NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

HYDROGRAPHIC SERVICES REVIEW PANEL

Volume II

Anchorage, Alaska

August 15, 2006

Attendees:

Voting HSRP Members

Jon Dasler
Elaine L. Dickinson
William Gray
Captain Sherri Hickman
Dr. Lewis Lapine
Adam McBride
Captain Andrew McGovern
Captain Minas Myrtidis
John Oswald
Scott Rainey
Tom Skinner
Rear Admiral Richard West (telephonic)
Larry Whiting

Non-voting Members

Captain Andrew Armstrong
Dave Zilkoski
Michael Szabados

Designated Federal Officer

Captain Steven R. Barnum

HSRP Decision Maker

John H. Dunnigan

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P R O C E E D I N G S

(On record at 8:03 a.m.)

MR. RAINEY: We've got several forms that you had in the back flap of the three ring binder, there are a couple travel forms and also in the folder, I also found two other forms in my folder. So in the back of the binder in here we need to sign where they're highlighted and then get these forms back to Barbara, Steve and Virginia.

I'd like to take just a second and do a quick overview of where we are today. Before we start I wanted to again thank our sponsors for last night's reception and special thanks to Mr. Taylor Morrison who came and showed his artwork and book and talked about the coast mappers and -- I came back to the hotel room and read it last night and it's just a terrific work, I really -- really impressed. And I just wanted to read the opening paragraph of it. Since the beginning America is dependent on commerce to grow into a powerful nation. Successful commerce relies on the safe passage of ships in and out of harbors. Almost all things people use everyday have traveled over water at some time. Clothes, food, cars and oil are just a few of the millions of tons of goods that are carried into U.S. ports. However, storms, fogs and collisions have claimed many victims at sea. Ship captains, passengers and merchants have always entrusted their lives and precious cargo to maps of American waterways. Who has been making these

nautical charts for almost 200 years? And then if you go through -- it's just a fantastic work and a really interesting story and we really appreciate having Taylor with us at the meeting, made that a special occasion. So thanks again to the sponsors for last night, John Oswald and Associates, Tenix, TerraSond and David Evans and very much appreciate all the help you guys did to help set up this meeting.

I'll turn it over to Captain Barnum here in just a second. If the public could do us the favor of signing in again. We have a public sheet for each day and if you could make a mark if you have some public comments that you'd like to make. That'll help us in our scheduling for the meeting. We took some public comments yesterday, we have a panel of some stakeholders from Alaska here today and then we have some more opportunity for public comment and we very much value your input.

Just taking a look ahead what we're going to accomplish today, we have a couple of presentations and briefings. Glenn Boledovich from NOAA will talk about the reauthorization of the Hydrographic Services Improvement Act. Following Glenn's presentation we'll resume work on our special report. I mentioned that we have an Alaska stakeholder panel, Molly McCammon from the Alaska Ocean Observing System will moderate that for us and then Commander Baird will talk to us about the Hydrographic Survey Priorities Plan and we all had a copy of that before the meeting and hopefully we'll have some comments

or recommendations for Commander Baird.

I talked with Ann and Tom Skinner and we have I think a good plan and approach for working on the special report. And I'll -- what I'll do is I'll talk to about that more in detail, how I think we can best proceed there when we get to that. So I'd like at this point then to turn it over to Captain Steve Barnum.

CAPTAIN BARNUM: Thank you, Scott. I'd like to also echo your appreciation for the reception last night, that was very nice and certainly to Taylor Morrison for the very fine presentation he gave us and the beautiful book that he has done.

I'd like to -- just to give a quick Hydrographic Surveys Review Panel mission overview. So to remind the panel members as well as the members of the public, the mission and the goals of the Hydrographic Services Review Panel. The Hydrographic Services Review Panel, HSRP, is governed by the Federal Advisory Committee Act and was established by the Hydrographic Services Improvement Act Amendment of 2002. This panel is charged with advising the NOAA Administrator on matters specified in the Hydrographic Services Improvement Act specifically related to hydrographic services. Hydrographic services are those services provided by three programs within NOAA, the National Geodetic Survey, the Center for Operational Oceanographic Products and Services and the Office of Coast Survey. The panel membership consists of 15 voting members. These are non-government

employees appointed based on their particular expertise. Members of the panel do not represent the organizations or the entities that they are employed by but again they are on the panel by mere fact of their particular expertise. There are three non-voting members consisting of government employees, one being Andy Armstrong, the Co-Director of the Joint Hydrographic Center, and there are provisions for two additional government employees. These are currently the Director of the National Geodetic Survey, Dave Zilkoski, and the Director CO-OPS, Mike Szabados. Our meetings are held minimally twice a year, although this panel has established a pattern of approximately four per year. With that I'll turn it back to Scott.

MR. RAINEY: Thanks, Steve. As Steve gave us the outline of the membership and things and we do have a piece of business that I'd like to take care of now. We talked about it yesterday and we deferred till today but what I'd like to do is open the floor for nominations to fill our Vice Chairman vacancy. The mechanics, what I propose is we have a written list of names and if we could have nominations made or ask individuals that are interested to make it known then we can take a vote, just circle the name of the person you'd like to vote for and then we can give it to Barbara and she can let us know the results of that. That's how I'd like to proceed. So at this time could I open the floor then for nominations for Vice Chairman.

MR. DASLER: Yeah, I would like to nominate Admiral West.

MR. RAINEY: That's an easy one. Is there a second?

CAPTAIN HICKMAN: I was thinking we could nominate Helen's replacement.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Yeah. I know that there -- the process has been undertaken to -- and there's been, you know, some discussions but I don't have a timeframe on how soon that person would be announced and go through the process of clearance for the special government employee. So I don't really know if that's a -- if that would be a feasible option. I make the job look harder than it is, it's really not a big deal.

CAPTAIN HICKMAN: Scott, I really think the problem is -- I voiced to you last night, is that there is so much time involved in it. And I don't really know how you accomplish what you accomplish and -- although I'm sure that there's some that would be involve -- would like to be involved, it's just so time consuming that I think anybody that might even entertain the thought knows that they don't have the time to do what you do for this panel.

MR. RAINEY: Well, I appreciate that and I have -- I have enjoyed being Chair and I'm real excited, terrifically excited about what we're working on, the special report, and the new synergies or partnership and the support with Jack Dunnigan and Steve Barnum and the continued excellent support from Barbara.

So I really think that we've kind of hit our stride a little bit here and I think that we're going to make good on the intent of Congress when they chartered this group. So it's been a real privilege for me to work with you guys so far and -- I think it would be helpful to have a Vice Chair, and we can again kind of figure out on the fly how -- you know, what we can do. But just as far as having some -- you know, some extra help and some -- you know, some continuity as we move forward. But -- you know, it's a voluntary sort of position so -- I don't know, if there's no new interest here we can table it until we can do some more arm twisting. Lou, did you have a comment?

DR. LAPINE: Yes. I know we're all busy and we've done a lot of productive work already. We all fear that we're going to have to work as hard as you have, which I don't know how you've done it. But there is someone in the room for fear of retribution that I'll be nominating. I think that Tom Skinner would do an outstanding job in helping you and so with his permission I would nominate Tom.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: I'll second that.

MR. RAINEY: All right. Tom, do you -- is that -- do you accept the nomination?

MR. SKINNER: Sure.

MR. RAINEY: Okay.

MR. SKINNER: Oh, mic. Sorry. I thought it was like, my name's Tom.

MR. RAINEY: Can you spell that? Yeah.

MR. SKINNER: Sorry. I need another cup of coffee.

MR. RAINEY: All right. Well, are there -- is there a need for any further nominations or should we call the vote? Seriously, are there other folks that would be interested? Or we can -- all right. Well, I think Tom would be a great -- excellent choice and why don't we move the -- move it to a vote. Let's go ahead, since Tom is running virtually unopposed then why don't we just get a -- is that?

CAPTAIN MCGOVERN: If you need a motion I'll -- Andrew McGovern, I'll motion to close the nominations and (indiscernible).

MR. RAINEY: Okay. I'm not trying to rush it. I mean seriously if there's other people interested please let me know. But -- okay. All right, so we have a motion to close the nominations then.

UNIDENTIFIED MALE: Second.

MR. RAINEY: All right. In favor of closing say aye.

SIMULTANEOUS: Aye.

MR. RAINEY: Okay. All right. Let's just take a vote then. In the interest of time I don't think we'll have to write it down. Could I have a showing of hands of those -- for Tom. Okay. Okay. All right. Was everybody in on that? Is there

any opposed? Okay, I didn't see everybody's hand, but all right. Okay, then I think we have elected Tom Skinner as our new Vice Chairman. Thanks very much. Tom, if you want we got a seat for you.

All right, well thanks very much. And again, I appreciate everybody's efforts and I know that this is a big undertaking and, you know, what we're trying to accomplish and, you know, really welcome Tom's, you know, help and everybody's continued support. And let me turn it over then to Glenn if he's here. Yeah. Oh, right behind me. Okay. And we'll go ahead and start our -- going on our agenda here. Glenn's going to talk to us about some issues on the Hydrograph Services Improvement Act reauthorization.

MR. BOLEDOVICH: Good morning. Can you hear me okay? Okay. Mr. Chairman, Mr. Vice Chairman, that'd be you Tom. Pleasure to be here. I was here just about exactly a year ago to talk to you folks about the contracting policy and get your input on that. As Captain Barnum reported yesterday, that policy is now actually I think at the Federal Register, it's completed, I thank you for your contributions there. And I'm back once again to talk to you about another pretty important matter, it's the reauthorization of the Hydrographic Services Improvement Act.

As you know, this panel is authorized under that Act and it's our primary conduit to the public and constituencies, at

least for an initial entree and the HSIA is the primary statute for these programs so your contributions are very important and valued and I think I speak for Jack and myself, I do work for Jack in the policy shop of the headquarters of the Ocean Service. I have a member of my staff here, Bruce, and kind of our commitment to work through this reauthorization process and work through you and get your input is high, we value your input and your comment. Kind of the key procedural question for you today is how do you -- how I work with you throughout this process. So I'm going to kind of give some background, then we have a few minutes to discuss at the end.

And -- we can go to the next slide please. So the -- kind of the entree question there is what role does the panel seek to play in the reauthorization and then kind of the bigger substantive questions are, you know, what changes might we make to advance NOAA's abilities in these areas. Obviously to improve them and deliver better products and services. Another question is what about the bigger world out there, is there anything in the reauthorization that can -- we can use to augment the role of these programs and the bigger issues of the Marine Transportation System, which was discussed yesterday with Helen Brohl taking over that group, kind of big areas of marine ecosystem and resource area management, certainly Admiral Lautenbacher's priority for the Earth Observing System and the Integrated Ocean Observing System and then the whole notion

that's kind of emerged since the commission reports on integrated ocean and coastal mapping. There's been some independent legislation on those issues, obviously of interest to these programs, and then the whole role of these programs in science and technology for the country in general.

So those are kind of some of the bigger scale issues. In terms of in general, you know, the Hydrographic Services Improvement Act is -- really authorizes, as you know, services programs, there's not a lot of controversy, it's not a highly regulatory mission and -- I don't want to underplay the importance of reauthorization but it's not a major point of controversy. I talked to John Rayfield about his views on reauthorization yesterday of course since he was here and I'll talk about that a little bit more later. I think ultimately for these programs, as I heard from you folks yesterday, that really what it comes down to is the annual appropriations for them. The nation's commitment to these programs is authorizing them in law but then following through and actually funding the services that are authorized. So I'm going to provide a little historical context for you here this morning and my real goal is to initiate some conversations with you folks and determine how we're going to interact kind of going into this process. As you know, the Act, the authorization lapses a year from September so we do have some time here.

Next slide please. The primary legal authorities for

these programs are the Coast and Geodetic Survey Act of 1947, the HSIA itself as amended in 2002 and kind of a little known Statute, the Chart Pricing Statute, as well.

Next slide please. Kind of the brief history as you folks know is, like certainly we learned last evening, again we were reminded last evening again, these programs have been around a long time. First authorized by Congress and supported by President Thomas Jefferson in 1907. Changes over time kind of culminating in the Statute of 1947. The programs were then merged, the Coast and Geodetic Survey were merged into NOAA when it was -- when NOAA was created in 1970 and at that time NOAA took on a lot of other major missions. And as John Rayfield pointed out kind of from that time as NOAA was kind of being formed and took on all these new programs, these programs got a little bit lost and they kind of reemerged here in the 1990's culminating the passage of the HSIA and then ultimately reauthorization in 2002.

Next slide please. Kind of some of the factors leading to that renewed interest, this is major expansion of maritime commerce in virtually all areas, geographically, the size and nature of the vessels and the draft especially. And of course technologies have changed rapidly. All of a sudden how are these programs going to move into the digital age, a question still before this group. And then of course the big event, the Exxon Valdez, certainly triggering some interest from the Alaska

delegation. As John pointed out yesterday, it was Congressman Young who first introduced the HSIA and introduced the reauthorization and at that time he was Chairman of House Resources Committee. And of course the big issue that was presented back then was this backlog of surveying requirements and how to implement new bottom -- full bottom coverage surveys to help reduce that backlog. These was also an economic analysis done by Woods Hole Institute and, you know, one of its conclusions was that the implementation of modern charting, surveys and digital charting could have benefits equal to double hull tankers for oil tanker traffic in terms of reducing risk. So those are some of the factors that kind of led to this renewed interest.

Next slide please. In terms of passage itself, there were hearings held in 1997, a lot of members of the maritime community testified, certainly NOAA did, kind of the scope of the backlog kind of came before Congress and the benefits of modernizing these services. The Bill was drafted in committee, it was not drafted by the administration or by NOAA. And the clear intent of the Bill was to augment and update the Act of 1947. The Bill was appended to a package of ocean Bills at the end of the 105th Congress and enacted.

Next slide please. Kind of the major provisions which are define what they meant by hydrographic data and hydrographic services, those were defined separately in the Act. It listed

the responsibilities of the administration. These were kind of the shall provisions of things that we shall do. Then it had a list of authorities, things that we could do, kind of the may provisions and those are two key words in statutes that you always want to look out for, whether they say you shall which is a mandate from Congress or may which is Congress giving you discretion to go forward with something. And of course the Act, one of the big things it did was require use of the Brooks Act for contracting for acquisition of hydrographic data and it supported increased contracting in general. It authorized a quality assurance program, it had several reporting requirements and of course the authorization of appropriations, kind of the authorizing committee in Congress saying what these programs optimally will be funded at, and it authorized the number of NOAA Corps officers.

Next slide please. The amendments in 2002, it broadened the scope of PORTS to include more real time, just real time systems in general, and it said we shall to the extent that there's funds available fund these types of activities. It also promoted the use of these products in support of marine conservation in other matters, a topic which was discussed briefly yesterday, how do these programs fit in with other NOAA missions. It made the quality assurance program mandatory, that we create that program, which we did. And probably most important for this group, it established this panel, I think an

important point for us. And it authorized the program to 2007. Another little known thing, at the end of the authorization of appropriations, this was the first reauthorization after 9/11, it specifically added an authorization for appropriations in support of homeland security over and above the other authorization levels. And that's a topic that's come up in our early discussions for reauthorization, you might want to expand that language in light of the work that we did in response to natural disasters so that there's kind of a message there that these programs are programs that will and should be called upon in those times.

Next slide please. Kind of our goals for reauthorization is obviously to develop the best Bill possible. I've talked with Jack Dunnigan about this, we do intend to work on developing an administration Bill in a proposal and we intend to work through this panel and kind of vetting and getting ideas to do so. Kind of our goal is looking at a little bit more than -- less than a year from now of having a Bill ready for introduction, getting it cleared through the process. I'll talk about that just a little bit. The process for getting a Bill is we'll work with our programs to develop it and it'll be cleared by Jack Dunnigan and it needs to go and be cleared by NOAA, by the Department of Commerce, it needs to be sent to OMB at the Whitehouse at which point they will send it to every other agency for review. That would include the Coast Guard, the Army

Corps, USGS and any agency that may be interested, the Navy certainly, and they'll have their comments come in and all that needs to be concluded before the administration will submit a Bill to the Hill. Kind of our goal is to get reauthorization during the next Congress. I realize that that is a year longer, after the authorization technically expires. We could have a little bit of discussion about that but just that is not a fatal issue. The Clean Water Act has not been reauthorized since I've been in Washington in 11 years and certainly Congress continues to fund those programs. And also the Act of 1947 provides permanent authority for these programs. Its authorization of appropriations is not by a set number of years, it just says such sums as may be necessary. So it kind of provides an underlying permanent authority. Technically unauthorized programs where their authorization ends are subject to a point of order in Congress. This issue comes up once in awhile more as a threat than anything. It's -- I've never seen it invoked as a reason for not supporting programs with funding. So that's kind of our take on that.

Next slide please. Kind of what I'm here to kind of get an initial view from you folks on is what kind of scale do we want to think about, what's your advice on that. Here it says three kind of obvious simple proposals, kind of go with the status quo. This is kind of the if it isn't broke don't fix it approach. Kind of a middle ground are some things that would be

nice to have but maybe not be real controversial and then to think big, what -- there are some major revisions that we should be considering. I'll talk about each one of those.

Go to the next slide please. You know, there's some -- a few pros and cons to each of these. Status quo, obviously make our job a lot easier to get a proposal cleared through the process I just described, probably fewer obstacles in Congress, and it maintains our current authorities. A con is it doesn't really reach out and try to broaden and strengthen the HSIA or the programs under it and it may be a missed opportunity to try to work to -- to work these programs into a larger integrated picture. In terms of the status quo, I talked to John yesterday. His initial intent was that's pretty much what he intends to pursue. And whether the administration puts forward a Bill or not Congress is certainly free to propose its own legislation and John indicated that he's talked with Congressman Young and they intend to do so and they tend to go for something more along this approach is his initial take. He did say we should talk and certainly when we get back to Washington we will so I'll be having those discussions with him. But since Congressman Young has been kind of the lead on this that certainly will be a first point of contact on the Hill.

Next slide please. Kind of a middle ground. This would allow us to kind of mull over some of the maybe quirks in the Bill, things that haven't worked well. Talked to the programs

about this a little bit already, I'll have a list of some ideas I'll put up. Obviously anytime you go for opening up issues you may create some obstacles, more questions, could slow the clearance and the Congressional process. And again, by taking a more modest approach are we taking full advantage of this opportunity to revisit the Act. Which is basically what a reauthorization is. The programs don't end when these authorizations expire. What it is is kind of a signal to Congress and to the agency that it's time to take another look. That's pretty much where we're at here.

And finally the think big slide. This would be an attempt to really broaden and strengthen the authorities in the Act, probably take advantage of integration into the bigger picture some of the things that have emerged like integrated ocean and coastal mapping. This would create a bit of a longer timeline to develop those ideas and to vet them. Certainly it'll lead to more questions as we go through clearance and probably some significant outreach then to explain our reasoning for these provisions.

We have -- I've talked to the programs and we've kind of put together a long list of some ideas. I didn't intend to go through them. I'll let you look at these, folks. Like I said, initially I'm just kind of here to kind of -- to get your sense. We're not committed to any one of these, they're just -- they're kind of some ideas. One of the ideas that kind of emerged is

even if we don't change the authorities of the program is there something we can do in reauthorization to kind of raise the profile or prestige of these programs. Which kind of triggered a thought in me yesterday when you folks were talking, I was listening to you and I kind of got a sense that there's -- whether it's in the NOAA process or the Congressional process that there's a bit of a Rodney Dangerfield thing with these programs, they don't get the respect and the attention that they deserve. And -- so some of the ideas we had with that, things that are already true. For example, the Director of the Coast Survey is the nation's hydrographer and the rep to the IHO and putting something like that in the Statute and just kind of raise the prestige of these programs, that these programs are important and they're important internationally. And things like that, they're not necessarily controversial but kind of pointing out that these programs are the national authority in the areas that they exist, whether it's geodesy or tides and water levels. And in fact there's quite a bit of history of legal authority from the courts, especially regarding boundary disputes and when there's issues of boundaries that involve these programs this is where they turn to. They don't come to us and say what's the boundary but what are the baselines, how do we determine them and using us as the authority. This is something we might want to do statutorily to that that would kind of help raise the prestige of these programs as well.

Sure, please.

MR. GRAY: I see that one that says identify NOAA as the national authority for hydrography, tides, water levels, shoreline, geodesy, spatial reference. We got into quite a discussion yesterday and we have periodically that there are various organizations doing more or less the same thing and coming up with different answers. I would agree that that's happening. It would seem to me that it would be a very sensible thing to identify one source of authority for all that type of information within the federal government. Who is going to object to identifying NOAA as the national authority for that information?

MR. BOLEDOVICH: The Army Corps of Engineers, USGS, I could think of a few. These are -- like I said, these are ideas that came forward and some of these are -- you know, to some extent we are the authority in some very specific areas. I don't think we get a lot of questions like on geodesy for example, nav referencing or the tides. But to put us as the authority for mapping or something might be -- have to be very careful. And like I said, there's other ideas that have come forward. No one's really put together any language or we haven't even -- kind of even thought about how exactly we would go about doing this. But as I did mention, anything we do propose will -- those agencies will get a chance to review before this would ever get to the Hill. And -- so that's

something that we're thinking about in the.....

MR. GRAY: Well, in the context of this committee, going back about a year and a half ago I suggested that we make a recommendation that all the federal entities involved with spending money for marine safety in our harbors should put together one single list of what the priorities are for spending money. And as I said there, I think I could take two-thirds of the buoys out of Long Island Sound, they're not needed, and the money that would be saved by doing that would probably overwhelm what NOAA's doing on the hydrography issues. I mean to me here's the United States, we have over half the legitimate navigation aids in the entire world. Do we need that many? But we pay for them. And Army Engineers get an enormous amount of money. And I'm hoping, but I don't know whether it will happen, that the committee on the MTS at cabinet level will take that kind of thing under consideration seriously. Because I know before that was a cabinet level committee there was a national committee for about five years and it didn't do a damn thing. And I talked with the people that we can't do anything because we have no money, we have no budget authority, we've each got our own budgets and we've each got our own boss. So we're not going to do much more than listen to what people tell us but we're not going to rock the boat. And it is time as far as I'm concerned that somebody should at least consider rocking the boat a little bit. And something like that I think

(indiscernible). So maybe it's something that the HSRP should consider, whether we make a recommendation that that be taken under consideration either in the context of the CMTS or just another HSRP recommendation.

MR. BOLEDOVICH: Right. And whether we do it in a proposal to reauthorize the law is another question because that opens up the Pandora's Box associated with that. There may be some other avenues to address those issues and clearly the CMTS and its reestablishing that you folks discussed a bit yesterday is an avenue without having to deal with any kind of a legal or Congressional action. And that's always something you want to consider. The head of NOAA's legislative affairs, we went to talk to him about legislation for the Integrated Ocean Observing System, he says but what's stopping you from doing that now, do you really want Congress to step in here. And I think as a threshold question, because it does open up that whole political process up on the Hill and it's always something to consider. Even if we have a proposal from this panel to go forward with an idea it doesn't mean it has to be done necessarily in the Statute.

I have another list, kind of continuation of the -- of some issues for consideration. Next slide please. You know, is there anything about the authorization for this panel we might want to consider. I mentioned disaster and emergency response. Including a finding and purposes section. John Rayfield is not

a fan of those at all. I kind of am because they don't -- they're not legally binding but many laws when you look at they tell you why Congress is acting this way, we find that marine commerce is important and the purposes of these Acts and it kind of creates a rationale or almost a justification for why these programs exist to underpin the actual statutory provisions that follow. But certainly there's a variety of issues on -- that could be on the table.

And that's my initial thing, if -- go back. I have a -- go ahead, you can go to the next slide. This is an example of some of the issues here, a few quick slides that I had. You know, one of the issues is should the authorities be merged. I told you we have two Acts authorizing these programs so this comes up. It came up with the last reauthorization, gee, why don't you want to create a single authority for these programs and isn't it confusing having two statutes. And we thought about it long and hard and kind of at that time -- we have this kind of -- this 1947 Act that kind of sits there as a constant. It was not the intent of Congress to remove that Act when it passed the HSIA and we were a little bit concerned about losing that permanent authority. And it also contains provisions that programs well beyond these and NOAA use for a variety of agreements and it has very broad agreement authority for us to enter into agreements with all kinds of parties which has proven vital to NOAA wide because, as you know, NOAA does not have an

organic authority. That's an issue that's been before Congress is this Organic Act and that's the kind of Act where you'd say NOAA has the right to do all these kinds of big things, whether it's education, in outreach and to work with others. And lacking that this Act has this authority for agreements which people across the agency rely on. So we've been a little worried about losing that.

Another issue, these are just examples of some of the issues that were on the slides. Next slide please. This is kind of going back to what I was talking about earlier, do we want to make a clear authority, there's no real authority in the statute for shoreline for example and making us kind of the national authority for these things. The con is, you know, is this really needed. The programs are functioning, kind of going back to the if it isn't broke don't fix it argument. And like I said, the -- we already talked about there may be some interagency concerns, we're trying to put NOAA in a lead position in some of these areas.

Next slide please. And I already kind of talked about the finding and purposes section. It's kind of a good way to rationalize the programs and it kind of creates a starting point for where you might want to go.

So kind of in conclusion I'd like to say there's not a lot of rush here. I know you got this -- last slide please. You've got another issue on the table today and this is kind of an

entry to you folks to kind of how are we going to participate in this process, how do you folks want to participate, are there some big ideas that you have you think we should be considering, that is obviously a major goal. And probably also important, are there other people we should be talking to that -- we look to the panel kind of only -- not as our only point of contact but also as a way of saying, hey, make sure you go talk to these folks over here. So if you have any ideas about that that would be very helpful. One of the ideas, I talked with Scott, is do you want to create some kind of a subcommittee so that there's a smaller group for me and my staff to kind of work through. We're going to be clearly working with the three program offices here in NOS over the coming months and is there a smaller group we can kind of segway into as we develop these ideas for the reauthorization.

So that's kind of it. I certainly am open to some questions and I'm looking forward to working with you folks and getting this Act reauthorized.

MR. RAINEY: Glenn, thanks very much. I'm sure we'll have a couple questions. I'd like to just touch on some things. Great presentation and we'd definitely like to work with you and provide input as we can. Kind of to think of what -- the couple thoughts I had or one of the questions I wanted to ask you is, you know, you pointed out that -- and we talked a little bit yesterday about how essentially things are -- at least

heretofore have been sort of appropriations limited rather than authorization limited. And as you look at the existing authorizing levels in the HSIA do those have enough room to accomplish the 100 percent requirements that you're projecting in the -- you know, in the five year plan, is there enough room in the existing -- again, this kind of goes to the idea of status quo, push it a little or take it, you know, over the top. And I'm just wondering to the extent you can in a broad sense as you look at your projections in the PPBES and things for these programs that your 100 percent requirements are the authorization levels in the existing Act sufficient?

MR. BOLEDOVICH: In terms of the specifics of the question, Scott, I'd have to turn to each program and they just got done developing those '09 through '13 requirements and what their requirements are. Looking at the numbers, you know, the actual funding that we're getting or -- is probably so far short of some of these numbers that certainly there's some room, plenty of room to grow towards that 100 percent requirement if these programs were funded at the level that they're currently authorized. Just to clarify, when we put forward a Bill, administration Bill will never contain numbers like this. It will say consistent with the President's budget and so whatever the President requested for the most recent year, the year that's pending before Congress, is all that it will say. Congress will put in these numbers. Steve, do you want to

address maybe whether these levels? I mean they're pretty generous. I mean there's $70 million for the mapping and charting line, that's almost close to double I think on the base for that line. So.....

CAPTAIN BARNUM: I think if we're looking at 100 percent requirement I think we're probably looking at a number that's higher than that. Certainly with the issue of the supplemental funding we got this year, the $20 million was something unexpected and I think it may approach that limit. So I agree with you, I would rather not see six numbers in that kind of a language.

MR. BOLEDOVICH: Right. What -- how these numbers can be used, Scott, is certainly when this -- what it is is a statement of our authorizing committee, what they think the investment in these programs should be. That's basically what that is is a statement. And so how I've seen these numbers used is more by external organizations like our Navigation Safety Coalition, when they go to Congress they say fund them at the levels that you said these programs should be funded at and it kind of gives them a high ceiling to shoot for vis a vis the President's request and then the work of the actual appropriator. So it does provide a mark in law from Congress, a statement. That's kind of their value. You know, optimally these programs will be funded at this level, that's kind of how I view these statements.

MR. RAINEY: Are there other questions or comments from the other members? Okay. Well, I really appreciate it, Glenn, and look forward to working on that. Let me ask, I mean it's something that we can certainly talk about and find out afterwards, but I know I'd be interested in, you know, following and helping out on that and if there's other folks particularly interested in this that wanted to kind of work on the front end of this and liaison with Steve and Glenn just let me know and then we can move forward on that. Okay. Jon Dasler.

MR. DASLER: Yeah, Jon Dasler. I just have another question I guess for Glenn or -- if you have a read on it. Because it seems like the Hydrographic Services Improvement Act should try to cross some of those interagency boundaries and if there's been any discussion with Rayfield and Young of any thoughts on that. And probably more specifically getting into the intercoastal waterways in the Corps and trying to resolve some of those issues. I mean that could open up a big can of worms that may make it more difficult. Is there any feeling on how feasible something like that might be?

MR. BOLEDOVICH: Well, based on my conversation with John yesterday, he intends to work with Congressman Young who's chairman of the transportation committee which oversees the Corps. He plans to design a Bill that his committee will not even have jurisdiction over to make sure that when the Bill comes up in the House there's only one committee of jurisdiction

right now for these programs and that's resources and he does not want to convolute it and gum up the works by adding things. That's kind of what his initial comment was. Those are things that he'd rather not see done in the Statute, those are things that the agency should be working on through the MTS and the CMTS, kind of my initial guidance from him. So he didn't want to introduce the prospect of there being multi-committee jurisdiction over the legislation, that's kind of his initial thing.

