm 24h	27	-0.049	0.149	0.144	3.7	63.0	0.0			
ALW-alw	15	cm 24h	28	-0.143	0.185	0.120	10.7	46.4	0.0			
THW-thw	0.50	h 25h	27	-0.641	0.830	0.538	25.9	40.7	0.0			
TLW-tlw	0.50	h 25h	28	-0.504	0.738	0.550	25.0	46.4	0.0			

Station: Annapolis, MD
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.087	0.087	0.0	91.7	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.031	0.086	0.080	0.0	89.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.034	0.090	0.083	0.0	91.3	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.252	0.551	0.490	4.3	69.6	0.7	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.184	0.488	0.452	3.1	76.2	0.6	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.020								
h			8760	0.077								
H-h	15	cm 24h	8760	-0.057	0.155	0.145	3.5	66.5	1.5	31.0	16.0	2.72
AHW-ahw	15	cm 24h	666	-0.054	0.147	0.137	2.6	69.4	1.2	13.0	24.0	
ALW-alw	15	cm 24h	667	-0.065	0.156	0.141	4.3	66.7	1.0	26.0	0.0	
THW-thw	0.50	h 25h	666	-0.291	0.715	0.653	8.1	58.0	2.0	15.0	24.0	
TLW-tlw	0.50	h 25h	667	-0.154	0.637	0.619	3.7	63.4	2.8	0.0	12.0	

Station: Annapolis, MD
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.102	0.155	0.119	5.0	60.0	0.0	12.0	0.0	5.00
H06-h06	15	cm 24h	60	-0.104	0.155	0.116	5.0	61.7	0.0	12.0	0.0	5.00
H12-h12	15	cm 24h	60	-0.110	0.155	0.110	5.0	61.7	0.0	12.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.113	0.157	0.109	6.7	63.3	0.0	12.0	0.0	6.67
H24-h24	15	cm 24h	60	-0.114	0.157	0.109	5.0	63.3	0.0	6.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.115	0.158	0.110	6.7	63.3	0.0	12.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.113	0.156	0.108	6.8	61.0	0.0	12.0	0.0	6.78
H42-h42	15	cm 24h	58	-0.116	0.160	0.111	6.9	56.9	0.0	12.0	0.0	6.90
H48-h48	15	cm 24h	57	-0.121	0.165	0.112	8.8	54.4	0.0	12.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.123	0.165	0.111	7.1	58.9	0.0	6.0	0.0	7.14
H60-h60	15	cm 24h	55	-0.124	0.166	0.112	7.3	54.5	0.0	6.0	0.0	7.27
H66-h66	15	cm 24h	54	-0.123	0.170	0.118	7.4	53.7	0.0	6.0	0.0	7.41
H72-h72	15	cm 24h	53	-0.123	0.171	0.120	7.5	56.6	0.0	6.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.124	0.172	0.120	9.6	53.8	0.0	12.0	0.0	9.62
H84-h84	15	cm 24h	51	-0.126	0.175	0.122	9.8	52.9	0.0	12.0	0.0	9.80
H90-h90	15	cm 24h	50	-0.129	0.181	0.129	10.0	54.0	0.0	12.0	0.0	10.00
H96-h96	15	cm 24h	49	-0.130	0.181	0.128	10.2	55.1	0.0	12.0	0.0	10.20
AHW-ahw	15	cm 24h	27	-0.092	0.148	0.117	3.7	63.0	0.0			
ALW-alw	15	cm 24h	28	-0.112	0.150	0.102	0.0	60.7	0.0			
THW-thw	0.50	h 25h	27	-0.352	0.504	0.367	3.7	63.0	0.0			
TLW-tlw	0.50	h 25h	28	-0.093	0.408	0.404	3.6	75.0	0.0			

Station: Solomons Island, MD
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.075	0.075	0.0	97.1	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.018	0.071	0.069	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.021	0.071	0.068	0.0	96.7	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.577	0.760	0.494	8.8	42.3	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.411	0.641	0.492	6.5	58.9	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.001								
h			8760	0.107								
H-h	15	cm 24h	8760	-0.108	0.168	0.129	6.3	59.6	0.3	38.0	10.0	4.05
AHW-ahw	15	cm 24h	703	-0.129	0.178	0.123	7.4	52.9	0.1	38.0	0.0	
ALW-alw	15	cm 24h	703	-0.080	0.142	0.118	2.1	70.1	0.4	25.0	13.0	
THW-thw	0.50	h 25h	703	-0.622	0.889	0.635	14.1	40.3	0.3	25.0	0.0	
TLW-tlw	0.50	h 25h	703	-0.420	0.753	0.626	9.1	52.2	1.0	24.0	0.0	

Station: Solomons Island, MD
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.128	0.160	0.098	1.7	60.0	0.0	0.0	0.0	1.67
H06-h06	15	cm 24h	60	-0.133	0.164	0.097	3.3	60.0	0.0	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.139	0.167	0.094	3.3	56.7	0.0	0.0	0.0	3.33
H18-h18	15	cm 24h	60	-0.143	0.170	0.093	3.3	55.0	0.0	0.0	0.0	3.33
H24-h24	15	cm 24h	60	-0.143	0.169	0.092	3.3	56.7	0.0	0.0	0.0	3.33
H30-h30	15	cm 24h	60	-0.146	0.173	0.094	3.3	55.0	0.0	0.0	0.0	3.33
H36-h36	15	cm 24h	59	-0.148	0.176	0.096	3.4	59.3	0.0	0.0	0.0	3.39
H42-h42	15	cm 24h	58	-0.151	0.179	0.098	5.2	55.2	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.157	0.186	0.101	12.3	50.9	0.0	12.0	0.0	10.53
H54-h54	15	cm 24h	56	-0.159	0.187	0.098	12.5	48.2	0.0	12.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.160	0.187	0.098	9.1	49.1	0.0	12.0	0.0	5.45
H66-h66	15	cm 24h	54	-0.158	0.185	0.097	7.4	42.6	0.0	12.0	0.0	3.70
H72-h72	15	cm 24h	53	-0.160	0.188	0.099	9.4	49.1	0.0	12.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.161	0.188	0.098	9.6	50.0	0.0	12.0	0.0	5.77
H84-h84	15	cm 24h	51	-0.166	0.192	0.098	9.8	47.1	0.0	12.0	0.0	7.84
H90-h90	15	cm 24h	50	-0.169	0.194	0.097	8.0	46.0	0.0	0.0	0.0	8.00
H96-h96	15	cm 24h	49	-0.174	0.198	0.097	8.2	46.9	0.0	0.0	0.0	6.12
AHW-ahw	15	cm 24h	29	-0.155	0.176	0.086	0.0	48.3	0.0			
ALW-alw	15	cm 24h	29	-0.116	0.146	0.090	3.4	58.6	0.0			
THW-thw	0.50	h 25h	29	-0.490	0.620	0.387	10.3	44.8	0.0			
TLW-tlw	0.50	h 25h	29	-0.279	0.499	0.420	3.4	58.6	0.0			

Station: Washington, DC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   10.00 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.373	0.373	29.5	19.7	28.4	4.0	5.0	0.00
SCENARIO: HINDCAST (combined water level)												
H			8760	0.046								
h			8760	0.072								
H-h	15	cm 24h	8760	-0.026	0.329	0.328	25.1	26.0	19.8	7.0	14.0	30.57
AHW-ahw	15	cm 24h	131	-0.387	0.414	0.147	75.6	5.3	0.0	0.0	0.0	
ALW-alw	15	cm 24h	23	0.249	0.269	0.103	0.0	13.0	30.4	0.0	0.0	
THW-thw	0.50	h 25h	131	-1.939	1.958	0.270	94.7	0.8	0.0	0.0	0.0	
TLW-tlw	0.50	h 25h	23	-2.000	2.022	0.301	95.7	0.0	0.0	0.0	0.0	

Station: Washington, DC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.325	1.137	1.098	25.0	28.3	15.0	24.0	0.0	25.00
H06-h06	15	cm 24h	60	-0.330	1.137	1.098	28.3	31.7	15.0	24.0	0.0	21.67
H12-h12	15	cm 24h	60	-0.338	1.139	1.097	28.3	26.7	15.0	24.0	0.0	23.33
H18-h18	15	cm 24h	60	-0.337	1.140	1.098	28.3	28.3	13.3	24.0	0.0	23.33
H24-h24	15	cm 24h	60	-0.343	1.142	1.099	28.3	28.3	13.3	24.0	0.0	21.67
H30-h30	15	cm 24h	60	-0.339	1.140	1.098	33.3	28.3	15.0	24.0	0.0	23.33
H36-h36	15	cm 24h	59	-0.342	1.148	1.105	28.8	28.8	15.3	24.0	0.0	23.73
H42-h42	15	cm 24h	58	-0.351	1.161	1.116	32.8	25.9	15.5	24.0	0.0	24.14
H48-h48	15	cm 24h	57	-0.360	1.177	1.131	35.1	26.3	14.0	24.0	0.0	24.56
H54-h54	15	cm 24h	56	-0.371	1.190	1.141	35.7	25.0	14.3	24.0	0.0	25.00
H60-h60	15	cm 24h	55	-0.373	1.198	1.149	36.4	25.5	14.5	24.0	0.0	25.45
H66-h66	15	cm 24h	54	-0.379	1.210	1.160	38.9	25.9	16.7	24.0	0.0	25.93
H72-h72	15	cm 24h	53	-0.381	1.223	1.173	35.8	24.5	15.1	24.0	0.0	24.53
H78-h78	15	cm 24h	52	-0.393	1.238	1.186	36.5	23.1	15.4	24.0	0.0	23.08
H84-h84	15	cm 24h	51	-0.394	1.249	1.197	33.3	21.6	13.7	24.0	0.0	23.53
H90-h90	15	cm 24h	50	-0.409	1.268	1.213	36.0	30.0	12.0	24.0	0.0	22.00
H96-h96	15	cm 24h	49	-0.410	1.270	1.214	32.7	26.5	12.2	24.0	0.0	22.45
AHW-ahw	15	cm 24h	11	-0.760	1.315	1.126	81.8	0.0	0.0			
ALW-alw	15	cm 24h	3	0.241	0.253	0.096	0.0	0.0	33.3			
THW-thw	0.50	h 25h	11	-2.100	2.351	1.107	90.9	0.0	0.0			
TLW-tlw	0.50	h 25h	3	-2.733	2.736	0.153	100.0	0.0	0.0			

Station: Wachapreague, VA
Observed data time period from: / 9/ 1/2009 to / 1/ 3/2010 with gaps of 12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.265	0.265	15.1	32.2	14.5	4.0	5.0	0.00
AHW-ahw	15	cm 24h	705	-0.079	0.102	0.064	0.0	87.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.107	0.125	0.064	0.0	77.9	0.4	0.0	0.0	
THW-thw	0.50	h 25h	705	-1.417	1.503	0.502	51.5	0.4	0.0	174.0	0.0	
TLW-tlw	0.50	h 25h	705	-1.130	1.196	0.392	28.2	2.0	0.0	75.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			2621	0.005								
h			2621	0.247								
H-h	15	cm 24h	2621	-0.243	0.366	0.274	41.2	33.0	0.8	32.0	3.0	28.92
AHW-ahw	15	cm 24h	207	-0.247	0.272	0.114	31.9	18.8	0.0	111.0	0.0	
ALW-alw	15	cm 24h	211	-0.221	0.267	0.151	26.1	37.4	0.0	136.0	0.0	
THW-thw	0.50	h 25h	207	-1.246	1.355	0.533	44.0	4.8	0.0	100.0	0.0	
TLW-tlw	0.50	h 25h	211	-0.943	1.078	0.522	27.0	16.6	0.0	37.0	0.0	

Station: Wachapreague, VA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.148	0.298	0.261	36.7	33.3	1.7	0.0	0.0	20.00
H06-h06	15	cm 24h	60	-0.165	0.306	0.261	38.3	30.0	1.7	0.0	0.0	18.33
H12-h12	15	cm 24h	60	-0.169	0.309	0.261	38.3	28.3	1.7	0.0	0.0	20.00
H18-h18	15	cm 24h	60	-0.170	0.310	0.261	38.3	28.3	1.7	0.0	0.0	20.00
H24-h24	15	cm 24h	60	-0.178	0.317	0.264	38.3	31.7	1.7	0.0	0.0	21.67
H30-h30	15	cm 24h	60	-0.185	0.322	0.266	40.0	35.0	1.7	0.0	0.0	23.33
H36-h36	15	cm 24h	59	-0.187	0.324	0.267	40.7	33.9	1.7	0.0	0.0	23.73
H42-h42	15	cm 24h	58	-0.198	0.335	0.272	43.1	32.8	1.7	0.0	0.0	24.14
H48-h48	15	cm 24h	57	-0.196	0.326	0.263	45.6	35.1	1.8	12.0	0.0	26.32
H54-h54	15	cm 24h	56	-0.202	0.336	0.271	46.4	32.1	1.8	12.0	0.0	28.57
H60-h60	15	cm 24h	55	-0.198	0.328	0.264	43.6	30.9	0.0	12.0	0.0	27.27
H66-h66	15	cm 24h	54	-0.212	0.345	0.275	44.4	31.5	1.9	0.0	0.0	27.78
H72-h72	15	cm 24h	53	-0.215	0.341	0.267	43.4	30.2	0.0	12.0	0.0	28.30
H78-h78	15	cm 24h	52	-0.227	0.360	0.282	46.2	32.7	1.9	12.0	0.0	32.69
H84-h84	15	cm 24h	51	-0.234	0.361	0.277	47.1	35.3	0.0	12.0	0.0	33.33
H90-h90	15	cm 24h	50	-0.247	0.381	0.293	48.0	34.0	0.0	12.0	0.0	34.00
H96-h96	15	cm 24h	49	-0.245	0.373	0.283	44.9	30.6	0.0	12.0	0.0	34.69
AHW-ahw	15	cm 24h	29	-0.141	0.154	0.061	0.0	58.6	0.0			
ALW-alw	15	cm 24h	29	-0.130	0.148	0.073	0.0	62.1	0.0			
THW-thw	0.50	h 25h	29	-1.214	1.241	0.266	75.9	0.0	0.0			
TLW-tlw	0.50	h 25h	29	-0.990	1.047	0.348	48.3	6.9	0.0			

