Summary Record
Hydrographic Services Review Panel
Public Meeting
November 19-20, 2008
Tampa, Florida

Wednesday, November 19th

Introduction

On the call of the Designated Federal Officer (DFO), Captain Steven R. Barnum, National Oceanic and Atmospheric Administration (NOAA), and after public notice in the Federal Register (Volume 73, No. 212, Page 64919 dated October 31, 2008), the Hydrographic Services Review Panel (HSRP) meeting was convened on November 19, 2008 at the Westin Harbour Island, 725 South Harbour Island Boulevard, Tampa, Florida. All members but one were in attendance.

The following report summarizes the deliberations of this meeting. Presentations and documents available to and/or prepared by the HSRP are available for public inspection via the web at http://nauticalcharts.noaa.gov/ocs/hsrp/archive/library.htm. Copies can be requested by writing to the Director, Office of Coast Survey (OCS), 1315 East West Highway, SSMC3, N/CS, Silver Spring, MD 20910. A list of the HSRP members and other attendees is provided in Appendix 1. The Agenda is included at Appendix 2. The results of the HSRP Strategic Planning Session are at Appendix 3.

Call to Order

Mr. Thomas Skinner, chair of the HSRP, called the meeting to order on Wednesday, November 19, 2008, at 8:00 a.m. He then turned the meeting over to Captain Barnum for opening comments. Attendance recorded at Appendix 1. Agenda at Appendix 2.

Welcoming Remarks

Captain Steven Barnum, NOAA, Designated Federal Officer, began the meeting by providing emergency procedure logistics and a brief description of the HSRP Panel, its mission goals and meeting protocols.

HSRP Business and Updates

Mr. John H. Dunnigan, National Ocean Service (NOS) Assistant Administrator, spoke briefly on the 2009 NOAA budget, saying it might pass

fairly quickly after the Presidential Inauguration on January 20, 2009. ***HSRP member Dr. Gary Jeffress*** suggested that the change in Administration and budget timing could be an opportunity to combine HSRP goals for NOAA with an economic stimulus package. He thought that the message to the NOAA Transition Team should be that NOAA is well placed to get funding out to the private sector to stimulate and create jobs. Mr. Dunnigan agreed, noting that at the moment Congress was working on stimulus packages in both the House and the Senate. Mr. Dunnigan also said that the NOAA transition team is busy identifying areas where government could funnel funds to benefit both the economy and NOAA programs.

HSRP Vice-Chair Ed Welch then asked how NOAA was briefing the transition team and suggested that if the agency were to share with the HSRP how it thought it could use stimulus money, this information would be good for the HSRP to have.

Mr. Dunnigan responded that the sharing of information was something to discuss and that a very comprehensive internal briefing package had been prepared for the transition team on NOAA line offices and goal teams. He noted that he himself would meet with the Transition Team soon to discuss changes occurring in recent years and NOAA's role and priorities resulting from these changes.

Mr. Dunnigan also announced that NOAA National Geodetic Survey Director David Zilkoski would retire at the end of the year, and thanked him for his service.

HSRP Chair Tom Skinner then reviewed the agenda, including the Stakeholder and Climate Change Panels on Day One, and briefly described how Day Two would unfold with a facilitated discussion to develop an HSRP strategy for the next several years. He then introduced the Stakeholder Panel, which was assembled to provide the HSRP better understanding of how people use NOAA navigation products and services, and how those products and services could be improved.

Regional Stakeholder Panel

Steve Fidler, Tampa Bay Port Authority (TBPA), spoke of the very proactive port community in the Tampa, Florida area, which provided the seed money to operate and maintain the first NOAA Physical Oceanographic Real-time System (PORTS®) in 1991. The PORTS® is very important to Tampa Bay as evidenced by reducing groundings 50% in the first year or two after it came on line. Mr. Fidler noted that what he thinks missing with PORTS® is a visibility factor—TPBA wants to see visibility sensors on its PORTS® for accurate fog density measurements. Mr. Fidler also mentioned the test study of U.S. Coast Guard Automated Identification System (AIS) and PORTS® integration now being

conducted in Tampa. He stated that funding for PORTS® is an issue for the local partner. Mr. Fidler then praised the efforts of NOAA's Navigation Response Teams (NRT) during the 2008 hurricane response, but pointed out that there is only one NRT to cover the entire Southeast gulf region. He recommended NOAA keep funding the NRTs because their work is critically important, but he also expressed concern that mapping of navigable waters is still insufficient. Areas recently surveyed are extremely helpful, but TBPA wants more mapping to know where obstructions and other hazards are, so they can be removed for navigation safety and not just marked. Mr. Fidler also praised the efforts of Michael Henderson, NOAA's Regional Navigation Manager, and closed with a suggestion to leverage Homeland Security grants as possible funding for PORTS®.

Tom Watters, Florida Department of Environmental Protection (FDEP), explained FDEP's bureaus and responsibilities, and articulated the need for coastal data to interpret the shoreline and to monitor long-term change. He described the cooperative agreement between FDEP and NOAA through the state wetlands program that maintains tidal benchmarks around the perimeter of the State of Florida. Mr. Watters said FDEP would like to see NOAA's network solution for long line baselines (the On-line Positioning User Service, or OPUS) evolve to a second tier of control benchmarks that users can use to place a network into control stations at two-mile intervals. He said FDEP also needs more frequent near-shore laser mapping (LIDAR) for topographic and bathymetric data for contour maps. *Mr. Watters' slides are available here*: http://www.nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Regional_Monitoring.pdf.

Captain Don Lewis, Jacksonville Maritime Exchange, began his presentation by explaining why the Exchange was founded in the Port of Jacksonville. It started out as a Harbor Safety Committee, then after 9-11 became the umbrella organization for the Port Security Committee, and is now the fiduciary agent for the Port Security grants for the Port of Jacksonville. The Exchange is presently looking into the possibility of whether or not something like PORTS® might fall under the umbrella of Homeland Security. Capt. Lewis noted that there is no actual port entity in Jacksonville for port coordination and infrastructure, so the Exchange could help address resource, funding and leveraging issues. Leveraging is important as operations and maintenance costs are rising, deeper and deeper draft ships are coming into port, there are fewer dollars for dredging – funding is always the issue.

Capt. Lewis said that from a port and mariner stakeholder perspective, NOAA's information, products and services are absolutely critical, but that NOAA does not do a good job of making stakeholders and the public aware of how critical NOAA data really is. He suggested that NOAA develop outreach/educational materials for maritime stakeholders around the country to use when presenting about NOAA's information, products and services—identify the critical elements of navigation and why tools such as PORTS® work. Captain Lewis also discussed the importance of including boundary lines on charts because, as of the 9th of

December, all of the East Coast ports will face a 10-knot speed restriction for at least 20 miles outside of the headings of their ports to protect right whales.

Captain Calvin Hunziker, Council of American Master Mariners, commented that education of mariners and the general public is sorely lacking as far as anything maritime, including electronic navigation (*presentation available here*: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Captain_Hunziker_ppt_for_HSRP_11_2008.pdf).

He noted that today we have Coast Guard's AIS, NOAA's Electronic Navigational Charts, Electronic Chart Display Information Systems (ECDIS), the Global Positioning System, Wide Area Augmentation System, the Global Maritime Distress Safety System, the Internet and E-mail on ship bridges. Captain Hunziker went on to say that technologically we're doing great and improving daily; unfortunately, on interface and human factors we've got a long way to go. Because of the many variety of systems available to the ship owner today, with each manufacturer using a different set of symbols to depict navigational aids, wrecks, or obstructions, it becomes incumbent on the ship's master to be intimately knowledgeable about the charting system used and the symbols displayed on his vessel. Further, the amount of information displayed on the ECDIS screen can become overwhelming and confusing. A major stumbling block to shifting fully to ECDIS is the ongoing cost of ENC updates for the ship owner.

Recent accidents and the master's inability to explain the symbols used on his charting system have renewed awareness of this problem. Captain Hunziker asked, "Where are the regulations that state that a master and/or mate must be proficient in using electronic navigation instruments available to them on the vessels that they serve on?" The answer: other than radar and Automatic Radar Plotting Aid certificate requirements in the United States, there aren't any other requirements.

Mark Luther, University of South Florida (USF), College of Marine Science, spoke about Tampa Bay PORTS® as a component of a coastal ocean prediction system for Tampa Bay and provided slides as a reference (*available here*: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Luther-HSRP-11-19-08.pdf).

Safe and efficient navigation is the primary focus for Tampa Bay PORTS®, but there are a host of other end user groups that are well documented, from hazardous material spill response to fisheries management, red-tide study, sediment transport studies, dredging studies, and the like.