MR. RAINEY: If I could just -- I had -- that was something when I worked on the Hill that amazed me but that's a -- it's a particular R form in that you're actually selecting words and terms so it goes through the parliamentarian and it's a really -- it's tricky, you know, just exactly what Glenn said in talking with John. One of the things I personally would advocate and like to see is that the HSIA gets picked up and in fact even broader than that, that all of NOS is well represented in a NOAA Organic Act. But again, that's the same sort of an issue where you have resources, science committee, and you have multiple jurisdictions. So just as we're talking very much about the, you know, Executive Branch and trying to coordinate through the agencies. And just one thing, we're talking about the -- you know, getting NOAA designated, saying they're -- the OMB has the circular A-16 out and, you know, it's been talked about very much in the executive -- it's an executive order to

coordinate, you know, all of the data and things and NOAA has certain lead responsibilities for certain framework data, geologic survey and all that. You know, and to try to mesh that with what the legislation's doing but it's a tremendous challenge, you know, if you're going to try to meld in HSIA with Worda (ph) and all of these different Acts. And that's one of the very difficult things that we're facing when we -- I think we should rightly so put one of our most wanted as that we've got to get full bottom coverage, you know, in these federally maintained channels. But the reason that we're not having that is because of these jurisdictional difficulties, you know, on the Hill and with the agencies. But I think we're in the -- looking at the needs of the nation and all that, I think we can make that recommendation and then we just have to, you know, hope that the folks that are in a position to cross those jurisdictional boundaries will find a way. But I just wanted to underscore what Glenn's saying. That's the tremendous challenge to move these kind of legislations because it's just so diversely spread. I mean this is one of the most recent studies on the needs for coastal mapping and this is a well known problem but solving it is huge. But just to read you just -- at least 15 federal agencies are involved in the primary collection or use of coastal geospatial data, you know, often with responsibility shared among multiple divisions within the same agency. And they just -- you know, there's recommendations in

here that have been made in other places about, you know, ways to get at this. But that's -- it's a pervasive issue and it's something that we're struggling with and seeing in our recommendation. Anyway, Bill.

MR. GRAY: Yeah. I'm a long way from being up to speed on the niceties of how to get the right kind of laws out from the Congress. But from what you said, Glenn, that Mr. Young wants to try to see that many of these issues are solely the responsibility of the committee which he chairs or something like that. Back in the late 60's and early 70's I did have something to do -- at the time we talking about segregated ballots, we were talking about what became the Moore poll (ph) and things like that. It was very clear to -- from industry's point of view because in the early 70's we got a whole bunch of things that had never existed before. We got ocean, we got CEQ, we got EPA, all the rest of these things. And industry uniformly said we don't want anything to do with ocean, we don't want anything to do with EPA, give us Coast Guard only to look at what's going on with Marine Transportation. Because as soon as you get two or three different agencies within the same government saying we're going to come aboard and do something about what you're doing, safety, whatever the hell it may be, it gets to be a terrible morass. And in that sense what you're saying, Glenn, is Mr. Young and his staff are trying to sort some of these things out and try and eliminate overlaps or

conflicts. I think that keeping us advised of those and what they may be, maybe that's a way in which we can help him -- again, as I had said, the less people we have to deal with to solve a single problem the better.

MR. BOLEDOVICH: Just to respond to Jon. One approach to this, rather than opening up the HSIA to these issues is to go get our programs reauthorized in the HSIA. There's also pending legislation right now on integrated ocean and coastal mapping which is all about creating and interagency group to work on these issues and trying to address that. And rather than opening up our underlying authority to that have another law come along and say and all you programs, you will go play in this arena and keeping those separate might be one option.

MR. DASLER: It seems to me the middle ground of at least stating NOAA as the national authority and recognized as the national hydrographer seems to be prudent. And I think there's the base -- I mean ultimately it's your charts that, you know, MTS is navigating our waterways on even though the data may be coming from other sources. But it seems like it would be prudent at least I guess to underscore that as the lead authority.

MR. RAINEY: Okay. Glenn, thanks very much, appreciate it. Well, I'd like to go ahead then and resume work on our special report and let me go ahead and lay out my vision. Talked with Ann this morning and sat with Tom yesterday after we

broke for a meeting and Tom has revised the most wanted, basically regrouped and printed out some things. This morning I added just some references I think that could go under those groups if -- you know, once we approve them and speaking with Ann this morning on a good process. What I propose how we resume to proceed would be to turn it to Tom and he can go through the listing of the most wanted, approve that, and then if you recall we -- Ann suggested we split into groups looking at the existing sections in the draft. So once we've discussed and approved the new grouping of the most wanted I'd like to suggest that we break into those groups that we discussed yesterday on the sections and try to map. What we would do there would be to map back the sections of the draft that would go into the new and revised most wanted and then come up with examples and, you know, some suggestions of artwork. So that's kind of the basic framework and so I'll turn it over to Tom and then Ann and we can kind of see how we proceed. I've got -- this morning again all I had done is typed up some references that I think would go with each of these so I've got a different document here after we get through with Tom's, just where I think we can pull some of our information from in addition to the draft. So, Tom, do you want to take her?

MR. SKINNER: Yeah.

UNIDENTIFIED FEMALE: (Indiscernible - away from microphone).

MR. RAINEY: I have one. But -- oh, did you hand me a bunch? Oh. Okay, here we go. Too many papers.

UNIDENTIFIED FEMALE: (Indiscernible - away from microphone).

MR. RAINEY: There they are. I can -- you want to -- okay, they're coming around, the drafts here.

(Pause)

MR. SKINNER: See if that's on. Yep. Okay. Yesterday after we talked about some of the most wanted issues there were some suggestions from Bill and John and others, Lou I think, about combining some of them. So what we tried to do was take some of the suggestions and put those together, see what we came up with, and then see what was left over and whether they were priorities or could be worked into one of the other most wanted's that we'd already developed. What you have here is a list of five and I think the idea was that the report would then go into detail on these five things. In other words this would be up front and then there'd be a section on each of the five points here as a way to further explain what was needed or illustrate some of the problems.

Just going through them fairly quickly, you have them here. Eliminate the backlog of critical hydrographic -- I guess I should start first, there's no magic to the number of five. I think you have a spectrum of options. You know, you could go with one fairly broad recommendation of improving hydrographic

services but that's not very helpful. On the other hand you could have a great many recommendations that it may be hard to get your message across. So we're trying to strike the balance there and numbers of ways that you can organize the different types of things that we've talked about as being very important. So, you know, there -- what we're only trying to do here is trying to highlight what we think is the most important.

So first one, eliminate the backlog of critical hydrographic and shoreline surveys. This would include many of the things we've talked about in terms of making sure that NOAA has a core capability. We worked in replacing the single purpose hydrographic survey fleet with multipurpose vessels and implementing new surveying and mapping techniques. That may have to be language adjusted to incorporate what we're trying to get at there but we're trying -- that just is a placeholder is one -- for one of the bullets. Expand NOAA's rapid response capabilities for emergencies. This is one that we didn't mention yesterday, it didn't come out in a couple of the suggestions but we thought it was important enough to have as a separate bullet. Number three is pretty much as it was on -- in the draft booklet. We did add a reference to the IOOS system. And four is conduct full bottom hydrographic -- full bottom coverage hydrographic surveys for all federally maintained channels, approaches and anchorages. A little bit abbreviated from another one of the recommendations in the book, in the

draft. And then number five is a new one that attempts to get at taking hydrographic data and developing additional products to support non-navigational uses, including emergency response, marine habitat protection and resilient coastal communities. And again, that gets at the other uses that we I think talked about yesterday, making sure that they -- or trying to get them on board to support the work of NOAA's hydrographic services agencies.

So that's pretty much it. I think if you want to take a few minutes to go through it or if you have any suggestions, really appreciate some feedback.

MR. RAINEY: Elaine, go ahead.

MR. SKINNER: Elaine.

MS. DICKINSON: Elaine Dickinson. I think this is a good redoing of the original list because it's a lot more succinct and gets to the heart of the matters that -- I mean I see this as basically a call to action, not a review of, you know, everything on earth that we would ever want. On number three, we've talked about this a lot in the past where if we're using this as a -- sort of an advocacy tool, we heard many, many times that the use of the term PORTS is some sort of like red flag that -- you know, it's not always received well for whatever political reasons. And I'm wondering if you want to name it specifically or just refer to it as, you know, the real time data.

UNIDENTIFIED MALE: Okay.

MR. SKINNER: Other comments. Bill. And then Andy.

MR. GRAY: Thank you, Tom. I think this is an excellent job. I think the consideration is what was the last one on the -- page three most wanted list. Some of the words there, expand education and outreach on the critical importance of NOAA because -- sort of -- or something. That's -- those kinds of words and it got what NOAA's already working on would be the book that we've just gotten last night and so forth like that. And the publicizing what we do and I think this outreach function is something -- it's important and they should work some of those words into -- maybe it fits in with your number five or something like that. And I also think of outreach and education or so forth like that as -- that's something that slides right into the recreational users as well.

MR. SKINNER: Okay.

MR. GRAY: The 78,000 -- million, whatever it is. We need education and understanding of what's going on within the waterway. (Indiscernible) education going back to the kids and everything like that. So just somehow working some of those types of words into this concept I think would be helpful on number five. Otherwise the rest of it I think for now covers the -- very well the most wanted that we've been talking about for a couple of years.

MR. SKINNER: Andy and then John.

CAPTAIN MCGOVERN: Too -- I would suggest maybe in five adding develop additional products to support. Maybe -- I think throw there in recreational boating and non-navigational uses maybe. This way it -- I think the M -- when we talk about MTS I think the real conversation is commercial, you know, and not recreational so let's make sure that that's included there. And I kind of agree with Bill and I disagree. I think that to me the education, you know, and the outreach is number one really. But I don't know if you want that as the most wanted because that's basically what the most wanted is is the outreach, getting the word out. I don't know if you want to put that in a -- you know what I mean? It's like to me the only way we're going to get any of this is to get John Q. Public and Congress aware of what the importance of this really is but do you put that in your most wanted or is the reason why you're doing a most wanted is because of that. So it's almost like an unspoken number one priority. I just want to -- I think it's super important but I don't know if it's part of that.

MR. SKINNER: Yeah, I think that's a good point. We may want to think about -- I mean there are a number of ways to do this. You can have like an intro paragraph that sort of throws out the amount of goods that are carried on, you know, maritime traffic and the importance to the U.S. economy and U.S. citizens is a way to sort of frame it. Or you can just sort of lead it this way. So I think that's a good point. I think just we

might want to consider a couple of options of how to get that message across.

MR. RAINEY: Tom, just -- I guess one thought I had on that point is one of the things we want to think about is -- and it was well mentioned yesterday, but, you know, we're going to give this up -- you know, to Steve and up the chain in -- within NOAA and in some ways thinking about the notion of, you know, we can say some things that they can't or we can be providing guidance and recommendations that they can then take forward and say, you know -- justify in other words their expenditures or increased expenditures or effort on doing education and outreach or something, if it's -- I mean it might be worth saying in that regard other than obviously it's implied in the nature of doing this kind of thing. But it might be worth special mention insofar as NOAA could then take that and show justification for, you know, continuing to work on education and outreach.

MR. SKINNER: Jon.

MR. DASLER: I think you did a great job, Tom, in compiling all this. Actually it seems to me that this might also serve as the basic outline for the rest of the document where now you just take and you start highlighting on specifics as you work through the rest of the document that really states the case for everything and it could be simplified in that. I think one thing I would add under item three where a lot of these address point source measurements, I think it would be

prudent to add something about the development of Vdatum to accurately define the water levels over wide areas and the real need for doing that. I know that wasn't really on that list but I think it goes hand in hand and a lot with what we've been talking about. So I guess I would throw that out as well.

MR. SKINNER: Okay. We may -- maybe there's a group that can sort of get together on three, there have been a couple comments on three, we can sort of word smith around. I think your point about having this serve as the outline was something that Andy raised yesterday where he said this doesn't sort of relate to what the other sections are. And I think that one of the thoughts that we were doing when we went through this list was that that's exactly how this could be used in that manner and I think.....

MR. RAINEY: I think that is the current thinking and what Ann and I talked about today is the next step, I mean once we kind of go through this, would be to then map back what we have. We don't want to lose what we have but we want to reprogram it into that as sort of our template. So I think that's the proposed way ahead and I think that makes great sense.

MR. SKINNER: Andy had a comment then John. Andy.

CAPTAIN ARMSTRONG: Andy Armstrong. I -- one thing that I perceive as a significant problem and we haven't talked about it much here, but briefly and that is the topic of getting all of these critical hydrographic surveys that have been completed

onto the nautical charts, both paper, raster and electronic. And maybe that could be addressed as another bullet under number one.

MR. RAINEY: I mean that's what I was envisioning or hoping. We don't -- you know, like you say, you got -- it's definitely worth bringing up. But I'm thinking that, you know, maybe how this would then flow, you have your primary theme and then each -- you know, have topics. That would be one of them and -- there's sort of a marriage or a marrying of that idea in number one. I think it needs to be stated there and then you can also hit it in -- you know, it kind of comes up again in five in a way it seems to me is -- you talk about expanding the use and services, it might be some possibly to put some process information in there. But I personally agree and I think we want to hit that as a -- certainly as a sub-theme with the issue of the ping to chart and we don't -- we've got to balance across, you know, the program so you don't end up with just a tremendous amount of data in the can and not get the products out.

MR. OSWALD: John Oswald. I'd like to make a few comments here. The -- on number one, it might just be a word change perhaps, but we don't really want to replace some of the hydrographic survey fleet, some are pretty new. We've got Thomas Jefferson and the Fairweather of course. So maybe just consider the use of the word aging where it says current under

bullet item number two there, one -- the second bullet. In item two, maybe it's a typo, but is contacts supposed to be contracts? Because you had a.....

UNIDENTIFIED MALE: Yes.

MR. OSWALD: Yeah, okay. That takes care of that.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. OSWALD: We -- yesterday we had to supplement this capacity with contracting and there's -- it's actually been done last year, I don't know too much of the details on the Hurricane Katrina. They used contractors to support that effort. And then the.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. OSWALD: And then on item three maybe just some word smithing, but fewer words, water level obser -- or water level is the same in my view as tide. I would just remove that. And this word -- term, bridge air gap confuses everybody in the United States. We in effect do it commercially and -- it's just a word that's not well known. And the PORTS, I would contend that PORTS is sort of a hurdle when you go try to sell things. As we discussed before.

MR. SKINNER: Other comments.

UNIDENTIFIED MALE: Lou.

MR. SKINNER: Lou and then John.

DR. LAPINE: I agree with everything that I've heard thus far. I just have a small question, it may be in the wording. But in the first one here, going to eliminate hydrographic and shoreline backlogs but there's nothing in number one that says how you're going to eliminate the shoreline backlog. I mean you could just add the word shoreline to the first bullet maybe.

MR. DASLER: I guess my view on these is the more simplistic we can make this and get into the details in the report. I mean I would even -- like John was saying, maybe even shorten number three and just get it to water levels and currents and then really get into the discussion. If we're going to use this as an outline and not really worry about getting -- because you're going to start losing people if you start getting too complicated. I had the same concerns Andy did under number one and how the whole ping to chart and how that's all going to get in there. But I would think if we just looked at that as being implementing new surveying and mapping techniques which is also the processing but we get into that discussion within the rest of the document I think is really the place to address those kinds of things and try to really keep these -- almost like number one where it's just like simple little bullet items like it's a table of contents almost.

MR. SKINNER: Okay. So are you -- you're suggesting that we keep it simple but also keep the bullets or are you suggesting.....

MR. DASLER: Yeah. I would keep the bullets.....

MR. SKINNER: Okay.

MR. DASLER: .....like number one and I -- but I think I would take a lot of -- I mean it looked like number three is really trying to incorporate a lot too but maybe just simplify it to water levels and currents and then get into the meat of that discussion of what that all involves within the document and not try to capture it all because I think it gets confusing when you start getting too in depth right at the beginning.

MR. SKINNER: Okay.

MR. DASLER: Is my view. If we're going to -- if that's the approach we're going to take it seems like those could be addressed within the document.

MR. SKINNER: Lou, the -- Glenn had actually after this was -- the original was printed had suggested adding and shoreline to what we originally had. So it was definitely a last minute thought and so we can add something there.

DR. LAPINE: Well -- this is Lou. I mean just so we cover it all in the following chapter, it just -- you know, I don't say we have to add anything to bullet number one but we get to talk about it we need to explain how we're going to eliminate the shoreline backlog. As Jon said.

MR. SKINNER: Okay.

DR. LAPINE: Expand upon them later in the document.

MR. SKINNER: Okay.

UNIDENTIFIED MALE: (Indiscernible). I think the -- you're probably right about that, if you're going to put hydrographic and shoreline surveys in the first -- number one bullet you can always (indiscernible) contracting. Just like the contracting survey capability, take out the word hydrographic. (Indiscernible), I can't do much about that. Can anybody hear me? I would take out the word -- you could take out the word hydrographic on your -- under expand and just in the sub-bullets don't get so detailed.

MR. SKINNER: Okay. Other comments.

CAPTAIN BARNUM: I would just like to see if -- it may be splitting hair, but under eliminate the backlog of critical. Critical means a lot to different people, I mean it's a fixed number. I think maybe we might consider capturing the emerging requirements which captures new requirements at a -- at the surface since the original definition of critical and also capture the concept that some of these critical areas will need to be surveyed in the future, not that we'll be done. So I put that out to the floor.

MR. SKINNER: I'm sorry, so just eliminate the word critical?

MR. RAINEY: No. What he was saying, critical has now become -- critical survey has now become sort of a term of art so it's been.....

MR. SKINNER: Right.

MR. RAINEY: .....pegged to the 43,000 square miles. So as we work on that, the National Survey Plan, is just canning those down and what Steve's saying is, you know, that was -- that's a number now, that's sort of a baseline or benchmark number. So if we put in eliminate the backlog of critical and emerging that keeps it to -- it's not simply just enough to finish off that originally -- that original chunk.

MR. SKINNER: I thought we'd simplified it by removing one word but we.....

MR. RAINEY: Yeah.

MR. SKINNER: .....made it more complex by adding two, so. But that's fine.

CAPTAIN MCGOVERN: Andrew McGovern. But if you just drop that word critical doesn't that cover that -- I mean to me it's like trying to make it simpler, not more complex and we want to eliminate the backlog of all -- all the backlog, right? I don't know.

MR. GRAY: Andrew, I disagree with that because critical applied at one time the 43,000 square miles out of the 3.5 million square miles that NOAA's responsible for I think. And if we leave -- if we eliminate backlog, there may be backlogs in all kinds of things but if it's -- it's unimportant, I guess we don't hear that much about them I would think. I think -- something that we're really zeroing in on things that are important. Navigationally critical was the phrase that we used,

(indiscernible), wasn't it?

MR. RAINEY: Right. I mean we're -- it's navigationally significant and then within that subset it's the critical -- yeah, yeah. And so -- I mean I think these are all really good points but, you know, we just I guess have to choose one. It seems to me that these would -- you know, we're going to present these as the most wanted. That wouldn't mean that we would want -- we wouldn't want, you know, NOAA to continue, you know, throughout the EEZ and the -- you know, the WASI (ph) and all of that. But anyway, that's the distinction that's there. Whether we want to specify that in the heading or keep the heading simple and then sp -- you know, flush that out in the supporting section.

MR. SKINNER: Yes. Mike.

MR. SZABADOS: Tom, on number five.

MR. SKINNER: Yeah.

MR. SZABADOS: Talking about products, just non-navigational. Maybe to include navigational and non-navigational uses and you have the examples including, put recreational boaters there. Because as -- you want to also enhance our products to the navigational community too.

MR. SKINNER: Okay. So that's -- well, so you would say fully disseminate hydrographic data and develop additional projects, navigational -- to support other navigational and non-navigational uses including emergency response, recreational

boating, et cetera, et cetera?

MR. SZABADOS: Correct.

MR. SKINNER: Is that -- Andy, you had.....

CAPTAIN MCGOVERN: (Indiscernible - away from microphone).

MR. SKINNER: Okay. Elaine. Okay. Thanks. Anyone else? Bill, were you going to say anything? All right.

MR. GRAY: (Indiscernible - away from microphone).

MR. SKINNER: It's closed. We'll try and figure something out and get a revised version to you probably around lunchtime.

MR. RAINEY: Tom, I'm sorry, I -- we were ta -- can you say that again?

MR. SKINNER: I said Scott's paying for lunch and.....

MR. RAINEY: All right. What.....

MR. SKINNER: Come on, you make me Vice Chair and then you don't even listen to me.

MR. RAINEY: No, I wanted to dovetail in with what you're doing on the next thing. But the.....

MR. SKINNER: All I said was that we would try and -- we'll try and rework this and get it back around lunchtime so people can take another look at it.

MR. RAINEY: Okay. Could I suggest though that -- I mean we've got some time left here before the break and our stakeholders panel. It might -- Tom, do you -- I mean it sounds to me like we've got some, you know, agreement on these five broad things with some tweaking to the language. Could we take

the next step to break into groups on these five? You know, if you have a particular interest in one of these maybe we can just do a quick break on that and what we could do there would be to maybe just make a short list of, you know, some examples and, you know, just some ideas that support those and we have our copy from the original draft. Virginia, could you pull up the one that I did on the references? It's the same thing and -- you know, some of the source material for these different bullets I just, you know, kind of thought we had to round some things down obviously. So we have our draft and I think some of the original source material, just a suggestion, where we can pull some things. But I thought maybe we could take the time that we have here before the scheduled break and maybe split up into the groups of the new five categories and kind of start jotting in or sketching in some of those building blocks of examples of things we want to mention in there. Would that be worth doing here now and then knowing that we'll come back with another gloss on the titles for the most wanted?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: All I did there is just -- in all of the material that we've covered or looked at, you know, you can just pick one. In other words like -- all I'm doing there is just some things that I know where I would like to pull from -- on the sections when we go to write them out. Like if you pick

number two there, and I just kind of paraphrased the bullets we were just talking about. So expand NOAA's rapid response capabilities. Some of the things that we talked about in our past meetings were the National Response Plan and NOAA has a response plan, the instant command, and we talked about those in Houston, I'd gone through and some of our recommendations from Houston and the material and presentations that we got there I would think would be the material we can draw from. And so those were just initial ideas of some of the work that we had done and where we can, you know, look to pull.....

MR. SKINNER: Okay.

MR. RAINEY: .....to flush in the sections that would then support this.

MR. GRAY: Looking at that list, the first one off the reference, the MTS report to Congress. Yeah, that's good and put it out with whatever its full name is or something like this. But I think -- I don't see in that list two National Academy of Science reports that I can think of. I don't see.....

MR. RAINEY: Yeah, Bill, this is just -- this is five minutes I had this morning to jot.....

MR. GRAY: Okay.

MR. RAINEY: .....some ideas down. It's -- it was just shorthand and -- absolutely. I mean I've got -- I got six studies here, you know, with me. There's lots of things,

there's -- it just was an initial thought on some things that we can pull from.....

MR. GRAY: Yeah.

MR. RAINEY: .....as well as our own work and our own recommendations. I think it would be good and I think we're in agreement that, you know, we want to set out our recommendations that are relevant for the sections and I think that there is some specific work that's gone before that it would be good citing back to to kind of ground this -- some of the -- you know, like in the draft we'd included, for example, the MTS report on page 84 has I think a very helpful quote basically stating that the number one need.....

MR. GRAY: Yeah.

MR. RAINEY: .....you know, in the listening sessions was this type of thing. So this is not -- you know, this is just a -- kind of a suggested list of some of the (indiscernible).

MR. GRAY: I think all I'm saying is that in the finished document it would be well to have some references.....

MR. RAINEY: Absolutely.

MR. GRAY: .....that are recognizable as somebody else than us, like the National Academy of Sciences, like INTERTANKO, like -- and I know there's a whole bunch of websites back there, they ought to have this www.shippingfacts.com, you can click in there and -- I mean the numbers that are in here are all a little bit wacky, they're low and so forth like that. But there

are sources of those numbers that come from the International Energy Agency and from people like the International Chamber of Shipping and those things are -- people can click on those and get them right away, find out what the value of the commerce is and all the rest of that, and we ought to have those where anybody who reads the report can dig into them.

MR. RAINEY: Absolutely. I agree and we have a page, I think we'll have the space to have a robust (indiscernible).

MR. GRAY: I mean I'd rather have that than the hotels where we've had our meetings.

MR. RAINEY: Right. Right. Okay. Well, if -- Andrew, you had a comment I believe? Or.....

CAPTAIN MCGOVERN: (Indiscernible) on number three that it just came out, that economic study done in Tampa on PORTS so that's another.....

MR. RAINEY: Right.

CAPTAIN MCGOVERN: .....good reference.

MR. RAINEY: Right. Let's -- this may, you know, be more of a distraction, we can go back to Tom's, you know, clean thing. But I'm just saying that I think these are the kind of thoughts to kind of pull through as people work them. So what I'd like to do then, I think that's excellent step. And so maybe if we could flow back to the clean sheet. We have, by my watch anyway, about 45 minutes before our -- well, anyway, we've got a little bit of time here before the break. We have a

scheduled break at 10:15 and our panel coming and so I'd like to be on schedule. But Tom, do.....

MR. SKINNER: This'll take maybe 10 minutes to.....

MR. RAINEY: Yeah.

MR. SKINNER: .....to clean up and then we can redistribute and at least get that cleared up.

MR. RAINEY: Do you want to take a break while we're doing that, just let folks go, and then we could come back, take a look at that and then maybe split up into these, you know, small groups -- section with -- you know, the -- you know, one through five and then try to get some ideas on, you know, either references or examples. Andrew.

CAPTAIN MCGOVERN: Yeah, Scott. I think people know the general direction, I don't know if we need to wait for the exact word smithing here that we just put together. People know which -- in general what the five categories are and let's (indiscernible).

MR. RAINEY: Okay. I agree. Elaine.

MS. DICKINSON: Oh. Question. We had all the sections that were already drafted from yesterday. Are you saying that that's all changed now?

MR. RAINEY: I -- what I would suggest, and this is where -- you know, this is the critical point I guess. I like the idea of the regrouping and it was always my intent that the report supported the most wanted, that was the whole way I set

it up, and we've had some very quick and very hard work to get the initial draft. But what I would suggest based on our discussions yesterday and, you know, kind of where we're going. I like this idea of taking it and organizing it in this fashion. I don't want to lose the work that we have. So what I was hoping that we could do in this initial grouping is take a look at this is the organizational structure, we have the references, you know, generally that I threw up there but most, you know, importantly and timely the work that has been done here and I'm hoping that we can in a sense map back, I mean just, you know, kind of make some -- you know, save what we like out of here, reorganize it into that format. That's what I'm proposing. I don't know if that answers it or not, but.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: I think in large part we can. In other words -- I mean there was some time spent on pulling from our existing recommendations. Again, let's just take the -- you know, the rapid response. I mean those recommendations I think are relevant and we can pull those -- you know, I think much of -- in other words the whole intent here is to capture what we've got and just, you know, reorganize it and then, you know, build from there. There were sections that we do need to build on. Ann.

MS. BOESE: Yeah, can I make a suggestion? I think if we

break into groups according to the most wanted one through five because that will be our organizational template. And if -- whatever group you're in, if you -- when you look at your most wanted eliminate the backlog. Look at the report, if you can pull -- just pull the page out, say this goes with this, this doesn't, this doesn't and we can just reconfigure. You just pull what you can from the report, A, and then B, any additional information that needs to -- that could be added and see any hard good examples that are going to bring people in to understand why these most wanted are most wanted. That would be perfect. Doesn't matter if it becomes messy now, we just are like taking cards and reshuffling where it goes. And hopefully they'll be in pretty good shape but I have the feeling that they may not. So that -- you know, it's cut and paste, literally cut and paste. And then I'll take that, I'll take that, whatever it looks like, and work with -- work from that and I have some other ideas for the afternoon. But that'll be -- that's I think the way you have to do it.

MR. RAINEY: All right. Well, let's proceed then. Could -- who could work on the -- let's just go one through five and try to make sure we've got something covered. But on the eliminate backlog of critical hydrographic shoreline surveys. Got a couple folks. Okay. I don't know if I need to select and direct where to go. But -- let's just -- okay, so John -- both John's want to work on that. Expand rapid response capabilities

in emergencies.

UNIDENTIFIED FEMALE: (Indiscernible - away from microphone).

MR. RAINEY: Okay. That's the real time? Okay. Why don't we do this. Who -- can we -- let me ask for volunteers to who could lead this next section on each one. Could -- who -- John, can you do number one? Okay. Rapid response capabilities. Adam, would you be willing to take a look at that one? You've had the most recent experience with that with Katrina and all. Sherri, you want to take three? The conduct full bottom coverage hydro surveys. Bill, you want to jump on that one, would that be okay? I mean we can all contribute to all of these, I'm just wondering if I could just pick folks or folks could volunteer for each of these sections and we get with those people. And then fully disseminate hydrographic data and develop additional products. This is -- in other words the expanded uses. Anyone interested in maybe kind of -- okay. Elaine, thanks. All right. So why don't we take this time now and take a look at that in those groups. Okay. So Jon Dasler's got one, get with him on that one, Adam McBride on two, Sherri Hickman on three, I guess Bill, is that okay on four? And Elaine on five.

(Off record at 9:31 a.m.)

(On record at 10:01 a.m.)

MR. SKINNER: .....leads on the five areas could just give

a quick summary of where they are. I didn't ask a yes or no question because I was afraid of the answer.

(Whispered conversation)

MR. SKINNER: Been asked to make an announcement that if you have a cell phone on and don't absolutely positively need it if you turn it off because it's interfering with the recording.

Just wanted to go through in the next 15 minutes or so some of the changes on the most wanted list that I tried to incorporate from the earlier session, you should have a copy of it in front of you. You can tell -- differentiate it from the earlier list in that number five has four bullets. So try and find the list that has the bullets at the bottom of the list. I tried to put one in front of every seat there. If you don't have one let me know. You don't have one? Oh god, how did that happen.

UNIDENTIFIED MALE: I was too close to you.

MR. SKINNER: You have one, don't you?

UNIDENTIFIED MALE: Yes.

