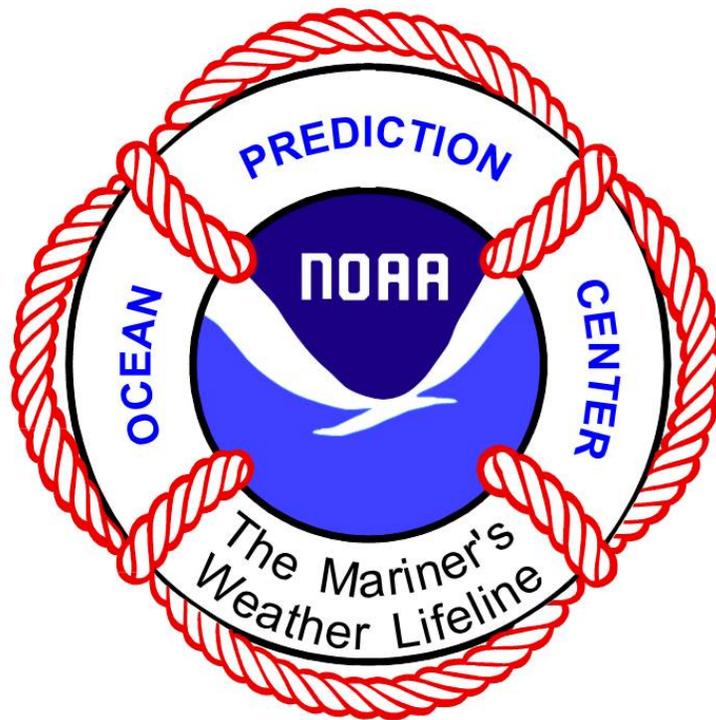


# Ocean Prediction Center

## 2012 Annual Accomplishments



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## 1. Introduction

The Ocean Prediction Center (OPC) faced many challenges this year, but they never failed to rise to the challenge. This was also a year for transition. Early in the year OPC completely switched from issuing operational products from AWIPS to AWIPS-II. The next transition took place over the summer months: the move from the World Weather Building in Camp Springs, MD to the National Centers for Weather and Climate Prediction in College Park, MD. Months of move planning, on top of years of facilities planning, culminated in the smooth and seamless shift between buildings. After that transition was complete, the Ocean Applications Branch began working on their next main push: implementing GFE operationally for offshore zone forecasting.

Hurricane/Post-Tropical Cyclone Sandy was another major challenge in 2012. From the moment it became evident that Sandy was going to be a major storm, OPC, other National Centers and Weather Forecast Offices (WFO) took extraordinary actions to coordinate and plan their forecasts. The heightened level of coordination and support continued through the strong nor'easter that immediately followed Sandy's thrashing of the New Jersey and New York coastline. OPC and the National Hurricane Center (NHC) worked closely during both events to provide accurate storm surge forecasts and analyses to emergency managers and local NWS offices in the effected coastal areas.

## 2. Major Accomplishments

### *OPC Issues Operational Products with AWIPS-II*

On January 18, 2012 OPC issued their first operational products from AWIPS-II, the third National Weather Service office in the country to do so. OPC first sent the Offshore and Atlantic High Seas text forecasts; these forecasts included operational OPC forecasts and products for NHC's Tropical Analysis and Forecast Branch (TAFB). OPC produced the TAFB products as part of a scheduled operational backup. This was the first time that any operational marine forecasts were issued on AWIPS-II. Many people in NCEP and the Office of Science and Technology contributed to this effort.

### *OPC Upgrades High Seas Warning Broadcasts*

On March 5, 2012 OPC reached a historical milestone by upgrading its High Seas voice warning

messages after more than 32 years from telephone recordings to MP3 digital audio format. These warnings are issued, for example, as “hurricane force wind warnings,” “storm warnings,” or “gale warnings.” The benefits include improved broadcast quality which translates into better warning information for ships at sea.

