U.S. DEPARTMENT OF COMMERCE

 + + + + +

 NATIONAL OCEANIC AND ATMOSPHERIC

 ADMINISTRATION (NOAA)

 HYDROGRAPHIC SERVICES REVIEW PANEL

 + + + + +

 PUBLIC MEETING

 + + + + +

 TUESDAY

 SEPTEMBER 16, 2014

 + + + + +

The Hydrographic Services Review Panel met in the Courtyard Marriott Grand Cypress Room, 125 Calhoun Street, Charleston, South Carolina, at 9:00 a.m., Scott Perkins, Chair, presiding.

MEMBERS PRESENT:

SCOTT R. PERKINS, HSRP Chair

WILLIAM HANSON, Vice Chair

RDML KENNETH BARBOR

RDML EVELYN FIELDS

ED J. KELLY

DR. FRANK KUDRNA

DR. DAVID A. JAY

DR. GARY JEFFRESS

CAROL LOCKHART

JOYCE E. MILLER

SUSAN SHINGLEDECKER

MATTHEW WELLSLAGER

NON-VOTING MEMBERS PRESENT:

ANDY ARMSTRONG, Center for Coastal and Ocean

Mapping, University of New Hampshire

JULIANA BLACKWELL, Director, National

Geodetic Survey

RICHARD EDWING, Director, Center for

Operational Oceanographic Products and

Services

ALSO PRESENT:

REAR ADMIRAL GERD F. GLANG, HSRP Designated

Federal Official

MICHAEL ASLAKSEN, Chief, Remote Sensing

Division, National Geodetic Survey,

NOAA

PAUL BRADLEY, Policy Advisor, National Ocean

Service, NOAA

CAPTAIN (sel) RICK BRENNAN, Chief, Coast

Survey Development Laboratory, NOAA

RUSSELL CALLENDER, Ph.D., Deputy Assistant

Administrator, National Ocean

Service, NOAA

TIFFANY HOUSE, Project Analyst, Remote

Sensing Division, National Geodetic

Survey, NOAA

LT. COL. JOHN T. LITZ, United States Army

Corps of Engineers (USACE)

RACHEL MEDLEY, Chief, Customer Affairs

Branch, OCS, NOAA

LYNNE MERSFELDER-LEWIS, HSRP Coordinator

JIM NEWSOME, President and CEO, South

Carolina Ports Authority (SCPA)

CAPTAIN (USCG ret) RUSS PROCTOR, Chief,

Navigation Services Division, OCS,

NOAA

CAPTAIN RIC RODRIGUEZ, USCG Captain of the

Port Charleston

LESLIE SAUTTER, Geology Professor,, Ocean

Mapping & Marine Geology Department,

College of Charleston

KYLE WARD, Southeast Navigation Manager,

NOAA

KATHY WATSON, HSRP Coordinator

DARREN WRIGHT, Maritime Services Program

Manager, Center for the Operational

Oceanographic Products and Services

(CO-OPS)

A G E N D A

Page

Welcome and Introductions.............. 5

NOS Priorities, Coastal Intelligence

 and Resiliency....................... 13

Keynote Address........................ 50

U.S. Coast Guard Charleston Sector..... 106

U.S. Army Corps of Engineers,

 Charleston District.................. 135

Luncheon Speaker....................... 175

HSRP General Discussion................ 208

Public Comment......................... 214

 273

 P-R-O-C-E-E-D-I-N-G-S

 9:06 a.m.

Welcome and Introductions

RDML GLANG: So good morning everyone. My name is Gerd Glang. I'm the Designated Federal Official. I just want to point out a couple of logistical details. Everyone should have an agenda before them. The bathrooms are down that hall there. I'm pointing to my left, if you haven't already found them, and if you need to get out in case of emergency, I notice there's glass doors straight out through the little foyer out front here. With that, I'll turn it over to you, Scott.

CHAIR PERKINS: Okay, great. Well, welcome to the HSRP Advisory Panel Committee meeting. The first order of business, we would like to open, you know, with the Pledge of Allegiance. If we'd all raise, and please repeat with me.

[PLEDGE OF ALLEGIANCE.]

CHAIR PERKINS: Thank you. Be seated. The mics are open mics, so be advised of that. They're not voice-sensitive, so they are on. They are always on. If you start to hear an echo, that's because the mic is too far away from whoever is speaking. So if you, you know, move the mic in closer proximity to you when you're speaking, that will reduce the echo. Even closer. Okay, great.

But yeah. Be advised the paper rustling or any sidebar comments, you know, they may be audible, so be careful. So with that the first order of business here, you know, is the self-introductions. If we -- I guess I'll start, just because I'm already speaking.

So my name is Scott Perkins. I have the privilege of serving as the incoming chair of the HSRP. So my background and experience is in geodetic surveying, photogrammetry mapping. I've served as a shoreline contractor and hydrographic survey profession, you know, for NOAA. So with that, do we want to go to the left or to the right?

RDML GLANG: I can go next. Good morning. I'm Rear Admiral Gerd Glang. I'm the Director for NOAA's Office of Coast Survey, and I serve as the Designated Federal Official for the Hydrographic Services Review Panel.

DR. CALLENDER: Good morning. I'm Russell Callender. I'm the Deputy Assistant Administrator for NOAA's National Ocean Service. I have no real background in hydrography, although once upon a time I was a biological oceanographer, I did map a bunch of oyster reefs in Galveston Bay. So just kind of all that.

DR. BRADLEY: Good morning, Paul Bradley. I'm a policy advisor at the National Ocean Service.

MEMBER WELLSLAGER: Good morning, Matt Wellslager, immediate past chair of the HSRP and the Chief of the South Carolina Geodetic Survey.

MEMBER FIELDS: Good morning. I'm Evelyn Fields. I'm on the HSRP Panel and I am presently retired.

MEMBER KUDRNA: Good morning, Frank Kudrna, member of the HSRP Panel, consultant with the URS Engineering Corporation, and I serve as chief engineer for the Illinois International Port District, the Chicago port.

MEMBER SHINGLEDECKER: Susan Shingledecker, Vice President of Boat U.S. Foundation, the Boat Owners Association of the United States, and HSRP Panel member.

MEMBER JEFFRESS: Gary Jeffress, Panel member. I'm a professor of Geographic Information Science, Texas A&M University, Corpus Christi. We run a tide gauge network for Texas, in cooperation with CO-OPS.

MEMBER KELLY: Good morning, Ed Kelly. I'm the Executive Director of the Maritime Association of the Port of New York and New Jersey, representing over 550 various members involved in commercial maritime navigation and operations, and a Panel member.

MEMBER BARBOR: I'm Ken Barbor. I'm Director of the Hydrographic Science Research Center at the University of Southern Mississippi.

MEMBER MILLER: Joyce Miller. I'm Director of Seafloor Data Services at University of Hawaii. I'm a licensed hydrographer and a member of the HSRP Panel.

CHAIR PERKINS: Over to you Lynne.

MS. MERSFELDER-LEWIS: I'm sorry. I'm Lynne Mersfelder-Lewis, and I'm not replacing Kathy, but I will follow in her shoe steps.

MS. HOUSE: My name is Tiffany House, and I am a project analyst. I work with Mike in RSD, Remote Sensing Division.

MR. ASLAKSEN: Mike Aslaksen with the National Geodetic Survey. I'm Chief of the Remote Sensing Division.

MR. WRIGHT: Darren Wright. I'm the Maritime Services Program Manager for the Center for Operational Oceanographic Products and Services, also known as the PORTS guy.

CAPT BRENNAN: I'm Rick Brennan. I'm the Chief of the Coast Survey Development Lab.

MS. MEDLEY: Good morning, everyone. I'm Rachel Medley. I'm the Chief of the Customer Affairs Branch under the Navigation Services Division, in the Office of Coast Survey.

CAPT PROCTOR: Good morning. I'm Russ Proctor. I'm the Navigation Services Division Chief in the Office of Coast Survey, and I also serve as your alternate DFO.

MS. WATSON: Kathy Watson, soon to be retiring HSRP coordinator.

MEMBER ARMSTRONG: I'm Andy Armstrong. I'm the co-director of the Joint Hydrographic Center at the University of New Hampshire, a NOAA University partnership, and as such, I'm a non-voting member of the panel in accordance with the provisions of the HSIA.

MEMBER EDWING: Good morning. Rich Edwing, Director of the Center for Operational Oceanographic Products and Services, and a non-voting member as well.

MEMBER BLACKWELL: Good morning. I'm Juliana Blackwell, the director of the National Geodetic Survey, also a non-voting member of the Panel.

VICE CHAIR HANSON: And I'm Bill Hanson, Great Lakes Dredge and Dock Company, and current vice chair of the Panel.

CHAIR PERKINS: Great. Yeah, yeah, thank you. There are three members of the HSRP that weren't able to attend personally, so we have Dr. Lawson Brigham up in Alaska with the University of Alaska-Fairbanks, and a retired Coast Guard captain. We have Dr. David Jay with Portland State, is that correct? Yes, and he is on European travel, and we have Captain, I've just forgotten --

RDML GLANG: That's Deborah Dempsey.

CHAIR PERKINS: Deborah Dempsey, thank you. I just forgot her last name. So Captain Dempsey is out on the water and unable to attend right now.

MS. WATSON: And we also have Carol Lockhart, who's not present, a Panel member.

CHAIR PERKINS: Thank you, yes, and Carol Lockhart is a certified hydrographer in professional practice space.

MEMBER ARMSTRONG: And one of our non-voting members, Dr. Larry Mayer, the other co-director of the Joint Hydrographic Center, is also not present. He's at sea as well.

CHAIR PERKINS: Great, thank you. I think that's the entire roster. All right. If all of our speakers are here, I think we can roll right into the 9:30 session and get that panel seated a little early. So it's always good to be ahead of schedule at the beginning of the meeting. So at 9:30 we start with Dr. Callender. You ready to go sir?

NOS Priorities

DR. CALLENDER: I just asked Paul if my slides were in there, and he wasn't sure. So we're going to -- I live with notebook, so I've got to carry it around here. I've got a few notes.

There we go, thank you. So good morning. Again, I'm Russell Callender. I'm the Deputy Assistant Administrator of the National Ocean Service. That's just a fancy way of saying I'm the Deputy Director of the Ocean Service.

Holly Bamford is the assistant administrator, and she expresses her regrets for not being here today. I first of all want to thank the panel for all of the hard work that you've done in the past, and that I think you will do in the future.

I first became associated with the Panel at the meeting in New York. Learned a lot, very impressed by the quality of the folks in the room and I'm very interested to hear where the Panel goes in the future. So first of all, thank you from me and from Holly.

In this presentation, what I'm going to do is walk you through some of the NOS priorities. You heard a fair bit of detail from Holly at the New York meeting where those priorities are. I'm going to focus on two that are most relevant to the activities of the HSRP.

I'm going to close with a request. Maybe it's a challenge to the Panel on how I believe NOAA can best use the advice that you provide, both as a conduit for strategic thinking, as well as a way to bring stakeholder needs to the Ocean Service and to NOAA writ large.

So next slide, please. So again, you've heard from Dr. Bamford about the three fundamental priorities. They're shown in orange: coastal resilience, coastal intelligence, and place-based conservation. The blue boxes below are shorthand versions of major outcomes we wanted to achieve through what we termed an NOS road map.

This is a document that we finalized since the New York meeting. Hopefully, excuse me, the Panel has seen that. If not, we can make it available to you. Really, the two areas, the two major priority areas that I want to focus on this talk is going to be coastal resilience and coastal intelligence, which is the two major priorities that are relevant to HSRP.

And of the major outcomes, really the improved community preparedness and response is probably most relevant. One of our goals is to have coastal communities able to apply relevant criteria and standards to enhance preparedness and recovery.

Secondly, in the coastal intelligence priority, the integrated support tools for port communities is again one of the major areas we want to focus on, which is really about meeting the need for expanded commerce and busy ports through enhanced and integrated decision support tools.

So the road map as such is not really meant to be a strategic plan, or an annual operating plan for the Ocean Service. But really it's a way to cluster some activities around the major priorities that we've identified over the last two-plus years.

Typically, I get bored and sort of roll my eyes when people start talking about strategic plans and priorities. But what I will say is it's actually had a pretty positive impact, in terms of how the Ocean Service is viewed from outside.

Currently, NOAA priorities include environmental intelligence, and I would say we blatantly snagged our coastal intelligence piece from that. Coastal resilience was a priority that we actually pushed up into the NOAA priorities, and usually the priorities come on top and are pushed down, and everybody scrambles to figure out how can we connect to the administrator's priorities. We did it the other way around. We pushed our priorities up and got those as NOAA priorities.

Just as importantly, we got our priorities in the Department of Commerce strategic plan, again moving our priorities up versus having them come down.

The beauty of that is it's more of an open dialogue, more of an open access to both the NOAA administrator, in terms of what we do and how we do it, and also to the Secretary of Commerce, who actually gets briefed quarterly on the progress towards her plan, which is I've never seen a Secretary do that in about the 18 years that I've been in the agency.

So also the suite of priorities, the road map, the refocusing is starting to be seen on the Hill as a very positive thing for the agency. We got some budget increases in FY '14 that I think were in large part because Congress had seen the fact that we are coalescing around a limited number of priorities.

NOS in the past has been seen as a very diverse organization, maybe even referred to as a holding company, with all the various parts of it. Now we're seen as a more unified organization. Maybe it's smoke and mirrors, maybe it's reality. I'm hoping it's reality. Certainly Congress is responding well. OMB understands what we do more than they have in the past. So all those are good for us.

For FY '15, we don't know what the budget's going to hold. We've seen House and Senate marks. We'll see if we actually receive a budget or whether we have a continuing resolution. There's all kinds of rumors swirling around that it's likely to be a continuing resolution, at least in the beginning. We'll see how long that lasts.

So next slide, please. So this is a cartoon you've probably seen before. This really represents the kinds of things that we do in coastal intelligence, ranging from the fundamental observations from the National Geodetic Survey, to the maps and charts produced by Coast Survey, to the tides, currents, water levels produced by CO-OPS, and the use of a variety of technologies by the integrated ocean observing system.

You know, it's not really about data. It's about actionable information that is relevant and can be used. That's sort of the mantra, if you will, of the coastal intelligence priority for us. Let me dive a little deeper. Next slide, please. A couple of areas I'd like to focus on briefly is the airborne LiDAR and the National Water Level Observation Network, or NWLON.

Earlier this summer, the White House Office of Science and Technology Policy released the National Plan for Civil Earth Observations. The plan included an assessment of 362 observing systems across the federal government, including 145 high impact observing systems.

The top piece of those high impact observing systems, the top 15 were systems that had the highest impact and also had societal relevance beyond many of the other observations, which included airborne LiDAR and the NWLON system.

So the point of that is what we're doing is extremely relevant, it matters, and it's being recognized, certainly within the administration if not beyond, to where it, frankly, it really matters with the stakeholders.

Next slide, please. So why does it matter to the stakeholders? So you've seen figures like this probably many, many times. At the New York meeting, John Vickerman gave an excellent and provocative presentation on shipping trends.

One of the things that was blatantly obvious from that presentation, and all of you are probably aware, is just the evolution of the size and the draft of ships from the 1950's, when ships came out with the 100 TEUs to where we are coming on board with the Maersk Triple E, with 18,000 TEUs.

So ships are getting bigger. Waterways, with some exceptions, aren't getting bigger. So it really highlights the need for coastal intelligence across the board.

Next slide, please. So the next couple of slides all talk a little bit more about some of the aspects of coastal intelligence. What is the value of coastal intelligence? So fairly recently, I'm not sure exactly when it was Rich, that the PORTS program did an economic valuation study of the PORTS system writ large, and we have copies of that available for the members. There we go. I'll pass those out.

A lot of good economic statistics. This is going to be really useful as well work to market what we do on the Hill and beyond. One of the pieces that's in there is that the U.S. would see a $300 million annual benefit from a port system that supported 175 of the ports around the country.

So it's a pretty large return on a pretty small investment for the port system. So I'd urge you to take a look at this. It's got some great summary statistics in there that I think you can provide -- it will provide some value to you as well.

Last year, we completed installation of the Charleston ports by adding an air gap sensor to the Don Holt Bridge. I'd like to recognize and thank Jim Newsome from the South Carolina Ports Authority for his support of this program, and Jim's going to be talking after me as well.

Also in PORTS in July, Dr. Kathy Sullivan, the NOAA administrator, and Holly Bamford participated in the dedication ceremony for the Jackson ports. We received interest from the Georgia Ports Authority, that they want to work to install a PORTS system.

So the demand is ever-increasing for the PORTS, and that's just again a small piece of what we do. The charting, positioning and other navigation-related products and services are extremely valuable as well as to stakeholders. Next slide, please. So switching to how coastal intelligence connects to resilience. Again, resilience is a priority for not only the Ocean Service but NOAA and the Department of Commerce, and the administration writ large.

So resilience impacts the risks that stem from increased shipping and the challenges there, as well as weather and climate impacts. The point here is that coastal intelligence is a foundation for coastal resilience in ports in the broader coastal communities.

For example, C4 mapping and coastal elevation data are critical for accurate inundation models. If you look at the figure on the right, this is a figure for potential storm surge flooding. The Ocean Service has been working with the National Weather Service to produce more accurate storm surge forecasts by incorporating tides and other model guidance into the Weather Service forecast model.

It kind of is stunning to me that this is really the first time in the operational side that the Weather Service is incorporating tides in the storm surge. So this is -- the figure is an experimental product. It was released this year. Thankfully, we haven't really had to use it. It's been a pretty calm Atlantic season.

But the point of this chart is it's a graphic that provides more of an on the ground view of what storm surge actually means with water measured in feet above ground, which is what people can relate to.

There's other tools, other resilience tools at the Ocean Service that rely on coastal intelligence, such as the sea level rise and coastal flooding impacts, fewer shown on the left. This is the Customs House here in Charleston, with a graphic showing with a five foot sea level rise what it would look like.

This is really great for managers to visualize in their community what the impacts of sea level rise might be. There's a lot of other pretty amazing products on the digital coast website. Mickey Schmidt is back here in the back. I call him the King of Digital Coast. So if you have a lot of questions about that, I'd urge you to talk to Miki.

Next slide, please. In terms of the future of coastal intelligence, the three bullets there are where we see changes. But I would also urge the panel to think about those as questions for you. How can we lower costs and be more efficient in our observations, in our products that we produce?

How can we increase the accuracy of what we do? What is that capacity for multi-use? So for example, improvements in technology are bringing down the cost of equipment such as air gap sensors. Those sensors used to cost about $35,000. Now they're down to about 3,500.

So it's really -- it's really important to figure out how we can lower those costs, and that's a great example of that. We're using microwave-based sensors to monitor water levels without having things submerged in the water, which cuts back on fouling issues and other maintenance costs.

The use of Topo-Bathy LiDAR figure in the lower right acquires both elevation data and hydrographic data, integrated with complex and rugged shorelines. This capability really increases the efficiency of data collection, and provides near-shore bathymetry in places where it's really difficult to get those bathymetric observations.

These types of data are great for a number of missionaries beyond nautical charging, including inundation modeling, the storm surge graphic I showed before, habitat mapping and coastal change analysis. You should also be familiar with the GRAV-D initiative, which stands for Gravity for the Redefinition of the American Vertical Datum. I like GRAV-D better. This project is really about generating a better, faster and less expensive way to acquire gravity data and provide more accurate elevations for the nation.

Once the GRAV-D project is completed, it will inform the next generation model of the earth surface and enable fast and accurate height measurements within two centimeters, versus the accuracy range of a meter or more than we currently have.

So the figure here of North American continent, the green shows the data that are now available through GRAV-D. The blue are the data that's currently being processed. The orange-looking colors are where collections are currently ongoing, and the white is planned.

So it's a pretty ambitious project that will have a large payoff in the future. We're also looking at the use of things like unmanned aerial systems, in partnership with the GRAV-D project, to really increase, potentially increase the efficiency and lower the cost of those collections.

Next slide, please. Another slide on the future of coastal intelligence. So we've talked about it. You've talked about it many times is the integrated ocean and coastal mapping concept of collection once, use many times. I mean this is critical.

A great example of that is in the Long Island Sound area, shown in the upper right. There was a project where Coast Survey was going to do some work, but there was also needs from the state of New York, the state of Connecticut, as well as New York and Connecticut Sea Grant and EPA.

So trying to pull together all those stakeholder needs and align them with work that we were already doing, we were able to expand the work and make it more relevant at collecting not only bathymetric data but habitat data that's useful for all of those coastal partners.

One of the topics that this panel has talked about before is the concept of crowd sourcing. There may be some opportunities to use crowd sourcing, although we need to be very careful about data quality, especially in instances where NOAA is the authoritative source for coastal data. But there may be some possibilities in the future.

Another possibility may be the use of a variety of diverse platforms. So using partnerships with the IOOS program, for example. The figure on the bottom right is a wave buoy partnership with the Army Corps of Engineers, IOOS and NOAA. There's a variety of gliders that are currently being used. So just an example of the kinds of technologies that may be useful for us in the future.

Next slide, please. Last slide on the future of coastal intelligence. NOS is continually striving to increase the value and utility of our data products. Many of the issues we're facing, such as coastal flooding, needs to be understood at the regional and local levels.

So it's very clear that our products need to be tailored geographically, even though we do have a national focus. For example, this summer the Coast Survey released a chart of the Charleston Harbor entrance and approach shown on the bottom right.

This has created a direct response to the Charleston branch pilots. You wanted to have a single chart that covers the entire approach channel. The chart was truncated closer to shore previously, and this allows them to plan for the harbor expansion that's coming up in the future.

Also at the pilots' request, you can see the circle in the top left-hand corner. There's a beacon -- the arrow beacon on top of the Arthur Ravenel Bridge. This is a very prominent landmark for vessels approaching the city at night, and we made sure to connect that to the charts, so that the pilots can use this information more effectively.

We're also working to better integrate our data and products to enhance the application value of what we do. For example, in the Ports of L.A. and Long Beach, the Ocean Service is working on a new experimental product to optimize information that shippers need to plan trans-ocean shipments, and that pilots need to navigate deep draft vessels into the harbor.

Currently in these ports, the deep draft ships are having to wait offshore or reduce their draft, excuse me, to enter the port without grounding when wave and water level conditions are unfavorable. So we're working with Maritime Partners and a Dutch software company to develop a tool that's going to integrate real-time observations, NOAA charts and vessel characteristics, to forecast windows when these deep draft vessels can safely transit into the port.

Admiral Glang is also engaging a Presidential Innovation Fellow to help us with this and so that -- I'm pretty excited to see where that goes. We're also working to provide more of our data in a format that allows third parties to take our data and develop value-added tools and products.

This is similar to the model that the Weather Service has used in partnership with companies such as the Weather Channel and others, providing opportunities for business to add value to the NOAA data and products. Last slide, please. So what can the Panel do? I think there's two major focus areas, really, advising NOAA on more strategic issues, and advising us on the interface between the regional and the national stakeholder needs.

On the first issue, there was a meeting that was held by the NOAA Science Advisory Board with Dr. Sullivan in the summer in Boulder, and she put out a challenge to that panel to really decrease the focus on sort of the daily or the administrative kinds of issues, but really focus more on the strategic issues that will be facing the NOAA Science Advisory Board.

I'd urge you to do the same. I think you're in a great position with the expertise you have, with the connections to stakeholders, to provide us with information about where we go in the future. What are some strategic directions, in terms of science that we may not be aware of? What are some cutting edge technologies that you're aware of that NOAA could explore?