MR. SKINNER: Okay. Read through it. Just list a couple of changes here. The -- I switched number two -- what was number four to number two because I thought it was more closely related to the first item and added a bullet to try and separate it from why it was not just doing backlog but a specific issue that Bill and others have been talking about. So that's now number two. These aren't in order of priority, they're just

trying to -- I tried to group them based on issue. So rather than have me go through it, take a couple minutes and then just any comments let me know.

(Pause - background conversations)

MR. SZABADOS: Tom?

MR. SKINNER: Yeah.

MR. SZABADOS: On number four.

MR. SKINNER: Yeah.

MR. SZABADOS: I think Vdatum would fit better in five now with the way we've defined five. And -- Dave, would you concur?

MR. ZILKOSKI: Yeah, Vdatum is actually -- is an additional product that brings them all together.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Okay.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. ZILKOSKI: Yeah, you know, and it's -- and I guess that's something we should probably talk about is how there are a lot of models that need to be developed so if you're looking at trying to say I want to fund Vdatum operations in all these different ports or something maybe you would want to think about putting it in four from that, I'm not sure. I mean, Mike, that's what they're maybe thinking because, you know, you talk about the modeling that has to go on. You got the water levels

but you also have to do modeling there. So is that what people are meaning?

MR. SZABADOS: Vdatum observations is not a correct way to say it. So maybe we want to say modeling in general?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SZABADOS: Use the term modeling?

MR. ZILKOSKI: Yeah. Maybe that's what you want to do.

MR. SZABADOS: Observations and models?

MR. ZILKOSKI: Yeah. That probably would be better. Because that's what it is, that's what costs the money, it's the models.

MR. SZABADOS: It's the models, right.

MR. ZILKOSKI: It's the models and Vdatum would cost the time and money. So that.....

MR. SKINNER: So could you tell me what.....

MR. SZABADOS: Okay. So fund real time, tide, current, observations and -- observation systems and -- well, and modeling. Give me a minute.

MR. SKINNER: Okay. We'll come back to that one. Any other comments on the revised structure? Well, we can come back to this if you think of some more things. Why don't we take some time and go -- just a quick report from each of the leads on the five different categories. And if you're not finished with your work that's fine, just sort of an update. Jon, are

you ready to.....

MR. DASLER: We turned it all in.

MR. SKINNER: You turned it all in. Okay. So update number one is you're done. Do you want to tell us what you did?

MR. DASLER: We basically took pages six and seven and eight, kind of took the key paragraphs. And then we also have a significant amount of things we wanted to add. Talk about the ability -- the current ability to navigate on the more accurate charts and it exceeds the accuracy of the data that's on them right now. And also trying to expand on some examples, kind of showing some images of recent contacts that have been discovered that are uncharted, you know, some examples of wrecks and aircraft on the bottom, that kind of thing, that we can add to it. If we can get a list from NOAA adding sort of a hit list of uncharted rocks, wrecks and obstructions that are -- have been discovered, you know, either on a annual basis, over some timeline, but with the use of new technologies just to give some indication of the amount of items that are being discovered and added to charts over some time interval. Some examples listing -- I think first is pretty much stating the case of why the need for updating it and why it's so critical. And then expanding on that is giving examples of some of the -- like the QE-2, the Athos, some other wrecks where -- that have been involved in it, uncharted objects that ships have hit. Glacier Bay again was another example. Need to expand the data processing pipeline

from getting data in the field, the whole concept of ping to chart and some adding to that. Use of RTK or at least post process kinematic for running -- maximizing field efforts, eliminating biases in the field both from a horizontal positioning aspect and then also trying to minimize total propagated error just to increase accuracies in the chart and also increase the turn around time from ping to chart. So it'll in -- the more accurate we can make these things and reduce the error the more automated these systems can become and reduce total ping to chart. More dollars from the -- for the program, eliminating the backlog to basically double production.

MR. SKINNER: Can I just jump in for a second on a procedural thing?

MR. DASLER: Sure.

MR. SKINNER: Are these going to be sort of -- are the -- what the groups produced, are they going to be summarized for this afternoon or are we going to talk about these later on?

UNIDENTIFIED MALE: I don't know how -- there's.....

UNIDENTIFIED FEMALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: There's no way she can do -- get that put out.

MR. SKINNER: Okay. Because, Scott, we have to break right at 10:15, is that right?

MR. RAINEY: Well, we need to be back by 10:30. So if we

want to press on and if people have to leave individually we could go till 10:30 but I want to be able to, you know, start with our panel at 10:30.

MR. SKINNER: Okay. I think we'll have some time to talk about this this afternoon. Is that right?

MR. RAINEY: Yes, we should. Absolutely.

MR. SKINNER: So we can either go on with group one and then catch the others later or if people want to hear a quick summary of where the groups are we can do that. I just -- I don't want to get -- cut any group short.

CAPTAIN HICKMAN: Can I just make a comment? And I may -- Minas brought up a point and I thought I'd put his mind at ease but I'm not so sure I was right. Is there anything in your number one that does -- talks to -- about ENC's?

MR. DASLER: No, not the ENC's.

CAPTAIN HICKMAN: Because I don't think anything is on our actual which is probably not a good thing.

MR. DASLER: It could be. I mean I'll.....

CAPTAIN HICKMAN: In these five points. So that's just one critical downfall I see right now.

MR. SKINNER: Right.

MR. DASLER: We can add a section that discusses that. I mean all of that is part parcel I think to eliminating -- not just eliminating the backlog but getting it on the chart and getting it out to mariners so it could be a section that

discusses that.

CAPTAIN MCGOVERN: I think that would be covered by number five. I mean fully disseminate hydrographic data. Obviously that's -- put that on the chart, right? And getting that chart out whether it's ENC's or raster. I mean but I think you can expand it in number five about the whole ENC program, that it's -- right now it's dead, right? If that'll work.

CAPTAIN ARMSTRONG: I had thought that number five was sort of more appropriately going to be all the other things that the data was useful for rather than sort of circling back to too much on Marine Transportation issues. But.....

MR. SKINNER: Can I suggest -- I know we started this, but it sounds like we're sort of drilling down on some of the details which I think is great but I really don't want to get sort of started five minutes into it and then have to break for the panel. So maybe if we can take the break now and then this afternoon pick up and go through each of the sections in greater detail. Maybe that's a better way to proceed on this.

MR. DASLER: I only have probably a couple other little items.

MR. RAINEY: Yeah, why don't we let Jon finish and then.....

MR. SKINNER: All right.

MR. RAINEY: .....that'll -- we can pick it up and be back at 10:30. Go ahead, Jon. Thanks.

MR. DASLER: The other thing we added was in geo -- the georeferencing section and really kind of combining that with the shoreline and mapping and then putting in an example of mis-charted shorelines, some of the examples that were presented, add that in as a figure. And then applications of emerging technology to help increase that production, ASV's and AUV's. And I think that's pretty much it unless anybody else. John or Lou, if you had anything to add.

MR. SKINNER: Any other comments on the first group? I think maybe in the interim time we can figure out where -- Minas, your issue, where it is most appropriately placed. Electronic charts.

CAPTAIN MYRTIDIS: Well, I just think that we have spent quite a few time talking about ENC's and the importance for not having it included there.

MR. SKINNER: Okay. Well, let's work on that between now and when we raise this this afternoon. So we'll pick this up sometime this afternoon with the second group which, Bill, is now your group.

MR. GRAY: Okay. I'm ready.

MR. SKINNER: So, great. Thanks.

MR. RAINEY: Okay. Let's try to be back then at 10:30 and we'll welcome our Alaska stakeholders panel. Thank you.

(Off record at 10:13 a.m.)

(On record at 10:34 a.m.)

MR. RAINEY: .....very much appreciate it and like to introduce Molly McCammon, Executive Director of the -- of AOOS up here and she helped us pull this panel together. And Molly's also on the Executive Board for the National Federation of Regional Associations. And I know Tom has had a lot of work.....

MR. SKINNER: Yeah, I just wanted to welcome the whole panel to this panel and also a special thanks to Molly. Molly had worked with both Helen, me and Josie Quintrel (ph) from the Gulf of Maine Ocean Observing System on making sure that navigation services was seen as a critical part of ocean observing systems nationwide and I think we owe her a debt of gratitude for that. And it's also nice to see you again.

MS. MCCAMMON: Well -- can you hear me okay with this?

MR. RAINEY: These mics are not too sensitive, you got to get kind of close to them.

MS. MCCAMMON: Okay. I'll put it a little closer. Okay, is that better?

THE REPORTER: Yes.

MS. MCCAMMON: Okay. Well, welcome to rainy Alaska. When I was asked to put this stakeholder panel together I, you know, blasted out an e-mail to, you know, six, seven people, didn't get any response, there was a deafening silence because this is August and people are either out on their boats, they're out fishing, they're out doing things or else they're on vacation.

So then I blasted out another 30 e-mails and we started making phone calls and now we have this great group assembled here which I think will give you a good kind of breath of perspectives in terms of users of the marine environment.

But I really do appreciate that the panel is here visiting Alaska during this season. I've been Director of the Alaska Ocean Observing System for three years now. And AOOS is one of the 11 regional associations being developed as part of the regional coastal component of IOOS, the Integrated Ocean Observing System. We've been doing lots of planning, workshops, outreach efforts to various user communities and I can assure you that hands down when we talk to user communities, and it doesn't matter if it's a whaler in Barrow, if it's a recreational boater, if it's the Port of Anchorage, if it's a commercial fisherman, what we hear kind of bottom line from people is winds, waves, currents, we need more information, we need better information there, we need better bathometry, better mapping. Those are kind of just really core elements that almost everyone says they need for various purposes. And when you start looking at whether it's -- I have fisheries ecosystem model or shoreline erosion or ocean circulation, it all comes down to providing those kinds of basic elements that are up to date, accurate and really ground truth the models that we've been working from. So that's kind of an underpinning and I'm sure you'll hear about this from all of the panelists today,

that that's really basic information that Alaskans are desperately in need of.

Specifically though I do want to highlight a couple things. And I do have written comments here and so you'll have those in front of you. So I'm going to go through these very quickly because I want you to hear from the other panelists here. But specifically we do need higher resolution bathometry throughout state waters. And I could pick and choose and say here's my top three priorities but I'm sure people next to me will say here's my top two or three. But we really do need better bathometry, that is absolutely critical to the work we're doing. We need additional tide gauges. And if this means putting out tide gauges that maybe aren't quite up to snuff, maybe a little bit lower level but they're cheaper, maybe a little bit easier to maintain, I think we really need to look at that because we really need to get that information throughout the state on a much broader basis. And then thirdly we need better spatial and temporal resolution of our surface currents through use of high frequency radar. We've been testing this in two locations, one outside of Prudhoe Bay which is relatively easy because there's power up there and you just kind of plug it in and it's actually been working pretty successfully during the ice free seasons. The other place we've been testing it most recently is in Prince William Sound. And what we found is it's really difficult operating these systems remotely with

autonomous power. And we have a couple of proposals into National Science Foundation that we've been working with some folks up at the University of Alaska to try to test and develop a new system that's much more fuel efficient, power efficient and will give us better capability. So -- but it shows a lot of promise for providing the kinds of information that a lot of folks need.

There are also some observing activities that maybe aren't really around your purview but they definitely relate to navigation safety and whatever you as a panel can do to promote these kinds of cooperative efforts I think would be really useful. One of them is the increased number of river gauges. Much of our traffic and movement along the coast through coastal currents is driven by freshwater input. And instead of adding river gauges in Alaska right now USGS is removing them due to budget cuts. And this is making it very difficult to get really accurate forecasts of what's happening in our coastal currents which is directly related to providing important navigation safety information to users. So whatever you can do to influence USGS budget that would be great.

The other thing that we hear a lot from the west coast folks and the people in the arctic is better information on near shore inland fast sea ice. The problem isn't so much where the ice is at the moment. The satellite coverage gives us pretty good coverage for that. The problem is how thick is that ice

and is it going to break up today, in the next 30 minutes or in the next week or two. And this is really critical for not only subsistence hunters who use the ice as camps for their whaling activities, but also for all of the tug and barge access to the west coast of Alaska and to Prudhoe Bay and the north coast. Trying to figure out when the ice is going to break up, when will it be safe to ship all of our goods to the North Slope. So any additional and improved information on near shore sea ice thickness in particular is really critical to that.

And then the last thing, and I think Dr. Smith is going to talk a little bit more about this, is a better survey by NOAA and USGS of the sediment literal cells to include sediment sources, sinks and transport rates in order to establish an Alaska baseline. That's something we don't have right now and I know many of you have probably heard about some of the critical places that we have in this state that are literally washing away at the moment due to coastal erosion. So a survey, coast wide survey, of that would be very helpful.

There's also kind of four kind of broad recommendations that AOOS as an organization has been looking at and the first is having CO-OPS work with us to develop a 10 year plan. It would be very helpful to have it laid out exactly what all of the user communities feel is most important in terms of developing the navigation services and hydrographic services products in Alaska and having a really comprehensive plan that

everyone is kind of working off of. Then we can all look at that, use that as our baseline and start kind of picking at it and trying to get it accomplished through various funding mechanisms.

Second, we really would like NOAA to look at Alaska as a test bed for new equipment and technology. I think because of our remoteness, our harsh weather, we face a lot of unique challenges that other areas in the state -- in the lower 48 don't have. In fact I gave a slide show in Hawaii and people were just blown away by the fact that we don't have roads and power on most of our coastline, very few miles of our coastline, and there's 43,000 miles of it, have power or roads. So we have a lot of challenges and it's a great test bed for different kinds of technology.

And then lastly, all of our NDVC buoys right now are serviced from Stennis. And we've talked to Paul Moresdorf (ph) about the possibility of establishing a staging center here in Alaska, possibly at Seward where the University of Alaska has a marine mooring center there and where the new research vessel hopefully will be located. It -- as more moorings are placed in this state, as we start doing more work on the ocean, it's really important that we have a base of operations here in Alaska and that we not depend on someplace in the Gulf of Mexico, subject to hurricanes for god's sake. That we don't want to depend on that for providing the kind of support that we

have.

So those are kind of the general recommendations that I have and I'd be happy to answer at the end any questions that you might have. But what I'd like to do now is introduce -- and I'll go one by one and just introduce them one at a time and they'll give some comments and recommendations to you also. And I'd like to start with Captain Jeff Pierce who is President of the Southwest Alaska Pilots Association from Homer, Alaska.

CAPTAIN PIERCE: Hello. I am Jeff Pierce, President of Southwest Alaska Pilots. I've been an active pilot for over 20 years up here. Basically I got the surprise of all surprises when I came in the door. You actually got a regional location now for our tides and currents here in Cook Inlet. We were using Wrangell. Wrangell we were adding five hours, subtracting four and a half hours. That station's in southeast Alaska. For us and our work what we do, we actually cover Southcentral Alaska from Icy Bay west, Prince William Sound, the tanker traffic in and out of Prince William Sound, cruise ship traffic, Kodiak Island and all of Cook Inlet and Seward. So we have a real vast area. And we in our group rely highly upon the current and tidal predictions and I'll get into that with Cook Inlet. That's why I'm really -- thank you. This is a big one to us. Because right now we're transporting tankers in and out of Cook Inlet, we have a terminal in Nikiski that does L and G export, we have a refinery there at Nikiski and we also have a

ammonia uria export facility out at Nikiski, and that's about 84 miles up the Inlet. We do not use tugboats to these facilities. These are all very large ships, 700 footers. With no tugboat use we're dependent upon the tides and currents. We have utilized now, a few years back the Coast Guard finally put a range up for us which kind of indicates deeper water for us. We're using the tides to float the ships and to get to the docks because of the shoaling. Cook Inlet, I don't know if you've read much on Cook Inlet, but on all the charts they'll have a disclaimer on them that due to rolling rocks you're not allowed to go in the blue, the blue being 10 fathoms. Recently, i.e, I'll put it about six, seven years. Is that about right? They came up, did some bottom dragging for us and did some soundings for us and, well, went oh boy, we found things. These are very much a changing body of water because of the silting and the large tides. Diurnal tide in Anchorage is about 30 feet. So in Anchorage, to get to Anchorage is all of our transport for TOTE, Horizon Lines, barges that supply the Anchorage community. Recently there's been a lot of dredging in Anchorage itself, they've been dredging, there's a couple of dredges, for the last several summers. Then they drop the spoils in the port area or outside the port and then we watch. As mariners we're very attentive around here to watching -- even though we know where we are, we're in good water, we always use a bottom sounder because we start talking, we're seeing spikes, seeing stuff.

And this is very consistent up here. I would say about every 30 days we'll talk amongst ourselves and we'll talk about the spikes or boulders or whatever we're seeing. And this is constant year around. So the more input -- like Molly said, the more input we get the better information we have, the better off we all are. I came this morning and listened briefly and somebody had made the comment, it really stuck with me, that better soundings and better display of information is better than a double hull tanker. I've worked a tanker fleet for a long time and I cannot concur anymore with you, I agree 110 percent. Give us the information and we're better off. And I can go right back to the Glacier Bay spill and probably no one remembers it but.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN PIERCE: Okay. What was that? That was an uncharted rock. So -- I mean what I'm referring to is these things are changing around us and we need to be more aware of what great information does to prohibit and exclude accidents and oil in the water.

This Nikiski thing, I want to get back on it real quick. Because we're dependent upon the currents to dock there, we stem the current. So what we do is we look at predictions and we act accordingly. Usually we're trying to get in around an hour after high water or hour after low water, be dependent on what

you're doing. But basically we're utilizing the current. Now in smaller tides we have noticed an error of up to and over an hour. The channel we're using here is -- what we'll do is we'll turn and stem the current and wait for the current to arrive. It's a safe operation, however, I really don't want to be up there if I don't know there's current. I use the current -- use Mother Nature, not fight it. So if I get up there and it's ebby and I want it to be flooding I'm kind of looking at myself going I'm not going to believe this again next time. And real frankly I -- we've all started adding time. Hopefully this will help. I mean it's a very big part of what we do for a living is to make sure that the tides and currents are what we -- what is published is what we're seeing, you know, on those two different things there. Because we're also playing the tides to get the water over the bars and if we get a northerly wind direction and we're seeing barometers moving we will -- we all start adding time. And it's just precautionary because -- I don't want to say our face, but our trust in numbers is exactly that, it's numbers. You have to make sure you got the water there to do what we're doing.

So I can encourage you on some parts. I noticed some priorities. I went into the website and some of the priorities listed were level threes. I don't know what that means, I really don't. But one of them is the Nikiski approaches and that's where the refineries are and that's the body of water we

use. They are listed at priority level three and also a Drift River terminal approach was listed at priority level three. And that's on the west side of the Inlet and we do the same thing over there, no tugboats, we're using the tides and currents. And, you know, we all got our little tricks where we're adding an hour here, subtracting an hour there and doing things to try to get it organized. And hopefully this helps us a lot and I'm -- we talked earlier and he's going to take some down to my partners because we're all going to jump up and down for joy. So something is happening that's good.

One comment, I did send a pilot down to Kodiak here recently on the east side of Kodiak and it's not untypical in our area to see this. Soundings last done 1933. So what we do is we avoid going inside 10 fathoms. You just can't risk going inside 10 fathoms in this environment. And then the people that are wanting the vessel there are saying why aren't you coming in closer. Well, of course being a sailor sometimes you're not too explanatory about what you're wanting and saying. I mean it just doesn't come out that well, it really doesn't. So basically we've tried to tell our customers that our intent is to get it there safely and keep it safe. So the more mapping and chart information you give us the better that we are at providing a better service and the better our customers are. That's all.

MS. MCCAMMON: Thank you, Jeff. Appreciate that. We're

going to kind of switch fields a little bit here and to my right is Margaret Spahn who is a fisheries biologist with the Alaska Department of Fish and Game. And Margaret is going to speak to the importance of bathometry information for fisheries management.

MS. SPAHN: Is this on? Yes. Good morning, my name is Margaret Spahn, I'm a biologist with the Alaska Department of Fish and Game, Division of Commercial Fisheries in Homer, Alaska. I also provide their GIS mapping in our region two area which goes from Prince William Sound through Cook Inlet. And there are -- we have been recently using -- well, within the last two or three years we've been using NOAA provided multibeam bathometry where it's available for survey planning and for determining available habitat which brings us into -- you know, works toward stock assessments and fisheries management. I'm going to have to move this a little closer. Sorry.

So there have been three of us in the Department who have been working with NOAA data pretty extensively, one in southeast Alaska, myself in southcentral and one in westward region. And the fisheries and fisheries surveys, some of the fisheries that this data has helped informed are ling cod and rockfish, shrimp trawls, scallop, cod, black cod, king crab. And in discussing what we were -- what we wanted to convey to this panel in talking with my colleagues in southeast and Kodiak, the one thing we certainly agreed upon was what an extraordinary job

NOAA is doing in making this data available to us. They are absolutely bending over backwards and going out of their way and it -- we really appreciate that. They have -- the Fairweather and the Rainier crew have been extraordinary in providing data even before it's ready for distribution so that we can use it in upcoming surveys. And the Sand Point office has been incredible. We really appreciate the -- your orientation toward web based distribution. That makes it so much easier for us. You have hydrographic soundings available online through your map server. Brook McMahon in Sand Point is doing an incredible job with that in getting both current multibeam data and historic single beam data there. The ENC's are available online, we appreciate that, and the -- having the raster navigation charts, the BSB charts, available free at this point to the public is a very welcome change.

I was a little surprised yesterday to hear comments questioning the direction that NOAA has been taking on developing the ENC charts and full coverage of ENC's. From my perspective there -- the ENC data is extremely useful in that it's vector data and layers can be extracted and each layer also has a series of attributes associates with it. And that the raster charts are basically based on the same data that the ENC's are -- that inform the ENC's. And I'm curious about the -- what the problems are in -- on the bridge and in navigation. It seems like if there are problems with using the ENC's it's

probably software based and training based and not an issue with the data itself. And, you know, at this point I believe many of the electronic charts are proprietary and, you know, different software packages have their own electronic chart format. And I think -- I suspect that when the ENC's are available for a larger area that the software company that develops a good product to use the ENC's directly is going to be way ahead of the game.

I was also really pleased to hear the discussion about shorelines and vertical datum issues. When I'm integrating datasets from different sources the shorelines are often a very big problem. You know, we have shorelines from USGS, from National Wetlands Inventory, ENC charts, U.S. Forest Service, DNR and also some non-tidally referenced shorelines where data has been collected based on let's say aerial photographs that have no tidal reference and no vertical datum associated with them. Vertical datum for us is very important, would be having accurate vertical references is terrific for tidelands leases, for clam surveys, aquaculture leases, of course flood plain development. Glacial retreat and isostatic rebound associated with it and -- well, this is aside from fisheries, but I believe with the eruption of Augustine that the -- having accurate GPS vertical reference certainly helped inform us of impending eruptions. And I think there is a role that NOAA or USGS can certainly play in educating the public and the GIS community in

particular about vertical datums and their importance. In a way it's kind of -- we have a converse problem that I was referring to with ENC's. With ENC charts you have a competent navigator that may not be trained with the particular software that uses ENC charts. In our case we may have a competent software operator, a GIS analyst who isn't necessarily a very competent geographer or cartographer.

We certainly support contracting to cover -- well, to collect bathometry in areas that are lacking. I know there are a lot of areas in Alaska that have none at all that -- you know, there's a lot of white spots on those charts. And I would hope that as you develop non-navigational products that the deliverables you expect from your contractors are comparable or identical to those produced from NOAA vessels so that all our datasets are comparable basically. Also, if we contract with a private firm to collect hydrographic data we would like that to be useful to NOAA and we need to perhaps open a dialogue on how to make that happen. We -- most of our funding comes from grants and so we have to, you know, be very careful in how we spend money and I expect that -- I would suspect that it would cost more to produce data to NOAA standards and -- well, that's something we might be able to discuss in the future.

We certainly support NOAA fleet improvements and maintenance. The Rainer and Fairweather are very much appreciated. As far as ancillary data that's collecting during

hydrographic surveys we're very interested in using the backscatter that's collected during multibeam surveys. And to this point -- the backscatter is useful to us in characterizing the soft sediments. The multibeam itself, high resolution multibeam certainly tells us where the rocky reef areas are. We'd also like to have more information about the softer sediments for other fisheries.

There are software products that characterize based on acoustic characteristics, do an automatic characterization basically. And we have found that the NOAA data is not -- we can't use it with QTC for instance, Quester Tangent, because it's optimized for bathometry and the gain settings are changed during collection and that makes the backscatter not terribly useful is my understanding. But I -- so I know that NOAA is working with Joint Hydrographic Branch, UNH, in developing some software to compensate for that and we are very interested in that and appreciate that effort.

Other ancillary data, there's CTD tests that are done during the collection of hydrographic data and I'm not sure what happens to that but might be of use to us or other people in the state. And bottom grabs and sediment characterizations are of interest to us. And one recommendation I might just put out there is consider the possibility of incorporating a drop camera when you do those bottom grabs because a bottom image can tell you so much more about the community and there's something else

to refer to that a geologist or a biologist might find more interested than a hydrographer would.

And lastly, I would like to see more public involvement in the survey planning process and prioritization. And it could be that there is a very effective public participation process that I'm simply not aware of. Both the public -- I'd like to see some kind of public participation or -- well, participation in both the prioritized areas, setting the priorities for new surveys or resurveys, and in specific survey design. There are -- there have been surveys in the past that have stopped short of collecting data on an entire reef system that are -- you know, an entire geographic feature, in this case it was a reef system. And had we known that -- you know, had we known that when that was being planned we might have jumped up and down a little bit and hoped we could get some more -- and also sometimes -- well, for instance, the Orca inlet survey in Prince William Sound. My understanding is that that survey will not -- that survey does not include the southern approaches to Cordova. And that is -- and that's shallower water and that's where our entire Cooper River gillnet fleet enters and exits from Cordova harbor. So, you know, in that case that particular survey isn't addressing the needs of that fishery fleet. And -- well, again, thank you for meeting here in Anchorage and if you have any questions I'll answer them now or later.

MS. MCCAMMON: Thank you very much, Margaret. We're going

to continue on with the fisheries theme here and Bob Pawlowski is Executive Director of the Alaska Fisheries Development Foundation and he's going to speak to the needs of commercial fishermen.

CAPTAIN PAWLOWSKI: Thank you, different hat this time than yesterday. I'm -- again, I'm Captain Bob Pawlowski, a retired NOAA officer who spent a career in the fisheries side commanding the Miller Freeman as my last sea duty so I got to know very clearly the challenges of fishing Alaska and working with Alaska on following that and I was the navigation advisor during the time that the whole issue with the decision with the Glacier Bay came forward and Andy and I worked in planning the surveys in Cook Inlet.

Couple of points. One, following NOAA I've been involved with the Resource Development Council for Alaska and the Alaska Miners Association, looking at the challenges with essential fish habitat and with maintaining communities in areas where endangered species or habitat areas of particular concern come up. So I want to talk on those subjects. But really quickly, the Alaska Fisheries Development Foundation is a 28 year old nonprofit foundation based on industry members that represent the harvesting sector, a group you might know, and that is American Seafoods. The processing sector, we've got the associations but we also have Trident, Orca Bay, Ocean Beauty, North Pacific as members and the service sector which can

include oil and gas groups like Crowley or the distributors, et cetera, as well as we have press and we have other associations. So we really get a good cross section of the industry throughout as well as their unique things.

Alaska is a very well managed fishery and a very sustainable fishery and there's a lot of effort that's going into it but it's facing some major challenges that surveying can really help. I want to note three areas of dependency that we have to face. The first one is clearly the indus -- the fishing industry has to look at navigation safety. Hydrographic surveys, good accurate weather services, good tides all play into getting in and out of the ports, planning your fishery, not losing your gear because of excess currents. There's lots of different decisions that go on. The more information that can come together, particularly enhancing the Ocean Observing System, at a cost effective way is going to do very well for our remote communities.

It's very important to get in this issue of inaccurate shorelines. Everybody's using GPS. When John talks about I want to -- is Cherikofs 1,000 meters off or any of our -- some of our Aleutian Islands are substantially off yet they're still a navigation reference. When you're working with GPS you're counting on it being accurate and you're counting on it being accurate to the chart. A substantial error is a high risk and it's not only a high risk for the operation, it's also a high

risk in enforcement when you're having to stay three miles outside of stellar sea lion closures, which is a challenge to the industry based on some of that.

The other thing that's going on in getting that data out to the fishing industry is Senator Stevens has worked greatly on getting increased bandwidth in our communities. But a 10 meg startup where you have possibly one meg during storms is a non-starter. Minimizing it down so that navigation, hydrographic information, tides, meteorology can all be put out in a small files on the -- can work with cell phones, work with Telex, style, has a lot to say for it. When it's up it's great to get a beautiful website home page, when it's down it's going to take you an hour to get that home page up before you can even get access to the information. So communication and bandwidth is a real challenge facing rural Alaska and the coastal communities that support the fishing industry.

Second point is economic dependency on good solid navigation information. Everything other than fish is barged in, freighted in or flown in. Fish is hauled in on the fishing vessels and then either barged out, freighted out or flown out. So navigation and good hydrographic is very important. It becomes critical as an economic dependency when you look at doing operations where you have an endangered species, a habitat area of particular concern or a marine protected area. In any of these cases you've got a community that is dependent on

refined product, bringing refined product, diesel oil, gasoline, et cetera, into an area where there's an endangered species has an insurance risk mitigation cost. When you're a small community bringing fuel in where you have sea otters or spectical LIDAR or whatever. The insurance companies want to look at a responsible carrier and responsible carriers going to have to pay the premium that goes directly into the community. When you're a fishing industry that cost comes directly into what you have to recover to be able to harvest that fish which is one of the reasons why you're also seeing the price of fish escalating in your local fish markets. So that economic dependency is really critical. Hydrographic services can mitigate a lot of that by clear channels, good weather, good tides, accurate timely information.

The third dependency I want to identify is -- before I step into that. I have to say there is a benchmark we live with in Alaska post Exxon Valdez and that is best available technology. So when you bring in refined product into these communities if there's a question -- if an incident happens the question's going to come back were they using the best available technology. Clearly we use the best available that's available but it is -- in most of rural Alaska it's very substandard to the lower 48. And what can be done to improve our navigation services we'll do great.