The National Institute of Standards and Technology (NIST) broadcasts OPC’s High Seas storm warnings through a time and frequency broadcast service from station WWV in Fort Collins, Colorado. The broadcast is commonly known to mariners as the “Time Tick” used as an aid in celestial navigation. WWV has a long history that dates back to the very beginning of radio broadcasting. The call letters WWV were assigned to National Institute of Standards and Technology in October 1919. High Seas Warnings for the Atlantic Ocean are broadcast at 8 and 9 minutes after the hour, and 10 minutes after the hour for the Pacific Ocean. The audio portion of the WWV broadcast can also be heard by telephone at (303) 499-7111. The WWV number receives more than one million calls per year.

OPC coordinated with the National Institute of Standards and Technology to upgrade the quality of the recordings by switching from phone recordings to electronic messaging using the digital voice recorder. Future plans include using text formatters and text-to-speech capability to move towards more automated procedures.

#### *Transition to the NOAA Center for Weather and Climate Prediction*

During the summer of 2012 the construction of the new state-of-the-art facility, the NOAA Center for Weather and Climate Prediction (NCWCP) in College Park, MD was officially completed. In July the certificate of occupancy was received for the NCWCP and over 100 NCEP employees and contractors relocated to the new facility. This initial set of occupants was followed in August by over 700 additional NWS, National Environmental Satellite, Data, and Information Service (NESDIS) and Office of Oceanic and Atmospheric Research (OAR) staff and contractors. The NCEP Climate Prediction Center (CPC), Weather Prediction Center (WPC), NCEP Central Operations (NCO) and OPC conducted shadow shift testing during July and CPC began dual operations on July 23 and sent all operational products generated at NCWCP to AWIPS and WOC without issue. NCO and Raytheon Technical Services successfully moved the NCEP AWIPS II Test Bed into the NCWCP and set up the Test Bed Room for upcoming Forecaster Integration Testing and AWIPS II training exercises.



**The OPC forecast floor in the World Weather Building is empty after the last of the team moved to the National Center for Weather and Climate Prediction. Photo courtesy of Edwin Danaher, Chief, Forecast Operations Branch, Weather Prediction Center**

On August 20, the five month project to move NCEP operations capability from the World Weather Building in Camp Springs, MD to the NCWCP was successfully completed “without the loss or delay of a single operational product”. Both OPC and HPC spent many months of extensive planning and pre-testing of equipment and software at the new building in preparation for the transition of operations from the WWB to NCWCP. The testing included forecaster preparation and issuance of test and actual products followed by a 72 hour period of dual operations from both locations of all operational work desks for both Centers. At the end of OPC Dual Operations period on Sunday, August 12, OPC Director Dr. Ming Ji declared OPC was ready to complete the transition and terminated all WWB operations. The OPC staff and non-operational equipment move was completed from August 13<sup>th</sup> to August 14<sup>th</sup>. The NCWCP was proudly displayed to Dr. Titley, Dr. Sullivan, and Acting NWS Director Furgione during a 2.5 hour tour of the entire facility on August 30.



**NOAA Center for Weather and Climate Prediction, College Park, MD, September 2012**

The ribbon cutting ceremony for the NCWCP was held on October 15<sup>th</sup>. Among the distinguished visitors to this auspicious event were U.S. Senator Barbara Mikulski, Acting Secretary of Commerce Dr. Rebecca Blank, NOAA Administrator Dr. Jane Lubchenco, Acting NWS Director Laura Furgione, Acting GSA Administrator Dan Tangherlini, Prince Georges County Executive Rushern Baker III, and University of Maryland President Dr. Wallace Loh. Several hundred guests flooded into the modern auditorium to hear the distinguished guests and Dr. Louis Uccellini speak about the completion of the building and the new opportunities for science and collaboration that were introduced with the new building, which is located on the M-Squared Research Park on the University of Maryland campus.