Station: Kiptopeke, VA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.063	0.063	0.0	99.2	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.016	0.058	0.056	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.002	0.053	0.053	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.223	0.507	0.455	3.4	74.3	0.1	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.106	0.400	0.386	1.4	84.0	0.4	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.013								
h			8760	0.088								
H-h	15	cm 24h	8760	-0.102	0.166	0.130	6.1	62.0	0.3	82.0	11.0	3.41
AHW-ahw	15	cm 24h	705	-0.077	0.148	0.126	3.5	68.5	0.4	86.0	12.0	
ALW-alw	15	cm 24h	705	-0.114	0.168	0.124	6.7	61.0	0.3	101.0	13.0	
THW-thw	0.50	h 25h	705	-0.199	0.535	0.497	4.1	73.0	0.4	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.007	0.515	0.515	1.8	73.9	2.3	12.0	12.0	

Station: Kiptopeke, VA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.107	0.125	0.064	0.0	75.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.109	0.126	0.064	0.0	76.7	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.111	0.128	0.065	0.0	73.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.116	0.134	0.067	0.0	70.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.120	0.138	0.068	1.7	70.0	0.0	0.0	0.0	1.67
H30-h30	15	cm 24h	60	-0.125	0.143	0.070	1.7	66.7	0.0	0.0	0.0	1.67
H36-h36	15	cm 24h	59	-0.126	0.145	0.072	3.4	67.8	0.0	0.0	0.0	3.39
H42-h42	15	cm 24h	58	-0.130	0.150	0.076	3.4	67.2	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.131	0.152	0.077	3.5	68.4	0.0	6.0	0.0	1.75
H54-h54	15	cm 24h	56	-0.133	0.152	0.075	1.8	66.1	0.0	0.0	0.0	1.79
H60-h60	15	cm 24h	55	-0.137	0.155	0.075	5.5	63.6	0.0	6.0	0.0	3.64
H66-h66	15	cm 24h	54	-0.140	0.160	0.077	5.6	57.4	0.0	6.0	0.0	3.70
H72-h72	15	cm 24h	53	-0.146	0.166	0.080	5.7	58.5	0.0	0.0	0.0	5.66
H78-h78	15	cm 24h	52	-0.153	0.171	0.079	1.9	48.1	0.0	0.0	0.0	1.92
H84-h84	15	cm 24h	51	-0.161	0.180	0.080	3.9	43.1	0.0	0.0	0.0	3.92
H90-h90	15	cm 24h	50	-0.169	0.189	0.084	8.0	44.0	0.0	6.0	0.0	6.00
H96-h96	15	cm 24h	49	-0.175	0.196	0.089	12.2	44.9	0.0	12.0	0.0	12.24
AHW-ahw	15	cm 24h	29	-0.065	0.082	0.052	0.0	96.6	0.0			
ALW-alw	15	cm 24h	29	-0.122	0.140	0.070	0.0	69.0	0.0			
THW-thw	0.50	h 25h	29	-0.124	0.339	0.321	0.0	93.1	0.0			
TLW-tlw	0.50	h 25h	29	0.062	0.287	0.285	0.0	93.1	0.0			

Station: Lewisetta, VA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.083	0.083	0.0	93.2	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.069	0.095	0.065	0.0	83.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.061	0.090	0.066	0.0	94.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.332	0.576	0.471	5.7	66.8	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.289	0.541	0.457	4.0	70.8	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.006								
h			8760	0.127								
H-h	15	cm 24h	8760	-0.133	0.180	0.122	8.1	53.6	0.1	45.0	6.0	4.16
AHW-ahw	15	cm 24h	704	-0.089	0.149	0.120	2.6	65.8	0.1	24.0	0.0	
ALW-alw	15	cm 24h	703	-0.168	0.204	0.116	12.9	44.2	0.1	75.0	0.0	
THW-thw	0.50	h 25h	704	-0.200	0.618	0.585	4.0	63.1	1.7	12.0	12.0	
TLW-tlw	0.50	h 25h	703	-0.137	0.589	0.574	3.8	67.9	1.8	12.0	0.0	

Station: Lewisetta, VA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.143	0.167	0.087	3.3	48.3	0.0	0.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.147	0.170	0.087	5.0	48.3	0.0	0.0	0.0	5.00
H12-h12	15	cm 24h	60	-0.153	0.176	0.087	5.0	45.0	0.0	0.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.158	0.180	0.087	5.0	46.7	0.0	0.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.161	0.182	0.087	6.7	45.0	0.0	0.0	0.0	6.67
H30-h30	15	cm 24h	60	-0.164	0.186	0.088	6.7	40.0	0.0	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.168	0.190	0.090	8.5	37.3	0.0	0.0	0.0	6.78
H42-h42	15	cm 24h	58	-0.170	0.193	0.092	10.3	36.2	0.0	12.0	0.0	8.62
H48-h48	15	cm 24h	57	-0.176	0.199	0.093	10.5	33.3	0.0	12.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.180	0.202	0.094	12.5	30.4	0.0	18.0	0.0	10.71
H60-h60	15	cm 24h	55	-0.180	0.201	0.092	9.1	36.4	0.0	18.0	0.0	7.27
H66-h66	15	cm 24h	54	-0.179	0.201	0.092	11.1	35.2	0.0	18.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.181	0.203	0.092	9.4	35.8	0.0	18.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.184	0.205	0.092	13.5	36.5	0.0	18.0	0.0	9.62
H84-h84	15	cm 24h	51	-0.187	0.206	0.089	9.8	29.4	0.0	18.0	0.0	7.84
H90-h90	15	cm 24h	50	-0.194	0.213	0.088	14.0	30.0	0.0	12.0	0.0	14.00
H96-h96	15	cm 24h	49	-0.197	0.214	0.085	12.2	26.5	0.0	6.0	0.0	10.20
AHW-ahw	15	cm 24h	29	-0.107	0.130	0.076	0.0	69.0	0.0			
ALW-alw	15	cm 24h	29	-0.192	0.207	0.081	13.8	31.0	0.0			
THW-thw	0.50	h 25h	29	-0.114	0.557	0.555	3.4	55.2	3.4			
TLW-tlw	0.50	h 25h	29	0.035	0.389	0.395	0.0	89.7	3.4			

Station: Hampton Road, VA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.071	0.071	0.0	97.6	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.070	0.086	0.050	0.0	93.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.048	0.067	0.047	0.0	99.1	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.197	0.457	0.412	2.8	79.1	0.1	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.155	0.434	0.406	2.1	81.1	0.1	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.011								
h			8760	0.128								
H-h	15	cm 24h	8760	-0.139	0.200	0.150	13.4	49.9	0.2	93.0	4.0	8.34
AHW-ahw	15	cm 24h	704	-0.039	0.138	0.132	2.1	73.6	0.7	73.0	25.0	
ALW-alw	15	cm 24h	705	-0.215	0.254	0.135	23.7	29.5	0.0	222.0	0.0	
THW-thw	0.50	h 25h	704	-0.091	0.520	0.512	3.8	75.1	1.3	12.0	12.0	
TLW-tlw	0.50	h 25h	705	0.026	0.479	0.479	1.1	77.0	1.6	12.0	0.0	

Station: Hampton Road, VA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.154	0.184	0.101	5.0	43.3	0.0	0.0	0.0	5.00
H06-h06	15	cm 24h	60	-0.158	0.186	0.099	5.0	40.0	0.0	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.157	0.184	0.096	3.3	43.3	0.0	0.0	0.0	3.33
H18-h18	15	cm 24h	60	-0.164	0.192	0.100	6.7	40.0	0.0	0.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.168	0.194	0.099	8.3	40.0	0.0	0.0	0.0	6.67
H30-h30	15	cm 24h	60	-0.174	0.201	0.101	8.3	38.3	0.0	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.177	0.206	0.105	13.6	40.7	0.0	12.0	0.0	10.17
H42-h42	15	cm 24h	58	-0.179	0.207	0.106	13.8	37.9	0.0	12.0	0.0	12.07
H48-h48	15	cm 24h	57	-0.180	0.210	0.109	12.3	38.6	0.0	12.0	0.0	10.53
H54-h54	15	cm 24h	56	-0.182	0.210	0.106	14.3	42.9	0.0	12.0	0.0	12.50
H60-h60	15	cm 24h	55	-0.187	0.216	0.109	16.4	41.8	0.0	12.0	0.0	12.73
H66-h66	15	cm 24h	54	-0.189	0.219	0.112	22.2	42.6	0.0	12.0	0.0	18.52
H72-h72	15	cm 24h	53	-0.195	0.227	0.117	22.6	35.8	0.0	12.0	0.0	18.87
H78-h78	15	cm 24h	52	-0.201	0.230	0.114	26.9	36.5	0.0	12.0	0.0	23.08
H84-h84	15	cm 24h	51	-0.212	0.243	0.120	23.5	29.4	0.0	12.0	0.0	19.61
H90-h90	15	cm 24h	50	-0.218	0.249	0.121	30.0	26.0	0.0	12.0	0.0	28.00
H96-h96	15	cm 24h	49	-0.229	0.260	0.124	26.5	24.5	0.0	12.0	0.0	26.53
AHW-ahw	15	cm 24h	29	-0.041	0.072	0.060	0.0	93.1	0.0			
ALW-alw	15	cm 24h	29	-0.233	0.241	0.062	20.7	0.0	0.0			
THW-thw	0.50	h 25h	29	-0.007	0.324	0.329	0.0	82.8	0.0			
TLW-tlw	0.50	h 25h	29	0.045	0.332	0.334	0.0	86.2	0.0			

Station: Chesapeake Bay Bridge Tunnel, VA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.061	0.061	0.0	99.6	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	0.031	0.064	0.056	0.0	99.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.028	0.060	0.054	0.0	99.9	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.096	0.426	0.415	1.7	81.8	0.6	0.0	0.0	
TLW-tlw	0.50	h 25h	705	0.040	0.324	0.322	0.6	89.5	1.1	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.016								
h			8760	0.120								
H-h	15	cm 24h	8760	-0.136	0.197	0.142	10.9	51.4	0.2	99.0	5.0	5.92
AHW-ahw	15	cm 24h	704	-0.089	0.162	0.135	4.7	64.8	0.4	85.0	12.0	
ALW-alw	15	cm 24h	705	-0.182	0.227	0.136	16.6	37.6	0.0	150.0	0.0	
THW-thw	0.50	h 25h	704	-0.047	0.460	0.458	3.0	80.1	1.1	12.0	12.0	
TLW-tlw	0.50	h 25h	705	0.197	0.552	0.516	0.9	69.9	4.0	0.0	12.0	

Station: Chesapeake Bay Bridge Tunnel, VA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.147	0.165	0.076	3.3	46.7	0.0	0.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.151	0.167	0.072	3.3	48.3	0.0	0.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.151	0.167	0.071	3.3	55.0	0.0	0.0	0.0	3.33
H18-h18	15	cm 24h	60	-0.158	0.174	0.074	1.7	43.3	0.0	0.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.162	0.178	0.075	5.0	48.3	0.0	0.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.169	0.185	0.076	6.7	43.3	0.0	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.173	0.190	0.079	8.5	44.1	0.0	6.0	0.0	8.47
H42-h42	15	cm 24h	58	-0.177	0.194	0.081	8.6	44.8	0.0	6.0	0.0	8.62
H48-h48	15	cm 24h	57	-0.179	0.197	0.084	8.8	36.8	0.0	6.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.181	0.198	0.081	12.5	33.9	0.0	12.0	0.0	10.71
H60-h60	15	cm 24h	55	-0.186	0.205	0.086	10.9	40.0	0.0	12.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.191	0.211	0.089	11.1	31.5	0.0	12.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.198	0.219	0.093	13.2	22.6	0.0	12.0	0.0	11.32
H78-h78	15	cm 24h	52	-0.205	0.224	0.091	15.4	28.8	0.0	0.0	0.0	13.46
H84-h84	15	cm 24h	51	-0.215	0.235	0.095	15.7	23.5	0.0	0.0	0.0	13.73
H90-h90	15	cm 24h	50	-0.223	0.243	0.099	24.0	20.0	0.0	12.0	0.0	22.00
H96-h96	15	cm 24h	49	-0.231	0.254	0.107	20.4	20.4	0.0	12.0	0.0	20.41
AHW-ahw	15	cm 24h	29	-0.131	0.255	0.222	3.4	82.8	0.0			
ALW-alw	15	cm 24h	29	-0.200	0.209	0.060	10.3	27.6	0.0			
THW-thw	0.50	h 25h	29	-0.048	0.370	0.373	3.4	89.7	0.0			
TLW-tlw	0.50	h 25h	29	0.224	0.429	0.372	0.0	75.9	0.0			