The third part is community and cultural has a dependency

on the fishing industry. People have grown up fishing, families fish, they own the boats, they run the plants, it's just really deeply entrenched into all of our communities whether they're Native or whether they're -- a lot of the ur -- quasi urban settled communities in southcentral and southeast in particular. There's business decisions that are going on all the time and one of those business decisions that can be greatly enhanced is getting good digital data to dovetail with the data the fishermen are collecting and putting through their -- either their globe terrain builders or their ulax (ph) or whatever or working with their local CDQ in getting the GIS's out. So they get a good feel on model for the bottom. They're trying to do sustainable fisheries, meet MSC certifications, Marine Stewardship Council certifications is a emerging goal, and they need good data and terrain models that they can match their local data to. The different formats, there's lots of challenges, but recognize there's different sets of data, the public that's available and that's being collected by the private. It's leading to opportunities for increasing the catch per unit effort. Catch per unit effort is one of the few ways you can drop your total cost per unit by increasing the catch. The other thing is it lets you choose what is an effective gear to use on the bottom or around the bottom so you are sustainable and you're mitigating the concerns that people have with the bottom.

Finally, in the event of a disaster, much like the Seladong Iuua (ph) out in western Alaska. Having good information to understand where is the trajectories, what is the storms coming, what is the cartography in the area, what is the angle of repose on the beach, what is the offshore slopes, all of these tie into the decisions that are going on. But to go one step farther, the people really look at this. And as Sharon Siverny-Livingston (ph) said, add the Aleutian life form. It may not have been a big event in the grand scheme of things, it was $85 million for 400,000 gallons of bunker sea plus the soybeans, but it was still a disaster to the people. The native people want to have simple clear tools that they can understand what is going on when their lands are being impacted. This was four native corporations. Federal government had the tools, they could see it, the Native elders were not seeing information that was useful. Hydrographic services can at least provide this is our best cartography we have in the area, this is our best meteorology, these are the decisions we're making for oceanography, for currents, for spill response, real simple, real clear, makes a big difference.

In conclusion, the fishing industry is facing challenges, hydrographic services can help to mitigate a lot of those challenges. The industry is a huge supporter of NOAA and the services they receive as well as appreciate playing a key role in the management of the resources that has been set up. So

with that I'll conclude and answer any questions towards the end or after. Thank you.

MS. MCCAMMON: Thanks Bob, very much. We're going to continue a little bit on -- with the theme of at least kind of state resources and state management. To my left is Rich McMahon who's with the Alaska Department of Natural Resources, Lands Records Group. And this group is responsible for basically all the maps and shorelines and information on kind of the terrestrial and tidelands portion of state owned lands and also uses of those state owned lands, including tidelands. And so Rich is going to speak to those issues.

MR. MCMAHON: Thank you, Molly. Thank you for the opportunity to be here. Our Department, the Department of Natural Resources, is the land owner from -- of the tidelands from the mean high watermark three miles out. So I just want to first echo the statements from other colleagues up here that any near shore bathometry mapping that you can improve upon definitely supports the mission of our Department. But primarily what I would like to speak to is the -- I represent more the upland side, as Molly says, where the land meets the water and I would like to address some of my comments to that infrastructure that the hydrographic mapping and the upland mapping share which is of course the geodetic control issues. And our group is -- our land records group, the mapping group, or GIS has been a long term user of NOAA products and the NGS

products.

And I guess the first area I'd like to make a comment is with respect to the state geodetic advisor. Our shop has worked with the geodetic advisor for about a year and it's a successful program. As everyone in this room knows the world of control is going through major, major changes and we face big issues educating policy makers on the implications of those changes. The state geodetic advisor program is an excellent way to help communicate these changes. And one of the challenges we faced was in working with a commissioned officer we were just getting some good traction, some momentum on training, and then we at least temporarily lost our geodetic advisor to the duties of the Officer of Hydrographic Surveys. So perhaps there's some things we can work on together there to provide some continuity at least for states that rely upon officers.

The second area I just want to mention is right now the State of Alaska is working to create a statewide mapping initiative. And it's early to tell if this will completely move forward but the two themes that the initiative's pursuing is more detailed digital elevation model and statewide ortho imagery. Alaska lacks far behind the lower 48 in both of these key themes. And in the area of the digital elevation maps, particularly -- we'll no doubt end up stratifying the state on high priority areas and lower priority areas. But certainly for the high priority areas we would benefit from improved work in

the area of the Alaska Geoid Model. We again in Alaska do not share the same level of I guess error limits if you will that the lower 48 has with the computation of the orthometric heights. And with all the changes from the CORS stations and the other methods of survey control up there it becomes even more important for Alaska to have a good working model. So efforts in that area are appreciated and no doubt help the bathometric surveyors as well and, as Bob mentioned, the terrain mapping.

The third area that I just want to touch on is make members of this committee aware of Alaska is involved in a very large land transfer program. The Bureau of Land Management is moving millions of acres to the State of Alaska to fulfill the statehood contract and moving millions of acres to the Native corporations to fulfill the Alaska Native Claims Settlement Act. And all of that again ties to the common control net that hydrographic services and the upland folks share. The land transfer is all being conducted in NAD27. We do not have a backward compatible pathway to find in the survey process to NAD83 which places the burden of conversion on the next generation or the next set of users because that transformation will have to occur. So I think for the -- some of the folks in this room help in educating the policymakers of the implications of these changes and the implications of these changing nature of survey and control would really help with this decision

making at these operational levels.

I guess I would just like to close, going back a little bit more to your main theme of the hydrographic surveys. We do have a number of dependencies and work products that we rely upon on NOAA data products. The sailing point determinations of the three mile limit are a big area. The oil spill response and damage assessment planning and sometimes the actual response themselves is an area. The Department of Natural Resources has recently enacted an Alaska Boater Safety Program. So there's a number of areas. We have a -- I guess my main point here is just keep in mind that the users of your products represent a very diverse user community besides the navigational folks and increasingly those people are getting more and more sophisticated in this area of GIS and mapping. And, as Katherine said, we really appreciate all the efforts you've made and one recommendation or request would be to continue that web posting and if possible to provide the nautical charts which many of these GIS users would like to see as background information within a web services environment under the open GIS protocols. That could be a really useful infrastructure to get us past this world of downloading and all of that. So, but we certainly do appreciate all those efforts made in that area. So those are my comments.

MS. MCCAMMON: Thanks very much, Rich. We're going to go down to the right on this table to Dr. Orson Smith who is

retired Army Corps of Engineers and is now a professor at University of Alaska, Anchorage. And Dr. Smith is kind of the key person that I turn to and almost anybody in the state turns to when they speak to issues of coastal erosion.

DR. SMITH: That's a very kind introduction, Molly.

MS. MCCAMMON: And true.

DR. SMITH: Well, I'm a professor and chair the Civil Engineering Department at UAA here in Anchorage. And I count myself a coastal engineering specialist by way of my education and experience with the Corps and more recently at the University. But I have a lifetime of interest in nautical charts, I use them as artwork in my office and home, but I also navigate a sailboat and actually am involved with the Coast Guard auxiliary on an adopt a chart program in Seward.

I have prepared a written statement and you'll have copies provided. Just in the interest of time I'd like to read that. It has some information about University programs and a couple ideas I hope you'll discuss.

I'm pleased to inform the Hydrographic Services Review Panel that the school of engineering at the University of Alaska, Anchorage offers a cohesive sequence of courses leading to a graduate certificate in port and coastal engineering. This graduate certificate program was approved by the University of Alaska Board of Regents in June 2006. Hydrographic surveying and coastal measurements and analysis are among the course

requirements of the certificate program which provides specialized education to enhance a theoretical knowledge and practical skills of graduate engineers to deal with engineering problems of the coastal zone.

The UAA school of engineering also presents Alaska's only ABET-accredited four year bachelor of science program in geomatics. Hydrographic surveying is a part of this program already but could be strengthened with additional teaching resources. Support from NOAA to more rigorously teach hydrographic surveying would allow the UAA Geomatics Department to build the capacity of Alaska's surveying industry and to accomplish -- well, to build the capacity of the industry to accomplish NOAA and other contract industry surveys to the highest standards. Student opportunities for challenging field experiences, industrial internships and participation in relevant research are readily available to an expanded hydrographic surveying program at UAA. Such a program could be conducted in collaboration with existing programs in the lower 48 states to further build the national capacity for hydrographic surveying excellence.

Concerns for climate change impacts have recently brought national attention to Alaska's eroding coast. Comprehensive review of coastal erosion processes or trends has yet to take place in Alaska. I suggest that NOAA could support a program in Alaska to produce Alaska coastal sediment charts. These special

charts would provide bathometry superimposed with sediment characteristics and transport trends that identify sediment types, sources, sinks and transport rates for major littoral cells along the Alaska coast. This compilation could be accomplished through interagency collaboration, perhaps with the USGS and the University, as it has in recent years in California, Oregon and Washington. These charts and associated documentation would be useful to coastal residents and managers of coastal resources to prioritize regional sediment management needs and opportunities along the Alaska coast and to develop strategies to address critical issues such as coastal erosion, recreational uses, commercial fishing, aquaculture, navigation, dredging and sediment flow through coastal wetlands to ocean waters. I would be glad to assist the panel and NOAA officials in formulation of a new program of this nature.

There's many other things I could add but in the interest of time I'll conclude my remarks there.

MS. MCCAMMON: Thanks very much, Orson. Our next speaker is Sue Saupe who is Science Director for the Cook Inlet Regional Citizens Advisory Council. And CIRCAC, as it's referred to, is a product of the Oil Pollution Act of 1990 following the 1989 Exxon Valdez oil spill which called for two public advisory committees in Prince William Sound and Cook Inlet to be kind of public watchdogs of the oil and gas industry in Alaska. And for CIRCAC, I actually serve on that Board as the representative for

the Municipality of Anchorage. And Sue has been Science Director there and will speak to some of the issues relating to oil spill response and preparedness.

MS. SAUPE: Thanks, Molly. I know you're interested from a statewide level and most everybody here has discussed it from Alaska level but I'm going to give you an example of what we've identified as data needs in a specific area and that's Cook Inlet and surrounding areas.

Molly mentioned that we're related -- or formed under the Oil Pollution Act of 1990 which lists a huge -- identifies specific tasks that we're supposed to do related to oil spill prevention and response, environmental monitoring, studying wind and water currents so that you can better predict transport of oil. So we have a huge kind of laundry list and we rely on partnerships and data provided by other organizations a lot in order to get our work done. We are interested in the data that's been discussed for improved safe navigation, mainly for its applications in preventing oil spills during navigation. But also we're really interested in a lot of that data for its applications beyond safe navigation, such as we have a very strong interest in improving surface models for oil spill trajectories in Cook Inlet. As well we would like to see three dimensional models developed in the area that can handle the vertical velocities found in Cook Inlet associated with the red zones that we do know from past examples, the Glacier spill, can

actually entrain the oil vertically and make it appear elsewhere. And it's a little hard to pre-plan or to plan your response if you don't really understand where that's going to resurface. And this three dimensional modeling will be -- help us to better understand comparative risk for surface oil trajectories versus disbursed oil trajectories, the interaction and fate of oil mineral fine aggregates, and then, as I mentioned, even particulate oil that gets entrained subsurface.

As an organization we have invested a lot of time and money into trying to improve this and helping any way we can other organizations collect their data that can help us improve tools that are available in Cook Inlet. For example, we are working with Alaska Ocean Observing System in preparing a draft Cook Inlet, Kenai Peninsula Ocean Observing System Plan so that we can work to integrate observational measurements and develop better modeling tools. We worked with AOOS in the Kachemak Bay research reserve to develop a user needs assessment for Cook Inlet and I'll mention some of the results of that in a moment. And as well we have worked with organizations such as University of Alaska, school of fisheries and ocean sciences, the Kachemak Bay research reserve and various branches of NOAA to fund and or support observational data collections that can be used for improving some of these models and building tools. And examples of that are we supported some surface ocean current radar deployments for Cook Inlet. We are conducting monthly CTD

transects at what we're considering the boundaries of Cook Inlet, at the lower Cook Inlet entrances, Kennedy and Stevenson entrances, northern Shallow Cove, as well as areas that sort of bound upper Cook Inlet from lower Cook Inlet that -- between the forelands and bisecting Kachemak Bay. We've supported the work of Mark Johnson in deploying satellite drifters to help us understand net transport within the inlet and downstream of Cook Inlet. And as well we've been supportive of the work that NOAA's done to deploy 80 CP's in Cook Inlet and we are also currently seeking funds to get some permanently deployed bottom mounted ADCP's that will overlap, excuse me, spatially with some of this other work.

We've been really pleased with a lot of the partnerships that we've been able to build but we've also been kind of frustrated, and without picking on any particular program we have noticed that there are times when within an agency, including NOAA, there's not necessarily good communication among the different divisions or departments. And we would love to see that communication improve so that the deployments of various instruments can overlap in space and time. Recent example was a disjunct in the deployment of COTR by NOAA in Cook Inlet, current meters and ADCP's and it would have been a really I think phenomenal set of observational data if they had overlapped in space and time.

I mentioned that we worked with the Alaska Ocean Observing

System in doing a user needs assessment. We also co-sponsored a physical oceanography symposium in 2005 where we could discuss the results of the user needs assessment and have all the different people that are collecting data and developing models in the same room so we can talk about long term plans. And the proceedings from that symposium are available on Molly's website and as a quick summary I'm going to talk about some of the things specific to Cook Inlet that did come up for that.

As already has been mentioned, there's a need for better predicted tides and currents, improved bathometry and that's for the higher resolution bathometry we have for all areas of Cook Inlet the better we can build models that rely on tidal component. But also bathometry and sediment type data is really important for just basic things such as our research. We did a big gulf wide environmental assessment through the EPA's National Coastal Assessment Program and we ended up having to go into several areas where there was no data available and we just had to rely on the ship tracks and getting some good sonar before we could put our trawl down. Also bottom type oftentimes did not match up with what we found on the bottom throughout an entire area and what was included in the charts. We also found that especially for Cook Inlet I believe that the sediment type depends very strongly on whether you're in a spring or a neep tide and we were able to sample soft sediment types only during certain tide phases and that sediment type was not anywhere

available during really -- the really strong spring tides. So I like Orson's idea of sediment transport information.

Better shoreline is definitely, that's been an issue for us for some of our coastal mapping and we believe that we need very good vertically or tidally referenced shorelines to interact with some of the habitat -- coastal habitat data that we've been trying to develop. And these information are really important to interact with the better trajectory models that we'd like to see so that we can have a better -- we can do better assessments of shoreline risk in preplanning and response efforts for Cook Inlet. For Cook Inlet there was identified that we definitely need some better winds and weather information, especially related to some specific jets that come down through the mountains in lower Cook Inlet. And we would like higher resolution, both spatially and temporally, surface currents and we -- as I mentioned before, we tested COTR. And Molly mentioned that in a lot of areas it's really hard, the research is that you have had some problems with the remotely deployed ones and power issues but in Cook Inlet we have the infrastructure available to deploy them for much of the shorelines in Cook Inlet. So I think that we're ready to go in terms of getting some of those instruments deployed and they can be very useful in obtaining the data that we need to test and improve models as well as directly for oil spill response in the event that we had an issue there.

And, as I mentioned, we need models that can incorporate the complex oceanography that's found in Cook Inlet, such as the semi-permanent frontal systems at the rip tides that include both convergent and divergent fronts. And that can incorporate both tidal currents, the very strong tidal currents that we see in Cook Inlet, as well as currents driven by the density differences, I'm sorry, such as baroclinic (ph) currents like the Alaska coastal currents that influence this lower Cook Inlet and the western boundary current due to the high volumes of fresh water that are entering Cook Inlet, in the upper Cook Inlet by the Knik -- Matanuska and Susitna Rivers as well as other rivers. And finally, sediment transport issues are of real importance in Cook Inlet, as I mentioned before, but also not just from a depositional but from a erosional point of view. So thanks.

MS. MCCAMMON: Thanks very much, Sue. Our final speaker is Kevin Bruce who's Deputy Director of the Port of Anchorage but I don't see him here. He had another conflict meeting starting at 10:00 and he was going to be a little bit late but he may join us in a few minutes. But as you can see, we have a little bit of a kind of Cook Inlet, southcentral bias I guess or perspective up here because this meeting is based in Anchorage. But I think if you were to hold this meeting in Juneau or Ketchikan you'd be hearing very similar stories from the folks who represent the different interest groups there, that

basically there's a -- what we view as kind of a dearth of information up here compared to the length of our coastline and certainly the value of the resources that people experience in the marine environment. And with that, I -- we take any questions and I turn it back to you, Mr. Chairman, and how you'd like to proceed.

MR. RAINEY: Okay. Well, Molly and the panel, thank you very, very much. I know for a number of years we've been trying to come up here because we are aware of some of the special requirements and needs that you pointed out. I had a couple of thoughts listening through that I just want to comment on and then open it up for the panel members. But it was a tremendously helpful presentation and as you may be aware if you came in a little bit ahead of time, we're working on a special report right now and trying to sketch in some of our recommendations and we've had an opportunity for public comment at our -- all of our meetings. And one of the things I wanted to comment on is information across the panel today, that we heard some excellent examples of -- one of the things that we're working on is expanding the uses and NOAA's just acknowledging NOAA's effort and supporting increased use of this data across different user groups and as many of you all mentioned today was some very excellent examples of that. The question I wanted to ask is a follow up. I think Captain Pierce and Ms. Spahn and others mentioned one of the things that we were chartered to do

explicitly in the Hydrographic Service Improvement Act which enacted this panel was to work with NOAA to take a look at their national survey priorities plan and in fact this afternoon Commander Doug Baird is going to give us a briefing on the recent vision for that. And we have had occasion and we did comment on that and I think it's a great vehicle. But I'd be interested to ask you, you know, as a panel generally about your awareness of that plan and the transparency of the process and -- you know, with the NOAA nav managers and other steps NOAA has taken to highlight that, if you had any kind of further comments on how you provide the input to that plan. Because that's something we've been specifically asked to do and are working on.

CAPTAIN PAWLOWSKI: I can make one comment obviously.

MS. MCCAMMON: Use the microphone, Bob.

CAPTAIN PAWLOWSKI: Sorry. Yeah, I can make one comment and compliments to -- is that on? Yeah. And compliments to how NOAA's kept the process open. Two things. One, by having a navigation advisor up here you have a very good conduit into the spectrum of the industry. But you have to recognize that Alaska is huge. The ability to attend the proper meetings whether it's in southeast, whether it's with the Coast Guard, whether it's with Southwest Alaska Municipal Conference, et cetera, or whether it's even getting out into western Alaska and familiarity with changes in fisheries or mineral development, et

cetera, is a challenge. Because Steve Burrell (ph) was here with a letter to Mike Riddle talking about resource development for gravel and that on behalf of the Mining Association out of Hinchinbrook (ph) -- or not Hinchinbrook (ph), out at western Alaska as well as up in Nome. The navigation advisor needs to be able to participate and actually understand the challenges with those. So it's a good process. Having a navigation advisor up here will make it go much better but that navigation advisor has to have the resources to do justice to the different regions in the state.

MS. MCCAMMON: Anyone else?

DR. SMITH: I'll just.....

MS. MCCAMMON: Okay, Orson, go ahead.

DR. SMITH: I feel compelled to say that my only experience for a really long time it seems has been very good with NOAA's particular willingness to collaborate with other agencies. As a Corps of Engineers Project Manager I called on NOAA many times to help with the planning and design of navigation projects and found the -- particularly the operational side of the house in surveys and tides to be very responsive and that's certainly a reputation that I hope will abide in the agency and it's very useful. Collaborating with the Coast Guard, of course, is a natural thing and charting and I believe there are opportunities for other agencies as I mentioned, like the USGS as well. So that's what I wanted to

say there. Molly.

MS. MCCAMMON: Okay. I'd just like to make one comment and that's that for the Alaska Ocean Observing System we have two members from NOAA sitting on our board. We have a representative of -- the State Director of the National Weather Service and then we have the State Director, the Director of the Alaska Fisheries Science Center. So we have NOAA fisheries and NOAA weather service represented but National Ocean Services is not well represented in this state. There is really not much of a presence up here. And it makes -- I think there -- it makes it a little bit difficult then to have that full integration of those services within that division with the other services in the other divisions of NOAA. And I don't know if the answer is having a stronger NOS person being the lead person or if it's even -- something even above that, something similar to what the Department of Interior has which is a direct representative of the Secretary of Interior representing all Department of Interior agencies across the board in the state. But some way to help facilitate that interaction and communication amongst all the agencies I think would be very helpful. Rich.

MR. RAINEY: Well, thanks very much. Could I open it up?

MR. MCMAHON: Just one other.....

MR. RAINEY: Certainly.

MR. MCMAHON: .....quick comment on that is people on the com -- or folks on the committee may not be aware there is also

a -- kind of a loose knit organization called the Alaska Geographic Data Committee and I think it -- it has some recognition through the Federal Geographic Data Committee and for -- it may provide one conduit to help improve some of those communications. The main goal of that organization is to share information about, you know, spatial data activities and it's modeled more or less off the Federal Geographic Data Committee. And NOAA did have good presence when Bob was available but it's kind of fallen off since so it's just one opportunity.

MR. RAINEY: Okay, well thanks, that's -- those are very helpful insights. Can I open it up to the panel members for any other follow up questions? John Oswald.

MR. OSWALD: I'd make a comment. I went to -- I meet with Molly several times a year and try to find out what they're doing and what these other groups are doing. So I went to the Homer -- Molly through AOOS has these stakeholder meetings around the state so they, like this, try to get input. Very well attended, broad base. I went to the one in Homer been 18 months ago now maybe and was totally shocked to see some things happening. When Jack Dunnigan spoke this -- just yesterday about this breaking down, you know, the walls, et cetera. But in modeling, CO-OPS does modeling. There's a variety of efforts going on in the universities and in NOAA and elsewhere in modeling. But -- Molly could correct me, but I believe we had reports from six, possibly seven different research entities

doing modeling in Cook Inlet. I as a taxpayer would like to see that stopped and more coordination. I know everybody has their agenda. The one that -- do you remember how many? It was seven or.....

MS. MCCAMMON: Well, I know there were at least -- I don't know, maybe you have like five ocean circulation models. And I think three or four of them were NOAA's.

MR. OSWALD: Yes. There's (indiscernible) the PMEL model, the NASA JPL model, the U of W model, the -- and then to the surprise of everyone the NOAA NOS -- I have to get this right. It's the research group that's under Steve Barnum.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. OSWALD: Yeah. And there -- and you would know the person. I can't think of the fellow's name. He's 60 years old, a senior scientist, just beginning a complete new model of collecting all the bathometry from the historic charts and not one of the other modelers knew about that effort. And it was about a one and a half man year effort according to him and I could look in my notes and find the name. You probably know this fellow. But.....

MS. MCCAMMON: Was it Rich Patchen?

MR. OSWALD: .....(indiscernible).

MS. MCCAMMON: Was it Rich Patchen?

MR. OSWALD: Yes, that's who it was. Does anything

through the AOOS happen on more -- like CO-OPS has operational models for the Great Lakes, Chesapeake Bay and there's a few others that sometimes are done in the -- I believe done in the universities and then come over and some are done probably inside the university. That actually doesn't support the NOS program, Office of Coast Survey program, of hydrographic surveying, if you can believe that, because they're not compatible. Inside of NOAA.

MS. MCCAMMON: Yeah, John. I think that the issue -- the issue I don't think is so much that there are all these multitude of models because each one of them will tell you, well, we're doing it a little bit differently and our mission is a little bit different and our perspective. But I think that the larger issue is that the folks are not talking to each other about what observations are needed to be collected to service, to feed those models, and those are not being coordinated. And that's where the expense is is in collecting the observations and that's where we need to really force the issue of getting the various agencies and the various entities together to really figure out what is -- what are they trying to achieve with these models and is there duplication between them but if not at least do a better job of coordinating the observation system. So -- and that is the goal with the plan that Sue's been working on for Cook Inlet to hopefully achieve that.

MR. ZILKOSKI: And -- Dave Zilkoski. Is this on? But

from the Integrated Ocean Observing System and what Molly's leading in the Alaskan Ocean Observing System, that's one of the things we're trying to identify, how do we coordinate these models and -- from inside NOAA is one aspect and we're trying to look at how to do that and we're doing a better job of it. But it's between the agencies and we're also doing that. The Ocean.US which is supposed to be coordinating a lot of these activities between the agencies and working with the Interagency Working Group on Ocean Obs. And I kind of mentioned yesterday in one of my reports, there's a modeling group to try and -- to do just that, to start coordinating what they're doing. And as they said, there's certain models you want to do for certain reasons but it's the data acquisition and then the multi-use of the same data and that's making it interoperable and integrating so you can actually get the data out there so other modelers can know what they have and what they're doing and then they can use it. So we're trying to tackle that and actually Thursday we're going to meet with Molly and her group to talk a little bit more about some issues.

MR. SZABADOS: John, I'd like to respond to one question you had regarding the cooperation between Coast Survey and CO-OPS and modeling. Actually it's a -- it is a (indiscernible), it is a very close knit team and they actually do the transition of the models from research to operation to us so we do work close together. And I think to answer the question about the

multiple models, let me -- I -- my office is responsible for running models but I will say operational models. And it's not that operational's any different than research, but research is where you develop new systems, new technology, and I would encourage the universities to develop the new models, bring on the new technology, and then at the appropriate time see that migration, that technology to operation and enhancements.

MS. SAUPE: I would just like to add to that. That, you know, addressing these multiple models, there probably will always be multiple models for every geographic area that are designed to address very specific issues. Like the MMS one, they were really interested in the wetting and drying, very near shore areas. JPL modeling so that it can link with larger -- within a bigger larger nested scale. But ultimately it comes down to, from my interest in oil spill NOAA will rely on one model and one model only currently and that's the NOAA model and the NOAA model does not model Cook Inlet very well. And so in order to test these models and improve any model or all models we definitely need to emphasize the observational data. And I just really wanted to reemphasize what Molly was saying. Thanks.

MR. RAINEY: Andrew.

CAPTAIN MCGOVERN: Yeah, Scott, I think Molly hit the nail on the head when she said that it's not the models, it's the sensors that cost the money and that they have to multipurpose.

I mean we've talked about this before, that -- you know, and we've seen that a lot of redundancy if you have three different organizations putting sensors in the same spot and it's ridiculous, let's face it. I mean we need to get smart about that and put in sensors that are multipurpose that can be used whether it's real time for navigation or, you know, to -- used for modeling or whatever down the road. I mean that's -- you know, everyone could just -- we need a source that the data can go into and people can pull it out and do whatever they want with it. But it's got to be -- the money -- let's face it, this -- the IOOS program, all of this, there's not a whole lot of money for any of this stuff so we've got to be really smart on how we put these sensors in and they have to be used by everybody and they have to be able to be used by everybody. And that seems to be the -- to me the biggest -- you know, the smartest way to go here.

MR. RAINEY: Okay. Any further questions from the panel?

MR. ZILKOSKI: Yeah, I have one more. Once again, Dave Zilkoski. Molly, you mentioned about the tide gauges and I know NOAA has certain standards that they put tide gauges in and USGS Corps have different standards and -- which I don't really see a problem with that they have different requirements and so forth. But I guess I -- can you elaborate on what would be helpful to you coming from a geodetic world and so we have different standards for doing different orders and accuracy. You know,

heights, two centimeters, five centimeters, and we give both of those and they have different procedures and specifications of doing them and people find that very useful, they don't need to get millimeters, they need to get five centimeters or even 10 centi -- but we have guidelines of how to do that. Is that something what you're saying that you'd want certain layered standards of certain types of -- say the tide gauges, having a first order, a second order, a primary, secondary -- I can't use that because that has a different meaning, but first order, second order type gauges?

MS. MCCAMMON: That's correct, Dave. And I'm not an expert on this, this was a recommendation that came basically from our arctic researcher up at the University and some discussions with John Oswald too that -- and it goes to the tide gauge issue and to the mooring issue and buoys that often the universities are able to put things in on a research basis that is providing information at a much less cost than the regular operational deployment from NOAA or from other agencies. And so we just have to figure out a way to do it more cost effectively and cheaper because we need more of them and cost is always going to be the issue. And so I think there can -- we should look at some layer of standards, different standards for different purposes that would be still useful.

CAPTAIN MCGOVERN: Scott, I just.....

MR. RAINEY: Captain McGovern.

CAPTAIN MCGOVERN: I think the -- that just defeats the last statement that the sensors -- you need to have multiuse sensors and if you've got sensors that have different accuracy limits then they can't be used by everybody. You have to determine what is at least a minimum accepted accuracy for a multipurpose sensor and then you have to go with that and that is why I guess, you know, some of the NOAA stuff costs more but say to use it navigationally it has to be accurate. It has to be because I'll go to jail if it's not, you know.

MS. MCCAMMON: Well, it's.....

CAPTAIN MCGOVERN: I'm using a sensor so you -- what I'm just saying is.....

MS. MCCAMMON: Yeah.

CAPTAIN MCGOVERN: .....the whole purpose of trying to minimize the amount of sensors and use them multiuse if you say that they can run at different accuracies then you've just taken that and thrown it out the window, that's just my problem.

MS. MCCAMMON: I think it's accuracy to what level because there's nothing that's perfectly accurate anyway, there's always some standard deviation or whatever, error of deviation. But I think it's not just the multipurpose sensor that we focus on too, but it's also multipurpose platforms. And so you might have one sensor on that platform for a single purpose but you would be using that platform for additional sensors for additional purposes. So the big cost for us isn't necessarily

with the sensor itself, it's with the platforms and maintaining them.

MR. SZABADOS: Since we're talking about water levels let me -- I would like to clarify one thing. While sensor technology and sensor accuracy is important, that's only part of the equation. The standardization to zero in that tide gauge to a reference point, to a datum is very critical. You could have the most accurate sensor out there but if you don't maintain it to the right datum it can cause significant -- ships going aground, levees being built a foot and a half below where they should have, like they were at New Orleans. Again, that was not the sensor's problem, they didn't pay attention to surveying and to the datum. So it's the whole process that -- and that's actually where some of the funding gets more expensive, maintaining that system to that datum or, as you said, to that platform. But sensor technology is also important.