**Ribbon cutting at NOAA Center for Weather and Climate Prediction. Left to right: Dr. Louis Uccellini, director, National Centers for Environmental Prediction; Dan Tangherlini, acting administrator, GSA; Dr. Jane Lubchenco, NOAA administrator; Sen. Barbara Mikulski; Dr. Rebecca Blank, acting secretary of commerce; Laura Furgione, acting director, NWS; Dr. Wallace Loh, president, Univ. of Md.; Rushern Baker III, county executive, Prince Georges County, MD.**

### *OPC Launches Mobile Website*

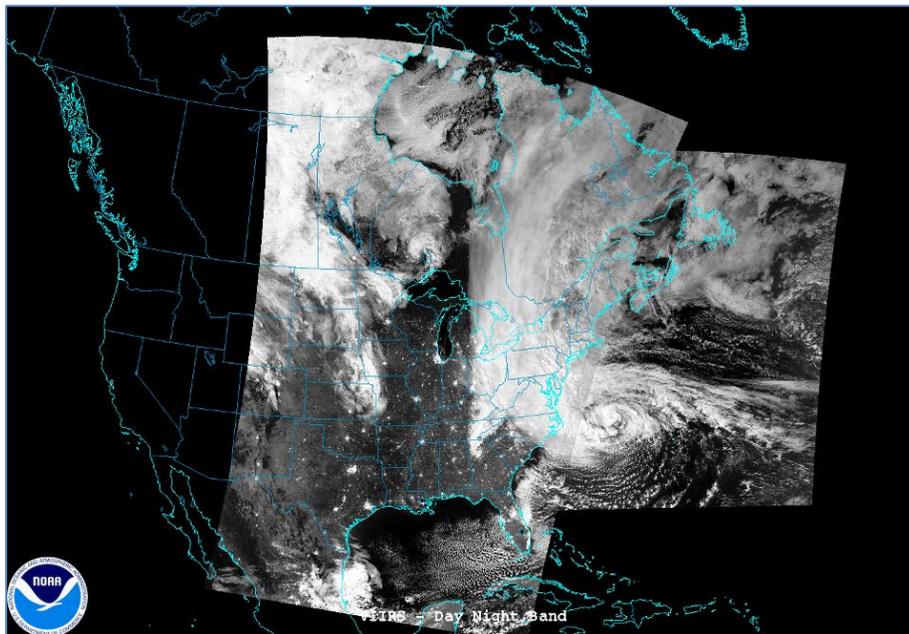
In October 2012 OPC introduced a redesigned mobile website that used industry-standard HTML format and contained more content than the previous mobile site. The new mobile site provides various marine forecasts and products to customers with basic cell phones, smart phones, or computers with low-bandwidth connections. The traditional OPC homepage was changed to automatically detect mobile browsers and load the mobile web site by default. The improved mobile website can be found at the following location:

[www.opc.ncep.noaa.gov/mobile.php](http://www.opc.ncep.noaa.gov/mobile.php)

### *Hurricane Sandy Forecast and Support*

OPC played a major role in collaborating with other NCEP Centers and Eastern Region NWS offices to assure continuity of services for Sandy. OPC collaboration helped assure that there was a unified, clear, and consistent message concerning the multiple hazards associated with Sandy. OPC led the development of the “Hurricane Sandy NWS Coordination Plan” dated October 25, 2012 which was used to brief leadership on the coordination strategy.

OPC also played a major role in the storm surge forecasts. The hybrid tropical- extratropical characteristics of the storm including the size the associated large wind field made it important to include extratropical surge models in forecasting storm surge for the Northeast, particularly the NY/NJ area. Joe Sienkiewicz from OPC, the Chief of the Ocean Applications Branch, worked closely with the NHC Storm Surge Unit with a focus on the extratropical models. He participated in storm surge briefings and also helped make surge model data from the Extratropical Surge and Tide Operational Forecast System (ESTOFS) available to NWS Eastern Region Forecast Offices before the event.