Station: Duck, NC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.061	0.061	0.0	99.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.018	0.061	0.058	0.0	99.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.014	0.058	0.056	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.054	0.324	0.320	1.1	89.5	0.4	0.0	0.0	
TLW-tlw	0.50	h 25h	705	0.052	0.355	0.352	0.3	87.4	1.6	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.025								
h			8760	0.110								
H-h	15	cm 24h	8760	-0.135	0.200	0.149	12.7	51.5	0.3	86.0	17.0	7.88
AHW-ahw	15	cm 24h	704	-0.145	0.204	0.144	13.8	50.3	0.1	148.0	0.0	
ALW-alw	15	cm 24h	705	-0.131	0.200	0.151	11.8	54.0	0.6	112.0	12.0	
THW-thw	0.50	h 25h	704	-0.134	0.567	0.551	3.6	70.9	1.7	13.0	0.0	
TLW-tlw	0.50	h 25h	705	0.170	0.581	0.556	1.1	67.1	4.4	0.0	12.0	

Station: Duck, NC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.143	0.168	0.090	6.7	55.0	0.0	12.0	0.0	6.67
H06-h06	15	cm 24h	60	-0.145	0.168	0.086	5.0	53.3	0.0	12.0	0.0	5.00
H12-h12	15	cm 24h	60	-0.145	0.167	0.083	5.0	46.7	0.0	12.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.149	0.170	0.083	6.7	43.3	0.0	12.0	0.0	6.67
H24-h24	15	cm 24h	60	-0.152	0.173	0.082	5.0	46.7	0.0	6.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.159	0.180	0.084	6.7	45.0	0.0	0.0	0.0	6.67
H36-h36	15	cm 24h	59	-0.164	0.184	0.084	8.5	37.3	0.0	12.0	0.0	8.47
H42-h42	15	cm 24h	58	-0.167	0.188	0.086	8.6	39.7	0.0	12.0	0.0	8.62
H48-h48	15	cm 24h	57	-0.170	0.192	0.091	8.8	38.6	0.0	12.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.169	0.192	0.092	8.9	39.3	0.0	12.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.173	0.198	0.096	9.1	36.4	0.0	12.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.183	0.207	0.097	9.3	29.6	0.0	12.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.195	0.220	0.103	13.2	26.4	0.0	12.0	0.0	13.21
H78-h78	15	cm 24h	52	-0.205	0.230	0.106	15.4	25.0	0.0	6.0	0.0	13.46
H84-h84	15	cm 24h	51	-0.219	0.246	0.113	27.5	23.5	0.0	12.0	0.0	25.49
H90-h90	15	cm 24h	50	-0.229	0.257	0.117	30.0	18.0	0.0	12.0	0.0	30.00
H96-h96	15	cm 24h	49	-0.235	0.265	0.124	32.7	22.4	0.0	12.0	0.0	32.65
AHW-ahw	15	cm 24h	29	-0.159	0.178	0.081	6.9	41.4	0.0			
ALW-alw	15	cm 24h	29	-0.137	0.159	0.082	3.4	62.1	0.0			
THW-thw	0.50	h 25h	29	-0.100	0.389	0.383	0.0	79.3	0.0			
TLW-tlw	0.50	h 25h	29	0.245	0.410	0.335	0.0	72.4	0.0			

Station: Beaufort, NC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.153	0.153	1.0	63.2	2.1	2.0	2.0	0.00
AHW-ahw	15	cm 24h	705	0.073	0.104	0.074	0.0	84.8	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.071	0.099	0.069	0.0	85.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.820	0.909	0.392	12.6	18.3	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.657	0.810	0.475	9.5	34.3	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.031								
h			8760	0.064								
H-h	15	cm 24h	8760	-0.095	0.229	0.208	16.6	50.6	2.2	58.0	8.0	16.04
AHW-ahw	15	cm 24h	703	-0.020	0.165	0.163	4.0	65.9	3.0	62.0	50.0	
ALW-alw	15	cm 24h	704	-0.165	0.240	0.175	20.9	44.3	0.1	224.0	0.0	
THW-thw	0.50	h 25h	703	-0.853	0.988	0.498	17.9	18.6	0.1	37.0	0.0	
TLW-tlw	0.50	h 25h	704	-0.581	0.806	0.559	9.9	40.6	0.6	26.0	0.0	

Station: Beaufort, NC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.058	0.181	0.173	5.0	53.3	1.7	0.0	0.0	5.00
H06-h06	15	cm 24h	60	-0.060	0.186	0.177	10.0	51.7	1.7	0.0	0.0	6.67
H12-h12	15	cm 24h	60	-0.069	0.194	0.183	13.3	50.0	1.7	0.0	0.0	10.00
H18-h18	15	cm 24h	60	-0.073	0.192	0.179	13.3	53.3	0.0	0.0	0.0	6.67
H24-h24	15	cm 24h	60	-0.074	0.197	0.184	15.0	51.7	1.7	0.0	0.0	10.00
H30-h30	15	cm 24h	60	-0.079	0.196	0.181	15.0	53.3	1.7	0.0	0.0	10.00
H36-h36	15	cm 24h	59	-0.077	0.193	0.178	15.3	54.2	0.0	0.0	0.0	8.47
H42-h42	15	cm 24h	58	-0.088	0.197	0.178	17.2	55.2	0.0	0.0	0.0	8.62
H48-h48	15	cm 24h	57	-0.092	0.197	0.175	15.8	56.1	0.0	0.0	0.0	8.77
H54-h54	15	cm 24h	56	-0.094	0.199	0.177	16.1	53.6	0.0	0.0	0.0	8.93
H60-h60	15	cm 24h	55	-0.091	0.195	0.174	12.7	54.5	0.0	0.0	0.0	9.09
H66-h66	15	cm 24h	54	-0.101	0.201	0.175	16.7	51.9	0.0	0.0	0.0	9.26
H72-h72	15	cm 24h	53	-0.107	0.201	0.172	17.0	56.6	0.0	0.0	0.0	9.43
H78-h78	15	cm 24h	52	-0.115	0.209	0.177	17.3	55.8	0.0	0.0	0.0	11.54
H84-h84	15	cm 24h	51	-0.121	0.212	0.176	15.7	52.9	0.0	0.0	0.0	11.76
H90-h90	15	cm 24h	50	-0.130	0.221	0.180	14.0	54.0	0.0	0.0	0.0	12.00
H96-h96	15	cm 24h	49	-0.132	0.221	0.179	18.4	51.0	0.0	0.0	0.0	12.24
AHW-ahw	15	cm 24h	28	0.065	0.104	0.083	0.0	89.3	0.0			
ALW-alw	15	cm 24h	29	-0.167	0.180	0.070	6.9	48.3	0.0			
THW-thw	0.50	h 25h	28	-0.907	1.012	0.458	50.0	10.7	0.0			
TLW-tlw	0.50	h 25h	29	-0.690	0.756	0.314	10.3	17.2	0.0			

Station: Wilmington, NC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   12.92 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.524	0.524	35.9	15.3	33.4	5.0	5.0	0.00
AHW-ahw	15	cm 24h	410	-0.015	0.081	0.080	0.0	92.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	145	0.129	0.146	0.069	0.0	54.5	0.0	0.0	0.0	
THW-thw	0.50	h 25h	410	-1.973	1.980	0.162	98.3	0.0	0.0	237.0	0.0	
TLW-tlw	0.50	h 25h	145	-2.000	2.000	0.000	100.0	0.0	0.0	50.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.026								
h			8760	0.042								
H-h	15	cm 24h	8760	-0.068	0.541	0.537	38.4	15.9	28.7	9.0	6.0	38.72
AHW-ahw	15	cm 24h	457	-0.087	0.185	0.164	9.4	61.1	0.9	37.0	0.0	
ALW-alw	15	cm 24h	298	0.090	0.195	0.174	2.0	48.7	10.4	0.0	13.0	
THW-thw	0.50	h 25h	457	-1.934	1.954	0.273	96.1	0.0	0.0	236.0	0.0	
TLW-tlw	0.50	h 25h	298	-1.933	1.949	0.251	95.0	0.0	0.0	150.0	0.0	

Station: Wilmington, NC
Observed data time period from: /11/ 1/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	32	-0.015	0.626	0.636	43.8	12.5	37.5	0.0	0.0	40.62
H06-h06	15	cm 24h	32	0.013	0.622	0.632	40.6	12.5	40.6	0.0	0.0	43.75
H12-h12	15	cm 24h	33	-0.021	0.638	0.648	42.4	12.1	42.4	0.0	0.0	48.48
H18-h18	15	cm 24h	34	0.009	0.651	0.661	41.2	8.8	44.1	0.0	0.0	50.00
H24-h24	15	cm 24h	35	-0.005	0.657	0.666	42.9	8.6	42.9	0.0	0.0	51.43
H30-h30	15	cm 24h	36	0.015	0.654	0.664	41.7	5.6	44.4	0.0	0.0	52.78
H36-h36	15	cm 24h	36	0.012	0.651	0.660	41.7	5.6	44.4	0.0	0.0	52.78
H42-h42	15	cm 24h	36	0.000	0.653	0.662	41.7	5.6	41.7	0.0	0.0	50.00
H48-h48	15	cm 24h	36	-0.008	0.649	0.658	41.7	2.8	41.7	0.0	0.0	50.00
H54-h54	15	cm 24h	36	-0.005	0.660	0.669	41.7	8.3	41.7	0.0	0.0	50.00
H60-h60	15	cm 24h	36	-0.003	0.646	0.656	41.7	8.3	41.7	0.0	0.0	50.00
H66-h66	15	cm 24h	36	-0.005	0.656	0.666	41.7	8.3	44.4	0.0	0.0	52.78
H72-h72	15	cm 24h	36	-0.014	0.650	0.659	41.7	8.3	44.4	0.0	0.0	52.78
H78-h78	15	cm 24h	36	-0.020	0.656	0.665	41.7	8.3	44.4	0.0	0.0	52.78
H84-h84	15	cm 24h	36	-0.028	0.657	0.666	41.7	8.3	44.4	0.0	0.0	52.78
H90-h90	15	cm 24h	36	-0.035	0.659	0.668	41.7	11.1	44.4	0.0	0.0	52.78
H96-h96	15	cm 24h	36	-0.044	0.657	0.665	41.7	8.3	41.7	0.0	0.0	50.00
AHW-ahw	15	cm 24h	15	0.075	0.112	0.086	0.0	73.3	0.0			
ALW-alw	15	cm 24h	10	0.106	0.165	0.134	0.0	50.0	0.0			
THW-thw	0.50	h 25h	15	-2.353	2.368	0.272	100.0	0.0	0.0			
TLW-tlw	0.50	h 25h	10	-2.710	2.716	0.191	100.0	0.0	0.0			

Station: Wrightsville Beach, NC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.082	0.082	0.0	93.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.011	0.077	0.077	0.0	94.5	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.021	0.081	0.079	0.0	93.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.146	0.418	0.392	2.0	82.6	0.4	0.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.078	0.379	0.371	1.8	85.7	0.3	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8576	-0.027								
h			8576	0.034								
H-h	15	cm 24h	8576	-0.061	0.194	0.184	9.8	56.9	2.3	66.0	34.0	10.39
AHW-ahw	15	cm 24h	690	-0.062	0.186	0.175	8.4	57.5	1.9	110.0	38.0	
ALW-alw	15	cm 24h	690	-0.047	0.183	0.177	7.2	59.0	2.8	50.0	50.0	
THW-thw	0.50	h 25h	690	0.038	0.528	0.527	1.7	73.5	3.6	12.0	12.0	
TLW-tlw	0.50	h 25h	690	0.143	0.545	0.526	0.7	71.6	3.8	12.0	12.0	

Station: Wrightsville Beach, NC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   0.00 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.041	0.103	0.095	0.0	83.3	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.055	0.110	0.096	0.0	78.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.063	0.114	0.096	0.0	78.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.065	0.113	0.094	0.0	80.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.060	0.113	0.096	1.7	78.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.063	0.110	0.091	1.7	80.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.066	0.111	0.091	1.7	81.4	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.075	0.116	0.090	0.0	77.6	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.082	0.120	0.088	0.0	75.4	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.080	0.120	0.090	0.0	80.4	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.077	0.119	0.092	0.0	83.6	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.083	0.119	0.086	0.0	77.8	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.093	0.123	0.081	0.0	77.4	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.097	0.125	0.080	0.0	67.3	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.102	0.131	0.082	0.0	68.6	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.108	0.136	0.084	0.0	66.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.118	0.146	0.086	0.0	67.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	29	-0.019	0.064	0.063	0.0	96.6	0.0			
ALW-alw	15	cm 24h	29	-0.022	0.098	0.097	0.0	89.7	0.0			
THW-thw	0.50	h 25h	29	-0.014	0.369	0.375	0.0	75.9	0.0			
TLW-tlw	0.50	h 25h	29	0.079	0.323	0.319	0.0	82.8	0.0			

Station: Springmaid Pier, SC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.095	0.095	0.0	87.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.032	0.085	0.079	0.0	89.6	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.058	0.102	0.084	0.0	87.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	0.010	0.347	0.347	1.0	87.9	1.1	0.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.163	0.434	0.403	3.3	81.1	0.4	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.030								
h			8760	0.033								
H-h	15	cm 24h	8760	-0.063	0.198	0.187	10.0	56.6	2.2	66.0	22.0	10.55
AHW-ahw	15	cm 24h	705	-0.063	0.188	0.177	8.7	61.1	1.7	86.0	25.0	
ALW-alw	15	cm 24h	705	-0.027	0.186	0.184	6.7	59.0	2.7	50.0	37.0	
THW-thw	0.50	h 25h	705	0.146	0.560	0.541	1.3	70.4	3.7	0.0	12.0	
TLW-tlw	0.50	h 25h	705	-0.092	0.521	0.513	4.1	73.8	1.1	12.0	12.0	

