Thanks, everyone, for taking time for that HSRP meeting just now.

Public Access FACA database:
https://www.fido.gov/facadatabase/logon.asp
NOAA HSRP website: http://nauticalcharts.noaa.gov/ocs/hsrp/hsrp.htm

Ashley/Kathy: Here are the general public folks:
Joseph Scolari, USACE
John Perez, Port of Miami
Bahar Barami, Volpe
Brian Walker, Nova Southeastern University
Don Ventura, Fugro-Pelagos, Inc
David Larimer, NCL
Donald A. Roman, University of Southern Miss
(the rest of the folks who signed in were speakers and I have their email addresses; I’ll send them a quick email.) Attached is the Federal Register Notice that gives details about the meeting.

HYDROGRAPHIC SERVICES REVIEW PANEL

HELD: Doubletree Grand Hotel, Bicayne Bay, Miami

DATE: Friday, March 7, 2008

AGENDA: Public meeting

TIME: 8:00 a.m. to 4:00 p.m.

CHAIRMAN: Tom Skinner, Durand & Anastas
Environmental Strategies, Inc.

VICE CHAIR: Edmund B. Welch, Maritime & Ocean Policy

PANEL MEMBERS PRESENT:

Captain Thomas Jacobsen, Jacobsen Pilot Services, Inc.
Michael W. Szabados, Director, CO-OPS
Captain Sherri Hickman, Houston Pilots Association
Captain Minas Myrtidas, Norwegian Cruise Line
Matthew J. Wesslager, South Carolina Geodetic Survey
Elaine L. Dickinson, Boat Owners Association of the U.S.
(Continued from Volume I.)

CHAIRMAN SKINNER: We will have two more public comment periods this afternoon if any of you change your minds or if we have new members from the public wishing to make a comment.

I should also mention that we have two panel members who have been delayed getting here. Captain McBride, I believe, is due this afternoon; and John Dasler was held up due to weather. He tried to make it here last night.

Next up is -- Panel, what we've tried to do today is in the past we've heard a fair amount about navigational services and that certainly remains a focus of the panel.

We tried to mix it up a little bit with today's panel, and we have five -- I think five people who will be making brief presentations and are available for questions and answers. And if we could have them -- I believe you're supposed to
present from up here. It's very hard having
Barbara around the corner here.

MS. DENTLER: Yes, please come up here.

CHAIRMAN SKINNER: She's the stand-in
teleprompter, and I have no idea where you are.

We have on the panel Bruce Carlisle from the

Massachusetts Office of Coastal Zone Management.

Chantal Collier from the Florida State
Department coral reef Conservation Program.

Becky Hope from -- the Operations Director
with the Port of Miami.

Chuck Husick, who's a journalist and active in
recreational marine areas, and is also the Ask
Chuck for Boat dot U.S. -- or boat U.S., sorry,
swift kick under the table here from Elaine.

And we also have Jeffrey Andrews, who is --
I've lost my cheat sheet -- so I -- you're -- can
you explain?

JEFFREY ANDREWS: I'm with Coastal Planning
and Engineering. We do hydrographic surveys. I
was asked to come here by Tom Waters from the
Department of Beaches and Shores and to go over
some of the state.

MS. DENTLER: Can you please speak into the
microphone so the court reporter can hear?

JEFFREY ANDREWS: I was asked by Tom Waters to
come speak to some of the stuff that the state is
doing with NOAA.
CHAIRMAN SKINNER: Great. Sorry to not have
that in front of me. I think we'll just go in
order of how I have you listed on the agenda, so,

Bruce, if you could start off, that would be great.

BRUCE CARLISLE: Good morning. As Tom said,
my name is Bruce Carlisle. I serve as Assistant
Director for the Massachusetts Office of Coastal
Zone Management. I assumed the Cabinet of
Executive Officer of Environmental Affairs,
Commonwealth of Massachusetts.

I would like to thank Jack Dunnigan and
Captain Steve Barnum and Chair Thomas Skinner and
the entire Panel for inviting me here today and
having the opportunity to share some of the
thoughts.

I do understand that the primary focus of the
Panel is on navigation and aspects related to.
There's a couple other aspects I'm going to touch
on. In particular, recommendation number two which
is the coordination and integration of hydrographic
services among federal agencies, especially as it
relates to sea floor and shoreline mapping.

I will also touch very briefly on
recommendation number five, the importance of
NOAA's hydrographic services to non-navigation user
groups. I have some prepared remarks, hopefully, I
will try and keep them brief.

In Massachusetts, the seafloor and shoreline
mapping are increasingly important to Massachusetts coastal and ocean management efforts.

High-resolution data on bathymetry and topographic elevation, seafloor and shoreline morphology, substrate types and sediment thickness are all critical pieces of information that will dramatically improve management efforts.

The goal of Massachusetts' seafloor mapping program is to generate high resolution data required to map the distribution of marine habitats in the coastal and ocean environment of the commonwealth.

The seafloor Mapping Cooperative in the Commonwealth was initiated in 2003 with CZM and the U.S. Geological Survey working as co-leads to produce high-resolution maps and geospatial data of seafloor topography, or bathymetry, and surficial geology. Other state and federal partners include NOAA and our state Division of Marine Fisheries.

To date, the state has invested more than three million dollars in this effort and this state-level investment has been matched dollar-for-dollar by federal funds.

As you can see from the handout that I circulated. Did you get the handout? Okay.
Good. We've made significant progress with a large chunk of our state waters have been completed. There's a URL, it's kind of hard to read, but to the left of the USGS logo where you can obtain the open file reports for those areas.

And although we do not have an established shoreline mapping program, the Commonwealth worked with NOAA and USGS in 1994 and 2001 to conduct comprehensive shoreline change surveys. We currently have a very strong interest in obtaining high-resolution LIDAR data and multi-spectral imagery for coastal shorelines, floodplains and habitats. We would welcome the development of a shoreline mapping initiative partnership parallel to what we have with USGS cooperative seafloor initiative. In particular, we are very interested in linking the near shore seafloor information, as you can see there, up to the dry side. So it's that very narrow band there which is sort of a missing link right now.

One of the things I want to emphasize is that states are playing an increasing role in many of these mapping efforts and are looking to be partners. We bring state, regional, local and even private dollars to the table and have direct
experience in the application of this mapping data data.  

As the panel report found in recommendation number two, one of the issues that can stand for some attention and action is the coordination of similar or related mapping efforts. It is understandable that different federal agencies and programs have different mission goals, use different mapping equipment and generate different data streams. That said, it is not unreasonable for coastal and ocean managers, like me, to ask that concerted efforts be made to reduce duplication and maximize efficiencies.  

To illustrate, in Massachusetts, we had two situations over the past year and a half coordination efforts, both between federal agencies and with the states that could have been improved. In one case, in our ongoing USGS seafloor mapping project, there were areas that we had mapped in 2006 and had planned for in 2007. And if you flip over, you can see this, where NOAA mapped over a portion of this in 2007. We were able to reconfigure and work with the USGS and NOAA to maximize the efforts in 2007. We are trying to reduce that type of duplication.  

On a related example, last year the CORE was flying the northeast to collect bathymetric and nearshore topographic data. When we heard about
this effort, we requested that the CORE consider expanding flight lines to cover a few small priority areas. Communication was not ideal, and at the 12th hour, we were informed that if we could come up with some dollars, they would fly to these priority areas. Unfortunately, our fiscal operations do not allow for such short notice expenditures. If we had been able to coordinate this sooner in the process, we could have built this into our budget and gotten this done.

One of the difficult parts of this issue is that all three federal agencies do a great job. So it's not a question of one versus the other. It's a question of making sure that federal and state hydrographic resources are used to the maximum advantage.

Touching now on the fifth recommendation in the HSRP report, there's so much data that can be and should be collected, and while it's imperative that NOAA address navigation issues, hydrographic data would be increasingly important as we look toward the ocean for energy, for food, for agricultural and other needs.

Could there be efficiencies in the integration of different acoustic data streams. For example, could our seafloor bathymetry data be used for charting in the areas where there are not hazard or liability areas? The compatibility of methods and
From Meeting 7 data, for example, interferometric versus 
multi-beam is something worthy of additional 
discussion.

Clearly, the Panel's aware of the issues among 
federal agencies in terms of coordination and the 
compatibility of data, although these may not be 
examples that you're aware of.

Fortunately, and maybe through your report, 
federal agencies are taking steps to minimize this 
type of problem and have created the Interagency 
Work Group on Ocean and Coastal Mapping with NOAA, 
the Army Corps, MMS, and USGS as agency co-chairs.

Our project manager for the seafloor mapping 
initiative attended this group's meeting last week 
here in Florida, and I was very pleased to hear him 
report back that discussions on the challenges of 
coordinated and effective mapping have led to 
specific next steps, including the development of a 
national strategic plan, promoting a one-stop shop 

for viewing and distributing the data, identifying 
who the mapping community is, organizing ideas to 
better coordinate the mapping and communicating the 
value of coastal and ocean mapping in context with 
other national initiatives, IOOS.

We commend the agencies in their leadership 
and the steps in this effort and we are very eager 
to see the results of this coordination and 
collaboration. We hope that as part of this
effort, partnerships with the states are enhanced, and that the states are invited to be involved early in the planning processes for mapping missions so that we can increase the utility and the use of the data collected. Thank you very much.

CHAIRMAN SKINNER: Thanks, Bruce. Any questions or comments? Bruce, if you take a couple of minutes and maybe explain what some of the seafloor mapping is used for from the state perspective?

BRUCE CARLISLE: In Massachusetts, we're about to embark, either through legislation or through some other authorizing vehicle, a comprehensive ocean management planning effort.

And this has largely been a response to projects in increasingly competing demands for marine and ocean resources and space. So the application of this information is going to be multi-purpose. For start, it's going to provide the base map for our marine spatial planning efforts. So similar to the land side where you must have a USGS topographic map, it shows your elevations, it shows your developed areas, it shows your roads, that's going to be a similar base map, for our marine spatial planning efforts.

It's also going to be able to really push our habitat classification areas, so we're going to be
able to start filing to show areas on the map in
terms of both the geology, as well as some of the
surficial biology. It's going to help us in the
siting and review of major projects and minor
projects, but major products.

For example, two deep water port L & G
facilities both are proposed in Massachusetts Bay,
were actually permitted. Both of those have to do
underground laterals to tie into the pipeline
infrastructure, so obviously finding out where the
siting of those pipelines is most appropriate is
driven by the information that we would be able to
get from something like this.

And then, finally, for example, I think it was
mentioned earlier on the CORE'S effort, the
regional sediment management is a really big issue;
so dredging, beneficial reuse, beach nourishment
and shoreline protection for, you know, sea level
rise and storm protection is another major thing.

CHAIRMAN SKINNER: All right. Thank you very
much. Other questions? Chantal?

CHANTAL COLLIER: Good morning. Almost
afternoon, I guess. Thank you very much for this
opportunity to address you, Chairs of the
Hydrographic Services Review Panel, as well as
Panel Members, my fellow guest panel members and
members of our local community who are able to join
us here today.
I'm pleased to be here representing the State of Florida and the Department of Environmental Protection and the coral reef Conservation Program. I will be speaking specifically about resource management and vessel safety applications of hydrographic services here in Southeast Florida.

NOAA has been a wonderful partner in the conservation of Florida's coral reefs. Our collaboration in the Florida Keys National Sanctuary goes back several decades. And more recently, here in Southeast Florida, through the Southeast Florida coral reef Initiative and South Florida's participation in the U.S. coral reef Task Force, members of the community and federal and local and state partners have been working together to address our resources here.

One of the earliest commitments through the United States coral reef Task Force was to map all shallow water reefs by 2009. And these habitats are very critical to our ability to address pressing resource management needs and to evaluate the effectiveness of our management actions.

Unfortunately, we've been told that, due to the current budget constraints, it may be another decade before Florida's maps are completed. While this is disappointing generally, it also prolongs the potential for serious damage to coral reefs and vessels navigating the waters of Florida.
I would like to bring your attention to two handouts that I passed out during the break that should be on all the panel members' tables, and there are additional copies on the back table for anybody from the audience who would like to see one.

The first is actually a poster that speaks to a wonderful action that just took place yesterday, which was a redesignation of the anchorage areas off of Port Everglades. Going back into 1993, two large ship anchorages were designated by the U.S. Coast Guard on the State of Florida's submerged lands offshore of Port Everglades in Fort Lauderdale, Florida. The purpose of these anchorages was to eliminate random anchoring on nearly coral reefs by ships that were in transit or awaiting shipment orders. However, because of their proximity to the shore and to the coral reef resources in the area, the location of these anchorages led to the unintended consequence of significant coral reef injuries from ship groundings and anchors drags, as well as the attendant ship damages that come with those incidents.

Since 1994, the location of these anchorages offshore of Port Everglades has contributed to over 44,000 square meters -- nearly 11 acres -- of injury to Southeast Florida's coral reefs.
ecosystems, from at least 10 separate ship
grounding incidents, and there are additional
anchorage drag damages that have contributed to
them as well. The estimated value or cost,

depending on how you look at it, of these reef
resources and the injuries that they've incurred is
nearly half a billion dollars.

Yesterday, on March 6th, a reconfigured
anchorage area was enacted by the United States
Coast Guard. The changes to the existing Port
Everglades commercial vessel anchorages include:
Elimination of the section of the anchorage closest
to sensitive living coral reefs, expanding the
anchorage in deeper waters further away from the
reef, and the elimination of the time that a vessel
can stay in the anchorage to 72 hours.

This action was a direct result of
recommendations by the Port Everglades Harbor
Safety Committee's Anchorage Working Group
following a review of commercial vessel groundings
off the Fort Lauderdale coast. And the
consultation, very importantly, was with local
stakeholders, including again, local, state and
federal agencies, anchorage users, pilots and a
research institution in the area. This was done as
a management solution to attempt to prevent further
damages to ships and injuries to the reef.

Notably, the publication of the proposed and
final anchorage rules could not have proceeded without the full-bottom coverages hydrographic services provided by NOAA in 2007. These surveys identified potential anchorage obstructions on the seafloor within the footprint of the new anchorage area, and enabled the delineation of the final anchorage footprint that was proposed in the final rule. Subsequent charting of the anchorage area, that will come now that it has been enacted.

I would like to next bring your attention to the second handout that I brought, and that is of the Port of Miami current anchorage area. Currently, the State of Florida and its partners are working to develop alternatives to the anchorage off the Port of Miami which presently sits directly over a large portion of coral reef habitat. This coral reef, which is an extension of the Florida Keys' coral reefs further to the south, is a valuable part of the marine ecosystem in Southeast Florida and must be protected.

I would like to point out that the value of resources in Florida's extremely important. We heard a little bit about the economic importance of surety, and absolutely, we need to look at the balances of the needs of the state in terms of its tourism dollars and in terms of the industry that
it generates through maritime shipping.

But I'd like to point out that for the resources in Southeast Florida, we had a socioeconomic study done in 2001, and then again in 2004; and cumulatively at that time, so the value is certainly much greater now, we know that the reefs in Southeast Florida, from the Dry Tortugas to the Florida Keys and Southeast Florida, generated 6.4 billion dollars annually in sales and income and supported over 71,000 jobs in the region.

Currently, ships in Miami are directed to anchor on the reef off of Miami, causing extensive damage from anchors and anchor chain. In order to make an emergency rule change, the federal registry -- it would be necessary for NOAA to hydrographic survey the area so we can examine potential alternatives to the current anchorage configuration.

The anchorage area off the Port of Miami is approximately four square miles and contains about one square mile of coral reef habitat. To facilitate moving the Port of Miami anchorage off of this coral habitat, and to prevent further destruction, on behalf of the citizens and
stakeholders of the State of Florida, I urge the Hydrographic Services Review Panel to strongly consider elevating the Port of Miami area on its list of priority survey areas to be completed before fiscal year 2008 -- or 2009.

I understand that there has been a decommissioning of the Rude in this region, and so I hope that this panel can look to this issue and see if there are some creative ways we might be able to address that. Thank you.

CHAIRMAN SKINNER: Thank you very much. Questions? Comments?

CAPTAIN HICKMAN: Sherri Hickman. For Port Everglades, the 72-hour limitation at the anchorage, is that to keep congestion down? Is that what the hope is for that?

CHANTAL COLLIER: In part, yeah, but also to, I think, try to discourage vessels staying in that area unnecessarily. One of the things that we learned through the process of the working group and the intended study that was done, to evaluate alternatives to the existing anchorage configuration. And currently, until yesterday, was to look at the use of those anchorages by vessels. And not all of them are actually vessels that are coming into the port. Many of them are awaiting shipment areas and they're just stopping there.
CAPTAIN HICKMAN: Who's going to enforce that, do you know?

CHANTAL COLLIERS: Coast Guard designation.

But we are looking now, that's obviously a very important next step, to make sure that that anchorage area is enforced. So we will be working closely with our fellow officers, with the Florida Fish & Wildlife Commission and NOAA, as well as the Coast Guard, too, making sure that it's enforced, and information about the new designation in addition is well advertised to mariners.

CAPTAIN HICKMAN: Thanks.

MR. WELCH: Ed Welch. I know that some of the vessel groundings in the Florida area over the last few years have been either negligent navigation by the mariners or some mechanical problems that calls the vessels to drift; but have you been able to quantify or could you quantify what proportion of the damages and costs that you described might be indirect or directly attributable to lack of proper charting or mapping?

CHANTAL COLLIERS: Well, that is actually a challenge. We don't actually have that information directly, but one of the big difficulties that we do have is that the location of the reefs is not actually currently on charts. There are notes in the charts that indicate the presence of the reefs,
but they're not actually delineated on the charts relevant to the position of the anchoraged areas.

And so that's something that we've actually spoken about with our regional coordinator, Todd Hobbs, who was the individual who assisted us in getting these areas surveyed for Port Everglades, so that we could move this -- create the new anchorage area. But that is something of concern and one of the things, as he was leaving his post, and Mike Henderson has joined us as the new local representative. We have been working with through NOAA's charts office to see if there aren't better ways that we can indicate on the next publication of charts the presence of the reefs in that area.

We do have that area now for Broward County and for Palm Beach County through work that NOAA and the State of Florida and the National Institute, Nova Southeastern Institute have done to create, which you're actually seeing part of that framework for Miami. We're in process of developing the habitat maps for Miami that we currently have in Broward and Palm Beach County counties.

MR. WELCH: So is your sense that first with regarding to the anchorage area in Miami there just needs to be additional work to see what possibilities there could be as far as adjustment to the anchorage, but second, in the later thing,
there's a desire to have the actual reefs shown on
the map as opposed to some type of footnote or a
reference?

CHANTAL COLLIER: Well, yes, both of these
things. But if you look at the map that I
presented to you, you can see that we don't
actually have any information on the area of the
seafloor to the east of the red reefs that are
highlighted in that handout. A large part of that
area may be suitable for anchoring, but we don't
have that mapping information at all.

We also need to better understand the area to
the inside of the reefs because a lot of the
vessels that call on the Port of Miami are those
that are going up river and are smaller vessels
that have need for shallow water anchorage, so we
need to be able to look at all the area around the
reefs, to the north, south, east and west, if at
all possible, to be able to examine the best
alternative to the current configuration of the
anchorage, to move it off of the reef is the most
important thing.

CHAIRMAN SKINNER:

DR. JEFFRESS: Does Florida have any
legislation to protect the reefs, the coral reefs,
from intentional damage or even negligence if a
boat comes up on a reef and destroys a section of
it? Is there any sort of compensation system or
CHANTAL COLLIER: Yes. Florida Statutes do hold permissions for that, for the development of a penalty schedule. We're actually currently in the process of working on that. In Southeast Florida, the reefs are managed a little bit different than they were in the Florida Keys National Sanctuary. The Sanctuary is comanaged by NOAA and the State of Florida, and through the National Sanctuaries Act there are strong regulations in place for that.

Currently, you may also be aware that the CORE of Conservation Act has passed the House and is now sitting with the Senate committee on oceans, and there are strong liability provisions with that as well, for instance, to all the state and territories within U.S. waters to pursue damages to reef resources.

In Southeast Florida, because there hasn't been a more coordinated and formal management plan in place for the reefs in this region, north of Biscayne National Park, it extends all the way up to the Florida Keys, through Miami, Fort Lauderdale, Palm Beach, and all the way up to St. Lucie and Martin County. And there hasn't been a strong coordinated effort to do public education and to develop a management plan for this region, and that's why the Southeast Florida coral reef Initiative was created through the United States
coral reef Task Force, to develop local action strategies that largely address the threat to the reefs in this area and work towards developing a management plan for them.

So that type of action is the thing that we're working on. The initiative has only been in place now for a little over three and a half years. And we have many projects. And we're working on right now more on key threats and local projects that we can address on a shorter term basis, while at the same time striving to develop stronger management action while protecting the resources north of the Keys.

CHAIRMAN SKINNER: Question here.

CAPTAIN JACOBSEN: Does vessel traffic service direct the ships to anchor or can they do that?

CHANTAL COLLIER: I'm sorry. Could you repeat the question?

CAPTAIN JACOBSEN: Does the vessel traffic direct the ships to anchorage or can they do that?

CHANTAL COLLIER: The vessel traffic service at the port?

CAPTAIN JACOBSEN: Yes.

CHANTAL COLLIER: My understanding is that the harbor safety's manager office is contacted and vessels are directed to anchor within the designated Coast Guard anchorages. And so because the anchorage is currently sitting on top of the
CAPTAIN JACOBSEN: Okay. I think they're answering my question. I guess you don't have -- the vessel traffic service doesn't have oversight over that area? The Coast Guard, or ETS. Okay.

CHANTAL COLLIER: And the Coast Guard works very closely with us to try to make sure the vessels are anchored in the appropriate area. But again, being that that's not their priority mandate, it's a little bit difficult to enforce that without additional assistance. And when we have an anchorage like this that's sitting on top of the reef in the first place, we have a real quandary that we need to address on that.

MR. ZILKOSKI: I want to just make a comment. This is something that -- I'm the director of the national geodetic survey. And so our positioning activities that we're doing is basically for making maps and so forth. But we have tried to take our knowledge and do that to a position under the water. We have something called a Shallow Water Positioning System. And I noticed on your diagram, you got diagrams in there taken after the damage to do the assessment.

I think this is an example of what NOAA is trying to do in taking some of their NAV site and
creating a usable non-navigation project. We
didn't develop it originally for that. We
developed it positioning capability. But, once
again, I'm not sure we're really capitalizing on
that and getting that out and showing people how to

use it -- and actually, our partner is right here
at the University of Miami. He's demonstrating it
and doing it, so we should probably talk with him,
but maybe you can help me get this out for using.

CHAIRMAN SKINNER: Any other questions or
comments? Thanks very much.

The next presentation is from Becky Hope, the
Operations Director of the Port of Miami. Becky,
we heard from Bill Johnson earlier, so...

BECKY HOPE: Hi. I'm Becky Hope from the
Port of Miami. I understand my director, Bill
Johnson, was here earlier.

MS. DENTLER: Would you speak up or speak
louder?

BECKY HOPE: Do you mind if I stand up? That
might be a little better.

MS. DENTLER: I'm having trouble hearing you.

BECKY HOPE: Yeah, I know. I think I will do
better if I can stand up. I'm sorry. I do have a
soft voice, unless I'm yelling at my kids. And I
don't have a presentation. I do apologize. I've
been out with the flu all week.

You're hearing from the different group of
panelists. I'm going to speak more as a port owner. Again, at the Port of Miami we're the second largest economic engine in Miami-Dade county. We employ over 110,000 people directly, indirectly. And our entrance channel -- and actually, I'm going to use Chantal's diagram, since you guys have it.

CHANTAL COLLIER: There's also one up on the wall there.

BECKY HOPE: Oh, okay, perfect. I'm going to wander around. Our entrance channel is outlined in this diagram, and it's approximately two miles, maybe four nautical miles going into the Port of Miami. This is South Beach. This is Fisher Island. And the port actually is out over here.

We completed to minus 42 feet of dredging back in the mid-'90s and January of '07, along my south shipping channel, which is where my cargo vessels go in, we completed to minus 42 feet and the charts that we utilize here at the port are done by the Army Corps. For my 32 foot channel, the Army Corps came and did the survey and this all became -- it has not been on NOAA, you know, chart.

Our island, we have about 19,000 linear feet of berthing, 9,000 linear feet is dedicated to cruise, the other ten is dedicated to cargo.
I'm sorry. I was asked to come and speak to you about our charts or NAVS and the services that you guys provide, but I wanted to kind of give you a snapshot of where we are and what we're looking at. In the future of the port is we're going to do dredging probably five years down the line, depending on, you know, the appropriation -- we just got authorized to dredge 52/50 feet. 52 feet will be out over there in the outer channel, 50 within our inner channel.

With the Panama Canal deepening and opening and doing the new locks, we are the closest U.S. deep water port to the Panama Canal. So we're trying to come on line with our 50-foot project, too, in line with the new Panama Canal. And again, you know, we got to go through PED and permitting and all the mitigation work associated with that. Again, our charts will be revised after that dredging occurs.

Because there are -- our channel is short relative to the deep water river ports, usually our charts are typically only updated with dredging activities, unless, you know, you have an incident and so forth.

So what we'll be looking for -- and again, I
will touch on Chantal's speech because that was on my list -- is our updated shoreline features, our berthing areas. If you look at the current charts at the Port of Miami, you're looking at charts probably based on our land in the early '90s. We've extended water, we've put in -- Jon, correct me if I am wrong -- we probably put in about another 1500 linear feet of berthing area that's not outlined in the charts at all.

MR. DASLER: 1495, yeah.

BECKY HOPE: Yeah, I was close, yeah, 1495.

Thank you. And with the ships that are coming in that are larger, let me go back to Chantal's diagram. You'll see our entrance channel right coming over here right smack in the middle of the reef. My 52 foot project is going to widen this entry channel. We are going to impact some reefs. But with the deep water draft vessels that are coming in, on my charts, you have your sea buoy out here, so the ships are coming in thinking they need to align with this particular sea buoy.

Because my channel is not getting wider, it's staying the same width throughout the channel, my ships with the deeper draft need to line up with that sea buoy; not where the sea buoy is, but approximately a mile out. And when these pilots
come from -- you know, not our local pilots, but from the vessels that come from all around the world, you know, they're trained traditionally to line up with the outer sea buoy.

These revised charts that will be done after this dredging project, we need to make sure that a sea buoy is marked on the charts further out so the ships are given a chance to navigate and align with the channel to avoid any potential reef impacts or any other kind of groundings that may happen. And that is something that, you know, we will look to utilize and to the Corp and, hopefully, by then NOAA and the Army Corps will coordinate these surveys, 'cause that is something that, you know, we are looking to the future to make sure will help eliminate any potential things.

And again, Chantal already commented on the updated anchorage. And the last thing I wanted to discuss is earlier as part of this presentation you guys discussed a lot of the ports programs, the current monitoring. We just wanted to touch base on that. Although that program sounds like a great program, as far as the Port of Miami is concerned, it's got a lot of bells and whistles on it that isn't so useful that we wouldn't use -- I'm just speaking at the Port of Miami, not at all the seaports. You know, the port would like something like that here, but just for the realtime current

182
monitoring. That is probably the most practical aspect of that entire program that we would utilize. Do you have any questions? Thank you.

CHAIRMAN SKINNER: Thank you. That was very interesting to have two presentations together.

BECKY HOPE: Actually, that wasn't planned.

CHAIRMAN SKINNER: I think there was. There may have been some planning on that.

BECKY HOPE: I kind of skimmed down on part of mine. Thank you.

CHAIRMAN SKINNER: Any questions or comments? Mike?

DIRECTOR SZABADOS: Just one comment regarding the port system and the different capabilities. Each of the ports are designed based on the use requirements. So based on Miami's requirements, we're -- the scenario, we would sit down with the port authority, the shipping companies, the pilots and any other appropriate individual, we would design that port around that system, of the requirement.

Another thing I want to add is regarding the importance of currents. We do provide also tidal current predictions. And actually, a crew is arriving this month to update the current tidal predictions for Miami, and they will be done this season and will show up in 2009 predictions. So you will get the update of that.
BECKY HOPE: Yes, please do, and I have something from the Biscayne Bay Pilots back here, too, who I'm sure would love to hear more about that, too.

DIRECTOR SZABADOS: I will be happy to meet with them.

BECKY HOPE: Thank you.

MR. WELCH: I'm sorry. Ed Welch. Is the Port of Miami on board with the concept of moving the anchorage if surveys show inadequate as elsewhere?

BECKY HOPE: Yes, yes, definitely. I'm actually part of the team that's working on coordinating it.

ADMIRAL WEST: Becky, I probably should have asked your boss this morning, but I'm sure he passes the hard questions on to you, but he said he spent 20 million dollars for security concerns. I think he made the point he was kind of bankrupt because of it.

Do you have any idea, just roughly percentage-wise, how much of that is what you feel you have to do and how much is mandated by the federal government? Do you have any -- I mean, are you spending all 20 million because that's what you want to do or you're being told to do or -- is that that --

BECKY HOPE: That is actually a question for
Bill.

ADMIRAL WEST: I should have asked him, right?

BECKY HOPE: Ports are required to put together a security plan and you had a certain amount of time to put together a security plan.

ADMIRAL WEST: And this is the Feds telling you to do this?

BECKY HOPE: Yes. Correct? State? Feds?

JOSEPH SCOLARI: We largely respond to FDLE, the Florida Document of Law Enforcement.

BECKY HOPE: Those are the folks that come down and do their annual inspections.

ADMIRAL WEST: So the bulk of your 20 million was to meet the requirements of the state?

JOSEPH SCOLARI: Trying to make the state happy.

ADMIRAL WEST: Okay. Do you have any requirements from the Feds from Homeland Security that adds to that or is that --

JOSEPH SCOLARI: I'm not privy to that.

BECKY HOPE: I am sorry. I can give you my --

CAPTAIN MYRTIDIS: It's on the way down from the federal government to --

ADMIRAL WEST: They pass it to the state and then --

CAPTAIN MYRTIDIS: All the port security goes
all the way from the top down.

MR. WELCH: Admiral, there's a very comprehensive Federal Maritime Security Law that was passed in 2002. It has tremendous mandates on all sections of the maritime industry, just about all of the security mandates are dictated by the Feds. And they're very voluminous in nature. Individual mariners are subject to some costly requirements and ports and vessel operators and it's -- the Feds have a few million dollars in port security grants that cover just a fraction of what people have to spend.

ADmiral West: I don't want to add anything more to our plate, but I think there's something here for us. Because if you're going bankrupt doing something from a -- I'm sure the federal government knows how to do that very well -- and not doing some things that for safe navigation and efficiency and stuff like that, then maybe we ought to take a look at it. Maybe we as a federal advisory committee need to go back and say, look it, you bankrupt them on your security requirements and meanwhile people are running around and bumping into things. But I don't have a feel for that, but I think that may be happening, but I don't know.

becky hope: One thing I do want you to understand, on top of the federal regulations. We do have Florida -- FDLE does have an extra layer
because I know there's a lot of discussion between
the TWIP (ph) card and the ports that are familiar
with. I haven't gotten my TWIP card, but I will.
And then we also have the Florida FLIPAP (ph),
which is an additional ID for Florida ports that we
are trying to get coordinated for the FLIPAP port,
so we don't have to allow every port to have three
different IDs, which is where we're doing right
now. But that is something that you might see at

the Florida ports, i.e., Port Everglades, Port of
Miami and certainly every other of the U.S. ports.

CAPTAIN BARNUM: First I want to thank you
Becky for coming today. Just a couple of comments.
NOAA's, of course, is the one that produces the
charts and takes a bunch of data from the Corps of
Engineers and the Coast Guard and everybody and
compiles it onto the nautical chart so they can be
published. So you're talking about the buoy, that
would be certainly something that the Coast Guard,
they're the folks that maintain the buoys. And so
working with the Harbor Safety Committee, and I'm
sure those groups have decided where that's placed.
And that information will then come to NOAA.

BECKY HOPE: We just started the Harbor Safety
Committee last month from the first meeting, so
that's just beginning.

CAPTAIN BARNUM: Excellent. Excellent. Well,
and I also wanted to talk about the port
facilities. You know, certainly there are things springing up all the time around the country for new facilities. And part of the process is that when the permit -- when facilities are built, they get a permit to build and part of that is they're supposed to send the as-builts to NOAA to be incorporated in the chart. But there's no teeth in that for somebody that doesn't do it and things fall through the crack. But through the Harbor Safety Committee, if you've got punch, which I'm really glad to hear.

Certainly Mike Henderson is our contact, and if you see things that are wrong with the nautical chart, let him know and that let's us know to be able to address that.

BECKY HOPE: Thank you.

CAPTAIN HICKMAN: I've got one more question. This 20 million dollars that -- did you guys -- not good for homeland security, getting refunded?

BECKY HOPE: Okay. Again, I am definitely speaking outside my area. Yes, we have applied for grants. But when you apply for grants, you're competing with all the other U.S. ports and the grants are specific projects. And as the years have gone by, since 9-11, some of the projects that you go and you apply for grants, you know, back in '02 and then your regulations change and so forth, the projects goes to change and you need to get
And now the way the federal government has revised the way they give out security grants where you’re on a tier-based. Each port is placed on a different tier, you got tier one, tier two and tier three, and those were organized not by the port themselves but by another entity. And forgive me because I don’t know enough about it. But we have to apply for grant within our given tier at this juncture. And the grants do not cover O & M. They don’t cover my police officers, my security guards, the folks that have to go there day in and day out. They only cover capital improvement projects, and that’s to be in the approved list if we had those projects approved because of other ports.

CAPTAIN HICKMAN: Thank you.

CHAIRMAN SKINNER: Any other questions or comments?

MICHAEL HENDERSON: Mr. Chair, if I may from back here, the peanut gallery.

CHAIRMAN SKINNER: Do you want to come up?

BECKY HOPE: I can bring you the speaker.

MICHAEL HENDERSON: I just wanted to add a comment or two. As the NOAA ad manager for Florida and the U.S. Caribbean, as well as Savannah, I wanted to speak a minute on this security issue. I go to approximately 14 different Harbor Safety Committee Meetings. The security issue and the
funding that is being discussed is discussed at
every one of these.

For the last five years, I am hearing these
committees and the port authorities deal with the
issue that everything has been pushed on the back
burner and that their funding or what they can come
up with is going to mandate it security issues; as
you said, from the federal level to start with.
But to echo what Becky said and John added, the
State of Florida is unique in that Florida FDLE
requires and additional layer of security beyond
what the Department of Homeland Security requires.

For the ports in Florida, it's a major, major
issue. It's very expensive, it's very time
consuming, and I hear it from Jacksonville to Key
West, and it is -- so, just to give you another
perspective on this, they are all dealing with it.
From someone who flies a great deal and also visits
port facilities, maritime security is far greater
than anything you'll run into at the airport today.
It is just mindboggling, I think, what the ports
have to go to, so I just wanted to add that comment
to the bit, especially for the State of Florida.

CHAIRMAN SKINNER: Yes, Mike?

DIRECTOR SZABADOS: Yes. I just wanted to
reflect on some of the discussions of our partners and ports. And reflecting on the cost of security, when we talked about federal funding of ports or with the partnership ports, some of the challenges when we deal with our partners, they identified that they have such expenses like the security which impedes them for supporting or participating in the partnership concept of the ports funding.

That's all.

CAPTAIN HICKMAN: Which brings back to --

ADMIRAL WEST: Yeah.

CHAIRMAN SKINNER: -- right back to Admiral West's comment earlier. Thank you, Becky.

BECKY HOPE: Thank you.

CHAIRMAN SKINNER: During the last presentation, I mentioned earlier that two of our board members, panel members had been delayed getting here. We're pleased to have Adam McBride joining us here, for making it, glad to see you here.

MR. McBRIDE: Tom.

CHAIRMAN SKINNER: Next, Chuck Husick.

CHUCK HUSICK: Good afternoon. I want to thank Barbara for inviting me to come here and try and give you a perspective from what is probably
your largest customer, the recreational boating community.

Recreational boating goes all the way from people in kayaks and canoes to, for example, the 2 to 300 foot-plus yachts that are currently tied up at the port of St. Petersburg. One of them carries a 42-foot sailboat and a 46-foot power boat, as well as two helicopters; so some recreational boats are noteworthy, if nothing else, for their size, opulence and maybe their aggressive expense. One of them was purchased by a Russian now living in England who owns a football club, and I think he paid 100 million for the boat. It was a used boat.