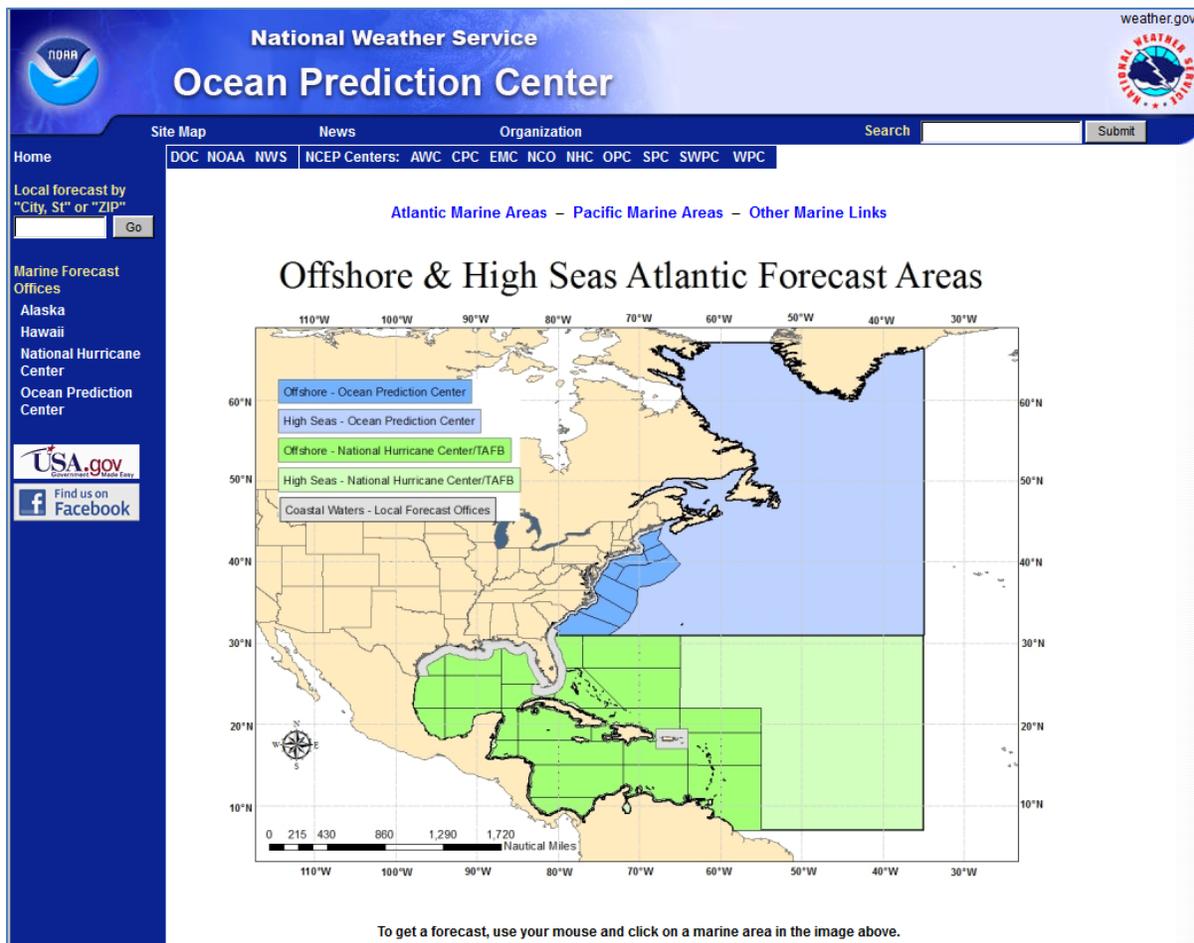


**Composite Suomi NPP VIIRS Day-Night Band showcasing Hurricane Sandy overnight on 10/28/12. This band is very sensitive to moon light which allows forecasters to see clouds as though it was daytime. The Day-Night Band is one of the many new satellite products that forecasters will be using in the Satellite Proving Ground at OPC.**

OPC also did numerous things in real-time to help improve overall NWS services. An OPC Sandy specific webpage was developed in real-time. OPC found a workaround for technical problems with coastal warnings on the main weather.gov page that would have reflected poorly on the entire NWS. In collaboration with NHC, OPC started providing position/radii guidance for the extratropical stage of Sandy much earlier than normal. This was done to help make for a smoother handoff if/when Sandy became extratropical.

*Offshore and High Seas Forecasts Highlighted on National Weather Service Homepage*

In November 2012, months of collaboration and planning came together with the completion of a portal for offshore and high seas forecast linked directly to the National Weather Service homepage. The creation of the portal website was a joint effort between the OPC, Alaska Region, the Tropical Analysis and Forecast Branch (TAFB), and the Honolulu WFO. Trish Wallace from TAFB and Christopher Juckins from OPC combined their GIS and web design skills to bring the project together. Instead of navigating to the separate NWS office websites to find a marine forecast, users can point and click to the region of choice and are redirected to the appropriate office and text forecast. The link to the Offshore and High Seas Marine site is located at the bottom of the [Weather.gov](http://Weather.gov) main page under the 'Forecast' section. The link provides maps for both the Atlantic and Pacific oceans.