Station: Springmaid Pier, SC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	12	-0.063	0.121	0.107	0.0	75.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	12	-0.102	0.150	0.115	0.0	66.7	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	12	-0.110	0.150	0.107	0.0	58.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	12	-0.092	0.133	0.100	0.0	66.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	13	-0.074	0.114	0.091	0.0	69.2	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	14	-0.085	0.117	0.083	0.0	78.6	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	14	-0.099	0.129	0.085	0.0	57.1	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	14	-0.104	0.132	0.084	0.0	71.4	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	14	-0.103	0.126	0.074	0.0	64.3	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	14	-0.101	0.121	0.070	0.0	71.4	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	14	-0.105	0.135	0.088	0.0	64.3	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	14	-0.116	0.140	0.081	0.0	57.1	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	14	-0.123	0.147	0.084	0.0	57.1	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	14	-0.134	0.149	0.069	0.0	42.9	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	14	-0.156	0.171	0.073	0.0	50.0	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	14	-0.170	0.182	0.067	7.1	35.7	0.0	0.0	0.0	7.14
H96-h96	15	cm 24h	14	-0.166	0.181	0.076	0.0	50.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	4	-0.062	0.100	0.090	0.0	75.0	0.0			
ALW-alw	15	cm 24h	5	-0.032	0.119	0.128	0.0	80.0	0.0			
THW-thw	0.50	h 25h	4	-0.125	0.296	0.310	0.0	100.0	0.0			
TLW-tlw	0.50	h 25h	5	-0.220	0.249	0.130	0.0	100.0	0.0			

Station: Charleston, SC
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.212	0.212	9.3	45.0	7.0	3.0	4.0	0.00
AHW-ahw	15	cm 24h	705	-0.070	0.104	0.077	0.0	84.8	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.148	0.168	0.080	0.0	48.7	2.8	0.0	50.0	
THW-thw	0.50	h 25h	705	-0.621	0.788	0.485	9.6	37.9	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.689	0.830	0.463	10.4	31.1	0.0	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.032								
h			8760	0.054								
H-h	15	cm 24h	8760	-0.086	0.261	0.246	19.3	45.8	5.0	58.0	7.0	20.03
AHW-ahw	15	cm 24h	705	-0.129	0.213	0.170	15.0	52.1	0.6	198.0	13.0	
ALW-alw	15	cm 24h	705	0.048	0.188	0.182	3.7	56.3	6.8	49.0	62.0	
THW-thw	0.50	h 25h	705	-0.445	0.711	0.554	8.5	52.5	0.1	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.577	0.798	0.551	11.2	41.0	0.3	24.0	0.0	

Station: Charleston, SC
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.073	0.213	0.202	10.0	45.0	1.7	0.0	0.0	10.00
H06-h06	15	cm 24h	60	-0.077	0.212	0.199	13.3	45.0	3.3	0.0	0.0	10.00
H12-h12	15	cm 24h	60	-0.085	0.217	0.201	13.3	46.7	1.7	0.0	0.0	10.00
H18-h18	15	cm 24h	60	-0.082	0.212	0.197	13.3	43.3	1.7	0.0	0.0	10.00
H24-h24	15	cm 24h	60	-0.087	0.223	0.207	13.3	46.7	0.0	0.0	0.0	11.67
H30-h30	15	cm 24h	60	-0.093	0.225	0.207	16.7	41.7	1.7	0.0	0.0	13.33
H36-h36	15	cm 24h	59	-0.092	0.223	0.204	15.3	47.5	0.0	0.0	0.0	13.56
H42-h42	15	cm 24h	58	-0.097	0.226	0.206	15.5	41.4	0.0	0.0	0.0	13.79
H48-h48	15	cm 24h	57	-0.096	0.226	0.206	17.5	45.6	0.0	0.0	0.0	14.04
H54-h54	15	cm 24h	56	-0.099	0.226	0.206	16.1	44.6	0.0	0.0	0.0	14.29
H60-h60	15	cm 24h	55	-0.101	0.230	0.209	18.2	47.3	0.0	0.0	0.0	14.55
H66-h66	15	cm 24h	54	-0.111	0.233	0.207	18.5	51.9	0.0	0.0	0.0	14.81
H72-h72	15	cm 24h	53	-0.113	0.237	0.211	22.6	50.9	0.0	0.0	0.0	16.98
H78-h78	15	cm 24h	52	-0.119	0.236	0.206	23.1	55.8	0.0	0.0	0.0	17.31
H84-h84	15	cm 24h	51	-0.120	0.245	0.216	21.6	51.0	2.0	0.0	0.0	17.65
H90-h90	15	cm 24h	50	-0.126	0.245	0.212	20.0	48.0	4.0	0.0	0.0	16.00
H96-h96	15	cm 24h	49	-0.128	0.249	0.216	20.4	53.1	2.0	0.0	0.0	18.37
AHW-ahw	15	cm 24h	29	-0.082	0.114	0.080	0.0	79.3	0.0			
ALW-alw	15	cm 24h	29	0.039	0.108	0.102	0.0	72.4	0.0			
THW-thw	0.50	h 25h	29	-0.479	0.554	0.282	3.4	55.2	0.0			
TLW-tlw	0.50	h 25h	29	-0.586	0.637	0.253	3.4	34.5	0.0			

Station: Fort Pulaski, GA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.278	0.278	17.5	34.5	15.3	4.0	5.0	0.00
AHW-ahw	15	cm 24h	705	-0.099	0.137	0.095	3.5	72.8	0.0	74.0	0.0	
ALW-alw	15	cm 24h	705	0.305	0.332	0.130	0.0	10.6	49.4	0.0	271.0	
THW-thw	0.50	h 25h	705	-0.521	0.722	0.500	7.8	47.9	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.566	0.752	0.496	8.1	43.4	0.0	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8692	-0.002								
h			8692	0.064								
H-h	15	cm 24h	8692	-0.066	0.290	0.283	20.3	40.2	9.5	21.0	6.0	24.23
AHW-ahw	15	cm 24h	695	-0.133	0.219	0.174	16.0	48.8	0.7	198.0	13.0	
ALW-alw	15	cm 24h	687	0.175	0.276	0.214	1.2	40.5	27.7	13.0	200.0	
THW-thw	0.50	h 25h	695	-0.321	0.634	0.547	5.0	61.2	0.4	24.0	0.0	
TLW-tlw	0.50	h 25h	687	-0.370	0.693	0.587	7.6	55.9	0.7	12.0	0.0	

Station: Fort Pulaski, GA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	40	-0.065	0.205	0.197	10.0	50.0	2.5	0.0	0.0	12.50
H06-h06	15	cm 24h	39	-0.067	0.199	0.190	10.3	51.3	0.0	12.0	0.0	10.26
H12-h12	15	cm 24h	39	-0.066	0.204	0.195	10.3	61.5	0.0	12.0	0.0	10.26
H18-h18	15	cm 24h	41	-0.064	0.216	0.209	12.2	53.7	0.0	0.0	0.0	12.20
H24-h24	15	cm 24h	39	-0.087	0.238	0.224	15.4	51.3	0.0	12.0	0.0	15.38
H30-h30	15	cm 24h	40	-0.090	0.235	0.219	15.0	50.0	0.0	12.0	0.0	15.00
H36-h36	15	cm 24h	40	-0.075	0.233	0.224	15.0	47.5	0.0	0.0	0.0	15.00
H42-h42	15	cm 24h	39	-0.086	0.236	0.223	15.4	43.6	0.0	0.0	0.0	15.38
H48-h48	15	cm 24h	37	-0.097	0.240	0.222	18.9	45.9	0.0	24.0	0.0	18.92
H54-h54	15	cm 24h	36	-0.100	0.232	0.213	16.7	41.7	0.0	0.0	0.0	16.67
H60-h60	15	cm 24h	36	-0.096	0.246	0.229	16.7	55.6	0.0	0.0	0.0	16.67
H66-h66	15	cm 24h	34	-0.111	0.238	0.214	17.6	55.9	0.0	0.0	0.0	17.65
H72-h72	15	cm 24h	34	-0.100	0.247	0.229	17.6	58.8	0.0	0.0	0.0	17.65
H78-h78	15	cm 24h	32	-0.115	0.237	0.211	15.6	59.4	0.0	0.0	0.0	15.62
H84-h84	15	cm 24h	32	-0.114	0.250	0.226	15.6	59.4	0.0	0.0	0.0	15.62
H90-h90	15	cm 24h	31	-0.118	0.239	0.210	19.4	58.1	0.0	12.0	0.0	19.35
H96-h96	15	cm 24h	30	-0.122	0.261	0.235	23.3	56.7	0.0	24.0	0.0	23.33

Station: Fernandina Beach, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.269	0.269	16.5	31.9	14.4	4.0	5.0	0.00
AHW-ahw	15	cm 24h	705	-0.058	0.110	0.093	0.6	82.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.098	0.135	0.092	0.0	68.7	0.1	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.867	0.942	0.368	14.9	14.3	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.711	0.843	0.454	11.3	28.9	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.031								
h			8760	0.025								
H-h	15	cm 24h	8760	-0.056	0.281	0.276	19.1	41.3	9.1	46.0	7.0	22.13
AHW-ahw	15	cm 24h	705	-0.097	0.192	0.166	10.6	57.0	0.3	136.0	0.0	
ALW-alw	15	cm 24h	705	0.029	0.189	0.187	5.0	54.5	6.0	62.0	61.0	
THW-thw	0.50	h 25h	705	-0.742	0.894	0.499	13.5	28.2	0.0	36.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.487	0.725	0.538	8.2	49.1	0.1	24.0	0.0	

Station: Fernandina Beach, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.051	0.248	0.245	16.7	41.7	3.3	0.0	0.0	10.00
H06-h06	15	cm 24h	60	-0.053	0.250	0.246	20.0	41.7	3.3	0.0	0.0	10.00
H12-h12	15	cm 24h	60	-0.051	0.251	0.248	20.0	43.3	6.7	0.0	0.0	13.33
H18-h18	15	cm 24h	60	-0.045	0.245	0.243	18.3	43.3	5.0	0.0	0.0	11.67
H24-h24	15	cm 24h	60	-0.055	0.256	0.252	20.0	43.3	5.0	0.0	0.0	11.67
H30-h30	15	cm 24h	60	-0.057	0.254	0.249	21.7	45.0	6.7	0.0	0.0	13.33
H36-h36	15	cm 24h	59	-0.050	0.253	0.250	22.0	45.8	6.8	0.0	0.0	13.56
H42-h42	15	cm 24h	58	-0.056	0.253	0.249	22.4	46.6	6.9	0.0	0.0	13.79
H48-h48	15	cm 24h	57	-0.055	0.254	0.250	21.1	49.1	7.0	0.0	0.0	14.04
H54-h54	15	cm 24h	56	-0.057	0.254	0.249	21.4	48.2	7.1	0.0	0.0	14.29
H60-h60	15	cm 24h	55	-0.057	0.257	0.253	21.8	49.1	5.5	0.0	0.0	12.73
H66-h66	15	cm 24h	54	-0.063	0.259	0.253	20.4	48.1	5.6	0.0	0.0	11.11
H72-h72	15	cm 24h	53	-0.061	0.259	0.254	20.8	47.2	1.9	0.0	0.0	7.55
H78-h78	15	cm 24h	52	-0.070	0.264	0.257	23.1	50.0	3.8	0.0	0.0	11.54
H84-h84	15	cm 24h	51	-0.077	0.274	0.265	23.5	51.0	3.9	0.0	0.0	11.76
H90-h90	15	cm 24h	50	-0.079	0.274	0.265	22.0	46.0	4.0	0.0	0.0	12.00
H96-h96	15	cm 24h	49	-0.077	0.274	0.265	22.4	44.9	4.1	0.0	0.0	12.24
AHW-ahw	15	cm 24h	29	-0.020	0.095	0.095	0.0	89.7	0.0			
ALW-alw	15	cm 24h	29	0.018	0.128	0.129	0.0	69.0	0.0			
THW-thw	0.50	h 25h	29	-0.752	0.799	0.275	13.8	13.8	0.0			
TLW-tlw	0.50	h 25h	29	-0.435	0.498	0.248	0.0	62.1	0.0			

Station: Naples, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   7.75 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.100	0.100	0.0	86.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	673	0.011	0.086	0.086	0.0	91.7	0.0	0.0	0.0	
ALW-alw	15	cm 24h	673	-0.009	0.073	0.073	0.0	97.5	0.0	0.0	0.0	
THW-thw	0.50	h 25h	673	-0.682	0.880	0.556	14.7	36.4	0.0	26.0	0.0	
TLW-tlw	0.50	h 25h	673	-0.685	0.849	0.502	12.5	33.3	0.0	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.022								
h			8760	0.064								
H-h	15	cm 24h	8760	-0.085	0.181	0.159	8.4	58.2	1.1	32.0	14.0	8.53
AHW-ahw	15	cm 24h	658	-0.081	0.176	0.156	7.6	59.7	1.1	36.0	0.0	
ALW-alw	15	cm 24h	649	-0.087	0.171	0.148	5.9	60.1	0.9	49.0	0.0	
THW-thw	0.50	h 25h	658	-0.550	0.914	0.731	14.7	43.3	1.5	25.0	0.0	
TLW-tlw	0.50	h 25h	649	-0.522	0.911	0.747	15.6	45.6	0.8	25.0	0.0	

Station: Naples, FL
Observed data time period from: /11/11/2010 to /11/17/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H84-h84	15	cm 24h	2	-0.112	0.172	0.185	0.0	50.0	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	3	-0.100	0.129	0.100	0.0	66.7	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	4	-0.085	0.135	0.121	0.0	75.0	0.0	0.0	0.0	0.00