MR. RAINEY: Well, I just would like to make the observation. I'm at least taken away from my mind that we're really largely on the right track. I mean I think many of the information you gave us is aligning with our efforts that we're looking at in our special report. And it's wonderful to get the -- you know, the Cook Inlet and then the statewide and then, like you say, we're trying to look at some national issues and to see sort of how that's dovetailing and it does seem to me that, you know, the communication and the outreach is taking

place and I think we're all -- I think there's going to be significant progress made with NOAA's efforts and hopefully we can play our part. But again, I'd certainly like to thank Molly and the panel, tremendous insights and information from the Alaska perspective and it's been a real pleasure to come up here and hear your point of view. So thank you very much for taking the time to join us today.

MR. ZILKOSKI: Can I say one more thing?

MR. RAINEY: Sure. Yeah.

MR. ZILKOSKI: Just I want to commend Rich for actually being -- someone other than me to say the state geodetic advisor and the geoid model. So that hasn't happened in this forum before, so thank you very much.

MS. MCCAMMON: We did it for you, Dave.

MR. RAINEY: Okay.

MR. SZABADOS: Scott.

MR. RAINEY: Yeah.

MR. SZABADOS: I'd just like -- I mentioned to some of the people, but next season we'll be doing a full current survey up in Prince William Sound and we have a group coming up later this month to work for the users to get their requirements, hopefully we put the gauges where they're needed the most. Be looking to work with all of you. Thank you.

UNIDENTIFIED MALE: Thank you.

MR. RAINEY: Mr. Vice Chairman.

MR. SKINNER: I think having this panel was a really useful way of getting some public input to our process and I would -- I think as we go forward as a panel that in future meetings we should think about having a similar type panel at each venue because I think this has been very helpful. It's very good to get the general public input to the public sessions but this really provides a real depth of input that I think is important for what we're working on. So thank you.

MR. DUNNIGAN: All right, let me -- and let me add my thanks too. Sorry I had to step out for a minute. But, you know, one of the challenges for me, you know, coming to the National Ocean Service is to start looking for the different ways in which our programs are connected. And what I heard from you today was a lot of connections talking about not just surveys and charting and mapping but talking about the implications of this for fisheries, for coastal management, for habitat areas of particular concern. And so it's helping me to sort of understand and I think for those of us in the Ocean Service to think about how the various pieces of what we do end up supporting each other and fitting. So it's a very good perspective, I'm really glad you're here. Molly, thank you very much for organizing, this is great.

MS. MCCAMMON: Thank you for coming.

MR. RAINEY: All right. Well, let's adjourn for lunch and then we'll come back and we'll jump in with hydro survey

planning and priorities. Thanks.

(Off record at 12:05 p.m.)

(On record at 1:05 p.m.)

MR. RAINEY: As we mentioned just before the break, our next presentation or session here is going to be Commander Doug Baird is going to talk to us about the latest draft of the -- of NOAA's hydrographic survey priorities. We had a chance to get the draft out to everybody before the meeting and hopefully folks have had a chance and let me just kind of turn it over to Commander Baird and we'll engage here.

COMMANDER BAIRD: My name is Doug Baird. I am an Alaskan resident, however I'm currently displaced to the east coast. I am counting the weeks until I come back permanently. Captain Bob mentioned that I was on a team that taught a hydro course and several other teachers are actually in this room. But it reminded me of a statement I used to open up by first lecture with. When I was a wee Ensign back 16 years ago the ship I was assigned to was delayed from sailing to Antarctica and the captain was briefing the ward room as to what was going on and what he thought might happen. And after he was done I raised my hand and being kind of eager I wanted to get underway and wanted to know how much we were going to be delayed. And I asked him, I said, well Captain, what's the worst case scenario. He looked me dead in the eye and said, well Mr. Baird, that'd be global thermonuclear war. Ever since then I've been very -- I've tried

to be diligent about being precise in how I speak. So if I leave something out or I'm not clear ask me a question, I'll clarify.

I think most of you or all of you on the panel have received a copy of the 2006 draft update of the hydro survey priorities. Hopefully you've had a chance to look through it. When I got in the office a year ago the plan was to actually update the 2004 edition in 2007. But there was a -- my boss has changed and they decided they wanted to do it a little bit sooner. So we hurried up and we tried to put something together before this meeting started. And so this is not a final product, it's -- there are some errors, in fact I'm seen some errors since I've been here. But I am -- part of what I wanted to be up here for was for you all to actually give me suggestions, critiques and comments.

Our plan in the future is to update this more frequently then even just every two years. I'd like to do it every year if possible and we're going to do that by not producing or a limited run of paper copies. I'd like to go to a digital version that's available on the internet but that we have to spend less time actually producing a document like this. The -- I had two employees working on this since mid to late June. One of them put in basically a month and a half into it and the other one put in three weeks. So it was a time sink to get a paper product out and so if we can just stay with a digital

version we might reduce the labor that goes into it.

So with that I'd like to open up for questions, any comments or suggestions or critiques that you all may have. Yes, sir.

MR. GRAY: I looked at this and it's very interesting and to try and show us what it is that's been done, what it is that needs to be done, but I wrote on the front of it does this include U.S. Army Corps of Engineers channels, when you take the square miles needing to do this, that or the other thing.

COMMANDER BAIRD: No, it does not.

MR. GRAY: It doesn't.

COMMANDER BAIRD: Not specifically.

MR. GRAY: And have you got any idea if you did include that what -- how many square miles might be involved?

COMMANDER BAIRD: If the Corps of Engineers channels are actually on our charts then it's been included. But we did not specifically do anything outside of our scope of responsibility for charting.

MR. GRAY: But I mean like if you look at a major commercial harbor or something -- I think I looked at San Francisco here and it's all red, this is to be resurveyed and so forth like that. There must be I think somewhere there some dredged channels, maybe they're not in San Francisco. But if you did that in New York or other areas. Or Delaware Bay.

COMMANDER BAIRD: No, we have not actually physically

doughnut holed out areas that may be surveyed by the Corps of Engineers. Because even though when we're in an area we don't specifically tell them to survey in the channel, sometimes it makes more sense to leave a transducer on and cover that area at the same time. But the Corps of Engineers data always has precedent over our own, unless we find a discrepancy. At that point we report it to the Corps. So.....

MR. GRAY: Well, I'm sort of curious on it because one of the things that we're putting in our report is that we want in government maintained by Corps of Engineers channels to have NOAA survey, NOS surveys to see that they've cleared the channels of all obstructions. I'm just curious how much additional mileage or square mileage that might add to the tasks that NOAA would have to undertake.

MR. DASLER: Just having worked with the Corps before -- I mean not all districts conduct their surveys along the same levels and that kind of thing. And a lot of them look at it as their task -- the Corps' mission is to maintain the channels in terms of dredging. So they consider these surveys as dredge condition surveys or monitoring surveys from a dredging standpoint and not trying to detect obstructions. And certain districts do that a little more than others but -- and I think that's where sort of the nexus is in that is that they're really not out there looking for something, an obstruction that could have fallen, it's more maintenance of the channel and when do

they need to re-dredge.

MR. GRAY: That's a very short sighted view.

CAPTAIN BARNUM: I was going to add that I would think the square nautical miles of the channel for a harbor is probably relatively small. And certainly in the efficiency of surveying it's more efficient to run your lines when you're surveying a harbor rather than, you know, omit the channel so you get the full picture of the bottom. So the Corps pretty much is the authority for the federal project and they pretty much draw their lines right at the edge of the channel for a little bit of overlap and that's it. They do not survey outside the channel. It's very interesting to point out when -- certainly in the issue of -- NOAA had this comment, an emergency response a couple years ago their view of the port being open was that the channel was open irrespective of the fact that for this particular port there were several areas that were naturally deep that were not surveyed. So our view is that to provide a path all the way from the approaches, the deep water, all the way to the berth, which is not their view.

CAPTAIN MYRTIDIS: Well, Doug, I have a couple of questions for you. I'm looking here at the survey priorities in Alaska and what is interesting to me is to see that some of the places that you have the majority of the cruise industry, hundreds of thousands of passengers and quite a few hundred thousands of tonnage you have priority three. That's a little

bit of a concern like in -- I believe in Ketchikan for example. Which is one of the major calls.

COMMANDER BAIRD: Right. Now port -- Ketchikan, excuse me, was actually surveyed in 2001.....

CAPTAIN MYRTIDIS: Right.

COMMANDER BAIRD: .....and so it was done with multibeam and Terra Surveys is the.....

CAPTAIN MYRTIDIS: What about Juneau and Skagway?

COMMANDER BAIRD: Juneau was surveyed in 1997 with single beam technology and then did a homeland security survey of the channel leading up to the harbor in 2003 I believe.

CAPTAIN MYRTIDIS: And the -- in that waters to let's say Glacier Bay or Sawyer Glacier and all that.

COMMANDER BAIRD: Sawyer Glacier on Tracy Arm was surveyed with multibeam in 2000 and -- excuse me, I think it's 2001, but it was a fairly recent survey, it was '99 and 2001. And we've been told about the retreat of South Sawyer Glacier, it's retreated about over a mile since we were there last. And so we are planning to send a vessel to Endicott Arm to survey in front of Daws (ph) Glacier and at the same time, this will be next fall, we will also be sending a crew up there to the upper end of Tracy to survey in front of where the South Sawyer has receded. But as far as Glacier Bay, we have not addressed the fjords of Glacier Bay as much because of the fact that it was surveyed in the 1980's and it's considered to be a modern

survey. When we are noted of discrepancies then we would send in and do little field examinations. In fact we did in 1999, we did a quick check of the face of the glaciers just to make sure they had not receded and at the time there wasn't much difference from what was charted and what was -- we found in reality. But as we get worried about these discrepancies then we will address them.

CAPTAIN MYRTIDIS: Well, I just -- you know, I just wonder everything you mentioned with the exception of one location I think in 2001 everything is '96, '98.

COMMANDER BAIRD: Right.

CAPTAIN MYRTIDIS: And, you know, we were listening from the panel before what's going on here in Alaska with the shifting of the bottom and this and that and I was wondering with the number of cruise ships that you have up here if it's worth the effort to resurvey these areas.

COMMANDER BAIRD: There are some areas that are and we rely upon the Coast Guard and the pilots to let us know where the areas we've surveyed in the last 20 years have changed enough for us to go back and resurvey them.

CAPTAIN MYRTIDIS: I hope not when they're going to hit a reef, right?

COMMANDER BAIRD: So do I.

UNIDENTIFIED MALE: Yeah, I was curious Doug, do they ever -- do you ever use satellite imagery to look at like how much

glaciers have retreated to what's -- to where the shoreline's been charted.

COMMANDER BAIRD: Yes, we have, and if -- I'll let Mike Aslaskan actually address that if you'd like to, Mike.

MR. ASLASKAN: Mike Aslaskan, NGS. Yes, we actually use active impasse of sensors to look at that. We've used commercial synthetic adaptive radar to look at the glaciers as well as we use classified source quite often to update the glaciers because they are retreating quite fast. Depends on the request from Coast Survey and then I guess inquiries as far as the users.

CAPTAIN MYRTIDIS: I'm sorry, I -- we have ships all over the place. Hawaii.

COMMANDER BAIRD: Hawaii. We actually had -- we tried to get some LIDAR data flown in Hawaii recently and I don't remember what the result of -- there was -- the Corps of Engineers was sending a plane or a helicopter there. I don't remember if we were actually able to work out anything with them or not. As of right now Hawaii is not an area we've been sending service platforms, we've been concentrating on other places. The number of requests coming from Hawaii have been less than other areas.

CAPTAIN MYRTIDIS: Just for your information, we have the biggest fleet of cruise vessels of 95,000 gross tonnage trailing Hawaii on an everyday basis, seven days a week, 365 days a year.

MR. RAINEY: Doug, I had some things I just wanted to point out for the panel. I mean first off I guess I'd really like to acknowledge the -- you know, that you guys have incorporated since we reviewed it the last time a number of things, you know, over and above even putting the page numbers in which was our best recommendation. But the -- you know, on page three we've got a mention of recreational boating, that's new. You've got we're tracking now the benchmark of the critical navigation areas which I think is incredibly important because that's sort of the sand bite or buzz word that we're using up on the Hill to kind of measure progress. I think that there's significant language -- well, there -- you can see the break out of the new features but to talk about to be tracking the emerging critical areas and then the -- and then to show also the new -- the -- to actually start to graph and show people the progress you're making with the full bottom coverage I think is a really good feature. In the report itself, I'd like to draw everybody's attention to it because I think we can use this as a source document for -- to make our argument on the critical need for this. And if you look on page four, I've kind of grabbed onto some language there that bleeds over onto page five. But basically getting -- NOAA is saying right there setting forth in the document why we need this full bottom coverage and the multibeam and that's exactly our argument for -- you know, that's the -- we've got the cross jurisdictional

issues but that's making the point and that's the point we're trying to make, that this type of technology is what we need for navigation safety versus -- as Jon had just pointed out, the Corps has a different mission so they're using different technology. And so there's language we can make note of and use. It talks about again on page five the expanded uses of this data, and again that's just completely in concert with what we're trying to do on the -- you know, on our bullet to really show that it's not just, you know, fancy matrix management, this stuff is a reality and it crosscuts across all NOAA's missions and national needs. There -- one of the things, on page 12 and it ties into my question about the -- you know, the awareness of it. There is a section that talks about, okay, how do you get input into the priorities and we talked about the nav managers and the different -- the linkages and workshops and one suggestion or comment I'd have is just to try to keep getting the word out and have everybody be as familiar with that process as you can. Another idea I'd have, and I'd mentioned it and it -- not necessarily an original idea I had, but one of the things that might be an enhancement that would be fun -- important kernel to track would be the number of obstructions that you're discovering with -- as you use the new technology and you do these surveys, you know, we've discovered, you know, this many new, you know, obstructions on the bottom or, you know, significant things. And I don't know, it occurs to me as you

mentioned, you know, doing this more often and digitally I don't know whether there'd be an opportunity to link -- I don't want to say in real time, but I mean just to -- you have your survey plan and I don't know if it would be possible to depict, you know, NOAA effort and contracting effort that -- and kind of show where they're working and focusing and have a link from your planning document to your execution. That would be I think an interesting, you know, piece of information. But I guess those were my major comments and thoughts and I think it's a good document.

COMMANDER BAIRD: As we talked earlier about keeping track of wrecks and obstructions, that's a relatively easy thing for us to do. It's just a matter of setting aside the time to do it. We've done it in the past on sort of an ad hoc basis, you know, promoting certain wreck we've found and sort of do some glossy handouts. But keeping track of all wrecks and obstructions we find during surveys is something that can easily be implemented.

MR. DASLER: The other question I had was regarding the resurvey areas. And I don't know, are those being incorporated back into the critical area as -- like a survey reach its given date? Because I know the Corps of Engineers, especially in the inland waterways, in some areas, I mean it can -- a month, a survey could be a month old and they're going to consider it out of date because of big sand waves. I mean I know it's a lot

longer period for the areas we're talking about here but it seems like, one, identifying those resurvey areas and then at some point the areas where a critical survey area has been mapped and it's time to resurvey, it seems like that should get plugged back into the critical area again. I mean it's all time sensitive. And then -- I mean actually all of these surveys at some point it's a temporal snapshot or a snapshot in time of, you know, what was existing there. But there continues to be, you know, unreported wrecks and obstructions or things that are coming into the waterways that even though a survey was a complete survey at one point there continues to be features that show up that have not been reported. I guess my question is is the resurvey areas, is that getting plugged back into the critical areas at some point in time?

COMMANDER BAIRD: No, it's not. We're tracking resurvey areas separately. The resurvey areas pretty much never go away unless we find a reason to remove them from that category. But the critical area, we were told basically to leave that goal line where it is, that is not to move. It's been set at 43,000 square nautical miles and that we're going to leave it there until we finish it. So that's why we now track areas that are considered critical now as emerging critical and areas that are resurvey that may have been surveyed 2001, 2005 even, as -- that's a separate category, that they require a different type of attention than even crit or emerging crit.

MR. RAINEY: Doug, another thought I had, and -- again, I don't know whether it would be either possible or a good idea or not. But one thing, if it -- again, if it's digital and you're not looking to reprint the thing but it might be an interesting graphic along with the number of obstructions that you're finding also to have a graphic that you highlight that says, okay, based on current, you know, funding resources or whatever this is our time till we're going to be able to complete the critical survey backlog. I mean we kind of have this benchmark out there and it might be kind of a thing to note. You know, that way you can kind of see -- you know, you're showing, you know, the accomplishments you're making but also, you know, how much of a task it is and it might be able to reflect the effort that you can put in with the resources you're given might be a nice mark as well.

COMMANDER BAIRD: We actually have an in house spreadsheet that we're sort of tracking that as our estimated when we're going to finish the critical area. And I'm hesitant to actually publish something like that because when something like that gets out it tends to be cemented and you can't get away from it again. And so if something happens in the future that we didn't account for we could be criticized for not making the goal that we think, hey, as of 2006 we're going to finish by such and such a year and then we don't or whatever. So I'd be willing to talk to that with people individually but I'm reluctant to advertise

it or release that type of thing as a spreadsheet, digital document.

MR. RAINEY: Elaine.

MS. DICKINSON: Yes, thanks. It seems like the survey areas could be divided into two categories, critical areas and everything else, since it looks like the critical areas are really the only thing that are -- we're likely to get resurveyed anytime soon. I mean we're talking, what, 10 years or more. I'm just -- maybe this is more of a policy question but I'm wondering -- I mean this takes a lot of work, it takes time and resources to do this report. Why are there even categories of priority three, four and five? You know, five is 132,000 miles. I mean it just seems like this is probably never going to get done. So why are there so many categories I guess of priorities that if the critical ones are, you know, barely getting done?

COMMANDER BAIRD: We basically tried to identify all the areas that were considered navigationally significant based on depth. And in that boundary to sort of prioritize where we should address first versus can wait. But categories do change. We find out information about a new facility being built, L and G for example outside Boston. What may have been a priority three may become emerging critical based on changing patterns. Or we get news about some tectonic activity off of Kodiak that has changed the shoreline and the depths drastically, that could change the category. So we felt it necessary to label all the

navigationally significant areas and then therefore we could sort of visualize where we should be placing our effort.

CAPTAIN ARMSTRONG: Maybe I missed it, I don't think so. Following up on Elaine's comment, is there anything in here that says by the way, we're not going to do anything other than the critical areas? Because it can be deceptive to see something that's priority two and they say, oh, well, we're priority two, you know, maybe in a few years they'll get to us? No, never.

COMMANDER BAIRD: Depends on who you talk to. There are people that -- might call them pie in the sky types, but they're actually talking about 100 percent requirement. And this 100 percent requirement would enable us to survey all of the navigationally significant areas every 50 years. Is it realistic? I don't know. But it.....

CAPTAIN ARMSTRONG: Just following up, it seems to me that we need to say someplace. Maybe I wouldn't have said that a few years ago when I was in a different position. But we need to say someplace that we're just not going to do these unless there's priority changes.

COMMANDER BAIRD: And also it reflects the request. If -- so saying you're -- I mean the category could change based on other criteria.

CAPTAIN ARMSTRONG: Well, that's right. But NOAA knows that they need to change the priority and unless they know that it's not going to get done unless it's in critical.

COMMANDER BAIRD: Priority one, we actually do priority one and other areas. We did I think approximately 300 square nautical miles last year that are outside critical, emerging priority one and priority two. And that was at the request of other agencies.

CAPTAIN ARMSTRONG: Presumably that sort of would have gotten them changed from those lower priorities in the critical. Is that right?

COMMANDER BAIRD: No, actually it wouldn't. I don't want to change the priorities or the categories on a whim. It doesn't mean that if we're in an area we won't go out and spend a day or two surveying some other priority because it makes sense. But just changing the categories willy nilly I think is probably bad policy, at least from my perspective.

MR. GRAY: You said a few minutes ago that resurvey areas don't go away, sort of.

COMMANDER BAIRD: That's my understanding.

MR. GRAY: Okay. And I see here on page 47 that -- right where we are here, Cook Inlet, it's 557 square miles which is a fairly big area. And back on page 11 where it has this -- all -- the breakdown of everything, critical, emerging critical, priorities one through five. It doesn't say how many total resurvey areas and if they won't go away they should be added into what still has to be done at least at some frequency I would think.

COMMANDER BAIRD: I think the idea of the table on page 11 is to show progress towards an end goal. If there's 510,000.....

MR. GRAY: Right.

COMMANDER BAIRD: .....square nautical miles of navigationally significant and we're working on those and would like to get those numbers down, you know, to zero on the bottom of all those columns. But.....

MR. GRAY: Well, I see that and -- and then you have a table on page 13 which shows the critical of 43,000, the ones that are completed, the ones remaining. And all I'm saying is if the resurveys don't go away then they're still remaining.

COMMANDER BAIRD: That's correct.

MR. GRAY: So how much are they in total?

COMMANDER BAIRD: I could go back and total them up. But basically that -- I guess I don't see the reason of counting something that -- of a number that never changes. I mean the whole idea of these tables is to show progress towards a goal of reaching zero for (indiscernible).

MR. GRAY: No, all I mean is if you've got to resurvey where you say they don't go away, they stay that way, you've got to resurvey them so it's still to be done.

COMMANDER BAIRD: That's correct.

MR. GRAY: Well, then still to be done is just the same as being category two or four or anything else. Except it's

probably more critical if it's considered a continuous resurvey. And so I'm saying again, how many resurvey square miles do we have? Right out here in Cook Inlet you got 500 and some square miles against a total target of you're doing 1,000 or 1,500 square miles a year so it's a pretty significant number on a yearly basis.

COMMANDER BAIRD: Actually the resurvey were not designed to be yearly. It was done on a frequency that is reasonable for that area. It could be every two to three years, such as in Knik Arm, or it could be every five to seven years somewhere else.

MR. GRAY: Yeah.

COMMANDER BAIRD: Such as outside Wilmington, North Carolina.

MR. GRAY: I would just say that to me I get the impression that the navigationally critical areas, one, defined some years ago still to be done, they're the highest priority. But your comments on your resurvey sound like they're about the next highest priority. So we ought to know how many there are totally, not just in Cook Inlet.

MR. RAINEY: Could I take a stab? I think -- am I correct in saying that a couple areas of complexity what we're looking at, I mean to Bill's comment and Andy Armstrong's comment. The priority areas as I see them are set up primarily as a navigation safety prioritization. You're looking at the

expected changes and the bathometry or hydrography and then the types of -- kind of the Marine Transportation System sort of arguments it seems.

COMMANDER BAIRD: Correct.

MR. RAINEY: And that seems to be the major theme that establishes the priority areas. Now there's other issues that come up and I think what you're eluding to, let's take for example like the law of the sea surveys or homeland defense surveys. They may have priorities that rise to a certain level and that patch of area may not be, you know, a priority one or critical area navigation safety wise but then that becomes a national priority and so that gets surveyed. And I think on Bill's question, the complexity issue there is part of this is a planning document but part of it's a marketing document in that -- insofar as we want to have -- show progress on the benchmark, that Congress establishes a new line item and it be responsive to that. But am I not right in my understanding that your critical survey areas can also be -- I mean these aren't necessarily distinct categories. In other words you can have a resurvey area -- in other words you can do a critical survey but that would be something that you want to go back, as you said in the 100 percent requirement, maybe look at a, you know, periodic resurvey. So, you know, these aren't necessarily mutually exclusive categories across all cases as I understand and I think that's the difficulty in trying to have a table that

exactly accounts, you know, for it all. Am I right in that understanding?

COMMANDER BAIRD: Yes, you are correct.

MS. DASLER: While we're on the subject of resurveying, I was just looking at 47 and the resurvey area in Cook Inlet and then when you look back at the priority areas it looks like that the resurvey area goes out and into the priority four area. And I don't know if that's the intent or -- I mean just as people looking at this document that could raise questions I guess.

COMMANDER BAIRD: I'm sure there's room for amending the areas. A lot of these regions were drawn either at a relatively small scale or on the quick. And so part of the reason is we'd like to get feedback is to -- you know, maybe we should pay attention to page, you know, 47 and basically check the extent of the polygons.

MR. RAINEY: Captain McGovern.

CAPTAIN MCGOVERN: Andrew McGovern. Possibly, you know -- I mean it was mentioned before maybe, like Andy said, we should, you know, put in here, you know, look, your chances of getting a priority five area are slim to none. Maybe that's not a way to say it but maybe -- and again, without lobbying, is there a way we could say that, you know, based on current funding levels this is how many -- you know, this is the -- this is how much we need to do but this is how much we're able to do. And that.....

MR. RAINEY: That goes back to my -- yeah.

CAPTAIN MCGOVERN: That then maybe you can use as that -- you know, then you can use it when you go up to them, somebody says, well look, this is what they fund us now, if you have a problem with that you go to your -- see your -- you know.

MR. RAINEY: That was what I was trying to drive at is.....

CAPTAIN MCGOVERN: Yeah.

MR. RAINEY: .....just to say, you know, we're doing the best we can but give them -- you know, not to lock yourself in but just to be flat up front along with, you know, we're finding all this stuff, we recognize we have this great -- you know, our national responsibility is this entire -- you know, the whole enchilada but we've got, you know, all of our effort, everything we've got -- putting on this we're just barely going to get, you know, through this in the foreseeable future and -- anyway, that was -- I mean that was the basis for my recommendations.

CAPTAIN MCGOVERN: I don't see it as -- you know, it's not lobbying because you're just stating facts. I mean you're saying this is -- these are the facts, this is our priorities but based on present funding levels this is what we're going to be able to do. And then people can then take it from there. But without that this really doesn't help the people that need to figure out, you know, do they need to go -- that guy that's a priority two, you know, he may look at this and say, well, you know, according to these calculations I'll be done in, you know,

2040, if I want to get past that I'm going to have to go to my Congressman, you know. And -- you know. And the other thing is when you were talking about the priority areas, and you mentioned based on depth that some of the priority -- you know, the difference between a four and a five may be that it's just naturally deeper than five but it doesn't say that in the description of the different priority areas. You're talking about types of ships, tonnage, traffic, but I didn't see anything in there where it said, you know, area five may just normally be deeper than.....

COMMANDER BAIRD: On page number eight on the top half of the page it actually lists the depth limits that we consider navigation (indiscernible).

CAPTAIN GOVERN: (Indiscernible) page 10 where it kind of got into the.....

COMMANDER BAIRD: Yeah, and then basically areas within those depths on page eight based on age of survey and type of traffic is then how they're further broken down.

CAPTAIN MCGOVERN: Yeah, see but this talks about depth limit but this doesn't connect the depth limit with the priority number. So if you go to page 10, right, and you then tell what's a priority one, a priority two, a priority three, it doesn't bring those depths back into that.

COMMANDER BAIRD: No, because we basically use the information on page eight and on page 10 to create the polygons

that are shown on the graphics in the rest of the document.

CAPTAIN MCGOVERN: So it's a combination thereof.

COMMANDER BAIRD: Right. So anything that said.....

CAPTAIN MCGOVERN: (Indiscernible).

COMMANDER BAIRD: .....the first currently charted at 21 fathoms off the Coast of North Carolina is something we will consider navigationally insignificant, that we don't plan to address it unless there is something other than a navigational interest into it.

CAPTAIN MCGOVERN: Okay.

COMMANDER BAIRD: Of course there is the rub in that, you know, we're using charted data to define where we're going and a lot of times that's -- you don't find out what's there until you go there and survey it.

CAPTAIN MCGOVERN: Yep. All right. But I still think you should put in a schedule based on -- either based on current funding levels or whatever that will give people the real idea of when this is actually going to happen. That may be the most politically correct way to do it, I don't -- you know, you're not saying -- you're not promising them that you're going to be done in -- because if the funding level goes down, somebody says how come you're done, say hey, that was based on those funding levels, it didn't get there, you know. I don't know but I think you really have to -- it would be a more useful tool for some people to use that way.

CAPTAIN BARNUM: Excuse me. I think that's probably a very good point, Andy, in that it gives folks a reference on when they might see an area surveyed. Right now it really doesn't show the schedule for that, it just shows the what. So that would be I think an important dimension that I think we could add. Especially since it's going to be updated every year.

COMMANDER BAIRD: Chris, to paraphrase Dwight Eisenhower, he said that he found plans to be useless but planning to be indispensable. So I mean something I create this summer could be thrown out the window after the next hurricane season.

CAPTAIN ARMSTRONG: Yeah, I think what we're looking for is not a schedule but a sort of conceptual understanding of when the agency is going to be able to do this work.

MS. DICKINSON: It might also be useful, I don't know if you've done this or if it's possible to put a dollar figure. I mean I know it sounds a little pie in the sky, but has anyone ever calculated say to do the critical areas how much money would it cost? I mean that -- you know, I'm just thinking from maybe a lobbying point of view you could show just the drastic difference in what you're getting and what you need. Have you ever sorted it out by dollars?

COMMANDER BAIRD: We actually do keep track of the cost per square nautical mile. There are problems inherent with that type of accounting but it seems to be the most useful at this

point. And it's something we probably could float but it's a decision beyond me.

MR. GRAY: Elaine, we talked about that in San Diego and saying it's a lot different to do a square mile in the Gulf of Mexico than to do almost anything that you find in Alaska and I mean just common sense will tell you that. But just the same, some order of magnitude figures are inevitably -- I mean if somebody's going to take it seriously that we feel the government should spend more of the taxpayer's money to get some of these jobs done sooner inevitably you're going to say, well, how much do you need to get done in five years. And we heard the other day if it get -- the remaining critical areas done in 10 years, no, let's do them in five years. Somebody said that yesterday. And if we want to follow that through to the logical conclusion of the decision maker we got to have some idea of -- I mean are we talking tens of millions of dollars or hundreds of millions of dollars or are we getting into billions of dollars, they want to know how much is it going to cost to do this.

MS. DICKINSON: Maybe it could be done by cost per square nautical mile per region, like the Gulf of Mexico costs X, Alaska costs this much. I don't know if that's possible.