**Web page for the Atlantic Offshore and High Seas marine weather portal. Zones are colored according to their office of responsibility.**

### **3. Contribution to NOAA, National, and International Programs**

#### *Ocean Contamination Tracking Program*

On Tuesday, July 24, 2012, 1200 UTC, NCEP implemented the Real Time Ocean Forecast System – Episodic Tracer (RTOFS-ET) for the West Pacific. This is the first operational three-dimensional ocean dispersion model within NWS/NCEP which provides guidance on the spatial extent and the severity of contamination by radionuclide Caesium-137 (Cs-137) released near the East coast of Japan due to the 9.2 magnitude earthquake on March 11, 2011 and the ensuing tsunami which significantly damaged the Fukushima Dai’chi Nuclear Plant. This system will provide medium term monitoring (2-5 years) of the radionuclide in the western Pacific Ocean and the disaster’s impact on the surrounding coastal and deep ocean waters. RTOFS-ET also serves as a prototype of an oceanic component of a full ecosystem modeling system to be deployed at NCEP in the future.

#### *Fourth Session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology (JCOMM)*

Dr. Ming Ji, Director, OPC, participated in the Fourth quadrennial intergovernmental session of the Joint WMO-IOC Technical Commission for Oceanography and Marine Meteorology in May, 2012. He attended as a member of the U.S. delegation as well as the JCOMM Services and Forecast Systems Program Area (SFSPA) coordinator. The meeting, held in the Republic of Korea, was attended by delegations from 47 different Members/Member States of WMO and UNESCO/IOC. The session approved priorities for the JCOMM Service work plan for the 2012-2017 period. Among them include coordination for marine volcanic ash fall advisory and marine space weather warning, both were piloted by the U.S. (NWS). Key SFSPA priority areas also include enhancing the capability for providing met-ocean information support for response to marine environmental emergencies such as the Gulf of Mexico oil spill and oceanic discharge of radioactive hazard from the Fukushima nuclear power plant, and the development of shipboard Electronic Chart Display Information System (ECDIS) for marine meteorological and oceanographic warnings and forecasts. OPC is playing a significant leadership role in both of these areas.

#### **4. Conference and Workshop Participation**

##### *39<sup>th</sup> Tall Ships America Annual Conference and Safety Forum*

Mr. Joseph Sienkiewicz participated in the 39th Tall Ships America Annual Conference and Safety Forum in Newport, RI on January 29-February 1. Approximately 200 attendees included tall ship captains, crew, administrators, and organizers. The recent focus on weather safety and utilizing weather information has been driven by the 2010 capsizing and sinking of the Brigantine Concordia 400 nm off the Brazilian coast in thunderstorms and the overall weather sensitivity of square rigged tall ships. Mr. Sienkiewicz gave three separate talks: the future of marine forecasting, weather basics, and a marine thunderstorm primer. The third talk was part of the Safety Forum that broadly addressed three findings in the Concordia investigation, thunderstorms, ship stability in gusty conditions, crew awareness, preparation, and communication.

##### *American Geophysical Union Ocean Sciences 2012 Meeting*

Mr. Joseph Sienkiewicz and Mr. Robert Daniels attended the American Geophysical Union (AGU) Ocean Sciences 2012 Meeting in Salt Lake City from February 20<sup>th</sup> through February 24<sup>th</sup>. OPC displayed two posters in the Operational Applications portion of Satellite Data session; the first poster discussed the use of sea surface temperature (SST) products, and the second poster described the use of Advanced Scatterometer (ASCAT) and OceanSat-2 Scatterometer (OSCAT) winds for extreme ocean storms. OPC displayed a third poster in the Community Building session. This poster described OPC's operational oceanography work as a community partnership that leverages efforts both within and external to NOAA.