What are some opportunities to create new business models? Are there additional opportunities for partnerships that we're not seeing? You are on the ground. You're connected with folks on the ground. You're living in a place, and your expertise is really relevant to use being able to help with those partnerships.

What are some coastal issues that NOAA should be tackling that's relevant to this panel, that's relevant to hydrographic services that we should be tackling? In terms of advising us on the regional and national stakeholders' needs, you know, one of the great facets, if you will, of how this meeting operates is you come to a region like Charleston, and we get to hear from folks on the ground what are their needs, what those stakeholder requirements, what are the challenges that they have, where we can we make our products better?

The challenge for you is listening to those stakeholders and incorporating not only what you hear in a region, but that broader national view, and try to find that right balance in terms of the advice that you can provide to us.

With that in mind, you know, what are some gaps? What gaps are you hearing about in terms of our products and services? What are some stakeholder needs, either regionally or nationally that aren't being met, and then there's of course the challenge for us is, how can we ensure that we meet those needs along the way?

Are there better ways, more effective ways to meet the stakeholder needs, and frankly how can NOAA writ large better connect and strengthen its relationships with the stakeholders? So this is just a few examples of areas where I think the Panel could help.

I think the Panel has provided tremendously valuable advice in the past. One of the internal challenges that I've seen, and Scott and I talked about this last night is the delay in response back from the NOAA side. I think that was, from the recommendations you provided to Dr. Sullivan, there was a huge time delay through the NOAA bureaucracy, until you got your response.

So I'm committed to try to do what I can at that level to try to push, and really increase that dialogue back and forth. You know, we don't have to communicate also just through a suite of recommendations from a meeting back to the NOAA Administrator.

There may be opportunities in between meetings to provide additional bits of advice, guidance, thoughts, suggestions along the way. I'd welcome you to do that. I'd like to really open the doors to really increasing that dialogue as much as we can.

So with that, I'll stop. I don't know if I have time for questions, but I'll be around all day too.

CHAIR PERKINS: Yes. Actually, we do have time for questions.

DR. CALLENDER: Okay. Joyce.

MEMBER MILLER: Yes. I think this is really valuable, but I have a question. Pretty much not every meeting, but every other meeting at least that we have -- that I've been involved in, PORTS has come up, and it's come up in many ways.

You know, it's come up with what stakeholder needs are not being met, you know, what opportunities, and we really haven't gotten much response from the administration. We have put PORTS in many times, and there's been somewhat of a silence. I'm very pleased to see this and the emphasis you put on.

How can we better communicate that message from the -- because it's been in many of our letters.

DR. CALLENDER: Yes, it absolutely has. There's two sets of challenges.

One is through the administration. I think with Dr. Sullivan's focus on environmental intelligence or focus on coastal intelligence, we have a way to increase that visibility and that value.

I think documents such as the PORTS evaluation document are going to be really useful on the Hill. So when I go and I'm briefing Members or I'm briefing staff, I pull out a graphic explaining what PORTS does, and universally, staff and members are excited and engaged.

But again, we're not seeing that overwhelming support in terms of the monetary support for the program. You know, I think a lot of this is probably going to be in the hands of the NOAA team, and we've got -- we've received a lot of advice from you, a lot of guidance on PORTS.

So I think it's -- I think the ball's in our court to some degree to kind of on this. Maybe not a great answer to your question, but you know, I think PORTS is only one of the issues that we're facing.

So maybe we need to push a little harder on the administration side to get that support, and it might be time, sorry Rich, to focus on some of the other issues broader than PORTS, in terms of what the Panel is looking at.

VICE CHAIR HANSON: If I can just follow up real quick on that, because you've got -- PORTS is more symptomatic, I think. It's kind of a good example, because we kind of understand it's one of the great things that NOAA's done. So much for the other people willing to pay for it.

So when you talk about new business models, you know, that doesn't apply just to PORTS. It applies to other things within NOAA. What are you talking about? What are you willing to listen to?

DR. CALLENDER: I think the door's open in terms of what we're willing to listen to.

You know, if there are some opportunities to, and I touched upon it, I think, in the last slide, where there's avenues to make our data and information more available to industry, and try to spur some connections with industry, try to spur some value-added products, so that there's a pipeline, if you will, that there's a need to pull from industry more so than we've had in the past, to provide them data and information that they can grow and move beyond that.

We've had conversations with the reinsurance industry, you know, is one group of pretty large influential partners and customers. They need better observations from us. Not better observations; they need to find the observations from us. You know, data discovery, data availability, so that they can enhance their catastrophic modeling work that they're doing, which is going to influence the reinsurance and the insurance industry across the country.

So you know, those kinds of efforts, if there's areas that you see from your connections with industry, where there may be an opportunity to move that dialogue forward in terms of data and information that they can use, that would be useful, I think, across the board.

I mean Gerd, Juliana, Rich, is there any other pieces of that?

VICE CHAIR HANSON: Let me throw it over to Ed, the PORTS guy. If there was -- I mean is there data you're not getting, because I mean you want to put in -- you're paying for it. You're paying for PORTS. So is there data you're not getting because you can't afford it, you don't want to afford it?

MEMBER KELLY: It's not that we can't afford. We pay for the O&M, you know, maintenance costs, really, and that's kind of scattered around the country, various ways of viewing it. It's very ineffective. But we've had many discussions on PORTS and enhancement of PORTS, including modeling, you know, getting everything on an AIS basis.

So there's a lot of things that were would like to see for further enhancement in the PORTS system. In fact, we just had the National Harbor Safety Committee and Area Maritime Security Committee meetings down in Philadelphia, an annual event run by Coast Guard and the TRB and what-not. Darren and a couple of people were there.

PORTS was highlighted. It's of tremendous value, but I think there was a shopping list of enhancements we'd like to see on that, and the resounding, echoing, constant theme is this should be federally funded, that the disparity of funding mechanisms around the country is just falling apart.

There's quite a few locations, ourselves in New York and New Jersey included, who will not have a funding partner going forward, and the broad usage. It's a tremendous product as far as enhanced partnerships with academia, with coastal managers, with state OEM offices.

It's one of the best products NOAA puts out there. But it really needs to get a better response as far as future enhancement, and funding is a very key issue.

DR. CALLENDER: Yes. I would agree with you completely on that. We took a run this last year, trying to push for the full federal funding of PORTS, seeing that it is a -- it's a national need. It's a life, commerce, property-related issue, really trying to move from that public-private partnership to full federal funding, and we frankly were stymied at the OMB level.

There was not, you know, they wanted to see more of this public-private partnerships. So we're going to have to figure out, I think, another way to run at it. You know, I do agree that full federal support would be the way to go.

I mean it's just like the Weather Service. They've got full federal support for what they do, and I think we need to push the same, the same kind of thing.

MEMBER KELLY: But beyond that, I think the products themselves and the enhancements, including expanded modeling, AIS, that type of stuff, is also very important to continue to improve the product.

DR. CALLENDER: Agreed.

VICE CHAIR HANSON: And at some point, I think, if you're looking for new business models, I would argue, just trying to be objective and keep the debate going, is that federal funding may not be the answer. It may be the other way, the private side. You can't dismiss it.

DR. CALLENDER: I agree.

(Simultaneous speaking.)

 VICE CHAIR HANSON: If you're not providing a product, the full-value product, and whether it's public-private partnership, federal funding, a blend of them. But we haven't made a lot of progress with full federal funding, and so I think maybe it's time to think about Plan B.

DR. CALLENDER: So I think, you know, I do believe that full federal funding makes sense. The question is, can we sell it at this point in time. So I think, you know, it's incumbent upon us, certainly on the NOAA side, working as appropriate with the Panel, to do some strategic thinking on how we would pull it off.

MEMBER BLACKWELL: If I can. I'd just like to add another example of kind of the reverse system that is in place right now, as part of the Continuously Operating Reference Station network that NOAA, through the National Geodetic Survey, manages.

I've reported out on this before, and you'll hear a little bit more in my update on Thursday. But this CORS network has over 2,000 stations, and less than I would say five percent of those are owned by NOAA. So the majority of them are through other individuals who have established these stations that provide constant GPS data at a fixed site, which becomes really the foundational information for positioning for the nation, as part of the National Spatial Reference System.

So while NOAA owns a small number of the stations, the majority of these stations are through other federal agencies, state, local, universities that have established these stations as part of this, you know, their network, which then feeds into this national network of information.

We at NGS collect the data, quality-assure it and then provide the data back out to the public free of charge. So while we do have some operating and maintenance costs and a little bit of infrastructure costs from our perspective, the majority of the costs are, you know, borne by those individuals who've established those sites for their specific needs.

So that's just another, you know, another way of looking at another business model that does work. Now the flip side of that is if these partners decide that they can't operate their stations, then we lose those stations out of the network and they're not available for others.

But the idea being there's enough redundancy and enough federal and state and enough diversity in the portfolio, that you can still make that work. Now it's not exactly the same as the PORTS, but it is just a different, you know, it is a model that has been successful.

It sort of came up from the grassroots effort, and while we still need to maintain some overall costs, you know, costs associated with the overseeing and maintaining the body of the data, as Bill was mentioning, you know, maybe we do need to look differently at how we advocate for PORTS and other systems that we want to be able to support for the future, and just look at other models and opportunities and think outside the box a little bit too.

DR. CALLENDER: You know, there's many challenges, certainly in the PORTS system. But one challenge to -- if you will, we try to transition from the partnership business model to more privately supported business model. It's that transition, you know.

How will the port community writ large respond to oh, we used to get this for free, and now we're having to pay? Or we're having to increase the cost for the cost-share that we provide. So that's, you know, as we start to think about things like that, this could be one of the many challenges we're going to have to sort through.

CHAIR PERKINS: Yes, Gary.

MEMBER JEFFRESS: I'd like to highlight the partnerships that NOAA can develop with the universities in terms of doing a lot of the exploration of, you know, new software and new products that NOAA can use out of its existing data.

We've started a relationship with CO-OPS. We have undergraduates and graduate students working on little projects to create phone apps for the data that's supplied by PORTS.

Our first success was the Houston Ship Channel, where we've integrated PORTS data into an app called Transit app, which is available to the public free of charge, which uses PORTS data and NOAA's hydrology model for Galveston Bay to give mariners an indication of depth and current, speed and direction in real time.

We've also invented another app based on all the wind sensors on our tide gauges in Texas, and put that out there, and surfers and wind surfers and fishermen love it. It's just collecting the wind in real time and displaying it on their phone along the coast.

It's simplifying the data and making it more usable, and that's just more products that this has all come out of the relationships between CO-OPS and our campus and our students.

DR. CALLENDER: What I see over and over is, you know, you hand a problem like that to an undergraduate or graduate student, and you know, they can develop an app pretty quickly and pretty amazingly. I think, you know, continuing to push that partnership with universities is critical.

There's a lot of talent that's out there that we could probably do a better job tapping. So those are great examples.

MEMBER KUDRNA: Russ, following on that theme as far as users go, I think it might be worthwhile looking at a more enhanced cross-semination of several of the silos that already exist.

We're sitting here, but we're also mentioning academia and a lot of that, I'm involved with the IOOS and the regional associations, and I'm noticing they're kind of conspicuously absent from this, and they're not at the commercial harbor safety groups. The OEM people, state municipal, you know, coastal managers and emergency responders are in a separate silo, but we all have very common overlap as far as using a lot of this information.

I think we might want to look at more structured ways to create cross-semination and get all the people under one tent. That's going to get a much broader coalition, and as far as, an evolution of what's important and what's not.

Because we always talk about PORTS, and I -- you know, kind of a sore subject because I'm the commercial user that's expected to pay for all of this, when the government itself, Coast Guard and the DoD are the biggest users, the Weather Service, academia, everybody else.

But there's no way to bring those people into the structure, and we might want to look at a more aggressive way to cross-seminate some of those groups, to bring them under one tent and take a look at the value of the system, what enhancements are necessary, and if there has to be a public type of a contribution or whatever.

There's an awful lot of people that use the data, that right now we have no way of reaching out to, to collect any money or users fees from, maybe a 900 number.

DR. CALLENDER: I think that's a great point. I mean being able to bring in more groups, more partners, more expertise, more desire from users to the various products would make a lot of sense. We've done that, started to do that on the coastal side, bringing in a lot of the coastal partners.

You know, as the preschoolers would say, you're engaged in parallel play, okay. So they're all kind of doing their own thing. So we brought in coastal zone managers, coastal states organization, the IOOS, IOOS association, sanctuaries. We're bringing in Sea Grant, and it's not that hard to do, but it -- all of the sudden it opens people's eyes to the possibilities of enhanced integration, efficiencies.

You know, certainly with -- on the federal side, with the budgets being where they are, it's critical for us to look for those efficiencies. So I think yes, you know, having more people under the tent, the academic community. The IOOS program is engaged. Frankly, I think they could be engaged more.

So there's -- I think that's a great idea. That's, I think, a good action for me to take up, in terms of trying to generate that larger constituency and larger group of partners.

CHAIR PERKINS: Frank.

MEMBER KUDRNA: Russ, going back to your first slide on priorities, you know, it's right on target. I think the strongest set of priorities in 20 years I've seen from NOS. So I compliment you on that. At our last meeting, Holly talked -- and on this subject of opening up to other groups, she talked about pulling together a meeting and bringing Sea Grant in.

That's part of another part, another part of NOAA, and as we all know, there's many times competition between the parts of NOAA. With your goal of dealing with stakeholders, it would seem to me that Sea Grant could be an enormously beneficial part of that priority list.

I know there's been debate over the years of where's the appropriate place of Sea Grant. Is there any ongoing discussion to move Sea Grant to NOS, or at least change its relationship, because I think that could be enormously beneficial to the priority goals of NOS.

DR. CALLENDER: So they're not really conversations about moving Sea Grant, but there are conversations that are active and ongoing now with Leon Cammen, the Director of Sea Grant, with LaDon Swann, the Director of the Sea Grant Association, getting them more engaged with what we do and having us be more engaged with what they do.

So it kind of doesn't matter where it sits, you know. That's one box over in one line office versus another. It's about trying to generate those connections to do the on-the-ground work.

I think we're starting to do that. The doors are open. I think Leon and LaDon have been really pleased with the fact that they're brought into this coastal element.

I think we could bring them into this kind of conversation as well. As you know, having come from a Sea Grant program years ago, it's a program that I think has a lot of value, that frankly is in many cases underused.

VICE CHAIR HANSON: Dr. Callender, thank for pushing resilience up the chart there as well in terms of PORTS. I was at the Corps of Engineers CERB meeting, the Coastal Engineering Research Board, meeting last week in San Francisco. We've been dealing with General Bostick's charge to understand resilience, what it means and what we should be doing about it.

Perhaps I should share that presentation that came out of that, because it's got, I think, maybe a thousand different definitions of resilience.

DR. CALLENDER: Sure.

VICE CHAIR HANSON: But in order for resilience to move beyond the word of the day, and be lost until next year's storm, it needs to have some metrics.

DR. CALLENDER: Absolutely.

VICE CHAIR HANSON: We need to be able to measure it, look at it and taste it and figure out what we're going to do with it, and that's how we sell long-term solutions.

You know, the Corps of Engineers is coming out with their Sandy comprehensive study in January, that we really think is going to be the foundation for the future of the nation in terms of coastal investment, whether it relates to coastal protection, PORTS, reliability, all those issues.

So we'd encourage you to add metrics to that discussion, and figure out how we can measure and taste it, so we can sell it.

DR. CALLENDER: We're actually doing that, and pushing the use of metrics. So within our road map, it's how can you -- how can you characterize resilience? How resilient are you as a community or as an industry? There's some groups that are doing that. The National Academy is pushing that as well.

I was in a conversation here yesterday, where one of the focus areas for the National Academy is here in Charleston, and the Academy is also focused on metrics. So there's a lot of interest in doing that, the partnership with Sea Grant. They're coming up with resiliency metrics as well.

So I resonate completely with that. I'd love to see that presentation from General Bostick. Holly and I are going to meet with him I think sometime in the next month, and so it would be useful to have that background as we go in.

But you know, if we don't have those metrics, if we don't figure out how we can make communities, industries, economies more resilient, then it won't be the buzzword of the day that disappears. But you know, looking around here, I mean one of the challenges of resilience is recurrent flooding, coastal flooding.

You know, I was driving my rental car through the streets yesterday, hoping I wasn't going to fill it full of water. So you know, I think it's an issue that, buzzword or not, I think it's going to be around. I think it's going to continue. It might be called something different, but I think it's going to be important for certainly the coast and coastal industries.

CHAIR PERKINS: Great. Thank you, Dr. Callender. We're right about on schedule here, so we could do one more brief question or we can transition into the next session.

DR. CALLENDER: I'll be around all day. I've got some things with other NOS employees tomorrow. So feel free to quiz me, catch me, tell me if I've said it, got it all wrong, whatever. But catch me during the breaks or any time during the meeting. Thank you.

CHAIR PERKINS: Thank you.

(Applause.)

CHAIR PERKINS: All right. Next on the agenda we have a keynote address from Mr. Newsome.

Keynote Address

MR. WARD: Good morning. Now the State of the Port address. Mr. Newsome is just fresh off that. He gave that last week, and we're definitely honored to have him here. There's a lot of development going on right now, which he will tell us all about, and we're very grateful to have him here.

CHAIR PERKINS: Jim, I do have a bio here for you. Would you like a formal introduction?

MR. NEWSOME: No.

(Laughter.)

CHAIR PERKINS: Well, it's very impressive, and I appreciate you not making me read it.

MR. NEWSOME: Well, good morning. Thanks for having me. So I understand that I have like between 10:00 and 10:30, and I'm very grateful for the opportunity to tell you about the U.S. port industry and by extension our port, and how it fits into that.

I would say as a starting point it is -- there's a lot of good news concerning ports, because ports have really now become integrated into the whole transportation infrastructure discussion in this country today. That hasn't always been the case. Ports were always customarily a bit of a stepchild, I think.

But because of the reasons mentioned by your previous speaker, the big ship trend and things of that nature, I think we're right where we need to be today. We attend a lot of forums in Washington on the subject, and we have great partners in doing what we're doing, particularly the Army Corps of Engineers, who's here today.

So we'll talk about a number of issues. If you can advance those for me. Think Deep is the title of my presentation, because indeed the major theme in the port industry today is big ships. So there's no question that the shipping industry is a big ship industry today.

It's all about building bigger ships to reduce costs and achieve the best economies of scale, and the ports in this country need to be able to deal with that, in terms of being able to handle them efficiently. So hopefully that will not drag your computer down too much. So you have to -- let's see. Go back to the top here.

There we go, okay. So just to tell you a bit about our port. I mean we are the ninth largest port in the United States, and in a state like South Carolina, and I would say most states, the port is seen as a major strategic asset for the state.

I really believe in South Carolina, it is the most important strategic asset. That's very logical if you think about it. I mean we live in a global sourcing, global manufacturing world and a state with a great port is going to be able to prosper, I would say.

If you look at the BMW plant that's located in the upstate here, there were actually two states that were candidates, final candidates for that location. One was South Carolina, the other was Nebraska. The port played a pretty critical role in really getting that project here, because of proximity and the need to ship. They export about 80 percent of what they produce.

So about one in ten jobs in this state are related to the port indirectly. So it has a huge economic impact, and it's really why the state owns it and it's why the state operates it.

In many states, the port is the landlord. In the Southeast and Gulf states, we are the operators of the ports typically, and that's because we want to control that important asset.

So next. If you just hit your left -- yes, there you go. So to give you a picture of the top ten container ports in the U.S., you'll see that we're number nine in the U.S. What I think is striking about this chart, if you look at LA, Long Beach, New York and New Jersey, they account for about 50 percent of the TEU volume in the United States.

The other ports are pretty fragmented. So there's no one real concentration of volume anywhere else outside of those three ports. Then we're -- so I showed you we're number nine in the U.S., number 82 globally.

And then we have been growing of late, and in 2013 and 2014, if you'll just click it one more time, we grew well above the market. We grew almost nine percent in fiscal year '13, and we grew eight percent in fiscal year '14.

The U.S. port market has grown between, really, three and four percent. So we're growing well above the market, and I think you probably would expect that. If you just think about the fundamentals of this region, we have a growing population base in the Southeast that drives imports, and probably more dramatically is the fact that we're manufacturing again as a country, and a lot of that manufacturing investment is in the U.S. Southeast.

For the first time, that manufacturing investment is really heavily geared to exporting. So you have again, 70 percent of BMW production is exported. Seventy percent of the Michelin offroad tire production is exported. So it's really manufacturing with exporting in mind.

And then if you hit it one more time, we are also achieving record volumes on a monthly basis. So just August we'll report that on Wednesday. We had 93,000 pier containers. That's the largest volume that we've had since 2007 here.

So the port industry is really growing, is really experiencing a lot of growth right now. I'd like to tell you, because I think it's because I think our economy is really strong overall. I'm not sure I believe that.

What I can say to you for sure is the automotive industry is driving a lot of growth in the port industry. So we went from nine million cars sold in this country in 2009, to I think the projection this year is for 16-1/2 million.

That drives imports. It drives exports as well, because that same trend is happening around the world. Then on one day, we had really a record day in our port. So just to give you an idea of what a port looks like on a day, we had almost 5,000 gate moves, 5,000 moves of trucks in and out of two container terminals.

We had 6500 lifts on and off vessels in the port. We had every one of our container cranes working that day, and very importantly, the labor force in this port provided by the ILA could meet every labor order.

I mean we had essentially the most labor demand that we had ever had, and we were able to accommodate that here. So I think that's important that a port is resilient enough to handle growth.

And then is a picture of our operating earnings. What this chart really tells you is that we are in a very competitive market. So we compete in the Southeast port market. Our major competition is Savannah. We fight fiercely for cargo with Savannah.

We serve a lot of the same market basically. If you look at our rates in the port industry versus say a port like Norfolk, which is not subject to that same competition, our rates to our shipping line customers tend to be about 60 percent of the rates in Norfolk.

So it's a problem in terms of the large investment. It is the major issue that we have as a port, making the large investments we need to make to keep up and to remain a top ten port with this level of operating earnings, and so we have to improve those.

So again, we have -- one thing that I would say is that we have been profitable throughout the cycle. Even in the worst times of the port, we made money. That's not necessarily the case with all the ports. If you look at the Port of Norfolk, they lost $17 million last year, on the highest rates in the port industry, basically. So that's problematic.

So anyway, if I look at our port system, if you can click that one more time, we have really three phases. So when I joined the port in 2009, we had to reposition the port and we had to reestablish our growth track. We had lost 40 percent of our volume when I joined the port in 2009 in the previous five years.

So that's the reason I joined the port. It was a big professional challenge, and I'm happy to say that we're back on a growth path today. So the next six years really, we would have to grow well above the market and we have to invest a lot.

So to be a top ten port, to handle the big container ships, to have modern automated terminals, you have to really be able to invest, and that's the hallmark of this asset-based industry. So the next five or six years will be our most challenging years.

Then, from 2021 and beyond, I think we'll revert to a period where we really see that we'll grow with the port market. It's not going to be possible to grow twice the port market forever and ever. I don't think that's a realistic goal.

So we will -- once we make our huge investments, we will revert to a more normal growth pace. So we see the port in three phases.