Recreational boating uses charts. They don't always use them well, but they use charts. They use paper charts. They use paper charts reproduced on plastic primarily because the quality of the paper NOAA prints on has deteriorated over the years and boats get wet, especially small boats, and the printing on plastic is now very practical. So we do have good charts in terms of their physical appearance and usability.

But, increasingly, we're using electronic charts. Out of the roughly 600,000 members of the Boat U.S. Organization, and I think that represents about one-third or less than one-third of the total number of boaters in the U.S., out of that, about a third of their boats, about a third of the 600,000,
are large enough to carry full-size electronic boat
ccharts. I say full-size, something from five
6
inches up to 24 inches diagonal. The charts we're
7
using -- thanks to you -- are first-year RNCs. We
can then, as you know, download RNCs from the web
8
and put it in the computer and access it.
9
We can also download the ENCs and do the same
10
thing. And if anybody's interested, during the
11
lunch break, I will set up a laptop computer and
12
show you a chart program that I use that sells on
13
line for 145 bucks -- the charts are free -- and on
14
which you can overlay an RNC on an ENC, but
15
puncture the RNC by moving the mouse and pick up
16
the entire database that's recorded in the ENC
17
trunk; the best of both worlds, it's a remarkable
18
system.
19
The average mariner today also uses a lot of
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weather information; and, in that regard, I just
21
want to make a comment about the great success that
22
NOAA achieved with a lot of help from the world in
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defeating Senator Santori's effort to restrict the
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distribution of weather information a few years
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ago. We were as a community years ago delighted
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when that went away.
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We were also downloading weather from
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satellites. We're taking weather from the NOAA VHF
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weather radio system. We get weather information
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from the NAVTECH system. The port's information is
available to us on line. A lot of boats now have
capability to pick that up when they're on shore
and offshore using high speed data cards and cell
phone link. We like to see ports available on our
chart plotter screens.

We also integrate radar information and AIS
information on those screens. If any of you got on
a reasonably well-equipped recreational boat today,
I think that you would be rather amazed at what's
available to the mariner. The question is whether
he knows how to use it, and that's a continuing
education problem.

We know almost precisely where we are. We've
got GNS information, differential GPS, we still got
Loran-C. I'm delighted to report, if you don't
know it already, that Loran will continue, it will
be developed into E-Loran. It will form a part of
E-navigation. I'm a member of the board of the
RTCM, and we're working hard in that direction with

our foreign partners. It's going to be a
world-wide system.

Our problem is although we know exactly where
we are with regard to the theoretical earth, in
most cases in areas outside the major commercial
ports we really don't know where the land is
because you haven't surveyed it. You haven't
surveyed it in some cases for 100 years. I don't
blame you for that. There are lots of places where
very few vessels go, only small craft go there. However, technology is coming to our rescue to a degree.

If you look at some of the new commercial products, for example, for Reno's new NAV Net 3-D system -- and I have a DVD of that if anybody's interested in seeing it -- that system will bring up on your chart plotter the official NOAA chart, either raster or vector. It will then proceed to overlay the bathymetric data that's available. And then, on top of that, it will put the very latest satellite information. And the resolution on that satellite information right now, I believe, is down to half a meter for pixel. All of that is precisely geographies.

So if I come into the Port of Miami where

they've added hundreds of different facilities on shore that are not on the charts, I'm not concerned, I can see them all, they're right there in front of me. Not only that, I can manipulate the image in 3-D. I can literally fly over the area I'm entering.

Now, that's of interest to recreational boating because recreational boating is like general aviation in the sense that we don't always go to the same place. Commercial vessels, commercial airliners are always flying back and forth on the same routes to the same places, unless
they're on a charter, a special charter, for the
aircraft.

A recreational boater has the freedom and the
ability if he wants to to poke his nose in where
nobody's gone for 20 years. He now has the
advantage of being able to see what's there in
front of him with reasonable assurance that it's
accurate based upon the date of that last satellite
image. So there really is some progress being
made.

We will shortly be seeing equipment on the
field that combines Loran with GPS. Those
receivers will give us even more accuracy and,

interestingly, they'll give us the ability to see
magnet heading and true heading even when we're
standing still. That will also improve the
performance of auto pilots. So we're doing pretty
well and we deeply appreciate everything that NOAA
does, especially when we compare our state of
affairs with that of our fellow mariners in foreign
countries, where the government agencies usually
copyright the charts and, therefore, charge for
them.

This is even true, by the way -- if you don't
know it -- for the Nautical Almanac which is done
in cooperation with the British. Because they
copyright that, I can't go on download an entire
year's nautical almanac. I'm limited to taking two
weeks out at a time. Since I don't rely on
celestial navigation everyday, that's not a real
problem, and anyway, I go out and spend 25 bucks a
year and I can buy an almanac. Why? Because I
have something that's wonderful and beautiful to
do; in addition to which, it works without
batteries.

The things that I would like to see occur with
NOAA, of course, is to continue producing more and
more ENCs, RNCs. I would like to see more survey
done of the bottom in areas outside the major
shipping changes and major ports. As example, in
Sarasota, Florida, they've constructed a new
bridge, high-rise bridge to replace a vascular
bridge. Everyone applauded grandly. Until boats
started running into something under the water and
tearing holes in their bottoms and bending their
propeller shafts. The thing that was under the
water was first denied, nobody thought it existed.
It almost reminded me of an anchor in the Delaware
River.

It turned out that this was debris from the
bridge that had been demolished back from 1950
before the previous bridge was built. Nobody ever
knew it was there because it happened at the time
when the new bridge was built to be in an area
where a vessel couldn't get through. When the new
bridge was built, that area became open for
navigation as part of the main channel. Right now, there's a marker buoy. We need to know where the bottom is, it would be very useful, I think, and especially since you can do that electronically now.

Lastly, there's an opportunity that lurks out there, it's been there a long time, it gets better all the time, but it has huge impediment in front of it. The opportunity is to use the perambulations of recreational boaters and others to gather data in areas you'll never survey and integrate that information into useful chart information. If not necessarily an official NOAA chart, at least into something usable by the average boater.

The reason it's possible is we now have precision positioning information, GPS, we have precision time information, if you'll accept a 200 millisecond latency. We've got PEP sounders, including, for example, a device that's on the market from a company -- I'm trying to remember -- a couple named Hummingberg, a very strange name, they produce a high frequency sonar that provides video-like pictures of the bottom down to better than 100 feet. And this thing sells for less than thousand dollars. You can power it off a stack of flashlight batteries.

So the opportunity exists, the technology is
there to use these wandering boats to collect data, which, if stuffed into an appropriate database, could then be used, I think, to produce the usable bottom contour.

With that, we have one last problem that you can't help us with, but it sure needs work. All of the solace vessels are required to carry AIS, AISA, Automatic Information System. Small boats are not required to carry that. There is a diminutive of AISA called AISB, it's been designed, it works, it doesn't interfere with AISA. It provides very useful information. For example, some of you here in this room are pilots who routinely navigate large vessels in and out of crowded ports. I navigate the port of Tampa all the time, especially the entrance channel.

I see a large vessel or two or three coming in and going out, and I would like to be able to talk to them on 13, but I have no way of knowing how to call them on 13. Frequently, at the position I'm at, I can't see the name of the vessel and calling: Would the Blue Vessel with the rusty red stack please come back? -- doesn't work.

If I carry an AIS receiver or AISB, I will have his MMSI, I can punch that in the radio and he and I are talking instantly, usually talking to the pilot because frequently the other people in the wheelhouse don't necessarily speak English, they
speak what I call, IKO English. At any rate, AISB

is held up, the products are in the warehouse. And
it's held up because an agency, the Federal
government, is sitting on their butts; mainly, the
FCC.

I mention that at this meeting only for one
reason: The more attention we can draw to the
areas of our government that -- unlike NOAA -- are
bloody inefficient, the better off we're all going
to be. We need to build a fire under those people.
We need to do it before there's an accident and
somebody points the finger and says it's the
Federal government's fault. That's what happened
with the Morning Dew incident, it resulted in 19
billion dollars' worth of unnecessary expense.

I just can't tell you how much I admire NOAA
and I also trust you guys, because I not only sail
boats, but I also fly airplanes. Somehow I think
you have something to do with keeping my butt out
of trouble in both cases. Thank you.

CHAIRMAN SKINNER: Thank you, Chuck. Yet
another interesting and very different perspective
from the other panel members. Questions and
comments? Admiral?

ADMIRAL WEST: Why is the FCC holding it up?
Is it a frequency bandwidth issue?
CHUCK HUSICK: No, sir. The FCC is holding it up because first Maritel objected to use of the AIS frequencies. That is something they tried to do to prevent AISA from being used. That went away and now it's up to the commissioners of the FCC to sign a piece of paper. We've been asking them to do it. They have been promising to do it. They haven't done it. They didn't do it at their last meeting because they went off to talk about the dirty words you're not allowed to say on the radio instead. And we're hoping they're going to approve it this month, but nobody's holding their breath until it happens.

ADMIRAL WEST: Where did Helen go?

CAPTAIN BARNUM: I was thinking the same thing.

CAPTAIN HICKMAN: She'll be back.

ADMIRAL WEST: Where's Helen when we need her?

CHAIRMAN SKINNER: Other questions, comments?

MS. DICKINSON: Yes, Elaine Dickinson. I would just like to echo what Chuck has said about utilizing data from the recreational boating community, because I think the equipment has just improved, you know, in leaps and bounds. The electronics that are available on the market for
relatively low price are becoming almost astounding.

And I know in the past there have been some proposals from different groups to feed data to NOAA from recreational boats because they are going all over the place where -- I can tell you, you are never going to get to resurvey them because I've seen your priorities list, and it's just -- it's going to be so far down, it's never going to happen.

But in the past, these proposals have just kind of fallen by the wayside because what we've heard back is that -- I guess it's a quality control issue or people have said, well, we don't know what kind of equipment you boats are using and it's probably not going to be good enough. And I think that has changed, and I really think it's just a tremendous potential to augment all of your data.

CAPTAIN BARNUM: Steve Barnum. To add to that, NOAA does have and has had for many years cooperative programs with the U.S. Coast Guard auxiliary and also the Power Squadron for cooperative charting. And so those are active programs. In fact, the Power Squadron I believe just met, I believe it was last week, week before, at their annual convention and there was an award
From Meeting

given for contributions from recreational boaters for providing updates to the nautical chart. But it is vast and it’s a program that needs to be expanded, I agree. Some of the areas that these remote sections probably have not been surveyed in 100 years.

ADMIRAL WEST: Let me ask Sherri and Tom their thoughts about having all these small boats in the system.

CAPTAIN JACOBSEN: The AIS system? Well, as long as we can turn off AISB so it doesn’t get too cluttered on our screen. We’d like the option to turn it on to see it and then turn it off to not to see it, but we’re all for it, we think sailboats should have it.

CHUCK HUSICK: AISB doesn’t interfere. First of all, the system has the capacity of 2000 messages per minute. There’s not a port in the world that’s going to create that kind of density. That’s been proven by the Coast Guard in their tests.

Secondly, AISA transmits every two seconds for a vessel that’s moving. AISB transmits once every 

30 seconds for a vessel that’s moving. So that isn’t really a problem. And I think under the current design of the AISB units are now in existence, being sold worldwide, being manufactured in this country and being sold worldwide, there is
no input to it that turns it off, as far as I know.

CAPTAIN JACOBSEN: Yeah. What I was talking
about is the clutter on the screen, so as we're
piloting a commercial ship, I want to see all the
commercial ships and then flip over to B and see
all ships or both.

CHUCK HUSICK: Your filtering is primarily a
distance filtering, I think. I don't know of any
way you can filter out AISB signal because the AISB
signal, as I recall, looks identical to the AISA.

ADMIRAL WEST: Well, I think that's a problem,
the clutter is a problem, especially in some of the
areas where you cannot want that, so I don't know
if that's something we ought to look at or not.
You got the experts here.

CHAIRMAN SKINNER: Any other questions?
Chuck, will you be around today?

CHUCK HUSICK: Yes.

CHAIRMAN SKINNER: I overheard some
conversations between you and Jack Dunnigan last

night, and I think Jack has revamped his
maintenance program, so if you're willing, I think
we should encourage people to take advantage of
"Ask Chuck" here. Thank you. Next up?

CHAIRMAN SKINNER: Helen, you're on the hot
seat. We have a question for you.

MS. BROHL: Yes, sir. Yes, what would you
like me to -- Admiral?
ADMIRAL WEST: No, I think --

CAPTAIN HICKMAN: Maybe Chuck would like to?

CHAIRMAN SKINNER: Chuck. Okay?

CAPTAIN HICKMAN: With the FCC, right?

MR. ARMSTRONG: AISB?

CHAIRMAN SKINNER: The question was raised on the FCC holding up the --

CHUCK HUSICK: Yes, Federal Communications Commission is holding up approval of the sale of AISB equipment, which has been designed in accordance with the tech requirements, has been built, that's in the warehouse, has been demonstrated, has been sold for experimental use in a limited number of cases and is being exported from the United States. And the approval that's required is from the FCC commissioners, when they finish worrying about the seven words you can't say on the radio. We need help, so to speak.

MS. BROHL: What I will do is obviously, you know, the guys who handle AIS, you know, Brian Tetrolt and Jorge Auroreo of the Coast Guard are trying to settle this out and get it completed so they can fully implement the AIS as they need to, they are probably very cognizant of that. What they could do is I will talk to them about what you just said and certainly Admiral Watson, who is our day-to-day contact for the coordinating board, mentioned that it came up, and I will do that and
make sure that I copy Jack and anybody else from NOAA and inquire as to whether that's something they feel from the CMTS would put on the agenda for a future meeting. They would have to concur, of course, and feel comfortable with it; but if you're okay with it, Jack, I'll do that and make sure that you guys are aware of it.

CHUCK HUSICK: Thank you. And, as far as I know, everybody is happy with this system. It's just a procedural matter now at FCC. We have, by the way, as a community, contacted various congressmen and senators and tried to get them to push the commission. This is not a technical problem, it's an electronics problem.

MS. BROHL: I understand. And it may be that even, what I would think, an impressive delegation of politicauls and careers in the Federal government can't push them either. However, we can certainly make that effort to inquire as to whether the agencies that are impacted by this might bring it to the committee and perhaps the Chair would want to write a letter in support.

CHUCK HUSICK: Thank you. One last comment on AISB on filtering. AISB transmits, I believe, at two watts, so you're going to automatically loose them because of signal strength differentiation. You're not going to see a large clutter from them.

CAPTAIN JACOBSEN: I'm not sure about that. I
mean, it's -- we operate around hundreds of boats
in L.A. Long Beach and going down the channels,
they're attacking all around us and sometimes it
would be nice if you want to see commercial vessels
turn off, filter, the --

CHUCK HUSICK: Yeah. The boats that you're
seeing tacking around aren't going to be carrying
AISB equipment. That equipment costs over a
thousand dollars by the time you install it.
They're not going to put it on little boats.

MR. DUNNIGAN: We're talking away.

ADMIRAL WEST: It's just a Federal bureaucracy
problem, fine, let us know that. I have a gut
feeling it's not just all that. I think there's
some operational implications here and I think we
as a panel ought to hear about it somehow. I don't
know where to go to get it, maybe Tom can help us
out, but I have dealt with AIS and whether the Navy
should use it or not and that was a nightmare, but
so I got familiar with it. And then maybe
something along with what Tom's talking about is
how do we manage this immense amount of information
that we're pumping, especially in some high-clutter
areas. If it's just a procedure problem, fine, I
will let the Feds figure that out. If not, I think
the panel should know about it.

MR. WELCH: Ed Welch. Admiral, the problem
that Chuck is describing is sort of a technology
advancement Federal government approval problem.

There's another aspect of this, is to -- the Coast Guard's requirements are who has to carry AIS and where they have to carry it. And right now, the commercial vessels -- most commercial vessels that operate in those areas that have Coast Guard VTS systems have to carry it and use it, and so that's about 13 areas around the country where this is required.

Now, the second step of the Coast Guard's rule which has been repeatedly delayed has been to expand the mandatory carriage, basically nationwide and to expand it to even more commercial vessels than are currently carried. And that has been controversial for a number of reasons over time because of the smaller the commercial vessel, they say, wait a minute, this is a unfunded mandate on it. And at one point these units were costing 10 to $12,000. Now the price has dropped drastically.

And as the price drops, I think potential resistance to it from the commercial sector is going away, too. And now, these other units with the new technology are within the financial reach of a certain segments of the industry, too. So the commercial has not come out yet with their proposed phase two mandatory carriage requirements for AIS. That's -- that could come out in the next year or so.
ADMIRAL WEST: Well, the international standard is IMO. I mean, they set it up and that's what it is, and you live with it. And I think it's 1600 times, I forget what the heck it all is. So they set the standards and the Coast Guard presents the U.S. as the input to IMO, and there's been a whole initiative to move up the dates and years, and it was a gradually integrated thing. The problem with AIS is all of a sudden we went from, you know, calling on Channel 16 to who are you over there 'cause this is an enormous amount of data, and with all our digital capability to pull all this information. Now we got kind of overwhelmed, quite frankly, and we were trying to pin down what's transmitted.

So my guess is there may be some operational implications here. It may have been just a phone call from some operational institution to FCC saying, wait a minute, I got some concern with how we're going to handle this. I don't know. But if it deals with navigation and safety, we ought to know about it. That's my only request.

CHAIRMAN SKINNER: Helen, do you have one additional comment?

MS. BROHL: Yes, real quickly, because it relates directly to the left hand/right hand issue and Steve can relate to this. The Coast Guard's waiting to promulgate some regulations, but there's
a number of regulations that are actually in the
pipeline that relates to some of the charting and
manning requirements that are impacting NOAA and
their ability to go to IMO and advocate really
dramatically for certain standards and
requirements. And that's because they're sitting
in the Department of Homeland Security. And I can
say this comfortably because I was with Admiral
Allen the weekend before last where he was clearly
succinctly saying we have 90 regulations sitting at
DHS and can't them out of that black hole.

And a lot of things have to do with that
things that do impact NOAA and impact navigation
safety. So in terms of trying to have some impact,
I think this committee, if you need to know -- you
need to know, Admiral, you said, we should know
what's going on, and it may be that to the extent
Steve and company are comfortable, 'cause I know
they're -- I hear a sense of frustration for some
of the things that they're waiting on and feel that
they would have a better leg up if they go to IMO
and talk about it if the rules were actually
published. Obviously, not every one of them
impacts all of you here, but that's another one of
those issues of black hole and perhaps you need to
know.

CHAIRMAN SKINNER: Elaine?
MS. DICKINSON: On the issue of expanding an AIS requirement to all boats, it's actually been under discussion for sometime and the Coast Guard had launched sort of an initiative, I guess, they're calling it the small boat threat and Admiral Allen has had stakeholder meetings and all kinds of things. And one of things they were actually looking at and putting out on the table was requiring every single boat, no matter how small, to have a tracking device, such as AIS. And so we actually have used the exact same argument that you did, Admiral; that the massive amount of things popping up on a screen would just look like a swarm of gnats, that it would be very, very hard for the Coast Guard to process all of that information in it. Yeah, it's just way too much information, plus the fact that there are AIS class B units that were just published in all the boat equipment catalogs and they're still $900. They're actually advertising them even prior to FCC approval because the products are there, they're ready to go, they're ready to be sold.

I think that with the FCC it's just a matter of maritime not being a real high priority for them. We have run into this many times before, but
we definitely do -- no one wants in recreational boating an across-the-board requirement for AIS, it's just too expensive, and it's not going to really accomplish anything.

ADMIRAL WEST: For Homeland Security, you would like to have an AIS system, everything that's out there, everything. And if you manage that data on shore, you can handle it because you want to know security, who's there, what's moving and you for the all sorts of computers to crunch it all, you can flip them off and follow them and all that stuff.

But when you have that type of situation in a real world, close quarters, which-way-are-you-going-buddy type of thing, it's not really effective and I think there's going to be a little bit of problem between Homeland Security identifying everything that's afloat out there as opposed to safe passage to congested areas, for example, so...

CHAIRMAN SKINNER: Can we flag this issue for further discussion? I think --

ADMIRAL WEST: Does that mean shut up? Did you just tell me to shut up, Tom?

CHAIRMAN SKINNER: I would never do that, but

moving along...
Thanks, Chuck, once again. And thanks for everyone's contributions on kind of flushing this issue out.

Jeff Andrews is Vice President of Coastal Planning and Engineering. Thanks for your patience.

JEFFREY ANDREWS: All right. Thank you. I will try and make this short, in honor of time. I was suggested to come here by Tom Waters from DNR, and because of some of the efforts we do with sand search investigations using hydrographic data, and also with -- we do a lot of surveying for beach profile for erosion studies. And our company's done over 60 beach restoration projects which are related to sand searches from Texas all the way up to Massachusetts.

So the goal that we're looking for: Sand, is to find the best there is of sand resource and to protect a sense of resources. It's critical to have accurate and timely data. And the preliminary research involves locating past data sets, and that's -- typically, we start with NOAA data and we need to minimize the duplication of efforts. One of the first places we go is to the NOAA site.

There's a lot of bathymetric data out there, and it's a great resource.

There's also a resource that the Department of Florida Natural Resources has developed. It's
called the Ross database. And within that Ross
database we have bathymetric data. We also have,
by the way, cores and seismic data, and so forth.
This is an example of the bathymetric data that we
have taken it and contoured it and put it into pill
shade, and this is just an example of this.

And one of the things, like I say, the first
thing you do is find out where the sand resources
might be, and you can see the sand ridges on that
particular map there. Now, what we do, you have
the navigation chart, we got the data that was used
to produce that navigation chart and we contoured,
of course, that's kind of hard to use. We did the
bathymetry of pill shading and this is what's in
the Ross database.

But you can take it a step further and
actually color shade or leave it in and the things
start to pop out of that database, that's the NOAA
data from navigation chart that's been reprocessed.
And then we go through and we put on where the bar
codes and where the core are and seismic and we

identify sand resources again. We tried to find a
resource that's close enough and some cases whiter
sand is better than courser material, so there's a
lot of information in that material, in that.

This is a project we're now working on in Long
Boat and, you can see where the identified ridges
just by going to the NOAA data and putting all the
historical cores and sand sources. So we have the
target that we're going to look at for that
project.

Now what's also part of the Ross database, we
gone through and put again the bathymetric data
onto a chart and mapped it, and we identified all
the transverse ridges, the sand flats, the waves,
banks. And Dr. Fink from our office has gone
through and characterized each one of these and
he's put a volume on that material. So we're
trying -- the resources, sand is very limited in
Florida and many places also. So part of the Ross
database was trying to find out what volume of
material's out there. Again, the NOAA data was
very useful with that.

We also again take that data, and we have to
worry about where the resources are. And in this
particular case, this is a GIS that we did for

Broward County and the background there you can see
is actually airborne LIDAR data that's done by
Tenex Labs, and we've gone out and the biologists
have mapped where all the sea turtles are. I will
come back to that in a minute. This is the
bathymetric data and in that web site they've
actually taken that and you can drop it into
Google. This becomes very useful for resource
managers and ourselves to go find, you know, where
there's -- what's out there. Again, we're
interested in these areas away from the part.

This is that map from -- the flash map and you
14 can see the resources, the reefs have been mapped.
15 Nova University went out and actually did video of
16 the hard bottom areas, so there's videos in there.
17 This is on that USGS site.
18
19 This is an area off of Martin County, and I
20 kind of showed that because you're in Dade County.
21 Dade County is running out of sand. And these
22 ridges here were some of the ridges that
23 Dade County wanted to go up and get sand from, but
24 there was quite a battle of taking sand from Martin
25 County and bringing it down. Martin County did not
26 want them to take that. It was one of the most
27 contentious meetings I ever been to. There are
28
29
30 some nice sand sources, but it pops out of the
31 data, it's nice to see.
32
33 Tom also wanted me to talk about a project
34 that he's got a proposal for from Dr. Shrestha.
35 It's airborne gravity measurements, this is the lay
36 out that they want to do, it's every five miles
37 across, 20 miles up and down the state, but this
38 cost is 1.8 million dollars and Tom was interested
39 and getting funding any way he can, so he wanted to
40 throw it your way, so...
41
42 But to get that one centimeter of geoid is
43 critical. We do the studies on each island, the
44 erosion studies, and there's times when we cross
from an inlet, we will get on the other side and
the geoids is all matched because they were brought
into each island, but it's not really up and down
the coast.

One of the other things that Tom wanted to
mention, when we go out and elect to do our sand
search investigation, this is a magnetometer. It
collects up to 0.2 gram mass. And we use it to
find objects on the seafloor that are culture
resources. And the state requires that -- the
requirement of resources requires that we actually
take this and use it whenever we do a sand
investigation because they don't want us to take
any fiber cores anywhere near a culture resource.
And it's just one of the big pieces that we pull
behind the boats and we have seismic and seismic
scanometer.

But in the case of -- recently, in Florida, we
did a 600 miles of track line looking at those
ridges off the coast, out -- this is the three-mile
limit right here. You can see the lines that were
run and that data was collected and Tom's
interested in wondering if that's a set of data
that you might be interested in.

And the reason we need to take the geoid
offshore is that recently the state has gotten to
where they don't want us to dig to -- they wanted
to leave a buffer above the sediment that they
collect. So we go out and do a bar area, we'll take cores and do seismic. And the volumes that -- we used to go after 20 foot holes. They don't exist anymore. We're going after 10 foot ridges and we don't -- and they're limited by rock on the bottom basically, you're trying to do dredging at a level that's really not practical. But it's -- we have to map it so that they can try to do it as close as possible with the buffers.

And what we're doing is using RTK to do even the seismic, not only the cores, but the seismic. And when we design a bar area, if we cut too deep, we're going to put that material on the beach, be it rock or sediment. So the geoid needs to be pushed offshore because on the East Coast it's three miles offshore. On the Gulf, it's as much as nine miles offshore, so it kind of gets scary when you start getting that accurate and it's outside the limit of the geoid model. And that's it.

Thank you.

CHAIRMAN SKINNER: Thanks very much.

Questions and comments?

MR. ZILKOSKI: Yeah, I will make one comment. The one with Ramesh is done with Florida with the airborne group. It's the same kind of concept that we're trying to work with them and do it for the rest of the nation, what he's trying to do there. I don't know about his cost or anything, but it is
an expensive program.

But I am following up and, Jeff, we'll talk because part of why we're flying -- really the coast is our primary concern right now, because we have lack of information 50 miles from the shoreline inward and 50 miles from the shoreline outward of gravity information, and that's exactly what -- where you are in some of the places collecting other information, so that could be helpful to us in doing our national gravity program.

JEFFREY ANDREWS: Good. Thank you.

CHAIRMAN SKINNER: Any other questions? Thanks very much, Jeff. I just want to take a minute, I had a note here that Captain Andrew Melick from the Port Everglades Pilot Association's is here. Biscayne? Okay.

ANDREW MELICK: Biscayne.

CHAIRMAN SKINNER: Obviously, I need some updates to my charts... so, welcome. I didn't know if you want to make any comments or --

ANDREW MELICK: No. I was going to support what Becky said about the Port of Miami, you know, her comments about the large ships.

MS. DENTLER: If you need to speak, you need to come up here.

ANDREW MELICK: I'm Andrew Melick. I'm a harbor pilot at the Port of Miami, and I would just
follow-up on what Becky talked about. The approach
to the port -- and I'm sure this is a situation in
many other ports as ships are getting bigger,
especially from commercial ships -- the ships, you
know, they need to have a longer approach to a
port. This is a -- it's a problem in Miami and
Port Everglades and other ports that are relatively
close to deep water.

These large ships need maneuvering space and a
lot of the -- currently the harbor chart at Miami
does not specifically make a recommendation to
mariners of deep transport vessels to stay a
greater distance away from the sea buoy and the sea
buoy, it's designated and it is a fair-water buoy,
implying that a ship can approach from any
direction and be safe at that buoy.

But that's really not the case. A large ship
has to approach the Miami sea buoy anyway from a
certain direction and from a certain side and
that's not always indicated on the charts. Now,
that kind of information is passed on to the
mariners by the pilots or whatever, harbor master
facility is working at a port. In Miami, there is
no designated harbor master. The pilots serve that
role. But when we communicate with ships before
they arrive, we tell them, you know, stay away,
don't approach more than one or two miles to the
sea buoy. We'll board you out there.
But sometimes that communication doesn't always happen and there have been plenty of incidents where, you know, there have been risky situations where ships have gotten too close and the pilot gets to the bridge and he has to make an immediate decision whether he can make it or not. And, if not, you know, then he has to make the secondary decision what -- you know, what's my alternatives here to avoid running aground.

So, you know, just that kind of information would be very helpful on instructions to mariners to know and ship captains know that they need to stay away.

CAPTAIN BARNUM: I had one comment. Steve Barnum. That sounds like some great information to be incorporated into the Coast Pilot, that kind of the information of how ships should approach the buoy and how to shape up contact. But we would be glad to capture that information, whatever you would like to see incorporated in the Coast Pilot.

ANDREW MELICK: Sure. In the Coast Pilot, but even more critically, I think that's the kind of thing that's - I think should be on the chart, the harbor chart.

CAPTAIN BARNUM: Sure. We'd have to discuss
how you would portray that type of information.

Chairman Skinner: Ed, and then Sherri.

Mr. Welch: Is this fundamentally a chart problem or does the sea buoy need to be relocated further out, or are there other implications to doing that that I'm not aware of?

Captain Hickman: That's what I was going to address. If you want the sea buoy moved out, then you have to be willing to board every vessel further out, not just the --

Andrew Melick: Well, not necessarily.

Captain Hickman: Well, where do you want the mariner to meet you? Are you going to tell them come in a mile from the sea buoy now?

Andrew Melick: Depends on the ship. There's a lot of ships we board inside the buoy, and that's not a problem with smaller ships, and it's -- you know, because we're getting more, higher ratio of bigger ships, like every port, those are what we're concerned with, you know. So the information we want to convey is that if you are a large, deep craft ship, this applies to you.

Captain Hickman: I don't think that's going to work, but I'll talk to you outside the panel, but --
ANDREW MELICK: Yeah, as far as relocating the sea buoy, that's -- that is a whole another issue, and there is a lot of practicality to that and in Miami it gets deeper quickly, and you can't put a buoy that much further out.

CAPTAIN HICKMAN: I guess my big blaring question here would be is the captain not looking at the chart when he's making his approach.

ANDREW MELICK: Well, hopefully, he is, but there's some captains that don't.

CAPTAIN HICKMAN: Because the chart has the depths on it before he gets to the sea buoy.

ANDREW MELICK: Oh, absolutely.

CHAIRMAN SKINNER: Sherri, can I ask you to turn on your speaker?

CAPTAIN HICKMAN: I'm done.

CHAIRMAN SKINNER: Yes, Gary?

DR. JEFFRESS: Do you guys have problems with long-shore currents coming into Miami?

ANDREW MELICK: Yes. We have the gulfstream running very close to the shore.

DR. JEFFRESS: You need to see Mike about getting a port system then.

CHAIRMAN SKINNER: Anything else?

DON VENTURA: Andrew, Don Ventura from Fugro Pelagos.

MS. DENTLER: Come forward and state your name again.
DON VENTURA: Don Ventura. I work for Fugro Pelagos, Incorporated. I just wondered is that the buoy situation that you're discussing doesn't merit -- if you can't move the buoy, cannot the designation of the buoy change? It's clearly not a safe water buoy for a number of important ships; therefore, should it not be at least cardinal mark, for example, indicating on the chart very clearly that shipping that has to approach the port has to bear in mind that it can't go west with the buoy because they're getting into navigationally-constrained waters?

ANDREW MELICK: That's a good point. Yes, that's one of the -- I talked to Becky about this earlier, that was one of the points I was making; for a lot of slips, it's really not a safe water buoy.

CHUCK HUSICK: May I make a comment, please?

CHAIRMAN SKINNER: We got to sort of wrap this up because we're already a half hour behind schedule, very brief.

CHUCK HUSICK: I will be very brief, very brief. Why are we worrying about the damn buoy? We navigate commercial aircraft carrying 300 people to wake points designated by lat line. Every last vessel is required to have GNS's, correct? Why not just tell them what wake point to go to?

CHAIRMAN SKINNER: That's it. We're going to
break for lunch. We will come back -- my phone has
died, my watch is elsewhere, I have no idea what
time it is. It's one o'clock, so let's try and get
back here at 2:00 and we will try and shorten up
some of the things on the afternoon schedule.
Thank you very much.
(Thereupon, a luncheon recess was taken from
1:04 p.m. to 2:00 p.m.)

CHAIRMAN SKINNER: Reconvene the panel. Just
to sort of go through the afternoon agenda, Bruce
Vogt is going to give us an update on legislative
issues; followed by an update on height
modernization by Gary and Matt.
It will then be our second public comment
period and a break, and then we'll come back to
talk about IOOS and wrap up with our final public
comment period.
So with that, Bruce, if you're ready -- oh,
I'm sorry, Bruce, I keep forgetting, this is the
third time I've forgotten.
Elaine wanted to just raise an issue put
before the Panel's consideration, maybe we can talk
more about it at tomorrow's strategy meeting.

MS. DICKINSON: This is just in follow-up to
our discussion about the most-wanted report. And I
just wanted to mention to you all that I had an
interesting point raised that we may have sort of
all missed it, has to do with paper charts and
print-on-demand charts. And all the focus on
electronics we often forget about, you know, I
think we all agree we covered everything we pretty
much could in the report.

And I got a call from a guy named Dave Dupree.
He's the president of Oceanographics. He's the
NOAA partner who produces print-on-demand charts up
in Minnesota. I think he's the only one who's out
there marketing them. And he was just a little
disappointed, I guess, that nowhere in our report
did we mention his product; which is, you know, and
I thought about it, and I said, you know, you're
right because those are really innovative charts,
you know, he's got a pretty much state-of-the-art
system where the minute somebody places an order
the charts are updated with all of the latest
corrections and printed out and shipped to the
customer, and it really is a great service.

And his problem and a lot of his frustration
is he feels that nobody really knows about
oceanographic charts that much. I think he has
limited abilities to do marketing. He's trying to
find ways to reach the public with this product and
I wrote a story about it and he finally agreed to
do advertising.

MR. ARMSTRONG: I saw the ad. It's a good ad,
by the way.

MS. DICKINSON: Well, we put a mention of
those charts on an e-mail blast that goes out
routinely to Boat U.S. members. There's 300 e-mail
addresses on it. And it had like ten other items
on that e-mail. And the number one site for hits,
for click-throughs after that went out was
Oceanographic. So it was kind of like, you know,
just really went over quite well and people are
finally starting to find out about these charts.

But I just wanted to bring that up because,
you know, the print-on-demand is another way that
the technology is really getting the product and
the chart updates out there to people. And
hopefully there will always be paper charts. There

are boaters who are never going use anything else,
quite frankly, so we really got to have them. And
this is the best thing out there, so that's all I
have to say.

CHAIRMAN SKINNER: Raise it tomorrow and see
how the panel wants to proceed.

Sorry about that, Bruce.

BRUCE VOGT: No problem. I'm Bruce Vogt. I'm
with the National Oceanic and Atmospheric Service.
I'm filling in for Glenn Boledovich. He's actually
my boss. He was supposed to be here today but he's
been ill for the past week and wanted me to
apologize to everyone that he wasn't able to be
here. And he said to say hello, passed on his
regards.
I'm here to talk -- give you a little bit of an update on a couple pieces of legislation that we've been tracking and, in particular, have been briefing this panel on for over a year now. That is the Hydrographic Services Improvement Act, the integrated ocean and coastal observation legislation, and also integrated ocean and coastal mapping legislation.

Now, I think we'll -- I'll probably be able to speed this us up a little bit on the agenda here because there hasn't been a whole lot of action on these bills. I think earlier Jack mentioned that NOAA has initiative or some money in the O & M budget to pit a chart trying to increase our efficiency of getting data off the charts and see if maybe congress can start an initiative like build a law, something like that, to increase their efficiencies, but -- no, just kidding.

CHAIRMAN SKINNER: Bruce, is your microphone on? I guess it is. That's better if you can use that.

BRUCE VOGT: I know. Sometimes people have a problem with my voice. It's a little deep and it's hard to understand at times. I apologize for that.

CAPTAIN BARNUM: It will raise up, try it.

BRUCE VOGT: So first I want to talk about Hydrographic Services Improvement Act. NOAA actually drafted a bill, an authorization bill and
transmitted to congress last year. Congress picked that up, looked at it. The Senate actually introduced a version of our bill word-for-word. The bill's introduced our own version which made a few changes, in particular, to contracts language requiring NOAA to use Brooks Act for contracting hydrographic data. There hasn't been a lot of progress on this bill in the Senate since it was introduced, but there has been some activity in the House. Jack Dunnigan had actually testified on this bill back in October.