COMMANDER BAIRD: Ac -- excuse me. Actually that's how we've been tracking some of the -- especially the contracts. We know basically sort of based on the prior work as to how much it's been costing per square nautical mile, gives us an idea how

much we can accomplish in a year. Because we know how much contracting money's coming down the pipe, so.

MR. RAINEY: Let me get John and then back to Andrew.

MR. OSWALD: Yeah, John Oswald. Yeah, I find this document extremely useful. Every one of our congressional delegation members has this and expanded maps at their homes. A couple of recommendations I would offer is there's areas on here that have already been surveyed because of the date that you did this but perhaps look at a publication of around the end of the third, beginning of fourth quarter of the year and then at least -- I don't know so much on the east coast, but west coast and Alaska the work is done. So there's blocks that are already actually done, the contractors -- the contractors are demobed or in the process of demobing now so it might be a target date every year. I agree with not -- printing a limited quantity and using the web to distribute this. This document is not that widely distributed in the ocean community. I think you should mandate that every geodetic advisor and navigation -- well, not the geodetic advisor in North Dakota. But the geo -- the coastal geodetic -- CGA's, coastal geodetic advisors, and the nav advisors. I don't know how you'd do that from a management, but -- like at the AOOS meetings in this state it comes up every time in the focus groups that almost always the number one thing is bathometry and number two usually is shoreline. And then they get into the tides and currents and physical chemistry. So

that would be a way to get this more widely distributed and NOAA funds -- I don't know in every case but they fund this -- the regional associations. And you have a mechanism with the advisors and the -- geodetic advisors and nav advisors. The -- you'll hear about the Drift River but I'll bring that up again because that is in the papers in the winter. Drift River oil terminal which is west of Nikiski and Captain Jeff Pierce mentioned that today so I'm sure they'll have their red coloring pens out when you're in Homer tomorrow. There's ice issues in Cook Inlet, some years heavier than others, that -- in the Rainier -- it's Rainier did some modest surveying there a few -- maybe two or three years ago. Possibly on the resurvey areas it'd be helpful for me to explain things to other people. As you know in Cook Inlet, maybe it's not that whole 557 square miles but what the -- is it two year schedule, three year schedule and possibly with some shading techniques, you don't do this in GIS, say when the last survey was done. Which I think is about -- Tara would know. Two years or something?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: I believe it was '04, wasn't it, Tom?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. OSWALD: Yeah. A part of that was done, so. And you guys know because you have been doing it. We've been surveying

Cook Inlet since 1778, so. Stakeholders, I would like to see you guys put on the internet like other parts of NOAA, I'd like to see the GIS files for these maps put on there, georeference. Because we have done it for all the Alaska maps so I merge it with other data -- if you can believe this, I take these maps, merge it with a nice Alaska map and then I take the NOAA, CO-OPS, NWLONS and tertiary sites and we prepare map products to give back to NOAA for planning purposes and to sell concepts. But if that were done the coastal managers I think would pick up and see where their priorities overlay in this, just a GIS technique. Just post the GIS files just like NGS posts the -- what's it called, Mike, the -- shoreline exporter and.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. OSWALD: Yeah, we've used that extensively too. Now we did it, we actually just did it through the back door, we got the files from the last GIS technician that was there through I guess Captain Parsons is how we did it a few years ago. And then with respect to the ranking, I've never quite understood. You have these critical areas, the resurvey and emerging critical areas and your area around Kodiak is a huge area, 3,900, 3,600 square miles emerging. And I've been told by Office of Coast Survey before that that status of emerging and the critical is the same, it's just the critical is that -- you know, the original 43,000 square miles, I know we had that

benchmark. So how do you decide within the priority areas what to survey, is it like the -- how thick the pile of letters is or -- for instance, why do you survey, you know, Sand Point, Metraphaney (ph) Island versus the entrance to San Francisco Bay? Metraphaney (ph) Island is sort of a sleeper. I mean it's not surveyed but just a remote area here in Alaska. We were just there. And then why -- like in next year in -- specifically in Alaska -- I guess two part question. How do you prioritize within the critical and then why would you have substantial probab -- I don't know, dollar wise, $5 million of work done on a priority one in southeast Alaska, specifically Chatham Straits area, it's the east side of Sitka, on the other side of that island, when it's -- the majority, 90 percent of it, appears as priority one versus the area at Craig which is critical survey. And we're making statements in this most wanted list about, you know, whether we use the word critical and this mileage and this dollar figure. So we're sort of -- and you just mentioned you just survey priority one and two.

COMMANDER BAIRD: Prioritization within certain categories is based on where we have field units working currently. I like the keeping the wet edge to the paint. Keep working in an area, it seems to be more efficient that way. And if we can keep the moving hop scotching around to a limited number of projects, that way it seems to enhance the efficiency of the units, that they can continue working in an area they know. And we do take

into consideration the number of requests for surveys in an area.

MR. RAINEY: Andrew, you had something?

CAPTAIN MCGOVERN: Well, just getting back to this. I mean I really think you got to flush this out with some of this -- you know, the cost, you know, whether it's, you know, okay, this is, you know. Again, this is what we can do with what we got and then maybe add to that this is what it -- you know, the approximate cost per square mile after that. I mean Jack said -- the other day he said, you know, we want to grow NOAA. Well, this is the fertilizer, you know, this is what we need in order to grow NOAA. I mean it's got to be -- you know, you're only going to grow -- NOAA's more money and, you know, we need those figures so that we can take them to the Hill and have them and -- to put them in here just gives it a wider distribution which will help, I think.

MR. RAINEY: Before -- John had kind of asked the question. The question I had in my mind was I was going to just ask you to briefly describe how you do that and you just did that for John. But on page 12 it just simply states, the annual survey plan is finalized at least six months prior to the beginning of the survey field session. Is that ground truthing out, is that what you're seeing, are you able to accomplish that? I mean it sounds like a tremendous challenge to -- you know, as you just mentioned, the Eisenhower quote there. I mean

you have your long term plan but things happen. And I'm just wondering, are you able to -- is that happening, are you getting the ability to marshal your resources in house and contracting and you feel comfortable with that statement standing?

COMMANDER BAIRD: For the most part. There's always little hiccups along the way and, you know, speed bumps and tangents and diversions and stuff like that. But for the most part we decide that we're going to work -- we made a list of 2007 survey areas. I expect the large majority of those to proceed as we've planned.

MS. DICKINSON: Can you say what percentage is being contracted out? Total.

COMMANDER BAIRD: By miles or by cost? I think it's split down the middle on money, isn't it Captain?

MR. SZABADOS: I think the ratio is about 40 percent in house and the rest contracted but we can get you an exact number. But roughly.....

COMMANDER BAIRD: And by miles it's almost half, it's maybe 55 percent in house, 45 percent contracted.

MR. RAINEY: Okay, thanks. Doug or Captain, what -- you know, like I said, this was one of the things that was explicitly mentioned and I don't know if there'd be any benefit to you or us to mention we talk about it, you know, in the plan itself. Is there a particular, you know, comment, notion or just, you know, capture it in the record of our deliberations?

I mean how can we best package that for you so that we've -- you know, we both work together to meet that, you know, requirement of the committee to review and discuss it with you, what would be the most -- you talked about changing maybe the timeframe of it a little bit, maybe perhaps the format primarily, going to digital so that it can be updated more regularly. Is there a schedule you would want to propose that we get on with you that, you know, we can kind of I guess institutionalize our review with you on that?

CAPTAIN BARNUM: I think so, I think we would -- ideally would like to get in a synchronized schedule where the panel can review the priority document on a yearly basis and so that it gets a stamp of approval so to speak and that, again, shows the -- that we're vetting it with the panel and that it is -- can use that as we pass it along. But I think it'd be very valuable to have your input, and certainly we're hearing it here, certainly about the schedule and using it as a potential document for educating folks on the rate of completion versus just the priorities.

COMMANDER BAIRD: If I could make a suggestion. If you're going to start putting a timeframe, we rely exclusively on survey outlines from the field units to update the graphics and those are usually turned in anywhere between, you know, during the field season through -- into November, December timeframe. And starting in October, November timeframe through March my

entire branch is working on letter instructions and getting the documents ready for the upcoming field season. So if it could be after March, say a late spring, early summer timeframe, to expect the updated that'd be -- work best for my schedule.

MR. RAINEY: Okay, I think that's very helpful. Were there any other comments or suggestions, questions, from the members? All right, well, Commander, thanks very much, really appreciate it. Can I toss it to you, Tom, on the -- pick up on the report?

(Pause - background conversations)

MR. SKINNER: People see that? Is that readable? No, because I think maybe if we can just edit it this way we'll save another round of grass. But what we've done here, I had a couple of minor changes on the actual list here that I wanted to go through and then we had talked earlier about having some sort of intro paragraph. This I don't think would be a final version, it's just sort of if the concept is -- people -- if the concept people agree with then I think we would then turn it over to Ann and say can you work on this. So I wouldn't worry too much about the style or anything like that, just see if it gets the concepts. This part is what we had before except that on number one to try and elevate the issue of ENC's. On the last one I added to reduce ping to chart time and accelerate development of ENC's. I don't know if that's the right language. If anyone has some changes but that's what I come --

John, I don't know if you had time to think about that. So any reaction to that change? Elaine.

MS. DICKINSON: I don't think anyone outside this room would know what ping to chart means. It's like a foreign language. This is mainly I think intended for an outside audience of, you know, policy makers and people like that.

MR. SKINNER: Okay. Just for this group as shorthand maybe, Ann, that's something that you can come up with something a little bit more English like. Going on, any other comments? Once, twice, three. The second one had a couple of changes under the bullet. It used to identify wrecks and other obstacles, it's now identify wrecks and other obstructions that threaten navigation in federal channels, it used to say dredged channels. Is that all right? And then skipping down to number four, there were a couple of suggestions. You can see here that the wording question was the Vdatum, expand and fund real time tide and current observations and either Vdatum modeling or just modeling to commercial ports nationwide as a critical component of the IOOS system. Any thoughts?

MR. SZABADOS: Tide was supposed to be replaced with water level.

MR. SKINNER: You're right. I'm sorry. I'm sorry, Mike. Real time water level and current observations. Yeah, thank you. Elaine.

MS. DICKINSON: This is where you know that I'm an editor.

I think this has to be in plain English and is there another word for Vdatum? Because nobody is going to know what that is either. Is there just some other regular word that would imply the same thing?

MR. ZILKOSKI: I mean Mike handed out a two page write up that explains it and I think you could just give it to -- and edit it and change what it is and -- I don't know if you really need to even put Vdatum up there so much. It's the modeling part that you're interested in.

MR. SKINNER: I think that's the first question is whether we.....

MS. DICKINSON: Data modeling.

CAPTAIN ARMSTRONG: How about calling it tidal modeling?

MR. ZILKOSKI: Well, Vdatum really is the transformation from one datum to -- one vertical datum to another vertical datum. So it's making -- it's the modeling allows you to be able to do that transformation. So I don't know how you want to put that in words that are simplified.

UNIDENTIFIED MALE: I think the problem I would have with just saying modeling is it could get -- I mean there could be current modeling, zone modeling, I mean all kinds of things. I mean maybe just putting it as datum modeling.

MR. ZILKOSKI: Yeah, you could go datum modeling.

UNIDENTIFIED MALE: I would just leave it as modeling, try to keep it simple. And then in the text itself you can expand

on that.

MR. DASLER: I mean leaving it modeling is -- I think is good because there are current modeling going on and, you know, the other. So, you know, what's wrong with just saying modeling. They say, well, what kind of modeling, well, we got Vdatum modeling, we got -- you know, we got the, you know, current modeling going on, we've got water level modeling going on, we've got all these things going on.

MR. GRAY: Are you really just talking about accuracy? Expand and fund real time -- I don't know why we took tide out, we should have tide and current and the accuracy of the observations.

UNIDENTIFIED MALE: Tide was just replaced with water level.

MR. GRAY: People want -- lay people want to know is it accurate or is it not.

MR. DASLER: Right. I mean I think the point -- at least initially in getting in the datum modeling was you get very accurate observations at point measurements. The problem is is when you start getting away from where those observations are made, you know, all bets are off. I mean there -- and that's the point of the -- and I think.....

MR. MCBRIDE: Is predictive models the right (indiscernible - away from microphone).

MR. DASLER: No, it's the model between -- and what Dave

was talking, the ellipsoid and mean lower well water. So if we can get accurate modeling we can do more accurate surveys. I mean eventually you can start putting the GPS on the ships and even navigate them on that surface. I mean I think that's the real point. I mean there -- yeah, there's a lot of other modeling efforts but I don't think that's what we're talking about here, we're talking about datum modeling and trying to get those point measurements spread out over a wide area and improve those accuracies. So I would say datum modeling would be the way to express it.

MR. MCBRIDE: I'm not exactly clear what that means either.

MR. RAINEY: It seems to me, I mean just my two cents on it would be to leave it simple. I mean remember what we're talking about here is our -- is the basic sort of headlines if you will and this is an organizational structure and then behind all of this we've got a couple of pages of text, graphics and recommendations that will support it. And it strikes me that we could have both. I don't see why it wouldn't be an appropriate modeling. The Vdatum I would characterize as like a tr -- and Dave, help me out, but in my reading on it, I mean it's a transformation or a translation methodology to model -- I mean to basically, you know, level the playing field so to speak across these various datums so everybody can speak to each other. Okay? Whereas we're also interested in, as Adam just

mentioned, predictive modeling and all the modeling that you're talking about, hydrographic modeling and other things that allow and enable, you know, the better ports and decision making things. So you've got two types of things going on there. If we left it modeling and then we've got the benefit of spelling that out and probably talking about each in the subsequent supporting text.

MR. SKINNER: Okay.

CAPTAIN MCGOVERN: (Indiscernible) percent. I mean that's -- we've got these two different types of models and both of them are important. You know, it's no good to know -- you know, if you got a current or a tide gauge here, if you don't have a model to tell you what the -- you know, what the height of the water is over here it -- you know, it's not going to help you if you're not right on top of the tide gauge, just as -- you know, even if you're doing a survey, you don't have the accurate differential, you know, it's not going to help you because you have to put a -- you know. And, Bill, you have to leave it water level because it's more generic and -- because you have these things in lakes -- places where there are not necessarily tides. There could be a storm surge which wouldn't -- you know, so water level is more generic.

MR. GRAY: How about tides comma water level, and water level.

MS. DICKINSON: Scott.

MR. RAINEY: Okay. Can I.....

MS. DICKINSON: I think.....

MR. GRAY: I think the water level tables would make tide tables.

MS. DICKINSON: I think we're way in the weeds here and I think -- I envision this as like a public outreach piece that, you know, should be a very succinct, clear, easy to understand list that -- I mean I could foresee, you know, Xeroxing it and attaching it to a letter and sending it to some staffer somewhere or somewhere on Capitol Hill or giving it to somebody, you know, that could influence budget decisions. They don't need all the jargon, they're not going to understand it and when they see those words their eyes are going to glaze over. So I would just recommend we try to keep this as simple as possible and then explain all the nuances in the text of the work.

MR. SKINNER: Can we go with just modeling, is that what I heard? Okay. And we may want to change this around just -- I was just thinking that it may want to be fund real time observations and modeling for water levels and currents. It's a little bit unclear because current could either be tide currents or -- like right now I'd think. So we'll leave that up to Ann. Okay. Good. So anything else on these five or we'll go with these as our priorities? Lou.

DR. LAPINE: Just kind of an afterthought. I thought we were.....

MR. SKINNER: No afterthoughts allowed.

DR. LAPINE: Oh, oh. It's a forethought then.

MR. SKINNER: All right, all right, go ahead.

DR. LAPINE: Well, I was going to change my nomination for the Vice Chair.....

MR. SKINNER: Please, do me the favor.

DR. LAPINE: I thought we were going to remove the word hydrographic after contracting. In other words we're going to expand NOAA's in house and contracting survey capabilities.

UNIDENTIFIED MALE: Yeah, that (indiscernible).

UNIDENTIFIED MALE: Capabilities (indiscernible).

UNIDENTIFIED MALE: Yep.

MR. SKINNER: Wait a minute.

UNIDENTIFIED MALE: First paragraph.

MR. SKINNER: Where are we?

DR. LAPINE: That's helps -- it's the first bullet.

MR. SKINNER: Okay.

UNIDENTIFIED MALE: (Indiscernible) first bullet.

MR. SKINNER: Oh, right. Missed that one too.

DR. LAPINE: That will cover the shoreline as well as the hydrographic.

MR. SKINNER: Yep. Sorry about that. Is this something that we need to approve formally or just go for it? Yes, Andrew.

CAPTAIN MCGOVERN: I'm just looking at it now but second

bullet of number two. I thought it was -- we talked yesterday about this. Did we say multipurpose survey vessels or just multipurpose vessels? Because you're going to use them for fisheries and this and that. I don't know if they're going to be -- I thought they were going to be multipurpose platforms, not necessarily -- you know what I mean?

MR. SKINNER: Yeah. I.....

CAPTAIN MCGOVERN: Would that be.....

CAPTAIN ARMSTRONG: I think it ought to stay survey.

CAPTAIN MCGOVERN: Well, I don't know what their plan is. If their plan is to use them for other than surveys we should take the survey off.

MR. SKINNER: I think there were fishing survey -- I mean.....

CAPTAIN MCGOVERN: Fishing enforcement and things like that that could be.

MR. SKINNER: I think they were all research type (indiscernible).

UNIDENTIFIED MALE: Yeah, I think it was a variety of kinds of surveys.

CAPTAIN MCGOVERN: Steve, could you answer that question? Captain Barnum. Oh, sorry.

UNIDENTIFIED MALE: Steve.

CAPTAIN MCGOVERN: Steve, we have a question for you.

MR. SKINNER: The question was on the bullet here, replace

aging single purpose hydrographic survey fleet with multipurpose survey vessels. Do we -- should we specify that they're multipurpose survey vessels or just multipurpose vessels? Now.....

CAPTAIN BARNUM: I think (indiscernible).

MR. SKINNER: Okay. So that what NMFS does is also surveying with these -- with their vessels and you just want one platform for all of NOAA's surveying activities.

CAPTAIN BARNUM: The discussion we've had about this issue is that there's many different views of it but my view is that the NOAA fleet would be composed of survey vessels that could do other missions while they're on the site. I think you heard you heard it from the panel today, being able to drop a camera, it's not something we normally do now, but have that kind of capability to collect other data that's useful to our users. Same could be said by the fisheries vessels, that when they're steaming 2,000 miles to do a survey or wherever that they're able to collect data that would be useful to hydrographic community.

MR. SKINNER: Great, thank you.

MR. DASLER: Tom.....

MR. SKINNER: I was just kidding when I said no last minute thoughts. I think this is the time to sort of look through it, so.

MR. DASLER: Could I add one?

MR. SKINNER: I'm sorry.

MR. DASLER: I was going to add one thing. Mr. Baird here suggested this. I know you had aging in there but I don't know if the word modern, I don't -- hesitant to use new, but modern multipurpose survey vessels. And maybe it's just implied by replace aging that you're getting modern.

CAPTAIN MCGOVERN: (Indiscernible - away from microphone) one of the Navy's aging vessels.

UNIDENTIFIED MALE: Yeah. That's very possible.

MR. SKINNER: If it's possible -- so general consensus no problem with modern?

UNIDENTIFIED MALE: Sounds good.

MR. SKINNER: All right.

MR. DASLER: And, Tom, one last -- I guess to get rid of the ping to chart we could just say reduce chart production time and then we can talk about that. If that makes.....

UNIDENTIFIED MALE: Yeah.

MR. SKINNER: Okay. Oops, what did I just do. Anything else? Is this something we need -- or we should take a vote on? Just to finalize it or.....

MR. RAINEY: I don't see any harm in that. I've put in backstops and check valves all over. Can I have a motion?

MR. GRAY: So moved.

MR. RAINEY: Okay, Bill Gray. Second. Jon Dasler. Okay, all in favor.

SIMULTANEOUS: Aye.

MR. RAINEY: Opposed. Okay, we have -- yeah.

MR. SKINNER: There are a couple things that we'd like to do from here on. I did mention this intro paragraph, I don't know if you want to go through that right now. The other activity is to go through the other four groups that met this morning. And what Scott did with John's group is he wrote down the themes that John and his group had developed on another document and then listed some examples with the idea being that by the end of today we would have an outline of not only these five things and the bullets that you see here but then the themes and potential examples that each group has developed and really have a pretty good outline of what the document -- what the final document would look like. So I don't know if it makes more sense to spend more time on that or if you want to go through this just quickly and see if this captures. People are looking at. Why don't we just -- we can -- if this is controversial we can just delete it and make it -- put it to a different time. But I just put down there the HSRP has developed a list of the five most wanted priorities to help guide NOAA and Congress on the nation's most pressing hydrographic needs largely unnoticed by policy makers and the general public unless something goes wrong. Accurate hydrographic services are critical to the safe transportation of -- or safe passage it probably should say of commercial vessels

that carry 95 percent of U.S. foreign trade, fishing vessels, the nation's 78 million recreational boaters, researchers, emergency response professionals and coastal managers. The HSRP believes that an improved understanding of the importance of accurate surveys, charts and real time data is critical to the success of NOAA's hydrographic mission. That, again, is trying to get the -- to the -- to Andy's point that getting people to realize that this is an issue is critical to getting any of this sort of moving forward.

CAPTAIN MYRTIDIS: Tom.

MR. SKINNER: Yeah.

CAPTAIN MYRTIDIS: Not because I feel neglected or something, but I think you should mention the millions of passengers. You know, we're talking safety of life at sea and safety of navigation. So I think it's important to mention that.

CAPTAIN ARMSTRONG: You must be around 10 million passengers a year, somewhere around there? I don't know the exact number, but it's millions, yeah.

CAPTAIN MYRTIDIS: I could find a good number, I don't have it right now, but.....

MR. SKINNER: This is a huge list -- let's see.

MR. RAINEY: Yeah, cruise ship and ferries too.

CAPTAIN MCGOVERN: Yeah, I -- Andrew McGovern. I was going to mention you've got, you know, important to like --

you've got everyone, then you've got coastal managers. Well, it's actually all this information is important to everyone who lives on the coast, not just the coastal managers but, you know, the entire -- I don't know exactly how you define that. But I like -- and I'd hate to lose this but there are some really -- a couple really good paragraphs in the old document on outreach and education that talks about, you know, that -- you know, the MTS affects everybody everyday, only people who may never see a coast community or busy port realize how important the MTS is to their daily lives will the outreach be sufficient. I think -- and it doesn't necessarily have to be in this opening paragraph but I think these couple of paragraphs in here really have to get into this document. And we do not have a bullet on it so I -- I mean -- I mean to say a bullet, but there's -- you know, somewhere in the intro or in a conclusion that we really got to hammer the outreach part of it. So.....

MR. RAINEY: Andrew, I think that would be exactly right and what I maybe envision this is a single page so we've got the intro page, this could be something that would -- will be, you know, pulled out, faxed around or whatever, the one thing, but there'll be -- I think there'll be space in the layout where we can have -- again, pull -- not lose that in a -- either in a -- you know, a letter or introductory section and things. But maybe what Tom's got prepared there would always sort of be a -- you know, in the one pager that has the five major elements.

But your point is well taken and certainly something we need to talk more about.

MR. SKINNER: Put in a placeholder in case we -- yeah, you want to work that in. And again, this is just to sort of say this is how -- something like this would be have a -- or what I would suggest that this would be framed as and we'll let Ann work her magic on it.

MS. BOESE: One thing that is -- I think needs maybe to be solidified is to -- and I'm hearing this in listening to what Elaine's saying and what some other people are saying is that it really is important to identify the reader or the audience. And if something like Vdatum is going to be a potential stumbling block, which it very well could be an alienating point in a -- in the beginning of something, it doesn't -- of course has its place later on in the material. But I'm almost hearing that we have to come back a little bit more and really say what are hydrographic products and services and why should you care. I'm thinking that we have to decide that -- is it going to be something that's going to make sense to the average Joe then maybe it has to take one step back. Which isn't going to be hard, it doesn't mean that all the other information can't be there, it's just that it needs to be kind of -- it needs to be explained a little bit more throughout. Not simplified, but explained.

MR. RAINEY: But I.....

UNIDENTIFIED MALE: That's a good point.

MR. RAINEY: My thinking would be that that would all -- this is going to be sort of ensconced in the whole special report and that -- just what you're saying would be in a -- you know, in the introduction.....

MS. BOESE: Right, right.

MR. RAINEY: .....and then weaved throughout the supporting sections and that this -- for this particular one -- kind of one pager that we're highlighting it then -- you know, that -- you know, you want to keep it, you know, kind of (indiscernible).

MS. BOESE: No, I think succinct but I'm thinking of looking at this introduction, I'm listening to what everybody's saying and I'm thinking that there is a place. And it was really in the original way that we had laid it out. I had -- my feeling was to put the vital statistics about the Marine Transportation System up near the front too because as a person who maybe doesn't even know what the heck the Marine Transportation System is, what is it, how does it affect me, how does it affect my fellow Americans, why should I care. And that basically is how we laid it out to work, the function -- you know, how a person would take the information in and what -- hopefully how they'd be able to process it. So it's just -- it's nothing that has to be word smithed right now but I guess I want to get a feel. Do you think that is a good way for me to

go in the editing? I do.

UNIDENTIFIED MALE: I do.

UNIDENTIFIED MALE: Yeah.

MS. BOESE: Okay.

UNIDENTIFIED MALE: Yeah.

MS. BOESE: Because I want to be able to hand it to my next door neighbor who's a fairly intelligent person and probably could be on the Hill at some point and say can -- what -- can you read this, what does it say, what does it mean. Is that what we want to be able to do? Okay.

MR. RAINEY: I think absolutely. The only thing I'm not quite getting is I don't think anything Tom has written is inconsistent with that ultimate goal.....

MS. BOESE: No.

MR. RAINEY: .....because I think we have -- we'll frame it in all of that and I think, you know.....

MS. BOESE: But it's how you want to fold it and that's.....

MR. RAINEY: Yeah, okay.

MS. BOESE: .....not something for introduction.

MR. RAINEY: Right.

MS. BOESE: .....but how it unfolds. The idea, and Elaine's point is well taken, if you start hitting people with a lot of words of things that they don't necessarily know, they're foreign, you'll lose them. If they're -- if they are unfold --

if they unfold later in the text they'll be interested by that point. And it's the process and that really comes when we get all these pieces in and then we smooth it out so that it works for the mind who doesn't know all this already. And that's -- I think that we agree on that, so. I just want to make sure I was understanding.

MR. SKINNER: Okay. Good, I think that's great. Can we go back to the groups if we're all set here? I can cancel this out and -- I think it's.....

MR. RAINEY: That's it.

MR. SKINNER: Yes. So this is group one. And, John, this is what Scott had recorded for your major themes and then a couple of examples. So this is sort of what the final project -- product would look like by the end of today is the priority area, a couple of the bullets, the themes and then examples. So I guess want to make sure before we go on with this that everyone thinks that that's a -- that's the product that we want by the end of today.

MR. RAINEY: The thought is exactly what Tom articulated. My thinking would we is that if we could do this, if we could run through -- Ann has all the raw data, everybody, you know, passed her, you know, please give if you haven't, you know, the information that we did, kind of mapping things back and all of that. But if we had this, sort of the capstone, and everybody could leave the meeting, you know, with a copy of this, this

kind of gives us our skeletal outline and then we can leave with some ideas. If you've got some graphics on a certain section, I've heard people have, you know, some promises of some good photographs or whatever. It might -- you know, we all leave, you know, literally on the same page of what -- you know, how this thing flushes out a little bit. And then when we pull it together and get it back out to everybody, you know, then we can do another review. So that just was the idea, try to capture this as much as we can and be in agreement as we all leave the meeting with the short time we have physically together.

MR. SKINNER: I guess just logistically if we can spend, excuse me, about -- maybe until around 3:30 on developing that, print out some versions -- print out a copy so that everyone can actually then go through the whole thing and say okay, what are we missing here or does this -- does everything fit together and wrap it up by 4:00. I think that would be a pretty successful day.

MS. DICKINSON: On the -- on section one there was a really interesting statistic I've heard at previous meetings that might be worth putting in there. Something about a certain percentage of soundings on current charts were generated before the 1940's. And if anyone has that statistic we might want to put it in.

MR. RAINEY: It was actually in -- we could probably cite this maybe as the most recent document (indiscernible).

MS. DICKINSON: Oh, okay.

(Whispered conversation)

MR. SKINNER: Okay. Whisper, whisper, whisper.

CAPTAIN MCGOVERN: Scott, just on this one. The example, the Coast Guard reg on carriage of ECS is not due out till January '07. Maybe we should change that to the bill, the Congressional mandate. Because there is no right, they're not required to even have a right promulgated till.....

MR. RAINEY: Right. That's no problem, we can get the.....

CAPTAIN MCGOVERN: Okay.

MR. RAINEY: .....you know, proper citations and things. That's just quick shorthand.

CAPTAIN MCGOVERN: Yep.

MR. RAINEY: The idea there is that there's what I would call a hard requirement.....

CAPTAIN MCGOVERN: Yep, there definitely is.

MR. RAINEY: .....and we need to make that point I think, that, you know, this isn't just a nice to do thing, there's a responsibility to try to deliver on.

CAPTAIN MCGOVERN: Just so whoever's looking at it.....

MR. GRAY: If you're getting into....

CAPTAIN MCGOVERN: .....(indiscernible) looking for the Coast Guard reg they're.....

MR. GRAY: I'm sorry to be (indiscernible), but, you know,

if you're getting into these details about the ENC's or anything like that, just remember the IMO is working on ECDIS and that's where the requirements are eventually going to come from in another year or two. And whatever NOAA or anybody else has done on ENC's up to that point is going to be obsolete by what IMO puts out on ECDIS. So.....

UNIDENTIFIED MALE: Well, really though.....

MR. GRAY: .....that's the way I hear it.