So to tell you a little bit about the markets we serve, 78 percent of our revenue's in the container business, you would probably expect that. I mean containerized trade is actually the engine of globalization. If you think about it, there are about 200 million 20-foot-equivalent containers that move with loaded cargo throughout the world.

Without those 20 lines that carry that cargo, there would not be any globalization. Wal-Mart brings in about 500,000 containers a year into the United States. So containerization is really the engine of globalization.

We handle sort of what I call sophisticated break bulk. BMW SUVs, GE and Siemens gas turbines, nuclear power plant parts. We don't handle grain, we don't handle soybeans in bulk, things of that nature in our port.

Then last, we have a very small cruise business that will never be that large, but it is an important piece of our diversification. We make good money at it, and it's a business that we want to be in, you know, within the scale that it's in today.

So the port's about growing. If we're going to invest, we have to grow, again, well above the market. So how do you do that in the port business? So if you'll click that one more time. So one is you basically need to capture all the cargo that should move over your port. So freight moves based on the cheapest inland cost, all things equal.

So you've got to make sure you capture the cargo that's supposed to move over your port. That's fairly obvious on the one hand, but it's not always the case. Lines route their cargo in crazy ways. I'm not a port guy. I come from a shipping line. I worked for 30 years with a series of ocean carriers, so I know this only too painfully.

The second thing is that we try to attract a lot of discretionary cargo, and this is what helps us grow above the market. What discretionary cargo is, is cargo that can move over multiple ports, and if I look at my career in the industry, I never thought that in the Port of Charleston we would handle a lot of agriculture products.

I mean you don't think about Charleston as handling Midwest cargo. But indeed today, we handle about 500 containers a week of grain products that are translated into containers here. Dried distillers grain, soybeans, free flow wheat, things of that nature.

So that's been one trend because American agriculture products are very desired in rising standard of living parts of the world. So if you think about the world today, we're growing a middle class of over two billion people in the world, and American food products are a key part of that.

The other thing that is even more surprising, having started my career in Houston, I never thought that we would handle plastics in Charleston. I mean most plastics are manufactured in the Gulf. They were going to be manufactured in the Middle East until the price of natural gas went down.

Now, all that manufacturing is coming back to the U.S. There's not enough port capacity in Houston to handle all of that. Anybody from Texas in here? So there's not enough port capacity in Houston to handle all of that trade. So we are actually seeing a lot of exports of plastics coming to the U.S. East Coast, and particularly Charleston.

The third area is growing imports, and that increasingly is e-commerce related. We went through a big boom of distribution center development related to bricks and mortar retail. You probably would all agree with me that bricks and mortar retail is kind of yesterday's news.

We are buying on e-commerce today. Amazon is the wave of the future. So we see a lot of distribution centers built with e-commerce in mind. The last thing for the port is that we have to have competitive rail. So what I have learned in five years in the port industry is you have to have two railroads that are enthused about serving your port, and that want to offer competitive rates, because if they don't price competitively to your port, the freight will go elsewhere basically.

So it's really an integrated way of moving cargo that is part of this volume growth strategy.

So next, and then finally, we are an integral player in the economic development picture in South Carolina, and it's a place that we've been very good in this state. We have a governor who is very aggressive in economic development.

She's a great salesperson, she's very enthusiastic, and I think the track record of Boeing coming to Charleston, BMW and Michelin making multiple billion-dollar expansions in this state speaks to the fact that we're pretty good at economic development.

We actually are the largest tire manufacturing state in the country today now, having I think just passed Oklahoma in that regard. So there's nothing there. Okay.

(Laughter.)

MR. NEWSOME: Okay. So again, I think I covered a lot of this. We can just click that forward. So this is a graphic of where some of the investment is in new manufacturing, and again, what sets this manufacturing apart is a lot of it is export-related.

You know, we make a lot -- Michelin and Bridgestone make offroad tires here. There's not really any demand for offroad tires in the United States. All of it goes to Canada, it goes to Australia, it goes to Brazil. So there's a heavy export component related to a lot of this investment, and we --

For the port to succeed, the denser this chart is, the better things are for us basically, because the port only works if there's a cargo base.

So I mentioned rail. You have to be an intermodal rail-capable port. That means -- what that means in English is that more containers are going to move by rail. One of the big challenges in the port and shipping industry is that we face a shortage of trucks. Our children don't want to be truck drivers, basically. It's not an attractive profession.

There's some reasons for that. I really don't think it has to be that way. I don't think we have to accept that, but that's the case today. We definitely need to fix it. So we have worked very hard to make ourselves a rail-capable port. We don't have on-dock rail. We built a terminal, the Wando Terminal in Mount Pleasant in the 1980s.

To build that terminal, we had to forego the right to have on-dock rail. So we've done some things locally here, I won't get too much into detail, to make our port work rail-wise for containers. We created a drayage program where we coordinate the moves from our terminals to the rail ramps to create more efficiency, hopefully less congestion.

We built an inland port, which I'll talk a bit about, and then we're building an new intermodal container transfer facility, ICTF. We're laden with acronyms in this industry. Sometimes I'm convinced it's so we don't want to explain to people what we really do, actually. So we make it intentionally confusing to understand what we do.

So we built an inland port, and I had a lot of fun with this in South Carolina, because people know that we're deepening the harbor here, and they said, well Jim, what harbor are you -- what river are you deepening up to Grier, South Carolina? You know, what ships are you going to take up there?

But obviously that's a bit of a joke. But there actually are four rivers that would get you close to Grier, none of which are navigable. This isn't a ship-served port; this is a rail-served inland port. So it is served by overnight train service with the Norfolk Southern. It's adjacent to the BMW plant.

So we started with a base cargo of about 25,000 containers, and go back just for a second if you would, sorry. Okay. And you know, really the port today handles about 40,000 containers, and it's right in the middle of the biggest manufacturing and consumption area in the Southeast, the I-85 corridor.

So it's an innovative development that we're very proud of, and I think will be a big distribution hub in the Southeast. If you think about what we did here, we built an intermodal rail terminal, added another intermodal rail terminal.

There are only six in the Southeast. We made a seventh one, and it's in South Carolina. So it was a big strategic investment for us. Cost about $50 million actually to build, and we did it very fast.

So next. Within -- while I think that it's an important distribution hub, it's within 500 miles of almost a 100 million consumers, and 500 miles is the range which you can really serve on overnight distribution and be competitive.

So in addition to containers, we handle a lot of what we call project cargo. That's the real challenging part of our industry. It's fairly easy to handle containers; it's pretty routine. This stuff is very different. It's valuable. It's heavy. It's cumbersome, and you need capability to do that.

So we are in -- we are in a situation where there are four permitted nuclear power plants in the United States. Two of those are in South Carolina, two are in Georgia. So the parts of the two in South Carolina move over our port today.

GE has a huge deal in Algeria for gas turbines. They have a huge deal everywhere for gas turbines. They're sold out for years in gas turbines right now. So that's good for us. We have a big heavy lift crane that has 700 tons of capability basically.

So we can lift, make one lift of 700 tons. Then we have a very capable contractor provider here. So this is an interesting business for us, and something that we see as a growth area.

So to talk a bit about our harbor, something we are very proud of. Number one is our partnership with the Army Corps of Engineers, you know. They are federal channels. I think we have to realize that all these harbors are owned by the federal government, and thus we need to work with the Corps to do deepening.

There's a lot of confusion about harbor deepening in this country if you read the literature, because I think the main thing that is confusing is it's often intermingled with harbor maintenance. So understand that a harbor has an authorized depth. Our harbor today has a 45-foot authorized depth, and there's an amount of maintenance that goes with that every year to keep it at 45 feet.

In the case of our port, it's between 13 and 15 million a year. That comes from a thing called the harbor maintenance tax. Like many trust funds in this country, the harbor maintenance tax is 100 percent collected and 50 percent spent. We don't know where the other 50 percent is. It's probably not important.

There's just a move now that will compel 100 percent of the money to be spent. That's pretty logical actually, if you think about it. If you collect money for harbor maintenance, you ought to spend it on harbor maintenance. So I don't think anyone would have an argument with that.

But that does nothing for deepening. So deepening is a separate capital investment, and every project is seen as a separate capital investment. The problem in the U.S. today in a nutshell is there's no capital budget in the federal government for harbor deepening, and we have been, I would say and I will say it, and I would not expect my colleagues with the Corps to say it, but I can say it.

There has not been a lot of prioritization of deepening projects. Every project has been looked at with equal enthusiasm to some extent. That will have to change, in terms of what the federal government will fund. So I'll say it very directly to you.

The federal government is not going to fund the deepening, all the deepening projects that are on the table today. There's simply not the money for it; there's simply not the merit for it as well. So we have a good deepening project. It's on track time-wise.

What does that mean? It means that we will complete our harbor deepening study in four years, basically. So that is a record time frame. This is thankfully, and again the Corps district here has done a great job in really piloting this. We are the first deep draft navigation project in what is known as Smart Planning, to move projects along faster.

There are some other studies that have taken up to 20 years to do. There's -- I just say it, there's no way a harbor deepening study should take 20 years. It's impossible. I mean we've had the head of the Panama Canal here. He says I'm spending 5-1/2 billion to widen the Panama Canal, and I can do it in eight years, you know. Why does it -- why should it take you that long to do a study?

But that was the system before. It's not the system now. So we will have a Draft Environmental Impact Statement within a month. So that is the first phase of ending the study. There's a period of public comment and then we look for a chief's report some time about this time next year, which means the study is accepted. The federal government says it's a meritorious project and it's time to move into construction.

What sets our project aside is that our legislature, not knowing how much money the federal government will appropriate for any deepening project, has put aside $300 million in an interest-bearing bank account, to pay for our share, certainly the state's share. It's a cost share, but in case of need, the entire project. I don't say that lightly. I will say the taxpayers of South Carolina should not have to pay for the federal share of our deepening project. There's just no reason for that. If that has to be the case, it's enough of a strategic initiative that we will do it.

I think that sends a strong signal to the administration, that we're very serious about this project. You may also say well, why on earth is Jim talking about the Bayonne Bridge being raised in 2016. The Bayonne Bridge, as you all know, is in New Jersey.

Well, because without raising the Bayonne Bridge, it's impossible for big ships to come to the East Coast, because if a ship can't call in New York, it can't go to Norfolk or Charleston or anywhere else, because there's so much cargo that goes to New York.

So the Bayonne Bridge will be raised to 215 feet just in the nick of time. We actually believe, and we're more aggressive about this. But we think that our project can certainly be deepened by the end of this decade basically. So we want to push that forward.

That's not the official time table. That's what we think can be accomplished. So this is a great project. On all measures, it delivers the deepest harbor in the Southeast for the cheapest cost with a minimum of environmental mitigation, and environmental mitigation on this project is, I think, less than five percent of the project cost. So it's a very good value.

This is the picture that underlies all this. If you'd hit it one more time for me. So already before our project, four harbors have been authorized to 50 feet of depth at mean low water, so New York, Baltimore, Norfolk and Miami.

Miami's an interesting one. It's a cruise port. Cruise ships basically require about 30 feet of draft, but they have a vision where they want to handle deep draft container ships. We don't necessarily think that's a logical vision but, you know, that's what makes the world go around. People don't always see things the same way.

But what is clear from this picture, if we're a major exporting region, there needs to be a harbor in the Southeast at 50 feet or deeper, because you have to load the ships full out of the Southeast to sell foreign. So we actually aspire to get a 52 foot harbor basically. That is what we're seeking in Charleston.

Next, and we will be, just because of the dynamics of other deepening projects, we will be the only port to achieve 50 feet or deeper in the Southeast basically. So that puts us in a very unique competitive situation, in our opinion.

Next. What's the impact? You say why? You know, what's the point of all of this? What are you trying to achieve with this deepening. Well, an 8,000 TEU container ship like this size ship and the workhorse size of ship that comes to the East Coast will be eight to ten thousand TEUs.

When that ship is fully loaded, it has a draft of 48 feet, and a 52 foot harbor will accommodate a ship with a draft of 48 feet 24 hours a day without tidal restrictions. So the name of the game is to be able to bring this ship in and out without tidal restriction, and indeed a shipping line wants to get this ship in and out with 2,000 moves in a 24 hour period, pilot to pilot. Not dock to dock, pilot to pilot.

So from when the pilot boards to when the pilot's off, having done 2,000 moves within 24 hours. So basically we have a six foot draft advantage to make that happen. It's something that a shipping line, like I worked for before, cannot ignore. I mean you simply can't leave 1,000 containers behind a week, you know, by not coming to a deep port basically.

Next. So as I said to you, it's a big ship, cost-focused industry. It is what this industry's about. It is an incredibly valuable industry in terms of globalization, but it is an industry that behaves like a commodity today. It's all cost-focused, and there was just an article by the CEO of Maersk yesterday, and he said very clearly the lines with the lowest cost are going to win.

How does the line achieve lowest cost? You build the biggest ship possible. So the idea is to take the biggest ship you can take into a port basically. That's the name of the game today.

So future ship deployments are pretty clear. The Asia-Europe trade, which is the largest long haul trade, will have 18,000 TEU ships or larger. So again, 18,000 TEU ships or larger, and I can tell you in '97-'98, in my previous company, we never thought we'd build bigger than a 5,000 TEU ship. So today we have 18-19 thousand TEU ships being routinely built.

So next. That means the Asia-U.S.A. trade will have 8 to 13 thousand TEU ships. So I showed you an 8,000 TEU ship. We clearly believe that we'll handle 13,000 TEU ships here routinely in the not too distant future, once the Bayonne Bridge is raised.

In the Europe-U.S.A. trade, we have five to eight thousand TEU ships. So again, mostly post Panamax or new Panamax ships, and then the remainder of the trade is depending on the port capability, anywhere from three to eight thousand TEU ships.

So in South America today, if you know anything about ports in Brazil, they are not very capable in terms of, you know, turnover and productivity. They're handling up to eight thousand TEU ships.

So this is a picture that we like to show people. So that little spec is a BMW X-5. This little plane is a Boeing 787. That's not such a little plane actually. If you look across the harbor, you'll see the aircraft carrier Yorktown. The lighter blue container ship is a 9,000 TEU ship like we handle today, and this big ship is a 14,000 TEU ship like we will handle in the future.

It's 1,200 feet long. It's a beam of 167 feet of width. If you know anything about sailing, a ship is sort of ten degrees off center. So 167 degrees of width means you need a 350-foot wide space to handle that ship in a harbor basin.

And that, the Adidas guys like this, the Nike guys don't like it, but it would handle 70 million -- this ship would handle a total of 70 million Adidas running shoes if the ship was full of Adidas running shoes, which it would never be. But it's anyway just a calculation, maybe the Department of Meaningless Statistics or something. I don't know.

So the basic requirements to be a futuristic port, and this is a picture of our Wando Terminal. So you have to have a growing cargo base. You have to have reliable ingress and egress within 24 hours, not fog delays, not tidal restrictions.

You really have to get ships in and out. Lines can't afford to speed up and spend a lot of fuel to stay on schedule. Fuel costs, believe it or not, on a ship like that, the fuel costs are more than the capital and crew costs of the ship today, with bunker fuel at $700 a ton.

So 48 feet of draft, competitive dual rail service, ample truck capacity, competitive land for port-related logistics, inland port facilities, attracting human capital to our industry, lowest possible costs, the most technology that we can have and the ability to participate in economic development.

What does technology mean on a terminal like this? It means the next terminal we build will be highly automated. So you can actually run one of these terminals from a room like this on screens basically, if the labor component allows you to do that. So it's a very high tech business.

There's no shortage of challenges. Some of the challenges that we have, if you can just click through those. It's certainly a slower growth marketplace than we had in the last decade. We have a very competitive port marketplace as I mentioned. We have huge investment requirements.

There's not a lot of large low cost land tracks close to the port. We have to have appropriate capacity for large ships, and we have to get some revenue improvement to justify the investment that we need to do.

I just want to point out this trucking issue again, because like I said, we face a huge shortage -- if you want to click that one -- face a huge shortage in the trucking industry.

Think about this. The container trucking industry, which are pretty much entrepreneurs that hook up with trucking companies every day. They own their trucks. They get paid per move. That industry has 100 percent turnover in a year. A Wal-Mart store has 40 percent turnover.

So this is 100 percent turnover industry, and they get -- if they get hung up on a terminal, they don't make money. So what our imperative in the port is is to make sure they get in and out fast, and make sure we have the proper gate hours, so they can make a living and not go build houses or do something else. It's a big challenge.

So you know, the port has to be leader here to make all this happen. We have a big strategic vision, a large capital plan, if you click that, and this is a picture of three new Panamax ships, three 8,000 TEU ships at the Wando Terminal, which is what we will see in the future. It's what we see today; it's what we'll see in the future.

So there's a lot of opportunity here. I think the Southeast port market is the best port market fundamentally, which is good for us. But there are a lot of challenges to invest, to handle these ships.

So that's my 30 minutes pretty much. If you have time for questions, I'll be happy to answer any.

CHAIR PERKINS: Yeah. We do have time for questions, because we have a break and poster viewing, you know, coming up after this. So no worries that we're a little past 10:30.

VICE CHAIR HANSON: Mr. Newsome, Bill Hanson, Great Lakes Dredge and Dock. Good to see you again, sir.

MR. NEWSOME: Good seeing you.

VICE CHAIR HANSON: Congratulations on the great progress you've made in a short time here in Charleston. One of the sea changes in the Southeast ports, as you mentioned, has been the governor's support, and I know Christine's here from the Southeast Governors Alliance.

You know, we've seen Governor Scott in Florida, Governor Deal in Georgia, Governor Haley here and even Governor McCrory in North Carolina step up to the plate when the federal dollars weren't available for this.

I'd like for you to talk a little bit about how that developed, and then maybe a second question. As the Corps goes through their analysis, you and I know from our careers that when you deepen a port, there's many, many other benefits that accrue to a regional economy, that the Corps is not allowed to count in their economic plan.

Do you have plans for additional port dock space, dock development, inland type facilities, or what's your plan to handle the growth that will come?

MR. NEWSOME: So yeah. I mean I think that it is -- I would say what have we accomplished in five years time. For sure, we had everyone in the state on the same page about the strategic importance of the port. So the governor, this is a very strong legislative state. Everyone believes the port is the biggest strategic asset.

So that was a big deal, and anyone who's lived in South Carolina knows that we went through a bad period, where we had a lot of internal disharmony about whether the port was a good thing or a bad thing or if it should be Jasper County or Charleston or wherever.

So we got through all of that, and that enabled us to make, you know, a statement, which was really putting the $300 million aside for our deepening ahead of the realization of the project was huge, because that essentially said that we're ready to do this. You know, we're going to deepen this harbor come hook or crook.

We don't know today, and I'll say this very clearly. No one who's doing a deepening project today knows that they're going to get a dime of federal expenditure. Everybody can talk about it. It's written about. They're all going to do it, etcetera. There's not one dime secured.

The last harbor that has achieved a federal dollar for construction is the Port of New York and New Jersey, and it should have. There's no reason it shouldn't have. It's 5-1/2 million TEUs. So in addition to the harbor deepening and our cost benefits are quite good, we know that, but we are investing in a new terminal at the former Navy base.

We had a BRAC here in '94. We got some land in the former Navy base, and we're investing in what is essentially almost a billion dollar terminal, you know, for 300 acres. Why is it so expensive? Because we live on quicksand here, and you have to stabilize the muck to be able to build, you know, handle these heavy weights and things of that nature.

So we are investing on top of that, you know, in new facilities. What was also surprising and somewhat disappointing, which I think a lot of us never thought about until recently, is that we have to invest a lot of money in our existing terminals, to retrofit them for the big ships.

Because when we built the Wando Terminal I showed you, it was for two to four thousand TEU ships. We talk about handling 14,000 TEU ships. So the dynamics of doing that are very different today. So it's -- we have to invest, you know, to keep up.

MEMBER MILLER: What's your current harbor depth?

MR. NEWSOME: 45 feet at mean low water. What it means is you can handle a ship at 48 feet of draft for two hours, which is the length of the harbor basically. So we want to remove that tidal -- this project's aim is to remove that tidal restriction for a ship at 48 feet or 14.6 meters of draft.

CHAIR PERKINS: So if you get authorized the 52 feet, and you have 24-7 access, do you no longer need the real time PORTS system? I guess it's elementary, right? You don't need it.

MR. NEWSOME: Well, I wouldn't be the one to answer that. John, you want to take a --

CAPT CAMERON: The bridge senor will definitely need that component of PORTS. But underkeel clearance is an important issue. I'm with the harbor pilots. We try to maintain ten percent underkeel, which is the largest safety factor in place in the United States right now, and tidal barriers here are 2-1/2 feet with wind-driven effect.

So at a 52 foot depth, a full-loaded ship will be right at that ten percent. If tidal fluctuations are greater than normal, we'll need to know that.

CHAIR PERKINS: So have you squirreled away a little bit of that $300 million for your PORTS system?

MR. NEWSOME: Yeah. I mean that $300 million is for the deepening project. There are other investment dollars put aside, and we will borrow significant amounts of money to accomplish that, because you build long term assets in a very discrete --

You build long term assets before you have a dime of payment for them basically. That's the issue that we have. So we have an ambitious capital plan. But the $300 million alone was for the entire cost of our harbor deepening. But now because we're going deeper and the project's more expensive, it covers at least the 60 percent state share.

So there's still a gap. I'll tell you that I think if any harbor's going to qualify for federal reimbursement, I think we're in good shape to do that, because we have -- our harbor project is half the cost of, you know, comparable harbor projects, delivering a much greater benefit.

Some of the other harbor projects that are competing with us for dollars are not going to even achieve the functionality that we have today. That's a whole different debate, you know, why you would do that not -- I don't want to get into that debate really. It's not for me to do. I have an opinion on that, by the way, as you might imagine. Other questions?

MS. MERSFELDER-LEWIS: Could you clarify? Are you looking now to go down to 50 or 52?

MR. NEWSOME: So the official name of our project is the post-45 foot project.

So we studied -- the Corps studies alternatives, and we're somewhere at the 50 to 52 foot range, and that largely comes down to a question, frankly, of who's going to pay for the extra two feet, because there's probably no way that we would not -- we would opt for 50 feet and start another study again in two or three years. It wouldn't make sense.

VICE CHAIR HANSON: I hate to hog the microphone here. Grab it from me later, okay. We'll be on a panel together down in Panama here in a couple of months, at the ACE meeting, talking about the impact of the expansion of the Panama Canal to U.S. ports.

But there's another canal that recently started expanding. Can you talk a little bit about the expected impact?

MR. NEWSOME: Yeah. So what's really interesting, there obviously is a lot of excitement about the expansion of the Panama Canal. It's a $5.5 billion project that was authorized by referendum of less than 100,000 votes in Panama. If you think about it, it's pretty sensational. But we all thought this big ship deployment thing was going to wait for the Panama Canal expansion.

It's two years late, and because of the cost dynamics of the industry, many of the lines didn't wait. They started deploying the ships through the Suez Canal. So there is really effective competition between both canals. They have a similar toll structure.

You may not believe it, but you know, the 13,000 TEU ship that goes through the new Panama Canal will pay a million dollars, one million dollars to go out of the Panama Canal. So they will, in my judgment, have a competition between them.

But I think the canal that will get the business is the one that provides the shortest haulage basically, the lowest cost. It's pretty obvious. If you come from Northeast Asia, you're probably going to come by the new Panama Canal. If you come from Southeast Asia, you'll probably come by the Suez Canal.

There's a pretty clear line of demarcation, which is defined by the number of hours of streaming basically.