##### *International Ocean Vector Winds Science Team Meeting*

Mr. Joseph Sienkiewicz participated in the International Ocean Vector Winds Science Team (IOVWST) Meeting in Utrecht, Netherlands in June 2012. Throughout the conference, issues and quality of OSCAT winds and basic state parameters were discussed. Mr. Sienkiewicz presented the last talk of the conference: a presentation that addressed the use of remotely-sensed ocean winds by forecasters to make forecast and warning decisions. The presentation included a segment that included the recommendations and changes made to meteorological observations and dissemination following the sinking of *Titanic* in 1914. Wind speed and direction parameters, important in 1914, are still important and are the parameters the

IOVWST are trying to improve. He also discussed the status at NWS (OPC and NHC) of ongoing efforts to read OSCAT data into AWIPS-II and taking advantage of GOES-R Proving Ground capabilities and high resolution ocean surface vector winds (OSVW) to better anticipate explosive cyclogenesis.

Mr. Sienkiewicz was also invited to a Committee on Earth Observation Satellites (CEOS) subgroup meeting hosted by Mr. Paul Chang and Hans Bonekamp. Mr. Sienkiewicz discussed data access, and operational applications with Chinese, Indian, and Japanese colleagues.

### *OceanSat-2 Scatterometer Technical Meetings*

In October, Mr. Joseph Sienkiewicz participated in OceanSat-2 Scatterometer (OSCAT) technical meetings in Ahmedabad, India. The meetings were hosted by the Indian Space Research Organization (ISRO) Space Applications Centre. Also in attendance were scientific representatives from NASA and the Royal Dutch Meteorological Agency. Mr. Sienkiewicz presented the OPC and National Hurricane Center (NHC) user's perspective of OSCAT wind products. In addition to the meetings, he also had the honor of being a guest lecturer at the joint IRSO/United Nations training effort for south Asia meteorologists on satellite capabilities and applications. The lectures were held at the ISRO Campus of the University of Bhopal.

During the interagency meetings, it became evident that ISRO is dedicated to optimizing OSCAT's wind products for operational and climate needs. ISRO informed the group that it plans on including both ocean color and scatterometry (OSCAT clone) on OceanSat-3. The organization is currently in negotiation with the Japanese Space Agency (JAXA) concerning a potential scatterometer on GCOM (Global Change Observation Mission) and is looking at a next-generation scatterometer for launch after OceanSat-3.

### *Sail Training International and Tall Ships Annual Conference*

Mr. Joseph Sienkiewicz was invited to discuss severe storms at sea at the Sail Training and International Tall Ships Annual Conference. The event was held on November 16 and 17 in Riga, Latvia. Approximately 400 participants from the international tall ships community attended the conference.

Safety was a major theme of the conference with several talks dealing with aspects of preparation, crisis management, communication, and weather awareness, avoidance, and

prediction. Tall ships or traditional sailing vessels are extremely weather vulnerable due to the sail area carried, the time it takes to reduce sail, and the relative slow speed of the vessels (as compared to the motion of storm systems). Mr. Sienkiewicz gave two lectures to approximately 80 captains and mates; he discussed severe thunderstorms, tropical cyclones, and extratropical cyclones. Mr. Sienkiewicz highlighted current weather prediction capabilities and products that are publicly available. The talks were well received; many captains asked questions or made comments.

Mr. Sienkiewicz's lecture can be found on the following website:

<http://www.youtube.com/watch?v=KwjZ1Mn2fVo>



**Mr. Joseph Sienkiewicz delivering a lecture during the Tall Ships Annual Conference.  
Photo courtesy of Tall Ships America.**

## **5. Outreach**

### *34<sup>th</sup> Annual Safety at Sea Seminar*

On Saturday March 31 and April 1, Mr. Paul Vukits and Mr. Joseph Sienkiewicz represented NWS and Ocean Prediction Center at the 34th annual Safety At Sea Seminar hosted by the US Naval Academy and Marine Trades Association of Maryland. Mr. Vukits and Mr. Sienkiewicz staffed OPC's booth and answered questions concerning NWS and NOAA oceanographic and

marine weather products. They also took part in roundtable discussions for cruising sailors and gave a 45 minute Weather Awareness presentation to over 270 sailors. The Safety at Sea Seminar was a requirement for participants of two major sailing races that occurred in June 2012.