Station: St. Petersburg, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 7.67 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.119	0.119	0.0	76.2	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	558	0.103	0.127	0.074	0.0	69.5	0.0	0.0	0.0	
ALW-alw	15	cm 24h	558	-0.107	0.135	0.083	0.0	64.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	558	-0.591	0.825	0.576	13.3	43.7	0.0	24.0	0.0	
TLW-tlw	0.50	h 25h	558	-0.565	0.751	0.496	8.2	43.5	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8578	0.000								
h			8578	0.063								
H-h	15	cm 24h	8578	-0.062	0.181	0.169	7.5	57.9	2.4	20.0	15.0	8.22
AHW-ahw	15	cm 24h	528	0.021	0.154	0.153	1.1	69.7	4.4	11.0	35.0	
ALW-alw	15	cm 24h	525	-0.156	0.211	0.143	13.1	41.7	0.2	50.0	0.0	
THW-thw	0.50	h 25h	528	-0.532	0.869	0.688	13.6	41.5	1.3	37.0	0.0	
TLW-tlw	0.50	h 25h	525	-0.556	0.828	0.614	10.3	43.4	0.4	12.0	0.0	

Station: St. Petersburg, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.063	0.145	0.132	5.0	71.7	0.0	0.0	0.0	1.67
H06-h06	15	cm 24h	60	-0.059	0.140	0.128	3.3	70.0	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.059	0.136	0.124	3.3	71.7	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.052	0.131	0.121	3.3	76.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.051	0.129	0.120	3.3	75.0	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.054	0.127	0.116	3.3	78.3	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.063	0.130	0.115	3.4	72.9	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.064	0.129	0.113	3.4	74.1	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.064	0.130	0.114	3.5	71.9	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.061	0.125	0.110	1.8	73.2	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.062	0.125	0.109	1.8	72.7	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.061	0.129	0.114	1.9	75.9	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.063	0.131	0.115	1.9	71.7	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.061	0.133	0.119	1.9	63.5	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.066	0.133	0.116	2.0	66.7	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.069	0.135	0.118	2.0	66.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.075	0.136	0.115	2.0	63.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	25	0.039	0.112	0.108	0.0	80.0	0.0			
ALW-alw	15	cm 24h	24	-0.143	0.167	0.088	4.2	54.2	0.0			
THW-thw	0.50	h 25h	25	-0.408	0.639	0.502	16.0	60.0	0.0			
TLW-tlw	0.50	h 25h	24	-0.308	0.425	0.299	0.0	58.3	0.0			

Station: Clearwater Beach, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.080	0.080	0.0	94.6	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	651	0.018	0.076	0.073	0.0	97.2	0.0	0.0	0.0	
ALW-alw	15	cm 24h	651	-0.016	0.080	0.078	0.0	97.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	651	0.315	0.583	0.491	0.2	66.1	5.1	0.0	15.0	
TLW-tlw	0.50	h 25h	651	0.091	0.459	0.450	0.9	79.9	2.3	0.0	26.0	
SCENARIO: HINDCAST (combined water level)												
H			8447	-0.017								
h			8447	0.072								
H-h	15	cm 24h	8447	-0.089	0.173	0.148	6.9	58.8	0.8	51.0	11.0	6.51
AHW-ahw	15	cm 24h	604	-0.091	0.171	0.144	6.1	58.9	0.5	51.0	0.0	
ALW-alw	15	cm 24h	604	-0.093	0.175	0.148	7.6	57.6	1.0	48.0	0.0	
THW-thw	0.50	h 25h	604	0.258	0.714	0.666	2.3	56.0	8.4	0.0	15.0	
TLW-tlw	0.50	h 25h	604	0.167	0.738	0.719	3.3	56.0	7.1	0.0	26.0	

Station: Clearwater Beach, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.084	0.132	0.102	0.0	68.3	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.080	0.129	0.102	1.7	73.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.084	0.126	0.094	1.7	76.7	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.082	0.123	0.093	1.7	76.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.082	0.124	0.093	1.7	76.7	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.081	0.119	0.088	0.0	80.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.087	0.123	0.087	0.0	78.0	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.090	0.124	0.087	0.0	75.9	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.089	0.124	0.086	0.0	73.7	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.091	0.124	0.085	0.0	76.8	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.092	0.126	0.087	0.0	72.7	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.093	0.131	0.093	1.9	72.2	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.095	0.133	0.094	0.0	71.7	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.094	0.136	0.099	0.0	69.2	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.101	0.137	0.094	2.0	68.6	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.105	0.142	0.096	2.0	64.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.109	0.138	0.085	0.0	63.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	28	-0.092	0.128	0.090	0.0	71.4	0.0			
ALW-alw	15	cm 24h	28	-0.068	0.113	0.092	0.0	85.7	0.0			
THW-thw	0.50	h 25h	28	0.446	0.700	0.549	3.6	46.4	10.7			
TLW-tlw	0.50	h 25h	28	0.186	0.536	0.512	0.0	50.0	0.0			

Station: Cedar Key, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.086	0.086	0.0	92.7	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	697	0.029	0.085	0.080	0.0	94.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	697	-0.034	0.086	0.079	0.0	92.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	697	0.033	0.440	0.439	1.1	80.6	3.2	0.0	12.0	
TLW-tlw	0.50	h 25h	697	-0.066	0.479	0.475	2.4	77.0	1.7	12.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.011								
h			8760	0.056								
H-h	15	cm 24h	8760	-0.067	0.175	0.162	6.5	60.2	2.0	22.0	12.0	6.30
AHW-ahw	15	cm 24h	674	-0.075	0.180	0.163	7.0	57.6	2.2	36.0	25.0	
ALW-alw	15	cm 24h	676	-0.068	0.169	0.154	6.2	61.1	1.8	37.0	13.0	
THW-thw	0.50	h 25h	674	0.215	0.694	0.661	3.1	61.1	6.2	24.0	25.0	
TLW-tlw	0.50	h 25h	676	0.170	0.614	0.591	2.4	66.7	5.2	0.0	12.0	

Station: Cedar Key, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.064	0.139	0.125	1.7	73.3	0.0	0.0	0.0	1.67
H06-h06	15	cm 24h	60	-0.066	0.134	0.118	1.7	76.7	0.0	0.0	0.0	1.67
H12-h12	15	cm 24h	60	-0.069	0.125	0.105	0.0	78.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.057	0.118	0.105	0.0	83.3	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.057	0.121	0.108	0.0	83.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.061	0.119	0.103	0.0	80.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.066	0.125	0.107	0.0	78.0	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.072	0.128	0.106	0.0	74.1	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.069	0.125	0.106	0.0	73.7	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.070	0.125	0.104	0.0	78.6	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.068	0.127	0.108	0.0	72.7	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.070	0.132	0.113	0.0	68.5	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.072	0.137	0.118	1.9	69.8	0.0	0.0	0.0	1.89
H78-h78	15	cm 24h	52	-0.069	0.138	0.121	1.9	73.1	0.0	0.0	0.0	1.92
H84-h84	15	cm 24h	51	-0.076	0.140	0.119	2.0	72.5	0.0	0.0	0.0	1.96
H90-h90	15	cm 24h	50	-0.080	0.143	0.119	2.0	72.0	0.0	0.0	0.0	2.00
H96-h96	15	cm 24h	49	-0.083	0.132	0.104	0.0	69.4	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	29	-0.084	0.139	0.113	6.9	72.4	0.0			
ALW-alw	15	cm 24h	29	-0.064	0.120	0.104	0.0	86.2	0.0			
THW-thw	0.50	h 25h	29	0.331	0.523	0.412	0.0	65.5	3.4			
TLW-tlw	0.50	h 25h	29	0.269	0.423	0.333	0.0	65.5	0.0			

Station: Apalachicola, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.106	0.106	0.0	82.9	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	574	0.045	0.081	0.067	0.0	94.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	577	-0.042	0.081	0.069	0.0	93.1	0.0	0.0	0.0	
THW-thw	0.50	h 25h	574	1.078	1.233	0.599	0.0	14.3	32.9	0.0	87.0	
TLW-tlw	0.50	h 25h	577	1.303	1.387	0.475	0.0	0.7	41.9	0.0	75.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.009								
h			8760	0.073								
H-h	15	cm 24h	8760	-0.083	0.184	0.164	9.2	62.9	0.8	67.0	12.0	7.47
AHW-ahw	15	cm 24h	501	-0.039	0.154	0.149	4.4	68.7	1.2	13.0	0.0	
ALW-alw	15	cm 24h	525	-0.105	0.184	0.151	10.3	62.7	0.4	23.0	0.0	
THW-thw	0.50	h 25h	501	0.551	0.993	0.827	2.4	40.9	17.8	0.0	25.0	
TLW-tlw	0.50	h 25h	525	0.752	1.088	0.786	1.1	29.7	23.6	0.0	50.0	

Station: Apalachicola, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.039	0.119	0.113	1.7	75.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.044	0.117	0.109	1.7	78.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.048	0.113	0.103	1.7	83.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.042	0.109	0.102	1.7	81.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.039	0.108	0.102	1.7	83.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.047	0.112	0.102	1.7	81.7	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.053	0.112	0.099	1.7	81.4	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.057	0.117	0.102	3.4	82.8	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.057	0.115	0.101	3.5	84.2	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.057	0.116	0.102	3.6	83.9	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.058	0.114	0.099	1.8	81.8	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.054	0.115	0.103	1.9	81.5	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.053	0.117	0.106	1.9	77.4	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.050	0.116	0.106	1.9	78.8	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.052	0.117	0.106	0.0	80.4	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.056	0.116	0.103	2.0	78.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.059	0.111	0.095	2.0	79.6	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	23	-0.026	0.103	0.102	0.0	87.0	0.0			
ALW-alw	15	cm 24h	23	-0.071	0.103	0.077	0.0	87.0	0.0			
THW-thw	0.50	h 25h	23	0.948	1.339	0.967	4.3	17.4	39.1			
TLW-tlw	0.50	h 25h	23	1.100	1.304	0.717	0.0	21.7	43.5			

Station: Panama City, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.089	0.089	0.0	91.3	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	344	0.025	0.077	0.073	0.0	95.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	349	-0.017	0.082	0.080	0.0	96.6	0.0	0.0	0.0	
THW-thw	0.50	h 25h	344	-1.201	1.374	0.668	41.6	10.8	0.3	96.0	0.0	
TLW-tlw	0.50	h 25h	349	-0.817	1.181	0.855	27.8	24.1	2.0	120.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	-0.008								
h			8760	0.075								
H-h	15	cm 24h	8760	-0.083	0.173	0.152	7.4	59.8	1.2	31.0	12.0	7.20
AHW-ahw	15	cm 24h	259	-0.055	0.152	0.142	3.9	69.1	2.7	0.0	0.0	
ALW-alw	15	cm 24h	270	-0.101	0.172	0.139	7.4	59.3	0.4	0.0	0.0	
THW-thw	0.50	h 25h	259	-0.981	1.455	1.076	43.2	17.0	4.6	0.0	0.0	
TLW-tlw	0.50	h 25h	270	-1.000	1.466	1.073	48.1	17.0	5.2	60.0	0.0	

Station: Panama City, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.046	0.119	0.111	0.0	81.7	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.050	0.116	0.105	0.0	83.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.051	0.113	0.102	0.0	85.0	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.049	0.113	0.102	0.0	85.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.052	0.111	0.099	0.0	86.7	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.057	0.111	0.096	0.0	85.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.059	0.112	0.096	0.0	83.1	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.058	0.111	0.096	0.0	86.2	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.056	0.111	0.097	0.0	78.9	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.058	0.111	0.096	0.0	78.6	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.058	0.111	0.096	0.0	80.0	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.055	0.109	0.095	0.0	79.6	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.054	0.109	0.095	0.0	81.1	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.054	0.108	0.095	0.0	80.8	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.053	0.106	0.092	0.0	86.3	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.053	0.102	0.089	0.0	86.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.059	0.101	0.083	0.0	89.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	13	-0.024	0.106	0.107	0.0	84.6	0.0			
ALW-alw	15	cm 24h	13	-0.049	0.096	0.086	0.0	84.6	0.0			
THW-thw	0.50	h 25h	13	-1.061	1.233	0.654	53.8	15.4	0.0			
TLW-tlw	0.50	h 25h	13	-0.869	1.362	1.091	53.8	15.4	7.7			

Station: Pensacola, FL
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of   13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15 cm	24h	8761	0.000	0.113	0.113	0.0	80.2	0.0	0.0	0.0	0.00
AHW-ahw	15 cm	24h	282	0.012	0.075	0.075	0.0	98.6	0.0	0.0	0.0	
ALW-alw	15 cm	24h	268	0.008	0.076	0.076	0.0	95.5	0.0	0.0	0.0	
THW-thw	0.50 h	25h	282	-1.833	1.895	0.482	87.6	0.4	0.7	96.0	0.0	
TLW-tlw	0.50 h	25h	268	-1.451	1.642	0.770	64.2	10.4	0.7	72.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.000								
h			8760	0.083								
H-h	15 cm	24h	8760	-0.083	0.193	0.174	10.9	56.7	1.7	34.0	13.0	10.27
AHW-ahw	15 cm	24h	132	-0.055	0.153	0.143	6.8	75.8	1.5	0.0	0.0	
ALW-alw	15 cm	24h	137	-0.118	0.177	0.133	8.0	54.7	0.0	0.0	0.0	
THW-thw	0.50 h	25h	132	-1.409	1.674	0.908	65.2	12.9	0.8	0.0	0.0	
TLW-tlw	0.50 h	25h	137	-1.190	1.654	1.154	62.0	11.7	5.1	0.0	0.0	