Following that, in February, just recently, February the 13th, the House held a markup in the House Natural Resources Subcommittee. That bill after markup was sent to the full committee. There are only some minor changes, nothing really that affects the bill overall.

But I did hear just recently that the full committee has tentatively scheduled markup for the Hydrographic Services and Improvement Act for next week sometime, I was told March 13th, but that's tentative. This bill is pretty noncontroversial. So I think that this -- we're hoping, from everything we're hearing, that this bill should move through both chambers this session in the 110th Congress, we're hoping. Yeah, that's all contingent upon what happens with the election season, and if things kind of get lost in that
process and a lot of legislation's pending, it doesn't make its way through.

The only thing that's different really between the House and the Senate bill is that the House...
does that mean?

BRUCE VOGT: I'm sorry, which were you --

ADMIRAL WEST: The Senate version is: Changes to the Hydrographic Services Review Panel -- which is us -- to update the current status of the panel. What does that mean?

BRUCE VOGT: There's some changes in the legislation, the administration bill that just talked about compensation for the panel. There was some old language in there about comps to the panel and now. The compensation is for travel expenses. The costs incurred while you're doing the duties of the panel, that's really the changes I was referring to. There's nothing in there that changes anything within the panel. There was some language that extended potentially the people that could be on the panel, because the panel's pretty diverse right now, and I think there was an attempt to just codify some of the other people that serve on this panel; like Tom, coming from where the coastal management background. There was an attempt to broaden the language a little bit there.

ADMIRAL WEST: I must have slept through that briefing to the panel, but there was changes submitted, so maybe sometime tomorrow somebody
could tell me what's been submitted and what
changes our panel from the first time I signed up?
Can we do that? I mean, is this -- this follows
the administration's submissions?

BRUCE VOGT: Right. Yes.

ADMIRAL WEST: The senate's that --

BRUCE VOGT: The broader language was
something that was actually introduced -- in terms
of the members on the panel was something that
didn't come from us. It was actually -- that the
House had asked if we could include. But the
changes to the compensation issues and things like
that was from the administration version.

ADMIRAL WEST: Does everybody remember all
that?

CAPTAIN HICKMAN: No, no.

ADMIRAL WEST: I think NOAA owes us -- owes
the backup panel here some explanation about what's
going on with what we all signed up to be and what
you're saying congress is going to tell us to be in
the future; is that fair?

BRUCE VOGT: Sure. We can do that tomorrow.
I don't think there are any major changes to the
function of the panel or anything.

ADMIRAL WEST: Well, the compensation is an
issue for me. I have a personal hangup over that --

BRUCE VOGT: Sure.

ADMIRAL WEST: -- for historical reasons. But, so, I mean, that's kind of the first time I seen it and --

BRUCE VOGT: Okay.

ADMIRAL WEST: Unless -- did I miss something? CAPTAIN MYRTIDIS: I think we all missed something.

ADMIRAL WEST: Oh, okay.

CAPTAIN HICKMAN: We all missed it.

MR. ARMSTRONG: Barbara, did --

MS. HESS: That was the draft from the last notebook, I thought that one was --

MR. ARMSTRONG: I thought everyone got copies of the drafts that went forward.

MS. HESS: That was one of the drafts in the last notebooks. I don't have it with me, but I can try and see if I can get a copy. But I think that was included on your package in one of the past meetings, the changes.

ADMIRAL WEST: Also, what was in there was what the administration submitted, correct? Is that what we were given?

MS. HESS: I don't believe so.

BRUCE VOGT: I believe, I'm not sure which
meeting it was, but we did circulate the drafts
that the administration put together. In fact, I
think we included the entire transmittal package
that we sent to congress, so a section-by-section
analysis, our draft language and how the bill would
look within the facts.

ADMIRAL WEST: Then I missed that. If we can
spend a couple minutes, we don't need to do it now.
I think the panel should know exactly what the
administration submitted and what appears to be
both in the Senate and House version.

MR. WELCH: Do we have here somebody with a
copy of the present law, as far as applied to the
panel?

BRUCE VOGT: I don't have a copy with me.

MR. WELCH: Okay. We can take a look at that,
it will be a little easy for people to see what the
effect of the proposed amendment would be.

BRUCE VOGT: Sure. We can do that.

MR. McBRIDE: If I may. I'm not sure if I
understand this.

CHAIRMAN SKINNER: Sure, Adam.

MR. McBRIDE: We're currently compensated,
MR. McBRIDE: Well, I didn't hear about that either. I would like to hear more about that.

CHAIRMAN SKINNER: I believe at one of the briefs there was a discussion that this was an issue, but I heard that -- I don't think that we've had -- that the issue of compensation was an issue for someone, but I think I agree, that going through all the changes would be very helpful.

BRUCE VOGT: Sure. So moving onto the Integrated issue on Ocean Observing System legislation. There's a bill again in both the House and the Senate, again, there's been a lot more movement in the House than there has been in the Senate. In fact, also on February 13th, the House version of the Integrated issue in the Coastal Observing was there was a markup in the subsources subcommittee and that bill had a few minor amendments and then was reported to the full committee.

And the full committee plans on holding a markup for this bill on March 13th as well, along with the Hydrographic Services Improvement Act. In fact, some of what we heard is that they're planning on possibly packaging the Integrated Oceans Observing System legislation with Hydrographic Services Improvement Act. They're trying to move things through as a package, potentially including the Integrated Ocean and
Coastal Mapping legislation with that package, too.

I guess I will -- since, I'm not sure what has been covered in the past now, then NOAA -- let me backup. The bill that's going through the House right now for the IOOS bill was actually part of a climate bill last year. And that climate bill passed the full committee in the House, the Natural Resources Committee. And so the thinking is that now that this is being moved through as its own stand-alone bill, and the fact that it's already passed the Natural Resources Committee means that this should move through pretty easily. The House, at least the people I talked to -- that they feel pretty confident they can get this passed this session.

That then raises some issues with the Senate because the House legislation is different from the Senate bill; not too different, but different in enough ways that there would be some negotiation required between the Senate and the House on this. But, you know, again the House feels pretty confident they can negotiate those differences with the Senate and move this through.

Now, for the Senate version, there are a few more obstacles on the way. This is Pago policy, that the authorization appropriations in the Senate bill has caused the Senate bill to be put on hold, and I'm not sure -- we don't have a lot of
information about where that's going. That's another issue that's going to have to be worked out. But we haven't heard anything new on that. We just know that it's been put on hold.

So the last one is the Integrated Ocean and Coastal Mapping legislation. The House passed the version pretty quickly last year in July. We testified in June and then the House passed the bill in July. The Senate has taken up the bill that the House passed. There really weren't that many differences between theirs and the House bill and the Senate bill before it passed, but the Senate has taken up the House bill and they're currently redrafting that bill in negotiating some things with the House, but there's some internal debates in the Senate.

The Senate Commerce Committee was very happy with the piece of legislation or the bill that the House had passed, but there were some issues in the energy and Natural Resources Committee of the senate regarding who should be the lead for the Federal agency to carry out the act.

It was drafted and the version that passed the House put NOAA in the lead, had NOAA developing the program, Integrated Ocean and Coastal Mapping Program within NOAA, and as the chair of an interagency committee to handle Integrated Coastal Mapping issues and the Energy and Natural Resources
Committee in the Senate felt that we're -- or felt that that was in conflict with the Energy Act of 2005 that was passed, because the Department of Interior, in particular, had some pretty strong mandates in that Energy Act and they felt those possibly conflicted with the issues in the Integrated Coastal Mapping Act. So for those reasons this bill's being held up in the Senate. But, as I said, you know, there are -- everyone's pretty hopeful that these three bills are going to move in some way, and possibly as one package, because there all related in some aspects.

So that's pretty much it for my update. If you have any questions, let me know.

CHAIRMAN SKINNER: Thanks, Bruce. Questions? Comments? Elaine?

MS. DICKINSON: The NOAA Organic Act, what happened to that?

BRUCE VOGT: There hasn't been any progress on the NOAA Organic Act.

ADMIRAL WEST: It's not going to happen this time.

CHAIRMAN SKINNER: Other questions?

MR. WELCH: Tom, Ed Welch. On the IOOS legislation, if folks will recall back in the fall there was some interest on the part of the panel that -- to make sure that the regional panels had some kind of a feedback from actual users as to
their products. There was a letter that was
drafted, there's meetings that were held, and I
think folks got a fairly satisfactory assurance
from the folks with the regional panels that they
were taking steps to incorporate consultation with
actual private sector users. But if we wanted to,
if you look on page 36, again, on page 35 of the
Senate draft bill here, S950, they have a

subsection on what the regional associations are
supposed to do and how they're supposed to go about
their business, and it wouldn't be very hard to
draft up a little phrase that talked about
consulting with users and ask members of congress
to put that in there. And then you'd have a
statutory expectation as opposed to exchange of
letters, so I don't know whether that would be of
any interest to people or not?

CHAIRMAN SKINNER: Well, that's certainly
something that I've been supporting, so to the
extent that we can, I would definitely support that
type of change. I think probably also want to hear
if that -- what impact that would have, if any, and
maybe somebody can fill us in later today on the
IOOS update.

ZDENKS WILLIS: Yes.

BRUCE VOGT: The only thing I would say is I
think NOAA has looked through this language very
carefully and we felt that the freedom is there for
us to developing any sort of advisory panel and, in working with the regional associations, to acquire, if not make it part of our agreement, contract, whatever you want to call it, with the regional associations, however that turns out, to include all sectors.

CHAIRMAN SKINNER: I'm jumping ahead because this is -- this will be covered in the IOOS presentation, but there was a pretty positive response from the IOOS folks, so... other questions? That's it? Thanks very much, Bruce.

BRUCE VOGT: Thank you.

CHAIRMAN SKINNER: And next, Matt and Gary, are you all set for your presentation?

DR. JEFFRESS: Yes.

MR. WELLSLAGER: I think, yes, why don't you?

DR. JEFFRESS: Do you want me to start? Do you want to bring it up? This is a report on the national -- this is a report on the National Height Modernization started about ten years in 1988 when NGS wrote a report to congress about the sad state of elevation data in the United States. My take on this, why it's deteriorated, it's basically deteriorated because the National Geodetic survey back in the 1990's pretty much abandoned maintenance of benchmarks across the country.

And my guess is, just a wild guess is that they were going to rely on GPS to takeover, not
only the horizontal location as part of the National Spatial Reference System, but they thought that the technology of the GPS and having a program of gravity observations, we would have a geoid model by now that would be suitable to using GPS to establish accurate elevations. And I'm talking about elevations relative to sea level, which we call orthometric metric heights.

So, back in '98, this report stated that the existing technology was not good enough to establish accurate elevations throughout the United States. And the existing infrastructure, all those benchmarks that were leveled fairly tediously all through the 20th century had reached a point where they're not serving the economic benefits of the United States and something needed to be done about it. And so they started this project called National Height Modernization, which not only helps us reestablish good elevations throughout the United States using the latest in technology, at the terrestrial leveling or using GPS. And it would kick off with basically funded by earmarks of various states that have been involved.

And the map up there shows the height modernization states in the pink, interested states in the light blue, and the green states are not showing any interest just yet, except this needs to
be updated. Illinois. where is that? Somewhere. Illinois is an earmark to start them off, helping them out in this year's budget.

From my experience, I'm the principal investigator for height in Texas and Matt is working with South Carolina; even though we're both pink states, we both have height mod programs running right now.

Texas got started back in 2005 with an earmark through one of our senators. We had a second earmark on the second year and on the third year, which is the year we're in now, our funding year we're in now -- which is a year delayed, which was a continuous resolution year -- the pool of previous years' earmarks was given to NOAA to fund a competitive grant process.

And, basically, the states that already had programs put our proposals to continue the work they're doing in height modernization. It was published in the Gazette, and so all the other states had opportunity to compete, but very few did.

And then this year's very much similar, except this year we've actually got a line item in the president's budget to fund height modernization.
And I believe the Senate put it in as 10 million dollars, whereas the year before it was nine and a half million. But the House didn't put any money in there. And, I don't know, Dave, it's around about five million now, is that correct?

MR. ZILKOSKI: Yes, sir.

DR. JEFFRESS: We're all competing to get height mod funding. That's a very inadequate budget to cover - to reestablish the elevations throughout the United States. That's kind of the history of it.

It doesn't seem to be working. (Referring to slide presentation.) Here you go.

Last November, nine of the states got together and organized a meeting with Admiral Lautenbergbacher and we presented this information, you know, and we thanked him for his report for height modernization so far and we tried to emphasize how important it is to each of the states, and we tried to highlight how height modernization fits in with the goals of NOAA. So we went through the climate goal, foreseeable rises, a big deal.

This is a tide gauge record for Galveston and Pleasure Pier, which is the longest tide gauge in Texas. It shows a substantial increase in sea level, but like Louisiana, Galveston is very much
subject to subsidence. And if you go to CO-OPS on
the web site, it says there that Galveston sea
level will rise at the rate at 2.13 feet per
century, as detected by this tide gauge. But
that’s the combined net result of both sea level
rise and subsidence.

By the way, the scientists at the moment think
that sea level rise globally is about two and a
half millimeters per year. Galveston is sinking at
about six millimeters per year. So it’s about a
little bit less than four millimeters so we use in
Galveston. The height mod is one of the programs
that helps the tide sea level rise to elevations on
shore.

And so it’s one of the ways we can monitor
climate change, okay. Now, height modernization on
elevation does not just affect the coast. The
National Geodetic Survey was responsible for this.
The National Spatial Reference System throughout
the United States, that includes all the noncoastal
states as well, and Texas is a good example of
where elevations are deficient on land and it’s
mainly on land adjacent to rivers and streams where
we have riverine plane.

That picture there is of a house there in
Austin in 2001 as a result of a flood. Local
governments have a lot of problems and so do local
surveyors have a lot of problems establishing
elevations relative to flood levels because a lot of benchmarks have disappeared. And as a result of that, many local governments, because they need elevations to design subdivisions and roads and drainage networks have established their own elevation networks, but of course have not maintained the sort of standards NOAA insists on for accurate elevation determination.

And so, you find cases like in San Antonio where we have the city has established their own elevation network and supposedly tied it into the National Spatial Reference elevation. We have the Edwards Aquifer Authority that manages the water in the Edwards Aquifer, which is primarily San Antonio's drinking water supply. We have the San Antonio River Authority that manages flooding and mitigation of flooding around San Antonio 'cause it's had some very severe floods over the years, and the county also has its own little network, and all these four networks do not agree by a matter of feet.

So it's very difficult for us to say that the Texas Department of Transportation to build a highway through San Antonio because you have all these different elevation data which don't fit. And it's costing them a lot of money and actually the cost to sort out this mess before they start construction.
Precision agriculture is also a beneficiary of height modernization, especially related to drainage and irrigation systems. So that fits in with the ecosystem role of NOAA. The weather service, again, related to flooding, especially coastal flooding, uses - tries to use updated elevation data to predict coastal flooding in times of tropical storm surges. We have ourselves in Corpus Christi have -- using tide gauge data, along with meteorological data to better predict water levels associated with storm surges.

In Texas, the tidal charts, the predicted tides are actually only accurate about 60 percent of the time because of the meteorological affects and the coastal hydrology or hydraulics, winds and barometric pressure have a lot to do with forcing the water elevations. And so we're trying to integrate, not only the gravitational predictions of tides, but also integrating meteorological affects, and we've buttoned that number up into the 90 percent. And the weather service is actually using our data now to help predict coastal flooding. And it's associated with height modernization as well.

And transportation of commerce, of course, elevations along the coast, integrated with bathymetric charting and nautical charting. These are inundation models which height mod is
associated with in getting accurate elevations along the coast. And, of course, we heard what the problem is in Louisiana. We also have the same problem in Texas. It seems like the closer we get to the Louisiana boarder, the more subsidence we see.

MR. McBRIDE: Hey... it's not our fault...

DR. JEFFRESS: Down in Corpus Christi, we're seeing about a foot and a half percent per century in total increase in water level, and it drops off about a foot by the time you get to the ground. But still it's a problem. And a big problem, actually, for mariners in Texas, it's actually assisting in getting higher clearances on the bottom. But then just as the opposite occurs in Alaska where they're having glacial rebound and the water level is actually dropping, rather than increasing. So they have the opposite problem in maintaining accurate water levels compared to what the elevations are on shore.

And just to bring that home, in Corpus Christi, for example, there's a lot of coastal development on Padre Island. This is adjacent to Corpus Christi. We have development out there and higher homes being built right by the beach. Padre Island has, of course, the FEMA flood insurance maps associated with it, and the magic elevation to get flood insurance or keep up flood insurance is
nine feet, but FEMA doesn't actually specify, nine feet above what? One would assume it's nine feet above mean sea level, of course, this actually comes under the jurisdiction of land surveyors who are asked to produce what is called elevation certificates for individual properties where they establish elevations on the floor levels of buildings.

And on the basis of that, if the floor level is above the nine feet, then the land owner, the house owner, can get flood insurance at a reasonable rates. If it's below nine feet, then the rates go up substantially. And actually there's some places on Padre Island you cannot get flood insurance, they're zoned that way.

So surveyors, when they're asked to do this, and there's missing benchmarks that disappear, they go out and find whatever they can. It's usually -- it's a city elevation marker they will tie into that and assume it's the National Geodetic Vertical Datum of 1929, which was adjusted to 26 tide gauges around the country. So last year it's nine feet above that data.

Or you can find NAVD, North American Vertical Datum, of 1988 benchmark and tie into that and establish a nine-foot elevation. Because the zero for that is the main sea level up in Quebec in the St. Lawrence Seaway, so FEMA accepts that elevation
as well.

Or you can check another box which says "other" and, for example, you can tie into our tide gauge which has the latest 2001 APOK elevation for main sea level.

But surveyors who tie into our tide gauges find that the elevations are something like eight feet. And so those using the up-to-date sea level, most of the houses on Padre Island, which will be

up to nine feet, now are up to five, but FEMA doesn't know that yet.

This is a summary of the appropriations for the nation for height mod since 2001. California and North Carolina got started out initially and, as you can see, over the last few years, a lot of states have come on board. There's Texas in 2005. And we've seen a steady increase in the budgets for height mod; but we had a pretty disastrous year this year, so we're trying to deal with that right now.

So why do people want to know what elevations are and, again, just like I finished talking about flood insurance. This is the evacuation route as of about eight years ago from the main road from Padre Island to Corpus Christi. It's since then rectified, the Department of Transportation has raised that causeway up by nine feet, and so -- but that was what it was back in '98, I believe, and
that was a tropical storm, not a hurricane.

So sea level is rising and, basically, the
public and the surveying profession is trying to
help them decide whether they can get flood
insurance or not. Okay. Again, Austin, 2001;
Houston, Tropical Storm Allison in 2001, a very

minor one, by the way. This was probably one of
the most expensive flooding disasters for the
United States. It was a five billion dollar flood
bill for that, and I think there was about 20
people lost their lives. And again, because we
didn't have enough data and knowledge about
elevations relative to the drainage systems, et
cetera. It was a big problem for Houston.

The height modernization program is trying to
capture interest from the states and, for example,
South Carolina, Matt can talk to us about how their
state did geodetic survey of this, that is involved
with height modernization, and we're trying to
leverage funding both through the states and
through this program.

In Texas we've teamed up with the Texas
Natural Resources Information System, which is kind
of like a de facto mapping agency for Texas. And
they also produce a lot of GIS data for Texas and
most of the Texas agencies. And they are --
actually have gone through an exercise funded by
FEMA as a result of Hurricane Rita to LIDAR map all
So, basically, what we've both been doing for Tenorex, who is orchestrating this mapping, is stepped up to them and offered to them that we could do quality control on the control for the LIDAR mapping before the LIDAR data was observed. So we're helping them with geodetic control for elevation for the LIDAR mapping.

This program is also encouraging each state to establish a spatial reference center. And this is kind of like a branch office, so that's the way I describe it, as a branch office of National Geodetic Survey in Texas. South and North Carolina actually have state agencies that do geodetic surveys. But Texas was the fourth spatial reference center established. There's been one established in Louisiana, and Roy Dokka, who we talked about in this morning, he is the lead for that. There's been one established in Washington state and also one in California.

And so, NGS is encourages height mod program to establish these special reference centers. We actually got a request from the government to do this on our campus. And also, since then, the state legislature has enacted an act to create the spacial reference center on our campus under the
education code. And that just allows the state
agencies to better fund it and it creates a channel
for funding.

I'm going to talk about V-datum in a little
bit. Digital elevation models are very popular now
for GIS, and they are also tied to out-of-date
elevation monumentation thought Texas and the
nation. And we also -- we've also partnered this
year with the Corps of Engineers to establish
NAVD-88 elevations on our tide gauges, and they're
funding that as part of their attempts to get
better elevations for their dredging operations in
Texas. Next one. Okay.

Now, the problem goes back to the geoid, and I
would like to just highlight some basic geodesy in
leveling and at least I can try to get you guys to
understand this. This is like Geodesy 101. As you
can see, the earth kind of looks like a sphere, but
it's not really. It's actually an ellipsoid of
riverine. The radius of the earth of the equator
is 22 kilometers longer than the radius of the
earth at the pole. It has something to do with the
spinning, okay. So when you're using a
mathematical model to put all the mapping on, what
you geologists do has created this ellipsoid of
revolution which is centered on the center of the earth and have created an XYZ coordinating system, where the Z axis comes out the North Pole, the X axis comes out the equator at the again anyone Meridian, and the Y axis is perpendicular to both of those. And that's what the GPS system coordinate is based on, XYZ coordinate. But keep in mind, the GPS system is moving as well as the earth's spinning on its axis. That's where calculus comes in. We won't go into that.

Next one. Okay. So what we have is this yellow line, which is the ellipsoid of revolution. You can think of that as the sphere, okay, that's the mathematical model of how we locate position on the earth and put it into mapping and can get state plane coordinates.

That approximates topography of the planet. And that's sea level depicted over here. This is a topographic surface. Now, if you project sea level underneath the land surface and you come up with this bumpy -- and this is mean sea level now -- you come up with this bumpy surface which deviates from the mathematical surface by plus and minus about 90 meters. And this is equivalent of sea level. And this mean surface of sea level, we call that the
geoid, the approximate main sea level geoid. And
that's a equipotential surface where gravity is the
same. It's like mean sea level because the tides
go up and down, gravity actually goes up and down
everyday, too, because of the pull of the sun and
the moon.

And the variations here are caused by what are
called gravity anomalies where you have -- if you
have a bulge, there's a large mass close by. And
if you have a dip, there's less mass. And so if I
pour water from a high point to a low point, it's
not the difference in elevation measured in feet
that's causing the water to flow downhill, it's
actually gravity. And gravity is not the same
everywhere along this mathematical surface, because
of mass anomalies between the surface of the earth.

Now, if we go and level to this point relative
to mean sea level, we want the yellow -- which is
very difficult to read. That's the orthometric
height, and that's the height you get if you're
leveling from main sea level inland. It's relative
to where this proximate geoid would be at that
location. What GPS gives us is this little "h"
here, this lower case "h". GPS gives us an
elevation above the mathematical surface. It does

not give us an elevation above the geoid or main
sea level. Okay.

And that's what we don't know, and, of
course -- if you press the next button, the button
again -- this value "N" is called the geoid
ellipsoid's separation, and that's what we want to
try and model with a good geoid model. And if we
have that value in down within a couple
centimeters, then we can establish the true
orthometric height above sea level anywhere in the
country, okay.

What we're missing is the gravity data to
produce this nice red surface which is actually a
bumpy surface. We have existing models which are
based on historic gravity data sets that have been
observed at different periods of time, with
different instrumentation and different quality, so
it's not extremely reliable. The GRAV-D initiative
would fix this. And separate to NGS's initiatives
with GRAV-D, which is not funded, we've been
working with the -- in Texas, we have been working
with the Naval Research Lab, which is actually a
key component -- or player in this. They've
developed this airborne gravity technology and have
used it successfully in Iraq and Afghanistan and

now they're doing Pakistan. But they've not done
it in the United States, so we're not likely to fly
any missiles around here any time soon.

So the technology is available, we just need
to get funded for the United States, and then we
can use GPS all over the place to get accurate
elevations. I might also add, the FAA is very interested in this, you know, because all aircraft elevations are relative to sea level, and so that's one of the reasons why aircraft are not using GPS right now for navigation and position determinations, because of this error created by not knowing where the geoid is.

So, traditionally, we have observed elevations in the past using spirit levels, and this is kind of like what the set up is, you start at some known datum. Here's mean sea level and you just do differential leveling across the countryside, and that's how the majority of benchmarks are now disappearing how they were established here in the United States.

Nowadays, we have digital LR levels. That's this one here. They cost about $5,000 a piece. But the rods are also expensive because they're made out of invar steel and they're encased in aluminum jackets. And if you're going to do some of this leveling across the countryside, and including putting monuments in the ground, it costs $2,000 a mile to do that. So it's very expensive, but it is very accurate because it's down to the tenth of a millimeter.

And in some places we do still need some of this, but we're trying to -- we much prefer to use GPS because GPS is much more cost effective. This
is an example in Texas. This out of ADS's database, NGS ID, I don't know what that stands for. Dave might know what that is. This is database of when elevations were established in Texas, going back to 1902. And you would see the majority of the elevation work was done in Texas back in the '40s, and that diminished, and then a little bit done in the '60s and -- up to the '90s and then dropped off.

And I believe NGS only has one leveling party right now to do the nation's leveling. And so what's happened in Texas with roads being developed and widened, all these benchmarks that were put in way back when have been destroyed. And we estimate it's probably about 20 percent of them left, which is a real pain for surveyors when they go to do things like elevation certificates.

I've highlighted here when the leveling adjustment was done in 1929, when it was tied to 26 tide gauges and it was redone in 1988 to get rid of the biases introduced by those tide gauges. And one tide gauge was fixed, and that was that one up in Quebec in the St. Lawrence Seaway. Next one.

This is the monumentation we're talking about. This is actually an NGS benchmark on our campus. This is actually through our campus. It's still a reasonable mark, but where that flagging is, that's the original soil level when the mark was
established. And so we've had a lot of erosion there and then sooner or later that mark is going to fall over and be totally useless. And that one was established in 1963, it's dated up there.

Just to give you some comparisons of the two adjustments. Back in 1929, we didn't have much of an understanding of the geoid back then, and that's why we tied -- we assumed that sea level was the same on all three coasts and also the Great Lakes that was connected to the sea, which was not the case because of the geoid problem.

And so, back then, the adjustments was 100,000 benchmarks, the readjustment in '88 was 450,000 benchmarks, but a lot of them have been -- were not revisited for this adjustment. They were just readjusted using the original observations. Okay.

And so if you look at mean sea level versus this latest adjustment in '88 you will see differences around the coast. This is in millimeters or centimeters? Centimeters. All these biases were adjusted out from the '29 adjustment, and when you compare mean sea level to NAVD-88 this is what sea level's doing around the country. It varies all over the place. Next one.

And, of course, we have NOS standard tide gauges in Texas and we've leveled to them using NAVD-88 elevations, and you can see the differences as you go along the coast, it's half a feet up here
in Galveston, two-thirds of a foot there in, I
guess, that's San Antonio Bay or something. Corpus
Christi it's .48 feet and actually down in
Brownsville the NAVD is below mean sea level. So
you can see there's a slope in sea level compared
to NAVD-88 in Texas.

And this is one of the things that VDatum is
being set up to address. So you can go to various
places and know what the relationship is between
sea level datums and the terrestrial datum for the

United States. Next one.

We've also started as part of height mod is
establishing CORS stations, that's the Continually
Operating Reference Stations, the GPS stations,
that are running 24 hours a day where surveyors and
other folks can use this to do differential
corrections to get the precise GPS observations
down to a couple of millimeters. We have
colocated a CORS station with a tide gauge. This
is in Galveston on the Pleasure Pier. That's been
up and running for about six months now and, it's
now in the NGS CORS web site, and that data is
logged every second. It's the one under GPS
observation there. And, of course, that's
available to mariners, too, if you know where to
get it. It's not a realtime system. It's a
post-processing OPUS solution type system.

This is VDatum. And you'll see it's very
scarce around the coast. And none in Texas.
There's a little bit in Louisiana, a little bit in Florida. North Carolina's done quite a bit. Up
around New York, California's done quite a bit and Washington state. And these -- there's a program
that's associated with height modernization but, of course, it's not funded very well and, of course,
we need a lot more data around the coast to tie all these datums together.

Where it is available, it's fairly intuitive to use. You put in an elevation and you can convert it to whatever datum you want, from terrestrial to any of mean sea level data, mean sea level, mean high low water, whatever. It's a cool thing because this isn't enough of it. And I think my last slide is next.

GRAV-D. And this is what we're hoping, it's the silver bullet for height modernization. If we can get the GRAV-D observed throughout the United States using this airborne system, which we know is accurate to a couple milligal, we can get a much better model for the geoid down to the centimeter level, according to the geologists and engineers, and that would allow us to use GPS just about anywhere to get accurate orthometric elevations relative to sea level. Here endeth the lesson.
Oh, sorry, one more slide.

This is an airborne system. This is the cost
of this. It's based on absolute gravity. And
there was a comment this morning about why don't we
use all the oil company data, the GRAV-D data? Oil
companies are only interested in relative change of

gravity, not absolute gravity. We need absolute
gavity to produce an absolute geoid. So the oil
companies have not observed gravity to the
scientific way that we need to produce it with
geoid, but it is useful data for the weather.
Thank you.

CHAIRMAN SKINNER: Thanks very much. Before
we go on, Matt, do you have anything to add to it?
Mike?

DIRECTOR SZABADOS: Just a few comments.
First of all, I really want to compliment the State
of Texas for the about 30 years now we've been
having collaboration on transferring technology and
the standards. And because of that, there's a
station that the State of Texas puts in for tides
is fully compatible with the NOAA stations and
standards and be able to be used with the NGS
height mods. And I just wanted to compliment the
State of Texas for the forward thinking and,
actually, for me, shows a way that IOOS should move
forward in establishing standards and better to
have those standards.

Just a comment on sea level. I just want to
say that the NOAA standards, and we maintain what
we call sea level, we call it relative sea level

and it's relative to land. That's where you place your feet, build your roads and build your house. And the reason for that is we update that every 20 years, and that's to ensure that the nautical charts stay relevant. Because if you don't -- as indicated, sea level would be changing for a number of reasons, due to climate, subsidence, spatial rebound. And so we maintained that standard, that relative sea level so the charts stay relevant.

And in the case of Texas and Louisiana and Alaska, certain parts of Alaska, instead of doing it every 20 years because of subsidence and spatial rebound, we're doing it every five years now, because there was a certain pilot group in Houston who threatened not to bring the ships in after we told them that we were moving the channel depths. So what happened here was that in the state, in Texas, because of subsidence and we changed that relative sea level, it was a major jump. And to -- and caused great confusion. So to prevent that in these high areas of subsidence, we update that every five years now. And 2008 is the -- again, we're doing it again. But there won't be a big jump because we're going it every five years now.

DR. JEFFRESS: Right. Just to highlight that,
NOAA computes these title datums over 19-year period, which is what we call an Epoch. And the latest one, the 19-year period ended in 2001 and was subsequently published in 2003. The previous Epochs to that ended in 1978. And if you look at the value of mean sea level in Corpus Christi and Padre Island, mean sea level jumped a quarter of a foot between '78 and 2001. But people are still building houses to benchmarks that were established back in 1929.

CHAIRMAN SKINNER: Any other questions or comments? Before we start, John, I mentioned earlier that we were -- two of our members had gotten delayed. Adam joined us and now Jon Dasler is here. We're glad you can make it.

MR. DASLER: We established that VDatums can be a lot easier than getting from Dallas to Miami. I was wondering if you could backup to -- you got a slide that was showing some relationships of adjustments in -- there's a real peak around 1947. And I was wondering if that was related to the 1947 leveling adjustment.

DR. JEFFRESS: You have to ask Dave that. Do you know that?

MS. DENTLER: Is this the one you were talking
DR. JEFFRESS: The one that had the big peak in --

MR. DASLER: Because the '29 datum went through a big adjustment in '47, which was more of a leveling adjustment, which is -- looks like it was.

MR. ZILKOSKI: No. What you have there is that that's where the country started growing really, and this was typical in lots of other major cities that happened. But, in Texas, you know, you have the oil boom that started growing and people started moving into the cities and so forth, and so they started building the leveling network, so you go across the country to any one of your major cities that had any kind of major development. And oil in Texas was one of the major developments, so you have huge networks that started to build in the middle '40s all the way to the middle '50s and beginning in the '60s then it died back down again because the country was starting to slow down a little. That's what you see, that big hump that goes on there.

MR. DASLER: If you go forward, that showed the coastline of Texas and the relationship between

NAV-88 and chart datum mean level low. But my observation there was that really, even along the
coastline, you're only looking at a, you know, two-to-five centimeters over some very vast distances.

MS. DENTLER: This one?

MR. ARMSTRONG: 18.

MR. DASLER: There you go. So over shorter periods -- and the CORS has been doing this in the bays for a lot -- you can extrapolate depending on what the title constituents are relative to geoid elevations; once you know that separation, you can see there's not a lot of changes there. And then last, there's several waterways, Colombia River, for example, where the chart datum is based on an orthometric height, and so that relationship's established, and I guess I'm wondering why now when we're updating surveys along the Colombia River, you know, we're not getting on that and using the GPS heights for that. More of an observation, I guess, more of a rhetorical question.

MR. ZILKOSKI: If it was rhetorical, I'm not going to answer that.

CHAIRMAN SKINNER: I was going to say, Jon, you're letting everyone off the hook here.

MR. DASLER: Well, I guess I know there's surveys on the Colombia now and they're putting in gauges and zoning, but the zoning areas are going to fire away -- if we did GPS heights, we'll have a lot better charts as a result.
MR. ZILKOSKI: Well, we are trying to, and I don't know the specific ones you're talking about, Jon, but we are trying to work with using, incorporating the best set of GPS heights with the tide values with the NAVD-88 wherever we can. In some cases, it may look like we're not using. But if we're not, there's probably some reason that we do have on there, and it's something we should address those. So on those cases, hopefully if people are asking us why we're not doing that, and maybe we don't have the information or that there is a good reason why we are not. I don't know your specific case, but we can talk about that and I can look it up and find out, because we are trying to use the latest and best values there but we do have to be consistent with what's around us.

MR. DASLER: Right. I know it specifically like we'll be doing a stretch from about Harrington Point on up to Vancouver, and then some NRTs are working above Vancouver, but they're going to use -

we’re going to use GPS heights with backup gauges and zoning to kind of show that relationship under a NOAA contract. But the NRTs are working above Vancouver and once you get above Vancouver, there's hardly any gauges installed and the zoning runs for about 40 miles up river and because of the result of the Bonneville Dam, you know, zoning -- you can't really zone that as safe based on the flows
coming out of Bonneville.

And that's a perfect application where they should be using GPS heights for the coordinates here on that stretch of the river where it's all a gradient defined orthometric height.

MR. ZILKOSKI: Well, I will let him answer it.

DIRECTOR SZABADOS: Well, I was just going to say, current technology we're using is evolving. And, Dave, I guess -- I ask a question out loud. Technology, we're moving to RTK and VDatum, should we address some of these issues? Would that be a correct statement?

MR. ZILKOSKI: It will address -- yeah, it will address some of those issues, but some of it has to do with the procedures in integrating it into the system. So it will address some of them. We're not there yet. But, once again, I'm not sure

I fully understand, Jon, your specific example of what you're doing there. But what Mike is saying is once we have VDatum built in that area and we have the models in place, you can use GPS -- kinematic or not, it doesn't make any difference -- you can use GPS with the VDatum model and you'll be able to get your best estimate of your height above whatever Datum you want at that point in time.

MR. DASLER: I presented in -- in the NOAA field procedures workshop in Seattle that Colombia River datum is really not defined by water level.
It was original water level observations back in 1912 by Hickson, the Corps established -- what they call it -- an adopted low water on the river. But it's relative to -- originally, it was relative to NGVD '29, but now it's relative to NAV-88. So it really has no relationship to mean low level of the water. So it's already defined on an orthometric height. So, I mean, you don't really need VDatum, you know the relationships. And GPS heights along there, I mean, everybody's been surveying that way for years. And if we're updating charts, that's how it should be done, in my opinion.