CHAIR PERKINS: Okay. Well thank you Mr. Newsome.

MR. NEWSOME: Thank you very much.

(Applause.)

CHAIR PERKINS: I don't know if you got one of these yet, but this is a copy, fresh off the press, corrected through this week, last week, of the new chart of Charleston. So I'll present that to you as well.

MR. NEWSOME: Well I appreciate that. Thank you very much. Thanks for having me today.

(Applause.)

MR. NEWSOME: Thank you.

CHAIR PERKINS: Thank you, Mr. Newsome. Next up we have a short break, and an opportunity to do some viewing of the College of Charleston's Benthic Acoustic Mapping and Surveying, the BEAMS program and student posters, and we will reconvene at -- promptly at 11:00 a.m. Eastern.

(Whereupon, the above‑entitled matter went off the record at 10:42 a.m. and resumed at 11:05 a.m.)

CHAIR PERKINS: If I can get us reconvened here. Thank you for returning fairly promptly, as requested. So now our next session is from the U.S. Coast Guard Charleston sector. My pleasure to introduce Captain Ric Rodriguez.

U.S. Coast Guard Charleston Sector

MEMBER MILLER: Sir, I think you need to speak into a microphone, because it's being recorded.

CAPT RODRIGUEZ: Okay. That goes totally against my way of doing business. I like to move my hands. So my name is Captain Ric Rodriguez. I'm the sector commander here. I've been here in Charleston for about 14 months. I've been in the Coast Guard a little over 30 years.

Just to clarify, I was talking to Mr. Perkins about whether you all understand the role of sector command, and you may and I'll give you just a little bit of an insight. There are 35 of us around the Coast Guard, which includes Puerto Rico and Guam.

Our responsibility is to manage all Coast Guard missions that fall within our area of responsibility, primarily captain of the port responsibilities. That's probably the biggest one. But the other piece of it, which is really where my bread and butter comes from, is search and rescue, and a lot of it dovetails it.

So there's facilities security, there's waterways security. It's managing, working with our port partners and with agencies which includes all of you. But I carry a lot of broad authorities given to me by statutory law, and then our mission.

So we have 11 statutory missions. I exercise nine. One of them is not ice breaking thankfully. I'd rather not be in Alaska. So I'm very happy to be here in Charleston. But the captain of the port responsibilities is probably one of my greatest ones, and the one that I probably fear the most. And I'll say that out loud and I'm recording that I do fear it, because there's a lot that goes into it.

I am currently responsible for the Coast Guard missions within two states. So I have Georgia and South Carolina that I'm responsible for. The captain of the port though, there is a separate captain of port zone in Savannah, Georgia.

So though I supervise the commander who's there, she is her own captain of the port, and we both report to our boss, which is in Miami. So I just wanted to give you that as a little bit of a background. I'm going to go through the questions first, and then I'll elaborate a little bit on it.

Again, as mentioned, we are multi-mission here. With regards to our future capabilities and how prepared are we here, regarding the port expansion and the growth of the marine commercial shipping along the U.S. Southeastern coast, it depends. I say that because we're as prepared as we need to be in terms of our Coast Guard overall authorities and responsibilities.

But we recognize a port like the Port of Charleston is hoping to expand and grow, working with the Army Corps, working with NOAA and working with other federal, state and local agencies. We are going to be as prepared to address the concerns.

I would say as the sector commander, I'm not concerned about the maritime transportation impacts. I am adequately staffed to address my current challenges, and I believe I will be able to address any future challenges. I don't see them expanding significantly more.

We will still regulate the shipping industry as it comes in. We'll still respond to the hurricanes that come in with regards to, you know, regardless of how much of an expansion it is. But a lot of it rests with our relationship with the Army Corps, which in Colonel Litz's brief, you'll get more detail as to their part of that expansion progress or process.

How does Sector Charleston use NOAA's navigation data and products to support its mission? I could not do what I need to do with regards to hurricane preparedness, heavy weather, climate change preparedness without NOAA. There's no way I can.

I rely heavily on the data that comes to us, so that we can make adequate assessments. Sector Charleston is part of District 7, which includes from the North Carolina border all the way down to the Caribbean.

When a storm starts brewing in the Caribbean, we stand up not just a heightened sense of awareness, but the district office, my boss, my admiral will stand up an Incident Command post, and we get on regular conference calls.

So we start monitoring the heavy weather as it works its way up. We base a lot of what we do on the predictions, and the prediction comes from you all, in terms of how the storm is going to track, what the impacts are going to be, and then I can make an appropriate assessment as to whether I need to eventually close the Port of Charleston, and with that ask the ships or direct the ships that here in port to leave.

For those that can't, to work with them on ways that they can mitigate whatever heavy weather or storm comes in. So I cannot do what I do with regards to hurricane preparedness without the information that you all provide.

And a second piece to that is -- which is where my biggest concern will be is post-storm recovery. One of the things that I'm charged with is right after a storm is how soon I can open up the port, and that pressure will come in various forms.

It will come from our port partners, it will come from the local government, it will come from the state government. It might even come from the national government.

So one of the things that I look at doing is mitigating the threat once the storm or heavy weather hits, and then as soon as possible, I want to be able to, with collaboration with our partners, open up the port so we can allow the flow of commerce to come back in.

I need your information. I need the prediction, and I need to be able to rely on what you provide us, so that we can make the appropriate assessment to minimize the impacts in the maritime transportation system. But it's not just that. One of the things that we have to be able to do, and this is a lot of work with the Army Corps, is to be able to open up the shipping channels and the intercoastal waterways.

It's not just the commercial traffic, but it's also to the average citizen. So I'm very concerned about where the buoys are. I'm very concerned with the placement of the buoys, and there's a lot that goes into, when we have a buoy that's off station and we want to place it, I'm relying on the navigational charts.

But as I was talking to Kyle Ward a little while ago, one of the challenges we have is in the Coast Guard we're very programmatic. So when we're told to put a buoy here, that's where we put it. Whether it looks good on the chart or not, we base it on the GPS coordinates, and that's where we place it.

I think we need to evolve a little more than that. We have to be able to provide feedback to you, if that is indeed the best place to do it and where to make the adjustments. Because as you all know, the mariners are quick to tell us if something is off station or if something is not working.

Whenever we have a maritime incident, whether it's a grounding or there's an accident, I have to send resources out to verify that the chart was accurate and if the buoy was properly watching or if it wasn't even in place, and if it's not, address that concern. So that goes into part of my assessment or evaluation.

What products will we need for future capabilities to address the marine shipping growth for this region? We need continued support with mapping surveys, to provide the latest, most accurate data for our maritime community, and the professional mariners that safely guide the projected increased size of the ships that will be calling upon the port here in Charleston.

Again, a lot of it, we can already address the concerns. We will work hand in hand with the pilots on being able to address the increased workload coming in. We are required -- as you all may know, there's a 96 hour notice of arrival that every ship that comes into port has to notify us.

We will work with the pilots to make sure that we can adequately meet them coming in, do the threat assessment, and if necessary board and escort them in and out if necessary. So I think we can meet the increased demand that's going to call upon the Port of Charleston.

What's working with the use and application of our data and products and what's not working? At this point, we've been very satisfied with the level of support and products that NOAA provides. There's going to be a push for increased technology. So I guess the question for all of you is what will you all be able to do with regards to additional apps?

I have no -- I haven't given it much thought in terms of what type of application. But as you know, the mariners are quite savvy. Whether it's the private or the commercial side, they want technology in their hand. So whatever you might be able to provide, that is at that level. That granularity, I think, is really important.

I know there's some applications out there that can be used on the iPhone or Samsung or other things that will, you know, AIS data. But I'm not sure what the mariner's going to demand, but I think it's worth looking into, is how much more can technology provide the information that the mariner needs in order to navigate safely and to know what is out there.

The last thing I would say is we welcome the continued collaboration and support with NOAA and with our other partners. We can't do this by ourselves and neither can you. So I believe we have a forum that allows us to have open and honest communication.

We attend the same meetings. I look across the room and see John Cameron over there from the pilots. Kyle attends a lot of the meetings that we're at. The Army Corps is at the same meetings. So we benefit. In Charleston, it's a small town in a big city.

So we all know each other, and that's very helpful, and we all attend the same meetings. So I would say we have a great relationship among the federal agencies and we will continue to do so. We just need to be honest with each other.

If there are things that are not working, we cannot be so protective and frankly -- and not worry about hurting your feelings.

I think we have to tell you if what's working is not working, and vice-versa. So at this point, I'd say we just need to continue to be honest with each other. Is there anything I can answer for you? Sir.

RDML GLANG: Thanks, Captain Rodriguez. I'll pop out my notes. So the conversation this morning, we mostly focused on deep draft vessels, but you've got a fair bit of inland waters, intercoastal waterway that cuts through your AOR.

Can you talk about how usable our products and services are in those regions, the usability of the charts, their content? Are the scales appropriate, those kinds of things?

CAPT RODRIGUEZ: I would say here one of the biggest concerns we have in this AOR is shoaling, and though the charts are fairly accurate, one of the things that we have trouble accounting for, and there's big fluctuations in tide.

We have extreme low tides and I don't want to say extreme high tides, but the low tides matter, and that is probably the biggest concern, is though the charts are accurate, it's the shoaling that has increased, that is making this a very difficult place to navigate.

So unless you're a very one, experienced mariner and two, that you are really aware of your surroundings at all times, it is very common for vessels to run aground. And that is probably my biggest concern, and that's more on the inland side.

If you look at the Port of Georgetown, for example, it's a nice port. But they have significant shoaling that's come up, and Colonel Litz is shaking his head because he knows. It is a constant concern. But eventually the shoaling will restrict vessels from coming in.

So it is a big impact on the inland waterways. I'm limited to one, responding to those that need -- that are in distress, work with the commercial salvers, respond to any potential threats to the environment. But with regards to shoaling, I can't do much about it.

 So that's where I rely on others, whether it's Army Corps or other agencies, to be able to help us with that. I would say that's probably the biggest challenge we have on the inland waters.

The second piece, I'm not sure if this falls under your concern is, the Coast Guard is trying to move away from managing all the aids that we have. We're trying to push some of the responsibilities onto the states and even the private side.

I think that's going to be a potential problem down the road, because I'm not sure the states are going to be able to manage or address all of their aids and navigations concerns.

But it's we're having -- it's a lot harder for us to get into the inland waters, to fix all the aids that need to be repaired. Does that answer your question sir?

RDML GLANG: Yes. No, that's great. Thank you.

CAPT RODRIGUEZ: Sir.

MEMBER ARMSTRONG: Andy Armstrong from NOAA's Joint Hydrographic Center. Are you using any virtual aids here, or how do you feel that virtual aids to navigation will impact navigation in your area?

CAPT RODRIGUEZ: I am not aware that we are using it right now, sir. I would be interested in finding out what the benefit would be and where it might alleviate some mariner concern or work. But I don't think I can answer it now, because I'm not aware of it, sir.

CHAIR PERKINS: Captain, this summer a series of listening sessions, you know, took place, I think. There were 16 of them across the country that were joint, you know, Coast Guard, Army Corps and NOAA. Do you have any feedback or were you able to personally participate in those? Can you share anything or lessons learned or benefit --

CAPT RODRIGUEZ: I did not, but a few members of my staff did. They found it very insightful. I don't think -- you know, it validated what we were doing and what we had already heard. I'm not aware of any big concerns that came out of the listening sessions.

But I had about -- I know of two people that participated, on my staff that participated fairly regularly on the listening sessions. So they just came back saying it was very helpful for them to hear if there were any concerns out there, but nothing came up, sir.

CHAIR PERKINS: It's a hard question, but do you think that was a beneficial use of federal dollars to conduct those listening sessions?

CAPT RODRIGUEZ: I do. I think they're very beneficial, especially if people can call without having to travel, and if they have issues that they want to bring up, I think it's very beneficial sir.

CHAIR PERKINS: Okay, thank you. Yes, Joyce.

MEMBER MILLER: To what extent does the Coast Guard use the Charleston Port system?

CAPT RODRIGUEZ: In what regards ma'am? I'm not sure what, in terms of the Charleston ports.

MR. WARD: The new air gaps sensor that's in place. I don't think you guys --

CAPT RODRIGUEZ: Yeah, I was going to say. I don't think we do. Anything else?

MR. WARD: Yes, and just -- I don't know if it's been explained yet. But the port system here consists of an NWLON gauge that always been here, so we all -- you know, we use that.

But the air gap is the only other sensor, and that's the only new sensor. So very limited for that specific purpose of getting those vessels underneath there.

CAPT RODRIGUEZ: I'd like to invite for a moment John Cameron, who used to have this position a couple of tours ago, and he works with the Pilot Association. John, is there anything from your perspective that you think would be valuable for the Committee?

CAPT CAMERON: Well, that sensor is very important, even though it's just one sensor. We have a two foot safety margin there, and at least every week, we're looking at that sensor while a ship is coming in, and we're telling the pilot, you know, you might want to speed up or slow down to get there for his optimal clearance So even though it's just one sensor, we use it.

CAPT RODRIGUEZ: Yes he -- the pilots use it certainly much more than we do.

MR. MILLER: Mr. Perkins, I just want to go back to your question about the listening sessions, the country-wide tri-agency listening sessions. I actually had Kathy Post, the -- I don't know if the HSRP saw this. But it's in your -- on your website. There was a whole sort of feedback form that the Coast Guard put together, that shows all kinds of different questions and responses based on those listening sessions, the countrywide listening sessions.

Then I also wrote up a NOAA perspective report on that as well. So there is a holistic report out there, and it's sort of broken down by recreational users, commercial industry and various other users. So if you wanted more information on how those talks went and what were the major issues and what we're hearing, it is on there.

CHAIR PERKINS: That's great. I wasn't aware that it was on our website.

MR. MILLER: I think you guys get a lot of information thrown at you so, you know.

CAPT RODRIGUEZ: One of the things --

CHAIR PERKINS: I think that's a very gracious way of you covering the fact that I haven't looked at it recently. So thank you so much for the courtesy. Yes, Ed.

MEMBER KELLY: I don't want to take from the comment.

CHAIR PERKINS: No, no, please, please.

MEMBER KELLY: Just briefly on the listening sessions. I was a part of the initial small group with the TRB that was initially put at standing that up and it was very well presented. But then when it got out into the field, we had local representatives who were totally unclued-in to what the major program was.

I felt that the program in New York was a waste of my time, you know. It kind of meandered around and some questions were thrown about. But I don't think they had the same team going around to a listening post. So you had a lot of divergent opinions coming in. So I think that it could and should have been done a lot better than it was done. So just my two cents.

CHAIR PERKINS: Thank you for that input. Do we have any other questions for Captain Rodriguez? Sir.

MEMBER KUDRNA: You didn't talk about recreational boats. When you have calls on recreational boats and there's elevation errors, are those conveyed to NOAA also?

CAPT RODRIGUEZ: I'm not sure. Can you ask that again? I'm not sure what you mean, sir.

MEMBER KUDRNA: If you a distress call, a grounding of a recreational boat or someone calls for assistance, and there's an elevation error regarding shoaling or something like that, do you transmit that information to NOAA?

CAPT RODRIGUEZ: You know, I'm going to probably say we don't, and I -- now that you mention it, it's probably a significant gap that we need to let them know about, because that shoaling here for the recreation side is the biggest concern that we have with regards to recreational boaters.

They can go out first thing in the morning in one direction and try to reverse it coming back, and they'll hit the higher ground. We've been very fortunate that frankly there haven't been more lives lost.

We had a couple of cases last year where that very same thing happened, and if they didn't have life vests they --- you know, there was a mother -- there was a mother, father and a young child, and that's exactly what happened. They came back and they hard aground, where the starboard side tipped right over and fell in the water, and we found them two hours later.

So we were really lucky that they had survived. But that is a huge challenge, and I think that's probably a gap for us, that when that happens, we should be able to communicate that to NOAA, so they're aware of that issue.

But the challenge with that is it might be more related to the high tide and low tide aspects, which a lot of your recreational boaters are not paying attention to. Yes, ma'am.

MEMBER MILLER: To what extent is the ICW maintained by NOAA versus Army Corps?

CAPT RODRIGUEZ: It's almost exclusive.

LT COL LITZ: We do the dredging on it. Unfortunately, over the last several years, the money for dredging has not been there. We have barely enough money to do caretaker activities along the AIWW.

So we know the places that are shoaling hard, and we're aware that there are recreational boaters running aground there, and it's very difficult to navigate, especially around I think it's a breach inlet area and others, and we try to identify those areas as best we can.

But we just simply don't have the funding of late to dredge the AIWW. It is an authorized project and we'd love to do it. It just requires an appropriation we don't have.

CAPT RODRIGUEZ: Great, thank you.

CHAIR PERKINS: Wait, I won't let you off the hook, because there's still time on the clock.

CAPT RODRIGUEZ: Oh no. I'm here as long as you want me to.

CHAIR PERKINS: So one of the things I do is when I go around the country, I try to talk and hear from a cross-section of users, and recreational boaters are particularly concerned, because the way they use navigation information is changing, right?

You mentioned that they're more and more tech savvy and they want the information in the palm of their hand. And yet what that leads to is -- are changes in behavior, right? If a boater even cares about a nautical chart, they may take a moment to look at it before they get underway, or they know the area and they're not going to worry about it.

But when you're in your car, it's really easy to bring up your phone, because our interstate highway system has excellent cellular phone coverage. But when you're out on the water, maybe not so much.

CAPT RODRIGUEZ: Oh definitely not, sir. I will tell you that.

CHAIR PERKINS: But the behavior of recreational boaters, they're really just practicing what they do when they're driving, right? They bring out their cell phone and they say oh well, I can figure out what's going on. So do you have an opinion? Do you -- are you observing that kind of change, that boaters are expecting their phones to work, to give them information or even for emergencies?

CAPT RODRIGUEZ: Absolutely, sir. In fact we ‑‑ one of the things that makes it particularly challenging, it doesn't take the search out of the search and rescue. It's just that, is mariners are tremendously -- recreational mariners are tremendously complacent with regards to how well their electronic devices will work.

They will run the risk of going 40 miles off, you know, off of Charleston, hoping that their cell phone will work, and it will probably stop working after four miles, and they fail to communicate. So despite the education that they need to have a marine band radio, they still rely foolishly on their cell phone, because there just isn't the coverage.

It does pose the challenge, you know. The app is great, but they do need to have a navigational chart, and they should be looking at the chart beforehand.

We put out broadcast notices to mariners, which many recreational boaters ignore or are not even aware that they're out there. So not having the marine band radio, not listening to the appropriate frequencies makes it particularly challenging.

So it is part of the education process that we do when it comes to National Safe Boating Week, when we're giving them the opportunity. I stress to folks don't rely on your cell phone. It's great initially when you're at the dock. Check the weather. If you have access to charts, great.

But once you leave the pier, it's not going to work for you. And oh by the way, if you drop it in the water, it's gone. So it will fail for you in many ways. But there is an over-reliance on it. We will get intermittent communications sometimes with folks and then, you know, they're cutting it off because their battery is going to die.

So that's another big challenge with it. So we're trying to educate them that they need to be smart about being out there, and the cell phone is great initially, but you need to have the marine band radio and EPIRB and you know, life vessel, all this stuff.

But that's the course of technology. It's an over-reliance, and you hit the nail on the head sir. They're acting as if it's in their car and they can pull up Google Maps or TomTom and it will work, and that's not the case.

RDML GLANG: How about in the Coast Guard? What are you all using for technology, and are you able to pull in the NOAA data that you need?

CAPT RODRIGUEZ: We do, and we are using the electronic charts. We have -- our folks are very well versed on the electronic charts, and especially on larger cutters, that's exactly what they are using. But they also continue to take fixes.

We still have some of our young kids who are in our smaller boats that are running around as well. But they have the charts on board and they're supposed to follow the charts, and they don't always as well. But it is -- I think it's part of the curse of technology too. It's that over-reliance. Yes, sir.

CHAIR PERKINS: Any further questions?

CAPT RODRIGUEZ: I know Colonel Litz is chomping at the bits to jump up and tell you all that he has. Thank you.

CHAIR PERKINS: Thank you, Captain.

(Applause.)

CHAIR PERKINS: All right. Our next speaker is Lieutenant Colonel John Litz, commander and district engineer for USACE Charleston.

U.S. Army Corps of Engineers Charleston

LT COL LITZ: All right. Ladies and gentlemen, thank you for having me here this afternoon to speak to the panel. This is my first opportunity to do so, but as I look around the room, I do see some familiar faces, Kyle Ward, Captain Rodriguez, and others.

So just thank you for having me here today, and what I'll do is give you a brief overview of the Corps of Engineers in the Charleston District and how we interact with NOAA, and which is a great federal partner for us.

We've -- it seems like in so many meetings and forums lately, I do see NOAA. So it's a pleasure for me to be able to bring this to you today.

But so I'll talk to you today, but I have three experts that will be here tomorrow I believe, that will give you some more detailed information and the first of those, he's not here today, David Warren will speak about the Atlantic Intercoastal Waterway in detail.

So you know, he's the guy that can answer just about any question. If anybody's got the answer, he'll have it, and that will be tomorrow. He's a civil works project manager for me in the district. I have Mr. Brian Williams, who's back here in the white shirt, and he is the project manager for the harbor deepening project.

So a very large, important job, and there's probably -- if there's a question on the harbor deepening, he's the guy to answer that in the most detail.

Then also back here in the blue shirt we have Mr. Phil Wolf, who's the chief of the newly stood up GIS Branch in the Charleston District, and I believe he'll talk tomorrow on eHydro and GIS. So I'm glad we could have them participate in this couple of days of the panel as well.

Just to note, I am one of those people who has lost their cell phone in the water, as Captain Rodriguez mentioned. So I have to learn by touching the stove, I guess.

So very busy slide here. There's really just one key point here. But the Corps District has been in the Charleston area for a very long time, even before we were the Charleston District. Some of the projects that we trace our lineage back to is Fort Sumter, Fort Jackson, Charleston Air Field, which is now Joint Base Charleston and a regional airport.

But particularly in navigation projects, I think everybody here probably knows about the jetties that were built in the late 1800's. We hear about them every day still, especially if you're from Folly Beach.

We hear about them quite a bit. Actually, it was a structure that pushes silt out of the harbor. A lot of folks don't, you know, think it's just a protective measure. But it uses the Venturi effect to flush the harbor.

So but really what's important about this is the long history that we have of development in Charleston and in South Carolina, at the local, state and federal level with those partners, and also industry partners, and particularly the navigation mission.

So this is the United States, and that's obvious to every one. But the colors here mean they are our nine Corps of Engineer divisions, and within each division there are districts. There's around 40 districts around the world, most of them here in the continental U.S.

The Charleston District, as you can see called out there in blue, it's my boundary. It's my area of responsibility, the Charleston Corps of Engineer District. It's a political boundary of South Carolina.

The lighter blue down there just means that we're part of a five district region, and my regional headquarters is in Atlanta, and my commander is Brigadier General Turner. As mentioned earlier, Lieutenant General Bostick runs the Corps of Engineers, that three star major command, whose headquarters is in Washington, D.C.

The Charleston District is about 256 personnel. There are two of us that are active Army and the rest civilians, and we are primarily project-funded, meaning we take a fee for service. Very few of our programs are direct-funded from the federal government.

So that's an interesting fact about, you know, sometimes we're 256 personnel. In the past we've been 156 personnel, about eight years ago. So the workload that we have from our federal partners kind of determines how big the district is and what capabilities we carry and are able to bring to the table.