Based on the success with Tampa Bay PORTS®, a number of additional sites were added along the West Coast of Florida to measure wind and wave current type, temperature, and salinity. The USF College of Marine Science manages this Coastal Ocean Monitoring and Prediction System (COMPS). All the data from these sites go through the NOAA National Data Buoy Center for quality control and are accessible through NOAA from there. One particular sensor site

is also home to a suite of instruments to look at several environmental issues in the Bay, primarily nutrient decomposition from the fossil fiber, in addition to marine transportation. Both Tampa Bay PORTS® and COMPS are components of the Gulf of Mexico Ocean Observing System and the Southeastern Atlantic Boat Association, which are regional contributions to the U.S. Integrated Ocean Observing System (IOOS).

Mr. Luther also discussed the issue of AIS units on vessels. To him the data set is an issue because the pilots don't really need to know what's happening right now at certain points along a ship channel; they need to know at some point in the future, when they are trying to get there. A predictive model is needed for this. To have maritime domain awareness, you must know what the wind and waves and currents and tides are doing. Mr. Luther also stated that information on wind, wave, current and tide is critical to maritime port security and should be funded as such, and mentioned the USF Navigational Center for Maritime and Port Security recently established in collaboration with SRI International.

He went on to say that port security is much more than terrorist attacks. A terrorist attack has never shut down a U.S. port; this does not mean it couldn't happen, but it never has. Human error, along with natural disasters, weather, etc…, has shut down ports in the recent past. The Skyway Bridge disaster is an extreme example of that, but the recent Gulf storms that shut down the Port of Houston and the Port of New Orleans are just as much a part of maritime port security as terrorist-related activities.

Open Discussion

Topics of discussion following the presentations included:

- Number of ports in Tampa
- Reporting the cost-benefit ratio of PORTS® to the Senate and House Conference Committees
- Matching topographic data with bathymetric data
- How human/machine interface affects accidents
- Suggestion to invite Deputy Director, Navigation Transportation Board, to present at next HSRP mtg
- Federal funding of the PORTS® system including O&M
- PORTS® and AIS integration
- Traffic, cargo and type of maritime users in the Tampa port areas
- ECDIS display issues
- Uniformity of chart symbology and standardization
- Education and training
- The adequacy of America's port infrastructure in dealing with the increase in maritime trade, congestion over the next 30 years
- Maritime transportation education issues
- An Internet service to facilitate the exchange of data in cross platforms
- Right whales

Mr. Dunnigan asked the Stakeholder Panel whether NOAA should be working to simplify the ECDIS display or including all data. Capt. Hunziker said that it should all be included [users can select layers to display] and that PORTS® information should come over AIS and be displayed on ECDIS. He also stated that uniformity of symbology on the charts is a major issue. Capt. Barnum noted that NOAA is working with international charting community to standardize beyond the raster chart, that ECDIS is an international standard and education is key. Mr. Dunnigan suggested the HSRP might bring the maritime education issues to the CMTS for interagency collaboration on it.

Mr. Dunnigan also asked whether stakeholders had a plan for doubling capacity in a port to deal with trade growth and congestion. Response was that congestion is not really a problem right now, but cargo handling capacity is the limiting factor.

Office of Coast Survey (OCS) /National Geodetic Survey (NGS)/Center for Operational Oceanographic Products and Services (CO-OPS) Strategic Plans

Note: Prior to the Tampa meeting, HSRP panel member working groups reviewed the draft strategic plans developed by OCS, NGS and CO-OPS. **T***he powerpoint slides used to capture working group comments are available at:* http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/3_offices_strategic_plans.pdf.

HSRP member Matthew Wellslager went over the OCS strategic plan review and recommendations. Comments included adding more imagery to convey points, and suggestions to develop additional plans for navigation response team and NOAA fleet hydrographic survey work, detailing new ships and technology capacities. Mr. Wellslager said the plan was a good, high-level document and that it would be useful to see the more detailed drafts when made available.

HSRP member Captain Sherri Hickman, who led the review of the CO-OPS plan, said that the plan addresses a number of what the HSRP believes to be U.S. Army Corps of Engineers capabilities, and that admiralty lawyers need to be included on the partners and customers page because NOAA's information becomes evidence in a collision or grounding. Also the plan does not discuss budget, and nothing can be implemented without a budget, timeline and accountability.

HSRP member Captain Andrew McGovern noted that the plan discusses the Homeland Security aspect and the fact that NOAA was contracted by the Pentagon to do countermine warfare surveys (high-resolution surveys) of our channels after 9-11.

Dr. Jeffress, working group lead on the NGS strategic plan, complimented NGS on its plan and noted the work NGS does is critical to the entire geospatial industry. The plan was very succinct, but could be improved with dates,

definition of the Continuously Operating Reference System, a highlight of the National Vertical Datum Transformation Tool, and a wording change to "become a recognized global leader."

CMTS National Strategy Review and Activities Update

Mr. Welch spoke briefly on the National Strategy put together by the Committee for the Marine Transportation System (CMTS) to map out priorities and interagency future activities. He referenced a hard copy summary of his points and some slides provided by Gary Magnuson, NOAA staff detailed to the CMTS executive secretariat (*both available here*: http://www.nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/CMTS-CT10-30_Presentation.pdf and http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/HSRP_Summary_CMTS_National_Strategy.pdf).

The CMTS National Strategy contains approximately 34 recommendations for various actions to be taken to improve the MTS. The strategy commits a full 2.5 pages to Arctic transportation issues, which the HSRP would hear more on later in the day. Mr. Welch questioned what the CMTS will do beyond the Strategy, that because the CMTS is not institutionalized, it could be considered vulnerable to dismantling in the new Administration. Mr. Dunnigan followed with information on how the CMTS is fleshing out the strategy through integrated action teams. Presently NOAA is the lead on the most active team to integrate technology.

National Ocean and Coastal Mapping Strategic Action Plan

HSRP MemberJonathan Dasler provided comments (*available here:* http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/HSRP_Comments_National_Ocean_and_Coastal_Mapping_Strategic_Action_Plan.pdf)

on the National Ocean and Coastal Mapping Strategic Action Plan per request of Roger Parsons, NOAA Integrated Ocean and Coastal Mapping (IOCM) Coordinator at the July 2008 San Francisco HSRP meeting. Mr. Dasler said that this action plan falls in line with HSRP "5 Most Wanted" recommendations and provides a more coordinated mapping effort across agencies. He also mentioned that in the economic climate that lies ahead, it is hard to argue against pooling resources for more integrated mapping. Mr. Dasler said that the planning effort could be more comprehensive, and that a part of the plan should be to develop a vehicle to share information across communities and agencies. Some concerns voiced regarding the plan's inadequacies include:

- How will the mapping be funded?
- Where are the lines of authority in moving forward?
- Accountability at a high level and how that comes into play?

Mr. Dasler also remarked that it would take seed money to get this IOCM effort really started. He said that Senate Bill 39 on IOCM and Coastal Exploration and the NOAA Organic Act would address some of the funding issues, along with HR 2400 on the same subject. He requested a status update on the bills.

Following Mr. Dasler's presentation the HSRP discussed the reach and import of these strategic plans to the new administration. Mr. Dunnigan suggested that the HSRP put forward a recommendation to NOAA on the value of the CMTS agency collaboration and the need for the new Administration to continue it and an interest in MTS.

Meeting Summary Approval

The minutes from the July 29-30, 2008 HSRP meeting in San Francisco were approved by all panel members present.

Right Whales

Andy Armstrong, co-chair NOAA Joint Hydrographic Center (JHC) at the University of New Hampshire, gave a brief presentation (available here: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/20081118-Florida-AndyA_short.pdf) on a joint partnership between JHC and the Coast Guard, the State of Massachusetts, and Cornell University concerning right whale collisions with ships. The project uses information gathered over a number of years on:

- the location of whale ship strikes;
- historical accumulation of right whale sightings; and
- traffic patterns in the area using Coast Guard's Automated Identification System (AIS) information.

The plan will use automated buoys equipped with hydrophones and computer software to detect whale calls in the Boston traffic separation scheme and alert mariners to the whales.

After Mr. Armstrong's presentation, the HSRP discussed funding for this type of program. The Panel also discussed the documentation and verification of actual vessel strikes and man-caused whale fatalities.

Public Comment Period

No comments from the public.

Lunch Recess

A group photo was taken at the Lunch Recess.