MR. ZILKOSKI: You were at that meeting he's talking about. Do you know of any specific examples that he's talking about in Seattle?

MIKE ASLAKSEN: What was the example you gave again?

MR. DASLER: The Colombia River.

MIKE ASLAKSEN: Right.

MR. DASLER: The Colombia River, it's basically a gradient. If we want to, I can show slides later.

MIKE ASLAKSEN: That's an extreme situation, as far as the issues we're talking about here.

CHAIRMAN SKINNER: Can I jump in just for a second? One of the things we're going to talking about tomorrow is the possibility of setting up very small discrete panel work groups, maybe two or
From Meeting

three people, to look at specific issues, either
technical or product-type issues and that type of
thing. And I'm probably the least qualified to
comment on this particular issue, but this sounds
like something that might benefit from a couple of
the panel members working with some of the NOAA
folks over the next couple of months before the
next meeting and maybe discussing this further.
Does that sound like appropriate --

MR. DASLER: Yeah. Well, the only other
comment I make, surveys are happening this year and

if you do everything based on zoned tides, it's not
going to be repeatable. If you do it in -- if you
do your surveys this year and you tie it to the
ellipsoid, you can go back and you can correct
everything on that, so it is a little pressing in
terms of operations this year, obviously.

CHAIRMAN SKINNER: Can you meet at the Blue
Moon at 5:30 to iron this out by 7? Very sad
looking faces here.

MR. ZILKOSKI: A couple things.

CHAIRMAN SKINNER: Sorry.

MR. ZILKOSKI: We will take care of this
before the next meeting, Jon. We'll sit down with
Jon and figure out what he's talking about and we
can do it. But I think you're right, the bigger
issue is these are the kind of things we need to
identify, what's the overarching issue and we
should put it general terms so that we're able to
take it to the future. That's use of GPS for tide
zoning and what we do from now until the VDatum's
up. Those are issues that as a group we can do.
We'll take your example, Jon, and address that, you
know, off-line. But tomorrow, I would still like
to talk about the bigger picture.

CHAIRMAN SKINNER: Any other comments or

CHAIRMAN SKINNER: Great. Thanks, Gary, and
thanks, Matt. I wish I would have had one of these
speaker systems when I was growing up. This would
be great for sibling management, shutting someone
off. I like testing this thing. Very clever.

We are now going into the second public
comment period, and I just want to see if anyone
has signed up or anyone wishes to make a public
comment?

CHUCK HUSICK: Just one question.

CHAIRMAN SKINNER: For the public comments, if
you can go up to the microphone. Sorry to make you
do this.

CHUCK HUSICK: Sure.

CHAIRMAN SKINNER: State your name again just
for the record.

CHUCK HUSICK: Chuck Husick. I listened to
your comments about the height finding effort. And
I note in recent days and months I've been getting
updates of approach plates for various airports
around the country where the touchdown zone
elevation of each end, and in some cases also the
center of the runway, is given to the nearest foot.
Can I assume that that's coming off GPS data?

DR. JEFFRESS: That's the guy you got ask.

ADMIRAL WEST: It is.

DR. JEFFRESS: NGS, they're responsible for
all airport surveys and actually the FAA uses a
chunk of their budget to fund that which would be a
good model to follow, for FEMA to do that same
thing, by the way.

MIKE ASLAKSEN: Michael Aslaksen. Yes, we
survey using kg/m GPS techniques and profile those
and survey them again. Those are down to the
centimeter level now. The FAA has its own
standards as far as how they publish those. But
the data that we provide to the FAA is down to the
level relative to the control in the airport.

CHUCK HUSICK: I'm greatly relieved that it's
not to the height of the tide. Thank you.

CHAIRMAN SKINNER: Thank you, Chuck.

BRIAN WALKER: Good afternoon. I'm Dr. Brian
Walker at Nova Southeastern Oceanographic Center
and the National Oceanographic Institute. And it
seems like this panel has a lot of -- been working
hard on a lot of issues. I just wanted to touch on
one that was brought up earlier by Chantal Collier.
Many resources in the conservation of Florida's coral reefs have been invested by the State of Florida and the NOAA and others.

Unfortunately, the issue of ship anchorages in relation to coral reefs in South Florida still remains a problem, as she discussed.

As Chantal mentioned, the Coast Guard issued a reconfiguration of Port Everglades anchorage yesterday due to the numerous ship groundings and insults to reef communities by ship anchors and chains. Coral Reefs are extremely valuable real estate. Reefs act to prevent coastal erosion, provide a sand supply to our beaches, offer habitat to a myriad of marine organisms and provide a source of biodiversity.

Reconfiguring the Port Everglades anchorage is a big step forward for the reef conservation in South Florida. Moving anchorage away from the coral reefs helps to avoid future impacts and allows the reefs to recover. Surprisingly, this issue has not been addressed to other anchorages in South Florida in close proximity to coral reef habitat.

As Chantal pointed out, the Port of Miami anchorage contains about one square mile of coral reef habitat. That's 25 percent of the area of anchorage. Furthermore, most of this reef lies in
the shallow west portion of the anchorage, which is
the area most used by the ships. The reef inside
the Miami anchorage is included in a recent NOAA
fisheries proposal as critical habitat for two
species of corals, the acropora cervicornis and a
A. palmata, which were recently listed as

Miami-Dade Environmental Resource Management
recently found 33 of these colonies of acropora
cervicornis as close as a half mile south of the
anchorage on the same reef that goes through the
anchorage, making it very likely that this species
also occurs in the anchorage. This means that the
NOAA charts will be directing ships to anchor and
NOAA critically -- NOAA's critical habitat for this
threatened species. The Miami anchorage must be
reconfigured to avoid further impacts to this
threatened species, its critical habitat and to
other living coral reef organisms.

The National Coral Reef Institute is closely
working with Florida DEP, Coral Reef Conservation
Program to evaluate the anchorage and to develop an
alternative anchorage configuration. These results
will be presented to the newly-formed Miami Harbor
Safety Committee in the near future to offer
options for changing -- changes in anchorage configuration that will not impact reef communities. In order to develop information relevant to the reconfiguration, we respectfully request that the panel seriously consider placing a survey of deeper waters around the Port of Miami on a higher priority to gain better data that will assist in the reconfiguration evaluation and facilitate an emergency role change in the Federal registry by the Coast Guard. We can provide these recommended survey areas upon request. Thank you.

CHAIRMAN SKINNER: Thank you. Just to clarify. We have not in the past -- this panel has not set the priority areas for or specific priority areas for surveying. But I think we've certainly heard one of the concerns here in Miami, and I think we will be discussing with NOAA whatever possibilities there are here, but it's not this panel that sets the priorities.

BRIAN WALKER: Okay. That would be great, because even off-line and in your own line of work, this reconfiguration can't move forward until the hydrographic survey is done of the newly proposed areas. Thank you.

CHAIRMAN SKINNER: Thank you very much. Thank you for spending the time here at today's meeting.
Other questions? Is there anyone else, any other
public comments?

Just to check with the panel, we have a break
scheduled right now or we could just move right
through and go to the IOOS presentation. Any
strong thoughts on skipping the break? Hearing
none, jumping at the chance to hear none.

CAPTAIN JACOBSEN: Five-minute break.

DIRECTOR SZABADOS: We hear recommendation of
five minutes.

CHAIRMAN SKINNER: I can't see her, so -- five
minute break, and then we will get back here in and
launch into the IOOS presentation:

(Recess.)

CHAIRMAN SKINNER: Reconvening the panel. A
couple of administrative things. We have dinner
scheduled for panel members tonight. Barbara, help
me out a little bit. It's at 7:00 in the Blue Moon
Restaurant.

MS. HESS: At 5:30, open bar, I think; not an
open bar, wait, I take that back. No, no, no.

MR. ARMSTRONG: Woo-hoo.

MS. HESS: This is my parting gift to you all.
It's a two-for-one special in the bar, and then

7:00 the seated dinner.

CAPTAIN HICKMAN: Woo-hoo.

MS. HESS: The seated dinner will take place.

I need you to come and see me and make sure your
name's on the list or I'm going to have to pay big
bucks.

CHAIRMAN SKINNER: Barbara sort of fronted the
costs on this against all advice and regulations
and so forth. Please don't -- if you said you were
going to go or indicated you were going to attend,
please don't make other plans. Were there any
other announcements, Barbara?

MS. HESS: No. Thank you.

CHAIRMAN SKINNER: Moving onto the IOOS
portion of the meeting. I just wanted to go
through a little bit of the history of where we've
been on IOOS with this panel. You know, we started
some years ago and the whole discussion of IOOS
versus ports, we sort of thrashed that around and
came up with when we were responding to Admiral
Lautenbacher on the U.S. Ocean Report, our advice
was sort of the rising tide floats all boats, so to
speak, and that IOOS reports were linked, and that
we supported all these efforts, particularly IOOS
with a navigation component. We have been pushing

that for a couple of years.

We had some concerns at the last meeting in
Seattle based on some regional words we had heard
about involving mariners in ocean-observing
systems. And Mr. Nagle was there and has done a
lot of work on behalf of what we'd like to get
implemented; resulted in my going to a NFRA
meeting, which is the National Federation of Regional Associations, for Integrated Ocean Observing Systems. I'm not saying this slow for the reporter. I'm saying it because I struggle with it every time. That was a very productive meeting. We've had some feedback. There's some feedback in the notebook.

I think one of the best things was that most of the managers for Ocean Observing Systems wondered what the problem was that the mariners were one of their biggest constituency groups, and I think a lot of their programs reflected that fact and we got a response from NFRA with a listing of the different ocean observing systems and the types of programs that they were implementing for mariners, which I think was all very, very positive.

I also was subsequently on an IOOS grant review panel that met in January -- and I can't talk about the details of the proposals -- but I was surprised at how many of them had really interesting maritime navigational components in them. And that was also very heartening to see.

One sort of side update. I mentioned this before. Bruce Carlisle had mentioned it in his presentation that there were two offshore LMG proposals in Massachusetts, and I worked on one of them. But as part of that project, the Stellwagen
Bank National Marine Sanctuary requested an array of buoys in and out of Boston Harbor.

And these buoys have been configured through a consortium led by Cornell University to detect Right Whales vocalizations. And the system became live probably two months ago. To get background data, two weeks ago the first LNG tanker came up to the northeast gateway buoy system to commission the buoy. It came without a cargo, but they tested the system and it worked as designed. So I think that has some potential applications, particularly in those ports that have a Right Whale or other marine mammal issues.

Basically, it works on a realtime basis where the buoys are configured to pick up Right Whale vocalizations and alert vessels in the area to their presence. Andy?

MR. ARMSTRONG: If I could just elaborate on that. Geo-hydrographic Center is developing a system in connection with Cornell to transmit the information from the acoustic signals on the buoys to the ships via AIS for display on the shipboard navigation system.

CHAIRMAN SKINNER: I should have mentioned that. The port operators group in Boston had a presentation from -- I forget the person's name.

MR. ARMSTRONG: Chris Ware.

CHAIRMAN SKINNER: Right. It was very
informative. I would say overall the group has
calmed about this whole proposal,
but then when they actually saw what it could do,
they were very excited. So I think this is
something that's good news.

Also, I just want to -- I think I mentioned
this earlier, as in a very short period of time has
really taken our message and aired it out to the
troops, and we really appreciate that. There's
been a lot of positive developments in IOOS, but
not all is well in IOOS-land, and I think that is
part of our efforts and

this-rising-tides-floats-all-boats issues. This is
something we have to be pretty vigilant on.

There's been some work to collaborate with the
PORTS program and, Mike, we all appreciate that and
all the stuff that you've been working on. There
has been efforts to integrate IOOS with a sea floor
mapping issues, and I think that's also very
positive. Heck, we even have an IOOS dating
service -- what's going on? -- today.

ZDENKA WILLIS: It's never good between this
panel and two for one drinks, so I know that much.
Thank you.

CHAIRMAN SKINNER: It doesn't start until 5:30
so we've got sometime.

ZDENKA WILLIS: Plenty of time. So I'll go
over a number of issues. So I'll try to go over a
number of issues, and I appreciate the vote of confidence there. We, within NOAA are work collectively to support the maritime community in a number of our programs and we, IOOS, as I tell everybody, IOOS is a national endeavor, and our missions are your missions, so I'm glad to hear that.

So I'll just run through a number of topics here, probably the first of which we all talk about is status of funding. Certainly IOOS is now within the president's budget and you saw the FY-09 rule out by Jack Dunnigan this morning. From FY-08 perspective, the president's budget actually had two lines, a NOAA IOOS line and the regional IOOS line, is how the president puts the budget forward and that was a 14 million dollar request.

In the omnibus, IOOS came in with 26.3 million and we had one earmarked for 940 K for the Alliance of Coast Technology, which is a cross-cut among eight different universities to do center verification. So about 27.3.

But to put that in context, where IOOS has been, in fiscal year '05, although it was through earmarks, the highest we've recorded against IOOS was 54 million dollars. So certainly not the trend that we like to see from 54 million in FY-05 to 27.3 in FY-08. And we are certainly pleased, at least from the president's budget, that it's
going up. So we hope to get back up there. So that's where we are on the funding.

With regard to, as you know, with IOOS, we apportion funds out to the regions and while there is no set formula, if you look at S950, it shows about a 50-50 split. Historically, the percent of dollars going out to the regions was 57 percent in FY-05. And we are still at the recommendation stage for FY-08. And we're looking at least 67 percent of the funds going after the regions. And while many -- we did do this process for our competitive panel -- and I'll talk about that process in a minute -- and while the P.I.'s, the principal investigators, have been notified of NOAA's intent, it is still a recommendation until that actually gets processed and so I can't talk about specific funding to specific grants in a public forum like this.

Quickly, the meritorious -- the merit-based proposal process that we went through from in FY-08 was similar to FY-07, and we were able to make some changes because we started this in FY-07, so we were in our second cycle. And we were able to make some changes based on lessons learned and based on talking with this panel. One of which was having recommendations by the HSRP, for reviewers, and so several of you participated as mail reviewers, and then Tom was on the panel.
And just so you know the breadth of which we had with regard to this panel in the reviewing process, we had 14 academic institutions, 13 federal agencies, 6 state agencies, 6 professional organizations or consortiums, two private industries. And we actually had a Canadian government agency. So we do have a breadth of reviewers and that's always tricky because many people in the oceanographic community are part of these proposals coming in, so we have to manage that.

So that's where we are. And I can take questions in the middle of this or when I go through. Because I'm going to go through an array of topics, so I'll watch for people to flag me if you have questions.

CHAIRMAN SKINNER: I think to the extent we can make this a little bit more interactive would be great.

ZDENKA WILLIS: Yeah, 'cause, 'cause, I can firehose but I don't want to, so I will keep trying to look up to make sure, because I just have talking points. I'm not doing slides today.

So within the NOAA IOOS office, in addition to watching out for these regional associations who are building regional coastal ocean observing systems -- and a lot of acronyms here, there are eleven of them -- we are working on, as has been
discussed, across other NOAA programs. So it is
with cooperation with Mike and his groups that we
are entering into an agreement with CO-OPS, with
IOOS and with the Army Corps of Engineer to offer
the realtime quality-control waves products
tailored for ports and the partners in the maritime
navigational community, and that's going to be
ongoing this year through 2008.

It is certainly in collaboration with our
National Data Buoy Center, who has their waves
buoys out there as well and provide data assembly
center -- data assembly work on that behalf. It's
also a very specific project going on and, Tom, I
don't know if you're going to talk after I am on
the specific project, but it is an IOOS-funded
project in the Long Beach area, which is really
what got us started to be able to demonstrate and
work with Mike on his system, which is a realtime
system that he's got liability issues that we need
to work through. But it's just, I think, great
cooperation between, you know, what we have funded
through IOOS to get translated into Mike's system
on ports and on CO-OPS. So I think that's
something we talked about in the last September
meeting and we, you know, accomplished that and
working through that with real milestones by August of 2008.

Going back to our regional folks, and you have the letter from NFRA, you asked us to take a look at the regions, were they responsive to user needs and user requirements, and so NFRA has provided that letter to you. You asked us to do program reviews on the regional associations and all of the projects that we have funded, and we began that process with the Great Lakes Ocean Observing System. We did their first regional assessment. They were first in the barrel and we did that on the 26th of February. We have all eleven regions. The assessment's set up by my office. The next one is -- I have to think about my schedule here -- the next one is in April and that will bring -- in Houston, actually, and that will bring GCOOS, our Gulf of Mexico Coastal Ocean Observing System; SECOORA, our Southeast Coastal Ocean Research Regional Association; and the Caribbean Regional Association together in April 23rd; April 30th, we will go to Rutgers and we will do MACOORA, which is Mid-Atlantic; and NERA's, New England Regional Association; Alaska will be done actually in Washington because Molly McCammon then travels
From Meeting

back and forth to Washington; the Pacific Islands will be done via VTC to try to also save on resources; and then in June we will pick up the three regional associations, Regional Coastal Ocean Observing Systems of the West Coast, that's NANOOS, CeNCOOS and SCCOOS, so if I confused you with all those acronyms, it's where we live. So we've done that.

But yet, even though we are doing this, there is still concerns on the ability to fund the observing capacity that exists there and that has been built up from previous earmarks. As Emma West has said, you've got to keep the lights on. And, you know, we don't have the funding that we need for the operational maintenance. And as went through this very abrupt change in 2007 from an earmarked process into a merit-based proposal process, it is not a perfect process, and we realize that.

And so, also, additionally, in August of last year, we met with the NFRA executive board on what was -- and the consortium for ocean leadership and Ocean.US to talk about that process. And in that we have a program support contractor who is developing an IOOS regional business model. And

reason that they're doing that is one of the requests that came in from the NFRA letter to NOAA was, well, I get funded by this federal agency
under this program and it's a better way to do it than what you're doing at NOAA; whether it's a DOD program, a Department of Energy Program, an NSF program.

So the first part of that study which was completed in December was to evaluate those various funding mechanisms that would be available to be able to fund the Regional Coastal Ocean Observing Systems that still meets the intent of being a competitive process and how can we get from, you know, right now, what's basically year-to-year or even a three-year cooperative agreement with subject available funds into a five-year process.

So they laid out the various funding mechanisms that are used within the federal government.

And the second part was to actually take a look at a regional business model from a strategy, organization structures, IOOS requirements, implementation plan, funding and communications.

They looked at it from both a federal perspective and then they went out to the regions, and so they've done that rigorous analysis, they've conducted the interviews and we had a midterm progress review of that work in the -- on the 26th of February. I joked with my husband when I read it, that if only I could clearly identify what everybody needs to be doing, it would just be perfect.
But it does point to the fact that we do need to be capturing what the requirements are that this sector has and other sectors so we are building to something. And that was pretty clear, and I think that's been a comment certainly of this panel and others with regard to IOOS. And so we're going to work forward on that.

So things like -- we have regional associations who are developing models that can -- that have the potential operability to a port system. And within NOAA we've got the offices here under Steve Barnum, he's got the Coastal Services Development Lab and who does development of those types of models that gets supported and transitioned into CO-OPS, where there's a process whereby that needs to be done and you saw the difference in that gap. You saw 48 model gap in what we saw earlier this morning.

We do have regional associations who have developed those. And so we talked earlier this week. I need to get -- it's still in a written agreement -- that, you know, how to do that, but we talked about taking the models that, you know, MACOORA up in the New York York or the Great Lakes have developed, put them through the same rigor that already occurs between Steve's group there at NOAA and Mike's group and, you know, making sure that the commensurate computing power and all that.
So those are the types of things that I think are really exciting and that will also give us the ability to, you know, get away from this perception that the regions are just out there doing what they want to do. And they're not. Because they've done those user needs and they've done those assessments and they've actually provided us a first draft, us, NOAA, it's available to everybody. It just happens to be that I -- when I'm talking us, it's NOAA -- on some conceptual designs. So I think that those are some areas that where we need to work on our regions.

A couple other things that we're doing. HF radar. We talked this morning about the oil spill there in San Francisco. There was a meeting that was sponsored by the State of California and NOAA in January. In looking at the use of additional observations, specifically HF radar, and how that matches up with the current oil spill response model that NOAA runs, so OR & R was there, sanctuaries was there. I was there from a programatic perspective, and the Army Corps was there, the various entities in California that are involved in this. And so that's the next area that we're going to concentrate on.

Because for the most part while the HF radar has -- the network is growing, we are in, I think, about 95 or 96 HF radars, most of what's been
available in the national server has actually kind
of been a picture of the data and that doesn't help
you. You actually need those vectors. So that's
what we're working on this year is to actually get
that vector data out and then get into a format
that the model can use or, in our case, the model
actually has to be looked at because of the
configuration of the model, to be able to take not
only the ports data but the HF radar data. So
that's why we're working in the HF radar. We are
doing our due diligence within our NOAA, Planning
Programing Budgeting Execution System to get those
requirements, and so we can try to start to get the

funding for sustainment.

Because there is no funding for sustainment of
this capability, which is showing huge promise for
not -- an oil spill response, for a number of ocean
health issues, beach closure, a number of updates
to, you know, the three dimensional circulation
models which are critical to this group. So that's
another area that we're concentrating on.

We are in the midst of completing the draft of
a Senate report. Last year's appropriations
language tasked NOAA to write a report on IOOS that
was supposed to encompass all of NOAA, all of the
federal agencies, all of the regions, and if we had
time, the international component. But we, I think
most of you received received my Z-gram -- which
I've gone to biweekly instead of weekly -- and I talked about that, but it is -- what we have -- what we were directed to do and what we worked with -- and we think it's an important way to go -- is to focus the report so that we can show it isn't everything for everybody, but we can show support in areas that are important to the nation, coastal inundation, the maritime transportation sector, the integrated ecosystem, effector and harmful algal blooms, harmful algal blooms modeling, how to bring this together so that this report does show in a realistic manner how by that, you know, you need products and services, you need the integration of that data, you need the observation systems to make it work in a way that is understandable.

And then that -- by doing that in a holistic way, we can then support other areas. So that report is soon to go into clearance. We met -- and because it's going through the appropriations, it goes through our budget shop, and so we have -- we've got some work we're doing on that. But I think we're close on getting that into clearance.

Let's see. What else have we done?

The interagency working group on ocean observing, for the integrated coastal mapping. We have one for ocean observing and, in fact, Jack Dunnigan chairs that. On the NOAA rep you should see soon, we hope within this week a public,
registry notice for comment on an IWGEO, IOOS strategy, which was actually started last year, gosh, at least a year ago now. So that is working its way through our administrative process within NOAA to come out.

Talked about last time. We talked about standards and how they're important for us to be

able to use that data. We did kick off in October the U.S. Data Management and Communication Standards process. US DMCS process. NOAA used our resources to take the -- as I take it, you know, it's a 10,000 foot level that you could almost make a decision to, down to the two foot level where you could actually make some decisions in this process. It's a three-step process. You propose the standards. They go from proposed to submitted, the public notice, and then they get to recommend it. It's an ongoing process, we call it, you know, open season or tax season for standards. But in the first cycle, we brought eight standards in. Four made it to the -- from the proposed -- from the submitted -- submitted to proposed. I'm sorry. And they went out by public register notice and that just finished. And we will have the next data management and communications steering team meeting in May. They meet every month. While the process is open 365 days a year, we close it down in, for example, we'll close down the input of any any
standards to be looked at the May meeting in March because we have to do some processing. So that is ongoing.

We talked to you about a data integration framework, which was our ability first within NOAA to be able to use, as we call it, data off the shelf for any user and that is plowing along, again, in great cooperation with CO-OPS. They've got a programmer that is absolutely fantastic, and Mike Schapp has just been great in working with us to bring this together and our National Data Buoy Center down at Stennis, our two large areas that are processing data to start the data integration framework.

In February, we met with the data management and communication reps from all 11 regions, and so we're extending the DIF from what as we call it Club Fed out to Club Regions and the nice thing about them is that they are really more agile in computer programming than sometimes we are in the federal government. So there's a lot of excitement in moving that forward.

And so we've done that and we do have a web site where we try to be very open and transparent, it's www.IOOS.NOAA.gov. And we also link back into, from a data perspective, the very, again, great web sites, the buoy center and NDBC and CO-OPS comes from a data perspective. They still
25 have their own but we try to link our partner and

our regional execution is our NOAA's coastal
services center, again, a very distributed
management within NOAA and the federal governments
and the regions.

We talked about a national waves plan. I
would have hoped that this would have gotten out to
you all by now for comment. The first version came
in -- actually, my office in fall, and there was
just some things we needed to have looked at before
we could actually get it to a wider audience and
then we just -- Army Corps is our lead on that, got
a little bit overwhelmed there. And I'm expecting
that the draft which would then -- NOAA and the
Army Corps will bring it into the IWGOO when that's
ready. Then the IWGOO, and for my case, I will
then send it back out to NOAA for comment, but we
will work to also get it out to the HSRP for
comment so that you're seeing all this.

And one other topic and then I will take
questions. Just so you know, it's a point of, I
think, great interest, NOAA and Shell signed an
agreement on the 13th of February and that -- my
office is the collaboration lead on that; in this
case Buoy Center is our technical lead, as is Jack
Carlan for HF Radar and this is -- Shell is putting
oceanographic immunological sensors on platforms
within the Gulf of Mexico at their expense and
working with NOAA to make sure that data is in
format so that we can use. So that's a very
exciting partnership. That was just signed in
February, and there's six projects there, including
putting an HF Radar on one of their platforms to
ty to look at some bistatic signal returns there
in the Gulf of Mexico.
And we just got -- or the Admiral just got an
e-mail that B.P. would like to now enter into a
similar agreement, so we're -- we just got that in
and we've made the query to B.P., so I think I'll
stop there. And, Tom, I didn't know -- I think you
were also on here. I didn't know what you wanted
to talk about, but I'll take questions from you.
CHAIRMAN SKINNER: Why don't we start with
questions or comments and then go onto Tom for the
WOR beach project.
CAPTAIN JACOBSEN: I will give a quick update.
Questions?
CHAIRMAN SKINNER: Any questions?
MR. SZABADOS: What were the four parameters
that got elevated for the standards?
ZDENKA WILLIS: Oh.
DIRECTOR SZABADOS: I don't know, but I lost track 'cause --

ZDENKA WILLIS: Yeah, I should know, too, but I can't -- it wasn't by parameter. I will have to get back on that, Mike, because, you know, as soon as I said that, you know, I can't rattle them off right now, and -- but I'll get back to you all on what those were. It was the NASA standard and NOAA standards from our -- and the Cortas (ph) Group, and so we did have to table for that, we're on the QHUC 'cause we didn't have the right expertise, so we're formulating that right expertise on that, so we should get that fixed by May. But I'll get back on that. I can't remember.

DIRECTOR SZABADOS: All right.

CHAIRMAN SKINNER: Jon?

MR. DASLER: I was just curious on HF Radar. I know you're putting it into places where you can do forecasting, but are they also putting that in, selling that as also a tool that can be used for realtime observations during the spills especially in critical areas, like in San Francisco Bay, is that --

ADMIRAL WEST: Yeah.

ZDENKA WILLIS: That's what the meeting was on the 15th of January and -- there is a one-pager on that. I know I sent it on the Z-gram, but we'll
get it out to you. But yeah, it is exactly that, to be able to understand the trajectories with the realtime currents that are being continuously monitored, in addition to, you know, the port systems that already have that out there. But absolutely, that's what the intent and the discussion on that meeting was. Some of it has to do with, again, getting the actual vectors into the format that can be used.

MR. DASLER: I think that can be a big selling benefit for the realtime observations, where they're putting out booms and you got wind-driven currents in San Francisco Bay and where the oil's going.

DIRECTOR SZABADOS: On the HFR, I just want to highlight that NOAA is working with IOOS community up in New York right now with Rutgers and Stevens. Again, the HFR, as an oceanographer, you get a plot from a lot of vectors and from the oceanographers you get the oohhs and aahhs. But then you have to make a practical product that the operational person could use, including make sure you have it quality controlled, so we're in the process of trying to do that. We're more than trying. We're working on that.

CHAIRMAN SKINNER: Admiral?

ADMIRAL WEST: Hasn't MMS required the rigs in the Gulf to provide you the data?
ZDENKA WILLIS: They have required for the ADCP data, but this is above and beyond anything that they have access to.

ADIMIRAL WEST: But it took that initiative for them to start cooperating before they decided they would join us, is that fair or is that not fair?

ZDENKA WILLIS: That's fair to say that that is where that started. Also then through the Gulf of Mexico, Alliance, the president of Shell met at the meeting in 2006 met with Admiral Lautenbacher and Jon Hoffmeister, really, from what he's stated to us and shown through his company, that he really wants to about a better steward with the environment and with the community down there, but certainly it did start because of that insistence by MMS.

CHAIRMAN SKINNER: Other questions, comments? I have a couple I wanted to follow-up on, Ed's comment earlier, on the suggesting that the IOOS bill be amended with some language about user groups, I think that was it, wasn't it?

MR. WELCH: That was, Tom, but I've looked further in the language there, and there's actually some stuff there I think is fairly good that this idea's embraced present.

CHAIRMAN SKINNER: So I might have been ahead of myself. Check. The next thing I just wanted to mention, I'm on the board of an ocean-observing
group that was an earmarked baby and I think it probably wouldn't have gotten off the ground without it, but having said that, the move towards the competitive I think is really needed - or was needed and is a brilliant move.

Looking at the different proposals that come in, the quality of the submissions ranged over a very wide area. And this is the way to go. And I think that this would not have happened without Admiral West constantly driving this home. And I think that he should be recognized for that effort. It's no fun badgering people to give these things up. And it really was needed.

ADmiral west: Yeah, absolutely. The problem is now you got the backlash because you can't keep everybody happy. We just -- NOAA just didn't get enough money to keep everybody going, and now you got some backlash, literally today, over there stirring the pot, well, I'm not sure I really like where we are going now because I didn't get all my money. So we're kind of caught in a Catch-22, so now they're pushing back at us and the momentum over on the Hill is kind of like this, and we're right at a critical moment, I think, with IOOS.

The other indicator is some of the proposals weren't good because they never had to compete for the money, it was earmarked. So in some ways competitive money makes better products for
American investment. So there's lots of good things going on here, but we're at a critical time right now where we've got some turmoil, some people pushing back because they haven't gotten all their money and I can't keep all the lights on, I got to fire people. And I certainly appreciate that. But until NOAA took the huge step of rolling up and starting a national line, as most of you know, earmarks are harder now, I guess that's -- is that fair, harder now? They're still here. They'll never go away. McCane gets in there, they will even be harder, but so I think it is the right direction. But everybody needs to know, there is some real tense times right now. Zdenda knows.

Well, if we're giving you money, we got to keep them going. You got to find some weak folks to keep them going.

But that brings up a good point. One of the other problems we have with IOOS, in fact, because they were earmarks and because they started by the active research community was, the user says, well, you never contacted me when you designed your architecture and all this other stuff, so there really is -- we got to keep up the pressure that these folks that are getting this money understand that they're putting this not just for the researchers but for the commercial industry, the transportation commercial and all that stuff, so we
15 got to keep that pressure up, too.

MR. WELCH: And, Admiral, and the letter of
16 response was an excellent letter. And I was just
17 looking through the chart that was attached. And
18 one observation I would make is that, you know,
19 consulting with one user is not consulting with all
20 users, for example, there were a couple of the
21 regions that listed two or three users, so to
22 speak, but they were all in the fishing industry.
23 So in that region, there wasn't any -- assuming --
24 I'm assuming it was the shipping industry in
25
311

those commercial shipping industries. But the
1 fishing industry's going to look after its own
2 commercial fishing -- commercial shipping is going
3 to look after its own. In some ways there needs to
4 be some initiative from the private sector saying
5 we want to be involved but there needs to be some
6 responsibility about it. The regional folks say
7 more than, oh, let's check off a box. We got one
8 or two users from a couple of segments and we can't
9 assume that they all speak for everybody.
10 CHAIRMAN SKINNER: Do you want to respond
11 or --
12
13 ZDENKA WILLIS: It's very valid. And one of
14 the things as we go through this assessment is for
15 those regions to -- so that I can understand what
16 is the breadth of the users and really how involved
17 are they in the organizational structure. And I
Meeting 18 will tell you that, you know, NFRA did have their meeting, their buy-in -- I guess they do it every six months -- meeting at the start of the science meeting last week in Orlando and there was -- I wasn't there for the entire meeting, but that was a discussion on there. But again, I was very -- as the program manager was very happy that the HSRP was able to put the letter together, and I welcome this panel's continued dialogue and continued, you know, pressure -- and I don't mean that in a derogatory way at all -- to continue to make us, the IOOS community, be responsive to your needs. And so I think -- I appreciate, you know, that opportunity.

CHAIRMAN SKINNER: I think probably Admiral said it better than I did when I was saying, well, good things with IOOS, but there's some problems ahead. This is really the critical point, and I want to make sure that to the extent that this panel can really stay on top of this issue, because it is sort of a tipping point and we, you know, progress in other programs has been made, that's gone the wrong direction -- I'm not referring to anything in NOAA -- we want to make sure that that doesn't happen here and staying on top of that I think is critical and I think we might want to include that in our strategic discussion tomorrow. I need an over the horizon back scanner radar here.
(Referring to audience location.)

MS. BROHL: If I could drop in, I just wanted to add to what Ed said in terms of the membership list. I don't know --

CHAIRMAN SKINNER: Helen, you've been with

this crowd long enough, you have to come up to the microphone, or we won't listen to you.

MS. BROHL: Helen Brohl. I just wanted to add to what Ed Welch was saying in terms of the content of the membership. I don't know how it's viewed, then certainly the federal partners are hugely important, but they don't constitute the stakeholders, necessarily. I mean, they may be users and important ones, but the Army Corps of Engineers is not necessarily going to be there representing the interests of the commercial maritime industry. They certainly understand the value of it. I just mentioned that, too. Thank you.

CHAIRMAN SKINNER: Thank you, Helen. Any other comments?

MR. DASLER: Tom? Well, I guess -- I saw in one of the Z-grams, I guess, it's a part of it, is the bathymetric data sets is going to be part of the IOOS and bringing in data from some of the IOOS efforts, I think I saw that in there.

ZDENKA WILLIS: That's what's Tom thought about the IOOS dating service, and that was really
Paul Seri's comment from California. We were able to -- and I put those collaborative projects on.

We were able to get that going. The real effort and the real heavy lifting is, in fact, done in the executing office in NOAA, which is Steve Barnum's group, the Office of Coast Survey and, in fact, Roger Parsons in the Integrated Intercoastal Mapping has really taken that one on. And so from my perspective, I'm just kind of doing the highlights now. But again, once we can -- I don't want -- I want to make, you know, we didn't reorganize NOAA entities underneath IOOS, and that was for -- done very purposely so that we aren't creating something outside that said, you know our missions are your missions. So really the heavy lifting is done -- all the lifting is done where it should be done in NOAA, and that's within our Office of Coast Survey and they've taken off. And not only do we have California, I think, we also have state of Washington and Oregon are looking to come in and so -- and we were part of the interagency working group meeting last week under the IOCM. Again, so we don't have -- like we have talked before -- CORS versus IOOS. We certainly don't want IOOS CM and IOOS to get into that discussion, so we're making sure that we're very closely linked in NOAA that, you know, that that is
a full part of this whole national picture.

MR. DASLER: Just a plug, Oregan's sea floor
mapping workshop is coming up March 18th and 19th
in Corvallis.

CHAIRMAN SKINNER: Anything else before we
move on to Tom's presentation or overview summary?

CAPTAIN JACOBSEN: Just a short what we're
doing in Long Beach story. We have a few things
going in Long Beach which are kind of interesting.
We're working with NOAA, Scripps, Walpole and some
the local Port of Long Beach surveyors on several
projects. Just a little background. I think the
biggest challenge for all the ports and the pilots
are the bigger ships that keep coming in. Our
largest container ships now are the 8200 TEU ships.
They're 1100 feet long, 140 feet wide and about 43
feet deep, and that's because we have some
restrictions for the channel and we're going under
bridges and we clear the bridge by a couple feet.
So big ships going down tight channels.

The biggest tankers are the 300,000 ton
tankers, 1200 feet long, 200 feet wide. And the
deepest draft right now is restricted to 64 feet.
So interkeel clearance is critical in these. And
we're going to take care of some shoals, and B.P.
is going to start loading down to 69 feet deep. We
ger on board the big ships outside the break
water -- the big ships. We get on board about five
miles outside the break water and we get into a
channel and we're restricted as we approach Long
Beach. The critical problems with these big
tankers are southerly swell for us. And we're on a
northerly heading and we can start pitching the
ship and we can use up all the interkeel clearance
and actually touch bottom.