I think it's worth noting that our workload is healthy right now in the district. We're bigger than we've ever been in the past. Our objective is not to grow but to provide value to the nation. And whatever capabilities we don't have in the district, we can leverage other districts around the Corps of Engineers as well, so --

So moving on, these are our primary mission areas that we deal with the Charleston District. Some districts in the Corps have other mission areas, but these are the primary ones that we have.

Civil works, the one down here at the bottom, that cutter head dredge picture right above it, is the main one of interest here, although you know, our regulatory program and our emergency management mission area also interfaces with NOAA, and I'll get into that a little later in the presentation.

But as Captain Rodriguez kind of alluded to, the Charleston District and the Coast Guard and NOAA and other agencies partner when it comes to opening the harbor. If there's a harbor closure due to a natural disaster or otherwise. So a little bit more on that as we get through this presentation.

Probably the most well-known thing that our civil works program does is our navigation and survey mission. We get an annual budget of sometimes between 15 and 20 million dollars, mostly utilized on maintenance of the Charleston Harbor.

We have two deep draft harbors that we maintain, Georgetown-Charleston; about 300 miles of channel and coastal inlets. The Atlantic Intercoastal, as I mentioned before, it is an authorized project. Just very little funding and no dredging as of recent for that project.

Also within our navigation and survey mission, we produce plans and specs for dredging and ditching and dyking for our dredge material disposal areas, which if you drive over Highway 526 or over the big bridge and look down, you'll see disposal areas and those are the ones we use for harbor maintenance.

Okay, and we have a couple of vessels that we utilize. We're not nearly as big as the ones that you see out there in the Coast Guard or NOAA, but we have -- our flagship is a 42 foot vessel called the Evans, and that's it right there in the center screen, and we have the Wilson, a much smaller vessel up there in the upper right-hand corner.

That's -- those are the assets we use to survey all the federal channels in South Carolina. They both use multi-beam sonar systems to obtain full bottom coverage. The ATV you see down there in the lower right-hand corner is kind of a home cooked innovation that some of our folks have put together.

It's a relatively new capability, and it carries a topographic LiDAR retrofit system, that we'll use out on the shoreside. We'll run it along the beaches both pre- and post-storm to gain, to give ourselves an idea of what, you know, how much material a certain storm washed away, for instance.

So it's a new capability. We've been employing it for probably not quite the last year. But I thought it was worth mentioning here in this forum, even though it doesn't float.

Things we provide to our federal partners. We supply channel conditions data, map products via e-Hydro, which is an art GIS application or GIS-based application, that takes our sounding data and basically puts it into a format that our customers can use. I'm sure you're aware of that.

We have a couple of different ways that get information out to the public, and one of them's our website, and that's on the next slide I'll show you, and we also use our GIS app for your mobile device. I think we talked about that a little earlier when Captain Rodriguez was up here.

There's our district website. I think Dr. Calender mentioned earlier, and it's worth recognizing, that we all have phoning challenges as of late, and the more agency cooperation that we have, I think that's the message there, is it leads to cost savings. We're definitely in the Corps seeking those opportunities, and we do get those opportunities with sharing capabilities and data, and we greatly appreciate that.

We've made several improvements to our web products, modernizations over the last year or so, and what's worth noting is that you're a user of those, of that data or you go to those websites and you have feedback, we greatly appreciate it, and our contact information's on our web page.

So please remember that as you -- after you leave here and you navigate through our websites. Any feedback would be useful. I think David Warren and Phil Wolf will probably talk a little more in detail about the products we provide tomorrow, when they give their more detailed presentations to the Panel.

So here's where I'll make a plug for our engineering capability. Engineering Division is one of the subordinate divisions within the district. We do have a pretty decent in-house capability, but as I said earlier, we also have the ability to leverage other capabilities from other Corps districts.

A fairly broad range of project types within our civil works, a mission area that engineering division supports. We deal with beach erosion and shore protection projects which result in beach nourishments and coastal structures, such as growings and revetments.

If you've ever been on Folly Beach recently, we finished that project in July. We're doing some cleanup work right now, some hard material that keeps surfacing from one of the borrow areas, where we picked up some material that's kind of consolidated and cemented together. But largely that project is complete.

We'll be doing some sand fencing, which should be fairly transparent to the public later, but that five miles of beach nourishment is complete and that's worth mentioning, and if anybody's got a question about that here at the end, I will certainly do my best to address that.

Other things that we're looking for in our coastal studies are sand sources. If we have to nourish Folly Beach again next year, I'm not sure we have the sand borrow source identified yet. So that's one thing we'll be looking at, that we use our survey capability for.

We study the effects of our projects on adjacent shorelines. We look at project costs and benefits, and we do so -- in conjunction with the engineering division, we have a planning division, a small planning capability within the Charleston District, and again, we can leverage other Corps districts for planning capability that we don't have in-house.

But they do a lot of our project cost and benefit studies. Then also worth mentioning is beneficial use of dredge material. I think I took a question, sir, from you on the last break. So we can talk about that a little later as well.

Okay. Emergency management is a capability. It's a mission area that we have within the Corps, and it's worth mentioning here because this is an area where, as a new district commander, when you're finding out your responsibilities, when you find out you have the responsibility to make a recommendation to the captain of the port on whether he should open the harbor or not, it kind of dawns on you that this is a very big responsibility, especially when you know the economic and other impacts of the port, that I think Mr. Newsome did a great job of highlighting a little earlier today.

It's a big deal. So the survey capability is what Charleston District provides. But from a recent tabletop exercise that we had, for the first year that I'm aware of, recently in July, and we will continue to do so next year, preferably before hurricane season, where the Coast Guard, Corps of Engineers, NOAA and others partnered.

We found out that it's probably the NOAA capability that will be first on scene to do channel surveys. That has everything to do with our small vessels and what we have to do with them, with CAT-3 or above hurricane. We're going to have to pull them out of the water and put them somewhere. And then reintegration of our employees that operate that vessel, and getting the vessel ready to do its mission is a consideration.

So considerable lag there, that I think we'll look to the NOAA capability, at least initially. So I'm very glad we had this table top exercise, and one that we're definitely going to do again next year, hopefully before 1st of June. We can get it before hurricane season so --

Here's some products that we use from NOAA. The tide gauge measurements and predictions are used daily by the District, by our hydrographic survey crews, and they depend heavily also on benchmarks and vertical datum that are used on many of our other projects here in South Carolina.

There are the nautical charts that Captain Rodriguez was harping on earlier, that everybody should have with them.

Finally, we've got a couple of slides in here about the harbor deepening project. So right now, we're in the feasibility stage, as Mr. Newsome did a good job of highlighting, and he mentioned that we're in a -- well what I'll call the civil works transformation era, where we're trying to get -- do business a little differently within the Corps.

Mr. Newsome mentioned sometimes it took 20 years to get a feasibility study completed, and there are a lot of reasons for that. The Corps was studying a lot of things in very fine detail, and you know, the more things you study, the more time you study it, you know, the more certainty that you have in your final product.

But we realize that we can make decisions based on, you know, perhaps better science in a quicker time frame, and save more money, and basically get the feasibility studies done quicker. The Post 45 project is the first project of its type, of its size in the Corps of Engineers going through this process.

So what we are going to realize from it is about an $8 million savings in the feasibility study, and we'll probably shave somewhere between three and four years off of the study time line.

I believe Brian Williams is going to cover in greater detail some of the key aspects of the feasibility study, to include the environmental aspects, the economics and the engineering that go into the study, and what to expect there.

I think also Jim did a good job this morning of highlighting that the study is about reducing transportation inefficiencies and the light loading that goes on with the vessel, due to the draft restrictions that exist right now. Although others will probably tell you that there are other benefits that we aren't studying in the feasibility study for us, for the Army Corps of Engineers, it's about reducing transportation inefficiencies.

And so what's next with the study? October, really this fall I'll say, I should qualify, is a big month for us. We're very close to releasing a draft feasibility study and environmental impact statement, and that will let the public know what the tentative depth will be.

We studied 48 feet, 50 feet, 52 feet and when this draft comes out, you'll know what the depth that we will pursue on our way to the final feasibility study and final environmental impact statement. You'll know what that will be.

I think it's worth noting that after the chief's report is complete, after the final report and final EIS are complete, there's still a period of time. There's a phase called the PED phase, pre-construction, engineering and design is what it stands for.

That is where we will get into the details. We'll do a ship study based on the post-Panamax vessels, the Gen 3 vessels. Some of the things that we traditionally would have done in the feasibility stage will occur in the PED stage.

So it's a phase of the project that we can't skip, that we still have to do, but we're looking for ways to get to that phase as soon as possible, in accordance with the laws and the framework that's out there, that regulates the Corps and the feasibility study process.

We're very fortunate to have the partnerships that we have between the Ports Authority and many other federal agencies such as NOAA. This -- I think Brian Williams, who's far more versed on this project that I am, he's been working on it for years.

I've been the commander for about 14 months now, and that's my limitations with being exposed to the project. I think that it's a model relationship.

I think it sets the example for all other projects out there in the Corps, as far as the partnership and the cooperation that we've achieved, to get to the point we're at now in such a short period of time. So I'd just like to state that that is a great thing about this partnership and the project.

We still have a ways to go. Things are on track, and at this point, I think I'll stop there and see if there any questions.

CHAIR PERKINS: Yeah, great. Thank you, Colonel. Yes sir.

MEMBER ARMSTRONG: Colonel, I actually have three questions, if you'll bear with me. So I'll give me one --

LT COL LITZ: I hope I have three answers.

MEMBER ARMSTRONG: You mentioned that you're doing web delivery of your channel condition information. Are you actually delivering survey data from your channel condition surveys, and if so, what's the time frame between survey and delivery?

LT COL LITZ: That data is on our public website. As far as the time frame, Phil O'Brien, do you know? I'd be guessing.

MR. WOLF: Typically when we do the survey, we can consolidate the survey and we'll get it out in probably about a week.

MEMBER ARMSTRONG: Okay, and then that's available for the public, anyone to use?

LT COL LITZ: Yes sir.

MR. WOLF: Yes. I think though, the data that we have on the website is static. So it's not something we can download that acts like a file.

MEMBER ARMSTRONG: It's an image?

MR. WOLF: Yes, correct. They're end use products, JPEGs, TDS used for an application.

MEMBER ARMSTRONG: Oh, okay.

MR. WOLF: We use the actual data to get the surveys to pilots on an as-needed basis. We are building more capability on the public website, to incorporate a lot more additional products and we're working on that right now for the customers, i.e., the recreational boater.

LT COL LITZ: You can actually go to the website if you're a recreational boater, and you can see where, for instance, the Atlantic Intercoastal is shoaled in, so you'll know to avoid those areas.

MR. WARD: There's a few posters in the back that have some of their information as well out in the lobby.

CHAIR PERKINS: So Andy, you've got two more?

MEMBER ARMSTRONG: I do.

LT COL LITZ: That was already a three-part question.

CHAIR PERKINS: Go ahead. We'll let you filibuster.

MEMBER ARMSTRONG: Okay. You mentioned sand sourcing for beach replenishment, I think.

LT COL LITZ: Right.

MEMBER ARMSTRONG: So how do you -- do you run surveys offshore with your survey vessel for that, and what sort of technology do you use for doing that?

LT COL LITZ: We use a multi-beam technology for that, and we do the surveys offshore. But the vessel Evans, which was the one in the middle of the screen, the -- within our navigation section, I would say it's around 12 personnel or so.

Out there at their station out of the -- at the Joint Base, what we call our Construction and Survey Annex, and that's -- those are the folks who do that for us in-house.

MEMBER ARMSTRONG: Do you interact with BOEM's sand resources project that seems to be going on up and down the East Coast?

LT COL LITZ: We do, absolutely. In the details of such, I'll defer over here to the right side of the -- my right side of the room. But I know that we interface with BOEM, because I've had to do some mea culpas with BOEM before, with regards to the Folly Beach project. But we're all good there, so you know.

MEMBER ARMSTRONG: Those sand surveys are outside of the project limits?

MR. WOLF: Yeah, that's correct. Anything past the three mile line we have to coordinate with BOEM. Recently, a lot of our -- the majority of our borrow sites are inland in the three mile zone. But there are some that are on the cusp or some are out, a little bit further out past the three mile.

However, we're going to have to make future efforts to go past three miles looking for sand. So that's what we're doing right now for Folly Beach, and we coordinate them through, you know, through their policies and procedures, going through sand sources in detail, doing their EIA or EA and procedures of that nature.

Any kind of mining we do past three miles, we have to go through them to coordinate that.

MEMBER ARMSTRONG: And those sand source surveys, are they going to NOAA for churning applications?

MR. WOLF: Well any surveys that we get, we send to NOAA. Like an example, we just did Folly Beach, working with Chris LeBeau up in Silver Springs.

Any surveys, they'll take it. So I ask them every time we do a survey, anything that's not within the navigational channel areas, and they said we'll take anything you've got. So anything that we do outside the channel we give to them.

LT COL LITZ: Folly Beach actually had four sand borrow sites that we utilized.

MEMBER ARMSTRONG: And there's one final question. Thank you for that. I'm glad to hear that that data's getting to NOAA. In terms of the disaster response, you indicated that your vessels, you know, have to come out of the water.

So have you had any discussions with NOAA about the possibility of augmenting NOAA survey teams with your survey folks, and has anything like that come up?

LT COL LITZ: No. Kyle, do you want to --

MR. WARD: Yeah. With the Evans, and they can talk to that, but just having their survey folks needing to tend those vessels, and their plan is such that they take them out of the water, the inherent getting them back operational again, based on what NOAA's process has been in the past for Sandy and other storm responses.

Our ability to splash boats faster would probably take place. However, for a port of this size, I'm sure Captain Rodriguez is going to want everybody, all assets on hand, and definitely they'll be getting back into the water as soon as possible.

But you know, with actually at that tabletop exercise, which was excellent, one of the things we talked about was just with all the pine trees around here and Hugo, they all went down. So being able to get vehicles and things like that back and your labor force back is very tough, and having the NRTs as one confined unit is, you know, that's about as quick as you could be if you are moving assets out.

LT COL LITZ: So what Kyle's alluding to is that we will COOP. We will move away from our headquarters here in Charleston. Our COOP site right now is the St. Stephen Dam, which is a Corps project in St. Stephen. So we'll be about four stories under the dam, but -- and we'll pop out when the storm's over.

But getting back is a different story, with all the tree fall, and our survey crews will also COOP. So you know, days, hours before the event, we'll pull that boat out of the water. So we do have a plan. We're refining it right now based off of results of the tabletop exercise. We still have some things to work through.

MEMBER ARMSTRONG: Thanks Colonel.

LT COL LITZ: Thank you, sir.

CHAIR PERKINS: You're welcome Andy. Colonel, regarding you know, your survey crews and only having two vessels, and then NOAA also having, you know, hydrographic survey contracts, and knowing that the nation has a tremendous capacity in the private sector to provide those services, is the mechanism in place that if your vessel were down for maintenance or repair or assigned on some other priority, do you have MOA in place where you could reach out to the Office of Coast Survey and get hydrographic survey support from NOAA? Do you have the contracts available in the Charleston District, where you could reach to the private sector for that support?

LT COL LITZ: I know I have contracts in place. In fact, that's how we would remove debris or vessel from the harbor. We don't have that capability in-house. So it would all be through our contracts, IDIQ contracts that are basically standing contracts.

CHAIR PERKINS: We have a -- you know, we have a reality that we have a family of hydrographic survey contracts that were just awarded. They have, you know, they don't have adequate funding, you know, to be fully utilized.

Is that mechanism in place between NOAA and the Army Corps, where you could use and access those service providers?

LT COL LITZ: I don't have the answer to that question. I don't know if any -- does anybody have the answer to that question? That's a great question. I'm going to have to research that.

CHAIR PERKINS: So I like to ask the great questions. I never have great answers. Thank you.

RDML GLANG: I'll give you the short answer, sir.

LT COL LITZ: That's one to take away from me.

RDML GLANG: This is Gerd Glang from NOAA, that there is no memorandum of agreement or understanding between NOAA and the Army Corps, that allows for the effective transfer of money.

CHAIR PERKINS: Sounds like that's a topic the Panel should consider, you know, looking at, because that mechanism might be useful for both parties. Glad to see you went to that school up the road in Leavenworth, from where I call home town. So it's always good to see that somebody's been to the Command and General Staff College.

LT COL LITZ: That was interesting. I lived right behind the big federal prison.

MEMBER KUDRNA: Question. For the deepening of Charleston Harbor, after your study's completed, for any federal participation in that, do you have to wait for the Water Research Development Act?

LT COL LITZ: Yes. A WRRDA would be what would authorize the project.

CHAIR PERKINS: Do we have a question from the audience?

CAPT CAMERON: If you don't mind, I'd just like the endorse their survey section. At the pilots two weeks ago, we called Phil. We were taking a ship that is deeper than normal to a part of our harbor at four o'clock in the afternoon.

I asked Phil what was the most recent soundings, and in a half an hour, I got a color-coded presentation of a very specific area that we were concerned about the shoaling. So their services are excellent and timely.

LT COL LITZ: Thank you, John.

MEMBER KELLY: Colonel Litz, I do have one question, and we could talk about it maybe during lunch. But when I go talk to recreational boaters and they bring up the Intercoastal Waterway, their most frequent complaint is it's not a project depth. Just north of Emerald Island, I think it's at six feet or two feet or something in shoaling. So what do I tell them?

LT COL LITZ: The answer is not satisfying, and that is, you know, their -- probably write their Congressman. I mean it's all about an appropriation, you know. We have the assets. We have the contracts in place to dredge the Intercoastal. We just don't have the money.

If there was money, there was an appropriation, then we could do it. If there was somehow a realignment of funding at the federal level, which you know, it takes Congress to do, then we could get to it.

I mean that's really -- it's not a satisfying answer. I mean I guess the other answer is just don't use it, you know. But none of those are satisfying, acceptable answers really to the public. That's all I can tell you sir.

And just to add to that, I do answer a fair number of congressionals -- congressional inquiries based on individuals and groups concerned with the state of the AIWW all the time, over the last year for sure.

MEMBER KELLY: Colonel, Ed Kelly from New York/New Jersey. Particularly in light of the deepening project, the Post 47, what is the plan for the dredge material disposal or constructive use, and what are you doing with normal maintenance dredge material right now?

LT COL LITZ: Normal maintenance goes in one of the disposal sites that you'll see. There are an array of them. I don't have a good slide that shows where they are, but so -- and I mentioned earlier, the ocean disposal is an option, but you know, there are a lot of costs associated with that.

I mean when you can get the material to a closer, confined disposal site, that's what you want to do with the material. As far as beneficial use from Post 45, Brian, do you want to take that one? I mean we don't -- we don't have an answer right now. Brian can tell you what stage of the project we'll figure that out.

MR. WILLIAMS: So like the Colonel said earlier, when we went through this civil works transformation and SMART planning, we really had to get down to basically what was required to make a sound planning decision on alternatives analysis.

And one of the things that you would normally see in a report like this would be a detailed analysis of beneficial use of dredge material. You will not see that in this feasibility study. That's not to say we won't do it, but it just will not be in the draft report that will be released in a couple of weeks.

So we have met with the state and federal resource agencies. They have provided some input on potential ideas, and their, basically their wish list. We've received public comment in our public scoping period that was at the beginning of the study. So we've taken all that into account.

So we have several things that we could focus on. If you're familiar at all with Charleston, there's areas like Crab Bank, Shutes Folly, Morris Island, places that could benefit if the material is deemed satisfactory enough for that use.

We have the information on the material we would anticipate to dredge during deepening. So we have grain size, we have whether or not it, you know, all the chemistry analyses.

What we don't have is any detailed plans and analysis of well how much material could you put there, in what configuration, and the likelihood of its performance criteria.

So those are the things that will have to be done in our pre-construction engineering and design phase after the feasibility phase. Did that answer your question?

MEMBER KELLY: Yes. Good luck with it. In New York/New Jersey, the disposal of dredged material was probably the biggest obstacle to getting it done.

CHAIR PERKINS: Okay. One last question.

VICE CHAIR HANSON: Sir if I could, thanks Andy for bringing up BOEM. There's a group that doing the offshore sand surveys, much needed for a very long time, and the group's been responsible for the old MMS. Now BOEM got a slug of money, thanks to the Sandy appropriations, and they're actually spending it well.

So I actually think that it would be good to have this Panel maybe get briefed on the activities that BOEM's been doing up and down the East Coast, including the Charleston area.

Just a little side story, because we're going to tour the Wando Terminal this afternoon. My company actually had concurrent contracts. It was two deepenings ago we were deepening at this channel. At the same time, we were actually doing the early development of the Wando Terminal.

We actually had an idea to use the sand from the deepening. It was sand actually back then, not rock, to fill the terminal. We actually reached agreement with the Corps to do that, got a value engineering proposal, and we all got letters from this new organization we never heard of called MMS, advising us that they had the rights for all the sand three miles offshore.

We never heard of them before, never had to go that far offshore before. So as we continued, we ended up having to truck in all the sand, because we couldn't reach the agreements in time to use that.

But just a little story so we could get out there, and that was some 20 years ago so it's been a while. That's developed a little bit since then.

Then I guess finally sir, and having been with General Turner and General Savre last week, and we had the 9/11 commemoration last week, and they've asked me to do this with each commander, to say thank you.

You've served in Kosovo, Afghanistan and Iraq. Thank you for your service. 3,000 people perished in that tragedy in New York. 5,000 men and women have lost their lives since then in service to our country. Thank you.

LT COL LITZ: Thanks Bill. I appreciate it.

CHAIR PERKINS: Thank you, Colonel. You know, we have a lunch break coming up. You know I know, gentlemen, your schedules are extremely busy, but we do have stakeholder panel sessions scheduled for tomorrow.

So you're welcome and, you know, I don't expect that you'll be able to join us. But if you can, or someone from your staff can, we'd certainly appreciate the input.

LT COL LITZ: Absolutely.

(Applause.)

CHAIR PERKINS: All right. Lunch until 1300 hours promptly.

(Whereupon, the above‑entitled matter went off the record at 12:08 p.m.)

 A F T E R N O O N S E S S I O N

 12:30 p.m.

Luncheon Speaker

DR. SAUTTER: I speak loudly for a living. But please raise your hand if you don't hear me because of whatever. I do teach at the College of Charleston. Im in the Department of Geology and Environmental Geosciences, and I want to just give you an overview of a program that I've been running since 2007.

It's called the BEAMS program. I have several co-workers, one here at the College of Charleston, Scott Harris, who is another geologist in my department, and we also collaborate. We have a partner group at the University of Washington. Dr. Miles Logsdon is there.

We also, this whole program really evolved through a partnership with CARIS, which is the primary vendor of the software that is used on almost all NOAA survey vessels. So we've had a great working relationship with CARIS. They give us licenses for free, and out of that we have developed a program which is basically training the workforce of tomorrow basically.

We always say "next generation," but these students are graduating and going into the workforce immediately, and they are finding jobs immediately. You've seen the posters in the hallway. I hope you'll take a look at them.

We have three of the students right now and a couple were here earlier. They had to go to classes. We're just close enough so they still have to go to class. We're just two blocks down. In fact, I have leave immediately after, because I have a lab to teach, and I just came from class.

I will be here tomorrow morning, all morning and at lunch, and so if you do have questions, you want to learn more, please don't hesitate to ask me tomorrow. So again, I apologize that we don't have -- okay, still don't. That's fine.