UNIDENTIFIED MALE: It will.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Yeah.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Yeah, they've got all the technical requirements on carriage so now it's up to the nation's states to implement -- you know, it will -- I think we'll be proper if we cite the -- you know, the federal law for our purposes. But what you say though is exactly right, I mean IMO is genesis of a lot of this but there's a lot of coordination with the Coast Guard and all the -- to make that happen.

MR. SKINNER: Any other thoughts on group one? Okay. Moving onto group two. We've got about an hour. The break I think will -- it was scheduled for 3:00 o'clock, I think if people are all right, are okay, I don't know if you need a

break, sort of working through. Just help yourself to coffee and whatever is brought in, I think we'll get through it a lot faster.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Hey. Anyone who doesn't like that has detention.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Bill, do you want to go through what your group came up with?

MR. GRAY: Yes.

MR. SKINNER: Thank you.

MR. GRAY: My group was me and Andy I guess, maybe one or two others. And all we -- the theme is let's get rid of obstructions that cause damaging groundings. The incidents that we came up with, there is a thing called the 1992 Hen report. Gene (ph) Hen was a Coast Guard admiral that did the investigation of the grounding of a ship called BT Nautilus and it was out of the Kilvin, called the Arthur Kilvin, the port of New York, New Jersey I think in 1992. And in his report to the commandant on it there was some pretty pointed words about how bad the hydrography was in those areas and the fact that obstructions were known to exist in government maintained channels as well as along private berths and so forth. I've got

that report, the Hen report, somewhere and I'm going to send to Ann and to Scott the INTERTANKO Port and Terminal Safety Study in which we used that as one of the prime examples why the hydrography had to be better.

The next one that -- it's already been mentioned, is the QE-2, that was the grounding that took place in Vineyard Sound. We -- one of the things, excuse me, about it that I don't think we have to mention was that accident was not entirely caused by a chart that was bad, it was caused by the fact that the pilot and the navigating crew of the QE-2 despite being on board for about 24 hours didn't even talk to each other until they almost hit the thing and then they had an argument and they hit it.

MR. RAINEY: Can I just ask a -- I'm sorry, one -- are we capturing this?

UNIDENTIFIED SPEAKER: (Indiscernible - away from microphone).

MR. RAINEY: Yeah, we need to get this because at the end of the day we want to have this. I mean so I can come and type it or -- I mean.....

UNIDENTIFIED SPEAKER: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: The QE-2.....

UNIDENTIFIED MALE: Bill.....

MR. RAINEY: I mean we need to have the.....

UNIDENTIFIED MALE: Shouldn't be in this one.

UNIDENTIFIED MALE: (indiscernible - away from microphone).

MR. RAINEY: Yeah.

UNIDENTIFIED MALE: Yeah.

UNIDENTIFIED MALE: (indiscernible - away from microphone).

UNIDENTIFIED MALE: Yeah. No, this QE-2 shouldn't be in this one.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: All right.

MR. GRAY: All right.

UNIDENTIFIED MALE: Okay.

MR. GRAY: I don't care where it gets used, I'm just getting incidents and it's -- the whole point is that all of these things are doing to prevent accidents that cause groundings that could cause pollution or damage or whatever.

MR. SKINNER: Bill, just if I can interrupt just for a second. What we're trying to do, and I know every group didn't do it in the same format because we didn't specify when we started. But for the purposes of trying to get a completed outline I think if each person reporting can identify the major themes first and then go to the examples it'll be easier to have a -- sort of a consistent approach for each group. And if that's not something that the other groups did it may be

worthwhile to sort of spend a few minutes before we start recording thinking about what the themes are. So I can -- I don't know if there's a -- Bill, if you want to spend a little bit more time or if you're ready to go with the themes.

MR. GRAY: Well, I already said what it was. Which is to find obstructions and whatever, impediments to safe navigation that vessels otherwise might encounter.

MR. SKINNER: Okay.

MR. GRAY: And that's why we want to do this. And then we have incidents where obstructions have been found, some of them have been in federally maintained channels, some of them are not. And I've listed about 10 different ones that have occurred in the last 10 or 12 years, three or four of these had to do with boulders that have been found in the Long Island Sound, Block Island Sound area, in Portland, Maine. We heard that from Captain Jeff Pierce earlier this morning, he said the same thing happens out here in Cook Inlet. Andrew told me that he heard from Sam DeBow I guess that about 10 years ago or maybe five years ago the -- NOAA was asked by the Department of Defense to do full bottom surveys in some of the more important federally maintained channels in the United States to find objects that might be terrorist inspired or otherwise dangerous to navigation and they found some examples of obstructions in those channels that they would not otherwise have found. Sam DeBow is the guy that Ann and Scott can talk to on that. We heard Doug tell us,

again we've talked several times about it, that since the full bottom coverage and the multibeam have been available wrecks have been discovered at the rate of something like one or one and a half a day and other obstructions have been uncovered. I think that just by talking with those people, Dave MacFarland, maybe Roger or whatever, right within NOAA we can get a good catalog of what are the -- some of the more interesting incidents were. The most important example of course is the Athos I, which I've talked about since this happened because it's right there in a federally maintained channel by the Army Engineers, channel and anchorage, and they found these two large objects that caused a spill that's cost $240 or $250 million so far.

The one other instance of things that show up that can cause groundings that I'm aware of, and I mentioned it and what I'll hand over to Ann and Scott is in the lower Mississippi. I know in my Exxon years we had a very high percentage of our groundings in the lower Mississippi each and every year but almost never with any damage. The lower Mississippi is a very interesting and kind of unique place I would probably say down by southwest pass because they dredge 24 hours a day, 365 days a year and they run new survey lines each day I think down there at southwest pass. They've got in the area that deep sea ships can go up to Baton Rouge about 260 miles up the river, they have I think some 11 or 12 crossings that they also run surveys on

every day or so and like that. I put reference to the lower Mississippi here and so forth but I don't really think that's something I would suggest that NOAA tried to take over what Army Engineers are doing down there. It's a situation that changes every day and the way the engineers do it and run those survey lines which are immediately made available to mariners and pilots, I think that's probably the right way to do it.

The other thing I put on the bottom of my paper goes back to something and Ann said a moment ago that she feels that the whole subject should be introduced by explaining what is the Marine Transportation System and why is it that people should be interested in it. And that was covered in the draft that we got on page four and on page 21 and I disagree with most of the numbers there. I think the amounts of cargo moved, the volumes and so forth, they don't coincide between page four and page 21 and I think all of them are low which makes me suspect they're from old sources of information. So I think that stuff should very definitely be checked. And I have mentioned two websites on here that I think should be -- everybody should go and look at them and I want -- I mentioned one before, www.shippingfacts.com. And that website is maintained by I think all the roundtable in Europe which is the International Chamber of Shipping, the INTERTANKO, Intercargo (ph) and BIMCO (ph) and between those four ship owner associations it covers pretty much the world of bulk shipping. And they have all kinds

of very good data on not only what the volume and value of cargo movements are but also on what the cost economies are that have been achieved. In other words I mean how much it takes to ship a pair of shoes from Asia to Chicago or a bottle of whiskey or a car or whatever it may be, it's a very good source of information. So www.shippingfacts.com, I think you should use it.

The other one that I would refer to is the world -- it's www.worldshippingcouncil.com. That's an outfit run by Chris Koch in Washington, D.C. who is the spokesman really for pretty much the entire world container ship industry and he does a very good job of looking out for the container ship people. As a matter of fact he's kind of the guy that went up to the Congress when the due by ports fiasco was underway and all these crazy bills were coming out from people like Mrs. Clinton and Schumer and so forth saying that all containers have to be expected by Americans before they can be put on board a U.S. ship and that would certainly stop all container traffic absolutely dead in its tracks. But anyway, his website has excellent information on cargo flows, costs, all the rest of that for the container ship side of the industry.

And one other thing. Ann, you had asked when I send off the Port and Terminal Safety Study which has the reference to the Hen report which was all about bum hydrography and objects in channels, I'll send some other things that I think may be

relevant as sources of information on these subjects. You've got there, Scott, that MTS report that we did in 2004, number 279, and I thought it was kind of a crummy report and that's why I put a minority report in the thing and that makes some of these same points. And also the point that what our country has done is disgraceful in the way it criminalizes the acts of seafarers and that type of thing. I know that's not a NOAA issue but that's an issue that everybody ought to be aware of, that we've got people in this country treating seafarers in a despicable way. Anyway, I'll give you a reference to that as well.

MR. RAINEY: Thanks, Bill. Virginia, on -- let's start another section on kind of global comments. Because I mean we're going to keep going through on the specific things but Bill made some really great points, I think the last three bullets, if we can put them in a -- sort of an overall or global comment category that we can use and put them in the appropriate sections there and then that'll help us maybe at the end of the document because there'll be some -- and then that way.....

MR. GRAY: It's world shipping -- oh, yeah, okay, world ship -- that's right. Okay.

MR. RAINEY: And Steve had a comment.

CAPTAIN BARNUM: Yeah, I was going to -- a couple comments. Certainly for the obstruct -- the homeland security surveys that were done for the baseline imagery for the

potential mine hunters, I can address that. I conducted 18 of those all the way from Norfolk to Brownsville to Tampa to -- even to the Virgin Islands. So I can be a source of information for that, some of the objects that were found. And another example that might be relevant is the Rebel which hit the submerged rig and sank, it created an oil spill down in the Gulf just this past winter after the storm, so might be another recent example.

MR. DASLER: I don't know if it's appropriate in here at all to get into. I know the Corps has been -- and DOD has been pushing now this munitions at sea and UXO and the large hazards. I know we had -- some staff was working on a dredge just off of Virginia Beach that the dredge hit ordinance and blew up a dredge pipe. But when -- just earlier, I think it was in a couple of -- some of that information was passed around and -- I mean, Steve, maybe you can -- I don't know if there's a place to fit that in or not or what that -- it's a little bit out of the realm but I know it's a concern that's being raised now.

CAPTAIN BARNUM: I know ordinance is certainly a concern. I know Hawaii there was an area that they were doing some surveys, trying to figure out where it is, there's -- off of Puerto Rico areas that -- where they're trying to identify coordinates. These are areas that are also in habitat areas, not critical navigation but certainly approaches to Chesapeake Bay is, so.

MR. RAINEY: So, Virginia, the last two as you're -- was the Rebel struck a submerged.....

MS. DENTLER: (Indiscernible - away from microphone).

MR. RAINEY: .....rig. These would be under examples. And then let's say -- and then --it's just Rebel, right, R-E-B-E-L. Yeah.

CAPTAIN BARNUM: I be -- yeah, R-E-B-E-L.

MR. RAINEY: Okay. We think it's R-E-B-E-L.

CAPTAIN BARNUM: It was a integrated tug barge unit.

MR. RAINEY: And then the last thing maybe to add would be the issue of ordinance.

CAPTAIN ARMSTRONG: If -- I guess I would encourage us to keep this particular item strictly to federally maintained channels. I think that's where we started out on this. Rather than just things all over the place.

MR. RAINEY: You're right. Yeah, so we can cut and paste those in the other.

MS. DICKINSON: As I recall there was a more recent incident where a -- I think it was a pipe or a pier was found when they did a multibeam scan right in the middle of Baltimore Harbor.

CAPTAIN BARNUM: That was post Isabelle surveys when we were doing the response surveys of the condition, make sure there's no objects that was discovered. And it turned out it had been there for quite some time. Scott also mentioned in

Lake Union where they found a pile that was a danger to navigation that also went undetected.

UNIDENTIFIED MALE: So there's a lot of them.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Yeah, we could put -- yeah.

DR. LAPINE: You know, does anybody know what the magnitude of this undertaking is? I would think it eclipses the critical area survey and I think it should be noted in the beginning here, you know -- and what's the impact when the U.S. Army Corps of Engineers reads this, isn't this their job? And now what we're saying is we're going to take over maybe a billion dollar program from another agency.

MR. RAINEY: Well, you're exactly correct in that -- except that I think that somebody, and this has been the thing for me for years before I was on this panel, but somebody has to stand up and say this is a major -- we all say we're about safety but -- and we are, but somebody's got to point this out and somebody has got to start to figure out how do we resolve the fact that this is going on. I mean we've -- we just can't have the Athos I just keep happening. We've got to find a way to deal with it. So I don't think we're necessarily saying we're going to -- I don't think we're -- I mean we're pushing it by mentioning it I guess but I mean somebody's got to make this statement and then.....

DR. LAPINE: I would suggest that we -- somebody check with the Army Corps of Engineers and see if they don't have some cost benefit studies that they've done. You know, sure, half a dozen incidences have been labeled here for 500,000 transits of those channels. You know, you're going to start up a billion dollar program.....

MR. RAINEY: Well, I think that.....

DR. LAPINE: .....to find -- to prevent three pilings from being struck.

MR. RAINEY: I don't think it's irresponsible for us to suggest that this is an issue because we can cite things, the Athos happened, the -- you know, John did a lot of work on the High King, the -- you know, the Corps surveyed that multiple times and then the vessel finally found it, they just went right by it. I mean I think it's an issue and I think it's one that's within our -- I don't know, I'd like us to -- you know, to mention it and then how it sorts its way out. The issues you're talking about would be what would be then the -- you know, the subsequent debate at the CMTS level and, you know, among the different agencies and the legislative authorities. But I think we're completely right to at least point this out, that this is something that needs to be looked at given, you know, recent incidents. Andrew.

CAPTAIN MCGOVERN: I agree and I guess the real success of this is, you know, just because there hasn't been an accident

doesn't mean it's safe. And if you hear the stories of what -- that Steve could relate which hopefully will come out in this, what they found during these homeland security surveys, it was absolutely amazing. And it was just -- it's just plain luck that we haven't had more of these, right, Steve?

CAPTAIN BARNUM: More surveys or more (indiscernible)?

CAPTAIN MCGOVERN: No, the -- yeah. But -- and, you know, the other thing maybe that's missing in this, Bill, is -- an example would be the fact that under OPA '90 the masters are now required to know their under keel clearance at all times.

MR. GRAY: That's true.

CAPTAIN MCGOVERN: And obviously they don't, you know. So you've got this requirement in there but you're not giving them the tools to fulfill that requirement. And it's just -- I just think that this is something that -- you know, it does have to happen. I mean.....

MR. GRAY: If you -- Andy, if you go back and you read the Hen report in 1992 it made the point that in federally maintained channels and in the areas between federally maintained channels and private berths there were lots of pieces of different information and most of them were inaccurate.

CAPTAIN MCGOVERN: I mean (indiscernible), yeah.

MR. GRAY: And for the -- and back to what Lou's point is, what's the Army engineers going to think? What they ought to think is that they -- either learn how to do the job right and

keep doing it and find objects by making surveys periodically or let somebody who knows how to do it do the job.

CAPTAIN MCGOVERN: Well, I was just going to say that. I mean the other option to this is that instead of NOAA doing these multibeam surveys is that the Corps does it because they don't do multibeam surveys, they'll tell you that. We don't do that, we do single beam, we do them 50 yards apart. You know, and they used to do wire drags at least in the Port of New York and they stopped doing those until.....

UNIDENTIFIED MALE: The Corps of Engineers.....

CAPTAIN MCGOVERN: .....a (indiscernible) ship had the bottom thrown out of it after a dredging project and, you know, found out that there was a boulder they missed.

MR. WHITING: Andy. The Corps of Engineers does multibeam surveys when they deem it necessary. It's getting that education into the Corps of Engineers to deem it necessary a little more often and that's what we have.

MR. DASLER: And I think one of the bigger problems, not all Districts are created equal. Some are really on the cutting edge and are doing it, some are still back in the single beam era. And I think the -- to address Lou's concern, I mean this -- NOAA charts these areas, it's still NOAA's responsibility when something grounds, I mean they're the ones that are called to the table. And -- so I don't think we're stepping out of bounds that we're getting into federal channels, I think we're

just highlighting some concerns and some incidents that have happened and it needs to be addressed somehow. Either the Corps needs to get in there and start doing obstruction surveys or somebody needs to pick up that gap.

MR. SKINNER: Can I jump in just for a second?

DR. LAPINE: I'll rest my case, but I think we ought to at least show what the magnitude of this project is, somewhere in the -- in a bullet or something that the reader understands that this is a major undertaking. And a major cost.

MS. DASLER: Wouldn't -- I mean some of it is happening, it's just not happening all over. I don't think it's that major. The Corps does surveys and some of them -- some of the areas now they're still doing single beam. It's just upgrading some of that technology, getting some of that information put in, if they're going to take that on. If they're not and the Districts don't want to take that on then at least they should say, hey, NOAA, you need to -- I mean we're not -- we're just looking at dredging, we're just doing single beam, somebody needs to come in here and address this issue.

MR. SKINNER: I think we need to somehow come to some conclusion that either we can wrap this up or it needs more work and move onto the next one. I'm concerned that the energy level will rapidly fall off and I don't want to shortchange groups four and five, three, four or five. So I guess I need some help in terms of are there some major issues that we still need to

somehow hash through or is there a way to resolve things here?

MR. RAINEY: I think that's good, that's.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: This is not necessarily a major theme, it was just I heard it and it had to go somewhere, so.

UNIDENTIFIED MALE: I think it's a.....

MR. SKINNER: Cannot always meet? Okay. Anything else on the second group? Okay. Number three. I think this is Adam.

MR. MCBRIDE: Most of the material that was drafted in the initial draft was pretty much on point and there wasn't really a great deal to add to that. I was concerned about the statement that NOAA needed to assess its NRT capabilities and then the next item was the conclusion that they needed to expand it and I think you -- you don't come to that conclusion until you've done the assessment or if you've made that conclusion I hope you've done the assessment. So I would eliminate the assessment because I'm pretty clear in my own mind in talking to the NOAA folks that they've assessed their five or six NRT's and determined that it's not adequate. Beyond that I didn't have a great deal to add to what was already drafted, I thought it was very much in keeping with what we wanted to do. So that really -- and that's just an editorial observation that -- coming out of the paperwork which I believe I gave back to Ann.

MR. SKINNER: Anything else?

MR. MCBRIDE: No.

MR. SKINNER: Anyone want to add?

MR. RAINEY: Just a question maybe, Adam. Do you have some photos? I mean having gone through that and the presentation you gave us and your staff gave us in Houston, I mean I'm just wondering to make that real I mean would you have or know of some things for -- as far as maybe photographs we could use to show that? We can maybe pull from your presentation or the other -- we got a couple of maybe good sand bites from the API presentation I thought in Houston as well to really drive home how critical was -- we heard a number of times that if we're not back up and running within 48 hours, you know, a whole train of consequences. Could you help us or.....

MR. MCBRIDE: Yeah, no, I'd be happy to go back over ours. I think as well though that somebody like Tim Osborne who was actively involved.....

MR. RAINEY: Okay.

MR. MCBRIDE: .....in a raft of these last year might have some.....

MR. RAINEY: Right, okay.

MR. MCBRIDE: .....some better photographs.

MR. RAINEY: Okay. That'd be great (indiscernible).

MR. MCBRIDE: Because -- yeah, I mean he was -- he and his teams were in the water and -- with his teams.

MR. RAINEY: Right, okay. Maybe -- Elaine.

MS. DICKINSON: It might be worth putting in the text somewhere that we're entering a -- or we're in a more active hurricane period that is expected to last at least -- or about another 10 years, perhaps longer.

MR. MCBRIDE: I think the -- actually Tom, there was one other theme that I had that I wanted to mention was that NOAA's work, whether in emergency response or in some of these other incidents that arise is largely coordinated with other agencies, Corps of Engineers, DOD, et cetera. And I think that NOAA at least in the hurricane season last year did a great job in that coordination work. And I've made the observation before that the water side recovery and -- after hurricanes Katrina and Rita was fabulous, the land side was a disaster. So I'm not sure that that needs to be particularly developed but I would like to highlight in the notes that this is an interagency activity which has worked well. And not to focus completely and utterly on hurricanes because there are a whole raft or a variety of other events, tsunamis, earthquakes, just other events to which NOAA brings NRT or emergency response expertise. So I don't want anybody on the west coast, for example, to think that we've forgotten them.

MR. RAINEY: Right. I -- and I think that's a really good point that -- in Houston we talked about it and I -- in the draft -- I can't remember whether I had it in there or not, but NOAA has developed an all hazards incident response plan and

maybe that's a way to get at that. Because I think that's a really good point, it's not just hurricanes, it's manmade, natural and, you know, really all hazard response and recovery.

MR. SKINNER: Is that it? We've -- and we've got examples? Okay. Great. Group three, going, going, gone.

CAPTAIN MYRTIDIS: Well, just -- I'm sorry, just a question. How this last bullet is integrated with the most wanted. I mean, okay, they did a great job which is great but what this has to do with what we're trying to present.

MR. SKINNER: I'm using the major themes and this is probably in -- may not be correct. It's sort of just a placeholder for comments and then I think that -- I mean I can go through and just.....

CAPTAIN MYRTIDIS: Okay.

MR. SKINNER: .....erase that.

MR. MCBRIDE: Let me just add. As Minas has pointed out and as I said, that.....

MR. SKINNER: Examples?

MR. MCBRIDE: .....I didn't think that was a major theme so much as an item to be -- and because it went so well, but that in the context of NOAA's emergency response it isn't interagency ordinarily activity which they already do quite well. And maybe that's extraneous to the major theme that we're trying to push anyhow.

CAPTAIN ARMSTRONG: Well, if -- you know, if -- we have to

be careful with something like this because if we're going to say they did a really excellent job then what's the problem?

MR. MCBRIDE: Well, the problem is capacity.

CAPTAIN ARMSTRONG: Right.

MR. MCBRIDE: Yeah.

MR. DASLER: Is this an appropriate spot to mention the supplemental funding and the work that's being done this fall and winter down there also?

MR. MCBRIDE: Well, again, I think you're trying to highlight the things that need action, not the successes that have happened in the past. Unless you're going to point out that it's a drop in the bucket or, you know, it's a good start but there's still serious problems or something.

MR. DASLER: I mean it is a little bit of drop. Other than I guess they've designated 1,200 square nautical miles to be done and only about half of that is going to be -- and there was only funding to do half of that this year, so I don't know.

MR. SKINNER: I've just put a notation here, it's under examples under number three. And maybe what we do is possible high -- possibly highlight it as a future need that NOAA seems well positioned to take on this responsibility and it's -- it is something that we should look at moving forward.

MR. MCBRIDE: Yeah, in the hurricane Rita example, as we mentioned during our presentation there was an NRT -- a single NRT response vessel which went first to Houston and then tried

to get down to Port Art Beaumont and then came over to us third. In the meantime we were trying to -- contracting facilities. So I think the interagency cooperation was working, the capability of getting the work done instantaneously, which is what every port director wants, was not there.

MR. ZILKOSKI: Well, I think you hit it right there, and you said it before. It's the capacity that you have in that. And your whole idea there is you're trying to increase the number of them. So you can highlight the successes that you had in the Gulf but there was also some -- not failings, but not as quick response because you didn't -- you got a person doing too much area so you got to decrease the area, increase the number of people. So you highlight the successes and this could have been better it we would have had more people on the ground, and that's what you use it for.

(Pause)

MR. SKINNER: Any other thoughts? Number three. Going onto four, expand and fund real time tide, current and -- wait a minute.

CAPTAIN HICKMAN: You changed that to modeling.

MR. SKINNER: Right.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: What's that?

UNIDENTIFIED MALE: (Indiscernible - away from

microphone).

MR. SKINNER: All right. You know what I mean.

UNIDENTIFIED MALE: You know.

MR. SKINNER: Who had this one, was it Sherri, is this.....

CAPTAIN HICKMAN: Yeah.

MR. SKINNER: Okay.

CAPTAIN HICKMAN: Yeah. I guess for your major themes, accurate, timely and reliable real time hydrographic info. The next one would be identify water level. And the next one, identify speed of current.

MR. SKINNER: Speed of current.

UNIDENTIFIED MALE: You mean direction?

CAPTAIN HICKMAN: No, the next one's.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: .....the next one's direction, identify direction of current. And modeling of nowcast forecast and Vdatum.

MR. SKINNER: Of nav?

UNIDENTIFIED FEMALE: Now.

UNIDENTIFIED MALE: Nowcast (indiscernible).

CAPTAIN HICKMAN: Nowcast.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: Nowcast forecast.

MR. SKINNER: Nowcast forecast.

UNIDENTIFIED MALE: Dave, instead of saying modeling.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: Speak to me anyways.

CAPTAIN HICKMAN: And Vdatum. Stop, stop typing. Get your hands away from the computer.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: Yeah, go to modeling such as. Delete, delete.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: Okay. And then.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: That's what we were saying and then there's a lot that we've highlighted for Ann within the current draft.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN HICKMAN: That's it for the themes that we.....

MR. SKINNER: Okay.

CAPTAIN HICKMAN: Now -- I've highlighted a bunch of the

stuff that was in the original draft of our handout to be used. And the example, one of the best examples would be the Potomac Trader. And I guess -- Andrew, you want to just give them a little recap of that, of how much -- there's just more than the fact that this one went aground because of -- it was a parameter of different problems.

CAPTAIN MCGOVERN: (Indiscernible) New York there's a, you know, meteorological conditional effect on obviously the water level fairly greatly and the Potomac Trader went up the East River, they had a northeast wind -- we had an easterly wind of about 40 knots that's going around in about an (indiscernible) to northwest about 40 knots. And the tides were supposed to -- this is all we found out later and (indiscernible) has all this info as to why. We had a normal five foot rise and a ten foot rise on one high tide. The ship was 35 (indiscernible), it's a 35 foot channel, (indiscernible) high water. So basically, you know, looking at planning, it was planned perfectly, (indiscernible). The problem was when this wind shifted from east to northwest we went from a 10 foot rise of tidewater to a minus one foot rise of tidewater, 11 foot (indiscernible) we lost. The ship went up on the high (indiscernible) but there wasn't any high water, it was -- you know, it -- and so it ran aground and of course bottomed out. Luckily for us it was one of the first double hull tankers and there was no spill but major, major damage. So -- and the subsequent investigation,

then we were able to access the tide gauge at -- this was right before PORTS so we were able to access the tide gauge and the battery and get all this information and he -- Mike's got the, you know.....

CAPTAIN HICKMAN: Yeah, Mike's got that all in graph form so that would be a really good visual.

CAPTAIN MCGOVERN: Yeah. So that for me is a good example (indiscernible).

UNIDENTIFIED MALE: (Indiscernible - away from microphone)..

MR. SZABADOS: Another example (indiscernible - away from microphone).

CAPTAIN HICKMAN: And we've highlighted that in the critical connections, yeah, for Ann.

MR. SZABADOS: Okay.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: What's that?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Okay. Anything else? Group four. Others.

CAPTAIN MCGOVERN: You guys want anything about the Vdatum (indiscernible)? I don't know really what the.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN MCGOVERN: Yeah.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN MCGOVERN: Okay.

MR. SKINNER: Group -- moving onto group five. Elaine, is that you?

MS. DICKINSON: That would be me. Last but not least. I had a meeting with myself. Steve came over and helped me a little bit. This one, fully disseminate hydrographic data and develop additional products to support other navigational and non-navigational uses. I think -- then there's four bullets, so -- and some of them are very different so do you want to do them bullet by bullet?

MR. SKINNER: Sure, yeah.

MS. DICKINSON: Okay. The first one is provide education and information to recreational boaters. And off the top of my head there's two major themes there. One is that the most claims that are -- that occur on recreational boats for insurance companies is hitting a submerged object. And at one time I had a dollar cost of those losses, it was in the tens of millions. I can flush that out. The other theme is that the consumer market for marine electronics, particularly what we call GPS chart plotters, is pretty much exploding.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MS. DICKINSON: People are buying these things, using them on their boats.

MR. RAINEY: It's a tough crowd.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MS. DICKINSON: Loggers.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MS. DICKINSON: Not bloggers. They have perhaps a false sense of security that -- just like the cartoon we saw yesterday, that just because they have the latest marine electronics, they're only as good as the data being entered into them on a card and they may think they know exactly where they are but we would like the -- all of the baseline data to be updated and improved.

MR. GRAY: (Indiscernible) to say they know where they are but they don't know what's in front of them. Because the data that's on the electronic chart (indiscernible) just the same as it is for anything other than that.

MS. DICKINSON: Exactly. But people think because.....

MR. GRAY: (Indiscernible - away from microphone).

MS. DICKINSON: .....they have -- yeah, they know where they are but they think because they have the latest Garmond GPS that it's very, very -- that the chart information is absolutely positively accurate and up to date and it might have come from

1942.

MR. GRAY: (Indiscernible - away from microphone).

MS. DICKINSON: So you're putting horseshoes on, you know, modern products.

MR. GRAY: Yeah. It's just like on page seven of this (indiscernible), it says (indiscernible) with much -- have much greater accuracy. They don't have anymore accuracy (indiscernible).

MS. DICKINSON: Well, the GPS gives you some pretty good accuracy.

MR. GRAY: For where you are.

MS. DICKINSON: Right.

CAPTAIN HICKMAN: Bill, I think the point.....

MR. GRAY: (Indiscernible) doesn't tell you what's under the water.

CAPTAIN HICKMAN: The point you're missing though is this is to educate the recreational boater with the equipment. This is an education (indiscernible).

MS. DICKINSON: Well, yeah, this is to support why it's important to provide all these things to improve products and services to the boating public. Because they're using all of these chart plotters. So the better the charts the better it is for everybody.

MR. GRAY: (Indiscernible) because they're got it on screen it's more accurate (indiscernible).

MS. DICKINSON: Right.

CAPTAIN HICKMAN: So they have to be educated that it's not.

MS. DICKINSON: The other item we can mention there is also the -- that NOAA's been producing some nice products, we don't want to see them disappear, such as the small -- what do you call it?

MR. GRAY: (Indiscernible - away from microphone).

MS. DICKINSON: Small.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MS. DICKINSON: Well, the pocket charts, chart downloads and then the small -- what's the word. Small craft charts. They're -- we don't want them to go away is the point here. Because of budget constraints.

CAPTAIN HICKMAN: Help me out here. The small craft -- yeah, isn't that what they're called?

MS. DICKINSON: Yeah, and there's also booklet charts, it's a new product that's very handy and downloadable. The next bullet was provide baseline and real time information for emergency response.

MR. SKINNER: (Indiscernible - away from microphone).