So working with Scripps and NOAA, we wanted to
come up with some modeling programs and model when
we have the bad swell for us and we can have a go
and no-go alarm system kind of, sort to speak. And
every other swell doesn't hurt us too bad, but the
southerly well in a long period affects these
ships. We want to know before we get caught in the
channel where we can't bail out. So that's a good
project to work on.

Another project is we're upgrading our ports
system this year with Walpole (ph) and then NOAA,
of course. We want to work on alarm system for
when predicted tide is different than real tide, so
somehow have that alarm us, so that affects our
transits under the bridge.

MR. DASLER: RTX GPS.
CAPTAIN JACOBSEN: Yep. And then all this is being transmitted in different ways out to our carrier board laptop computers, and that's our high precision navigation systems, so it's all kind of coming together.

CHAIRMAN SKINNER: Sounds really interesting.

CAPTAIN JACOBSEN: It's all good stuff.

CHAIRMAN SKINNER: Any questions or comments?

Anyone want one for their own report?

MR. DUNNIGAN: Do I want one of his computers?

Yeah.

CAPTAIN JACOBSEN: He will charge you.

CHAIRMAN SKINNER: One of the systems.

MR. DUNNIGAN: Cool.

CHAIRMAN SKINNER: Thanks, Tom.

CAPTAIN JACOBSEN: Yep.

ZDENKA WILLIS: You're welcome.

CHAIRMAN SKINNER: Thanks, Zdenda, why, of course.

MR. DUNNIGAN: You didn't brief out on ocean U.S. changes.

ZDENKA WILLIS: I did not. Can I?

MR. DUNNIGAN: Let me just make sure. Many of you are familiar with an organization called Ocean.US. It's been a part of IOOS for a long time. It is the group that did the IOOS development plan and the second IOOS development plan. It's essentially an interagency body, but it
really developed a strong personality of its own.

The IWGOO, Interagency Working Group on Ocean
Observations -- as Zdenda said, I chair that -- has
been looking at Ocean.US.

And we've made some decisions that at the
agency level we think that Ocean.US probably
doesn't have a strong of role to play in the future
as it's played in the past, so there has been some
structural changes. The executive director is
leaving at the end of this month. And we're going
to be moving towards probably a much smaller staff,
we're not exactly sure what they're going to be
doing. It may be that Ocean.US will go away and we
will just keep the focus on the the agencies
themselves, but we have a couple of months to try
and work that out. So I just want all of you that
have some familiarity with Ocean.US if you had any
questions about it or heard stories what are they
doing at Ocean.US. It's certainly morphing into a
different kind of body that it's been, and it may
not have a continuing role at all. But that's sort

of what the status is. I just wanted to mention
it.

CHAIRMAN SKINNER: Great. Thank you. Any
other comments? Great? We're all set.

We have one last public comment period, just
to check to see if anyone would like to make a
public statement? Everyone is looking very
tight-lipped. What's the formal process? Do we
leave the comment period open until the advertised
time or --

MS. HESS: I don't -- I mean, I don't think
so. There's nobody back there and there's no check
marks. Let me just check the page and make sure
nobody checked it out and they're out in the
hallway.

MR. DASLER: While we're waiting, I'll make
one more comment.

CHAIRMAN SKINNER: He's full of energy over
here.

MR. DASLER: The case of the 69-foot ships
approaching L.A., this is the classic example of
where we need to be going in the future. Dave
Doyle made a great presentation at the field
procedures workshop talking about how the people
with -- it's not going to be too far out where

you're going to have a GP receiver the size of your
cell phone and you can navigate around at five
centimeters, so I mean, that's where things are
going and we need to be looking that way.

In the case of the ships going into L.A. Long
Beach, if that channel is surveyed to a very high
precision relative to ellipsoid charts and
converted to that and then they have the receivers
on there, you will have the realtime observation.

You will know realtime how much your ship is moving
around, you'll know, you know, if you're getting shallow water draft effects and you start getting into the channel and you adjust your speeds. I mean, you'll be able to navigate right on it. And that's really where we're going and we need to be looking that way.

CAPTAIN JACOBSEN: That's good. That's good.

CHAIRMAN SKINNER: We do have one public comment, Bahar Barami from the Volpe Transportation Center.

BAHAR BARAMI: Thank you, Tom. Bahar Barami. I would like to just, you know, make it very brief, an informal comment about the study we're conducting. For NOAA to assess the -- to connect the formal benefit cost analysis for the -

essentially the selected number of products, electronic chart systems and realtime tide and current systems, and it's a rather rigorous process but also rather time consuming and difficult because we really don't have good data in terms of quantifying the benefits as well as the costs. Costs are a lot easier to quantify. So if you're doing a whole range of impacts, estimate terms for a broad spectrum of users, from commercial, all types of commercial users, passengers, as well as cargo and recreational users, fishing vessels, as well as military, you know, vessels, search and rescue. And then research and development, R & D.
type benefits.

So, in essence, the reason I came here, Barbara invited me -- and I'm very grateful for having participated in this -- is to really elicit, your help. I'm going to be calling on a lot of you. Because you are the front-line users and experts. And you know what the issues are, you know what the impact is. What you're essentially trying to do is to assess the impact of charts, and I believe that the impact is horrendously beneficial to the nation at all levels, but we really need to use our rigorous benefit cost analysis to quantify this.

And I'm going to be -- I was talking to the port pilots and just talked to the Captain Jacobsen. How are -- to what extent can we measure the way we are pair off having some of these technologies than if we relied on alternatives? Because we're going by the OMB requirements for evaluating the whole range of alternatives to the products that we are -- the products of the program that we are evaluating, so we're looking at paper charts. The baseline is not having anything. The baseline is having paper charts, draft charts and a whole range of non-NOAA products.

So that's what we're doing. That's why I will be asking a lot of questions of a lot of you at an informal level. We're forming expert group
meetings. We're not calling them focus groups because in order to run focus groups. We will have to get OMB clearance and we're not running focus groups, but we're having some expert group meetings in Boston. I work out of the Boston area. But we have that conceptual framework for the benefit cost analysis and by the end of the summer, the study will have been completed. But I'll be calling on a lot of you and I really appreciate having access to this wealth of knowledge and information. Thank you.

MR. WELCH: Before you go -- before you leave,. BAHAR BARAMI: Yes, sir.

MR. WELCH: Thank you. But I suspect some of us aren't very familiar with the Volpe National Transportation Center, so could you take a minute or two to explain what that institution is?

BAHAR BARAMI: Sure. We are a -- essentially a research lab. We are part of the -- part of the US DOT, U.S. Department of Transportation, and one of the agents administration within US DOT is -- has recently been renamed, RITA, Research and Innovative Technology Administration, which is in Washington, and we are -- and that's our parent agency, so we are an agency within RITA, which is an administration within -- like FAA and FL Highway, RITA is one of the administrations within
US DOT. We are a free service agency, but we're all Fed, so we do conduct and we are all mostly -- we all have academic backgrounds and so on, so we write proposals and we conduct research.

I'm doing a project for Helen Brohl for CMTS, Corps of Engineers hired us to do the -- to assess for the MTS assessment of the challenges at all levels, the infrastructure modernization channel, just a passage. So we do free for service research but we are very much customer-focused but also kind of independent, in the sense that we really think independently rather than just rehashing some of the things that the government wants. Sometimes we create problems because of asking difficult questions.

MR. WELCH: Thank you.

CHAIRMAN SKINNER: Other questions or comments? Thank you.

BAHAR BARAMI: Thank you.

CHAIRMAN SKINNER: Any other comments? Let's see. If I would have known that this involves so much paper...I think one of the things that -- going over the schedule for tomorrow and, Barbara, if you can be there to correct me if I'm wrong, there's a schedule change and the bus leaves at nine a.m. or is that?

MS. HESS: I think it's 9:30. The bus will be there at 9:30. Danielle has the information.
Everyone needs to meet out in the front of the building closer to the street. The bus cannot pull in so they will pick us up from the street. They will out there waiting for us. We will ship by 2:30 or three.

CHAIRMAN SKINNER: We know people have flights to catch, so we're going to try to keep it to that schedule. Bruce, are you doing the budget discussion?

BRUCE VOGT: Budget is tomorrow?

CHAIRMAN SKINNER: There's an FY-10 budget thing on the agenda.

BRUCE VOGT: Right. We're going to talk about some of those, some of the things that are in the planning process.

CHAIRMAN SKINNER: So tomorrow will include a tour of the integrated bridge on the Norwegian Sun and, Minas, we have you to thank for that. I think everyone is looking to that, brand new vessel.

CAPTAIN MYRTIDAS: Is the fleet. This is what you guys...

CHAIRMAN SKINNER: Special.

CAPTAIN JACOBSEN: We ordered the new one.

CHAIRMAN SKINNER: So Minas will be submitting a grant to update the system, I think. Then
Admiral West will be doing the power point presentation for the science advisory board, and I think that will be useful for us to see and also for him to get some feedback. The budget update, and then we need to spend some time talking about the strategic plans for this group and where we're headed over the next couple years, so it's a fairly busy day tomorrow.

I would also like to have just a quick members-only meeting, panel members, at the immediately at the conclusion of the public session today. I heard a gasp over here.

MS. HESS: Please bring your identification for the visit to the ship tomorrow. The identification, driver's license or passports that you have provided to me to get clearance for the ship visit.

ADMIRAL WEST: Where are we going, Cuba?

MR. DUNNING: Shh.

CAPTAIN MYRTIDIS: Did you not hear, the port has expended 22 million dollars that, alone should tell you what to expect domestic. So I really would like us to leave here by 9:30, not try get together at 9:30. There's only 10, 15 minutes to go to the port, but I think we're going to use the
time to clear through security. So when the ship
is clear for the outgoing passengers, then we can
go straight, I mean, so I would appreciate it if we
are departing at 9:30 in the morning.

CHAIRMAN SKINNER: Your wish is our command.

Change to 9:15.

MS. DENTLER: Meet at 9:15. We will leave at
9:30.

CHAIRMAN SKINNER: Right.

MS. DENTLER: With our thumb in our eye.

CHAIRMAN SKINNER: You didn't have to put it
quite that way, but....

ADMIRAL WEST: Touche.

CHAIRMAN SKINNER: Read between -- meet
between -- is there like a coffee place or --

MS. DENTLER: There is, the little --

CHAIRMAN SKINNER: Breakfast, bar.

MS. DENTLER: There's not a bar, where you
guys had dinner last night, there's a place to get
coffee. It's like a little deli right there.

CAPTAIN MYRTIDIS: There is a coffee maker in
the room.

CHAIRMAN SKINNER: Let's keep it simple.

Let's meet.

MR. ARMSTRONG: Is that by the concierge?
CHAIRMAN SKINNER: Right by the concierge desk at 9:15 ready to go, okay.

ADMIRAL WEST: That's easier then.

MS. HESS: Do you want five minutes to -- you wanted to have a meeting after this?

CHAIRMAN SKINNER: Yeah, can we meet here?

MS. HESS: Yes.

CHAIRMAN SKINNER: So we'll adjourn the meeting and -- yes, Jack?

MR. DUNNIGAN: If you're ready to sort of wrap it up, let me just have a minute. I have to head home tonight, and so, have a great day tomorrow, Minas, thank you very much, I really wish I could have made it, but I've got some other things going. So again, thank you all for taking your time and being here and for everything that you do. As we said at the beginning, as Tom said, this is something that is important to the Vice Admiral, it's important to me and we're glad to be able to listen and learn, which is what we do whenever we get together. I hope you all will do something really nice for Barbara Hess because she's just a great leader and trooper for all of us, and I really appreciate everything that she's done for such a long time. So thank you, Barbara.

And I'll be seeing you. If I don't see you around town the next time we get together so look forward to it, but I just want to say thank you
very much and wish you well.

CHAIRMAN SKINNER: Once again, thank you for the extraordinary amount of time you put into this panel. Can I have a motion to adjourn?

MR. DUNNIGAN: I move.

MR. WELLSLAGER: Second.

CHAIRMAN SKINNER: Second? Any discussion?

All in favor?

(All responded aye.)

CHAIRMAN SKINNER: Any opposed, any abstentions?

(No responses.)

CHAIRMAN SKINNER: Thank you very much.

Okay. That should not have been adjournment. It should have been recessed until tomorrow at 9:15 in the morning. Sorry.

(Meeting concluded at 4:00 p.m.)

REPORTER'S CERTIFICATE

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I, Glenda M. Powers, Registered Professional Reporter, Certified Realtime Reporter, and Notary Public in and for the State of Florida at large, certify that I was authorized to and did report said proceedings in
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Dated this 20th day of March, 2008.

Glenda M. Powers, RPR, CRR, FPR

HYDROGRAPHIC SERVICES REVIEW PANEL

HELD: Doubletree Grand Hotel, Bicayne Bay, Miami

DATE: Friday, March 7, 2008

AGENDA: Public meeting

TIME: 8:00 a.m. to 4:00 p.m.

CHAIRMAN: Tom Skinner, Durand & Anastas Environmental Strategies, Inc.

VICE CHAIR: Edmund B. Welch, Maritime & Ocean Policy

PANEL MEMBERS PRESENT:

Captain Thomas Jacobsen, Jacobsen Pilot Services, Inc.

Michael W. Szabados, Director, CO-OPS
CHAIRMAN SKINNER: I want to call the meeting to order. My name's Tom Skinner. I'm the acting chair of the Hydrographic Services Review Panel.

A couple things I would like to go over. First, the evacuation directions in case there's an emergency. In case of emergency, please exit. Make a left out of the room, walk down the hall, take the next left out of the double glass doors and go down the elevator and straight out to the exit signs.

MR. DUNNIGAN: Elevator?

CHAIRMAN SKINNER: Escalator. The restrooms are located to your left out of the room past the glass double doors before you get to the elevators.
and to your left. And there will be a sign to the restrooms.

I also need to read this statement about the Hydrographic Services Review Panel. The HSRP is governed by the Federal Advisory Committee Act and was established by the Hydrographic Services Improvement Act Amendments of 2002.

The Panel is charged with advising the NOAA administrator on matters specified in the Hydrographic Services and Improvement Act, specifically related to hydrographic services.

In a nutshell, hydrographic services are those services provided by three program offices within NOAA. That's the National Geodetic Survey, the Center for Operational Oceanographic Products and Services and the Office of Coast Survey.

The panel membership consists of fifteen voting members. These are special government employees appointed based on their particular expertise. Members of the panel do not represent the organizations or the entities they are employed by. But again, they are on the panel by the mere fact of their particular expertise. Panel members serve four-year terms.

First order of business then is to introduce someone who actually needs no introduction: Captain Minas Myrtidas of the Norwegian Cruise Line. Captain Myrtidas has been a key member of
the HSRP since its inception and was instrumental in bringing this meeting to Miami.

We certainly appreciate the sporting hospitality that Norwegian Cruise Lines has provided us here. So, Captain.

CAPTAIN MYRTIDIS: Thank you, Tom. Good morning, everybody. I just want to take a few brief moments, and if you allow me, I'm going to put my sail hat on and welcome the Panel to the cruise capital of the world: The Port of Miami. We are excited to have you here, and we are most excited to have you with us tomorrow on one of our ships, the Norwegian Sun.

I would take now the opportunity turn and introduce you to a gentleman who is a very important member of our community here, and he took time out of his very, very busy schedule to have to say hello to all of us all.

Ladies and gentlemen, Mr. Bill Johnson. He's the port director for the Port of Miami. Mr. Johnson.

(Applause.)

MR. JOHNSON: Thank you, Captain. Good morning, everyone. First, it's a great honor for us, not just myself as our port director for the Port of Miami, but we as a community, and our Mayor, the Mayor of Miami-Dade County, Carlos Alvarez, to welcome all of you and your important
work, your meeting here in our community. We're very honored and we're very pleased that you have chosen Miami-Dade County and, of course, the City of Miami in which to convene and have your work, so thank you very much, first of all, for that, we appreciate you being here in your business.

I'm just going to take a few minutes of your time. I know you got a full agenda, a couple things I sort of like to layout for you. Anyone that lives in Miami-Dade County probably knows because they read the press and I'm constantly or oftentimes in the press, my background in terms of public service. And I am a public servant.

I've been in public service about 28 years now. I started in this community right out of graduate school; a kid from the midwest educated in the south. But I've spent all of my professional life in public service here in Miami-Dade County. Literally within the last, you know, 15 years within a seven-block area, many of the things that you see are things that I've worked on.

Our nation's largest and probably one of the best performance centers in the world, we think it will rate in the top five, right across the street is one of my projects. I took that over when that project was very troubled and behind schedule and I did a workout plan on that project.
From Meeting

I also was instrumental in building the American Airlines Arena where the Miami Heat plays on the waterfront. Truthfully, I would have preferred that it would not have been built on the waterfront, but it was, and, of course, today that adds to the congestion of the port, which I've been a port director now for almost two years.

I love being in public service. I love serving the public. This is just a great, great diverse community in which we live. I'm used -- quite honestly, have been probably for the last 15, 18 years -- as trouble shooter, as what we call the problem-solver. I'm not a boy genius. I'm just a hard-working guy who's willing to work, if you will, 12, 14 hours a day, and that's what the Port of the Miami requires. It requires a 12-hour day at minimum, and I'm willing to work at least six to seven days a week.

We have a great port. It's one of the leading ports in our nation. It's something that I'm very proud of, to be the port director. I stepped into the port 18 months ago. Quite honestly, for the most part I'm known for being pretty honest, pretty blunt. When I stopped into the Port of Miami, which is a public institution, publicly owned, it was in deep trouble, a very troubled port. We've worked hard as a team over the last 18 months; now,
my 19th month that I'm in, to assess the issues, to
assess the problems and put together a correction,
a recovery plan.

We are, of course, have a very, very strong
legacy, a wonderful history, of being the cruise
capital of the world. What does that really mean?
What it means is that Norwegian Cruise Line started
at the Port of Miami 41 years ago this past
December. Forty-one years ago NCL started at our
port. Ted Anderson, the founder of Carnival,
started at our port 40 years ago, Carnival Cruise
Line, today, Carnival Corporation.

Of course, as a community in Miami-Dade
County, we're extremely honored and pleased that
three of the largest cruise lines in the world have
their world headquarters here in Miami-Dade County.
Of course, Carnival Corporation and Norwegian
Cruise Line and Royal Caribbean's offices are
actually on our port. They're literally
headquartered on the Port of Miami.

What does cruise capital of the world mean?
It means that this year we'll deal with almost 4
million passengers. It means that the
Port of Miami has continually, decade after decade,
been the number one port in our world in terms of
numbers. You probably already know that less than
17 percent of the American population has ever
taken a cruise. It's a very small number. And, of
course, if you look at the statistics, last year 45
percent of those numbers; 45 percent of the
Americans who took a cruise did so out of one of
three ports here in this state. Of course,
Port of Miami, number one; Port of Canaveral,
number two; and Port Everglades, 30 miles up the
street, port number three.

It's a business. It's a very, very
competitive business. It is a very tough business.
The Port of Miami is a department of county
government, one of the largest county governments
in America. In fact, county government which has a
budget typically as large as 16, 17 or 18 U.S.
states. It's a big, big government.

And I don't need to tell you that often times
with government comes bureaucracy. My job is to
cut through that bureaucracy, cut through that red
tape and make things happen like a private business
would.

The Port of Miami is just like a private
business. We must completely sustain ourselves
under revenues generated at our port. We must be
efficient, we must be clean, moderate and customer
friendly. It has been a tough challenge over the
last 18 months to first not only assess the issues
but to put together a recovery plan.

There is no subsidy. There is no general
funding support. We have to literally depend upon
the revenues created, if you will, from our cargo
and cruise operations, as well as some of the
federal or state grant monies that we receive. The
challenges are huge.

I will tell you, since 9-11, since the
tragedies of September the 11th, the Port of Miami
now has gone from spending 4 million a year on
security to well over 20 million. The cost for
security at our port has almost, truthfully,
bankrupt the port. I will -- the port will spend
in excess of 20 million this year just on
operations.

In addition, my cruise and cargo partners will
spend millions and millions more. I will tell you
that the Port of Miami -- a little island of 518
acres right outside our door -- is probably the
most secure environment anywhere in our community,

Where are we headed? Well, the Port of Miami
today has eight major cruise lines that call upon
our port, eight partners, including NCL. Again,
they will bring this year close to 4 million
passengers. They represent, if you will, 28
different ships, some of the biggest and best in the world. You can't rest on your laurels. You can't just rest on the fact that we're the leading cruise port.

Where we're taking the Port of Miami is trying to increase the number of brand. We're trying to increase not only the numbers, but we're trying to obviously make our Port the number one port, not just in facilities and amenities, but also the best port anywhere in our country, in the world, in terms of customer service.

We recently partnered -- and it's all about partnerships. That's why I'm here this morning, to just spend a few minutes with you to talk about our port. I guess we could say it's sort of the marketing aspect of it.

We partnered with one of major universities here in the State of Florida. It's located here in our community, Florida F.I.U., Florida International University. And I'm not shy. On a flight to Tallahassee, our state capital, I was talking with the president of F.I.U. and we got his support, we got, if you will, free customer training from his university, and it's one of the top programs in America for hospitality. We got free customer training for all port employees, all 411 women and men who work for me at the port.

Customer service is important. And what I'm
stressing to you is the need not just to have modern facilities, because you come over today and see the Port of Miami, you'll see that we have some of the most modern cruise facilities in the world -- not just in Florida or in America -- in the world.

Last fall we opened up $4 million worth of facilities for Carnival, state-of-the-art, second-to-none, anywhere in the world. But you can't just have modern facilities and safe and secure facilities. You must have facilities which they're actually efficient, that they're clean and that they have great customer service.

We are really focused on the bottom line. We're focused on profitability so we can plow that back into, if you will, our services, plow that back into our facilities. So the cargo is the next aspect. Cruise is doing well.

Cargo's the next major aspect of it. We've had a very, very tough several years. And what had been a very robust economy worldwide, internationally, in cargo, the Port of Miami in the last two-and-a-half, three years has lost 17 percent of its cargo volume, 17 percent. We're talking millions and millions.

I should also tell you that the Port of Miami, if it's a business, is a 16-billion-dollar-a-year
business. In 2006, we generated 16 billion to the economy. The President of the United States understands that well. I was port director for about three weeks when President Bush, the White House called, the president wanted to come visit. It's a pretty great honor when your president wants to come visit your port.

But the bottom line is and what the president wanted to emphasize, obviously, was that - the importance of free trade, the importance of, if you will, the maritime industry, and the Port of Miami represents that.

But on the cargo side, when you're talking a drop of 17 percent since 2005, you're talking not just millions, you're talking billions of impact on the negative side. It's a huge problem. And we have been hard at work trying to understand why we've lost business. You can't correct the problem if you don't understand what has led to that problem. Aggressive management, proper marketing, congestion, on port, off port. A number -- we were, frankly, our cost was too high. We weren't cost-competitive. There were consolidations in the industries. There are multiple reasons why.

And what it has resulted in, if you will, is a very, very, again, I think, a very prudent well thought out game plan to move us ahead. Recently, a few months ago, with great leadership from our
state government, through our State Department of Transportation, local government, including the county and city and the port together, within the year we'll embark on a one-billion-dollar tunnel literally here right outside our window, right outside our door here.

This one-billion-dollar tunnel will literally connect the interstate system under Biscayne Bay to the Port of Miami, two tubes, four lanes, one highway opening in 2012. It's a reality. It's funded. It's got a green light, it's a go.

Obviously, we're extremely concerned about the sensitivity to the water, to our beautiful bay, and to, if you will, all the environmental issues. It's a very, very important, if you will, aspect of it. The tunnel is our future. The tunnel will allow this port to be able to grow substantially.

The next piece of it and, of course, we're very, very thankful in terms of the most recent legislation passed, the last water bill, the Port of Miami is authorized again to go to Phase III in terms of deepening of the harbor. We need to be able to do this in a very sensitive way, again being very, very sensitive to the environment in which we live and which surrounds us.

The Port of Miami, by 2015, when the Panama Canal improvements are complete, the Port of Miami will be the depth of 52 feet at its entrance and 50
feet in the working harbor, making it one of three ports on the east coast at that depth, allowing the port not only to double but almost triple the amount of cargo volume it does. Cargo is significant.

Again, let me emphasize the Port of Miami is the second largest economic engine in our region. It generated in 2006 16 billion, 110,000 jobs. So the importance of balance -- and I can stress this -- the importance of balance; the importance of understanding not only where you are today, but also where you're headed, and to do so in a partnership with everyone, with environmental groups, with organizations like NOAA, on and on and on, so that we are doing things the right way, doing things, if you will, in partnership.

Where we are today is what I call again full implementation of a recovery plan. I'm soon to announce -- in fact, it's been announced, I announced it last week with permission from the CEO of NCO -- we have reached with the Port of Miami a long-term volume agreement with Norwegian Cruise Lines that will result in a development of about 100 million of new cruise facilities on the waterfront, again, outside the door. Those facilities will open sometime in late 2011, and again, will allow for NCO to further grow and become their major premier facility in the
southeast of the United States. We are very, very
honored that NCO has selected the Port of Miami to
continue to grow and to prosper.

We are also excited, we're soon to announce
two riveting announcements. The world's largest
shipping line has married one of the other top

shipping lines in the world. It is consolidating,
if you will, its operations in the southeastern
United States at the Port of Miami.

Myrtidas AVM has partnered with one of the
other top two shipping lines in the world. We will
be announcing this very soon. It will represent a
25-year-deal worth hundreds and hundreds of
millions of dollars.

I'm also pleased that we've been able to soon
announce a 30-year deal with one of the leading
shipping lines in the state of Florida into the
islands, the Caribbean, and Central America with a
30-year deal, again, worth hundreds of millions of
dollars. These are volume-based incentive
agreements which are good for our port, they're
good for the industry and, most importantly,
they're good for our economy.

When we do the agreements, I'm extremely
sensitive, again, to the issues of cleanliness of
the yard. Issues of, again, environmental
sensitivity. So when you look at this again, it's
all about not just growth, it's about, if you will,
reasons growth, balance growth, making sure that you have an open door.

I appreciate the opportunity to be with you.

I appreciate, I respect the work that you do. I would like to, I guess, leave you with the thought that while we're looking, obviously, as a business to grow, again, we're not a profit center. Our reason, the reason we exist, is to create wealth for our economy, to create jobs, good-paying jobs.

If you didn't know, in the state of Florida, our economy is driven by tourism and trade. Trade, the Port of Miami, we're fortunate, we do business with 250 ports and 100 countries around the world. Next week is the largest convention in the world, every single year, the largest convention in the world for cruise, right here in our community.

We have a great port. We're blessed as a state. We have 13 other great ports or 14 deep-water ports in our state. We're all focused, if you will, in doing the right thing. And I can assure you, as the director of the Port of Miami, I am committed 'cause two of my folk are here today. One will be on the panel, Becky Hope. I'm committed to doing things the right way. I'm committed to an open door, I'm committed to partnership. We may not always agree, but we'll always be willing to listen and we'll always, if you will, do the things that are the right things.
not just for our port, but for our community, a
community I take great pride in, a community which
I just absolutely love to be a member of.

Thank you for listening, have a wonderful,
wonderful day. And, hopefully, you will see
something at the Port of Miami that you like. If
you don't like, just let me know, just e-mail me.
Thank you.

(Applause.)

CHAIRMAN SKINNER: Mr. Johnson, thank you for
those remarks. That's a great way to kick off our
meeting. Many of us have had the opportunity to
look at some of your port facilities from our hotel
rooms, and it's pretty impressive, and we look
forward to having a close-up tour tomorrow, so
thank you very much.

MR. JOHNSON: One thing I didn't say. On the
last days of our dredge, this took us to 42 feet,
the contractor doing the dredge had all kinds of
PAP2 violations and we were cited. Today, in fact,
it was just awarded this week by the board of
county commissioners, approved a 2.2 million dollar
mitigation, which I fully support, to rectify those
sins from 1995.

Now, honestly, do I have 2.2 million? I
don't. Okay. If I were, you know -- to be honest with you -- if I had a private business, you would say I'm bankrupt. But it's a commitment. I'm going to borrow the money from the State Sunshine Fund, pay interest on it, and we're going to do it. You have to honor, okay, the commitments, and even those that go back to 1995. So thank you for listening. I appreciate your support.

CHAIRMAN SKINNER: Thank you very much.

MR. JOHNSON: Thank you.

CHAIRMAN SKINNER: This is a commemorative coin. It's 200 years.

MR. JOHNSON: Oh, great.

CAPTAIN SKINNER: Just to let you know, you can't use it for the 2.2 million.

MR. JOHNSON: We'll try. Thank you all very much. Have a good session, everybody. Anything you need at the port, you just let us know.

CHAIRMAN SKINNER: Thanks again. We're moving on to the administrative section, and I think Barbara Hess has been deputized to administer the oath of office for our new members.

MR. HESS: I am. I am. Could we get them on the phone? We need to dial, there's two outside people that weren't able to make it today. They're
going to be dialing in. If we could just dial that. I think it's 8, then the number.

(Panelist Captain James Weakley, Lake Carriers' Association, and Panelist Captain Ramon Torres Morales, Port of Las Americas Authority, were not present at the meeting.)

(Thereupon, a telephonic connection was made and the Panel continued as follows:)

TELEPHONIC VOICE: There are two parties in conference, including you.

CAPTAIN BARNUM: Good morning. This is the HSRP Services and Review Panel. Steve Barnum speaking. Who's on the line?

CHAIRMAN SKINNER: Good morning.

MS. HESS: Who was on the conference call?

CAPTAIN BARNUM: Weakley, Captain Weakley is on the phone.

MS. HESS: Captain Ramon Torres Morales is not on?

CAPTAIN BARNUM: No.

MS. HESS: No? Okay. He must not have been able to dial.

CHAIRMAN SKINNER: We're starting with the swearing in of the new members.

MS. HESS: Yes. Could the new members please stand and raise your right hand? Thank you very much. Could you state your name?

MR. WELLSLAGER: Matt Wellslager.
CAPTAIN WEAKLEY: Captain Weakley.

MR. JEFFRESS: Gary Jeffress.

MR. WELCH: Ed Welch.

CAPTAIN JACOBSEN: Tom Jacobsen.

MS. HESS: And I need you to get your appointment affidavits and all together read the A, oath of office, on the appointment affidavit form. It's number A. It starts with "I will support." And you can all read together, please. Hold on.

(Thereupon, the Appointment Affidavit, A, Oath of Office, was read by all new members as follows:)

"I will support and defend the Constitution of the United States against all enemies, foreign and domestic; that I will bear true faith and allegiance to the same; that I take this obligation freely, without any mental reservation or purpose for evasion; and that I will well and faithfully discharge the duties of the office on which I am about to enter. So help me God."

MS. HESS: Could you all please sign on signature of appointee, and I'll pick those forms up. And I also need to pick up your identification, so if you could have that out, I'll come around and get that. And you are now considered sworn-in members. I don't know if --

CAPTAIN BARNUM: Captain Torres?

MS. HESS: Do you need to go through that? He
CAPTAIN BARNUM: Captain Torres?
CAPTAIN TORRES: Hello?
CAPTAIN BARNUM: Hello?
CAPTAIN TORRES: Yes?
CAPTAIN BARNUM: Yes. We just went through
the oath of office and you came in the middle of
it.
CAPTAIN TORRES: Yeah.
MS. HESS: Could you read the oath of office,
sir?
CAPTAIN TORRES: Sure, sure.
MS. HESS: Just A and state your name, please,
and read it so we could hear it. Thank you.
CAPTAIN TORRES: Can you hear me okay?
MS. HESS: Yes, sir.
CAPTAIN TORRES: Okay. I am Ramon Torres
Morales. I do solemnly swear that I will support
and defend the Constitution of the United States
against all enemies, foreign and domestic; I will
bear true faith and allegiance to the same; that I
will take this obligation freely, without any
mental reservation or purpose of evasion; and that
I will well and faithfully discharge the duties of
the office on which I am about to enter, so help me
God.
MS. HESS: If you could just sign that form
and send that to me, we can talk off-line on how to
get that to me. I'll give you a call. Thank you
so much for calling in.

CAPTAIN TORRES: Thank you.
MS. HESS: Okay.
CHAIRMAN SKINNER: Congratulations --
CAPTAIN TORRES: Thank you very much.
CHAIRMAN SKINNER: -- to all of you.
CAPTAIN BARNUM: Are they staying for the
meeting?

MS. HESS: For the voting. Ask if they could
stay on, if they could stay on for vote. Did they
already hang up?

CAPTAIN BARNUM: No.
MS. HESS: Okay.
CHAIRMAN SKINNER: The next item on the agenda
is the election of officers, so if you both could

stay on the line that would be greatly appreciated.

CAPTAIN WEAKLEY: Will do.
CAPTAIN TORRES: Okay.

CAPTAIN BARNUM: Next on the agenda is the
election. Now that we had the new members sworn
in, is to elect the chair and vice chair.
Currently, Tom Skinner is the acting chair and at
their last meeting in Seattle, we had a voting
sheet or candidates for Tom as chair and Ed Welch
as vice chair. And certainly we can have write-in
candidates, too, so...

We're not going to go to caucus or anything
like that. But what we have in Section B is the
voting sheet, so if you would, please, take that
out and write in who you vote for for chair and
deputy chair and put your name and date of honor.
This is the member agents, voting members.

ADMIRAL WEST: Tom, are we going to hear any
more from the port people?

CHAIRMAN SKINNER: Yes.

ADMIRAL WEST: I've got a couple of questions.
He was in a hurry, so...

CHAIRMAN SKINNER: While we're waiting, a few
other things. One, if you could remember to turn
off your cell phones or put them on mute, that

would be great.

As the panel members know, every meeting we
struggle with how to have a meeting amongst us and
not have some of us with our backs to the audience.
We haven't figured out a way to correct that
problem, so those of us here in the back row
apologize for not facing you, but we just haven't
figured out the logistics.

We also haven't figured out the logistics for
lunch. There is a federal prohibition on providing
a free lunch. I guess that doesn't exist, you
can't do it. So we would very much like to have
anyone who would like to stay for lunch with us to
participate; unfortunately, there is a charge for
that, and there will be someone to collect some
funds when we do have -- when we do break for lunch. Again, that's not the ideal situation, but if you would like to talk to panel members and visit with us, we certainly encourage that.

CAPTAIN BARNUM: Jim and Ramon, if you could, so you could call in your vote, I'm going to give you a telephone number to call, you. Probably -- unless you have two phones, we don't have e-mail connection here or you could e-mail us. If you give us a call, to Barbara, at 301-980-4658, 301-980-4658 and give her your vote, I would appreciate it. Thank you.

CAPTAIN TORRES: So we're off-line now. When do you want us to call Barbara?

CAPTAIN BARNUM: Call her now.

CAPTAIN WEAKLEY: Ramon, I will give you a minute to go first and then I'll call.

CAPTAIN TORRES: Sure.

CHAIRMAN SKINNER: Thanks, guys. I think while we're finishing up with that, I would just like to take care of a couple other business matters. One, our reporter for today's meeting is Glenda Powers, right over here. Thank you very much.

(Applause.)

CHAIRMAN SKINNER: She has a supply of rubber bands to shoot at you if you mumble, talk too fast or don't introduce yourself, so we're really going
to have to be in line on this one. And, thank you.

THE REPORTER: You're welcome.

CHAIRMAN SKINNER: I would also like to for the purposes of record recognize the contributions of the members who rotated off the panel in January:

Bill Gray, Dr. Lou Lapine, John Oswald, and,

in particular, Scott Rainey, who I think put in an extraordinary amount of time into getting the report out.

Having now gone through one meeting organization, I know how much time is put into this — or he put into this organization, so I think we should have that in the record. And, of course, previous members, Helen Brohl, and our former Federal representative, Kevin Roger Parsons.

We're also looking forward to the new perspectives in energy of our new members, focus on energy. And it's really a pleasure to welcome Captain Tom Jacobsen, Dr. Gary Jeffress, Captain Ramon Torres Morales, James Weakley, Ed Welch and Matt Wellslager, so welcome to all of you.

CAPTAIN BARNUM: We have two more votes.

CHAIRMAN SKINNER: Okay. The other -- a couple of other items, one, I'm not sure if everyone knows that Barbara Hess will be ending her service at NOAA in 30 days; actually, I think it's now 29, but who's counting. So this is most likely
our last meeting with Barbara. Here she is.