So this is very photo-rich. I'm going to go through it pretty quickly, because of the time that we have. But one of the best things about this program for me is that I get to interact with these wonderful young people, who are just so energized by learning this state of the art technology, getting out to sea, doing research with the technology, and then going off and doing work in the workforce.

So it's been a real pleasure and privilege of mine to be able to generate this whole program. Let's see if the advance works now too. We're having all sorts of technical difficulties. It worked in rehearsal, as we say.

So I want to give you a quick overview. We started it in 2007, basically because we had ship time on the NOAA ship Nancy Foster. They had a multi-beam system, and a former student of mine was on the vessel, and they started talking to us about doing multi-beam, and everything evolved from that point. So it's really a fortuitous situation that all started with ship time that NOAA generously gave to us.

I did a sabbatical at the University of Washington, and in that time, convinced poor Dr. Miles Logsdon to do the same thing. He still gets mad at me because it's so much fun and so time-consuming, but he does love it. So he is able to take students out and train them in the software and the research as well.

So we now have two institutions. We are pretty sure that theyre only institutions in the country that do anything like this, if not the world. So we have the market right now, it's great.

So the program elements. This is not a certification. It's not a CAT A, it's not a CAT B. These are geologists and oceanographers, sometimes marine biologists who take the course with me. They are scientists who are mapping, and learning how to map and interpreting.

They are scientists first, and some of them may go on to become full time hydrographers, but basically we train them as scientists first. We have course work that is very minimal, required. It's a three course program. We expect them to do research. This is what is part of the program.

We try to get every single student out on a dedicated cruise, and we try to get them out onto some internship or volunteer opportunity, and I'll go through those in a little more detail. But just to show you the stats, that way I want to make sure I get through that.

But we've had, at the College of Charleston alone, 98 students who have gone through the program since 2007, and with UW starting the first program in 2011, they've already had 29 students. 46 of the 84 students who have graduated, some are still matriculated, but I keep tabs on everybody who's been through the program, 55 percent are currently in the workforce.

That's a very strong percentage. That shows you, first of all, the availability of jobs, and it also shows you the interest level that these graduating students have, and many of them have persisted within the workforce since graduating, even since 2007.

They're in a variety of government, academic and private situations, private industry. Another important thing is a third, more than a third of that group is women. So we are definitely helping to infuse more of a diverse community of hydrographers or mappers.

So we have a requirement of research, and so every student either does a joint project or a single project. So we've presented 64 posters at national meetings in the last few years, and some of them are international, and we win awards, especially if it's the first time they've offered a poster session. We kind of sweep the awards there.

But we also make sure we get students into internship or volunteer opportunities, by getting them on board vessels, and we've been able to help so many principal NOAA principal investigators by offering a free volunteer student -- by having a student volunteer as a survey tech on their vessel.

Tremendous learning experience for the student. Often, it's the first time they've done something completely on their own like that after the program, but also a huge boon to the investigators on board, to have another survey tech.

The course work that I mentioned really is only three courses that provide the foundation of the training. It's in addition to being a geology major. So there are many other courses, which I'll also show you. But we are looking for someone who has either first of all, a marine geology or an oceanography course, at a higher level, not an introductory 101 kind of thing.

So they come into the program with some knowledge about the ocean, and particularly we would like to see them have the marine geology aspect. Then they take a two credit Intro to Sea Floor Mapping, which is basically the CARIS software training. It's HIPS. It's the bathymetry side of the CARIS software, and we call that SeaMap.

So they dedicate a two credit program to learning that software, and then the next two credit course is the research course, in which they use that software to actually conduct viable research, and I'll show you some of the results of that, and of course you've seen some of the posters out in the hallway.

The other courses that we very much encourage -- we cannot require this, because this is not an official sanctioned program within the state system of higher ed. We are simply doing this. We're giving them guidance of where to go for more course work to boost their resumes.

Almost every student takes a very strong GIS class we offer. They are required to take one semester of calculus. With a geology major, we expect them to try to get that second one in, if they're going to go off in this field, and then geophysics, special topics, any other training that we can provide.

There's also annually we have several different software vendors who willingly come in and train our students for a weekend, as much as a full week of free training in different software packages. So they get that additional experience, even though they don't get credit for that.

Once they have the course work we, as I mentioned, they are expected to do research. So we mine the existing data. There's so much information out there. NGDC has a wealth of data that we tap into every semester now, and you know, one data set, 20 different purposes.

Why rely on collecting your own? Obviously, if we could collect our own for every student, we would do that. So we are very grateful for any data sets that people send us too. With all the investigators we've collaborated, they send us data as well.

From that information, they design scientific questions. So they are doing real research. They make their first base surface and then they come up with questions. How can they quantify channel meandering or the characteristics of a submarine canyon, et cetera. So there's plenty you can do once you have that information in hand.

And then we expect them to present at a local poster session meeting, and then we also expect them to try to present at a professional meeting, either being present at the meeting or sending their poster to a meeting. Almost every single student has presented at a professional meeting in the last three years -- four years, excuse me.

Some of the meetings we've attended in New Orleans. I will never take 18 undergraduate students to New Orleans again. We drove in vans too. So it was just insane. But they were all very well-behaved during the meeting, and they dressed up pretty well.

That was the US Hydro meeting in New Orleans. We'll be attending that same meeting in D.C., and I'm sure after that I'll say I will never take students to D.C. again. And then in the Ocean Sciences meeting in Salt Lake City it was a wonderful merging of both the UW students and the College of Charleston students, and we had our own poster session during that particular meeting.

This past summer, I took 15 posters and I got to go to Brest, France. There are some perks to this job. And they were extremely well-received there, and opened up some new doors for international collaborations. We have a student on an Irish vessel right now because of that meeting.

The research cruise, though, is the cornerstone of the success of this program. By getting every single student out on a vessel, to actually undergo the entire process of acquisition, the ancillary data, deployment of other instruments and then processing the data at sea, coming home and doing research on that work.

We have had many years' worth of donated ship time through Coastal Services Center on the NOAA ship Nancy Foster. It's very convenient that it happened to be home ported here, so we get the tail end or the beginning of their field season. But more recently, we haven't been able to rely on that, as budgets have been reduced.

So we have just recently started to acquire our own funding for ship time. But while we're out there, we do more than just multi-beam sonar. We get to do all sorts of other deployments that are all contributing to the understanding of what the character of the sea floor is. So we do training while we're out there, but we're actively conducting research.

The ships, I've mentioned Nancy Foster already. More recently, the Savannah, that the College of Charleston is supporting the ship time on that. It's a 90-foot vessel. It's a UNOLS out of Skidaway Institute of Oceanography, and Kongsberg, sort of the premier vendor of multi-beam sonar, generously has loaned us the use of their state of the art EM2040C. Absolutely amazing system, and they're going to loan it to us again this next year.

So very -- we couldn't do this without the partners that we have. Before I forget, I've never had a grant support any of this work. It's all been through partnerships. So that's pretty significant, and at this point, you can't get a grant, because it's too established.

The University of Washington also has a Kongsberg system, and Miles Logsdon gets a few days each year for his students on that vessel. Also, they have a smaller vessel at UW and we have -- this is an email tree name. I call it the Little Beamer.

But at the College of Charleston, we have a 21-foot vessel that we can -- we've also been donated use of a couple other systems, so that we can do some of the shallow water stuff, and maybe help some of the other local groups like the Army Corps and the Coast Guard.

So just some shots from our most recent cruise. Some of these students are here today. We have Hunter Miles in the green, Nick Damm in the dark green, and well Savannah wasn't on this cruise, but she was from an earlier class of BEAMS, and we had a few others here earlier. I hope you at least got a chance to meet some of them.

The other thing that we hope to continuously grow within this program is more internship opportunities. NOAA has been wonderful through the years. Captain Rick Brennan started a summer internship program in 2009, and three of the four students who went out to sea on either the Fairweather or the Rainier are still with NOAA.

So it had a very strong impact on those four. This one happens to be my son, so it was particularly important for me, and he works up at in the Biogeography Group at NOAA, with Tim Battista's group.

So those partnerships or those internships, excuse me, are extremely important. We have other partners, not just NOAA, and they are providing internships, as well as some volunteer opportunities out at sea. Some of the -- almost all these internships are paid. We don't really promote unpaid, unless it's a survey tech volunteer position.

Another wonderful thing that we can provide to the students is people love to come visit us. They either come to recruit students for their job positions. We have so many people who have met our students, they want to come see them again. We have so many alums now, and they come back and tell their stories. We have alums who have started to hire our students now.

So it's really this wonderful giving back, and just recently we had a live teleconference with the RV Nautilus, Bob Ballard's boat, and one of my beamers was on board. So she was virtually giving a presentation to the current group.

So it's been really helpful to have these people come back and show the breadth of the workforce needs, and also what the jobs out there are, not just NOAA, believe it or not. But you'll see the stats of NOAA in a few minutes.

So these are some of our regular contributing partners, of either the software, loaning us hardware, loaning us people. Geodynamic loans us a person to go to sea with us as an expert, and people who support software licenses and hire our students.

So some of the where have they gone with this training. These are undergraduate students, remember, and basically everyone who graduates, who wants to go into this field gets a job. It may be part-time, it may be full time, but they get a job within a few months of graduating.

That's why my numbers have gone up so high. It's not because I'm such a great teacher or anything. I'd like to think that, but it's -- we have a very strong program. Eleven full time NOAA employees, 30 paid internships, 11 of which are with NOAA.

Those two numbers, the 11-11, that's not a coincidence. Almost every one of the NOAA interns has become a full time NOAA employee. So keep that in mind, as we look ahead at recommendations within NOAA.

But many just want the adventure of different jobs all the time, travel the world, be a contractor. So I can't even keep track of all the numbers of those. But we also have people going into oil and gas with private firms, software companies. We have two at CARIS, now, who come back and train our students.

So a wonderful giving back to the program, and a couple, three, have started their own businesses and now some are hiring our students. Only 12 to this point have gone into graduate programs, because the job opportunities are great, but they are some of them now going back to school to learn even more.

And when I say 12 have gone on to graduate programs, I mean with using these skills, not just simply a geology program. There are many more have gone into geology. I keep track of all the goings on with my students. I had a huge database that I try to update regularly, and they all tell me where they are.

We have a great lively Facebook group page, and I just try to plant it and they search the globe for good sea floor to map, apparently, with many different partners. And you'll see the yellow as being internships or jobs. So they're well -- they're covering the country and in some cases covering the globe.

And these are some of the areas that they are working or some of the agencies within which students are currently working, and of course NOAA is the leader of this group. I mentioned 11 full time positions at this point, including NOAA Corps. Some, you may not have heard of many of these. You've probably heard of Fugro if you've been doing any of this work in the past.

But a huge number of different companies now know about beamers, and they come back to us. They call me, they email me. Send me the resumes. So it's a direct pipeline now, and it's extremely exciting, because some of them call me up and I can place a student with them within a heartbeat.

I got a call the other day, this summer. Do you have a student who could go to Sweden for two weeks, and by the way, they got paid $300 a day and she hadn't even graduated yet? So yeah, she could do that and now she has this great experience.

We have several contractors who call us regularly seeking students. That lower picture on the right was just gratuitous. A cruise that was -- I think it was a NOAA contract, but it turned out that five of the people contracted to be on that cruise from separate mechanisms were all alums of our program. So they had a good time. They didn't even know each other, because they were from different years.

And as I said, some of them go into the actual software companies. Both CARIS and EIVA have hired our students in the past, and another company called OneOcean.

As I said, some go into academia. I don't have a list of all the things they've done, but they've done some great stuff, including water column research, looking at methane plumes.

We have this ability to borrow data, existing data, as well go collect our own. The students have conducted an incredible variety of research projects, and we've also been able to collaborate with many groups, to help them with the analysis of their data.

Not just developing a pretty picture, but actually doing the analysis, and the South Carolina Department of Natural Resources, who we're working very closely with, identifying -- they identify to us critical fish habitats. We go out and map it for them, and we hope to continue that.

But we've worked with the marine sanctuaries, Gray's Reef. Hunter Miles, in the light green shirt, did his work on the shelf edge, looking at fish habitats there, and lionfish habitat with Paula Whitfield's group out of NOAA.

So we are doing these little projects, but they're all putting together into the larger picture of what's out there and what is that habitat like, and also recently looking at deep coral habitats.

Savannah Norvell back there, raise your hand. She did some of the submarine canyon work along the northeastern margin, and we have a couple of -- Sonya Tyson was here earlier, of this group. And then Nick Damm, who is in the darker green, did the salt dome work with a colleague. So these are just some of the aspects, some of the data sets that we get from the National Geographic Data Center.

I'm also very involved with the Ocean Observatory initiative, Washington's -- University of Washington's Regional Scale Nodes Program, which is why I did my sabbatical out there, and we took to them the ability to do the processing. They've since gotten CARIS on board, and they have since started their own BEAMS program.

So that collaboration really developed into something pretty nice, and we still use the data that we collect while we're out there, have done some really exciting things with those data.

Some of the other research that Dr. Harris, Scott Harris and I have collaborated with others, but we compiled many of the different areas that had been mapped locally with other researchers, and some of the data we had collected, including the meandering channels that we collected on board the Foster.

This one on the lower left is also from the Foster. But to establish paleo-shorelines. So looking at sea level changes and the effects of shoreline on our margin, and the 10,000 year shoreline in the lower right showed a low country, just like Charleston, of the 10,000 year vintage, with meandering tidal channels.

Pretty exciting stuff. We went out this past year, and the first pass with multi-beam we found another channel somewhere else. So there's a lot to be learned, not just fish habitats, but also about the geologic history of this area.

So now because it's gotten so popular and now I have to do it every semester, which I love doing, but it's a lot of work, and so we'll be producing 25 students per year while -- UW's still smart to keep it small, and what we hope to do is to develop a certificate.

Again, not a CAT A or B, but a beam certificate, so that as people learn more about the program, a student who has just had the SeaMap class won't have the certificate. It will be more involved with that. They sort of know at what level a student has reached while they were an undergraduate student.

Of course, we need to develop more courses and we also need some more staff. So we are requesting funds of that nature for the next few years of fiscal resources at the College.

We're hoping to get our own multi-beam instead of having to borrow one all the time, and get this annual ship time into the budget so we always know we have a dedicated cruise on the Savannah, which is a perfect vessel for the training and the kind of work that we do. So far two years in a row we've gotten it, and with the success of the program, I think we'll be able to establish that.

We are expanding partners constantly. With every meeting we go to, more people want to contribute to the program and want to hire our students, and we're starting to develop collaborations with institutes. There's one in Portugal that would like to work with us on autonomous underwater vehicles, and we'd really like to get into that aspect of sea floor mapping.

We also have an amazing telepresence venue at the College now, a nine panel video wall that we can communicate with anyone basically. And we are looking at cloud sourcing, where data being collected at a different port on the other side of the globe, and we can process the data in-house at the College of Charleston. We're working with CARIS, Paul Cooper, to make that a reality in the next year. So we're really excited about that, as well as teaching people remotely from that location.

So if you're interested and you want to just see the excitement of what our students are doing, and if you want to contribute ideas, whatever, please email me and ask to be invited to our Facebook page. We have 150 people on it and about a third of those are not alums. So we have lots of people who are interested. We have a website. I'm sorry to say I have not had time to keep up with it. We're working on a new one.

But you'll see a lot of the posters that have been produced up until 2011, I think. Maybe 2012's on there. But we are developing a new one.

And please, please, email me if you want to know about shoreline changes, paleo-shorelines. Please email my colleague Scott Harris. If you know people on the West Coast who would like to be involved, you might want to communicate with Miles. And Paul Cooper has been an absolute leader within our group to make these things happen as well, and to make sure we always have our software.

I think that's it, and I know you're just trying to digest at this point. So but if you have questions, I'm happy to take them. I have a just a few minutes before one. Yes.

MEMBER JEFFRESS: Hi. I'm Gary Jeffress, Texas A&M Corpus Christi.

DR. SAUTTER: Yes, hi.

MEMBER JEFFRESS: We have one course in Hydrographic Science, which is not enough to make a program. But a lot of our students have to get hired by the hydrographic industry out of Houston.

DR. SAUTTER: Out of Houston, by oil industry.

MEMBER JEFFRESS: Yes. Some of them stay forever, but a few of them go there to get their loans paid off and then go back to shore and get girlfriends.

DR. SAUTTER: It's hard to say no to the kind of money that is being offered through oil and gas, yeah.

MEMBER JEFFRESS: I was wondering if your CARIS class is taught by CARIS? How do you manage two credit courses?

DR. SAUTTER: Okay. Well, the first question is CARIS does a two and a half day workshop at the beginning of our semester. Actually, I do the CARIS training on a half semester. The three, two and a half day workshop accounts for more than half of the hours of contact that they have to have in a course.

So they get the basics of the training there. But then I continue training and I have a grad student who also helps to teach them beyond just the cleaning of data, and we do backscatter and we show them more detail, and it really is more of the cleaning side once CARIS leaves.

But yes, we've developed that and my former student is the trainer who comes. So he's worked very well with us to develop a course specific to us. It is not your standard CARIS course, and we've developed many additional resources, exercises, data sets that the students use, because they need --- I know that they need specific experience, and I know they need lots of practice and things, which you don't get in the five-day workshop.

Then the other question you had was how you get a two credit course? I just said that's what we needed. You know, they know we can do that. We can have one credit courses. So we have flexibility. You could make it a three credit for sure. Any other questions?

CHAIR PERKINS: Thank you. It's a very enlightening presentation. It's amazing what you're doing. I've just to ask a question about software agnostics. So GIS geospatial educational environment, right, there's a lot of emphasis on trying to be software agnostic and not teach and educate to a specific licensed package.

So how do you navigate that challenge? Are there any other competitive softwares? I'm not, you know, it's not my --

DR. SAUTTER: Oh, there certainly is. They just haven't given me free 15 licenses.

CHAIR PERKINS: So it really is just pay to play?

DR. SAUTTER: Yes. Well no, it really isn't that. It's just that we started with CARIS, and because of our very strong association with NOAA and the HIPS software is what is used on NOAA vessels, to me that's a priority, that they know that particular software.

Then when we have the Fledermaus group come in and do a workshop, we absolutely encourage them to take it. The reason we don't teach a course with Fledermaus or EIVA, which was the other software that we partner with and they come and do training, is that I am not going to learn any more software, and I am not going to teach any more software.

This isn't even my field. I'm a paleo-oceanographer. But I'm passionate about it, and I do love the mapping. But I'm not going to learn anymore, and we just don't have the staff and we don't have the time. We all teach three to four courses a semester.

CHAIR PERKINS: Id like to ask one more, and then I'll relinquish the microphone. You know with the advancement that NOAA is seeing in, you know, and they're now contracting for bathymetric LiDAR, you know, in the land/water interface, do you see that being added to your course load?

DR. SAUTTER: What we would like to see with the expansion of the program is that more short courses are developed, where experts can come in and they are paid by the tuition of the students, and/or we can supplement their salary, where they come in and teach a dedicated course in maybe a summer week or a Maymester, something like that.

And it would be only to the students who already have the background training. We've seen students who didn't have the background come into a workshop and leave after the first day, because they don't know what's going on.

So our hope is that with more alums, we have an alum returning this fall, who has offered to teach a course in marine geophysics in the coming year. So those are the kinds of opportunities we are seeking now, where people can come in and teach short courses on their schedule, and the students will sign up for it, I'm pretty sure.

CHAIR PERKINS: Other questions? Thank you very much.

DR. SAUTTER: Thank you very much for having me.

(Applause.)

DR. SAUTTER: And I'm sorry I have to run.

CHAIR PERKINS: Can we do an impromptu 15 minutes, not on the agenda, so we have a chance to spend some time with the posters and the students while they're here from COC?

(Whereupon, the above‑entitled matter went off the record at 1:00 p.m. and resumed at 1:22 p.m.)

HSRP General Discussion

CHAIR PERKINS: All right. I'd like to everyone know that you should have two emails in your inbox, one from Mr. Aslaksen with the National Plan, and one from Kathy, distributing the Coast Guard/Army Corps/NOAA listening session PowerPoint. So this is our time. Yes, Eveline.

MEMBER FIELDS: Army Corps listening sessions? What was -- was that the survey or the final report or --

CHAIR PERKINS: Yeah. What it says it's a listening session PowerPoint.

MEMBER FIELDS: Okay.

RDML GLANG: So can I just qualify what that is Scott? It's really just a PowerPoint. If you look at it, you may realize you have more questions than it will answer. But it is -- it is the product that we received from the Coast Guard.

MEMBER FIELDS: Is this the one that has the ‑‑ kind of a survey and the responses to the questions and that sort of thing?

RDML GLANG: Yes.

MEMBER FIELDS: All right. I've seen that. Okay.

MS. MEDLEY: And I also have the raw data of that. So I think we provided you guys with the cleaned up PowerPoint presentation of that. But if you're interested in seeing the raw form, which is not so raw, but it just lists all the different questions and what user groups the answers are coming from and everything, I have that as well.

So if you're more interested or want to know more about the nature of the questions, I'm happy to talk to anybody about it afterwards.

MEMBER FIELDS: You know, I think from a personal perspective, that the Panel would be interested in that, because I think they'll be surprised at the user group, the user groups that responded, because I was a little surprised when I took a look at the information, that the biggest user group that responded or that was a part of that process seemed to be the recreational boaters.

Nothing against recreational boaters, but it's just that it's kind of -- it seems to be a little one-sided, because they were the biggest responders or the largest group of responders to the survey.

MS. MEDLEY: I think that might be because during the actual listening sessions, they were in-house. There was a bit more of industry that came to that, those ones, and they were able to express their views in person.

The rec community didn't maybe have as big numbers in turnout. So they felt more compelled to respond to this, and the Coast Guard's calling it a feedback form, because it's not a survey. So it's a feedback form.

(Simultaneous speaking.)

MEMBER FIELDS: I can't get into your politically correct terms.

MS. MEDLEY: Yeah, right, right.

MEMBER FIELDS: There was a lot of questions that were asked. The questions that were answered were answered mostly by recreational, the recreational community. Which there's nothing wrong with that.

MS. MEDLEY: Right.

MEMBER FIELDS: But I just think that when you look at the information that -- it sounds like you've sent to us an email. It needs to be clear that it's not a balanced necessarily response, what I would call a balanced response from all the users. It seems to be a little bit lopsided.

CHAIR PERKINS: Rachel, in the raw data -- in the raw data, is that other input from the people that were at the live sessions in the raw data and not --

MS. MEDLEY: You know, I can't exactly speak to how the Coast Guard compiled their feedback form. But I think what happened was whoever clicked on their feedback form link, that that's how they captured whoever was reporting back.

The report that I did was what all the nav managers were hearing from the in-person sessions, and it really does mimic exactly what was being reiterated in the feedback form. So it's the same -- the same issues were being brought up, same concerns.

But Admiral Fields is correct. It does seem -- from that feedback form, it seems a little bit more weighted to the rec community. But again, if you've seen the Coast Survey sort of user pyramid that we've been sort of shopping around, and we say we've got Solis class vessels and pilots and here's our different tiers of users, the rec users make up, what is it, like -- what did we say, like ten million users, and then you've got industry and pilots only have a smaller percentage up there.