Integration of PORTS® Data into AIS

Michael Szabados, Director of the NOAA Center for Operational Oceanographic Products and Services**,** gave a presentation on how NOAA is

working with the Coast Guard to integrate PORTS® data into AIS. *The powerpoint slides are available here:*
http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/PORTS_over_AIS_for_HSRP_Tampa_2008_Szabados.pdf

The testing of the system prototypes started in Tampa Bay in 2008. The Coast Guard manages the AIS system, and the primary purpose of the AIS test is to determine if the Coast Guard can actually grab the PORTS data format and transmit it to a ship in a usable and reliable form without delay. According to the tests, everything seems to be on track and there is no delay in the data showing up aboard ship for use by the mariner. There is room for improving how to display the information, but that will come later. Mr. Szabados explained that PORTS® was just the initial test bed, but the potential exists to transmit data from National Weather Service buoys and other appropriate platforms.

After Mr. Szabados' presentation, there was a brief discussion concerning the Coast Guard Vessel Traffic System locations, the implementation criteria, the timeline, and the amount of required bandwidth.

Mr. Welch recommended that the report from the completed test study be added to a future HSRP agenda.

Climate Stakeholder Panel

Keelin Kuipers, NOAA Coastal Services Center, spoke about three things in her presentation "A Rising Tide Floats All Boats," *available here:*
http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/HSRP_Kuipers_FAHEY_draft_Nov_08.pdf

1. The challenges coastal communities are facing when it comes to climate change and, in particular, sea level rise.

   Ms. Kuipers presented a map depicting a variety of disasters the U.S. has experienced over the past several decades: hurricanes, tropical storms, floods, heat waves and drought. These events are all affected by climate, and over the next century or so the map will get a lot busier. She also noted that the U.S. has sustained 78 weather-related disasters over the last 28 years, with overall damage costs exceeding over a billion dollars in each event. Sixty-six of these disasters occurred in or after 1990; and total costs for the 78 events were estimated at $600 billion using a GNP index.

2. How NOAA's Navigation Services data and models can, and are, being used by coastal decision-makers to address climate change impacts now.

   Ms. Kuipers asked, "So why develop a sea level rise plan?" Many states are beginning to address this issue and a recent survey by the Coastal States Organization shows that about 82 percent of state Coastal Zone

Management (CZM) programs are looking at this in their climate adaptation plans for the next three to five years.

3. Examples of specific partnerships and projects underway to help address some of these coastal issues, not only from a sea level rise focus specifically, but also from a broader perspective on coastal hazards.

   Ms. Kuipers discussed Digital Coast, a website repository for information, tools, and training in coastal zone data. Resources are available to help a variety of coastal decision-makers with information on climate change, coastal hazards, land cover change, and a whole range of management issues, but there are critical gaps.

In closing, Ms. Kuipers stated that over the next 50 to 100 years and beyond, coastal communities will be seeing increased flooding events and intensity of storms. These issues can really threaten coast infrastructure development and our natural resources. It is important to provide now the information that coastal communities need to make decisions on where they're placing high-value economically important infrastructure, so that in the future we don't lose these kinds of investments. We also want to protect the natural resources like wetlands and other areas that can also ultimately protect coastal development and people in these regions. NOAA's Nautical charting, geodetic positioning, tides and currents -- all of those products and services are very important for addressing the issue of sea level rise—this need for high-resolution data is being continually requested by coastal managers. We need to develop better high-resolution tools and models that can help coastal communities make decisions about what the impacts of sea level rise are. We also need to recognize that these decisions are being made every day, on a permit-by-permit basis by coastal communities. The information that we can and should provide is available through NOAA and other organizations and agencies. It is our responsibility to insure that coastal managers have the information they need to use and build most effectively.

Judy Gray, NOAA Atlantic Oceanographic and Meteorological Laboratory (AOML), spoke about the research that is being done within NOAA specifically on the relationship between hurricanes and climate. *Her presentation is available here:*
http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Climate_Hurricanes_HSRP_11-19-08.pdf.

AOML houses the Hurricane Research Division of NOAA. This is not to be confused with the National Hurricane Center (NHC) which is part of the National Weather Service. AOML has a close relationship with the NHC, but does no forecasting. AOML does the research that provides a basis for improved forecasting.

Ms. Gray explained that there have been great strides made in the last few decades in hurricane track forecasting, and we can now forecast tracks at five

days out with the accuracy that ten years ago we didn't have at three days out. There has been a lot of progress with a huge impact on evacuation scenarios and such. She went on to say that NOAA has not yet done as well with intensity forecasting.

Ms. Gray next touched on three aspects of climate/hurricane interaction:

1. rapid intensification;
2. the relationship with the ocean; and
3. the Saharan Air Layer (SAL).

Rapid intensification is one of the most difficult things to forecast.
The role of the ocean is very important because for almost the entire life cycle of a hurricane it is one of the biggest energy sources for hurricane development and maintenance. Much work has focused over the last few years on making ocean measurements commensurate with atmospheric measurements, looking at surface ocean temperatures and also collecting bathymetric thermographs, measuring temperature with depth; getting the three-dimensional structure of the ocean heat content under the storm. This is important because the hurricane doesn't just give energy from the top.

Ms. Gray also talked about an atmospheric phenomenon -- the SAL. The dust storms that come off the Sahara are very important in hurricane formation and for a lot of other reasons, too. It turns out the Saharan dust is one of the main mineral sources for all of the ecosystems in the Caribbean and Bahamas. There is no local source of phosphorus for iron; much of it comes from these dust clouds.

Ms. Gray discussed underlying arguments about global warming and that the impact of global warming on hurricanes is based on the assumption that you actually have data that can measure this. However, we don't have a long term record of data for hurricanes measured by satellites. One of the fundamental arguments put forward in recent years about the increase in hurricane activity is based on bad, or insufficient, data.

Ms. Gray also stated that a ship heading into port is not just interested in how high the tide is or even sea level rise. The mariner is also interested in how much water is flowing out of the river that feeds that port because it can make a huge difference in observed water levels; it is very important for water managers in South Florida to know about the role of river in/outflow into their ports.

In closing, Ms. Gray spoke in defense of hurricanes, saying they are a part of the natural system and are therefore important.

David Seris, U.S. Coast Guard Waterways Management Branch, District 17, began his presentation by thanking everyone on behalf of District Commander

Admiral Brooks for the opportunity to speak about the Arctic at the HSRP meeting. *Mr. Seris's presentation is available here:* http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/CG_HSRP_Brief.pdf.

Mr. Seris stated that the Coast Guard's assessment is that the Arctic is changing and the amount of activity seen by the operational units in that area is really unprecedented. Strategic drivers include the opening of the Northwest Passage, increased use of polar shipping routes, oil and gas development, engagement with natives, ratification of Arctic boundaries. A problem is out-dated hydrographic charting data— updated bathymetric conditions, ice observations and forecasts are needed.

Mr. Seris presented a diagram of the 200-nautical mile limits of the U.S. Exclusive Economic Zone (EEZ) and explained that nations are now trying to extend their claims to extended continental shelf [under U.N. Convention on Law of the Sea (UNCLOS) Article 76]. He noted that the boundary line between the U.S. and Russia has not been approved by the Russians, nor has the boundary line between the U.S. and Canada. Mr. Seris said that disputed boundaries are watched very closely by the Coast Guard, which spends a great deal of time patrolling the U.S. and Russian maritime boundary. As sea ice melts and there is more open water in the Arctic, this becomes a bigger job for the Coast Guard.

Mr. Seris noted that because the U.S. has not yet ratified UNCLOS, we are behind the other Arctic nations already mapping for claims to extended continental shelf. Canada, Russia, and Denmark have all approved the treaty and are actively engaged in seafloor mapping for claims.

Mr. Seris then spoke about the possibility of the Canadian Arctic Northwest Passage opening more frequently due to sea ice melt to provide shorter shipping routes. He said the Passage is opening enough in the summertime that a number of cruise and personal vessels are making the transit, and even though the maritime industry does not seem to be actively pursuing the Passage as a new trade route right now, it certainly could happen in the future.

Mr. Seris went on to say that two things are going to impact the need for hydrographic surveys for current and updated Arctic bathymetric information. The first is ship traffic management in the Arctic; the second is oil and gas development now proceeding in the Arctic. He stated that this second factor will probably happen faster than the establishment of any shipping routes because there is active oil and gas exploration happening right now north of the Chukchi Sea.