ADIRAL WEST: She didn’t ask us for permission.

CAPTAIN JACOBSEN: We should vote on that.

ADMIRAL WEST: Yeah, what's this? It's not voluntary. She's ignoring us.

CHAIRMAN SKINNER: So talking with her yesterday, I suggested maybe going to Staples and cleaning them out of three-ring binders as our going-away present. I got this cold stoney glare, so if any of our other panel members have better ideas of how to send her off before tomorrow, I think that's something we need to think about.

MS. HESS: Just say good-bye, that would be really nice.

CHAIRMAN SKINNER: Yeah, okay. We'll work on that.

CAPTAIN MYRTIDIS: We can leave her on the Sun tomorrow.

MR. WELLSLAGER: A good departing gesture.

MR. ARMSTRONG: Just let her stow away.

CAPTAIN BARNUM: Well, it was a very close race, but I do have the pleasure of announcing the winners or the selectees. Tom Skinner as chair and Ed Welch as vice chair. Congratulations.

(Applause.)

CHAIRMAN SKINNER: Has anyone told you what the vice chair does?
MS. HESS: You have to go over there and sit in the vice chair's spot.

MR. DUNNIGAN: You thought you could hide down there.

CHAIRMAN SKINNER: Also in planning for this meeting, I know we all recognize how much time NOAA puts into putting together these meetings, but it really is quite exceptional that for each of the meetings not only is Steve here but Jack Dunnigan. And for this meeting, you know, we'll have a five -- I think five program directors, is that correct?

CAPTAIN BARNUM: Yes.

CHAIRMAN SKINNER: So it's a tremendous amount of time and effort on their part, and I think we should recognize that NOAA takes this panel very seriously and we very much appreciate it.

We also appreciate the fact, I think many of you may know, that Jack's father passed away recently and on behalf of the board, on behalf of the panel, we want to extend our condolences to you.

MR. DUNNIGAN: Thank you.

CHAIRMAN SKINNER: I think the fact that you're here today when it would have been, you know, very understandable if you couldn't have made
it, is a testimony to your interest in the board
and also to your professionalism, and we very much
appreciate that.

MR. DUNNIGAN: Thank you.

CHAIRMAN SKINNER: With that, I think we are
moving onto presentations and updates on
implementing the five recommendations in the HSRP
report and --

CAPTAIN BARNUM: Actually, it's overview of
the budget.

CHAIRMAN SKINNER: Sorry, overview of the
budget. And -- are you doing that or is Jack?

CAPTAIN BARNUM: Jack is going to.

CHAIRMAN SKINNER: Jack, I think you're up
first.

MR. DUNNIGAN: Thank you, Mr. Chairman. Good
morning, everybody. So I guess I have the
microphone for about 45 minutes, and that will
workout. There's a couple of things that we want
to take an opportunity to cover this morning, and
hopefully I will be able to make this work.

I want to talk a little bit -- make sure you
understand what NOAA's budget is like. There is
some very interesting and important things that are
in it, in the budget, that congress is now
considering for '09, and I'll talk a little bit about '08 as well, which is our current year.

I want to update you on the work that we've been doing in NOAA to follow-up on the report that the HSRP did on the most-needed aspects of the marine transportation system and NOAA's role in doing it. And then I'm going to close with just a couple of comments about a new responsibility that I've taken on, on behalf of the United States, as their permanent representative to the Intergovernmental Oceanographic Commission and some of the challenges, really, that we see there. So if we can, let's begin with the budget.

Some very interesting things going on here. The president's budget for the next year, for the fiscal year that was announced last month, broke the four billion dollar mark for the first time. It's a -- so in that sense, it's good. And you can see the trends here, if you look back over the last decade, comparing there the president's budget and the enacted budget, you can tell a couple of things. First of all, the enacted budget is always larger than what the president requests.

And secondly, it's been on a very steady upward trend. And if you look at the rest of the government, and particularly if you look at some environmental agencies, you will not see that. If
you look at other agencies in the Department of Commerce, you will not see that.

NOAA stands out, really, as an agency whose budget has been going up. Now, that's not to say that we have all the money we need. Admiral Lautenbacher would certainly be the first one to tell you that the requirements and the job that we do for the people of America everyday far outstrip the amount of resources that are asked for and that are available in the current climate. But overall, it's a good sign.

Now, there are some challenges. The budget request is up by 200 million dollars. 240 million of that 200 million is for a satellite, it's for Gozar. So if you look at the requirements that we have to serve the people, certainly the work that we do to save lives and property and the observing systems that are a part of that from space are unbelievably expensive and absolutely essential to the health and safety of our people. So that's what the challenge is.

The challenge is to be able to justify and define the resources to do the broad range of things that NOAA has to do. You know, a lot of times we talk about the wet side of NOAA and the dry side of NOAA. And all of us on the wet side think the dry side gets all the money and why can't we get some more attention. But the fact is that
everything that NOAA does is important to the people of the country, and especially in a place like South Florida. You certainly understand that the risk that you have to face from large storms that come in every summer.

So we have an important role to play and the information that helps people and planners to be able to deal with those situations, so things have to happen. But, you know, all in all, it's, you know, NOAA's budget outlook is as good as you're going to find in the types of work that we do in the government.

Now, this is the Nation Ocean Service, and you didn't have this slide in your initial presentation. This one is new to you. But, I mean, essentially what we see here is that we have not, you know, in NOS, shown that same trend that you seen agency-wide for NOAA, so we take that as a challenge, you know. We know that the work that we do in maritime transportation and in resource stewardship is critical for the country also, so but we need to keep marketing and keep selling those ideas.

In the FY-09 request for the Ocean Service, it's 488 million dollars. It's an increase of 22 million over the president's budget from last year. That's a good sign. But let me point to you some of the longer-term challenges that we have. In the
lower left-hand corner, you see one of my favorite ships, that's the Rainier, and her launches and she is getting old. She needs to be given an opportunity for a major repair period.

The Rude, which has been doing a lot of surveying in this part of the world, is going to be decommissioned in April. We won't get the new svat vessel, the Hassler, for about another year and a half. So to replace these vessels, these hard assets, is extremely expensive. That's sort of, you know, our version of a satellite. And how are we going to be able to find the resources to be able to undertake that?

Even if we do a major repair period, the Rainier's not going to operate more than another 10 years. The Fairweather is just as old. At one time, we had 13 hydrographic survey vessels. Now we have 4. So, and, of course, our business models change. We rely much more on the private sector to help us do this today than we did 20 years ago, and that's good. We're a lot much more efficient. We're using, you know, much better technology. Nevertheless, the challenges are going to be out there looking into the future to be able to meet the needs that we have.

Navigation services actually is one part of the ocean service that is holding its own. And, obviously, that's what we're most concerned about
here today. And, again, this slide is in your materials and there's some details there on our NAV services request.

Some basic highlights that are in the budget, improving Ping to Chart which has been a great challenge of ours for a long time is receiving some extra money. And this is basically to be able to improve the data flow once we get it into the system so that we can make quicker use and better use of the information that we're gathering.

We're investing in autonomous underwater vehicles. We're not ready to make those completely operational yet in terms of doing hydrographic surveys. But in the future our technology is starting to have to go in this direction. We probably can't continue to rely on being large Class II vessels to be able to send launches out and pull sonar.

What we're hoping -- and the swat vessel is going to give us a real opportunity to be testing this -- is to be able to look at the technology improvements that are going to be there 30 years from now. We don't do surveys the way we did 30 years ago. And we know we won't be doing them 30 years from now the way we're doing them today. So we're investing here in our technology and our future.

And there's an increase in funding for ports
to improve and expand the delivery of information. We are continuing to look at the question that was recommended by the HSRP about whether or not the complete operation and maintenance of the port system should be undertaken by the federal government as opposed to the partners that we have today.

We're not actually there yet in this budget, but it's an issue that we're continuing to work on for further out years and, yes, Tom, I think that is Long Beach.

CAPTAIN JACOBSEN: Thank you. That's not Long Beach.

MR. DUNNIGAN: This is not Long Beach. This is Galveston. And response and restoration is -- you know, just continues to be one of the really essential programs that we carry out when the Costco Busan ran into the bay bridge in San Francisco Bay, we were on scene. Our on-scene coordinator was alerted within 20 minutes, and he was on-scene within two hours because he was off at a meeting in Las Vegas, but he rushed back and we had 55 people over the next two weeks who were there working with the Coast Guard in the Cosco Busan response.

So we know we play an essential role, but the problem is that we've got a significant budget cut. This is not a big part of our 400-million-dollar
budget, obviously, this 17 million dollar request. But it got cut by about 5 million dollars in the '08 budget. We think that that was an anomaly and we've been talking to people on the Hill and the president's request is to get that money restored. We've always believed that this is a program that needs a lot more money than we're able to get for it in the current environment.

So, and this is one of those areas where the president is consistently asked for more money than the congress has appropriated. So it's nice to be able to stand up and say, you know, the president wants me to ask for more money. But it's certainly one of the critical areas that we have in responding to problems in our marine environment.

Integrated Ocean Observing System. We are continuing to move forward on IOOS. Zdenka Willis is going to be here and she'll speak later today about some of the details, so I'm not going to spend much time on this now. Let me just say that this is one of those areas where we've lost money over the last couple of years.

The president in the '08 budget actually requested money for the first time, but because of a lot of budget issues, the amount that congress appropriated -- although it was a lot more than the president asked for -- was significantly less than congress had appropriated previously.
The president's asking for about the same amount of money that he asked for last year, and we'll see where this goes. It's something that's getting a lot of attention on the Hill. There's a number of pieces of value of legislation that are being considered, and we're continuing to execute the program. But we've got to find some way of getting the money, you know, back to where it was a couple of years ago. But I think the administration is still a believer and wants to see the thing move forward.

Those are just some highlights. I'm not going to go through the backup slides, but it might be good at this point to maybe take a couple of minutes, if we could, and see if you have any questions on the budget presentation before we go ahead and go into the other two issues.

CAPTAIN BARNUM: Do you want to call on people?

CHAIRMAN SKINNER: Sure. Admiral?

ADMIRAL WEST: I can't pass up the opportunity to talk about money and NOAA. Jack, can you go back to the funding of NOS chart? Actually, go back to the 4.1 for NOAA for a minute. I serve on another FACA for NOAA. It actually finished up last night, so that's why I'm a little late.

And in a public session yesterday I made the same comments about NOAA's budget because obviously
the top line affects all the parts of NOAA. And

4.1 looks great and a lot of folks worked hard to

push that and it should be about 4, 5, as the
friends in NOAA have done. The deceiving part
here, as Jack has already alluded to, is 250
million of it is to fix a satellite problem. So
what’s happening, it’s kind of deceiving that
NOAA’s going up. They’re sticking money in there
to take care of a problem and, meanwhile, the
programs -- now you can go to NOS, if you would
please.

And here’s what happening to the core programs
within NOAA. The top line looks like it’s going
up, but what NOAA’s here really to serve the
country for is going down. It’s not a unique
problem for the federal government, but it’s a
problem for NOAA. They have a very complicated
next-generation satellite, environmental satellite
system to try to put it. It’s very, very expensive
it’s tough, it’s technical, and they got some
problems. And we’ve got some money to pay. The
250 is just a down payment, folks. This is going
to be going on for a long, long time. What we
cannot accept is this burden -- tax burden on
NOAA’s top line to take care of this problem.

It’s not unprecedented for the federal
government to take a chunk of money and stick it
into an agency to fix the problem -- it's been done
in NASA many times -- to fix a problem so that the
programs that are ongoing can maintain a healthy
growth. This is not acceptable. 4.1 is wonderful,
but it's not acceptable when a third -- 300 to 400
million dollars each year goes to fix an old
problem. So this is -- I'm very concerned about
the budget process there and, of course, NOS
affects what we're doing here today.

Yesterday was in the OAR budget that we were
talking about, which is also suffering from this,
too, so that's not a good -- you know, good to see
it above 4, but that's a problem. And I think
there needs to be some kind of a public movement to
say that's not fair to the mission of NOAA, to tax
them with this problem with the satellite. It's
a -- I've been involved with satellites all my
life, it's a tough, tough business. In fact, DOD
realized that and put it to a separate agency and
said take care of this tough problem so I can -- I
am not affecting the ongoing programs. And maybe
that's something that commerce and administration
should take a look at. Thank you.

MR. WELCH: Admiral.

ADMIRAL WEST: Yeah?
MR. WELCH: If I could just elaborate on that a little bit and if we could go back to the previous slide? I'm sorry, the first slide that had the 4.1.

MR. WELLSLAGER: That's it.

MR. WELCH: There you go. Just for you non-Washington folks, a little thing you need to know is that when people talk -- sorry, Jack -- when a federal agency talks about a budget increase, they're talking about what the president asks for.

The real key at the end of the fiscal year is what congress appropriates, because eventually, I mean, what the president asks for sort of sets priorities for what -- in congress, what the president proposes, the congress disposes.

So if you look at that chart, NOAA total funding has been absolutely flat for four fiscal years. It's been 3.9. And the president is proposing to pump it up. So I just wanted to, you know -- the key thing is not whether the budget's going up or down. The key thing is whether the appropriations are going up and down. They're very related but they aren't quite the same thing.

And the second thing -- if we could go to the NOS slide -- yeah, I wonder if perhaps subsequent
to the meeting we could get copies of that if we
don't have it in our books now?

MR. DUNNIGAN: Certainly.

MS. DENTLER: You have it. It's in the back
of the presentation.

MR. WELCH: Oh, It's in the back. Okay.

MS. DENTLER: It was added out separate.

Yeah, it was at your seat. Did you get that?

MR. WELCH: Okay. I'll find it. And the
third comment I would make -- if I can make, and
I'll probably bring this up again a couple of times
as we talk about the specific programs, but the
port director inspired me to make this comment.
You know, he was talking about things that they had
of planning now five and six years out.

And for a program that has major capital
expenses, you have to be that forward-looking. And
the government, the federal government budgeting
process, has its own unique problems and we're
going to be talking about stuff in the proposed
fiscal '09 budget, which is the one that starts
this coming October the 1st, and I think they're
going to be talking about some things about getting
ready for the fiscal '10 budget.

But at some point it may be worthwhile for the
panel to talk with the NOAA folks about what the
planning is for two and three and four years out
for some of our programs, you know, there is some
work that some initial very preliminary work falls
that are being done and we might need to think --
particularly on some of these capital programs --
what are the needs going to be three and four years
out as opposed to just to the next fiscal year.
Because that's pretty well -- the parameters of the
next fiscal year are pretty well set. Thanks.

CHAIRMAN SKINNER: Other questions or comments
on the budget or response?

MR. DUNNIGAN: Good comments. And thank you
both very much. And I think, you know, you're
pointing out things that are critical and important
to know. And all I would say is that although we
certainly all see the needs and the requirements
that have to be met, and they are huge, the one
thing you can say about the NOAA budget is that
we're really the only part of the environmental
side. And, in many instances, the commercial side
of government spending that's doing this well.
The official administration plan for the
future is real negative growth of two percent in
domestic spending forever. And yet beyond that
you've seen that NOAA in that decade has gone up by
30 percent. And so that's good. I mean, I think
it shows that the congress and that the president
are understanding the critical role that we play in
lots of areas. And, then again, it doesn't take
anything away and certainly Admiral West was --
when he was at Corps was a great leader for the
community and everybody at NOAA appreciates what
was done with the friends of NOAA and to build a
strong consensus of support across the board.

And Ed is certainly right, that the actual
funding, the congressional funding, for the last
four years has been flat. And, you know, we were
doing really good in the '08 budget process. The
House actually funded us at the president's request
level and the Senate had a lot more money in it,
and it all fell apart in the continuing resolution.
So, you know, we'll make another run at it this
year and see how well it can work.

Ed raises a question of long-term planning,
and just so that you're aware, I was just chatting
with Steve. I think the panel was briefed about
two years ago at the Houston meeting on our plans
for our commerce and transportation goal.

We have about a seven-year planning cycle
within NOAA. We began about three weeks ago our
planning for the '11 to '14, FY-11 to FY-14 cycle,
so that's -- it's long-winded. We do planning for
a couple of months and then we program and then we
get into budgeting. We just started the budgeting
for the FY-10 cycle or for actual fiscal year '10
itself. So there are these plans, there are
requirements. It's probably not a bad idea to
maybe to come back to the panel with an update, and
certainly for the new members who didn't see that, you know, perhaps next time, Steve, we could come back and talk to them about that. Steve is the gold team lead for the NOAA's commerce and transportation goal. So we could maybe do that, that kind of a briefing. If it's going to be a public briefing, we may have to scrub some numbers out of it and certainly give you a sense of what's there.

The other thing is we're very seriously concerned about our fleet and the long-term capital needs, not just of our fleet, of all of our facilities, and as well as satellites, IT infrastructure. But we specifically looked at the fleet issues, and again, that's not a public document, but -- and it's still being vetted through senior parts of the government, but it may be that we could discuss that with you in an executive session to let you know sort of how those things are looking. So I'll ask Steve to look into that, too.

CHAIRMAN SKINNER: Thanks, Jack. I think that would be great at the next meeting to have that kind of update and briefing. Admiral?

ADMIRAL WEST: Just as a follow-up, as a follow-up, yeah, Ky and Mary Gleck and Jack, Jack Kelly, and Jack Dunnigan have spent - done a wonderful job over the years fighting for us. But
I still have to point out, folks, if you're concerned with investment and ocean issues, it is going down significantly. We have to put the chart back up. So we can't be happy with 4.1. It's just not going work. You're going to hear -- Zdenka, are you here? Oh, there you are. You know, a lot of us think that's the key to the future of our oceans, and it is a mess because of the budget problem.

And, oh, by the way, there will be probably be a CR for '09 because nobody's going to pass this budget and we'll wait to the new administration, that's already out there, so what impact does that have? And so things are not all rosy in NOAA for our ocean issues, is that fair?

MR. DUNNIGAN: Certainly.

ADMIRAL WEST: Okay. I don't want to be negative to -- all right. I'm done. There's a lot of work to do.

CHAIRMAN SKINNER: I think one of the things just for panel members to be aware of is tomorrow we'll be talking about the role of this panel and trying to address a lot of things that Admiral West has raised and how do we go about doing that as effectively as possible. Elaine?

MS. DICKINSON: Elaine Dickinson. Going back to response in restoration, I just had a question about that. You said the San Francisco oil spill...
you incurred millions in extra costs. Does that
come out of -- I mean, how do you pay for that?
Does that come out of the other programs? Do they
suffer because that happens, or do you just spend
the money and then hope to recover it later?

MR. DUNNIGAN: We can be reimbursed by the oil
spill liability fund for certain of our expenses,
but that doesn't come for some time. We don't get
it like right away. So part -- we didn't spend any

extra money that we had to take from anybody else
to respond to the Cosco Busan. We redirected
existing resources.

So we have a team, for example, in Seattle
that we call our war room, when one of those events
happens. There was one in Florida a couple of
years ago, but it gets managed out of that war room
in Seattle, so all of those people turn to. So
this is basically saying we had 55 people, you
know, already on our staff, some costs, people that
work on this stuff everyday that we were able to
turn to to be able to be responsive. We didn't
spend any extra of our own money beyond what we
normally would spend on this program.

MR. WELCH: Ed Welch again. Jack, to
follow-up on that, the oil spill trust fund now is
being replenished because congress has reinstated
the tax on imported oil to put in the trust fund.
So after going down for a significant number of
years, the trust fund is bottomed out and is
beginning to increase in size, which it needed to
do. And I know NOAA gets a certain amount of just
standard operating money off the top in each budget
from the trust fund as opposed to a reimbursement.
Do you know how much that is?

MR. DUNNIGAN: My understanding is we don't.

MR. WELCH: I think there's a small --

MR. DUNNIGAN: We've been -- we've actually
been looking at that as an option, talking to other
federal agencies and some folks in the private
sector about whether there would be support for
doing that for the NOAA budget, but at the moment,
I don't believe we -- and we'll get back to you
with a definitive answer.

MR. WELCH: Yeah, I think that's worth looking
at. I know the trust fund puts a certain amount of
operating money into several agencies across the
federal government, including a couple of Alaska
demonstration centers, which I guess are a good
thing to fund, not an oil spill trust fund, but it
seemed like this would be a -- this program
certainly would be worthwhile to get some regular
money as opposed to a reimbursement. I would
suspect that Senator Feinstein and Senator Boxer
might be interested in something like that after
the Cosco Busan.

MR. DUNNIGAN: It's an option that we're
continuing to look at. The problem from an
administration standpoint is with these trust
funds, and Helen Brohl can brief us on some of the

things that the CSTS has been doing with the
Harvard maintenance trust fund which is a similar
issue, is that it's not magic money. It's still,
in terms of the overall spending caps for the
government, whether it comes from a tax or whether
it comes from a trust fund, it's still capped with
the overall limits that the administration and the
congress have to deal with. So, you know, we still
think it is an option that bears some watching.

It's actively being worked, and I wouldn't
be -- and it's being talked about on Capitol Hill
as well. People are coming to us from the Hill and
saying, gee, shouldn't you be getting a regular
appropriation from the coastal liability trust
fund? And our usual answer is yeah, maybe, if not
more positive than that, depending on the
environment.

CHAIRMAN SKINNER: Any other comments or
questions on the budget process?

MR. DUNNIGAN: Yeah, by the way, if you'd
like, this is the NOAA budget for '08. This is the
summary document, all right. The real big budget
commission which we call the green sheets is about
this thick, anybody wants this, we can certainly
get copies of this for you. It's -- it goes
From Meeting 52

through all of NOAA, it discusses all the satellite programs, all the fisheries programs.

You talk about other great needs in NOAA.

Congress reauthorized the Magnuson Stevens Fisheries Act two years ago, and there's a tremendous amount of work that NOAA's being required to do. We have to end overfishing next year, you know. And they've got -- I was talking to the executive director of the Pacific Fishery Management Council yesterday. They really got a tiger by the tail. It's got to cost a lot of money to be under to undertake the high political risk that's associated with fisheries conservation and management under a very, very tough set of standards in that new law. That's just another part of the requirement that NOAA's trying to deal with in what is clearly is a very, very difficult budget climate.

CHAIRMAN SKINNER: Thanks, Jack. I think if there are no more questions or comments, now we move on to the -- we're addressing the five most-wanted recommendations in our report.

CAPTAIN BARNUM: Thank you.

MR. DUNNIGAN: Well, I think Steve and I are just going to do a little tag team here, but we
told you when you did this report that we would take it seriously, and we certainly do, and we've been working with this and vetting it through the department and in many places in government. And the presentation is basically just to bring you up to speed as to what's been happening to your report since it came.

In a general sense, let me say that this is getting very good play and very strong support by all of the audiences that we take it to. I think they're recognizing that the work that you did was thorough and comprehensive and done at a level that really allows us to focus on the critical nature of these programs.

So, you know, we're going to continue working this as the gold team leaf for congress and transportation. It's particularly important to Steve as he builds these budgets and does this out-year planning. It's still relevant and Admiral Lautenbacher still talks about it in meetings that he goes to, so I think our core message for you this morning is we really do believe you do great work and it's going to be very helpful to us as you move forward. But I'm going to ask Steve then to go ahead and walk us through the slide.
CAPTAIN BARNUM: Thank you, Jack.

MR. DUNNIGAN: You see, I even keep it with me all the time.

ADmiral West: Is it autographed?

Mr. Armstrong: Me, too, Jack.

CAPTAIN BARNUM: I got my copy, too. I think one of the most telling moments was in the HSRP report, we were at a meeting internal to NOAA and we had a new gentleman that just joined NOAA and one of the conversations came up, he says, talk about HSRP report, and the person reached out of his briefcase and pulled it out and said "here it is," he had it with him. I was impressed.

So, without further ado, I want to give you an update where we are. It’s been about a year since the five most recommendations was presented to NOAA and, of course, this is the number one recommendation: Aggressively map the nation's shorelines and navigationally significant waters.

And what you heard previously is that NOAA's resources does not any way equal the rate of growth of what we heard from the port director this morning. The MTS growth is happening at an exponential level but our resource is to stay engaged and to make sure that the navigation services are on par and that the mariners have the information they need to move the products in and out of the port safely and clean, too, without a
spill.

So these are the breakdown of that aggressively survey. Expand in-house and contract surveys, and developing and implementing more efficient surveying methods, and also we heard about replacing or recapitalizing our existing hydrographic ships and capabilities. And also to maximize the use and reach of NOAA's resources. So I will talk a little bit more about those as we go on.

Here's a table of our current capacities. On the left, you see the -- what we are currently doing now, 3,000 square nautical miles a year. Our 100 percent requirement is 10,000 square nautical miles a year, and that will get us to resurveying the 500,000 navigationally-significant miles around the United States and its territories.

The United States is composed of 3.4 million square nautical miles, so we just take those navigationally significant at 500,000 and on a 50-year cycle, we figure about 2,000 square nautical miles would be a reasonable approach.

Otherwise, at a current rate of reduction, we're looking at 166 years to do the 500,000 square nautical miles. So, agency estimate is about 100 percent, 130 million dollars is what we estimate to be able to do 10,000 squares a year. Our goals for next year for this FY-08 based on the funding we
got is 2500 square nautical miles. We had some
reductions in the adjust survey backlog. We had
asked for roughly 31 and change, 31 million for our
contract partners. We received 26. Similarly, we
had to lay up the NOAA ship Rude because of funding
shortfalls at NOAA's Rainier's operations, so that
was one of the outcomes of the FY-08 budget.

For '09, '09 includes money we asked for in
'08, and that goal is for 3,000 square nautical
miles in '09. Map 12 percent of the port areas
every year. That's what our current capacity is,
and that means mapping the ports for change, making
sure all the cultural features are there, the new
piers and new facilities. It's what you see with
your eye when you look at a nautical chart.
There's nothing more damaging to a manager to the
credibility of a nautical chart to becoming into a
port and looking at the chart and there's a
facility there and it's not on the chart. It begs

the question of what else may be wrong. So our
goal to this year map 12 percent based on the
funding we have and then our FY-09 goal is 14.3
percent.

For the national shoreline, the map 3 percent,
that's our current capacity. Our goal is 10
percent this year with the 100 percent for both the
port areas and the national shoreline is 16 million
dollars. In '08, we got 6.1 million dollars, and
so that will allow us to do basically 3 percent, 3.3 percent. Still far below what our goals are being able to maintain charts in a status that we like to keep them.

So the actions we're taking, I mentioned this earlier, survey 2400 square nautical miles, about half, 140 square nautical miles, contracted; collect useful data through integrated ocean and coastal mapping plans. And California state mapping is an effort to where we're looking to partner with, with California -- I'll talk a little bit more about that later -- to be able to get 2,000 square nautical miles, in addition to our current 2500 square nautical miles.

Partnering with the U.S. Army Corps of Engineers -- and we have a representative today in the audience, Joe Scolari -- and partnering with the Army Corps on mapping the shoreline. The Army Corps has a large effort to map the shoreline for sediment transport and we want to partner with the Army Corps to update our shoreline and also update the nearshore short mapping imagery, some of the hardest imagery to collect. Developing curricula with the -- and forums for users on data collection and processing, such as GPS and CORS, improving of digital sensor development and technology transfer in the industry, such as "Q," combine of certain bathymetric estimator, which is now developed at U
& H and is now in most of the major software programs.

Conduct demonstration projects in-house where surveying on the ellipsoid being more sufficient with our surveying, and initiate in-house the socioeconomic studies, proving that - or showing the value of hydrography and its services to the nation, what value does it bring to the nation in moving our goods and services through the ports.

Continued plans to replace the aging fleet, Jack talked about that earlier. The Hassler is underway, it's in construction, I believe, you've seen -- Barbara sent pictures out -- the steel being cut. It's being built down in Pascagoula, and it's replacing the 39-year old NOAA ship Rude which will be decommissioned this month.

Procure replacement for the survey vessel Bay Hydrographer. That's -- well, that aluminum is being cut, it's being built in Washington state, it's going to be a twin-hull vessel. It's a proven design that the Corps of Engineers has one in Mobile and also in New York, very happy with it. So we're not going to go out and reinvent the wheel. It's going to be a 55-foot vessel to replace the Bay Hydrographer and support the work that she does in research and also survey operations on the bay.

Replace the two hydrographic launches on the
NOAA ship Rainier. The message came across yesterday on my Blackberry -- I couldn't see the pictures -- but everybody was oohing and aahhing about the two new launches, which has been replaced. The launches that are on the Rainier, which is roughly 35 years old. They're older -- they were old when I came into the Corp and they're really old now.

They're a very good design and they serve us well, but they're 35 years old boats. So we're working to recapitalize these important pieces; not only for the ships, but the launches are the tools that actually get out and augment the capacity of the vessel. And so in this year's budget we had funding to add two more launches, so two additional launches will be built this year.

And expand our autonomous underwater vehicle in-house contract hydrographic data collection capacity by again developing operating procedures and developing how we're going to integrate this into the NOAA fleet and then with our contractors. So developing specifications in operating -- concept of operations. And that's an area that we're really excited about. We think this shows great promise in augmenting our capacity.

Second recommendation. Integrate coastal mapping efforts and ensure federally maintained channels, approaches, and anchorages are surveyed.
to the highest standards. Making sure that the
data integration, all the data that's collected
both between NOAA and the Corps and the USGS and
all our partners equals - not duplicating efforts
and so, and reduce inconsistencies, so maximize the
return on the taxpayer investments. Basically,
it's the map form used many times, a paradigm

you've heard about.

Tom asked if we would break between each one
if we had any questions.

CHAIRMAN SKINNER: Sherri?

CAPTAIN HICKMAN: Sherri Hickman. The Rude
was laid up up due to budget cuts, am I correct?

CAPTAIN BARNUM: Yes.

CAPTAIN HICKMAN: How do we plan on running
the new vessel if we can't run -- looking at the
same budget to run it, am I correct?

CAPTAIN BARNUM: We had the same budget. This
is -- we hope an acronym for this year. This was
the first year we had the president's request, both
in the House and the Senate, full marks, and we
were all very hopeful that that was going to come
through. What was enacted was significantly less.
What's in the '09 budget is there is funding to
operate the Hassler in that budget, so...

CAPTAIN HICKMAN: Okay. And the Rude's being
decommissioned next month. Was that the original
date?
CAPTAIN BARNUM: It's actually being decommissioned March 25th.

CAPTAIN HICKMAN: That was the original --

CAPTAIN BARNUM: No. It was scheduled to be decommissioned in August of this year, so we're basically speeding up that process, if you will.

CAPTAIN HICKMAN: Okay.

CAPTAIN BARNUM: It was the least pain to take as far as where to take a budget cut. We figured that it was easier to take the Rude offline rather than take it across the board VDAT cuts for all our vessels. So we are trying to maximize the vessels Thomas Jefferson, the Rainier and Fairweather, keep those operating at full tempo rather than cut it back.

DR. JEFFRESS: Gary Jeffress. You mentioned that you're cooperating with USGS and Corps in the hydrographic surveying. Whose standards are you meeting? Whose standards? Are we all doing it to NOAA's standards or using the Corps standards and USGS. Do you have separate standards?

CAPTAIN BARNUM: That's a very important point. I was in the interagency working group at Ocean Coastal Mapping last week in Fort Lauderdale and that was with the Corps of Engineers, USGS, NOAA, Maps was there, John Peladiello (ph), FEMA was there. There was a variety of folks there to come together to talk about these very issues. And
one of those is, is first having a day-to-day

inventory understanding who's mapping where so

people don't map the same place twice.

And the other is coming together on basic

standards of when you survey, that the data is

collected in a manner that can be used by multiple

partners. They can't do that everywhere, but

that's the goal, is to try and maximize that

effort.

DIRECTOR SZABADOS: Steve? Mike Szabados. I

believe that the Army Corps has recognized the

vertical control -- the points of vertical control

and it's decreed, it's coming out -- I forget the

gentleman's name, Jack, you worked with him.

MR. DUNNIGAN: It's John Reilly.

DIRECTOR SZABADOS: General Reilly sent a
decree out to the Corps that they should do it to

NOAA's standard, the vertical control, for all

navigational dredging projects and so forth.

CAPTAIN BARNUM: That's a good point, Mike.

That's not only working with the Army Corps, but

also with the states and all our partners to make

sure we use consistent data both horizontal and

vertical.

DR. JEFFRESS: The reason I bring it up is

because where the acid test boards is if there's an
incident and, you know, collision or oil spill and
they're relying on charts that are not in NOAA's
standards, the courts may reject it. That's why I
use NOAA standards for measuring water level in
Texas because the data goes in the court.

CAPTAIN BARNUM: And that's one reason we are
very careful about what we apply to the nautical
chart as to make sure that that meets rigorous
standards.

MR. WELCH: Ed Welch. Captain, if you
could -- could we go back to the chart that was
entitled "aggressively map?" Yeah. If we look at
the middle line, the map, the port areas, and you
indicate that basically we're proposing in '09 to
go from the 12 percent capacity to 14.3, which is
a -- you know, it's a nice little bump, do you know
how much additional funding resources that's going
to require?

CAPTAIN BARNUM: To go to the --

MR. WELCH: Yeah, to go from 12 to 14.3.

CAPTAIN BARNUM: Where is Dave Z? He's my
expert on that. Dave's our -- who managed the
shoreline mapping.

MR. ZILKOSKI: I don't have the exact figures
in terms of what that would take to go from the 2
points, we can go dig out those numbers. But, as you can see, if we're doing the 12 and the 3, it's a 6.1. 100 percent requires this 16 million. So to really bump that from 12 to the 14, and it's 3.1, they kind of go hand-in-hand. You're talking about somewhere in-between there, so it's probably another million dollars, another million and half or so to bump that up little bit, but a lot of that stuff is done through using better technology, too.

MR. WELCH: Okay. I guess the point -- my observation is, it's a psychological one, you know, you got the panel's reports that set a bunch of goals. You're not going to achieve all these goals in the near term, particularly that port mapping area. If you had a sustained increase of about 2 percent of your capacity, are you doing 2.3 there? For the next four or five years, you hit that goal. And if you're talking about that's a million dollars, that's -- a million dollars is tough when you don't have it, but it's not, you know, it's not the space shuttle.

And I think, psychologically, it would be good for NOAA and National Ocean Services folks to say, look, we see the various things on this report, we don't -- you know, we can't achieve everything at once, but we do have one or two goals in sight and here's our four or five year plan to hit it.
CHAIRMAN SKINNER: Thanks, Ed. I think that was a very good point. I also, at this point, just want to be conscious of the time here and make sure we get through all five recommendations; so if there aren't any further questions on the first one, we will move on to the second. Great. Thank you, Steve.

CAPTAIN BARNUM: So on the second recommendation, NOAA should take a larger role in improving partnerships with other federal and state agencies and other nongovernment entities to integrate coastal mapping. And we talked about that with the integrated Coastal Mapping, and an example of that was the Integrated Coastal Mapping workshop last week where they will be developing a strategic plan and a model and an inventory, so but they have a long way to go before I think they're really going to show some demonstrable results because it's a huge coordination effort.

And ensure the nation's federally maintained channels, approaches, and anchorages are surveyed with the full bottom coverage technologies. Again, working with the Corps of Engineers, in both headquarters and in the field, to make sure that we are mapping to the highest standard.

So in 2008, the actions that we would be taking is participating with USGS, MMS, Mineral Management System, DOD, on the Joint Subcommittee
on Ocean and Science Technology, JSOST, and the
interagency working group on ocean and coast
mapping, which I mentioned to ensure all our
partners are working at the local level to ensure
that we are collecting data in the most efficient
manner.

Support California coastal water multi-use
survey data needs. California has passed a bond
referendum, raised some money, and so they have
come to NOAA to help them manage the contracts, if
you will. And so this is in the spirit of
Integrated Ocean Coastal Mapping and IOOS, that we
collected data and maps used many times, so they're
collecting it for habitat. It's 2,000 square
nautical miles, basically from 10 meters out to 3
miles state waters. It's not an area that we would
normally chart in our lifetime because the
criticality is low, looking at our priority plan.

There are some critical areas in there, there
are approaches to the major ports, so but we do see

this as an opportunity to use their funding and add
in - sweeten the pot a little bit to bring it up to
our standards, if you will, so that we are able to
leverage their funding to potentially gain almost
2,000 square nautical miles for a very attractive
deal. And so the state of California will get a
quality product for basically updating the nautical
chart. They will get their data for the habitat.
Collaborate with the U.S. Army Corps, and again, talking about tailoring the shoreline/nearshore mapping standard specifications. This is with our LIDAR mapping project.