So I don't actually think that that's concerning. I mean if we're talking about we've got an exponentially larger group of users in that bottom tier, it actually it's kind of reassuring more than anything that we reached different segments in the maritime community with these listening sessions, and that we are sort of seeing the percentages and fallout of what we would -- what we should expect to see, right, larger amounts of rec users.

So hopefully that answers that question. But thank you, Admiral Fields, for noting that.

Public Comment

CHAIR PERKINS: I want to follow up on that. Before we do that, we have, you know, our public comment period scheduled here for 2:15. But if we want to take that out of order, we have a few people in the audience. So I just wanted, out of courtesy to them, would like to entertain any public comments at this point in time.

(No response.)

CHAIR PERKINS: Okay, great. Just wanted to make sure. Didn't want to make you sit there, anyone sit there and wait.

(Laughter.)

CHAIR PERKINS: So we have a block of time here in front of us, and then we have a departure time in front of us, so that we can go and get our firsthand experience, you know, here locally at the Port of Charleston.

So during the break, you know, in our intermission, a couple of things have come up. There have been a couple of questions that were asked regarding, you know, the *Federal Register* announcement regarding the open seats and the candidate selection process, and the filling of the unoccupied seat.

So we might try to take a little bit of time to see if we can get an update, you know, on that, you know, because I know there have been some questions on that. Rachel, do you think it would be beneficial to schedule time for a GoToMeeting or a WebEx for us, to look at the listening session results with you?

I mean I don't want to waste people's time, but you know what I mean, 16 cities across the country. A lot of -- hopefully there might be something there that would be a better way for us to digest that data than all of us collectively going back and looking at it our laptops while we're flying home on Friday. It's just a thought.

MS. MEDLEY: You mean a WebEx outside of this HSRP meeting?

CHAIR PERKINS: Yes.

MS. MEDLEY: I would be happy to present that and talk about anything that we've been hearing, and answer any -- well, try to answer any questions that the HSRP members would have concerning that, and specifically what NOAA Nav Services has been doing to try and address some of those issues that were brought up during the triagency listening sessions.

I think Rear Admiral Glang, the Board has tasked the three directors to give an overview about how we've performed outreach. I think that's coming up on Thursday to various customers, and I think you'll be really pleasantly surprised to hear that all three offices are actually completely attuned with what different users are looking for and what their expectations are.

The triagency listening sessions helped to reemphasize for us that we were heading on the right track with issues and concerns. But I'd be happy to go over that at another later date, and then speak to how we're trying to address those concerns as well.

CHAIR PERKINS: Okay, great. If we can try to make that happen in the next 30 days, I think that, you know, hopefully we'll have a report out letter completed before then, and we can maybe optimistically have a response back, and that would be a good time to do a little phone chat and get the briefing maybe on the listening sessions.

MS. WATSON: Excuse me, Scott. If it's just like an informational administrative meeting, you don't need a *Federal Register* notice.

CHAIR PERKINS: Right.

MS. WATSON: That's only when you're going to ask for comments and input from the public.

CHAIR PERKINS: Yeah, no. I'm just saying 30 days, because it's still September and we have end of FY and it's busy. Great, thank you.

MS. MEDLEY: I wonder if the directors are okay with that.

CHAIR PERKINS: So Admiral, can we put you on the spot for an update regarding candidates, Steve Carmel's open seat and time line for that process?

RDML GLANG: Sure. I just want to cover the last topic. So if we're going to schedule a conference call to go over the triagency listening session outcomes, we should -- can we also include our own Coast Survey customer survey, lower case S, the outcome of that?

MS. MEDLEY: Sure.

RDML GLANG: Every two years, Coast Survey has a customer survey. It's a real survey that we run through a contractor, and it meets all the federal requirements to be called a survey. It's under A-16 or whatever the OMB directive is on surveys. So why don't we include that one as well, since that's the focus?

MS. MEDLEY: And Juliana and Rich, do you guys have anything comparable that you would want to include?

MEMBER EDWING: Yeah. I'm not familiar with the survey.

MS. MEDLEY: I think a lot of what we heard from the listening sessions, you guys are concurrently addressing.

(Simultaneous speaking.)

MS. MEDLEY: Right, exactly. So we can work on that together. Okay.

RDML GLANG: I'm not sure we'll get at, but we'll do it, sort of lump that into one call. All right. So update on the new member selection. So we actually have -- let me just orient myself here.

As you know, Steve Carmel resigned after he was reappointed for a second term. Let me just dig up my notes on this. I'll just do it from memory. We have several Panel members who are scheduled to rotate off, five of them, and four of the five are eligible to reapply, and you know who you are. We look forward to that.

The public announcement, the *Federal Register* notice for new members has gone out, went out last -- about two weeks ago, and is open until October 10th. So we stretched it a little bit, but we knew we were stretching it because we had this meeting here, and we felt there was an opportunity to hear from you all if you had any more suggestions on who we might target for that.

We have a standard mailing list, very extensive mailing list of -- across the range of navigation user groups, both on the geodetic side and the academic side, that cover the different topics of interest, and we're sort of selectively resending that *Federal Register* notice to folks who we think have particular backgrounds that we're looking to fill on the Panel.

So for instance, right now we don't have someone from a large shipping company or the equivalent. So we reached out through our network to try and attract some applicants from that user group or that sector. Anything else on that Scott?

CHAIR PERKINS: I don't think so. I think that answers the general inquiries that came over lunch.

RDML GLANG: So if Panel members know of people who they feel would -- should be considered by us, by the directors for membership on the Panel, we certainly encourage you to send them an email or send us an email and say hey, I think this person would be -- represents either geography or a technical area that this Panel covers, or is an industry representative that this Panel would find useful.

So either let us know or you're welcome to approach them directly. As I said, the call for membership applications is open until October 10th.

CHAIR PERKINS: And so Mr. Carmel's seat and the other seats will be dealt with all in one batch?

RDML GLANG: Yes, yeah. We made that decision last year or back in -- after the New York meeting, that we would not fill --

MEMBER KUDRNA: Wouldn't short term it.

RDML GLANG: Right. The only person who can't reapply is our own Matt Wellslager, who has successfully -- he is successfully concluding his second term come December.

MEMBER KUDRNA: But this is a comment. NOAA never lets you go.

(Laughter.)

RDML GLANG: Well, we always welcomed back John Dasler, right. He's our groupie, our HSRP groupie.

MEMBER KUDRNA: But I want to add one other thing. We've talked about working committees. Coming from the Science Advisory Board, they've used outside membership in working committees as kind of an introduction to the FACA, and elevated a number of those folks over the years to that.

It's a very good opportunity to bring some people forward you might want to consider for appointment in the future.

RDML GLANG: Right.

CHAIR PERKINS: There was one comment made about working with a Presidential Innovation Fellow, and I actually applied for the Presidential Innovation Fellow program. I got a really, really nice letter back, thanking me for my application, which I kind of was flattered. But I didn't get selected.

But I would be curious just to hear a little bit more about both the fellow and what the goal is, and what we think the impact will be.

DR. CALLENDER: I can start and ask Admiral Glang to finish up. So basically we had an opportunity through one of the political appointees downtown who's well connected with the White House -- yeah, had an opportunity through one of the political appointees in NOAA to potentially have an Innovation Fellow.

We're able to get the CIO's office, basically the head guy for all things IT in the agency to pay for it. So it's good to have a fellow that someone else is paying for.

Let Admiral Glang know of this opportunity, and then he spent some time working with the CIO's office, to try to narrow down the selection, and then to try to identify what you're going to want this identify to do.

So Admiral, if you want to go into what you're thinking now, in terms of what this individual would do, that would be great.

RDML GLANG: So technically the Presidential Innovation Fellows are not on board yet. So I can't talk too much. I can't really talk about who they are. They'll be aboard in the next two weeks, September 22nd, I think.

There are two individuals that are coming to NOAA. They're part -- excuse me, they're part of a cadre of about 20 or 22 I believe, that are coming to Commerce, as I understand it, or broadly are in the program. Let me rephrase that. They may not all be coming to Commerce.

NOAA's interest is, some of you are familiar with the recent request for information that went out from NOAA on big data. NOAA is looking at engaging the private sector to come up with ideas and innovations about how we can better deliver all the data that NOAA acquires.

So this is NOAA writ large. So you know, we're just a little drop in the ocean of data on our side, compared to what comes in through the satellite programs and certainly what gets generated in the different weather models.

The original motivation was to bring in Presidential Innovation Fellows to look at NOAA big data, and to come up with ideas on how to better deliver those products, see where the private sector can help take advantage of that. The opportunity was really through Dr. Bamford and her connection with NOAA leadership.

So we identified that an area of interest for PIF might be to look at delivering coastal intelligence for the marine transportation sector, and maybe there are some innovations there that we haven't considered yet, about how to more smartly deliver our data.

I certainly feel like we could use some help on infrastructure, you know, how do you -- you can't deliver coastal intelligence unless you've got the data delivery infrastructure. But there are other challenges too, how people take up that information.

In different ports, our data is used to make decisions by different users. Whether it's a pilot or a coastal zone planner or a community that's planning for resilience or a port authority, they're all -- at the foundation, they're all using our information, but they're making different kinds of decisions. So how can we better serve up that information?

So these folks will be aboard by the end of the month. They'll go through and they'll be here for a year is my understanding, and they'll be given -- we'll be developing expectations of -- obviously we can't throw all our ideas at them, and we're really looking for them to come up with the solutions, right.

So there's an initial orientation period. We'll set some expectations, and then we'll set them loose and see what they come up with. It's really about how we better serve up our data and our information, for others to make best use of and enable business along the way.

CHAIR PERKINS: Great. It looks like an interesting program. It will be interesting to see that, not only the results for NOAA, but for government in general, and how that Innovation Fellow program plays out. So we have one hour in front of us.

Lynne, is it possible to call Dr. Callender's last slide back up? And the reason is because I -- you know, that kind of had the ask, right, the ask from the administration bullet points on it. So I'd like to have that on the wall as a framework, because I can't remember it primarily, but hopefully to help guide our conversation here as we work towards --

(Simultaneous speaking.)

CHAIR PERKINS: Okay. You're right. We do have a hard copy in our folder. So comments on today's opening remarks, opening sessions and working towards establishing our pathway to completing a productive report out. That's -- we have 60 minutes in front of us.

I can fill 60 minutes of time. I get paid to talk about anything, right. I don't think that's what we want to do though. So I'm hoping to have a dialogue. Yeah, Ken.

MEMBER BARBOR: Yeah, Ken Barbor. You know, one of the things I see in terms of -- because I was along the same lines, of what rose to a recommendation out of today's presentations, and of course part of it is I think we're getting more detailed presentations later, whether it's the, you know, After 45 or the Intercoastal, Intracoastal or whatever.

So I think unless we want to say what sort of lingering recommendations do we think and want to drill into these next presenters on those sorts of topics.

CHAIR PERKINS: Yeah, and I think the intent isn't that we let the presentations guide our thought process, right. I mean that's regional information, that's beneficial information at a macro level, you know. Where is the science going, you know? What is the new technology NOAA should explore using these bullet points?

And then hopefully those presentations, you know, help refine small pieces of the answer or reconfirm, you know, our direction. This is more painful and more awkward than I anticipated.

VICE CHAIR HANSON: You just need to stir the pot there a little bit.

CHAIR PERKINS: And just the reminder, you know. We are -- we do have the webcast, so just as Bill did, please move the microphone close when we talk.

VICE CHAIR HANSON: I think when it comes to opportunities for new partnerships, I'd like to actually engage our academic friends, because I really see -- one of the things I've learned being in D.C. is that Texas A&M actually has a fairly robust lobbying office in D.C. about a block from the White House.

They have a group that lobbies for engineering research and all these types of things. So I've actually been talking to them quite a bit about how to help out the Ocean Engineering Program at my alma mater.

I was wondering when it comes to engaging a stronger voice, the academics typically have been not very organized in terms of advocating for research and making the case. I was just wondering how a partnership with NOAA, how you partner with NOAA now, and how you might see some improvement in that.

MEMBER JEFFRESS: We've done a lot of that in the past, up until when earmarks went away. That stopped the whole process. It's back to chaos now.

MEMBER BARBOR: And I don't think that's partnershiping. That's, you know, forced indenture, but more on NOAA's side. I mean we obviously benefit. But I think that's -- every institution has lobbyists up there, and they may not occupy buildings, but they do occupy.

And we're actively involved in trying to restore those NOAA partnerships, because it's part and parcel of what we do, and it's difficult. So I won't go any further.

MEMBER MILLER: Yeah. One of the things that I was chatting with Ken about on one of the breaks is I used to work through the University, but for a NOAA program. One of the big challenges was, and this NOAA program had a lot of data that was valuable across the board.

But we had some data from the Mariana that the Navy very much wanted to see expedited, and they were willing to put three quarters of a million dollars on the table to expedite it, and we almost had to turn down the contract, because there was no NOAA mechanism for that partnership.

And when the Army Corps or when was it, I think, Admiral Glang said there's no MOU or MOA between Army Corps and NOAA, I see that as one of the -- a major issue for partnerships. If you can't move money among federal agencies, how in the world can you partner with some teeny little organization in

Alaska or something?

I mean it just seems to me that's a major stumbling block for partnerships for NOAA.

MEMBER BARBOR: To go back there, I think clearly what the mechanism that is the easiest to use from an academic NOAA side is cooperative institutes, and that is, you know, you find a researcher at NOAA that's interested in something and has money, and you partner with them, and the money flows very quickly.

But again, you have to have that cooperative institute relationship to make that work that seamlessly, and unless you have that, it becomes much more laborious.

VICE CHAIR HANSON: If I can also just maybe follow up and this may be more of a question for Dr. Callender. But one of the big issues that came out of the last WRRDA bill was the ability for the first time for the Corps of Engineers to take money from outside the government, non-federal funds from states or even local users.

Does NOAA have the same issue? Because we're seeing, particularly on the coastal front, we're seeing a lot more of the private foundations. The Rockefeller Foundation in New York got very involved in it post-Sandy. The Walton family and Gates Foundation have been very active in Louisiana because of societal issues related to coastal resilience, coastal protection.

Is this a market you've tapped into or thought about as potential sources of funding and partners?

DR. CALLENDER: Yeah. We've tried to do that, we, the larger "we" in NOAA. Been a lot of challenges. There's a few places that can do that, but it involved legislation that indicated that NOAA could actually do that. One is actually here in town with the Hollings Marine Lab, which has the ability to take or bring in money from outside of federal sources.

There was some talk a year or so ago about trying to do this to spur on some Arctic innovation, and I don't know the details of how that worked, but it did not seem to work. So that -- it has been a fundamental challenge. There's a few organizations that have used foundations, not to bring money into the agency but to do some things in partnership with the agency.

It's very unfortunate that no one is here from IOOS, because there's the IOOS Association, which may be a way to do something like that. Sanctuaries has a foundation. The NERRS program, NERA has an association, Coastal States.

So those might be some mechanisms to explore, not so much to bring money into the agency but to do things in partnership, bringing money into those associations, those foundations. So that to your point on the MOA with the Army Corps, I believe there's a NOAA level MOA with the Corps.

NOAA doesn't bring, use these to bring in money at the first step. It's usually an agreement, and then there's subsequent amendments to that agreement, as a way of bringing in money. Frankly, you know, from the NOAA side and having been in a science organization trying to expedite those MOAs, I've been frustrated for years.

NOAA does not do a good job of bringing money in from outside. It seems like more of the emphasis is on how can we spend our money on time that we get appropriated from Congress. So the whole process of MOAs, money coming in, has been a huge challenge for many years.

There's been some lip service quite frankly paid to it in the agency, but it's not really been solved. Not a great answer, but that's sort of an on the ground perspective in terms of the challenges there.

RDML GLANG: So we would have to actually check if there's a NOAA level Memorandum of Agreement or Understanding with the Army Corps. I'm not sure that there still is. There was an NOS level memorandum of understanding with the Army Corps, which expired last year, and we've made a few attempts to get that going again.

The challenge in a memorandum of agreement, which would be the mechanism that NOAA needs for accepting money from the Army Corps, it gets stuck up at the general counsel level, and we talked about this last year.

So that's certainly something that could be looked at again. We do have -- NOAA does have a high level memorandum of understanding with the Coast Guard and several MOAs, I believe, and then we also have several agreements with NGA.

Certainly for the three navigation programs, we do have a statutory mechanism for accepting money. The Coast and Geodetic Survey Act of 1948 is the piece of legislation that allows us to receive money, and then execute our missions. So we do have that. Rich.

DR. BRADLEY: Yeah. So two kind of examples is we have -- whether or not there's a high level agreement with the Corps is almost irrelevant, because you still have to establish another agreement for kind of the project you're trying to do, and having that umbrella agreement doesn't really help.

We have an agreement with the Corps to -- right now to help them establish datums for their projects, for coastal projects, and we have an agreement in place to do that, and each project is kind of a task order underneath that.

It's taken us years to get that in place, and we're just now really starting to get to work on some of that. I was just mentioning to Andy, I think, that I'm trying to pass money to the Corps right now, to do some engineering design work for us for NWLON stations up in the Lakes.

It's taken a long time to get that in place, and the lawyers right now on both sides are haggling over the dispute resolution boilerplate language in there, because the words on the Corps side are not the same as the words on the Department of Commerce side, and they're, you know.

So the agreements process is a huge challenge, I think, for making an efficient government.

MEMBER SHINGLEDECKER: On the agreements discussion, I'm not sure if this is the same thing or if it's related. From the New York meeting, one of the recommendations that was made had to do with having prescripted mission assignments for, I think more for an emergency response capability, to enable a faster response.

It sounds like those are related. The response in the letter said that NOAA agrees with the intent and will work to establish, as appropriate. I was wondering are there barriers to this that we're unaware of, and you know, how can we as a committee help further the cause for you guys in that area?

CHAIR PERKINS: Paul, do you want to take that one?

DR. BRADLEY: So do you mean barriers to the prescripted mission assignments specifically, or more broadly working with other agencies?

MEMBER SHINGLEDECKER: Both.

DR. BRADLEY: I shouldn't have offered both. So I was planning to cover the FEMA prescripted mission assignment in my updates on Thursday, but the short and sweet of it is that FEMA's been besieged -- since Sandy, FEMA's been besieged by mission assignment requests.

So in light of that, they've kind of taken a new line of thinking to the mission assignments, and the response that we got, after working with them extensively over a long period of time; we put in the request. We talked about it with them. I think they basically handed it to their lawyers, you know, in the scheme of this big issue that they have with all these requests for mission assignments is if you already have the authority to do the work that you're asking for a mission assignment for, then you don't need a mission assignment.

So that was the response. I think we had six different areas that we requested these PSMAs for, and that was the case for five of the six.

MR. ASLAKSEN: Well tell them what the one they did accept was.

DR. BRADLEY: Was it knowledge manager, right?

MR. ASLAKSEN: No. It was the coastal manager.

DR. BRADLEY: Oh, coastal manager, that's right, yeah.

MR. ASLAKSEN: They denied all the surveying, all the airborne part of it, and they basically said this is your mission to do everywhere.

(Simultaneous speaking.)

 DR. BRADLEY: So it's not done. We pushed back at Holly's level to FEMA, to Grover Fugate, raised the concern that this was something that he wanted to see happen. We're getting way into the weeds here, but I just got a note this morning from Grover, wanting to meet with Holly and I to discuss this.

So I think the pushback may have helped. The story's not over yet. I'm hoping that it's not over, because at his level and at Holly's level, this is something that makes sense and that we want to do. As in many cases, the lawyers may not be in sync with where the leadership wants to go on things, and may not be helping to facilitate.

So we'll see. The story's not over. We may still be able to pull this off.

DR. BRADLEY: Right, and I think so one of the nuances that we're trying to have a legal conversation with them about is in the Hydrographic Services Improvement Act, it provides the authority for us to do the types of things that, you know, we wanted the mission assignments for.

So I think they're holding that up to say well, you already have the authority. You don't need the mission assignment. But it also follows onto that by saying NOAA has the authority to obtain mission assignments.

So there's that, you know, hiccup in the authority that, you know, we're trying to -- you know, our lawyers are trying to work with their lawyers to, you know, come to some resolution as to what does that mean for the present request.

MEMBER SHINGLEDECKER: Yeah. It was my understanding in the discussion we had in the breakout from the New York meeting that the prescripted mission assignments would help improve the efficiency and the speed of delivery in the ICS approach in a situation like that.

So looking at the questions of, you know, how can we increase efficiency, that's why I brought it up.

 DR. BRADLEY: And the comment I wanted to make, following up on the Admiral's point about the Army Corps agreement, yes, we had an umbrella agreement between Army Corps and NOS that expired a year or two ago. There was some interest in doing that again at the NOAA level, because Army Corps wanted to also establish an agreement with the Weather Service.

So there was some, you know, sense that well, it makes a lot more -- it makes a lot more sense to do it at the NOAA level, as opposed to one with Weather Service, one with NOS. But in reality, every time we set up an agreement with the Army Corps, we had to write a new agreement for each one of those, you know, partnership projects or whatever.

So the umbrella is really more of a kind of feel good. We promise to keep working with you, but we're going to have to continue to write more agreements as we develop the projects.

MEMBER MILLER: Well, one of the things I see about, you know, partnerships, the PORTS system in particular, is it would make sense if Army Corps and EPA and, you know, U.S. Coast Guard and so forth contributed to that system, because they're federal users of the system.

But in order to do that, I mean this is two of your questions, you know, are there are opportunities for new partnerships, it just seems like NOAA makes it -- or whoever, the lawyers, whatever, make it so difficult to establish those partnerships that it effectively blocks off that type of cooperation.

And I don't know. Is it appropriate for this panel to, you know, to recommend that, you know -- we've done it a couple of times in very small areas.

RDML GLANG: I think it would be appropriate for the panel to recommend something, if you believe, feel strongly about this, that you know, streamlined mechanisms across agencies to develop partnerships and you mentioned some in particular would be useful.

Recommending how we do it is probably less useful. I think it's a stronger message to say, you know, we recognize the value of partnerships. We recognize some of the challenges. We recommend NOAA to work through whatever channels possible, to streamline those mechanisms.

Not so much for the money side, but for the outcome side. I think I -- you guys can jump in on the NOAA side here, but I think that would be a useful type or flavor, if you will, of recommendation.

It's less about the how we do it but more about the why, the importance, and what are some outcomes that we don't see happening that we think some partnerships would help with. They're coming for me.

MEMBER KUDRNA: Scott, a couple of thoughts for our general discussion, one on the small side. We've heard about interrelationships with both Sea Grant and the IOOS Regional Association, and I think we ought to routinely invite them to our meeting, if we're in a particular area.

We did have someone from Sea Grant here, but I think the IOOS Regional Association and the local Sea Grant program should be invited, so they hear what's going on and provide some input to us in the future. I think that would be a good general thing to do.

The second topic is -- and by the way, I thought this PORTS thing was terrific. I mean this connected to commerce, talked about the value, and Ed and I just had a discussion over lunch, and I think there's an opportunity to do something bigger, because when we look at the ability of NOAA to get resources to do the activities they need to do and an expanded budget in various PORTS area, it's difficult, you know. It's a zero-sum game in Washington.

We heard from the Corps of Engineers exactly the same story along the way. I think it would be useful to put together a working group that talked about the subject of port development expansion, and put it in a perspective that could be understood by Commerce and talked about what the U.S. is not doing compared to other countries, in terms of capital and infrastructure investment.