Several other areas of concern in the Arctic that Mr. Seris touched upon were:

- coastal erosion;
- coastal flooding;

- protecting our energy critical infrastructure;
- northern migration of fish;
- enforcing domestic fisheries law;
- management of fisheries;
- threatened and endangered species;
- patrolling closed-fishing and no-transit areas;
- eco-tourism type activities;
- commercial exploration in the Chukchi Sea;
- zinc mines;
- Waterways Analysis and Management System study;
- search-and-rescue exercises;
- Alaska native and tribal engagement; and
- suitability of products for operating in the Arctic environment.

Mr. Seris described the most recent Coast Guard cutter SPAR tour up to western Alaska in Summer 2008, and noted that Lt. J.G. Matt Jaskoski of NOAA's Office of Coast Survey came along to evaluate hydrographic conditions in the areas visited and developed a report on his observations (*available here:* http://www.nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Arctic_Chart_Evaluation.pdf). Mr. Seris commended NOAA for helping Coast Guard assess the navigational needs in the region, noting that it was valuable to have NOAA aboard to help identify landmarks on charts and work on other navigation concerns. He also stated that the Coast Guard would be interested in having a NOAA Navigation Response Team crew deploy on another Coast Guard cutter trip in the Arctic.

Mr. Seris further noted that ice observation forecasts and products are not meeting the needs of the vessels operating in the Arctic— problems include timing, frequency, and readability. Mr. Seris also stated that a critical part of operating in the Arctic is engagement with the natives and other groups. In closing, Mr. Seris emphasized that the Arctic is upon us and that the Arctic boundaries need to be finalized and ratified. He also stated that it is not the Coast Guard who will make development decisions on oil and other activities, but it is the Coast Guard's job to provide maritime safety and security for the activities that do happen in the Arctic. He added that the Coast Guard is not alone in having Arctic responsibilities; other federal and state and local agencies also have a role in what happens there.

At the conclusion of Mr. Seris's presentation, Mr. Skinner opened the meeting to questions and comments. Discussion then took place on the following topics:

- ocean surface topography;
- thickness of heat waves in the ocean;
- connection between the dip in the jet stream and deflexion of hurricanes;
- geodetic and water level information;
- reducing greenhouse gas emissions;
- NOAA participation in a Coast Guard summer exploration;

- infrastructure survey; and
- sea level rise.

Mr. Szabados noted that Navigation Services is more than just providing information; it is maintaining the expertise to understand geodesy and sea level datums, and understanding the long-term trends in the Arctic. NOAA has a lot to offer beyond the data itself.

Mr. Welch suggested that the Panel might make a recommendation to NOAA to consider actively continuing placement of a NOAA survey representative on any Coast Guard exploration tours if the offer is extended by the Coast Guard again.

NOAA Electronic Navigational Charts (ENC): Status Report and External Expectations

Captain Steve Barnum, Director NOAA Office of Coast Survey, gave an update on some issues that have been occurring. Highlights from his presentation (available here: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/HSRP_ENCs Barnum_11_11_08.pdf) include:

- International Maritime Organization carriage requirements for Electronic Chart Display and Information Systems (ECDIS) start in 2012;
- The International Hydrographic Organization is committed to full worldwide coverage for ENC suites by 2010;
- Web downloads are over a million a month for ENCs and 300,000 for Raster Nautical Charts;
- There are 74 agreements in place for the Raster nautical charts, and 8 vendors for the certified distributors and value-added distributors;
- The BSB format Raster chart product does not meet Safety of Life at Sea nautical chart requirements;
- MapTech, NOAA's sole contract provider of the BSB source and Raster charts, went out of business unexpectedly. NOAA acquired the company's software and rebuilt the system in-house;
- The Coast Guard is currently working on draft ECDIS rulemaking;
- OceanGrafix continues as a print-on-demand chart provider, but the plan is to open the market to additional providers;
- With the budget flat since 2004, the capacity to produce nautical charts has diminished;
- Outsourcing of the maintenance of ENCs; and
- Lack of increased funding.

Capt. Barnum stated that the goal is to have one production line so that a piece of source data is applied only once in the database rather than twice as currently happens now. Capt. Barnum further outlined that NOAA has made great strides in improving delivery of navigation information; over 43% of the downloads for

NOAA Raster nautical charts have been by people with iPhones. NOAA has contract partners to help maintain the ENC's, but quality control is done within NOAA by expert NOAA cartographers.

Mr. Welch requested that NOAA produce a short written summary of the MapTech experience and Capt. Barnum agreed to deliver. A discussion then followed as to the reasoning behind the sudden closing of MapTech.

HSRP member Larry Whiting asked how much of the ENC maintenance is outsourced to places like India. Capt. Barnum replied that a significant amount is, just as other countries including the U.K. also outsource to India.

Public Comment Period

No comments from the public.

Review of Proposed Recommendations from Day 1, Meeting Wrap-up, Next Steps, Expectations for Day 2

HSRP Chair Thomas Skinner commented that he saw two categories come out of the meeting: 1) the things that need to be followed-up on; and 2) the policy-oriented issues that would be the official HSRP recommendations to the NOAA Administrator.

The following topics were then discussed:

- Following up on Admiral West's suggestion for a speaker at the next HSRP meeting on the human machine interface issue relating to navigation;
- ergonomics;
- numerology/symbology; and
- continuation of the CMTS.

Mr. Welch suggested preparing a one-page letter for the NOAA Transition Team that summarizes the HSRP's 5 Most Wanted recommendations with an added paragraph supporting the CMTS. Mr. Skinner agreed to draft such a letter. Capt. McGovern stated that the one-pager should reiterate HSRP interest in funding for PORTS®. ***HSRP Member Captain Tom Jacobsen*** stated the Panel should continue asking for PORT®S funding, but also look for other alternatives.

The discussion then continued and included the following topics:

- full funding request for PORTS versus partial Federal and partial private sector funding;
- developing a vehicle for dissemination of planned mapping areas;
- the climate change panel;

- sea level rise;
- increasing partnerships in the coastal zone; and
- external management interest in NOAA.

Mr. Whiting suggested that the Panel make a recommendation on at least putting a survey plan together for the Arctic/Northwest passage.

HSRP member Captain Myrtidis suggested taking a vote on the general topics on Day 2 to give time to consider them. Mr. Skinner concurred and said that the HSRP could vote on the general intent of the recommendations, but final text could be circulated by email after the meeting for concurrence.

Meeting Adjourned

HSRP members agreed to continue the discussion the next morning, and the meeting adjourned at 5:30 p.m.

Thursday, November 20th

Call to Order

HSRP Chair Thomas Skinner called the meeting to order on Thursday, November 20, 2008, at 8:00 a.m.

Mr. Skinner introduced ***Lynne Carbone***, who would facilitate the HSRP Strategic Planning Session that would follow the finalization of HSRP recommendations. He explained that the strategic session was designed to help the HSRP focus on what to consider over the next several years.

Recap of Day 1

Mr. Skinner discussed the possibility of changing the format of future meetings to have the first-day presentations end early to allow adequate time to reflect and consider what was presented, and to have more time for discussion before voting on recommendations. He also said that the HSRP had agreed to support a voted motion for recommendations in principle, subject to future refinement by e-mail, and that this was how he intended to proceed hearing no objections.

Motions for the following recommendations were then made, discussions were held, and they were each voted on individually:

1. The HSRP recommends supporting PORTS® with a focus on the particular characteristics of Tampa Bay since there are integrations with other information and IOOS as a potential positive that should be replicated, if possible, focusing on the PORTS® data and making sure that data is provided with no reduction in Quality Assurance (QA) or Quality Control (QC) or anything similar.

2. The HSRP recommends that NOAA continue interagency participation by the incoming Secretary of Commerce and incoming NOAA administrator in the Committee for the Marine Transportation System (CMTS). The HSRP advocates continuation and institutionalization of the CMTS through the issuance of a presidential Executive Order or the enactment of authorization legislation as appropriate.

3. The HSRP recommends the placement of a NOAA officer on Coast Guard Cutter missions during 2009 deployment to the Arctic Ocean. The HSRP recommends that both agencies continue their operations in the future with respect to expanding hydrographic services in Northern Alaska.

4. The HSRP recommends that NOAA should investigate and encourage portraying speed reduction zone information on its navigation products [with respect to whale strikes].

5. The HSRP recommends that NOAA develop a vehicle for the dissemination of planned mapping to other agencies and coastal communities, well in advance of operations, to provide opportunity to address other needs and expand surveillance. The HSRP recommends that NOAA implement an internal coordinating mapping effort as a demonstration of integrated mapping.

The HSRP also recommended that NOAA continue to move forward with further electronic disseminations of its real-time or navigational information to mariners. But comments from the Panel on using the differential GPS data stream and other suggestions led Mr. Skinner to suggest that this topic would benefit from additional information to be presented at the next HSRP meeting.