Explore opportunities to work with FEMA on their national baseline floodplain map, and also define NOAA's role in Homeland Security mapping for safe ports.

Execute VDatum on a national plan. The VDatum's been implemented on an earmarked basis, on a state-by-state basis, and so we're working towards making a national plan for VDatum, so approach VDatum -- vertical datum issues are not on state-by-state basis. They need to be approached on a regional basis so we're taking those earmarks and combining them to approach them on a more regional basis, such as Mexico and other areas around the nation.

Collect GPS and geodetic and ellipsoidal ties at water levels, basically tying the water levels and the GPS together in Alaska, Hawaii, Puerto Rico, to understand the spatial relationship between water levels and the land so it helps us to get a much better idea on the relationship, the datums, and also be able to answer questions about climate change. Because is the land going up and down or is the water going up and down? You have
to understand those relationships to understand if there's really a sea level rise. And how it's going to affect the particular communities.

Produce a workshop to establish national standards for referencing vertical heights for the MLLW and NAVD88, that's what Mike Szabados was alluding to earlier.

Discuss potential Army Corps resources, allocations for further development of VDatum tools. Working with the Army Corps to again expand the use of VDatum around the area. And then also work with the Army Corps in a consistent, authoritative and accurate channel spacial reporting system. That's making sure that the channel frameworks are accurately portrayed on the chart. It's one thing to place them on the paper charts with the error budgets in there, but when you start adding to it electronic navigational charts on large scale, then any errors are magnified. So we're trying to work with the Corps and make sure a lot of that is squared away is where we're at.

So here's a chart for our current capacity, 28 percent of the top 175 U.S. ports for VDatum. Our 100 percent, of course, is all our territories, including U.S., Alaska, Hawaii. 100 percent estimate 3-and-a-half million dollars per year. Our FY-08 goals are 30 percent. So with one
million dollar appropriation, we are very fortunate, we have asked for this in the past and have not received it, so we are very pleased to receive that funding this year.

So our '09 goal is to, again, that funding still in '09 for 5 percent and 5 percent more, so 63 percent cumulative. So a lot of the areas around the United States are low hanging fruit, if you will. They have well-established datums, and so we're attacking those. But when we get to areas like Alaska, Hawaii and the territories, we understood it's a lot more work, particularly Alaska. Any questions on -- yes, sir?

ADIRIAL WEST: Steve, what's the mandate for the IOCM, is that a NOAA initiative or was it the JSOST that directed that?

CAPTAIN BARNUM: The IOCM was kind of the president's ocean action plan.

ADIRIAL WEST: Okay. So it is under the JSOST?

CAPTAIN BARNUM: Yeah.

ADIRIAL WEST: So mandated to the ports. Okay. How are you getting the requirements from Homeland Security? I saw where you're trying to map to their -- are they giving you their requirements, are they part of this team?

CAPTAIN BARNUM: No. Well, the homeland security -- the issue of the bullet in there was
NOAA, in 2002 and 2003, after September 11th, mapped many of the major ports along with the Navy to image the ports for the nation to ensure, basically to make sure that -- create a baseline, if you will, for the Navy. So if somebody puts something bad in the water, then the mine hunters would come in. And the way they operate, they like to have a clear baseline to compare, what was there before and what was there after.

And so we're having discussions with the Navy. The Vice Admiral has had discussions with the Navy and the VHS about how we'll go about addressing those requirements. I think the CM debts is going to be raised and the CMTS, Committee on Marine Transportation System, as an action item, how do we go about addressing this department. Because the Coast Guard has - controls the port for shipping and the Navy is the folks that will come in when something bad happens. And then so who is going to be the baseline?

And certainly that could be NOAA and certainly are the partners with the Army Corps and others, because it's not just the coastal ports. Does that answer it, sir?

ADMIRAL WEST: Kind of.

CAPTAIN BARNUM: Kind of? Okay.

ADMIRAL WEST: No. The missing piece in this is Homeland Security. It always has been.
the hell is going on? Chaste protection is how we
do business in the Navy, and so - but that takes
constant, you know, survey and stuff like that. Is
that what they want?

CAPTAIN BARNUM: The requirements have yet to

be fully defined.

ADmiral West: Well, you need to press them.

In support of you and your efforts in NOAA, I think
this panel needs to know what the requirement for
surveying is of U.S. waters is for homeland
security.

CAPTAIN BARNUM: And we are in discussions
again with the Coast Guard and said we have the
capacity -- well, we have the capability, but we
don't have the capacity. And so to define that
capacity, we need to know which ports and how
often.

ADmiral West: Well, you really don't know
then until you know what they want?

CAPTAIN BARNUM: Correct.

ADmiral West: And my guess is probably what
DOD does, but you don't know that for sure and you
should find that out.

CAPTAIN BARNUM: We're working on it --

ADmiral West: And you should get the money to
do that, by the way, not out of your budget, but...

CHAIRMAN SKINNER: I think that would be a
tremendous help to us as we're trying to promote
Third recommendation, modernize heights and implement realtime water level and current observing systems in all major commercial ports.

So NOAA's navigation services form the backbone, if you will, the critical component of IOOS, so water levels, telemetry and other. So the recommendation was expand and fund realtime water level current observations such as ports and commercial ports and improve the positioning for heights nationwide as critical components of IOOS.

So here we have the table, current capacity ports, 100 percent requirement, 175 seaports are -- 100 percent estimate is 25 million. Our '08 goals is 48 seaports total. In '08, we received an appropriation of 2.8 million dollars. There's still a significant gap. We saw earlier that there was a request for two million dollars in '09, and so that will allow us to provide the infrastructure and also take on additional operational models for 50 seaports total.

The national current observing program update 138 locations annually. As been briefed earlier, HSRP, our current tables and a lot of our current data is woefully out of date. Our 100 percent estimate is four million dollars. '08 goals in 70
locations. In '08, we received one-and-a-half million dollars. And '09, we hope to do 70 additional locations.

For NWLON, the National Water Level Observation Network, 100 percent requirement is 32 million dollars, 100 percent is estimate. In '08, we'll have 205 NWLON stations. We were appropriated 20 million dollars. And then, again, for '09, our goal is 210 NWLON station. Basically to densify the network, and this is the reference network, if you will, of the nation for water levels. Any questions on that recommendation before I move on? Oh, I'm sorry.

So NOAA will take the following actions in 2008. Add meteorological packages to 25 existing national NWLON stations, expand 25 additional NWLON stations over five years and harden stations to withstand extreme weather. The lessons learned after Katrina and Rita is that the stations -- one station we had hardened survived, is that correct, Mike?

DIRECTOR SZABADOS: Right.

CAPTAIN BARNUM: And so we received funding to harden additional stations to protect them against storm along the coast. So this year NOAA ports
will establish six additional ports in Pascagoula, Gulfport, New Orleans, Lake Charles, Sabine and Cherry Point and add air gap sensors to New York/New Jersey. And then also, like Houston and Tampa, we will release the New York/New Jersey ports economic study.

Shown here is the table for capacity, again showing the number of states participating in height modernization, 100 percent is all 50 states, 100 percent estimate, 15 million dollars. Our '08 goals is 11 states, again, doing this as a regional effort. In '08, we received 6.15 million dollars. And in '09, we're looking to add 16 states, funding dependent.

One of the major efforts this year is to conduct a nationwide gravity study. The gravity helps define the geoid, which helps define height. So collect gravity data for 20 percent of the country each year for five years, that's 100 percent, at a cost of 39 million dollars.

Complete the observational phase of the high resolution snapshot, basically of the NGS gravity survey plan. And in '08, we received $500,000. In '09, funding dependent. Anything you want to add to that, Dave, on the gravity?

MR. ZILKOSKI: Yeah. That's, I mean, you can
see it's a 39 million dollar program and we only have 500K to put into it. And what we did is we really did a proof of concepts, which we knew basically from using some working with the Navy of how it would work or not, but add our own insight, develop the standards. So really what it is, it is funding dependant. We know this will work. It's a lot of flight time which is very, very expensive. It's not the technology. The technology works. We've integrated it into our system, we can process the data, we can improve the geoid.

All we need now is some platforms to put it on and fly it around the country. But if you think about flying the country, it's pretty expensive doing it. But that's why it's a big jump. We're working with federal agencies to try to partner with them because they also have the need for the data, and in using some of their platforms. The instruments are very, very expensive, that's what the 500K is, just for one instrument.

MR. WHITING: Larry Whiting. There is a lot of gravity data that is commercially available. Have you got plans to acquire that or -- I mean, already existing data?

MR. ZILKOSKI: Yeah, we have -- we have most of that gravity data that is available. Most people have given it to us. We have over two million data points in our database. We've worked
with GNA law, AGA (ph) and NOW (ph), and we've worked with a lot of oil companies and they have given us some of their data in a proprietary mode, so that they we're not allowed to give it out. So we have a lot of it, and we're always looking for more. Part of what this program does is by flying the country and getting a different wavelength, this is a longer wavelength of the data, we're able to validate some of the older gravity information.

One of the problems of all the gravity data, 'cause it's a very, very accurate value, you have to know which corrections were applied. And when you get gravity data that's already processed by someone, they give it to you, they say, well, we apply this correction and that correction and we tie to this datum. Well, a lot of times when you start adding that and mixing and matching it, you find these inconsistencies. So what this program is going to allow us to do is find those inconsistencies and be able to better utilize all that local gravity on the ground.

CAPTAIN HICKMAN: I'm sorry, Sherri Hickman.
I thought for the -- it's not here -- what actions -- on the slide, what actions will it take for '08? I thought that there wasn't enough money in the budget for the six new ports?

DIRECTOR SZABADOS: Let me clarify that.
Actually, there was several ports. Mobile, which
was installed this fall, so there's seven new
ports. There will be seven -- six additional to
the seventh. Six of those ports were funded
through -- again, in our base funds, we do not have
federal funding for the operation and maintenance
installation of the ports. That was in the special
supplemental earmarked funding for Katrina, Rita,
and I think also for the Iraqi war, there was a
supplemental put in there by congress for those
ports. With the exception of Cherry Point, which
is Washington, which is to be funded by B.P.

CAPTAIN BARNUM: Okay. I mentioned these
earlier, talking about the regional effort for
height mod and height mod consolidating the grants,
the gravity images, developing and demonstrating
global navigation satellite system to the building,
showing what could be done using a GPS, accuracy
GPS, but, of course, doing that you need the geoid

and to do that you need to supply the ellipsoid, so
you think gravity would be done and Newton figured
that out and it's hard to explain what that would
be. But it is a critical component when you try to
do centimeter-level work. So present ten CORS/OPUS
overviews and initiate again a socio-economic study
of CORS and gravity survey plan.

Any questions? Now we're at the end of the
three? Okay.

Strengthen NOAA's navigation services and
emergency response and recovery capabilities. NOAA's capacity, again, is less than the rational needs. NOAA should seek out adequate recognition and funding for NOAA's essential support functions and recommendations. This was largely derived after the Katrina, Rita and certainly the efforts that NOAA put forth in opening up the major ports along the gulf coast back to commerce.

In 2008, NOAA worked with the state and federal agencies at the National Response Framework Essential Support Functions, to prepare and improve incident response and product delivery. We are working very closely with the locals and the states. We are participating in a workshop that's going to begin in May. It's basically run by the IGCA, Intercoastal Canal Association and Ray Butler's the leader of that, and it's again working with the states and the Corps and all our partners of how we will address - if an event like Katrina or Rita would occur, or even a smaller event, making sure that we're all coordinating in opening the ports. Operate six Navigation Response Teams. We had hoped to have funding for eight Navigation Response Teams this year, but we only received funding for six.

Continue procurement of a damage assessment aircraft, which was funding that was received through a supplemental, after Katrina.
expected delivery date. Contract, Gulf of Mexico marine degree mapping will continue. We have two supplementals for Louisiana and Alabama, Mississippi. We are currently working on the Louisiana work. It’s 935 square nautical miles and we just had a meeting with the state last week to map those. That data will be used not only for identifying marine debris, but also updating the nautical charts, many of the areas there it’s 50 to 100 years old, so that will be very important for storm surge and also habitat.

Coordinate reconnaissance surveys and define

NOAA’s role in the homeland security mapping, again, we talked about that; that’s ongoing, to define that role.

And so here’s the table showing our capacity, sixth NRTs, 100 percent, 10, five million dollars is the 100 percent estimate. ‘08 goals are 6 NRTs. 13 ports validated. NRTs, not only are they there for emergency response, but they’re there also to validate our navigational products, coast pilot paper charts, ENCs, to make sure that they reflect reality. In ‘08, received $500,000 gap analysis, NRTs.

‘09 goals is eight NRTs, again, the funding was there in ‘08 and it’s there in ‘09, so the goal is to have eight NRTs up and running next year depending on the ‘09 funding. Any questions on
that? Okay.

I'm going to move on to our last recommendation. Disseminate NOAA's Hydrographic Services data and products to achieve the greatest public benefit, so NOAA's navigation is delivered equal to make navigation and other uses, again, the spirit of Integrated Ocean and Coastal Mapping. So NOAA should expand efforts to deliver its navigation products and services more quickly and

ingcrease its outreach to make navigation and non-navigation users more aware of NOAA mapping and data resources available to them.

I think even those who participated in last year's capital ocean week, there was a panel on hydrography is not just for charting anymore, they talked about the multiple uses of hydrographic data and management of our coastal zone. And I think one of the connections there was when a gentleman from the Sierra Club jumped up and raised his hand and said "how can we help?" It was connecting to our nontraditional users on use of hydrographic data and how important it is for management of our posts.

So in '08, NOAA takes the following action, build 40 electronic navigational charts; release web based on-line geodetic-user tools; develop and test high frequency radar products for navigational community. That's for surface currents; conduct
From Meeting

20 operational testing, integrate ports data into the
coast guards Automated Identification System, being
able to get support data over AIS; to educate IOOS,
the idea is to have an integrated screen where you
have your electronic navigational chart and also on
the same screen seeing your realtime ports data at

Working with the Corps of Engineers, IOOS on
the integration of wave data in the ports, that's
taking the wave data that's collected by various
IOOS regions and incorporating that data into the
port system. Improving our tide current product
delivery. Customizable PORTS displays. Hold 12
height modernization user forums around the
country, and three regional height modernization
forums working again within the community to
educate about height mod. Educate IOOS partners on
the multi-use nature of navigation data and
products. And certainly, utilize the Joint
Hydrographic Center, which was referred to earlier,
to expand hydrographic survey technology beyond
traditional charting applications.

So, again, showing a gap analysis for the
ENCs, our current capacity or what we have
currently built right now is 601 navigational
charts. Our requirement is 1,000. Six million
dollars, that's what we requested last year. We
received 3.6 in the ap-props, so we had pretty much
a significant shortfall. So in '09, our goal is
again asking for that 6.35 million dollars to
produce 741 ENCs. It's important to note here that

in the world of the IMO and IHO is looking at
mandatory carriage of ENCs. This will occur this
summer at NAV 54 in London. And so there's the
strong possibility that the IMO may mandate
mandatory carriage of the ENCs. And that is the
end of that part of the presentation. Questions?

ADMIRAL WEST: Yes. Steve, thanks. I've got
several questions. Tomorrow I'm going to ask --
I've got to take these five things to the NOAA
science board next week. I think some of you know
that. So we'll talk a little bit about that
tomorrow. But, while I was reviewing some of
these, just for the general public, a couple
comments.

One is, is there a one-for-one comparison
between a paper chart and ENC? Because if you got
one paper chart for a certain number, do you have
to have one ENC, or is there some overlap or is
there any efficiencies with the ENCs?

CAPTAIN BARNUM: It's not exactly a one-to-one
relationship.

ADMIRAL WEST: That's always the question that
comes up. We're never there. Well, how many do
you need, you know? You know, one ENC may mean two
paper charts. What's the answer?
CAPTAIN BARNUM: It's roughly equal.

ADMIRAL WEST: Why is it roughly equal? You don't need to answer -- you know, later, over a beer. But that's, you know, we make these statements about we need ten NRTs, why do you need ten? Why not eight? So we've got to be able to explain to the general public why these things are important.

So back to my next -- two of our most-wanted include ports and response team. Let's take the San Francisco incident. Is there any lessons learned that came out of that? 'Cause do we ever look at lessons learned after the fact about how we things did? For example, was the response team, NOAA response team, called for that? I think they were, right?

CAPTAIN BARNUM: NRT was on call. It was not activated for that event.

ADMIRAL WEST: Okay. But there's a lesson learned there. It was, you know, because we're asking that we're woefully underfunded for ports. How did ports do? Did we -- I know it's safe and efficient moving ships. Is there drift models that we could have done with the oil spill and was it used? How effective were what we're saying we need?
in the real world situation? Is that looked at or are we going to look at that or what's the size of that?

CAPTAIN BARNUM: Mike, you can certainly chime in here.

DIRECTOR SZABADOS: Well, in the San Francisco port system, which is, okay, the partnership with the local partner pays for the operation and maintenance, they had a funding shortfall and a number of the current meters were down and it was identified during the oil cleanup. Such information would have been helpful in the cleanup, but because of lack of funding the gauges were down.

ADMIRAL WEST: What do we do with that -- what are we going to do with that information? Are we just going to let it set?

DIRECTOR SZABADOS: As I plan for budgets, that's one of the things that we're trying to include that information to try to justify an increase in the budget.

MR. DUNNIGAN: I mean, I think it's one -- this is one of the reasons why it's clear to us that there should be a federal responsibility to maintain the system. You know, we can't depend on
the highly variable funding structures of our partners for something that is so Grade A national significance.

That's the argument that we're making as we try to move forward in our budget, our longer-term planning exercises, to justify the funding. We haven't, you know, carried that day yet within, say, the '09 request, but there are a lot of people up on the Hill who are carrying these ideas ahead of us.

CHAIRMAN SKINNER: I think that type of information, though, again, looking forward towards how this panel could be helpful on this stuff is very important to make a case. I mean, I think that's -- I understand the frustration but with that type of an incident, having that many meters down is unacceptable.

CAPTAIN JACOBSEN: Tom Jacobsen here. For San Francisco, OSPR is stepping up to pay more for ports and keep it up-to-date. But ideally, NOAA would be doing it. I mean, all of us have been asking for that for quite a while. Down in Los Angeles, Long Beach, we are asking for funding from OSPR or NOAA and we had to do it ourselves through the ports, the local ports in L.A. and Long Beach. So, absolutely, if we can get some federal funding, that's the way to go.

MR. WELCH: Ed Welch. To follow-up with what
Admiral West said, is it possible for either NOAA or this panel to produce a one-page document that said -- would have said, had recommendations of this panel been fully in effect, this would have had -- this consequence in the case of the Cosco Busan oil spill or these additional resources that weren't available would have been available, or something along those lines?

ADMIRAL WEST: I think we should do something. I mean, we're making a case that we got to do this and we're just sitting here listening to it go down the tubes. I can make a case that if you're not going to put the O & M money in it, why are you installing it in the first place? You're wasting my money. Mike, you know, I'm always hollering at you, you're the messenger.

There's only so much money and they're just going to tell you to prioritize, you know, okay, that's important, but, Jack, go ahead and balance the books and put it where you think you do. But we got to start making a case for why these things are so damn important. Rather than saying, well,
Chairman Skinner: Again, I think that was an excellent point. That's one of the key things that we want to talk about tomorrow is where this panel goes and how to get the recommendations implemented. So I think some good ideas to start thinking about for tomorrow.

Any other questions, comments? Thanks, Steve.

It was very helpful, at least to me to see it in that format, so we can -- and looking at what the 100 percent is and the gap is, I think that's a good way to present for the panel as we move forward. We certainly like to see less on the gap side as we go forward, but it's a good way to sort of portray where we are right now.

A couple more administrative issues. If all of the public members who are here could make sure that they sign in. I think there are sign-in sheets -- is that right -- in the back.

And one thing I forgot to do was to approve the meeting summary from our October conference call, which we can take care of quite quickly. If we have a motion to approve the meeting summary from October -- October something -- October 15th, 2007. Do we have a motion?

Captain Hickman: I will make -- I will make the motion.

Chairman Skinner: Motion to approve?
MR. WELLSLAGER: Second.

MR. WHITING: Second.

CHAIRMAN SKINNER: Any discussions? All in favor, aye?

(All affirmative responses.)

CHAIRMAN SKINNER: Any opposed, the abstentions?

(No responses.)

CHAIRMAN SKINNER: The meeting summary's approved.

Next up on the agenda is Helen Brohl who is no stranger to this panel certainly. Helen is going to be talking to us about the -- well, first of all, Helen, we're doing something a little bit differently. Are you going to go up front?

MS. BROHL: If -- can I sit somewhere just because it's easier to see the screen or if you want me up there, I'm happy to --

CHAIRMAN SKINNER: Whatever's more comfortable.

MS. BROHL: It would be more comfortable here. My question is do you want me to try to meet your 10:15 break deadline, or do you have the little extra minutes, the full 30 minutes? I can talk pretty fast.

CHAIRMAN SKINNER: I'm not going to fight you on this one.

MR. BROHL: I'm a fast talker.
CHAIRMAN SKINNER: Give her the 30 minutes.

MS. BROHL: Don't kill the court reporter.

CHAIRMAN SKINNER: Have a seat. You got your 30 minutes and --

MS. BROHL: All right. I would like to do them both. I want to do the overview first and then the technology update second.

CHAIRMAN SKINNER: Helen, I have already started contracting out my responsibilities. I'm going to ask each presenter to tell you about yourself.

MS. BROHL: That could be interesting.

CHAIRMAN SKINNER: Part of your 30 minutes, so go.

MS. BROHL: Thank you. I am Helen Brohl. I'm the Director of the Executive Secretariat of the Committee on the Marine Transportation System. And I want to thank Jack Dunnigan and NOAA for inviting me here today. It's just wonderful to see everybody, and I'm sorry there wasn't enough time last night to actually see everybody one-on-one, and hopefully during the day -- I'll be here most of the day -- I will get to say hi to everyone and try to catch up on what you're doing.

I love the fact that you -- that this -- I think one of the things I enjoyed most about being on this panel, it was such a proactive panel. Some -- I mean, I've been on advisory committees
where you felt like you were spinning your wheels
sometimes and it wasn't just because
recommendations can't always be implemented. It
was because you felt like you were spinning your
wheels, and you guys have always been about getting
the job done and making a difference and your
Federal sponsor is extraordinary, if I can say so
myself.

My experience in working with an interagency
committee is you get to know virtually every agency
in some respects and their cultures and while there
are a lot of good agencies, I just have to
compliment NOAA. You guys are very lucky to be
working with NOAA, and those of you who do actually
work with NOAA are very lucky.

If I could today, I'm going to try to keep
within my 30 minutes and you'll have to give me a
nudge if you could after about 20 minutes -- or now
that I'm down to about 15 minutes tops, so I can
switch over to the second discussion.

Because some of you were new, I thought that I
would do a very short brief, again, on the CMTS.
And I think it kind of leads into quickly relating
how the CMTS is addressing some of the most-wanted,
and then specifically I would like to address some
of the activities under the integrated action team
on navigation technology, integration and
coordination, which I hope reinforces what Captain
Barnum said today and hopefully compliments as well some of that work.

Jack Gray was a guy who was on the panel when it was first started, a terrific guy who worked with Intertanko for many years and he was instrumental in developing a report in 1996 which created the term Maritime Transportation System and criticized the government a bit, the Federal government, for perhaps not addressing maritime transportation needs and Jack had no shortage of words every year about why aren't we doing this and why aren't we doing that.

And I think, ultimately, if you're running tankers or any kind of ship, the navigation safety is extremely important to you, you want to make sure that the people providing the federal services that are being provided are being provided in a holistic manner, that the left hand knows what the right hand is doing; as a matter of fact, I think that was their goal.

And that report prompted a provision in coast guard reauthorization to ask the federal government to have a report to congress which turned out into the 1999 report, which was a very broad brush assessment on the Marine Transportation System.

It created a precursor to the U.S. Committee on the Marine Transportation System, an interagency committee on the MTS, which was technically run by
Coast Guard when it was still in the DOT and the Marine Transportation System National Advisory Council, which is managed under the maritime administration.

So the MTS still exists. The I-CMTS is now the MTS. The Ocean Commission recommended in their report that the I-CMTS be raised to capital level because things can languish over time and the more that the big bosses don't show up and lower and lower staff start showing up and they have very great intentions but policies really can't be changed. And the committee then had a charter in 19 -- excuse me, what year am I? -- 2005 to create the CMTS as it is today.

And I think it's a pretty aggressive recommendation from the president in the Ocean Action Plan, and that's to create partnerships with agencies responsible for the Marine Transportation System and the intermodal connections, and we're still refining where those intermodal connections stop. Some people say it's our responsibility to deal with a container all the way to Chicago, I hesitate to think that because we have enough on our plates already; however, it's a great intention. The important part, of course, is to implement it in a meaningful way.

Just so you know, for the record, maritime transportation has an impact on 18 different
the president. So, we're dealing with -- we're really hurting lots of cats trying to get them to do meaningful things to improve the marine transportation system. The secretary of transportation is the standing chair of the CMTS and, as you can see, lots of other agencies, including the Department of Congress in which NOAA is held, and we have actively the International Trade Administration from congress is also participating on the coordinating board level.

What's I think's cool -- and I've said this to you guys before -- is we have ex-officio members. Technically, they don't vote but, believe me, their opinion counts a whole lot. And that office is under the White House, including the Office of Management and Budget, and CEQ, Homeland Security, and so the potential to from the very beginning generate ideas and policies that kind of have a backed up support from administrative offices is super important.

Just so you know, because as we go through a little of this, I think it's - quickly talk about the process of writing this committee. The coordinating board -- I've said this, I'm sorry, to you guys before, and I apologize, some of it's a
repeat from a previous meeting.

The capital thinks I'm really, really cool and real glamorous, and I love to say that I work for a cabinet level committee, but in reality, the CMTS doesn't meet all that often. We've met four times since 2005, which is better than the Committee on Ocean Policy which has met once, so we feel good about that. But the fact is it's hard to get cabinet-level people together.

The real heavy lifting is with the coordinating board, but they are no slouches. They are the administrative and directors of the many department agencies, which are many, many more than the 18, who sit around the table to create the policies that are recommended to the CMTS.

And from my vantage point, when you have the administrator of NOAA and the manager for the Army Corps of Engineers, and for Admiral Allen sitting there from Coast Guard and the Maritime Administration and USDA and Energy, and any number of agencies, including Customs and Border Protection, or the Transportation Security Administration; if those directors are around the table proposing policies, that's pretty far down the road, okay. It may not be the big boss signing
off, but if all those agencies are supportive, I think you're doing pretty darn well.

And, I mean, the executive secretary is the staff office and I'm the director of the staff office. **Integrated Action Teams** are just a term for task teams that are put together to take on some of the actual work and they are intended to be managed and led by the agency members rather than the executive secretariat. Ultimately, if those agencies don't buy into what you're doing, the staff can do all kinds of work but it's not going to go anywhere.

The Integrated Action Teams are - the big ones are National Strategy. We're in the home stretch of that. I'm going to make some references to the draft recommendations as we move along here. The coordinating board approved that on February 26th to be referred to the CMTS. And I look forward to bringing that to the panel when that's done.

The MTS assessment -- and Bahar is here from Volpe working from the Army Corps of Engineers to work on that, has turned in a phase one of part one, and it's moving along. But, frankly, it does take some financial commitments. And they were able to provide some for the first phase and

Maritime data collection, the inventory's

request some in '09, the Army Corps, I should say.
completed and I believe that when you were given
your e-mail background information for this
meeting, it was provided. I didn't want to bring
copies because it was fairly large, it's a PDF
version. But if you pull it up on your computer,
you can use the links on there and it will take you
directly to different federal maritime data
sources, again, that's federal maritime data
sources. It's -- it may not be a big, huge thing
when you look at it but, in fact, it's kind of a
first step of understanding the Mayan arts in the
federal government.

It covers 12 different departments and
agencies that are somehow doing some kind of
federal maritime data collection. It just
reinforces the fact that maritime transportation is
all over the place in the federal government.
There is no FAA for maritime transportation.

And a portal -- a more indirect portal, for
those of you are in the research part of this, is
in various stages of development. We're in beta
trials right now. And the goal of -- if you just
took your inventory now and clicked on a link,

that's great, it would take you to a federal source
and you would have that document. But to do any
real detailed research, it's only as good as you
really need to do like in an edit-and-find in that
document. It doesn't take you deep into the
documents themselves. This portal will do that, like a Google search, and that should be completed in April.

The Navigation Technology Integration Team, that was developed -- that was approved in October of 2006. NOAA leads that camp think, Jeff Dunnigan and Mike Szabados who provided Dave MacFarland, who you know Captain Dave MacFarland, who was the lead on this, and I'm going to talk a little bit more about that in a minute.

Other activities are trying to connect the dots in an appropriate way between other MTS federal advisory committees. There's about a thousand federal advisory committees in the U.S. government of which approximately 70 have some direct or indirect impact on MTS. But indirect means they may just have to concentrate about some trade aspects and could impact such things as like import quotas and things like that.

There's about 20 that are directly related to the Marine Transportation System. One in particular that has a lot of alignment with you guys is the Navigation Safety Committee run by the U.S. Coast Guard. And there has been some exchange between your committee and theirs, and you're both dealing with E-navigation issues and charting and mapping, and they're starting to do some broad visioning on what they think the most safe system
would be.

And I was really happy that at their last in
meeting Washington, D.C., Dave McFarland did
present your -- the most -- excuse me, Scott Rainey
presented the most-wanted, which is terrific. I
was trying to make sure that you guys are talking
to one another -- you got to understand, there are
very specific rules and regulations regarding
federal advisory committees talking to one another.
So you have to be careful, but it was great that
they understood that you had a most-wanted list.
And that Dave MacFarland talked about the
Navigation Technology Integrated Action Team.

So it's, you know, again, there are
appropriate ways to communicate with one another,
but I think it's terrific for them to understand
that a whole another advisory committee addressing
another agency has some similar things and so,
hopefully, they're looking at that.

The permanent status that's only as good as
anybody wanting it to continue. The CMTS exists by
presidential directive. The new president could
choose not to pursue it. It's only as good, as
again, as the interest of agencies that want to
participate. There is no -- the CMTS is not a
legislatively created organization.

Communications, planning is important, how do
we get the word about just our products, but more
importantly, about the importance of the Marine Transportation System. And we -- the coordinating board approved the creation development of an MTS Day on Capitol Hill to role out the strategy when it's done and other MTS products. Again begin promoting -- not promoting the MTS, that's the wrong word -- but educating them of the importance of the Marine Transportation System and some of the federal programs that participate.

That's in development and, Jack, I don't know, you've been so busy -- that you know that NOAA's leading that task, and we look forward to that. And to the extent that there's interaction with stakeholders, nonfederal stakeholders to make that happen, remains to be seen. But an interagency group, that's huge, that's a very big -- it may seem like a no-brainer, but, in fact, that's a huge thing. You have oceans week every year, maritime navigation. It's not necessarily -- you guys are engaged through NOAA, but the larger portions of marine transportation and their impact on oceans aren't necessarily dealt with. So it will be interesting to see how that proceeds.

The president directed that the CMTS take on looking at the data and analyzing the programs and the budgets. We haven't had staff for that. Maritime administration recently announced that they're just doing it on their own and will be
reaching out to some of the agencies. I don't know where that's going to go, but it's a big job; no matter how you look at it, it's a huge job. There are bits and pieces of inventories around, but nothing holistically and, ultimately, when you have to define where does the marine MTS portion stop or start? Is everything in the Army Corps? That you'll know, is everything in the Coast Guard that, maybe? So it's a big job.

Marine transportation in the northwest passage. I know this is a hot issue for those of you who are paying attention to what's going on in the federal government. They have to be clear about this, that the marine -- that the CMTS has created an interagency cast team. It's not to do what the state department is doing or other agencies in this, including the ocean related ones, but it's looking at the potential for commercial transportation or shipping in the northwest passage. And it will probably proceed really once the state department has completed their interagency policy review paper. The goal is to be complementary, not to trip over ourselves.

And I think I have one more thing I was forgetting here of stuff we've done. We've also are going to have -- you guys can relate to this -- we talked about the Marine Transportation System that had a lot of agencies around the table, but a
lot of the staff around aren't necessarily that
educated on how the Marine Transportation System
works. We're going to -- maritime administration
is going to be the team leader to have a field trip
to Hampton Roads in order to bring CMTS' members
staff there -- it would be really great if we could
get OMB staff there -- to see how a ship works, to
understand the value of the navigation systems on

board, and the importance of maritime
transportation trade to the country. So we look
forward to that, and that hopefully will be in the
next -- or perhaps late spring, early summer, okay.

If I could, specifically to how the -- your
most-wanted came to the CMTS. Admiral Lautenbacher
brought it almost a year ago to the CMTS and
immediately it was referred to the national
strategy development team. And there are portions
perhaps not stressed verbatim in your most-wanted,
but there are many ways in which that the
most-wanted is expressed in the national strategy.

Also the Navigation Technology Integrated
Action Team received it, and the good news, of
course, is that NOAA leads that team and they
thoroughly understand the impact and interest of
what you were trying to say. And I will talk about
some of their specific work plan projects in a
minute. Again, you had talked about overlapping,
having the federal agencies talk to one another.
One way to do that is also to have federal advisory committees talking to each other in an appropriate manner. And I mentioned that the HSRP and the Navigation Safety Advisory Committee had been in contact. We do try to reach out and give presentations to other Marine Transportation System federal advisory committees so they understand that there are other people doing things, and where the Federal sponsors could get together and talk about them, we encourage it.

Now, the national -- you had I'm going to hopefully comment on what Steve had talked about. You had talked about aggressively mapping the nation's shorelines technology in the strategy. And please understand that these -- we don't have actual priorities and more detailed tasks. We have action items, but no real tasks in the national strategy. If we had gone there first and foremost, we would never get the strategy done. But one of the important aspects is -- once this is approved -- is just to prioritize the action items and develop some specific tasks. But in many cases, there are activities already going on, as Captain Barnum had acknowledged.

So the national strategy calls for deliverance of timely, relevant and accurate navigation safety information to improve navigation safety. I know it's a broad-brush statement, but fortunately, we
do have some activities going on and there are some existing already outside the CMTS. And again, I

guess should -- but I should emphasize the CMTS does not replace agency activities. It's not unto itself an agency. It's just a forum by which agencies work together and promote information in the Marine Transportation System.

We talked about integrated coastal mapping efforts in your most-wanted. The national strategy does calls to enhance and improve existing frameworks that plan for, operate and maintain and mitigate risks. But we believe, the way we would interpret that, is to address coastal mapping and anything that supports navigation safety.

NOAA should take a larger role improving partnerships. Well, in fact, NOAA has a very active supportive role in the CMTS and what the CMTS means, and that's the partnership. And I can't thank Admiral Lautenbacher enough, and I sincerely hope that that continues in the new administration. Should Admiral Lautenbacher not be the head of NOAA on the new administration, we would like that.

Modernize heights and implement realtime water levels is one of your issues. And it does call for national strategy calls to deliver timely, relevant accurate navigation safety information to mariners,
including realtime information systems, realtime
current velocity systems, and, in addition, the
Navigation Technology Integrated Action Team was
called to coordinate realtime observations in their
scope, including AIS. But we believe that this
addresses modernized heights and implement
realtime. And I will talk a little bit in
follow-up what you guys could do when the strategy
is actually finally done and presented.

   Strengthen those NOAA's NAV services emergency
response. The NAV's -- the strategy does recommend
enhancing and improving existing frameworks to
mitigate risks. And emerging issues, proposed by
Admiral Lautenbacher and Admiral Allen, as was
alluded to by Captain Barnum, was requested CMTS
engagement on response. It's not yet formulated,
and I need to -- we are fighting Coast Guard --
when you get into anything that's related to
security, a lot of people are interested in having
their fingers in that one. We just want to make
sure that if the CMTS takes it on, it's not
duplicating other efforts; whether it's under the
maritime debate awareness efforts or the marine
security partnership coordinating committee.

There's all kinds of things out there. We just
need to clarify a little bit more what Admiral
Allen had in mind when he really suggested that the
CTMS work take this on to help coordinate.

You talked about disseminating NOAA's data and
products for greater benefit. Again, we believe
that the national strategy delivers this in a
broad-brush way deliver timely, relevant, accurate
navigation safety information to the mariners. It
does say mariners as compared to a broad-based
public interest.

There's just our contact information. I'm at:
Helen.Brohl@cmts.gov. And please feel free to
contact me at any time.