MS. DICKINSON: I'm going to the next bullet.

MR. SKINNER: Okay.

MR. SZABADOS: I might have an example for that.

MS. DICKINSON: Yeah, we could use an example. This would be something other than what the NRT's are doing. This would be other emergency responders who could really benefit from using NOAA data that's already there like -- I think what Adam was mentioning about the Calcasieu oil spill.

MR. SZABADOS: Another one is that Lakes Charles Emergency Center has a display of the real time water levels and they also have a GPS survey which Dave did and they have their evacuation route tied to the tide gauge so as the water rises they know when that road floods. Previous to that they used to have the sheriff go out there with a two by four banging in the walkie talkie and tell when the road was closed. And actually during Katrina they actually implemented that so there's a good story there. And we have pictures and data, we can give some examples.

MS. DICKINSON: Okay. I think we need to catch up with the typist.

MR. SKINNER: Get all that? I'm sorry.

MS. DICKINSON: Did you get all that? Emergency responders. Mike has an example of using it for evacuation routes.

MR. SKINNER: Okay. So this is more an example?

MR. SZABADOS: Example, yes.

MR. ZILKOSKI: And I think that's part of what's important here is linking the water to the land. I mean the water levels

are measured, that you know the water's coming and you're going to get flooded. And so the -- linking that to the digital elevation models for the evacuation routes. So that tells the emergency managers when they have to have people evacuate and also if there's flooding going on where they potentially can go and not go because they're under water. So it's that linking part I think and that's the theme part of it if you will. Okay.

MS. DICKINSON: Yeah, I don't know if you need another example. We could probably come up with one.

CAPTAIN MCGOVERN: Elaine, I think another one would be -- I'm sure Mike's got about 1,000 of these probably, but an oil spill response when -- especially in a port with -- let's say with a port system where they would give the on scene responders all the trajectories for the -- you know, the spill and everything like that. And that actually ties right back into Adam's of what went wrong, right, when you didn't have that information. So it could be maybe your -- an example would be the response of yours versus the response of a port that had these systems in place and how much better one went than the other may be really a good example, you know, good versus bad.

MR. SZABADOS: Going to Houston, Galveston, we have a port system there and it's been used for placing oil booms. So we can get an example for that.

MR. ZILKOSKI: If you'd add under examples the Gulf Coast height modernization examples. Just put that bullet and I will

get you lots of different one pagers that you can extract what you want out of there for examples.

MR. DASLER: Other examples are the -- what we talked about the other day, the Coastal Services Center and how they -- you know, I guess to address the resilience of the coastal communities and the -- again, the map once, use many times and the examples of that in that Coastal Services Center brochure that uses all the different kinds of data and how they can be used for coastal managers. There's -- I think Mike sent an e-mail that there -- it's also a link to the Coastal Services Center.

MS. DICKINSON: For the -- the third bullet is support marine habitat protection. I think there is some stuff already in the draft that we got that speaks to that. The only other thing we could use as examples, some of the folks that were on our Alaska panel talked quite a lot about fisheries management and that how much they relied on the NOAA data to help with fisheries.

MS. BOESE: I did get her card and I did take some quotes and I'll check them against the transcript.

MS. DICKINSON: Okay. And the last bullet, support resilient coastal communities. That might pertain to shoreline erosion, communities using NOAA data for, you know, managing land use projects, beach replenishment. I'm not the expert on that one, so.

CAPTAIN ARMSTRONG: Well, the sediment, the offshore sediment maps that we mentioned today would be a -- an ideal (indiscernible).

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

CAPTAIN ARMSTRONG: Sand and gravel from offshore is probably the biggest mineral extraction activity in the U.S.

MR. SKINNER: This was also mentioned, but it's used by managers of aquaculture leasing and so forth.

MS. DICKINSON: Aquaculture?

MR. SKINNER: Using this information as a way to figure out where to license aquaculture facilities was mentioned today and I know that's one of the things that coastal managers use it for.

MS. DICKINSON: Okay. The draft that we got, I think we can just reformat pretty much most of the stuff that was on page 10, 11, 12 and 13. Because those sections were already supporting resilient coastal communities and informing and expanding user group outreach and education efforts. So a lot of that is good stuff that's already written. There's two boxes that were included that I'm not sure belong there anymore and that was -- there was a box on IOOS in that section and I really don't know if that belongs here or somewhere else.

UNIDENTIFIED MALE: Yours can't be bigger than number one though.

UNIDENTIFIED MALE: Tom, can you cover wetland restoration? Is that.....

MR. SKINNER: I'm (indiscernible) examples.....

UNIDENTIFIED MALE: Yeah. Okay.

MR. SKINNER: .....with the theme, so -- but let me -- I'll try and clean this up.

MS. DICKINSON: I came up with a couple -- on the education and outreach end of things I just sketched out like two recommendations. One was having to do with training of future survey professionals. That there is a lack of -- that there should be an investment in higher education training, the next generation of survey professionals that have the adequate skills to meet future capacity. Or future needs, something like that.

MR. DASLER: I think we should replace survey professional with hydrographer.

MS. DICKINSON: No. We had a discussion on that.

MR. SKINNER: Was there a second recommendation?

MS. DICKINSON: Oh, yeah. Sorry. The other was re -- I don't know, for a better word, repackaging and publicizing existing NOAA data to serve a broader range of applications.

MR. SKINNER: Repackaging and?

MS. DICKINSON: Publicizing.

MR. SKINNER: Publicizing.

CAPTAIN ARMSTRONG: Yeah, I think I prefer.....

MS. DICKINSON: The existing.....

CAPTAIN ARMSTRONG: .....you know, hydrographic and ocean mapping over survey because.....

MS. DICKINSON: That's right, ocean mapping was a good.....

CAPTAIN ARMSTRONG: Yeah.

MS. DICKINSON: .....phrase for the previous one.

CAPTAIN ARMSTRONG: People might jump to the land survey conclusion. I think there's plenty of that training.

MS. DICKINSON: Survey data to serve a broader range of applications. And that's as far as I got.

CAPTAIN ARMSTRONG: Tom, that was -- in that first bullet under recommendations, changing survey professionals to hydrographic and ocean mapping.

MR. SKINNER: Training future.....

UNIDENTIFIED FEMALE: You want it on that line or the second line?

CAPTAIN ARMSTRONG: Either one.

UNIDENTIFIED MALE: (Indiscernible). Because there's a lot of land survey training, I think that's where we're -- we were just trying to differentiate that.

UNIDENTIFIED FEMALE: This is for NOAA, (indiscernible).

UNIDENTIFIED MALE: When -- well, but it's going.....

CAPTAIN BARNUM: When Elaine and I were talking we were trying to capture, you know, the geodesy and the oceanography

professionals that go into the compliment -- you know, the hydrographers.

CAPTAIN MCGOVERN: I guess -- I think we -- you know, maybe there's not the problem in training land surveyors in -- as there is in hydrographic surveyors. That's all I was thinking.

MR. SKINNER: We don't actually have to -- our recommen -- sorry. Our recommendations are the main bullets. So, Elaine, I think maybe this could still fit under the themes section if that's what we want to focus on.

MS. DICKINSON: Okay. I was.....

MR. SKINNER: I mean the themes generally are.....

MS. DICKINSON: .....what I was doing was following the draft that had actual recommendations in little boxes.

MR. SKINNER: Oh, okay. I guess it did.

MS. DICKINSON: So I guess that all changed. That's okay.

MS. BOESE: Those recommendations actually came from (indiscernible). But that's a good question. If there's going to be just the five most wanted do you still want to go through and have all those other recommendations?

MR. SKINNER: I'd prefer to have it just as part of the discussion. Because all of these -- I mean if you look back on these they're all sort of things that we -- they're describing what we think is important so I think our -- could easily be rephrased as recommendations as well. But what we want to do is

sort of get at the larger issue and use these as illustrative I think. Have -- how's everyone's energy level?

UNIDENTIFIED MALE: Low.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Do you want to just see if we can clean this up a little bit and print it out and -- so that everyone can take a look at it? And in the meantime people can get up and stretch and walk around, grab a cup of coffee. Does that make sense?

UNIDENTIFIED MALE: Sounds good to me.

MR. SKINNER: All right. Thanks very much to the groups.

(Off record at 3:23 p.m.)

(On record at 3:56 p.m.)

MR. RAINEY: I was going to -- we've just passed out two documents, just -- if you can have them in front of you. The skeletal outline of the sections and then we have a public comment that we want to get to in time. And then we'll be able to wrap it up.

(Pause - background conversations)

MR. SKINNER: Again, I think we're looking for major changes, not so much word smithing, but if you have comments. Minas has already suggested that the QE-2 under number one was not really an appropriate example so we might want to think about moving that out of there. Because it was not just a

charting error, it was a -- I guess the finding was that it was significant seamanship error. So that it might be better to use another one that is specifically.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. GRAY: Real time what?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. GRAY: What's that?

UNIDENTIFIED MALE: It's a more precise GPS (indiscernible).

THE REPORTER: Put your mic on over there, Bill.

MR. GRAY: What's that?

THE REPORTER: Your mic on.

UNIDENTIFIED FEMALE: Your microphone.

MR. GRAY: I'm just trying to find out what real time kinematics is and I still don't understand but maybe I don't need to know.

UNIDENTIFIED FEMALE: The lights aren't on.

MR. GRAY: You're right about that. That's true when I use my computer too. Real time kinematics. We've got ping in here still.

MR. DASLER: That should be kang, K-A-N-G.

MR. GRAY: What?

MR. DASLER: K-A-N-G, high -- were you talking about the

ship?

MR. GRAY: No, we just talked about.....

MR. DASLER: Oh, ping.

MR. GRAY: .....ping to chart.

MR. DASLER: Oh, right.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: Where is that?

MR. RAINEY: In the first section, okay, the very first section was drafted -- I put that down contemporaneously as John was making his report. So we can amend that with the panel's concurrence to, you know, pick up the comments we just had in the last round. So, yes, the -- you see some of the original language that we kind of agreed to change and I -- okay.

MR. SKINNER: I also went back to try and update the actual most wanted five and I think I got everything but we'll double check that. If you see anything mention it. And under five, the last one, because I don't know how to do sub-bullets, the major themes are broken out under the four -- according to the four bullets on pages two and three.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. SKINNER: Yes.

UNIDENTIFIED MALE: Good. (Indiscernible - away from microphone).

MR. SKINNER: Just want to make sure everyone has the time to go through it. But since we have a motion, when people are ready. Anyone want to second the motion?

UNIDENTIFIED FEMALE: I will.

MR. SKINNER: Been seconded. I'm sorry, that's your job.

MR. RAINEY: No, that's all right, you (indiscernible).

MR. SKINNER: All in favor of using this document with the notations that we've discussed as the outline for the report signify by saying aye.

SIMULTANEOUS: Aye.

MR. SKINNER: Any opposed? Abstentions. Great. Thank you all very much.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Right. Could I -- Ann, could you join us here? We talked about kind of the next steps and let me bring Ann up and we'll just throw out -- because what we've got now is we've approved the skeletal outline, we've reorganized it, we've got our major themes. We've go the raw data so to speak in a stack and the report out. So Ann would like to put out a couple of target dates for folks that had some pictures that they identified and other -- like I'm going to get some citations and some things. So can I just turn it to Ann as -- with some of these -- with the additional data that we need to collect fairly quickly and then we'll pull all that together and then get it

back out to the panel and talk about that in a little bit.

MS. BOESE: Well, if anybody has artwork that they'd like to submit. I think the best thing to do would be to e-mail a high res JPEG format at 300 DPI to Barbara so that it goes through NOAA by next Friday. And if anybody has any sudden thoughts or ideas or something that needs to be considered or should go into the text part I would like for them to e-mail it to Scott by next Wednesday which is August 23rd and next Friday is August 25. I believe I have everybody's written packet, the work packet that everybody worked on with their section. If there's anything else just drop it off to me. And I did want to say that I think that it was a very dynamic and useful process to get the hands dirty in the copy and the guts and now we'll have to sort the guts all out. But thank you.

CAPTAIN HICKMAN: Good luck.

MR. RAINEY: I think -- what I propose is we do that and we'll get the information all pulled together and then basically, you know, follow up the outline that we have with the information that we've all talked about and pull it together and then we can get it out to the panel once we have it together. This is jumping ahead a little bit into the new business but I think it's appropriate to talk about it now because it's sort of the next steps. And the ultimate -- I talked with Jack here. Again, from our perspective having this, you know, delivered by the end of the calendar year would be the objective. So there's

likely that the thought process and talking with NOAA and just looking at the next meeting is that we would probably do this, as we've done before, after the New Hampshire meeting we'll pull this together and communicate through e-mail and or a conference call that we'd produce this document likely without having another physical meeting on it. And then look to have our next meeting in the February timeframe which would be in conjunction or very close to the 200th birthday anniversary of the Coast Survey and if we'd have this document that we can, you know, have for that occasion and it would give us a real nice press release and an event that we could, you know, kind of start the process with this product. So that's right now the thinking. So it's -- it'll be important to follow through. I'll send out an immediate e-mail to try to update Admiral West and Admiral Larrabee as quickly and as thoroughly as I can. I know they had sent an e-mail saying that they were, you know, interested in that and I want to try to get them as up to speed as I can and we'll incorporate if they have some comments and get that down to Ann as quickly as I can facilitate that. I just wanted to thank everybody, this was a tremendous undertaking and a phenomenal accomplishment I think this meeting. Are there any other specifics on that? I think that's how we'll proceed. Just like to let you have the last word if there's another comment and then we'll turn -- we have a -- one public comment and -- so is there any other panel comments on that? Want to

thank.....

CAPTAIN HICKMAN: Well, I thought I might wait. But I just wanted to say that -- I know we've mentioned it but I think it deserves to be said again that we know you put a lot of time into the original critical connections that you brought here with you and -- and to your buddy sitting next to you, good luck.

MS. RAINEY: Well, thanks. I think it's a huge -- I think we're going to all be proud of this, it's going to be a good document, good effort, and everybody's really contributed and I think that's been tremendous and really happy to have Tom on board. But -- well -- okay, well let's turn the floor over then. You have another document from Mr. Scott McClaine who's joined us to make public comment, professional land survey under State of Alaska and he'd like to address the panel. So Mr. McClaine. Anywhere is fine. If -- kind of -- there, that'd be great. Thanks.

MR. MCCLAINE: First of all I'd like to thank you for the opportunity to make a few brief comments. I'm Scott McClaine, I'm a professional land surveyor here in the state of Alaska and I represent a small business concern that's been providing support services on NOAA multiyear contracts since 2001. I'd like to encourage you to -- encourage the participation of Alaska small businesses on NOAA projects. I feel that our small business has -- it's been a team effort to gain a little bit of

experience on NOAA projects to try to attain the ability to provide those services in a fully functional manner in a later timeframe once we gain the necessary experience. So I'd encourage NOAA to continue with providing those opportunities for Alaska small businesses.

Secondly, I'd like to encourage the participation of professional Alaskan surveyors on NOAA projects. Recently the State of Alaska has adopted regulations that follow the NC's model law and one of those specifically require that Alaskan professional surveyors be responsible for acquiring hydrographic data within the jurisdictional boundaries of the state.

And lastly I'd like to encourage NOAA to adopt a faster method of data dissemination to the community. As an end user we all like to see the data put out to the public in the quickest manner possible. And those are my comments. Thank you.

MR. WHITING: Scott, I'd like to thank you for putting that provision in the model law for the hydrographic survey and in the Alaska Statute and stuff. We talked about this, what, 10 years ago?

MR. MCCLAINE: We did. It took a long time to get there.

MR. WHITING: It took a long time. Thank you.

MR. MCCLAINE: I'd be happy to answer any questions that somebody might have. Thank you.

MR. RAINEY: Thank you, sir. Are there any other public

comments at this time?

MS. MORRISON: Hello everyone, my name is Gail Morrison, my company is Allied GIS. My team which consists of IIC Technologies, TerraSond and 3001 recently won a NOAA contract, we maintain the NOAA ENC charts. We won that about two years ago. So, first of all, with that in mind I'd really like to encourage you all to change this number from zero to something much larger that's on here for the ENC's for 2005, seven it's zero.

And I'd like to just talk briefly about my experience with NOAA. You are by far one of my favorite contracts. Everyone has been so nice to deal with, everyone -- the contracting officers, my client, Alexandria Heliotis. I'd just like to say that everyone's just so professional and just so nice, the whole contracting experience has been very nice. I've learned so much. This was my first large contract and everyone has been just so nice. And I've learned so much and all the knowledge that I gained from this contract I've been able to carry on through some of my other contracts and have been able to win some other larger -- some other large contracts.

I'd like to encourage NOAA to continue providing contracts for small businesses. It's very tough for small businesses to get into the federal market, so I'd like to thank you for supporting small businesses and especially women owned small businesses, which is what I am. So thank you.

A second topic I'd like to bring up is throughout this meeting I've -- and I was only here for today, unfortunately I couldn't make it yesterday. There is -- I'm hearing different companies, different agencies are using different datums, different geoids, et cetera. I use GIS -- US GIS products is my specialty, I also use CAT. I do a lot of data importing, data exchange. The U.S. Army Corps of Engineers has developed a data toolset called SDSFIE. It's Spatial Data Standards for Facility Infrastructure and Environment. This is an enormous relational database. What this provides is data standards, it provides templates for your contractors when they go out to collect data. It provides visuals so people know exactly what they're going to collect. For instance, there is a field saying what geoid did you collect this in, what's your vertical datum, what's your horizontal datum, how many feet are you off. There's about -- there's at least 40 fields and then you can add additional fields to that, you can hyperlink documents to the GIS. This -- the SDSFIE creates a GIS feature, either a point line or poly. So again, this is an excellent tool for standardizing your data and explaining to your contractors exactly what you want, exactly what you need and exactly what format you need it in. It imports data from many different fields, from many different types, Excel, DBF, text file, there's quite a few. So again, this is an excellent way to standardize your data.

And the last thing is, I'd just like to mention a contract

that I have locally, it's the Alaska Army National Guard, and this goes back to federal dollars, everybody's budgets are getting squeezed. What I've been able to provide for the National Guard is on some of my -- I have several contracts with them and different teams that provide different services. For instance, right now I have a vegetation contract with them and when these vegetation people, veg people go out to the different sites I have them collecting survey -- some survey data for the National Guard as well. So I'm helping them group these contracts so that they don't have to do a separate land survey contract. It just costs another $100.00 or $200.00 to have these veg people go out. They're not registered land surveyors, but again, we don't need extreme accuracy, we just need to know plus or minus 30 feet where the buildings are, we need some sort of X, Y, Z -- or X -- just X, Y coordinates so that other contracts can feed off these coordinates. So I don't know -- I talked to Mr. Baird about this, he had been doing this in the past. But I'd like to encourage you to tap into your contractors to tap into their contracts and their contacts so that if they're going out into an area where you might need a couple of points collected, just ask them if they wouldn't mind swinging by. It's a huge cost saving here in Alaska. I'm already saying my con -- my National Guard contacts thousands of dollars by doing this. Thank you.

MR. RAINEY: Thanks very much. Okay, I think that

exhausts our public comment. Is there any new business from the panel members? McGovern.

CAPTAIN MCGOVERN: Just something to think about I guess for the next meeting or something, it's something that's bothered me for years and -- we're doing a huge dredging project in New York. We've done several of these, because of the way the federal government funds it it's like every five feet so we've done this -- we're doing the same project three times to get 15 feet of extra draft. And each time, obviously, the whole current picture changes, there's never -- you know, they give us a billion dollars to dig or they give the Army Corps a billion dollars to dig and not a dollar to do a new current study. Which we know everything has changed after it but we don't know exactly how -- you know, how much because we can't get -- I would just think that there should be a way to almost require, you know, after a -- I think Andy had the words better yesterday, but if there's a change in the bottom then there should be required that there is a subsequent current study to follow up -- I mean we're talking, you know, pennies compared to what the dredging project cost. You know, that -- I don't know how we'd do that because it's a -- I guess it's one agency not necessarily against another but it's a follow up thing and I don't know how we can do that but it's something maybe people can think about between now and the next meeting. But just that, you know, if there is a major dredging project that that

dredging project should be followed up by a new current study to see how, you know, the currents and maybe other things that were affected by this dredging project. Because, you know, we've had dredging -- some of these dredging projects they make the turns bigger but make them harder because they've changed the whole current profile and it's -- it makes the turn actually a harder turn even though it's a wider turn. So just something to think about between now and then, it's a -- you know, I would love to get that requirement in there but I don't know exactly how you would do that and the procurement process and maybe that's something that the -- you know, (indiscernible) can work out.

MR. WHITING: Andy, ask the Corps of Engineers to do that.

CAPTAIN HICKMAN: I was going to.....

MR. WHITING: They are very interested in anything that affects their bottom, why don't they do just that, ask them to do it.

CAPTAIN HICKMAN: Andy, I think.....

CAPTAIN MCGOVERN: Because they're not paid to do it so therefore -- they're paid to dig.

MR. WHITING: You're their client, right?

CAPTAIN MCGOVERN: No.

CAPTAIN HICKMAN: Andy, I think -- I don't know how it came about but I believe they did a study on ours before we dredged between and made the new spoils between Lynchburg and Morgans Point because we were concerned with the bottleneck in

the water flow there.

MR. RAINEY: Was that because of the special asymmetrical channel or was that a different navigation project?

CAPTAIN HICKMAN: It was because they were going to be putting the dredged material into.....

MR. RAINEY: Okay.

CAPTAIN HICKMAN: .....new spots. And so they were not only dredging the channel deeper but they were making new land around it.

MR. RAINEY: Kind of camping. Yeah, okay.

CAPTAIN HICKMAN: So I'm not sure how they -- how we had that done, I could look into that. But I would imagine if they're doing it prior to it they might be willing to do it afterwards.

CAPTAIN MCGOVERN: And I guess this is -- I mean we had one current study done too in between two of the -- between the first project and the second project. But it was a special deal, it was a big deal that was -- you know, it took a lot of effort. To me, what I'm trying to do is try to maybe -- is to automate this, that it should be I guess call it the chicken and the egg or the egg and the chicken. I mean it should just be, you know, if you're going to do this that this -- this is just done automatically, you know, following it whether it's part of the original allocation or what but it's just, you know, when you do this this will be done too and make it more automatic and

not such a big deal to try to get that done.

MR. RAINEY: Might be the recommendation we could draft that we would recommend NOAA take that as an agenda item to the CMTS because that's the whole idea is that you've got Corps of Engineers digging but you've got NOAA doing your hydrographic modeling, you've got Coast Guard doing ATON. So all of this, somebody should manage the big picture and when you change something that affects everything else you ought to take a look at the everything else. Bill Gray.

MR. GRAY: Yeah. I surely agree with what Andy is suggesting but it brings up the thought -- you say we might have a meeting in February and what I'm thinking, we talked yesterday about possibly inviting people from (indiscernible) H-10, Alex Landsburg or something like that, to the meeting to talk a little bit about the work that was done in Houston, the full scale measuring. Which then brings me to the thought maybe it'd be -- you know, if we can do that why don't we invite somebody from the Army Engineers and somebody from the Coast Guard as well and talk about this subject. And you remember, Andy, when we did that Norfolk meeting four or five years ago, we had a very small workshop where we got a lot of pilots together, we got a -- quite a few Army Engineers together, we got good Coast Guard representation. And it was interesting because we had a fellow from the Army Engineers called Barry Holiday (ph) and I had only barely met him but we said we wanted to get some sort

of a dialogue going between Coast Guard, Army Engineers and so forth. And at the end of this day and a half meeting where we had some break out and work, you know, the way ships maneuver, all these various things, they asked Barry Holiday (ph), said what did you think of this meeting. He said, you know, I have been in this business of planning and designing channels for the United States for roughly 35 years and he said I learned more in the last 36 hours about the way mariners regard what we do than I did in the previous 35 years. And it -- I think everybody went away with a very good feeling about that and several of us wrote a paper about that, Al Bloom (ph) and me and Alex Landsburg I guess and Jennifer Waters (ph). And it worked out very, very well and that kind of a thing might be a little bridge building step that we could take. And as Lou was mentioning, you know, we're talking about grabbing some of Army's responsibilities or however the hell you might want to talk about it. But as I said, that's the only time in my quite a few years in the industry that I've really had what I thought was an open and positive discussion take place with the dredging people, the Army Engineer people. So that's just for consideration as we think of the next meeting. Oh, and one other thing I had. We don't have Helen anymore, are we going to try and replace.....

MR. RAINEY: Yes, I guess what I -- we talked just real briefly about that but the -- my understanding is that there is

a process in place, a selection board has met and that's proceeding. There's -- there are, you know, various and sundry requirements with the FACA Act administration that go into that selection process. So I would suspect that, you know, by our next meeting perhaps we may be able to have that member with us. Is that fair?

CAPTAIN BARNUM: I think the package is downtown, I think probably the announcement is -- would -- I would say would be imminent, so we should know soon.

MR. RAINEY: All right. We've kind of arrived at -- is there any other new business? Okay. Well, again -- Barbara, can I turn it to you to give us the -- I don't know if there's more to say other than by -- we have an event for this evening for the panel graciously hosted by John Oswald and my understanding is there'll be a -- some cars for transportation available if you get out at the lobby by what was it, 5:15 we figured, is that the.....

MS. HESS: (Indiscernible - away from microphone).

MR. RAINEY: Is that okay?

MS. HESS: (Indiscernible - away from microphone).

MR. RAINEY: Okay. All right. Minas

CAPTAIN MYRTIDIS: Yeah, just a question and I don't know, I'm sorry if I missed that. Did we discuss the possibility of location, time for the next meeting, do we want to do that or.....

MR. RAINEY: If -- we did but clearly not with much specificity. Let me say what I think we have in the works is that try to look for an opportunity. So it'd be worth it to check -- to hear from the panel what the availability would be around February 10th is the anniversary of the Coast Survey and the thinking would be perhaps to do a meeting that abuts that or is adjacent to that timeframe. So maybe if you could give Barbara your availability, you know, a week before or after that date and we were going to check with NOAA leadership and we're -- the thinking is to look for an appropriate site that would allow us to make this a pretty watershed event for the panel as well as -- you know, in conjunction with the -- Coast Survey's 200th birthday and also we would hopefully have our special report on hand. So that there would be some synergies of, you know, time, place and manner of the meeting.

MR. WHITING: Is the Hydrographic Society going to have their meeting about the same time?

UNIDENTIFIED MALE: That's in May.

MR. WHITING: That's in May.

MR. RAINEY: May, yeah. May in Norfolk.

MR. WHITING: And you wanted to have this meeting before then, right? Are we going to have another meeting in Norfolk right after that? Because I think we still, even though -- I think that the place that this thing belongs is at the Hydrographic Conference, right there, day before, during it or

whatever. Have a panel like this and invite some of those big people.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. WHITING: In May. Right. We're going to have two of them in Norfolk at the same time, the same year?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Well.....

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Why don't we.....

MR. DUNNIGAN: We might, for example, want to have a meeting in Mobile. Have any -- Chairman have any committees that come from Alabama?

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED MALE: That thought just occurred to me because Barbara and I had been talking about something else.

MR. RAINEY: Yeah.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

UNIDENTIFIED FEMALE: Sorry.

MR. RAINEY: Why don't we leave it, if it settles with the panel, that we're looking for around that timeframe. I would very much like to have the opportunity for NOAA leadership to kind of get back with us where -- when they look at all of the activities they have for the 200th and things going on. I think Larry's point's very well taken that, you know, look at the HSOA's and we had a very good meeting in conjunction with them in San Diego. But maybe we can get a short list of -- you know, I think we'll benefit from taking -- getting back and checking schedules and looking for a special opportunity, I think we would be -- benefit from tying it into something that would work for NOAA leadership as well as the panel. So can we just promise to get back with you on some options here within the week?

CAPTAIN MYRTIDIS: Of course the other option is to have a very long meeting on a cruise ship, but -- take seven day cruise.

MR. RAINEY: Well, nothing's impossible, we got to Alaska.

UNIDENTIFIED MALE: (Indiscernible - away from microphone).

MR. RAINEY: Can we leave sometime around February 10th and then arrive in Norfolk by May something? Yeah.

CAPTAIN MYRTIDIS: We are just making deployment right now, so probably we could do that.

MR. RAINEY: All right. Well, is there any other new

business? All right. Well I'd accept a motion to adjourn with -- Jack, thanks.

MR. DUNNIGAN: Yeah, let me just add my thanks to everybody for your time. I have to tell you something. I'm a professional bureaucrat so what you all did this afternoon and over the last day and a half I know is hard work so I really appreciate that. I'm very much looking forward to your product here. And I learned really a lot from a number of aspects over the last two days. So from my standpoint this continues to be a really important group that I'm committed to working with. I think the discussion we had about programming and planning was a little dense but it's really good for you to know what we have to go through. I thought the discussion we had this morning on reauthorization of the HSIA is a good start. I did get a sense from you about, you know, sort some outlines of the scope of what you thought would be useful for going into so that's very helpful and we'll continue to work with you on that. But from my position, once again, thanks an awful lot for being here, it's a good meeting, appreciate it. And congratulations, Tom.

UNIDENTIFIED MALE: I might just add, just on behalf of the panel I think we're all reenergized I think by the interaction that has taken place and some of the NOAA leadership that's stepped up and working with this and I'd just really like to show my appre -- express my appreciation for those efforts.

UNIDENTIFIED FEMALE: Group hug.

MR. RAINEY: Okay, could I have a motion to adjourn?

UNIDENTIFIED MALE: So moved.

MR. RAINEY: All right. All in favor.

SIMULTANEOUS: Aye.

MR. RAINEY: All right, thank you.

(Off record at 4:31 p.m.)

TRANSCRIBER'S CERTIFICATE

I, Nicolette Hernandez, hereby certify that the foregoing pages numbered 268 through 492 are a true, accurate and complete transcript of proceedings of the National Oceanic and Atmospheric Administration, Hydrographic Services Review Panel, held August 15, 2006 at Anchorage, Alaska, transcribed by me from a copy of the electronic sound recording to the best of my knowledge and ability.

9/7/06
Date

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