After the recommendations were approved, Mr. Skinner thanked everyone and turned the meeting over to Ms. Carbone.

Facilitated HSRP Strategic Planning Session Process Overview, Context and Framework for the Panel's Planning

Lynne Carbone explained that the strategic planning session would follow a structure but be very interactive. She identified what would be accomplished by the end of the day:

1. Understand the current and emerging environment and the implications for NOAA's navigation services mission.
2. Identify issues or challenges in which the HSRP is uniquely positioned to advise and contribute to over the next three to four years.
3. Focus on the next 12 to 24 months to determine what the HSRP should start on.

Mrs. Carbone explained how the Panel would look at external drivers, and how these drivers might influence or impact the Panel's mission, vision and future with respect to advising the NOAA Undersecretary on NOAA's hydrographic services and navigation information, products and services. As part of the strategic process, Mrs. Carbone directed the Panel to consider how it can:

- prepare for the future;
- focus on opportunities;
- capitalize on Panel strengths to realize those opportunities; and
- actually take advantage of changing environments.

Mrs. Carbone also said that during transition, and in a new administration, things can actually happen that might not otherwise because of the change. Transition is an opportunity to innovate in a changing environment. Strategic thinkers are partners to progress.

Sharing of Highlights of Recent Joint Strategic Planning by NOAA Navigation Services

David Zilkoski, Director National Geodetic Survey, presented highlights, management activities, and concerns of the tri-office collaboration between OCS, CO-OPS and NGS (*presentation available here*: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/TriOfficeCollaboration_for_Tampa_v2.pdf)

These include:

- GPS water level buoys;
- VDatum;
- Maptite (restoration planning tool);
- Climate change needs;
- Ports 101 briefs for congressionals and other stakeholders;
- Integrated ocean and coastal mapping;
- Creating joint milestones;
- Insufficient staff, training tools, and technology;
- Lack of infrastructure and resources;
- Integrating navigation products and services for product change in our resources;
- Sea level rise;
- Strengthening navigation services for emergency response; and
- Mapping—what are the real requirements?

Mr. Zilkoski stated that one of the major challenges was to raise awareness and relevance of programs with respect to climate.

Highlights of Relevant Panel Discussions

Ashley Chappell, Coast Survey, summarized the recommendations and discussion items from three prior meetings (*available here*: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/Chappell_11_20_08_HSRP_Potential_Plan_Items.ppt

which included:

- Survey backlog;
- Backlogs in the Arctic;
- Homeland Security requirements;
- Improving integration of coastal mapping;
- PORTS®;
- Integrated Ocean Observing System;
- Strengthening navigation services for emergency response;
- Endorsing the National Academy of Science Mapping study;
- GRAV-D;
- Data storage and processing, delivery of large data sets, acquiring and distributing data, data continuity; and
- Outreach and awareness.

Facilitated HSRP Strategic Planning Session

Ms. Carbone led the HSRP in an Opportunities/Threats exercise, stating that in strategic planning, you start thinking about the future and the environment trends facing you as an organization, as a community. She then asked everyone to give an example of an opportunity or threat and some of those identified were:

- Economy;
- Climate change;
- Sea level rise;
- Rapid changes in technology;
- More needs, less money;
- Evolution of real-time networks with GPS and adapting those for positioning;
- The use of new web technology in services;
- New technology for data acquisition and dissemination;
- Keeping up with training and educational use of technology
- New technology for data delivery information;
- Resumption of trades with nations such as Cuba;
- Increased demands and stresses on coastal environment; and
- Increase in range of transportation, number of ships coming in.

The results of these sessions are captured in more detail at Appendix 3.

Next, Ms. Carbone went over the following guidelines to be used as the HSRP chooses what it wants to do and how it wants to proceed with those choices:

1. Be honest about the organization's realities.
2. Engage in candid dialogue about what can and should be done.
3. Be completely realistic and find realistic solutions to challenges.
4. Ask the tough questions before committing to implementation.

Ms. Carbone explained the process outlined in the workbook, asking for breakout groups to identify three strategic priorities for the Panel and then provide information on how the Panel should accomplish the priorities in the next 12 to 24 months.

At this time Ms. Carbone divided Panel members into everyone into groups for the brainstorming sessions after lunch, and turned the meeting over to Mr. Szabados to introduce the Working Lunch topic on CO-OPS contracting.

Public Comment Period

No comments from the public.

Working lunch for Panel Members: CO-OPS Contracting 101

Mr. Szabados introduced ***Mr. Mitchell Ross, NOAA Procurement,*** and explained that he had asked Mr. Ross to make this presentation (*available here*: http://nauticalcharts.noaa.gov/ocs/hsrp/archive/nov2008/HSRP_FACA_Brief_11_20_2008_Contracting.pdf) to fulfill an HSRP request for more information on CO-OPS and NOS contracting procedures at the July 2008 San Francisco meeting.

Mr. Ross began his acquisition system presentation by explaining to the Panel that NOAA is trying to balance the need for good contractor relationships with the need for strong competition to get good value for the government. Questions like how much subcontracting is required in the work? How many records are we going to make? Is it going to be a multiple or single award? -- these are the factors that go into the contracting strategy.

Mr. Ross next explained the fundamental difference between Brooks Act Architect and Engineering (A&E) and Best Value, how we got to this, and how this ties in with the Hydrographic Services Improvement Act (HSIA) that says NOAA must always use the Brooks Act whenever involved with hydrographic data contracting.

Mr. Ross went on to explain that contracting in NOAA, in CO-OPS, and in all of the parts of the bureau is done by relying on three separate independent performances:

1. a program manager establishes the need;
2. a funds certifying official, who is independent of the program manager and the contracting officer, determines that the appropriate funds are authorized and available; and
3. a warranted contracting officer obligates the government in the form of a written contract.

At the conclusion of the presentation there was a lengthy discussion on:

- state law and the fact that there are states that require professional engineers to perform certain tasks associated with architect engineering, surveying and mapping;
- how we justify the course of action that we take;
- if quality service is capable of being provided under a non-Brooks Act A&E contract;
- the number of available contracting officers; and
- contractors needing a policy on subcontracting to start leases on businesses.

Mr. Whiting commented that NOAA could improve its cost benefit with better estimates for production on contractor jobs. Mr. Whiting further stated that one of the real problems with NOAA contracting is the length of time from the solicitation to the selection and asked if there was any way that NOAA could speed up those procedures.

Mr. Ross replied that NOAA is operating under a declining acquisitions work force, mandates are expanding, and NOAA is not likely to get any more acquisitions people. The amount of time it takes to award a stand-alone contract is roughly six months from start.

Mr. Skinner thanked Mr. Ross for coming to the meeting and making such a helpful presentation.

At this time the court reporter was released.

Facilitated HSRP Strategic Planning Session

The HSRP worked in groups and as a unit to develop plans for next steps and future directions of the Panel. Notes and products from the HSRP Strategic Planning session that continued through the afternoon are at Appendix 3.

Public Comment Period

No comments from the public.

Meeting Adjourned

The HSRP adjourned at 5:00 p.m. after finalizing details of its Strategic and 2009 plans.

To obtain a verbatim recording of the meeting, please contact Kathy Watson at Kathy.watson@noaa.gov or 301-713-2770, or write to Kathy Watson, NOAA NOS OCS N/CSx3, SSMC3 Rm 6147, 1315 EW Highway, Silver Spring, MD, 20910.