### *Washington D.C.-Area Boat Shows*

Throughout the year, OPC forecasters and management had the opportunity to represent OPC at several boat shows. Mr. Paul Lee appeared at the annual New York Boat Show on January 5<sup>th</sup> and 6<sup>th</sup>. Several hundred boaters visited Mr. Lee at the booth and were very interested in what the National Weather Service had to offer. The majority of the visitors were familiar with OPC and its products. Mr. Lee fielded many questions, but the most common was, “Does the National Weather Service have an App?” Mr. David Kosier manned the NOAA booth at the Atlantic City Boat Show in February. The boat show was an excellent chance for both WFO and OPC forecasters to hear customer concerns. In October, Mr. James Kells, Mr. Hugh McRandal, Mr. Paul Lee, and Mr. Todd Shaw participated in the Annapolis Boat Show and fielded many questions about thunderstorms and marine product transmission. The boat shows are an tremendous opportunity for OPC to receive input from users, and glean ideas which can improve current products or develop into new products.

## **6. Special Activities**

### *Antarctic Research Forecast Support*

OPC once again provided forecasts to support NOAA Fisheries research in Antarctica. The season support for the Southern Hemisphere summer was completed from January through February 2012. This year OPC produced a daily pressure and wind forecast that was centered around the NOAA field camp located at 62 degrees 28' S, 60 degrees 47' W in the South Shetland Islands off the Antarctic Peninsula. The Antarctic Marine Living Resources Division was very appreciative of OPC's efforts and provided the following positive feedback:

“I just wanted to re-iterate that we very much appreciate the Ocean Prediction Center's assistance. Your forecasts have made a substantial difference to the quality and efficiency of our work. Your forecasts were always timely and more accurate than anything else I've seen to date. Thank you VERY much! I hope the opportunity to work with your office again arises in the not-too-distant future.”

## *Arctic Forecast Support*

OPC continued collaboration with NWS Alaska Region to provide forecast charts, sea surface temperature and ocean current forecasts to the Arctic Ocean support webpage. This site was available to mariners during the summer months in 2012. It was a one-stop shop for Arctic forecasts and included public and marine hazard graphics, text forecasts, satellite imagery, freezing spray forecasts, and sea ice information, just to name a few products. The website was a critical source of information for US Coast Guard patrols and NOAA ships operating in the Arctic. NOAA Ship FAIRWEATHER spent close to one month in the Arctic conducting research and reconnaissance operations. They were able to dodge the summer sea ice around Barrow and transited as far East as the US/Canadian border before returning south.



**NOAA Ship FAIRWEATHER and her fast rescue boat hard at work in the Arctic, Summer 2012.**

**Photo courtesy of LT Timothy Smith, NOAA Corps.**

## *Department of Homeland Security National Operations Center Support*

LT Matthew Glazewski acted as the principal NOAA support meteorologist at the Department of Homeland Security National Operations Center the week of August 19 through August 25. During his time manning the NOAA desk, Hurricane Isaac approached the United States coastline. LT Glazewski organized the product reporting schedule for DHS Senior Leadership Briefs as well as conducted his normal duties, which included coordinating the product support schedule for other NOAA desk watch standards and responding to requests for information that were funneled through the NOAA desk.

### **7. Awards**

#### *Weather Hero Award*

Mr. Joseph Sienkiewicz was awarded the Weather Hero Award from the John C. Freeman Weather Museum. The award citation reads:

“For providing the record breaking surge forecasts for northern NJ, NYC Harbor, and the waters surrounding Long Island and for making the direct calls to the NYC Emergency Operations Center that alerted the NYC officials to the life threatening conditions. Additionally, for the direct (and forceful) communications with the New Jersey state emergency operations center and for the specific and consistent articulation of the threats posed by Hurricane Sandy to the general public.”

#### *Administrator’s Awards*

Mr. Anthony Siebers earned the NOAA Administrator’s Award in October 2012 with the following citation:

“For leadership and contribution in coordinating NOAA efforts to support US government response to the 2011 Japanese earthquake and tsunami.”