Really, in order to deal with these issues, more capital has to become available, and it's a sales activity that has to take place at an economic level to the country, not at a budget level for NOAA. I think something like that would be very useful to NOAA and the other agencies, and I think it would be well-accepted and viewed by Department of Commerce.

VICE CHAIR HANSON: If I could add to that, because I think there's a lot of work out there already, Frank, and then perhaps a briefing by ASCE, who's done a lot of PORTS work, not just in relation to the report card, but just more in general to the value of ports, as well as the American Association of Port Authorities, which has put out an awful lot of stuff and gotten -- upped their game, in terms of the PR as well, the value of ports.

I know when I started doing this five or six years ago, it was a difficult discussion. But almost every port in the country right now can tell you what a foot of draft is worth to them, and that means a lot. It means a lot to people in terms of jobs and dollars.

So and I think the byproduct of all that, to your point Frank, is once people realize the value, when we start talking about infrastructure, you're not talking about whether it's federal, state or private dollars. You're just talking about it's got to get done.

That puts the discussion on a whole different plane, who's going to get credit for it. In the Southeast, we've seen the governors want to take credit for it, which is why they're writing some very, very big checks for this, and kind of changed the dynamic of how these types of things get funded.

I keep bringing up the academic side, because I really think there's going -- there's a different discussion to take place, that it's not just the federal partners anymore for the academic side. You guys already have a lot of partners outside the federal side, and perhaps your governors and your folks there need to take another look at their budget, and just see how important your institutions are to them.

CHAIR PERKINS: So that cross-cooperation with other groups and, you know, knowing that, what was it, the U.S. Hydro, Hydro U.S. conference is every other year. So that's coming up in 2015. So it could be a segue for discussion about future meetings, you know.

We tried something different and we're able to come to Charleston concurrently with the NSGIC conference. A small delegation of us were able to attend, you know, their Coastal Caucus luncheon, a little cross-pollination, you know. We haven't had any NSGIC people come over here, but I didn't really expect that.

But does it make sense for us to spend some of this time talking about locations and dates for future meetings, where we can continue that, trying to target our meeting dates at a time and place where we can get that force multiplier.

I don't like to use the word "synergy," but you know, if U.S. Hydro is going to be in Washington, D.C. in 2015, and this Panel's going to meet in the D.C. region in 2015, it sounds like we should spend a little bit of time on long-range planning, you know, of meeting dates and targeted groups.

MALE PARTICIPANT: Scott.

CHAIR PERKINS: Because other than John, we don't get a lot of people in the room, and John, we really appreciate the fact that you still come.

MEMBER ARMSTRONG: When the hydrographic conference was in San Diego, we held the HSRP together with it, and one bit of advice I would have on that if we did that was not to try to hold the meetings concurrently, which is what we did in San Diego, because then the people who were here weren't there, and vice-versa.

But if it were held just ahead of or just before or a shortened HSRP meeting of a day at the beginning or the end, in order to give the Panel the opportunity to have the interaction with the group without forcing people to be in one place or the other, would be a good deal.

CHAIR PERKINS: Yeah, which is part of our problem here. We're directly over top of NSGIC, so you can't cross-pollinate very well.

RDML GLANG: So one thing we're trying to start doing in NOAA is just instead of going back to the well time and time again, and start looking for the non-usual suspects of people to partner with.

And, you know, we've been having a lot of success at the Ocean Service level partnering, for example, with the Weather Service, taking advantage of some of their meetings, because it's a service kind of mentality.

So I'm not saying meeting with the Weather Service, but there may be some other groups that you could think about trying to meet concurrently with or connect with.

Maybe it's an economic development council or a chamber of commerce or something like that, that really pushes on the economic benefits of what you do rather than talking to the same kind of folks that know what it is this group does. Maybe a way to sort of broaden that that's important visibility.

CHAIR PERKINS: That's a good suggestion. The American Association of Port Authorities is in progress on what they're calling a port investment tool kit project. So they've, you know, they've got a group of different stakeholders and I've attended two or three of their meetings.

Their intent is to come out with a road map, you know, with a document and a series of, you know, tutorials, to help someone like in Ed's seat at a port authority. Here's a way, you know, here's your formula. Here's your tool box of return on investment and here's your time line and here's how you have to market it and here's how to bond it and finance it.

In hydrographic surveying, you know, of the facility, in landside surveying of the facility, you know, it's one bullet point, you know, in that table of contents for that investment tool kit right now. But yeah. So doing something concurrently with the Association of Port Authorities, you know, may be a little closer to home for us, but trying to, you know.

We talked about LA/Long Beach, you know, as the next location, and Merle are we -- is it nothing disrupting that?

RDML GLANG: No. So we had talked about the next location for a panel meeting being in the LA/Long Beach area, because we have some projects there that we think we can report out on. The Hydro conference is in March, I believe. So you all are of course invited to come to that. We don't have to have a full on panel meeting.

Maybe we'd count that one differently. Maybe you all come as members of the Panel, but on your own dime, and you know. Our legislation, our statute of course says we have to meet at least twice a year, and unless we have extraordinary budget circumstances, I think the programs are prepared to fund two meetings a year.

But maybe the hydro conference is an opportunity to think about a shorter meeting. I think Andy, were you suggesting that maybe immediately following, give the Panel members a chance to digest and discuss what they heard, and then use that maybe to inform your next meeting, for instance.

I don't know. I'm just thinking off the top of my head.

MALE PARTICIPANT: Yeah, and what would be our guess at a date for the LA/Long Beach meeting?

CHAIR PERKINS: We haven't even -- so I think that's still somewhat open, but notionally, I think February is what we were thinking, the latter part of February. It's starting to get close to the hydro conference, of course, but --

MEMBER MILLER: One question. Is there any concurrent meeting that anyone's aware of in -- or any meetings in Long Beach or the California area in that time frame, that we might be able to, you know, in some way interface with?

CHAIR PERKINS: I haven't looked at that yet, Joyce. We can do that.

MS. MEDLEY: Yes. There's the Annual Passenger Vessels Association meeting.

CHAIR PERKINS: Annual Passenger Vessel Association meeting. Do you know when that is, Rachel?

MS. MEDLEY: Yeah. September or January 31st to February 4th.

CHAIR PERKINS: And where is that?

MS. MEDLEY: LA/Long Beach.

CHAIR PERKINS: Wow. If I were at the VFW, I'd yell bingo.

MS. MEDLEY: And you all probably recall that Ed Welsh was the former chairman of the HSRP. He is also an active member at the PBA.

CHAIR PERKINS: So I think there's complimentary passes in our future.

(Laughter.)

CHAIR PERKINS: Who's going to call Ed and ask him for a freebie?

DR. CALLENDER: So we brought up the idea of trying to work more effectively with IOOS and with Sea Grant. They both have national level meetings.

Sea Grant Week was held fairly recently. I'm not suggesting that maybe the whole Panel would go, but there might be some opportunities for some levels of cross-fertilization. Individual Panel members could probably finagle invitations, if that's what it takes.

But that might be a great venue to start some of that cross-fertilization, meeting with those groups.

RDML GLANG: So one comment on scheduling a meeting too early in the year in 2015 is that we do have -- we'll have hopefully six new panel members to bring on board, and that process, as you all know, can take a while.

So the January-February time frame could be a real challenge to get those new panel members seated. Just as a caution out there. So something to keep in mind. You certainly have our commitment to our best to move those along, but there is a vetting process that has to happen.

CHAIR PERKINS: So then I have to ask, what do we think would be a date where they would be in place by?

RDML GLANG: Well late February, I thought, was doable, don't you think, Kathy?

MS. WATSON: The solicitation closes on October the 10th. The evaluation team is going to be meeting in mid- to late -- or I would say mid- to late October, and then the package should be submitted through the NOS, the NOAA chain late October, early November.

You've got to give the NOAA administrator at least 30 days to review the information, and hopefully make a decision. So that's pushing it into December, and of course the terms end January 1, and then if the people that are appointed accept, then you've got to go through the HR processing, NOAA Security.

So you've got to give at least another 30 days for that. So we're looking at maybe mid-February, late February if possible.

FEMALE PARTICIPANT: That's the earliest.

(Simultaneous speaking.)

MS. WATSON: And Paul Bradley may be able to give us a little bit of input on that.

DR. BRADLEY: Sorry, I'm trying to multi-task and doing a poor job of it. What was the question?

CHAIR PERKINS: How soon can we get those panel members seated?

DR. BRADLEY: Oh, that's always a tough question.

CHAIR PERKINS: That's not the body language we wanted to see.

(Laughter.)

DR. BRADLEY: I hate giving any sort of a time table, because then I'm inevitably wrong, and I hate to be, you know, held accountable for that. If we get it into the review chain some time late October, I know there's a security clearance process in place.

So you know, in terms of swearing in, I wouldn't be so optimistic to say that it would happen by January 1st. But it should be some time in January, I would think.

CHAIR PERKINS: We don't have to go to LA/Long Beach this time, you know. The hydro conference is March 16th through 19th. It's in Washington. So if you want to -- if you think something, we could be creative around that time frame as well. Just another alternative.

DR. CALLENDER: March is a busy time in Washington as well, for March Madness on the Hill. But there's also -- forget that for a moment -- everybody's in town. So there may be some venues at that point in time to maybe find some of the non-usual suspects to connect with.

CHAIR PERKINS: Yeah, that's a very busy time on the Hill, a very good time for force multiplying and cross-pollination, that's true. We did have a plan to have a session, you know, or had a discussion about possibly having a session at this meeting on contracting-related issues, at Holly's request, you know.

And after a lot of discussion and consideration, we took that off the table for this meeting, and we have the commitment, you know, to do something at some point coming up about in that time frame in Silver Spring.

So you know, perhaps doing that and doing a D.C. meeting in the spring, I mean doing -- I don't know how bad everybody was looking forward to going to LA.

DR. CALLENDER: Sunshine in the spring, snow in the spring.

CHAIR PERKINS: I know.

MEMBER SHINGLEDECKER: Just avoid the cherry blossom time, right. It's double crazy.

CHAIR PERKINS: I would need to look, but probably --

Okay. Well, we do have a planning committee, you know, has been established. So it sounds like we need to have some discussion, you know, about east or west. I mean this is -- we have time for a discussion now.

MEMBER KUDRNA: I have a question. I understand, Admiral, that we only have resources to do twice a year. But some of the others FACAs have scraped up enough resources to send the chairman or the vice chairman to some companion meeting to represent the FACA.

Is there a possibility with some of these other organizations that we'd do that, that we allow the chairman or the vice chairman to represent us and kind of cross-pollinate with another organization?

RDML GLANG: Yeah. I'd be happy to pay for the vice chair's travel to Washington.

(Laughter.)

RDML GLANG: Yeah. That's a good suggestion, Frank.

VICE CHAIR HANSON: Buy him a Metro card and stuff.

(Laughter.)

(Simultaneous speaking.)

RDML GLANG: No. That's a good suggestion, and I think after the last -- the one and only webinar-based public meeting, my observation was to never have a virtual meeting again without the chair and the vice chair at least in the room with us. Remember that, Matt? That was one of our takeaways.

So I think that's possible, Frank. For the right venue, we would certainly entertain that.

VICE CHAIR HANSON: More than just the vice chair.

RDML GLANG: More than just the vice chair. I would --

VICE CHAIR HANSON: But that was fun.

RDML GLANG: Two Metro cards. You know, and we do have -- you know, Susan's not that far either, and some of you may have reasons to come to Washington.

MEMBER SHINGLEDECKER: I've definitely learned that driving Route 50 is less painful than sitting on a webinar all day.

(Simultaneous speaking.)

RDML GLANG: So Scott, this isn't the only opportunity in the next few days to bring this topic up, and then we also have the planning committee.

I liked your suggestion. Maybe the planning committee could dissect the calendars in March for Washington, for instance, and say okay, how could we leverage a panel meeting or at least even just a visit by the chair and the vice chair? How can we leverage that the most? Just a suggestion.

CHAIR PERKINS: I like that suggestion. We did have a near split vote on Charleston versus LA/Long Beach, you know. So at least a few months ago we had a pretty good base of support for going west.

MEMBER SHINGLEDECKER: I still support going west, and I think Long Beach would be a great opportunity for the Panel. Given the discussions that we had, you know, just an hour ago about partnerships and working across agencies, that makes lights go off in my head about the opportunity that D.C. presents in terms of trying to facilitate those kind of things.

MR. ASLAKSEN: Andy, for the San Diego trip, that was pretty well-attended publicly, as I recall. It's been a while, but it was standing room only at times. So you're going to get a lot of draw and lot of broad interest in there. So that's one thing I recall. It's been -- that was a long time ago.

MEMBER ARMSTRONG: Time flies when you're getting old.

(Simultaneous speaking.)

VICE CHAIR HANSON: I think I'd ask a strategic question, because we're talking about partnerships, and the question becomes what kind of partnership do you develop at these individual conferences, you know. I have been kind of knowing a message and travel weekly to a bunch of different venues. So that's not lacking.

But I was trying to identify what kind of partnerships you're looking for. It's not -- one thing we found in the infrastructure discussions, you don't want to be preaching to the choir. That gets old and it doesn't get you anywhere.

So you need to get outside the box of folks you normally talk to, to get your message across. At a Hydro Conference, for instance, who's your target there? Who's your partners there? I just came from a meeting last week in California.

California has no money, no interest in investing in coastal issues. They're willing to complain about it; they're willing to push it on the feds, but they have no interest in doing anything more than that.

So if you're going to California, maybe there's a plan, but let's think about what that is.

MR. ASLAKSEN: Well, wouldn't it be an opportunity too to have staff attend the FACA? Is that not unheard of, and put in a big push from a leg affairs approach to have the right staff, to maybe come and attend the conference as well, if we could tie that in, because it is right there, you know, and they will be there.

A lot of this needs to be rolled up into a big idea of thinking, right. So coastal intelligence? Let's all wrap that up in one thing, right. I think that's a big opportunity.

CHAIR PERKINS: So if we were going to do a straw poll, east or west, right. Let's try to move the ball down the field a little bit. Do you want to do a show of hands or do you want to take a post-it note and write an E or a W? I don't want to have to form a standing committee and get out the Robert's Book of Order and all of that but --

MALE PARTICIPANT: Show of hands.

MEMBER ARMSTRONG: Straw poll on?

CHAIR PERKINS: Show of hands, okay. East or west for our next meeting.

MEMBER ARMSTRONG: Oh.

MEMBER MILLER: You mean in conjunction with the Hydro Conference?

CHAIR PERKINS: If we go east, we've got lots of other potential targets to try and hit it in conjunction with.

So east in conjunction with some other beneficial potential partnership organization. How's that for a broad brush? So that could be before or after the Hydro Conference or some other IOOS or other related beneficial party. I don't think we can say Hydro specifically.

MEMBER MILLER: It's a little hard to say. I mean if I knew that there was a really good IOOS opportunity on the West Coast, that would sway my vote that way. I mean if we could get some research on what potential --

The Passenger Vessel Association is exciting, but I'd be more interested in an IOOS overlap personally. So if there were something like that on the West Coast, that would sway me or depending on where it is.

CHAIR PERKINS: So do you think we could be prepared to have a more intelligent and higher fidelity discussion in the next 48 hours before we adjourn on Thursday?

So we can look at our calendars and do our research, and each one of us will come back to the table with a recommendation of some other party that potentially would be a beneficial concurrent, consecutive --

DR. CALLENDER: So I can reach out to the IOOS folks, and see if they have things going on. I mean there's three IOOS associations on the West Coast too. So there's maybe some venues there as well. I can sort that one out pretty quickly.

MEMBER KUDRNA: Well, I could help. I'm on the IOOS Association Executive Committee, and SECOORA is based at La Jolla, one of the largest ones. They have terrific facilities too there with fisheries. So that might be a possibility. I'll contact the executive director and see what they have going.

Public Comment

CHAIR PERKINS: Okay, all right. We will visit east or west again on Thursday. One more call for public comments?

(No response.)

CHAIR PERKINS: Okay. At least I officially asked.

VICE CHAIR HANSON: John Q. Public.

MEMBER KELLY: I've got just a procedural or a concept type of thing. If we're looking to get partners, if we identify these partners, what is the plan? To bring them to this meeting and then stand them in front of the room and tell them we want to work with them or we want their money or --

I'm not understanding exactly how our normal FACA meeting would really directly tie into that partnering concept, that we would try to pull people in and talk to them, or we would attend their meetings and try to, you know, slip behind them and grab their wallet or, you know.

It's all stuff I'm very willing and able to do. I've done it before. I'm pretty good at some of that.

(Laughter.)

MEMBER KELLY: But you know, I think we really have to question our concept about partnership, and if our FACA meeting is really the right venue, or if we need to identify some targets, find some people within this group, and maybe get a delegation to make a phone call or to talk it through or something like that.

I mean, you know, you generally hit more targets if you aim with a rifle than if you shut your eyes and shoot a shotgun out the window.

So I think we have to do a little more work in refining who we think our partners might be, and what a valid reason, not just for us but for them, some commonality of purpose, and then try to find, you know, maybe an offline way to develop that a little bit, rather than just hoping that they may or may not be at a physical geospatial location, where we're going to have to have our meeting.

I think, you know, I'm entirely in favor of the whole thing, and I think we can find some more partners, and I think we can certainly, through the IOOS and the IOOS RA things. I know that the Mid-Atlantic Regional Association has been very active with some shareholder, you know, and stakeholder meetings and outreach, and with power companies and people like this, you know, where there's dollar value.

And then through the data that can be provided for pre-positioning their response trucks and what-not at the right time and the right places. Maybe we need to talk to some of those groups and find out. Maybe there's some synergy there.

But I'm a little mystified as to how we make a partnership agreement as part of our FACA meeting. I'm just questioning the process of that. If we do have a meeting in D.C., and there might be three or four people we may or may not wish to partner with, how do we do it in conjunction with our meeting?

Do we pull them in or is it a sidebar meeting at a dinner someplace or -- because I've been asked to partner an awful lot of times. I've asked other people to partner with me over the years, and I have found that one of the least productive ways to do that is to grab somebody and put them in front of a bunch of people he may or may not know, and ask him to make a commitment, especially if it involves funding.

So you know, I'm in favor of partnerships. I think we just have to do it -- kind of devise the right way to do it, and each partner might require a different type of approach. So I think we need to identify our partners long before we decide we're going to have our meeting in either Washington or Long Beach.

I don't care. I've, you know, traveled so many damn times. I don't even know how many times I've been in Long Beach. So it has no allure to me where we meet.

But, you know, I think we just need to find something that would be of interest to this group, and then also set our partnership program, you know, and give that some traction and build a strategic plan for that.

MEMBER BLACKWELL: May I just ask if we can define what it is we want a partner to do?

MEMBER KELLY: Yes.

MEMBER BLACKWELL: I mean I think we need to have an objective. What do you want us to work on? What do we want to work on together, and then let that what helps us define who our partners are.

Now I think Sea Grant and IOOS and all the other components we've talked about, groups that we've talked about are probably candidates. But what are the big things that we want to focus on doing, so we can identify the appropriate partners?

MEMBER KELLY: My viewpoint is we need to draw partnerships from a much broader base, and either the purely academic or scientific communities, and get buy-in from insurers, reinsurers, coastal managers, you know, just a host of people. Power companies, a lot of people who could -- ways that would have value for NOAA products and data, that would be willing to come in and say yes, this is important to us.

So perhaps the partnership is just getting endorsements from some of these people. That's an easy thing to do. Do you say this has value, you would be willing to, you know, give us a letter or make -- or support or sign on to this, so that we can get a broader base, you know, for the value of some of this data.

Which then leads us towards finding better ways that there's this many people that have interest in it, and either go toward expanded federal funding for whatever program it is, not just PORTS, although PORTS should be federally funded.

I have to say that; it's a reflex, and you know, or we bring people in to recognize the value of some of this data and what-not to them, and maybe get them to be constituents to also help to either fund or have their lobbying groups or whatever help to put pressure to get this thing to preserve.

I don't know. I think there's a lot of different things you can expect from partnership. You'll never find anybody against partnership. But when it starts rolling down and asking well, what do you want your partner to do, and what do you think he's going to want you to do, you know, that's where it gets a little tricky.

I think we have to define our objectives and partnership a little bit better before we just, you know, find a partner in D.C. or Long Beach. Having been to both places, I'd be very wary of any partner I'd find in either of those locations.

(Laughter.)

CHAIR PERKINS: Sounds like we're coming to Kansas City.

MEMBER KELLY: This is just throwing things against the wall at this point, but you know, just some concepts and ideas about what do we want from partnership. We need to define some of that.

Do we want somebody to just provide money? Do we want somebody to help us to become part of our broader group of value-added or endorsement people? Or do we -- what do we want from them, and what can we expect they're going to want back from us, because most partners, you know, kind of want something in each direction.

CHAIR PERKINS: Mr. Dasler.

MR. DASLER: Since it's semi still public comment, I think I would just say I think before you can define partnerships is, and I think if I understood the context of what was being asked there, of how the HSRP can help NOAA is how you vet out --

NOAA has a lot of great data, and there's tremendous value in that. But it's not really being used to the fullest extent and its capabilities. So what are the ideas that the HSRP can bring forward, that all of the sudden partners are going to come out of the woodwork and say yeah, we will help you support that?

I mean some of it that comes to the top of my mind is higher resolution data. I mean we're doing a lot of work with the pilots in trying to get higher resolution data onto their portable pilot units.

I mean can Google Earth or other partners, Esri, use some of the data and develop products and partner in developing new technologies and new advancements for the use of the data that's there?

So I think maybe the first step is coming up with some ideas, you know, rather than trying to figure out who the partners are, what are some of the new insights that can come forward, that are going to -- partners will rise up out of the woodwork to help move that forward?

CHAIR PERKINS: That's good input. Kyle, can you give us instructions on the transportation logistics? So we have one public comment.

MS. MERSFELDER-LEWIS: Are there ways of -- the question is from Chris Freeman, who's a senior geologist with geodynamicsgroup.com.

His question is there are several working groups within the Corps districts, not just navigation units that acquire high accuracy surveys for regional sediment transport modeling, sand searching, shoreline, beach profile surveys, et cetera.

As a contractor for both Wilmington, Norfolk and Baltimore Corps Districts, we have observed several areas within NOAA, priority areas, that have existing, modern data. It appears there is a data disconnect in some areas between the Corps and NOAA.

Under the idea of map once, use multiple times, it seems there could be a better way to let all stakeholders know of existing data to potentially reduce effort or increase knowledge of a particular area. NOAA has been doing a great job with SeaSketch, which could be a good platform to achieve better cross-talk on existing and modern data sets.

While SeaSketch could be updated by NOAA and organized a little better, I think there is a great potential to keep both NOAA and the Army Corps of Engineers informed on data inventory. I can expand if needed.

MR. WARD: We're running short on time.

MS. MERSFELDER-LEWIS: We acknowledge the comment and thank you. We will have somebody get back to you.

RDML GLANG: So we can actually prepare an answer for this and read it back into the record here tomorrow or Thursday. It was a great question, and clearly Mr. Freeman is well-informed about what IOCM has been up to. So that's great to read.

MR. WARD: All right. We board the shuttle at 2:45, so that's in nine minutes. So you have time to run up to your room quickly and come back down. We will be outside at the Wando Terminal. So tennis shoes or shoes are good. Don't wear sandals, and then we'll be on the bus. So 2:45 in the lobby.

CHAIR PERKINS: Thank you, Kyle.

(Whereupon, the above‑entitled matter went off the record at 2:37 p.m.)