Appendix I
HSRP Tampa Meeting Attendees
November 19-20, 2008

Voting HSRP Members Attending

Jon Dasler	Director of Hydrographic Services, David Evans and Associates, Inc.
Elaine L. Dickinson	Boat Owners Association of the United States (BoatU.S.)
Captain Sherri Hickman	Houston Pilots Association
Captain Tom Jacobsen	President, Jacobson Pilot Service, Inc. & Bay Survey Enterprises, Inc.
Gary Jeffress	Professor of Geographic Information Science, Texas A&M University – Corpus Christi
Adam McBride	Port Director, Lake Charles and Terminal District
Andrew McGovern	Sandy Hook Pilots Association
Captain Minas Myrtidis	Norwegian Cruise Line
Tom Skinner, HSRP Chair	Senior Project Manager, Durand & Anastas Environmental Strategies, Inc.
Ed Welch, HSRP Vice Chair	Independent Consultant for Maritime and Ocean Policy
Matt Wellslager	South Carolina Geodetic Survey
Rear Admiral Richard West, USN (Ret.)	former Pres/CEO, Consortium for Oceanographic Research and Education; former Oceanographer and Navigator of the US Navy
Larry Whiting	TerraSound, LLC (Retired)
Not in Attendance: Captain Ramon Torres Morales	Port of Las Americas Authority

Non-voting Members

Captain Andrew Armstrong, NOAA (Ret.)	Co-Director, NOAA/UNH Joint Hydrographic Center
Dave Zilkoski	Director, National Geodetic Survey
Michael Szabados	Director, Center for Operational Oceanographic Products and Services

Designated Federal Officer

Captain Steven R. Barnum, NOAA	Director, Office of Coast Survey

HSRP Decision Maker

John H. Dunnigan	Assistant Administrator, National Ocean Service

Presenters/Speakers

Steve Fidler	Tampa Bay Port Authority
Tom Watters	Florida Department of Environmental Protection
Captain Don Lewis, USCG (Ret.)	Jacksonville Maritime Exchange
Captain Cal Hunziker	Council of American Master Mariners
Mark Luther	University of South Florida, College of Marine Science
Terry Fluke (invited, did not attend)	Citgo and Tampa Bay Harbor Safety Committee
Keelin Kuipers	NOAA Coastal Services Center
Judy Gray	NOAA Atlantic Oceanographic and Meteorological Laboratory
David Seris	USCG Waterways Management Branch, District 17
Lynne Carbone	Lynne Carbone and Associates
Alissa Ard	Lynne Carbone and Associates
Mitchell Ross	NOAA Procurement

Staff

Kathy Watson	NOAA Office of Coast Survey
Virginia Dentler	NOAA Center for Operational Oceanographic Products and Services
Danielle Stuby	NOAA National Geodetic Survey
Ashley Chappell	NOAA Office of Coast Survey

Others/Public

Troy Dillman	U.S. Coast Guard, Tampa Bay
George Stanmore	Tampa Bay Port Authority
Dave Williams	Tampa CAMM
Steve Cropper	Tampa Bay Pilots
Greg Nipper	George F. Young, Inc.
Craig Kurial	Tampa Port Authority
Mike Aslaksen	NOAA NGS
Mike Henderson	NOAA Navigation Manager

Thomas Skinner
Chair

Edmund Welch
Vice Chair

AGENDA: Public Meeting

Wednesday, November 19, 2008
Westin Harbour Island
725 South Harbour Island Boulevard
Tampa, FL 33602

8:00 am **Formal Meeting opens**

- **Day 1 Welcome**
  John H. Dunnigan, *National Ocean Service Assistant Administrator*
  Thomas Skinner, *HSRP Chair*

8:15 **HSRP Business and Updates**

- **Approval of July 29-30, 2008 HSRP meeting minutes**
- **Brief update on current NOAA budget status**
  John H. Dunnigan

8:30 **Regional Stakeholder Panel**
Steve Fidler, *Tampa Bay Port Authority*
Tom Watters, *Florida Department of Environmental Protection*
CAPT Don Lewis, USCG (Ret.), *Jacksonville Martime Exchange*
CAPT Cal Hunziker, *Council of American Master Mariners*
Mark Luther, *University of South Florida, College of Marine Science*
Terry Fluke, *Citgo and Tampa Bay Harbor Safety Committee*

10:30 BREAK

10:45 **Coast Survey/National Geodetic Survey/Center for Operational Oceanographic Products and Services Strategic Plans**

- **HSRP working group reports, panel discussion/recommendations**
  Sherri Hickman
  Matt Wellslager
  Gary Jeffress

11:30 **CMTS National Strategy Review and Activities Update**
Ed Welch, *HSRP Vice Chair*

National Ocean and Coastal Mapping Strategic Action Plan
Jon Dasler

12:00 pm **Public Comment Period**

12:15 LUNCH

1:15 **Integration of PORTS® Data into AIS**
Mike Szabados, *NOAA CO-OPS*

1:45 **Climate Stakeholder Panel**
Keelin Kuipers, *NOAA Coastal Services Center*
Judy Gray, *NOAA Atlantic Oceanographic and Meteorological Laboratory*
David Seris, *USCG Waterways Management Branch, District 17*

3:45 BREAK

4:00 **NOAA Electronic Navigational Charts: Status Report and External Expectations**
CAPT Steve Barnum, *Coast Survey*

4:30 **Day 1 Final Public Comment Period**

4:45 **Review of Proposed Recommendations from Day 1, Meeting Wrap-up, Next Steps, Expectations for Day 2**

5:15 **Day 1 Concludes**

Thursday, November 20, 2008
Westin Harbour Island, Tampa

8:00 *am* **Formal HSRP Meeting Continues**

- Welcome, brief recap of Day 1, introduction of Day 2 strategic planning session and desired session results
  Thomas Skinner, *HSRP Chair*

8:20 **Facilitated HSRP Strategic Planning Session**

- Process overview, context and framework for the Panel's planning
  Lynne Carbone, *Consultant*
- Sharing of highlights of recent joint strategic planning by NOAA Navigation Services
  Dave Zilkoski, *National Geodetic Survey*
- Highlights of relevant Panel discussions
  Ashley Chappell, *NOAA*
- Panel members offer new and/or emerging trends which may or will influence opportunities for a future HSRP role and contributions

9:30 BREAK

- Subgroups are tasked to identify near- and long-term opportunities for an HSRP role
- Subgroups report out proposals: Panel agrees on common themes across the groups to consider for further discussion, deliberation, and decision

12:00 *pm* **Public Comment Period**

12:15 **Working Lunch for Panel Members: CO-OPS Contracting 101**
Mitch Ross, *NOAA Procurement*

1:15 **Facilitated HSRP Strategic Planning Session**

- Panel works through each common "top item" offered by subgroups as basis for strategic and annual plan components
- Discussion and consensus decisions serve as basis for HSRP 2009-2012 Strategic Plan and 2009 priorities

2:45 BREAK

3:00 **Panel finalizes HSRP Strategic and 2009 Plans**

4:15 **Final Public Comment Period**

4:30 **Meeting Wrap-up, Action Items, Next Steps**

5:00 **Public Meeting adjourns**

HYDROGRAPHIC SERVICES REVIEW PANEL noaa

HSRP
Strategic and 2009 Planning

November 20, 2008

Session Results

November 24, 2008

Table of Contents

Reflections

Long-Term (3-4 Years)	Short-Term (12-24 months)
PORTS system support	More attention on mapping charting and back-log
Be most efficient with limited budget	Expanding PORTS system and find funding
Find a long-term funding mechanism such as trust fund for navigation	Catch up survey back-log
Expertise to carry on the work we're doing	GRAV-D will allow GPS to get accurate elevations
Establish requirements of Navigational Services	Make your voice heard in the new administration (top 5 priorities)
Educate public and politicians on MTS	Expanding PORTS system and find funding
Developing budget process for NOAA, annual and 5-year- get more involved in the budget	Better awareness of Hydro Services within NOAA
Reduce vertical error in Hydro Services	Implementing use of GPS for water levels and a V-DATUM
Help NOAA improve products/services in support of navigation	Better awareness of Hydro Services both externally and within
Attention to technical innovation getting beyond government ability to keep up in navigation services	Better equate navigation services to int'l trade functions with DOC/Congress
Greater public awareness of hydro information -- get other groups involved beyond MTS	Expanding PORTS system and find funding
Continued participation in strategic planning process for navigation services	Better awareness of Hydro Services for navigation and other science e.g. climate change
Eliminate ping to chart delays	Implementing use of GPS for water levels a V-DATUM
Educate about NOAA, get HS/kids involved for future scientists/hydrographers etc.	Every port that wants PORTS gets it, fully funded
Public awareness -- duplication of effort, common path into future by multiple federal efforts -- internationally also	Public awareness -- duplication of effort, common path into future by multiple federal efforts -- internationally also
Help NOAA improve products/services in support of navigation	GRAV-D will allow GPS to get accurate elevations
Identify ways to leverage other fed resources for navigation services	Describe how navigation services critical to climate service -- foundational data, funding coming for climate

Current and Emerging Trends

- New administration
    - Democratic President and Congress
- Millions and millions of baby boomers retiring
- The economy
- Climate change
- Sea level rise
- Rapid changes in technology
- More needs, less money
- Evolution of real-time networks and GPS→ implications for positioning
- Use of new web technology and services
- New technology for data acquisition and dissemination
- Keeping up with training and education with new technology and services
- New technology for data delivery
- User expectation on product delivery
- I-phone, YouTube era
- Resumption of trade with Cuba and others
- Increase demand and stress on coastal environment
- Increase in marine transportation system- more ships