Mr. Joseph Sienkiewicz received the NOAA Administrators Award in October 2012 with the following citation:

“For scientific excellence and leadership in using experimental satellite ice mission CryoSat-2 to enhance near real-time marine and hurricane forecasts.”

### *Cline Awards*

Ms. Crystal Rickett was awarded a Local NWS Isaac M. Cline Award for “her work in program management and administrative services.” She was recognized for her high level of service and support for OPC and WPC as Administrative Officer and Property Custodian, and for also filling the secretary role for the centers during a period where the position was vacant.

Mr. Christopher Juckins, Ms. Frances Achorn, and Mr. James Kells received Regional NWS Isaac M. Cline Awards for “critical efforts enabling OPC to lead the transition to AWIPS II and the move to NCWCP” in the Engineering, Electronics, or Facilities Category.

The three individuals were recognized for their critical contributions that enabled OPC to successfully achieve two major FY12 objectives: a) completing the operational transition from AWIPS to AWIPS II; and b) moving the entire OPC operations from the World Weather Building (WWB) to the new NOAA Center for Weather and Climate Prediction (NCWCP) without interruption of OPC operations and services.

### *DOC Bronze Award*

As part of the NCEP Central Operations Joint Organization, OPC was awarded the Department of Commerce Bronze Award for “outstanding real-time support in the aftermath of the earthquake and tsunami that damaged the Fukushima nuclear power plant.”



**NOAA Administrator Dr. Jane Lubchenco, Hendrik Tolman (EMC), Alan Robson (WPC), Joseph C. Bishop (AWC), Ben Kyger (NCO), Genevieve Miller (MIC Guam), Anthony Siebers (OPC), Acting NWS Administrator Laura Furgione.**

## **8. Metrics**

In 2012 OPC produced 152 products per day with an average of 99.34% timeliness for the year. Over the course of the year, OPC beat its Government Performance and Results Act (GPRA) goals, with the following metrics:

Wind percent correct in 2012: 85.56% (goal=74%)

Wave Height percent correct in 2012: 81.46% (goal=75%)

## 9. Staff

### *OPC Staff*

There was very little turnover and few personnel changes this past year. In January 2012, Ms. Marsha Morstad joined the team as OPC and HPC's secretary. Ms. Morstad previously worked for Major General Caron of the 79<sup>th</sup> Medical Wing at Andrew's Air Force Base.

In October the OAB welcomed LT Christine Schultz, who had previously been stationed at the Amundsen-Scott South Pole Station in Antarctica.

OPC bade farewell to LT Matthew Glazewski, as he filled a position at the Office of Marine and Aircraft Operations in the External Affairs department. LT Glazewski was the driving force for creating the Technical Operations Coordination Officer position at OPC and within the NOAA Corps.

Due to the summer relocation from the World Weather Building to NCWCP, OPC did not host a summer United States Coast Guard Academy intern in 2012. Mr. Benjamin Albright of Howard University, however, did continue to work on research projects with Mr. Joseph Sienkiewicz throughout the year.

### *OPC Staff as of 31 December 2012*

#### *Administration*

Director: Dr. Ming Ji

Deputy Director: Kevin McCarthy

Secretary: Marsha Morstad

Administrative Officer: Crystal Rickett

#### *Ocean Forecast Branch*

Chief: Anthony Siebers

Senior Marine Forecasters: James Clark, Robert Oczajca, Scott Prosis, Douglas Scovil, Paul Vukits

Marine Forecasters: Kevin Achorn, George Bancroft, Robert Banks, Kathy Bell, Timothy Collins, Timothy Holley, James Kells, David Kosier, Paul Lee, Hugh McRandal, David Mills, Frank Musconda, James Nolt, Michael Rowland, Todd Shaw

*Ocean Application Branch*

Chief: Joseph Sienkiewicz

Meteorologist Developers: Frances Achorn, Christopher Juckins

GOES-R/JPSS Satellite Liaison: Michael Folmer

Technical Operations Coordination Officer: LT Christine Schultz

Meteorologist Trainee: Vacant