If we could go to the second presentation.

How am I doing on the time, Tom?

CHAIRMAN SKINNER: We're at about 10:15 right
now.

MS. BROHL: I think I can do this in about
five minutes.

CHAIRMAN SKINNER: Great.

MS. BROHL: And we can always follow-up with
questions after and, in fact, I encourage you to do
so, especially with Dave MacFarland.

The Navigation Technology Integrated Action
Team, when the CMTS was created, they didn't have

staff so they had these broad ideas of integrated
action teams, but there wasn't anything that
addressed navigation safety.

And having come from the HSRP, I was very
sensitive to that. And even in the private sector,
we spent a lot of time promoting those products
that support navigation safety. So I was very
pleased that NOAA was willing and the board
approved this Integrated Action Team. I just
should emphasis that this draft strategy, while it
was approved by the coordinating board, it has
thorough interagency review and it technically is
not approved all the way through the White House.

But I find it very hard to believe that any of
those components would be taken out in the final
document. These are not controversial issues.
These are very much supported by all the agencies.
So I don't think I'm going out on a limb to go
mention them to you, but do recognize that,
ultimately, we have to see with the final strategy
what the president finally approves. Anyway, to
that -- the strategy supports these things, which I
had mentioned before, so felt that the Integrated
Action Team on navigation technology integration
should seek to address them.

When we pulled together -- the three main
agencies that hail, navigation technology, Army
Corps, U.S. Coast Guard and NOAA. Those are the
ones that are actually providing information, as
compared to observing or supporting information --
got together at the staff level, we found that if
you asked staff, gee, how many of your products
would you like to see integrated? And a lot of
them raised their hand -- and many of them are
doing things already, as Steve said -- but how many
do you want -- would you like to have the CMTS
affirmation of them? Everybody throws a lot of
things in the pot, somehow, it sounds really good,
like, wow, this will automatically get around all
my bosses and I can have it front and center. We
want to avoid that; ultimately, it has to be
approved by the people in charge.

So when Dave MacFarland did an inventory
asking people to put it down and come up with a
full list, they gathered together 19 different
ideas which were divided into working groups, kind
of batched, and I'll show those in a minute. And
because in the last year of administration
everybody talks about low-hanging fruit, what
low-hanging fruit can we produce to show what the
administration did?

They were cognizant of trying to come up with
something short-term that they could show some
integration on, and one of them was the tide-aware
electronic chart.

The subgroups in this Integrated Action Team,
there were four. One is based on AIS products, and
naturally led by U.S. Coast Guard -- and jump in,
Steve, if I say this incorrectly, because I'm not
the techie, you guys know that -- but if you're
going to use -- combine more products with AIS,
let's say you want to put ports and AIS together to
present to the mariner, or anything else,
ultimately, you have to have it present in the
standard art or terminology.

And everybody knows that there are different
terms different among agencies. And, you know,
Mike Szabados can say I can push a button and ports
would be in AIS. It's actually more complicated
than that in the terms of the presentation portion.
So the team is working very hard to come up with
terminology to standardize that. That's actually
more challenging than it sounds, but they are
really having -- I think they have a lot under the
belt and they are getting closer, correct? No.

But that leads and that just reinforces the comment
that was made before, how are you standardizing
terminology? But there are other products as well.

Then the -- then there are products batched to
under -- with a NOAA lead under charting, data
collection and distribution. And there are three
projects designed to improve the accuracy of
charts. Third one is an Army Corps lead
navigational data collection and distribution.
They are -- have some of the terminology guys who
are working on some other standard addition of terms. And what we found really interesting is that when the U.S. Army Corps of Engineers -- and it's interesting, because NOAA, Army Corps and Coast Guard talk together all the time, there's no lack of effort to talk together and integrate.

But despite that, the Army Corps, I think because the idea was being handled out of Mississippi with the research guys, as compared to the application people, were trying to develop an observation system for the inland waterway because they were tired of tugs running into the locks and dams -- for its aging system enough as it is already -- and they were going to do a system based on GPS, not AIS.

And that's completely turned around. There's full coordination and collaboration, so that if you were on the draft coast and you did go into the inland waterway system, it would be a seamless system of observations and presentation. I think that, if CMTS did anything, it just brought that together. It may have happened eventually, it might have come around that way, but the more you have everybody saying, wait, we really are supposed to work together; and again, left hand/right hand. The operational coordination issues, U.S. Coast Guard lead again. There are some projects to develop coordination. And that's a little bit
overlaps with the fact that if you're going to do AIS on the inland waterway system, the Coast Guard is going to have to put the antennas for that and you have to coordinate for that.

Now, I understand there's some beta trials, they're going to do one in -- where is it -- I'm going to have to go back and look at that, but they're going to do presentations. It's a challenge with the inland waterway type guys, you know, some of the big companies are very supportive and are investing in equipment now as to make sure they're on line with this. But in, you know, a lot of mom and pop organizations, and they kind of like looking out the window, but you don't always get the current readings very well, and again, as long as you have tugs running into locks and dams, then clearly more information is warranted.

The last really unofficial part of that is the emerging issues section and everybody's trying to make sure we're clear on that. Now, I know that's a very broad brush, and I apologize because there is more data. As the working groups are responding to this new work plan, there are specific projects, and I think ultimately the best person to explain that is David MacFarland. I would stumble over it -- and I'm out of time anyway -- but I encourage you to contact Dave MacFarland if you have any questions or comments about what's presented.
He's interested to hear what stakeholders want, in particular, the last coordinating board member. The chair of the coordinating board for 2008 is Shawn Conotin (ph) with the Maritime Administration. And he made an obvious comment, and that was that he sincerely hoped there was outreach to stakeholders because, ultimately, you know, unless it's meaningful to the mariner, there's no point in chasing it down.

So I know that the team has talked about that a great deal in one of five venues in which they can present this in a more detailed manner to which you can respond specifically to your specific interest. I will be happy to answer any questions and then let you go to break.

CHAIRMAN SKINNER: Thanks very much, Helen. I will do it from the side. And we appreciate you're being here and obviously the work that you're doing mostly tied to this panel. We appreciate the vigor with which you've gone through your presentation, but I want to make sure that we do have enough time to ask questions and comments, so let's push back the schedule a little bit and see if there were any comments or questions of folks? There's a test afterwards, so...

(No responses.)

MS. BROHL: That could be good, could be bad, but...
CHAIRMAN SKINNER: Helen, are you around today? Are you staying for the meeting?

MS. BROHL: Yes. I'm going to stay for the meeting. I'm here most of the day.

CHAIRMAN SKINNER: Elaine?

MS. DICKINSON: I have a question. You talked about the national strategy which seems to cover everything that you're doing, but it hasn't been approved; so when will it be approved and is that going to happen in this administration, probably be better than not, I'm guessing.

MS. BROHL: The strategy was approved by the coordinating board which means Admiral Lautenbacher and all the other big wheels at that table approved it and moved it forward with some minor look-sees from state department on, added verbiage regarding the Arctic navigation.

And that has -- we just approved with the chair on the manner in which it will go forward for some new departmental reviews, but we haven't had the secretary sign on the dotted line. The procedure will be that we will get some departmental sign off and then -- which we're going to have a very aggressive schedule, it's not going to go through OMB. It will go directly from the CMTS to departments. And people like me will be in charge of nudging and getting that back really in a short turnaround time. We're talking about a
three-week turn around. But there should be --

frankly, it takes so much vetting at every agency

level, that if the Department of Homeland Security

talked to the Coast Guard about it, Admiral Allen

could say, oh, we’re on board.

And I, frankly, this administration has been

the only one questioning them; that doesn't give it
to us, we're not sure we want to look at it. So

everybody else, frankly, we have concurrent

previous to this. So we have our fingers crossed

that it won't take long. Any comments, through,

that do come in will go to Secretary Peters and

they will compile them. But we don't expect very

many, if at all, and she will make sure she's

comfortable with that. But that should be a

fasttrack because the secretary's office has been

engaged from the beginning and all the policy staff

had read it immensely and thoroughly, and then it

will go to the full committee.

But we're hoping for a full committee meeting

in April, and that that will be the final from

them, the CMTS will send it to the president. And

because we're also asking, since the White House

offices sit on the committee, we're asking them to

sign, as if they're full voting member in this

process -- which is kind of funny, we'll see how it
goes. But again, they've had, except for domestic

policy guys that are too busy, we're just hoping to
get it through them. But OMB has been on board all
the way and has made comments all along. Homeland
Security counsel's made comments all along, so
fingers crossed. I mean, it is -- so, in other
words, this administration and hopefully next year.
CHAIRMAN SKINNER: Other questions or
comments? Thanks very much.
MS. BROHL: Good. Thank you.
CHAIRMAN SKINNER: We're on break for about 15
minutes. Be back here in a little bit less, around
20 of, that would be great.
(Thereupon, a recess was taken.)
CHAIRMAN SKINNER: We're back convening here.
We've got -- we're going to start the rest of the
morning with first our presentation from Windell A.
Curole from Louisiana. We will then follow with a
public comment period. And just so everyone knows,
this is another thing we struggled with, our public
comment period. We originally had them at the end
of the day and some people would have to leave
before we were able to hear public comment, so we
split it up between three 15-minute periods, and we
had adjusted it, if there needs to be some longer
times here. I think the times will probably be
11:15 for the first public comment, and then two
periods this afternoon. And then that will be
followed by our panel prior to going to break. So
with that, Windell.

MR. CUROLE: Well, good morning. I appreciate
the invite for being here. And I had a chance to
talk to some of the people last night and see that
we all had some pretty common goals and interests.
And it's always good to see somebody who grew up
from Louisiana, and some of us never grew up.

We come from a special place, especially south
of Louisiana, it's one of these places where you
truly been brought up to work hard and to play
hard. We know there's just a few seconds in every
lifetime and you better take the biggest bite out
of each one. And when you look at the hurricanes
that hit us in 2005, I think that's very -- it
tells you what life is about, how quick things can
turn around. There's still a lot of sadness about
the effects we were talking about in New Orleans
last night. It's coming back pretty well, but
still, you still drive through some neighborhoods,
there's still that feeling and now also that
shadow. Even though we're better protected,
there's that shadow of the event happening again.

But one of the lessons here, we talked about
lessons in Florida, and word is that we don't learn
lessons. It's pretty obvious, one of the things
that never came up. Katrina was not in South
Mississippi, as Louisiana thinks. That storm with
the type of power, and the storm surge and the
width, the eye of 38 miles, if it would hit
anywhere from Brownsville, Texas, to Maine, it
would have devastated any place it hit. And that's
the thing that really has not gotten out, that we
really need to hit on the risks that all of us --
that shadow's not just over South Louisiana and New
Orleans -- it's over all the coastal United States.

Myself. Yeah, I'm from South Louisiana. And
my main job is working for the South Lafourche
Levee District. We are the local sponsors for the
hurricane protection project. I was authorized in
1965. And as of this date, it has not been
completed. But we're also very fortunate that we
were the only levee system south of the
intercoastal that did not flood from the storm,
either Rita or Katrina.

And, you know, in business when you're lucky
and good -- we were lucky first. But when you're
lucky and good, you get money and people to pay
attention to you. In government, when you're lucky

and good, you get ignored. We have not seen any
money. We're not getting much help. We've truly
been ignored for the point of having some problems.
Also because I'm from that area, I work for the parish -- we don't call them counties -- we call them parishes. I'm the coastal management coordinator for the parish. I am also the emergency manager when it comes to hurricane evacuations for the parish, so I do these things.

I work for sea grant. My first paying job back in 1976 was at the sea grant tied to NOAA, that's in the beginning. And again, from that beginning where we worked for the fishing industry, working for some emergency preparedness, if it had to do with water, I had my hand in it. I'm still doing it, and that's why my hands are always wet, from shaking hands with me.

And again, when I give this talk, if there's any questions that come, don't hesitate. This is about a discussion and talking about some of these issues. It's one of the key things, is the difference -- you know, the laws in the United States are built on all of the United States. But when you have something that's extremely different and you don't have a lot of people there, understanding gets kind of muddled a little bit.

And the Mississippi River, you know, it is -- it is America's river, it's one of the great rivers of the world and the effects of that -- we don't treat it differently when we look at the laws in Washington, D.C. That's why we're always catching
up. A lot of the laws involved in flooding and a lot of these issues come from what's happening in the Mississippi River.

This picture is shot from the Space Shuttle, all right, and here's the Mississippi Valley, and this used to be -- the valley used to be water until we started levying it off. And as it comes down and probably around here, we were probably around Baton Rouge area. This is New Orleans. It's kind of interesting. We always think of the rivers going north and south. So we talk about the east bank and west bank. But actually, the Mississippi River, as it goes through New Orleans, goes east/west -- yeah, east/west, so actually, there's a north bank and south bank. Nobody says that. So basically the sun rises sometimes in the west bank because of the curvatures.

So it's very -- but here, and the picture also talks about this levee coming here, is really the understanding of what built South Louisiana. South Louisiana was built by the Mississippi River. And I'm going through a few slides. That's a critical thing to understand, because if you don't understand geology, and especially unique geology. You're never going to understand the biology on top of it and the sociology, and then the issues that you deal with.

But the other thing I like about this picture
is that it shows a small coastline -- and you're
catching all of Florida here. Now, when it comes
to fisheries, Louisiana has four times the
fisheries than Florida. I like the National
Geographic said, you know, when you compare South
Louisiana to the Everglades, it makes it look like
a petting zoo. And then the reason is because of
this estuary that we have.

An estuary is the most productive portion of
any type of system, ecosystem. And Florida only
has basically the mixture of the rainfall that
falls in Florida and the Gulf of Mexico. We have
41 percent of the United States rainfall, every
drop that comes here, and it's built this gigantic
system here, that comes here. Thirty percent of
all coastal marsh comes from South Louisiana, and

that's the key to the production it has.

But the other thing, alligators. You know
what, National Geographic did a two-hour special.
I was talking to them, we had a couple of fisheries
scientists in Louisiana that really did the
critical research on alligators. Two hours
special. They did five minutes in Louisiana and
spent the rest of the time in Florida and in
Australia. And the thing is, why is that? 'Cause
if you're doing television, you have a lot more
customers, 18 million people in Florida, than you
do in 4 million in Louisiana.
The thing is when it comes to production of alligators, Louisiana produces about 30 million dollars worth of products where Florida produces just about 9 million. And there's a lot of nice comparisons between Florida and Louisiana. But the key is the Mississippi River.

And again, a lot of people don't realize, here's New Orleans, all right, here's Baton Rouge. But we have some -- on the west side, on the south side of the river, on this side, we have about 300,000 people living south of New Orleans here, this area -- and this is the levee system I'm involved with -- we have some 200,000 people.

So when I tell people I live 30 miles South of New Orleans, they say well, you live in the Gulf. Well, the geography is this -- even when you fly in New Orleans, it just tells you about the marsh all around there. In fact, one day the colonel from the Corps of Engineers District in New Orleans had invited the Dutch over -- this is maybe about eight years ago -- and he was giving the talk and he said, look at this, who else would put a city where this is? You know, marsh all around, a river that floods every four years, a lake to the north. He says only the French would build a city here. I said, that's right, colonel, and only the Americans would buy it.

But the bottom line is Jefferson -- Jefferson
saw we're going to buy this city because he knew
the United States could not grow, he knew the
midwest would be locked if we didn't have New
Orleans. He knew New Orleans would be the greatest
city in the world. And, in fact, he would have
been correct because, you know, it's location,
location, location: The greatest river with the
production in the midwest and meeting the world
through that city.

The thing that happened, though, yellow fever

and the geology around it has conspired not to make
it the greatest city with the challenges. But it
will always be important for the midwest because
truly the midwest meets the growth of South
Louisiana. But also you talk about the midwest and
the breadbasket that it is up in this area.

But if -- and I talked about the fisheries
production. We produced 30 percent of the lower 48
states' fisheries in South Louisiana. And then you
mix all the cultural things that we have, the Afro
Americans, the French, the Spanish, the Atlantic
Ocean, the Canary Islands. New Orleans has the
largest Honduran population outside the capital of
Honduras. We have about Lebanon -- believe it or
not, a lot of people from Lebanon are from
Louisiana because because of the French and
Catholic religion. And so with all of that, the
midwest is the nation's breadbasket. South
Louisiana is a seafood platter.

But again, looking at -- and this is a good film to talk about the oil industry. We have the nation's only offshore oil port. 1.2 million barrels a day is off-loaded right here and comes up this corridor which is where I live and work.

Right along side there, there's also another pipeline, Morris Pipeline, one of the first deep offshore pipelines, there's 230,000 barrels per day, along with the other support. But right through this corridor, you have close to 18 percent of the nation's energy needs comes through pipelines through here.

So when you look at what the storm did and the risk and the problems that would have occurred...

Also this little dot right here, this Port Fourchon and you talked about charts, talked about charting. When they did the charting out here, but brought that charting into the port and you expansioned the port to all of the customers, that was a tremendous benefit. And I just want to pass that on. That's one of the things that was done and the customers have really benefited from that.

But the key was, even though it was somewhere about here, until you brought it in the port, it didn't benefit the mariners to the fullest degree it could. But this port has grown tremendously since 1995. In 1995, we had 3D seismic doing oil
work which really increased the chance of hitting oils. We went from hitting three out of ten wells
to seven out of ten wells. So all of a sudden, you
could take some risks and not lose as much money.

Second, the Relative Relieve Act. It costs a lot of money to start going in deep water. We're
talking about over 1,000 feet. Well, congress passed the Royalty Relief Act and 3D-sized it, this little spot on the map started growing tremendously to the point where now there's over 1200 18-wheelers going down this little country road to this little port. And it's a very unique port. It's hard to get security to this port because it's not the normal port. It's not goods coming back. What happens is everything that needs to go and 90 percent of the ports offshore oil is to go through this place. So if you got to bring it by truck, it's off-loaded -- as Ford likes to say, it's where the rubber meets the road, right.

So supply all this oil, and this is the hottest new energy productions in the Gulf of New Mexico, they're going past 7,000 feet in depth in drilling. They're even looking, because of the loop platform and port, which is where the super tank is going to. As we go deeper towards the cold, they think they might not be able to pipe it in, or the pipeline might be too much.

So what we're looking at is actually drilling
and off-loading onto ships directly and have the

ship come into the port and move, which is about 19
miles off the coastline and bring it there. But
again, it shows the importance. The loop pipeline
is connected to 35 percent of all refineries in the
United States.

When the hurricane went through here, we had
tremendous flooding, but the port was knocked down
for a while. When we got energy back working on
the port, the price of oil, the Stock Exchange
change dropped by two dollars; just knowing that
energy had been connected to the loop. So although
most people don't realize the importance of this
small little area down here, it does play a major
part.

Now, to understand the risks and the
challenges that we have. Again, 41 percent of the
United States is drained through here. That's
why -- you know, when you live -- where my house
is, the soil under my house comes from Indiana,
Illinois, all the way from Western New York to
Montana into Canada, every bit of my soil was
brought here by the Mississippi River.

And again, I was fortunate enough to talk to
one of the researchers. We had thought up until
1930 that the Mississippi River was static, that's
the way it had always been. There was a Dr. LeBlanc who worked with a Dr. Fisk and what they found out was the Mississippi was not static; and it had been changing over the past 5,000 years, and it had different deltas. And when it moved into that delta, this tremendous volume of material drainage of the United States actually built land where water was before. And that's how South Louisiana was created.

Again, we talked about the different ones, about the deltas. Again, the Lafourche Delta came about a thousand years ago when the main flow was through there. And we still had 15 percent of the flow until 1904 when, because of floods and trying to avoid flooding, we actually blocked the Mississippi River from coming into the Gulf. But it had other consequences.

Now, this is the system that I'm involved with. Now, you're talking about the new elevation and accurate elevations. For years, it was obvious to me back in 1996, this is all hurricane protection system built with 100-year storm. But back in the '90s, I started telling the Corps, I said, look, just eyeball it. The differential between the level of the water and the height of
the levee does not look right to me, all right.

And, you know, they did -- a bit of us did a lot of work because we didn't have any extra money. But then they doubled our property taxes, so once we had money, project engineers, they go back and checked the benchmark that most of the levee was built on, and that dropped 18 inches. So when we were realigned, basically our system, which used to be 90 percent above the designed elevation, according to the old benchmark; when we got a correct benchmark, it was 80 percent below the design elevation.

So before the hurricane in 2005, we started working on raising those elevations. Why didn't we want to find out before? When you know you need to build a lot, you want to just go ahead and build a lot. You climb in the door, you know you might not be as high as you need to be, and it's great to have that information. But when it costs too much, then you don't do it.

But with the new GPS elevation, what would have taken $125,000 to check out the elevations on our system, with the new -- and three to four months -- with the new technology, in one day Roy Dokka and the LSU people went around and got the elevation for us to within the size of a golf ball.

And when you're building levees, that's more than
accurate enough. It's beneficial to us. Now, when I'm talking about water elevations, when I talk to the guy in the neighboring parish, we're all at the same level. It was so bad, with FEMA flood elevations, flood insurance program, you had one engineer went from one benchmark and built the house at, say, a three foot elevation; another engineer took another benchmark at another elevation, and there was much as three foot difference in these houses. Now, with this technology -- actually, when it comes to flood protection, to me, this is the biggest step in the technological improvement in knowing and being able to protect yourself from flood.

And in Hurricane Katrina, you know, talking about all the things that the National Weather -- the National Hurricane Center, training I had the one week over there, when you learn how confident people are at predicting these storms, and that's the critical thing. If you think you know hurricanes, then you don't know. If you know you don't know, you know. And that's how unpredictable hurricanes are.

Hurricane Katrina, I can remember on the Friday we were actually working and tied to one -- NOAA had administered a coastal impact fund and we used some of that fund to build a structure. We were starting the structure, the dedicating of it
and we heard about this storm that had gone through Florida and was now in the southeast part of the Gulf on the Friday. And, you know, they were saying at that time it was going to come up here and hit the panhandle of Florida. By the Saturday morning, all of a sudden I'm getting calls from BBT in England about this terrible storm that kicked up to category five and was headed our way.

And if you look at these storms, it's lucky for us, again -- this is the system that I'm involved with over here -- here's the eye as it was hitting in Mississippi. But it actually was moving this direction, and just due north, 16-mile difference, and I may not be here talking to you today. That's how much difference being on the backside of this counter-clockwise flow of a hurricane. If a storm's coming your way, you want it to hit east of you.

If it's going to hit west of you -- where we're at -- we want it to hit South Texas, actually. Or you want it to go as far as you can get to the west of you, because of that counter-clockwise rotation. So when you look at the hurricane effects in Louisiana, really just the toe of Louisiana here, Vaca (ph) Parish, caught the worst of Hurricane Katrina. St. Bernard caught a severe blow because of the rotation after it was coming up here. Actually, New Orleans caught the
But Waveland, Mississippi, to the Alabama line truly caught the worst of that hurricane. We had a 15 to 16 foot surge in St. Bernard. Those people flooded to 10 feet. And there was 64,000 people living in St. Bernard Parish, all but five homes flooded, okay.

New Orleans, as terrible as it was, flooded slowly and only flooded to four-and-a-half foot elevation, although the water depths were up 12 and 13 because it subsided in some of those subdivisions. But the fact of the matter is, Mississippi in this direction caught it the worst. And again, you know, it's coming through and we talked about -- it's so important to understand how much you depend on those predictions.

Now, when a storm like Katrina is coming your way, I think right now, 24 hours before the average miss is about 68, 65 miles, that's the average miss; so when you're looking at evacuating an area, you have to think about what is the worst that can happen? You know, a sixty mile miss could be 100 mile miss. And you could be from having 30 mile an hour winds to having 130 mile an hour winds. And I believe where I live, because we have a roadway that's pretty close to sea level, we have 13,000 people working offshore and have to come in through the port and leave through that roadway, we
probably order more evacuations than anybody else. We'll order evacuations because we think the water will come over the road. We've ordered evacuations when hurricanes have actually hit Texas, as I said before, because the road was supposed to be over the top -- or was over the top. Those are some things you just have to do.

But the line is, you also have to understand, every time you order an evacuation and it's a mandatory, you're going to kill some people. So how's that? When we order mandatory evacuations, nursing homes leave and we always lose one or two people. You have accidents that happen, and the calls. Average calls for a family can run up between 500 to $1,000 even if they have friends that help them out. So if you order too many evacuations, what happens is because the money's spent, they start debating whether they should leave or not, and we never want to put our people in that type of situation.

So every time you make those decisions, you have to look at all those other things and then you mix them into what's the chance of that family dying because of storm surge flooded that area? And that's the debate you always have to have. And these are very difficult and it's a very gray area and usually our leaders in Washington and in Baton Rouge have not had a lot of experience with the
actual going through the process of thinking through all of those -- all that information.

You know, I remember that we had a guy that had emergency preparedness in Louisiana, intelligent guy, hard-working guy, but Andrew -- a lot of people forget that Andrew hit Louisiana also, it hit as a category three storm and lucky it didn't hit the metropolitan area, but it did a lot of damage. The next year a storm started in the same place in the gulf. And he was ready to start ordering evacuations.

You know, hurricanes are totally unpredictable. You need to think through before you make these type of decisions. That's where the experience needs to come through. Again, it's talking about NOAA and the National Weather Service, the Slidell Station, it's very good that I have a personal relationship with these guys at the weather station in Slidell, because I can -- they are stuck to read what comes out of Miami. And they will not say anything different than what comes out of Miami.

But I can kind of read between the discussions with them and, you know, because if you say things to the general public, the press might take it and run and put you in a terrible bind, okay. But if you're talking to another person who knows how to interpret the information, they will not misuse it.
And that's why I see governments always often pinched in on how much information they can say, so with these relationships, it's pretty good.

It's kind of funny, but with Rita and after Katrina, of course, all of the -- this is Rita coming through -- it's kind of funny with this. I was actually testifying in front of the senate committee, Ted Stevens' committee, with Max Mayfield, all right, talking about the accuracy of hurricane prediction, and went pretty well compared to Katrina. And it was kind of funny, while we're talking about it, Ophelia is out there in the Atlantic and they don't know where the hell it was going. And then we have to rush home because Rita is bearing down on Louisiana again. Again. Now this storm did hit to the west. My levee system only had about a five foot surge around it for Katrina.

But here's Rita hitting right at the Texas line, someone 150 to 200 miles away. And I had water to the top of the levee. Actually, I had water trickle into the system, but it held, nothing broke and then we had success. But there was flooding all over. In fact, our system -- if I have a picture of it here -- that's Rita coming through. And again, that's our southern part of our system in the dry.

Here's marsh over here and then you have a
community over here of 200,000 people on the other side. We call this territory B. Here's our flood gate over here, and again, we close this, it was designed only to close because of a hurricane. But because of our climate in South Louisiana -- people talk about climate, that was a good point brought up earlier. Sea level rise, that's where our climate change is where our research money is. The fact of the matter is, in Louisiana, surprise is a controlling factor. When you've look over the past 100 years, we have some areas that have lost four feet in elevation, three to subsidence, and one to warmer climate, the normal warming.

So it's very important to understand the differentiation. And what's bad is the research money in Washington drives where you're going, and it's not where our problem is right now. Now, a climate change may supersede subsidence, but for right now, we need to be sure about the subsidence and work on that as a controlling factor.

CAPTAIN JACOBSEN: Why is it subsiding?

MR. CUROLE: Because we were built by the river. Remember, and the river flooded every four years? In fact, in high river levels, that river's chocolate. And in the past, it would break over the natural levee. And as it would slow down, it would drop it slow, so the high land in South Louisiana is right near the water basin. And it
tapers off to make the marshes as you get away. So all this stuff has been stacked up there.

Gravity's still pulling down. And since we moved into South Louisiana -- we didn't like flooding every three or four years, you get aggravated there, you lose your crops, when one of your kid dies, you want to do something about it, so you build the levies. Well, the levies stop the replenishment, so gravity's still pulling down, so actually, it's the dewatering. And also, just lately doing this elevation study, there's also a theory that actual load of sediment on the shelf is suppressing the shelf in South Louisiana.

So you have some high-level subsidence, and we think that there's some new now deep-seeded subsidence. There's a lot of different -- but again, in the picture, it shows you the subpart of our system, and this is during Rita, and we were -- people flooded all around us, north, south, east and west, flooded for Rita, and we did.

And like a friend of mine told me, he says, this macho guy, this much like going from a hero to a zero, and he wasn't kidding. And this is -- you know, I warned people, I always warned people. I said, look, our levee system will work to the height of the water that gets there. But if the water gets over, all bets are off.
And I give them a litany of the storms, 17-foot storm surge over here, Biscayne Bay when Hurricane Andrew hit. 1961, Corpus Christi, Texas, would easily put water over our system, yet we have not flooded in the storm system. Our neighbors in Terbaol (ph) Parish have flooded three times in five years. We flooded zero. They had 10,000 homes flood for Rita. We had zero homes flood.

But this is a challenge that we have. But that's all of the information from tide to wind, all of these issues I work with everyday to make decisions that affect -- I talked about that port, when I closed this flood gate here, I stopped traffic to the port. And that's a problem. So now we've had to spend another 25 million to install another -- a gate system here and form a lock out of this. But this is during the storm.

Now, this is the road it takes all of that important 18-wheeler material down to Fourchon. It's another 22 miles south of here, and that's that port that's supporting, again, 90 percent of all the offshore oil. The federal government gets 5.6 billion dollars a year in royalties from that work, not counting the oil that supports the United States.
And yet this is the road, like my friend likes to say, he says, you know, there's a world class operation in Fourchon for that world class drilling that's going on. And you would think we would have a world class road, and we do, a third-world class road. Again, here's the levee system here.

Now, the port has about 2,000 people working in it; again, 13,000 people work offshore on the rigs. We could support a community of five to 10,000 people here easily. No one lives here, because not a lot of land, the flood threat. Now, we have a little number of camps and these people -- I mean, if you like the water, I mean, you can eat fresh fish everyday if you wanted to. Some of these people have these camps. I'm talking about camps, not fancy, nice brick houses in the levee system, and they will spend all their spare time down here.

Here's the levee system. And our levee system ends right here. That road was covered with water all the way through here to the port. To solve that problem, because this land has been sinking, I talked about that four foot loss -- some of that took place right here. We have a graveyard and I have pictures of that graveyard and cotton field in this area, in 1905, and easily four to five feet
above the water line is now marsh and open water. That's the type of changes that are going on. It's a moving target. That's why being able to get accurate elevations, you know, quickly with GPS it's so beneficial for our work.

But we are now building a 600 dollar elevated road, toll road, to ensure the road traffic from the end of the hurricane system to Port Fourchon because of deep offshore oil. And the local businesses had to come up with the two million dollars to start the studies and get ahead because the state wasn't going to come up with the money or the Feds, and so to do the environmental studies and report. That was done.

I'm doing a lot of talking and nobody's making any comments. I could be lying to you all. No one's questioning. Again, here we have about 100,000 people living around here. We had 10,000 homes flood for Rita. And this all works together. We don't have the -- quite the land base, so there's a lot of construction going on here, and they go through here and down to Port Fourchon.

And actually, all of the Highway 90 to Lafayette, Louisiana, there's a lot of work because this is a very unique place, this port here.

And again, this re-roading goes -- when I was a kid, this is all solid marsh and now it's about 60 percent open water. And I will tell you about
fisherman that go from weekend to weekend and will
tell me about marsh that, again, because it's a
science issue. Another portion of Louisiana,
Chalmette is actually growing. And, in fact, NOAA
did some charts at the bottom and the 12 foot
contour has extended some 12 kilometers. That's
because we're depositing that soil now in shallow
water.

Right now, the Mississippi River is depositing
that water in a thousand feet where you're not
going to be able to hit land, so that's some of the
changes that we need to do. And we have the tools
to make new land and do some good things, but it
causes changes and we're going to have to determine
those changes. This is the port. There's some
unique facilities here. That's why when we think
this gets destroyed, this is going to be a strain.

Just this right here, this was invented by a
group of companies in our area, and it's a Wal-Mart
idea. Some of these boats rent for $45,000 a day.
And when you come into port, it would take you

three days to get your water at one dock and then
you have to move to another dock to get loaded up,
another dock to get the fuel. So if we build these
areas that they back in undercover, five inch fuel
lines, water lines are built into each one of
these, there's -- there are cranes overhead and the
trucks pull in the back. And so the trucks come in
the back, they load it up, they can turn around
those boats now in 12 hours where it took three
days before. So if you ran into $25,000 a day, you
can build a bit of these unique things. This is
the unique installation that you have here, and
it's a very unique port.

Again, when you go offshore, you got to bring
everything there by boat, but you also got to bring
it back. You can't throw it. You got to bring it
back and it goes up that road. The shoreline
roads, we have like everybody else. And again, if
you look at the rigs, you never see -- we had more
structures off of Louisiana than anywhere's else in
the world. And we don't have reefs.

You know, a statistic, we catch more red
snapper off Louisiana than they do in Florida, and
we don't have reefs, that's because of the
artificial reefs that these rigs have done. And I

just pulled about a 300-pound fish under one of
these rigs. It's a good diving place, also. I
will go real quick. Again, real quick deep
offshore oil is critical. Again the coastline, I
talked about the issues with the waves in
Mississippi and the structure took place over here.

And, you know, with all the information,
again, it's better to be lucky than good. This is
the sign on our warehouse. And Katrina hit and it
took the V-E-E off, so we were were kind of -- not
knowing it -- South Lafourche Le District.

And again, the people realize how good the fishing is, but you can go catch yellow fin tuna and come in in the morning, catch crabs and cash speckled trout and red fish. And then by the time -- before you go eat supper at night, you can go catch your bass. Not too many places can do that, but this is some of the differences in Louisiana. Thank you all.

(Applause.)

CHAIRMAN SKINNER: Mr. Curole, that was a great presentation. It combined a lot of different things. I think makes the rest of us reevaluate the magnitude of some of the problems that we deal with, so thank you very much. Questions or comments?

CAPTAIN HICKMAN: Is that a Bull Red?

MR. CuroLE: Yes, it is. It's a Bull Red's the females, actually.

MR. ZILKOSKI: I got one -- this was great, Windell, this was a great presentation and it shows the importance of heights and the panel's going to hear a little discussion later on by Matt and Gary about the height modernization program.

But you talked about Roy Dokka and his group in LSU, which is part of our height modernization, and he does some great work. And I think the observation I want to make is there's a lot of
things that NOAA's doing that the public's not 
hearing about. And, Wes, you've been saying this a 
lot, that we got to get out there and say a little 
bit more.

Here's an example of what Roy Dokka is doing 
and stuff that it's through NOAA and somehow we got 
to get recognition that without our resources you 
couldn't have done those heights, you couldn't have 
done -- and clearly, nothing anything from Roy, 
because Roy and his group are doing a great job, 
but it was through NOAA and their leadership in 
building the spatial reference center that allowed 
that to occur, and so we're not enough -- we're 
just missing the boat somehow, we just got to 
figure out how to handle that.

MR. CUROLE: Press conference. I don't think 
people understand on the ground the benefit of what 
this is. As you know: Elevation is a salvation 
from inundation.

CHAIRMAN SKINNER: Any other questions or 
comments? Thanks, that was great. We're now 
moving into the public comment period. And I don't 
know if we have a list of all?

MS. HESS: There was someone that said they 
wanted to make a public comment. I'm not sure if 
they're here.

CHAIRMAN SKINNER: Why don't we just open it?
Okay.
MS. HESS: Do you want to go up front? Just introduce yourself and who you're with, please.

Thank you.

JOSEPH SCOLARI: Hello. I'm Joe Scolari from the Army Corps of Engineers. I just want to thank you guys for inviting me to your panel.

I've been talking with Steve Barnum about the Corps has its community of practice and we're looking -- like it's a technical community of practice, and the community itself is looking to partner with NOAA and work together from the ground up.

I know that people up in headquarters and all are trying to get partnering agreements together, but it's the technical folks down at the bottom that have to make it happen. And I just wanted to let you know that the technical folks are my peers and my community of practice are very willing and very enthusiastic about partnering with NOAA and it's the things that these panels come up with to make interaction between the agencies more successful. It's a very short comment.

And I did prepare a paper which is sitting back on the back about different things where we use NOAA information and how a lot of our revisions to the engineering manuals and all are very similar to the NOAA guidelines in performing surveys, so the interaction between the agencies should be
fairly streamlined once the political end of it gets taken care of. All right.

CHAIRMAN SKINNER: Thanks very much. Any questions or comments? Thanks very much for coming. Any other public comments at this point?

(No responses.) (Continued in Volume II.)