HYDROGRAPHIC SERVICES REVIEW PANEL

Strategic and 2009 Action Plan
2009-2011

November 24, 2008

Overarching Desired Outcome

An overall increase in long-term support, improvement, and delivery of NOAA's Hydrographic Services

Strategic Goals

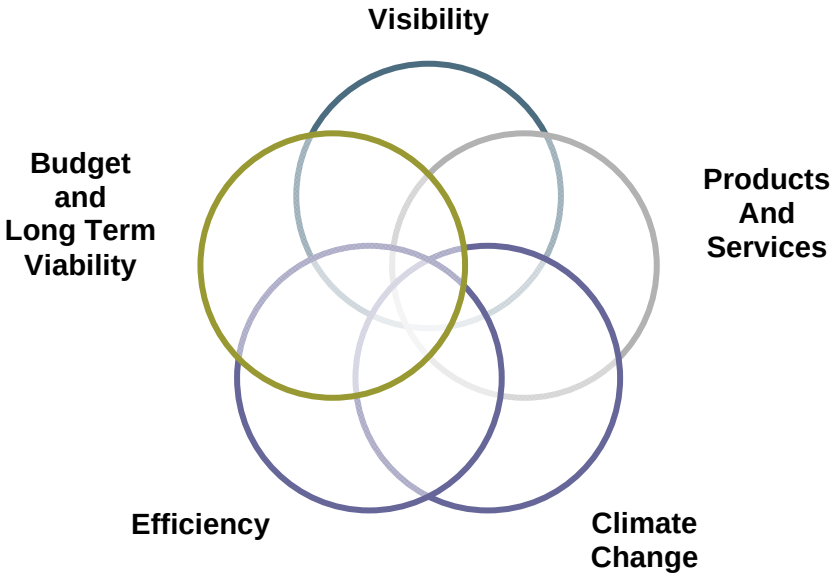
1.0 **Visibility & Awareness**
Increase the visibility and awareness of the value of NOAA's hydrographic and navigation services.

2.0 **Budget and Long-Term Viability**
Participate in the NOAA budget process and provide advice from planning to execution.

3.0 **Products and Services**
Make recommendations for the improvement of Hydrographic products and services.

4.0 **Climate Change**
Emphasize the role that NOAA's Hydrographic Services can provide to climate change policy.

5.0 **Efficiency**
Recommend innovative strategies and best in class practices to increase overall efficiencies.



1.0 Visibility and Awareness

Increase the visibility and awareness of the value of NOAA's hydrographic and navigation services.

1.1 Raise visibility to national decision-makers and funding agencies.

Year 1 Actions

- *Develop a playbook of consistent messages.*
- *Work with constituent groups to ensure that they understand Panel recommendations.*
  - *Develop simple one pagers from panel perspective for the uninformed.*
- *Develop and implement a legislative strategy with NOAA and DOC to include but not limited to:*
  - *Identify key staff on Hill.*
  - *Focus on appropriations committees.*
  - *Conduct hill visits.*
  - *Orchestrate senator questions to NOAA/DOC nominees on Hydro Services for visits and confirmation hearings.*
  - *Invite DOC/Congressional staffer to HSRP meeting.*
  - *Set up briefings with OMB, hill, etc. (post transition).*
    1. *Decide commitment of HSRP representation.*
- *Distribute recommendations to "State" delegations.*
- *Continue stakeholder panels.*

1.2 Provide NOAA with guidance and feedback on outreach plans and products.

Year 1 Actions

- *Review existing outreach materials and plans. Offer candid and constructive feedback on accuracy, language, relevance and impact.*
- *Educate HSRP Panel about new communication technologies.*
  - *Invite someone to talk about technology.*
  - *Optimize iPhone and YouTube technology.*

2.0 Budget and Long-Term Viability

Participate in the NOAA budget process and provide advice from planning to execution.

Year 1 Actions

- *Examine specific ports with PORTS.*
  - *Study funding mechanisms.*
  - *Explore alternative funding mechanisms.*
  - *Make recommendation on best model to use.*
- *Educate the Panel on NOAA and larger funding process.*
  - *Receive briefings on trust funds and government MTS spending.*
  - *Review the "political" process and drivers.*

- *Participate in PPBES and provide advice on the 2011 budget and beyond.*

3.0 Products and Services

Make recommendations for the improvement of hydrographic products and services.

3.1 Assess and provide an annual report card on the HSRP 5 Most Wanted and other recommendations.

Year 1 Actions

- *Update and validate recommendations.*
- *Deliver the annual report card for 2008.*

3.2 Evaluate the quality and usefulness of selected products and services.

Year 1 Actions

- *Select products and services for evaluation.*
- *Begin evaluation.*

3.3 Continue to recommend actions to advance progress on the HSRP 5 Most Wanted

Year 1 Actions

(insert current recommendations – Ashley)

3.4 Capitalize on IOOS to benefit Hydrographic Services.

3.5 Promote leveraging new technology for product and service enhancements.

Year 1 Actions

- *Evaluate and recommend use of new technologies to:*
  - *Reduce survey backlog.*
  - *Reduce time Ping-to-Chart.*
  - *Modify standards and practices of GPS derived water levels.*
- *Support GRAV-D to improve vertical accuracies.*

3.6 Facilitate opportunities for continuous understanding of user and stakeholder needs and requirements.

Year 1 Actions

- *Funnel more stakeholder input to NOAA.*
- *Continue stakeholder meetings and presentations.*
- *Continue Panel member attendance at events and document results for Panel use.*
- *Plan an annual calendar of key events for Panel members to attend.*

4.0 Climate Change Impacts

Emphasize the role that NOAA's Hydrographic Services can provide to climate change policy.

Year 1 Actions

- *Provide more Panel education on NOAA and other federal agencies' roles in climate change.*
- *Identify Hydrographic Services which are important to climate change.*
- *Review NOAA's requirements for Hydrographic Services in the Arctic.*

5.0 Efficiency

Recommend innovative strategies and "best in class" practices to increase overall efficiencies.

Year 1 Actions

- *Set a goal for improved contracting timeline.*
- *Promote shared standards.*

5.1 Recommend public and private sector strategic partnerships.

Year 1 Actions

- *Inventory and prioritize opportunities for partnerships.*

5.2 Identify opportunities to reduce duplication of efforts.

Year 1 Actions

- *Recommend a NOAA review for identifying and eliminating duplication of efforts.*

Subgroup Products

Group 1

Brainstorming

1. Integrating and expanding PORTS (coastal model)
2. Increase annual survey backlog (increase contracting out)
3. Integration and collaboration within NOAA and outside (including international)
4. Maintain accuracy and level standards
5. Increase awareness of Navigation products/services to non-navigation users
6. Increase funding for NOAA Navigation Services programs
7. Make NOAA a "household" word
8. Factor in I-phone, YouTube generation
9. More effective distribution and dissemination of products
10. Improve vertical accuracies and National Spatial Reference System
11. More effectively raise visibility with NOAA/DOC and Congress
12. Participate in NOAA and budget process (PPBES)
13. Process of determining and evaluating effectiveness of products
14. Effective internal implementation plan
15. HSRP Panel→ with other NOAA FACAs and other Federal FACA
16. Increase data gathering on hydro vessels, thru Integrated Ocean and Coastal Mapping
17. Increase horizon and vertical positioning (use of new technology)
18. Maintain internal "core" capability of NOAA Corps, physical scientists and others
19. Funnel more stakeholder input to NOAA
20. Copy Glackin letter to congressional board
21. Monitor implementation of HSRP recommendations

Top Items

1. Increase and enhance public and national decision-makers appreciation for NOAA's value and contribution to the Nation.
    - Increase awareness of Nav products/services to non-nav
    - Make NOAA "household" word
    - Factor in I-phone, U-tube generation
    - More effective distribution and disseminate product
    - More effectively raise visibility with NOAA/DOC and Congress
    - HSRP Panel→ with other NOAA FACAs and other Federal FACA
    - Funnel more stakeholder input to NOAA
    - Copy Glackin letter to congressional board

2. Expand delivery, accuracy, efficiency and production of the hydro services
    - Integrating and expanding PORTS (coastal model)
    - Increase annual survey back lob (increase contracting out)
    - Maintain accuracy and level standards
    - More effective distribution and disseminate product
    - Improve vertical accuracies and national spatial referencing system
    - Increase data gathering on hydro vessel IOCM
    - Increase horizon and vertical positioning (use of new technology)
    - Maintain internal "core" capability of NOAA Corps, physical scientists and others