Station: Pensacola, FL
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15 cm	24h	60	-0.062	0.155	0.143	6.7	65.0	0.0	0.0	0.0	3.33
H06-h06	15 cm	24h	60	-0.062	0.154	0.142	6.7	65.0	0.0	0.0	0.0	3.33
H12-h12	15 cm	24h	60	-0.060	0.152	0.141	6.7	65.0	0.0	0.0	0.0	3.33
H18-h18	15 cm	24h	60	-0.059	0.152	0.141	6.7	61.7	0.0	0.0	0.0	3.33
H24-h24	15 cm	24h	60	-0.063	0.151	0.139	6.7	63.3	0.0	0.0	0.0	3.33
H30-h30	15 cm	24h	60	-0.067	0.151	0.136	5.0	65.0	0.0	0.0	0.0	3.33
H36-h36	15 cm	24h	59	-0.069	0.153	0.138	5.1	61.0	0.0	0.0	0.0	3.39
H42-h42	15 cm	24h	58	-0.066	0.151	0.137	5.2	63.8	0.0	0.0	0.0	1.72
H48-h48	15 cm	24h	57	-0.064	0.151	0.138	1.8	61.4	0.0	0.0	0.0	1.75
H54-h54	15 cm	24h	56	-0.067	0.149	0.135	1.8	60.7	0.0	0.0	0.0	1.79
H60-h60	15 cm	24h	55	-0.067	0.149	0.134	3.6	63.6	0.0	0.0	0.0	1.82
H66-h66	15 cm	24h	54	-0.064	0.144	0.130	1.9	64.8	0.0	0.0	0.0	0.00
H72-h72	15 cm	24h	53	-0.064	0.144	0.130	0.0	67.9	0.0	0.0	0.0	0.00
H78-h78	15 cm	24h	52	-0.066	0.142	0.128	0.0	69.2	0.0	0.0	0.0	0.00
H84-h84	15 cm	24h	51	-0.065	0.144	0.129	0.0	68.6	0.0	0.0	0.0	0.00
H90-h90	15 cm	24h	50	-0.064	0.140	0.126	0.0	68.0	0.0	0.0	0.0	0.00
H96-h96	15 cm	24h	49	-0.066	0.145	0.131	0.0	63.3	0.0	0.0	0.0	0.00
AHW-ahw	15 cm	24h	9	-0.018	0.089	0.092	0.0	88.9	0.0			
ALW-alw	15 cm	24h	6	-0.088	0.119	0.087	0.0	83.3	0.0			
THW-thw	0.50 h	25h	9	-2.211	2.244	0.404	100.0	0.0	0.0			
TLW-tlw	0.50 h	25h	6	-1.900	2.048	0.839	83.3	0.0	0.0			

Station: Bay Waveland Yacht Club, MS
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 13.12 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.086	0.086	0.0	92.7	0.0	0.0	1.0	0.00
AHW-ahw	15	cm 24h	376	-0.016	0.073	0.072	0.0	98.7	0.0	0.0	0.0	
ALW-alw	15	cm 24h	351	0.042	0.101	0.092	0.0	87.2	0.0	0.0	0.0	
THW-thw	0.50	h 25h	376	-0.032	0.815	0.816	7.4	55.1	4.5	46.0	0.0	
TLW-tlw	0.50	h 25h	351	0.217	0.900	0.874	5.1	43.0	12.8	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.025								
h			8760	0.098								
H-h	15	cm 24h	8760	-0.073	0.185	0.170	9.1	61.0	1.7	34.0	22.0	6.88
AHW-ahw	15	cm 24h	333	-0.114	0.192	0.155	11.1	57.7	0.9	14.0	0.0	
ALW-alw	15	cm 24h	295	-0.016	0.156	0.155	3.1	65.1	2.4	0.0	0.0	
THW-thw	0.50	h 25h	333	0.399	1.084	1.009	4.8	32.1	18.0	11.0	24.0	
TLW-tlw	0.50	h 25h	295	0.508	1.241	1.133	6.4	30.5	28.1	0.0	0.0	

Station: Bay Waveland Yacht Club, MS
Observed data time period from: /11/ 1/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	32	-0.018	0.149	0.150	3.1	59.4	0.0	0.0	0.0	3.12
H06-h06	15	cm 24h	32	-0.020	0.146	0.147	3.1	62.5	0.0	0.0	0.0	3.12
H12-h12	15	cm 24h	33	-0.022	0.144	0.144	3.0	69.7	0.0	0.0	0.0	3.03
H18-h18	15	cm 24h	34	-0.021	0.136	0.136	2.9	70.6	0.0	0.0	0.0	2.94
H24-h24	15	cm 24h	35	-0.019	0.133	0.133	2.9	71.4	0.0	0.0	0.0	2.86
H30-h30	15	cm 24h	36	-0.023	0.130	0.130	2.8	69.4	0.0	0.0	0.0	2.78
H36-h36	15	cm 24h	36	-0.023	0.131	0.131	2.8	75.0	0.0	0.0	0.0	2.78
H42-h42	15	cm 24h	36	-0.029	0.132	0.131	2.8	72.2	0.0	0.0	0.0	2.78
H48-h48	15	cm 24h	36	-0.024	0.128	0.128	2.8	77.8	0.0	0.0	0.0	2.78
H54-h54	15	cm 24h	36	-0.017	0.124	0.125	2.8	75.0	0.0	0.0	0.0	2.78
H60-h60	15	cm 24h	36	-0.016	0.123	0.124	0.0	72.2	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	36	-0.017	0.125	0.126	2.8	72.2	0.0	0.0	0.0	2.78
H72-h72	15	cm 24h	36	-0.021	0.129	0.129	0.0	72.2	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	36	-0.014	0.134	0.135	0.0	66.7	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	36	-0.018	0.141	0.142	0.0	61.1	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	36	-0.015	0.136	0.137	0.0	66.7	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	36	-0.021	0.133	0.133	0.0	66.7	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	7	-0.089	0.176	0.164	14.3	57.1	0.0			
ALW-alw	15	cm 24h	8	0.045	0.114	0.113	0.0	75.0	0.0			
THW-thw	0.50	h 25h	7	-0.257	0.944	0.981	14.3	28.6	14.3			
TLW-tlw	0.50	h 25h	8	0.362	1.157	1.175	0.0	50.0	25.0			

Station: Grand Isle, LA
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 42.88 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.082	0.082	0.0	94.1	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	350	0.038	0.090	0.082	0.0	88.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	349	-0.034	0.082	0.075	0.0	94.3	0.0	0.0	0.0	
THW-thw	0.50	h 25h	350	-0.511	0.780	0.590	9.1	50.3	0.3	0.0	0.0	
TLW-tlw	0.50	h 25h	349	-0.080	0.702	0.698	6.6	63.6	2.0	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			7735	-0.005								
h			7735	0.051								
H-h	15	cm 24h	7735	-0.056	0.142	0.130	3.0	72.0	0.9	21.0	14.0	3.10
AHW-ahw	15	cm 24h	236	-0.022	0.134	0.133	1.7	79.2	1.3	0.0	0.0	
ALW-alw	15	cm 24h	252	-0.075	0.137	0.115	2.4	71.4	0.4	0.0	0.0	
THW-thw	0.50	h 25h	236	-0.644	1.337	1.174	35.2	24.2	5.9	45.0	0.0	
TLW-tlw	0.50	h 25h	252	-0.036	1.048	1.050	11.9	36.5	10.7	0.0	19.0	

Station: Grand Isle, LA
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.045	0.100	0.090	0.0	90.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.044	0.099	0.090	0.0	88.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.041	0.099	0.091	0.0	90.0	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.041	0.099	0.091	0.0	90.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.045	0.098	0.088	0.0	90.0	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.047	0.098	0.086	0.0	91.7	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.049	0.099	0.087	0.0	89.8	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.049	0.099	0.087	0.0	91.4	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.046	0.097	0.087	0.0	91.2	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.046	0.095	0.084	0.0	91.1	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.047	0.094	0.082	0.0	90.9	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.046	0.093	0.082	0.0	88.9	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.044	0.090	0.079	0.0	90.6	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.044	0.087	0.076	0.0	90.4	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.044	0.089	0.078	0.0	92.2	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.048	0.088	0.075	0.0	92.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.053	0.091	0.074	0.0	89.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	13	-0.018	0.091	0.092	0.0	92.3	0.0			
ALW-alw	15	cm 24h	13	-0.056	0.100	0.087	0.0	92.3	0.0			
THW-thw	0.50	h 25h	13	-0.861	1.471	1.241	53.8	15.4	7.7			
TLW-tlw	0.50	h 25h	13	0.323	0.981	0.964	7.7	38.5	23.1			

Station: Sabine Pass North, TX
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 42.88 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15 cm	24h	8761	0.000	0.080	0.080	0.0	93.6	0.0	0.0	0.0	0.00
AHW-ahw	15 cm	24h	508	0.007	0.085	0.085	0.0	90.9	0.0	0.0	0.0	
ALW-alw	15 cm	24h	509	0.026	0.078	0.074	0.0	91.7	0.0	0.0	0.0	
THW-thw	0.50 h	25h	508	-0.175	0.603	0.578	5.1	65.4	1.2	15.0	0.0	
TLW-tlw	0.50 h	25h	509	-0.250	0.583	0.527	6.1	68.4	0.8	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			4610	0.227								
h			4610	0.149								
H-h	15 cm	24h	4610	0.078	0.189	0.172	1.6	58.2	9.0	0.0	7.0	7.94
AHW-ahw	15 cm	24h	25	0.095	0.184	0.161	0.0	60.0	20.0	0.0	37.0	
ALW-alw	15 cm	24h	21	0.046	0.165	0.162	0.0	61.9	4.8	0.0	0.0	
THW-thw	0.50 h	25h	25	-0.080	0.980	0.997	12.0	40.0	8.0	0.0	0.0	
TLW-tlw	0.50 h	25h	21	0.238	0.900	0.889	0.0	47.6	14.3	0.0	0.0	

Station: Sabine Pass North, TX
Observed data time period from: /11/ 1/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15 cm	24h	12	0.115	0.148	0.097	0.0	66.7	8.3	0.0	0.0	8.33
H06-h06	15 cm	24h	12	0.112	0.147	0.099	0.0	83.3	8.3	0.0	0.0	8.33
H12-h12	15 cm	24h	13	0.120	0.156	0.104	0.0	69.2	15.4	0.0	0.0	7.69
H18-h18	15 cm	24h	13	0.116	0.169	0.128	0.0	69.2	15.4	0.0	0.0	15.38
H24-h24	15 cm	24h	13	0.133	0.189	0.140	0.0	38.5	15.4	0.0	0.0	15.38
H30-h30	15 cm	24h	13	0.124	0.173	0.126	0.0	69.2	15.4	0.0	0.0	7.69
H36-h36	15 cm	24h	13	0.131	0.176	0.123	0.0	61.5	15.4	0.0	0.0	7.69
H42-h42	15 cm	24h	13	0.127	0.170	0.117	0.0	69.2	15.4	0.0	0.0	7.69
H48-h48	15 cm	24h	13	0.126	0.174	0.125	0.0	53.8	15.4	0.0	0.0	7.69
H54-h54	15 cm	24h	13	0.116	0.170	0.130	0.0	53.8	7.7	0.0	0.0	7.69
H60-h60	15 cm	24h	13	0.118	0.164	0.119	0.0	69.2	7.7	0.0	0.0	7.69
H66-h66	15 cm	24h	13	0.114	0.167	0.127	0.0	69.2	7.7	0.0	0.0	7.69
H72-h72	15 cm	24h	12	0.124	0.165	0.115	0.0	66.7	8.3	0.0	0.0	8.33
H78-h78	15 cm	24h	12	0.127	0.167	0.112	0.0	58.3	8.3	0.0	0.0	8.33
H84-h84	15 cm	24h	13	0.118	0.166	0.121	0.0	61.5	0.0	0.0	0.0	0.00
H90-h90	15 cm	24h	10	0.170	0.198	0.107	0.0	50.0	10.0	0.0	0.0	10.00
H96-h96	15 cm	24h	12	0.119	0.172	0.130	0.0	58.3	8.3	0.0	0.0	8.33

Station: Galveston Pleasure Pier, TX
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 42.88 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.094	0.094	0.0	88.5	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	467	-0.012	0.094	0.093	0.0	89.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	471	0.008	0.086	0.086	0.0	90.9	0.0	0.0	0.0	
THW-thw	0.50	h 25h	467	0.533	0.872	0.691	0.4	47.1	14.6	0.0	0.0	
TLW-tlw	0.50	h 25h	471	0.340	0.632	0.533	0.8	60.1	6.6	0.0	12.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.016								
h			8760	0.033								
H-h	15	cm 24h	8760	-0.016	0.169	0.168	4.9	65.0	3.5	37.0	17.0	6.10
AHW-ahw	15	cm 24h	413	-0.016	0.163	0.162	3.9	65.9	4.1	0.0	24.0	
ALW-alw	15	cm 24h	426	-0.001	0.162	0.162	4.0	67.8	4.0	0.0	0.0	
THW-thw	0.50	h 25h	413	0.477	1.063	0.952	4.1	34.1	21.3	0.0	36.0	
TLW-tlw	0.50	h 25h	426	0.312	1.017	0.970	8.2	35.9	13.4	24.0	24.0	

Station: Galveston Pleasure Pier, TX
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.028	0.117	0.114	0.0	80.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.043	0.119	0.112	1.7	83.3	0.0	0.0	0.0	1.67
H12-h12	15	cm 24h	60	-0.033	0.120	0.116	1.7	78.3	0.0	0.0	0.0	1.67
H18-h18	15	cm 24h	60	-0.029	0.121	0.118	1.7	78.3	0.0	0.0	0.0	1.67
H24-h24	15	cm 24h	60	-0.028	0.123	0.121	1.7	73.3	0.0	0.0	0.0	1.67
H30-h30	15	cm 24h	60	-0.035	0.125	0.122	1.7	75.0	0.0	0.0	0.0	1.67
H36-h36	15	cm 24h	59	-0.031	0.124	0.121	1.7	76.3	0.0	0.0	0.0	1.69
H42-h42	15	cm 24h	58	-0.031	0.124	0.121	0.0	79.3	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.027	0.124	0.122	0.0	73.7	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.024	0.128	0.127	0.0	76.8	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.025	0.126	0.124	0.0	76.4	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.024	0.123	0.121	0.0	74.1	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.024	0.124	0.123	0.0	75.5	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.020	0.128	0.127	0.0	73.1	1.9	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.026	0.124	0.123	0.0	76.5	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.031	0.123	0.120	0.0	78.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.032	0.119	0.116	0.0	75.5	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	17	-0.060	0.131	0.120	0.0	70.6	0.0			
ALW-alw	15	cm 24h	18	0.015	0.114	0.117	0.0	77.8	0.0			
THW-thw	0.50	h 25h	17	0.659	1.108	0.919	0.0	41.2	29.4			
TLW-tlw	0.50	h 25h	18	0.389	1.297	1.273	11.1	38.9	22.2			

Station: USCG Freeport, TX
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 42.88 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.078	0.078	0.0	95.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	430	0.011	0.077	0.077	0.0	94.7	0.0	0.0	0.0	
ALW-alw	15	cm 24h	429	-0.016	0.073	0.072	0.0	97.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	430	0.686	0.975	0.694	0.0	38.4	18.8	0.0	0.0	
TLW-tlw	0.50	h 25h	429	0.226	0.531	0.481	0.2	71.8	3.5	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.018								
h			8760	0.041								
H-h	15	cm 24h	8760	-0.022	0.161	0.160	5.0	67.6	2.4	36.0	17.0	5.79
AHW-ahw	15	cm 24h	371	-0.020	0.155	0.154	3.5	69.3	2.2	0.0	0.0	
ALW-alw	15	cm 24h	401	-0.016	0.155	0.154	4.0	69.8	3.5	0.0	0.0	
THW-thw	0.50	h 25h	371	0.442	1.056	0.961	4.9	36.1	19.1	0.0	24.0	
TLW-tlw	0.50	h 25h	401	0.145	0.973	0.964	9.0	38.9	12.5	48.0	24.0	

Station: USCG Freeport, TX
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.016	0.111	0.111	0.0	83.3	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.024	0.110	0.109	0.0	83.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.018	0.111	0.110	0.0	85.0	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.017	0.111	0.110	0.0	83.3	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.019	0.111	0.110	0.0	83.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.024	0.112	0.111	0.0	85.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.024	0.111	0.110	0.0	81.4	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.023	0.113	0.112	0.0	82.8	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.019	0.113	0.112	0.0	82.5	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.018	0.114	0.113	0.0	78.6	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.019	0.110	0.109	0.0	83.6	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.019	0.107	0.106	0.0	79.6	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.019	0.105	0.105	0.0	83.0	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.015	0.106	0.106	0.0	78.8	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.021	0.103	0.102	0.0	84.3	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.027	0.105	0.103	0.0	84.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.026	0.102	0.100	0.0	87.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	16	-0.042	0.128	0.125	0.0	68.8	0.0			
ALW-alw	15	cm 24h	17	0.000	0.107	0.110	0.0	82.4	0.0			
THW-thw	0.50	h 25h	16	0.825	1.122	0.785	0.0	37.5	37.5			
TLW-tlw	0.50	h 25h	17	0.382	1.273	1.252	5.9	29.4	29.4			

Station: Port Aransas, TX
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 63.83 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.121	0.121	0.0	77.9	0.5	0.0	3.0	0.00
AHW-ahw	15	cm 24h	364	0.093	0.139	0.104	0.0	73.1	3.0	0.0	0.0	
ALW-alw	15	cm 24h	419	-0.103	0.143	0.098	0.2	66.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	364	-0.346	0.989	0.928	17.6	45.1	3.3	71.0	0.0	
TLW-tlw	0.50	h 25h	419	-0.115	0.557	0.546	2.9	70.4	1.4	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			7248	0.018								
h			7248	0.088								
H-h	15	cm 24h	7248	-0.069	0.179	0.178	7.2	60.7	2.1	16.0	12.0	8.00
AHW-ahw	15	cm 24h	177	0.027	0.151	0.149	1.7	68.9	1.7	0.0	0.0	
ALW-alw	15	cm 24h	236	-0.148	0.215	0.157	16.5	52.1	0.0	0.0	0.0	
THW-thw	0.50	h 25h	177	-0.232	1.228	1.210	21.5	28.8	9.0	14.0	0.0	
TLW-tlw	0.50	h 25h	236	-0.106	0.981	0.977	11.4	41.9	5.5	0.0	0.0	

Station: Port Aransas, TX
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.045	0.156	0.150	5.0	63.3	0.0	6.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.052	0.156	0.148	5.0	60.0	0.0	6.0	0.0	5.00
H12-h12	15	cm 24h	60	-0.050	0.155	0.149	5.0	60.0	0.0	6.0	0.0	5.00
H18-h18	15	cm 24h	60	-0.049	0.155	0.149	5.0	63.3	0.0	6.0	0.0	5.00
H24-h24	15	cm 24h	60	-0.052	0.155	0.148	5.0	61.7	0.0	6.0	0.0	5.00
H30-h30	15	cm 24h	60	-0.057	0.151	0.141	3.3	63.3	0.0	0.0	0.0	3.33
H36-h36	15	cm 24h	59	-0.062	0.151	0.139	3.4	66.1	0.0	0.0	0.0	3.39
H42-h42	15	cm 24h	58	-0.060	0.154	0.143	3.4	63.8	0.0	0.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.054	0.152	0.143	3.5	66.7	0.0	0.0	0.0	3.51
H54-h54	15	cm 24h	56	-0.058	0.147	0.137	1.8	67.9	0.0	0.0	0.0	1.79
H60-h60	15	cm 24h	55	-0.062	0.145	0.132	3.6	70.9	0.0	0.0	0.0	3.64
H66-h66	15	cm 24h	54	-0.062	0.145	0.132	1.9	68.5	0.0	0.0	0.0	1.85
H72-h72	15	cm 24h	53	-0.060	0.141	0.129	1.9	69.8	0.0	0.0	0.0	1.89
H78-h78	15	cm 24h	52	-0.063	0.139	0.126	1.9	65.4	0.0	0.0	0.0	1.92
H84-h84	15	cm 24h	51	-0.065	0.138	0.123	2.0	68.6	0.0	0.0	0.0	1.96
H90-h90	15	cm 24h	50	-0.070	0.136	0.118	2.0	72.0	0.0	0.0	0.0	2.00
H96-h96	15	cm 24h	49	-0.067	0.138	0.122	2.0	69.4	0.0	0.0	0.0	2.04
AHW-ahw	15	cm 24h	13	0.021	0.142	0.146	0.0	69.2	0.0			
ALW-alw	15	cm 24h	14	-0.101	0.134	0.091	0.0	64.3	0.0			
THW-thw	0.50	h 25h	13	-0.292	1.310	1.330	38.5	15.4	23.1			
TLW-tlw	0.50	h 25h	14	-0.029	0.666	0.691	14.3	42.9	7.1			

Station: Port Isabel, TX
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 63.83 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.081	0.081	0.0	93.9	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	410	0.041	0.085	0.075	0.0	93.9	0.0	0.0	0.0	
ALW-alw	15	cm 24h	416	-0.033	0.076	0.068	0.0	92.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	410	-0.468	0.787	0.633	7.3	44.6	1.5	48.0	0.0	
TLW-tlw	0.50	h 25h	416	-0.512	0.748	0.546	8.4	48.3	0.0	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.014								
h			8760	0.094								
H-h	15	cm 24h	8760	-0.080	0.169	0.148	7.9	64.7	0.5	38.0	9.0	7.47
AHW-ahw	15	cm 24h	348	-0.030	0.143	0.140	2.9	72.1	1.4	12.0	0.0	
ALW-alw	15	cm 24h	378	-0.110	0.179	0.141	10.1	61.4	0.0	24.0	0.0	
THW-thw	0.50	h 25h	348	-0.391	1.106	1.037	20.7	33.6	6.0	24.0	0.0	
TLW-tlw	0.50	h 25h	378	-0.595	1.017	0.826	19.8	35.4	1.1	24.0	0.0	

Station: Port Isabel, TX
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.077	0.140	0.118	5.0	78.3	0.0	6.0	0.0	3.33
H06-h06	15	cm 24h	60	-0.077	0.139	0.117	5.0	80.0	0.0	6.0	0.0	3.33
H12-h12	15	cm 24h	60	-0.072	0.137	0.118	5.0	83.3	0.0	6.0	0.0	3.33
H18-h18	15	cm 24h	60	-0.072	0.139	0.120	5.0	80.0	0.0	6.0	0.0	3.33
H24-h24	15	cm 24h	60	-0.073	0.138	0.118	5.0	81.7	0.0	6.0	0.0	3.33
H30-h30	15	cm 24h	60	-0.076	0.135	0.112	3.3	81.7	0.0	6.0	0.0	3.33
H36-h36	15	cm 24h	59	-0.081	0.136	0.110	5.1	79.7	0.0	6.0	0.0	3.39
H42-h42	15	cm 24h	58	-0.080	0.138	0.113	5.2	81.0	0.0	6.0	0.0	3.45
H48-h48	15	cm 24h	57	-0.079	0.137	0.113	5.3	73.7	0.0	6.0	0.0	3.51
H54-h54	15	cm 24h	56	-0.082	0.136	0.110	3.6	76.8	0.0	0.0	0.0	1.79
H60-h60	15	cm 24h	55	-0.085	0.136	0.107	3.6	76.4	0.0	6.0	0.0	3.64
H66-h66	15	cm 24h	54	-0.085	0.136	0.107	3.7	77.8	0.0	0.0	0.0	1.85
H72-h72	15	cm 24h	53	-0.085	0.133	0.103	1.9	77.4	0.0	0.0	0.0	1.89
H78-h78	15	cm 24h	52	-0.088	0.133	0.101	1.9	76.9	0.0	0.0	0.0	1.92
H84-h84	15	cm 24h	51	-0.091	0.133	0.098	2.0	76.5	0.0	0.0	0.0	1.96
H90-h90	15	cm 24h	50	-0.095	0.134	0.096	2.0	70.0	0.0	0.0	0.0	2.00
H96-h96	15	cm 24h	49	-0.095	0.134	0.096	2.0	75.5	0.0	0.0	0.0	2.04
AHW-ahw	15	cm 24h	15	-0.035	0.136	0.136	6.7	86.7	0.0			
ALW-alw	15	cm 24h	16	-0.110	0.138	0.086	0.0	68.8	0.0			
THW-thw	0.50	h 25h	15	-0.053	0.666	0.687	6.7	53.3	6.7			
TLW-tlw	0.50	h 25h	16	-0.481	0.787	0.643	12.5	43.8	6.2			

Station: Christiansted Harbor, St Croix, VI
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 9.25 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.018	0.018	0.0	100.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	371	0.000	0.017	0.017	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	381	0.008	0.015	0.013	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	371	0.526	0.883	0.710	0.5	46.4	15.6	0.0	24.0	
TLW-tlw	0.50	h 25h	381	-0.192	0.818	0.796	7.6	48.0	4.2	24.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8540	0.016								
h			8540	-0.011								
H-h	15	cm 24h	8540	0.027	0.089	0.084	0.0	92.5	0.0	1.0	0.0	0.02
AHW-ahw	15	cm 24h	349	0.024	0.080	0.077	0.0	94.6	0.0	0.0	0.0	
ALW-alw	15	cm 24h	341	0.042	0.091	0.081	0.0	91.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	349	0.264	1.043	1.011	8.0	36.7	14.6	0.0	48.0	
TLW-tlw	0.50	h 25h	341	-0.144	0.921	0.911	11.4	44.3	6.2	48.0	11.0	

Station: Christiansted Harbor, St Croix, VI
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.064	0.087	0.059	0.0	90.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.064	0.088	0.061	0.0	88.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.064	0.089	0.061	0.0	88.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.068	0.092	0.063	0.0	86.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.069	0.093	0.063	0.0	86.7	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.072	0.097	0.066	0.0	83.3	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.074	0.098	0.066	0.0	83.1	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.075	0.100	0.066	0.0	82.8	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.077	0.101	0.066	0.0	84.2	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.078	0.102	0.066	0.0	83.9	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.079	0.103	0.067	0.0	81.8	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.080	0.103	0.065	0.0	83.3	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.083	0.104	0.063	0.0	84.9	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.085	0.105	0.061	0.0	86.5	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.090	0.107	0.058	0.0	88.2	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.094	0.110	0.058	0.0	86.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.098	0.111	0.053	0.0	85.7	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	16	-0.069	0.098	0.071	0.0	81.2	0.0			
ALW-alw	15	cm 24h	13	-0.032	0.054	0.045	0.0	100.0	0.0			
THW-thw	0.50	h 25h	16	0.619	1.328	1.213	12.5	25.0	43.8			
TLW-tlw	0.50	h 25h	13	0.331	0.817	0.777	0.0	46.2	23.1			