3. Promote increased funding for NOAA
   - Increase funding
   - Participate in NOAA and budget process (PPBES)
4. HSRP Management
   - Process of determining and evaluating effectiveness of products
   - Monitor implementation of HSRP recommendations
   - Funnel more stakeholder input to NOAA
   - Copy Glackin letter to congressional board
5. Execution
   - Integrating and expanding PORTS (coastal model)
   - Integration and collaboration within NOAA and outside (including international)
   - Effective- internal implementing plan

Strategies

1. Increase and enhance public and national decision-makers appreciation for NOAA's value and contribution to the Nation.
   - More effectively raise visibility with NOAA/DOC and Congress
   - Factor in I-phone, You-Tube generation
   - Funnel more stakeholder input to NOAA

   Action/Deliverable:
   - HSRP educated new communication's technology
     - Invite someone to talk about technology
   - Invite DOC/Congressional staffers to HSRP meeting
   - Distribute recommendations to State delegations
   - Continue stakeholder panels
   - Visits to Hill

2. Expand delivery, accuracy, efficiency and production of the hydro services
   - Increase annual survey back-log (increase contracting out)
   - Integrating and expanding PORTS (coastal model)
   - Improve vertical accuracies and national spatial referencing system

   Action/Deliverable:
   - Increase survey production to 3,000-10,000
   - Fully fund PORTS
   - Support GRAV-D by improving vertical accuracies
   - Evaluate and recommend use of new technologies:
     - Reduce survey backlog
     - Reduce time Ping-to-Chart
     - Review program plans and budgets before finalized and submittal to NOAA budget
     - Mark recommendations
     - Review "political" process and drivers

3. Promote increased funding for NOAA
   - Increase funding
   - Participate in PPBES

Group 2

Brainstorming

1. Make NOAA listen to our recommendations
2. Develop protocol for outreach standards
3. Shorten time to issue a contract
4. Add individual professional input to NOAA
5. Make specific product improvement recommendations
6. Do more with more
7. Help articulate relevance of Hydrographic Services
8. New standards for new technology
9. Help with ideas to become more efficient
10. Help ensure products meet customer needs
11. Tell NOAA what customer requirements are
12. Translate "NOAA-speak" into English
13. Prevent duplication of effort among Federal/State/Industry/Academia
14. Provide input on NOAA's strategic direction

Top Items

1. Efficiency
   - Shorten time to issue a contract
   - Help with ideas to become more efficient
   - Do more with more
   - Prevent duplication of effort among Federal/State/Industry/Academia
2. Outreach
   - Develop protocol for outreach standards
   - Translate "NOAA-speak" into English
   - Add individual professional input to NOAA
   - Help articulate relevance of Hydrographic Services
3. Product and Service Enhancement
   - Make specific product improvement recommendations
   - New standards for new technology
   - Help ensure products meet customer needs
   - Tell NOAA what customer requirements are
4. New Technology Recognition
   - New standards for new technology
5. Strategic Direction of Hydro Services
   - Make NOAA listen to our recommendations
   - Provide input on NOAA's strategic direction

Strategies

1. Promote creative and innovative strategies to achieve enhanced efficiency
   - Recommend strategic partnerships for increased efficiency
   - Recommend industry and government best practices for improved contracting
   - Identify opportunities to reduce duplication

   Action/Deliverable:
   - Inventory and prioritize opportunities for partnerships

- Set a goal for improved contracting timeline
- Promote shared standards
- Recommend a NOAA review for identifying and eliminating duplication of efforts

2. Promote innovative strategies to enhance outreach
   - Help NOAA communicate in accurate, plain language
   - Help NOAA communicate the importance of hydrographic services to the Nation
   - Make suggestions to NOAA for outreach plans and templates

   Action/Deliverable:
   - Review existing outreach material and plans and offer candid and constructive feedback

3. Promote improvement in NOAA's Hydrographic Services and Products
   - Identify product and service improvement needs
   - Offer feedback on NOAA products and services
   - Identify new technologies to improve NOAA's products and services
   - Recommend standards for new technology

   Action/Deliverable:
   - Assess and provide feedback on selected products and services
   - Recommend modification of standards and practices of GPS derived water levels

Group 3

Brainstorming

1. Climate change- NOAA role in measuring trends, forecasting adaptation strategies
2. Survey backlog
3. Support for HLS
4. PORTS-common knowledge and awareness
5. Briefings-Hill, SAB, CMPs, DOC, OSTP, Transition, NOAA
6. Develop a playbook- modify by audience
   a. 2-3 people or teams
7. Green
8. Long-term funding
   a. Trust fund and other mechanisms
9. Report card on 5MW annual, bi-assessment
10. NOAA report on JMW
11. Consolidation of duplicative programs-within and externally
12. Strategy for promoting awareness- DOC and Congress
13. NOAA role in climate and sea level rise
14. Role in commerce and economy

Top Items

1. Promoting Hydro Navigation Services
   - Briefings-Hill, SAB, CMPs, DOC, OSTP, Transition, NOAA

- Develop a playbook- modify by audience
    - 2-3 people or teams
- Green
- Strategy for promoting awareness- DOC and Congress

2. Budget Strategies and Solutions
    - Consolidation of duplicative programs-within and externally
3. Report Card
    - Report card on 5MW annual, bi-assessment
4. Climate
    - Climate change- NOAA role in measuring trends, forecasting adaptation strategies
    - NOAA role in climate and sea level rise

Strategies

Promoting Hydro and Navigation Services

1. Develop playbook
    a. Consistent story packaged for sale
2. Set up briefings with OMB, hill, etc
    a. Decide commitment of HSRP representation
3. Work with constituent groups for letters of support to Hill, support and testimony, etc.
4. Develop legislative strategy
    a. Identify key staff on Hill
    b. Focus on appropriations committees
5. Develop simple one pagers from panel perspective for uninformed
6. Orchestrate senator questions to NOAA/DOC nominees on Hydro Services for visits and confirmation hearings

Budget Strategies and Solutions

1. Examine specific PORTS
    a. Study funding mechanisms
    b. Make recommendation on best model to use
2. Be part of process before decisions made
3. Help NOAA prioritize what/where to fund
4. Get up to speed on Trust funds and government MTS spending

Report Card

1. Update and validate requirements annually
2. Deliver annual assessment of budget and actions accomplished

Climate

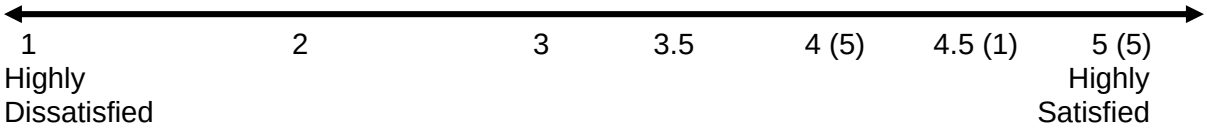
1. More panel education on NOAA, other federal roles and Hydro Services role in sea level rise
2. Tie into IOOS and capitalize on IOOS to benefit Hydro Services
3. Identify which Hydro Services are important to sea level rise

Summary
of
Meeting Evaluations

Meeting Evaluation
November 20, 2008

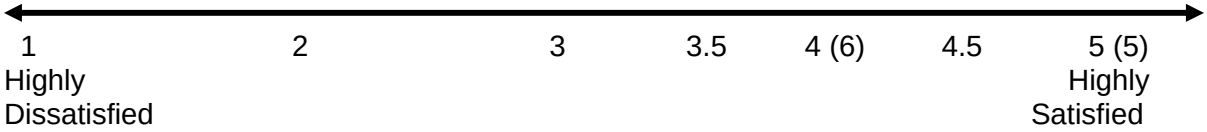
The number of submissions (11)

1. Task Accomplishment
Overall, my rating of our meeting is:



Comments:
1. From unorganized chaos to a final product – incredible
2. Extremely organized, efficient and rewarding

2. Group Process
My rating of the group interaction and our abilities to meet our desired objectives is:



Comments:
1. A lot of information to cover, but ultimately good results

3. The part of the meeting I found most productive was:
1. The breakout groups were good & productive
2. Subgroup interaction
3. Think groups
4. Creating the final product form all the peer input
5. Splitting into 3 group & brainstorming; comparing our likes & differences
6. Group breakout discussions
7. Focus on HSRP objectives

4. My biggest disappointment was:
1. The process stalled a few times during the discussions which led to extra time
2. Lack of group energy at end of day (including mine).
3. Needed more time
4. Not disappointed at all.
5. Not enough time
6. None.

5. Some suggestions for future meetings are:
1. End earlier in day.
2. Can't come up with any.
3. Continue to review these outcomes.