Station: Charlotte Amalie, VI
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 23.50 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.050	0.050	0.0	100.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	400	-0.012	0.053	0.051	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	398	-0.002	0.047	0.047	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	400	-0.210	0.721	0.691	7.8	57.0	2.2	24.0	24.0	
TLW-tlw	0.50	h 25h	398	-0.809	1.039	0.653	19.6	24.4	0.8	48.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8198	0.016								
h			8198	-0.015								
H-h	15	cm 24h	8198	0.031	0.085	0.080	0.0	93.0	0.0	0.0	0.0	0.04
AHW-ahw	15	cm 24h	357	0.020	0.080	0.077	0.0	94.4	0.0	0.0	0.0	
ALW-alw	15	cm 24h	355	0.039	0.086	0.076	0.0	91.8	0.0	0.0	0.0	
THW-thw	0.50	h 25h	357	-0.317	1.011	0.962	16.8	39.8	5.0	12.0	13.0	
TLW-tlw	0.50	h 25h	355	-0.459	1.147	1.053	22.3	27.6	6.8	72.0	0.0	

Station: Charlotte Amalie, VI
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.028	0.067	0.061	0.0	98.3	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.029	0.067	0.061	0.0	98.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.029	0.070	0.064	0.0	96.7	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.032	0.071	0.064	0.0	96.7	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.034	0.074	0.066	0.0	95.0	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.036	0.076	0.067	0.0	95.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.037	0.076	0.067	0.0	93.2	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.039	0.077	0.067	0.0	93.1	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.041	0.077	0.066	0.0	93.0	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.043	0.079	0.067	0.0	92.9	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.043	0.079	0.067	0.0	92.7	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.046	0.080	0.066	0.0	94.4	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.047	0.080	0.066	0.0	90.6	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.050	0.081	0.064	0.0	92.3	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.054	0.084	0.064	0.0	94.1	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.058	0.084	0.061	0.0	94.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.061	0.087	0.062	0.0	93.9	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	15	-0.066	0.093	0.068	0.0	80.0	0.0			
ALW-alw	15	cm 24h	15	-0.003	0.045	0.046	0.0	100.0	0.0			
THW-thw	0.50	h 25h	15	-0.240	0.794	0.784	6.7	46.7	6.7			
TLW-tlw	0.50	h 25h	15	-0.840	1.162	0.831	46.7	13.3	6.7			

Station: Vieques Island, PR
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 78.38 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.023	0.023	0.0	100.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	329	0.000	0.019	0.019	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	352	0.013	0.022	0.017	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	329	0.505	1.023	0.891	3.3	31.0	17.9	0.0	72.0	
TLW-tlw	0.50	h 25h	352	-0.759	1.142	0.855	22.7	18.2	4.3	72.0	24.0	
SCENARIO: HINDCAST (combined water level)												
H			6883	0.026								
h			6883	0.015								
H-h	15	cm 24h	6883	0.011	0.087	0.086	0.1	92.0	0.0	4.0	0.0	0.07
AHW-ahw	15	cm 24h	250	0.008	0.083	0.083	0.0	93.2	0.0	0.0	0.0	
ALW-alw	15	cm 24h	246	0.036	0.090	0.083	0.0	91.9	0.0	0.0	0.0	
THW-thw	0.50	h 25h	250	0.480	1.220	1.124	8.4	26.8	26.4	0.0	0.0	
TLW-tlw	0.50	h 25h	246	-0.809	1.208	0.899	29.7	27.2	3.3	25.0	0.0	

Station: Vieques Island, PR
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.042	0.077	0.064	0.0	93.3	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.045	0.081	0.067	0.0	90.0	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.045	0.081	0.068	0.0	91.7	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.048	0.083	0.069	0.0	90.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.050	0.084	0.069	0.0	88.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.054	0.089	0.071	0.0	90.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.056	0.090	0.071	0.0	89.8	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.057	0.091	0.071	0.0	87.9	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.059	0.091	0.070	0.0	87.7	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.061	0.093	0.071	0.0	85.7	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.062	0.094	0.072	0.0	85.5	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.063	0.095	0.071	0.0	87.0	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.066	0.095	0.069	0.0	90.6	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.069	0.097	0.068	0.0	86.5	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.074	0.099	0.067	0.0	90.2	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.078	0.102	0.066	0.0	84.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.082	0.103	0.064	0.0	89.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	12	-0.034	0.064	0.057	0.0	91.7	0.0			
ALW-alw	15	cm 24h	14	-0.009	0.052	0.053	0.0	100.0	0.0			
THW-thw	0.50	h 25h	12	1.017	1.459	1.093	0.0	33.3	41.7			
TLW-tlw	0.50	h 25h	14	-1.250	1.471	0.805	64.3	0.0	0.0			

Station: San Juan, PR
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 21.71 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.054	0.054	0.0	100.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.001	0.045	0.045	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	-0.002	0.048	0.048	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.311	0.572	0.481	4.8	67.2	0.0	12.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.357	0.600	0.483	5.7	64.0	0.0	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8241	0.124								
h			8241	-0.007								
H-h	15	cm 24h	8241	0.130	0.160	0.093	0.0	54.1	1.9	0.0	17.0	1.88
AHW-ahw	15	cm 24h	660	0.136	0.164	0.092	0.0	53.5	2.0	0.0	50.0	
ALW-alw	15	cm 24h	660	0.122	0.151	0.089	0.0	57.6	0.6	0.0	0.0	
THW-thw	0.50	h 25h	660	-0.174	0.638	0.615	5.2	62.4	1.7	12.0	0.0	
TLW-tlw	0.50	h 25h	660	-0.311	0.657	0.580	5.6	60.5	1.2	24.0	0.0	

Station: San Juan, PR
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.032	0.074	0.068	0.0	95.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.033	0.075	0.068	0.0	95.0	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.034	0.077	0.070	0.0	93.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.035	0.076	0.068	0.0	93.3	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.036	0.077	0.068	0.0	95.0	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.038	0.078	0.069	0.0	95.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.040	0.079	0.069	0.0	93.2	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.043	0.078	0.066	0.0	93.1	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.043	0.078	0.066	0.0	93.0	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.044	0.079	0.066	0.0	92.9	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.045	0.081	0.068	0.0	92.7	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.048	0.080	0.065	0.0	92.6	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.050	0.082	0.066	0.0	92.5	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.054	0.083	0.064	0.0	92.3	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.058	0.087	0.066	0.0	88.2	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.063	0.089	0.064	0.0	90.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.067	0.090	0.061	0.0	89.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	28	-0.021	0.065	0.063	0.0	100.0	0.0			
ALW-alw	15	cm 24h	29	-0.042	0.068	0.055	0.0	96.6	0.0			
THW-thw	0.50	h 25h	28	-0.450	0.691	0.534	7.1	46.4	0.0			
TLW-tlw	0.50	h 25h	29	-0.290	0.458	0.361	0.0	65.5	0.0			

Station: Mayaguez, PR
Observed data time period from: / 1/ 1/2009 to / 1/ 3/2010 with gaps of 21.71 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.130	0.130	0.7	73.9	0.0	3.0	0.0	0.00
AHW-ahw	15	cm 24h	681	-0.028	0.129	0.126	0.0	75.6	0.0	0.0	0.0	
ALW-alw	15	cm 24h	681	0.020	0.131	0.130	0.0	71.4	0.0	0.0	0.0	
THW-thw	0.50	h 25h	681	-0.512	0.839	0.664	12.8	48.2	0.4	25.0	0.0	
TLW-tlw	0.50	h 25h	681	-0.435	0.705	0.555	7.8	54.3	0.1	12.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8760	0.102								
h			8760	0.000								
H-h	15	cm 24h	8760	0.102	0.132	0.084	0.0	68.1	0.1	0.0	6.0	0.10
AHW-ahw	15	cm 24h	686	0.080	0.115	0.082	0.0	77.1	0.0	0.0	0.0	
ALW-alw	15	cm 24h	686	0.120	0.145	0.080	0.0	60.5	0.3	0.0	0.0	
THW-thw	0.50	h 25h	686	-0.245	0.679	0.633	6.0	58.7	1.6	12.0	0.0	
TLW-tlw	0.50	h 25h	686	-0.294	0.764	0.705	7.9	50.9	2.2	24.0	0.0	

Station: Mayaguez, PR
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of 12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	-0.044	0.081	0.068	0.0	95.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	-0.040	0.080	0.069	0.0	95.0	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	-0.040	0.080	0.069	0.0	95.0	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	-0.040	0.079	0.069	0.0	95.0	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	-0.041	0.080	0.069	0.0	95.0	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	-0.043	0.082	0.070	0.0	95.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	-0.043	0.082	0.070	0.0	94.9	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	-0.044	0.083	0.071	0.0	94.8	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	-0.046	0.084	0.071	0.0	94.7	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	-0.047	0.085	0.071	0.0	94.6	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	-0.047	0.085	0.072	0.0	94.5	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	-0.049	0.086	0.071	0.0	92.6	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	-0.051	0.085	0.069	0.0	92.5	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	-0.055	0.087	0.068	0.0	92.3	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	-0.057	0.089	0.068	0.0	92.2	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	-0.061	0.092	0.069	0.0	92.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	-0.065	0.091	0.065	0.0	89.8	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	28	-0.084	0.110	0.073	0.0	78.6	0.0			
ALW-alw	15	cm 24h	29	0.006	0.058	0.059	0.0	100.0	0.0			
THW-thw	0.50	h 25h	28	-0.325	0.643	0.565	7.1	60.7	0.0			
TLW-tlw	0.50	h 25h	29	-0.238	0.659	0.625	20.7	69.0	3.4			

Station: Bermuda Esso Pier
Observed data time period from: / 1/ 1/2009 to /12/23/2009 with gaps of   21.71 days
Data gap is not filled
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: TIDAL SIMULATION												
H			8761	0.000								
h			8761	0.000								
H-h	15	cm 24h	8761	0.000	0.055	0.055	0.0	100.0	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	705	-0.024	0.056	0.051	0.0	100.0	0.0	0.0	0.0	
ALW-alw	15	cm 24h	705	0.023	0.055	0.050	0.0	100.0	0.0	0.0	0.0	
THW-thw	0.50	h 25h	705	-0.077	0.345	0.337	0.9	88.1	0.3	0.0	0.0	
TLW-tlw	0.50	h 25h	705	-0.102	0.365	0.351	0.7	86.7	0.1	0.0	0.0	
SCENARIO: HINDCAST (combined water level)												
H			8547	0.015								
h			8547	0.083								
H-h	15	cm 24h	8547	-0.067	0.133	0.115	2.7	73.9	0.1	41.0	2.0	2.66
AHW-ahw	15	cm 24h	688	-0.085	0.143	0.115	3.9	69.0	0.0	174.0	0.0	
ALW-alw	15	cm 24h	688	-0.050	0.122	0.111	1.9	78.3	0.3	25.0	0.0	
THW-thw	0.50	h 25h	688	-0.028	0.402	0.401	0.7	83.9	1.3	0.0	0.0	
TLW-tlw	0.50	h 25h	688	-0.042	0.402	0.400	1.0	83.9	0.7	12.0	12.0	

Station: Bermuda Esso Pier
Observed data time period from: /10/25/2010 to /11/10/2010 with gaps of   12.23 days
Data gap is filled using SVD method
Data are not filtered

VARIABLE	X	N	IMAX	SM	RMSE	SD	NOF	CF	POF	MDNO	MDPO	WOF
CRITERION	-	-	-	-	-	-	<1%	>90%	<1%	<N	<N	<.5%
SCENARIO: SEMI-OPERATIONAL FORECAST												
H00-h00	15	cm 24h	60	0.098	0.116	0.063	0.0	75.0	0.0	0.0	0.0	0.00
H06-h06	15	cm 24h	60	0.095	0.115	0.065	0.0	78.3	0.0	0.0	0.0	0.00
H12-h12	15	cm 24h	60	0.092	0.115	0.068	0.0	78.3	0.0	0.0	0.0	0.00
H18-h18	15	cm 24h	60	0.090	0.113	0.069	0.0	78.3	0.0	0.0	0.0	0.00
H24-h24	15	cm 24h	60	0.086	0.112	0.073	0.0	78.3	0.0	0.0	0.0	0.00
H30-h30	15	cm 24h	60	0.081	0.110	0.074	0.0	80.0	0.0	0.0	0.0	0.00
H36-h36	15	cm 24h	59	0.080	0.109	0.074	0.0	79.7	0.0	0.0	0.0	0.00
H42-h42	15	cm 24h	58	0.078	0.108	0.075	0.0	82.8	0.0	0.0	0.0	0.00
H48-h48	15	cm 24h	57	0.077	0.108	0.076	0.0	82.5	0.0	0.0	0.0	0.00
H54-h54	15	cm 24h	56	0.077	0.109	0.078	0.0	83.9	0.0	0.0	0.0	0.00
H60-h60	15	cm 24h	55	0.077	0.110	0.080	0.0	80.0	0.0	0.0	0.0	0.00
H66-h66	15	cm 24h	54	0.075	0.109	0.080	0.0	83.3	0.0	0.0	0.0	0.00
H72-h72	15	cm 24h	53	0.073	0.108	0.080	0.0	83.0	0.0	0.0	0.0	0.00
H78-h78	15	cm 24h	52	0.070	0.106	0.080	0.0	84.6	0.0	0.0	0.0	0.00
H84-h84	15	cm 24h	51	0.068	0.107	0.084	0.0	82.4	0.0	0.0	0.0	0.00
H90-h90	15	cm 24h	50	0.066	0.107	0.086	0.0	86.0	0.0	0.0	0.0	0.00
H96-h96	15	cm 24h	49	0.063	0.108	0.088	0.0	79.6	0.0	0.0	0.0	0.00
AHW-ahw	15	cm 24h	29	0.080	0.099	0.059	0.0	96.6	0.0			
ALW-alw	15	cm 24h	29	0.115	0.132	0.066	0.0	65.5	0.0			
THW-thw	0.50	h 25h	29	-0.090	0.252	0.240	0.0	93.1	0.0			
TLW-tlw	0.50	h 25h	29	-0.110	0.279	0.261	0.0	89.7	0.0			