MEETING OF THE
NOAA HYDROGRAPHIC SERVICES REVIEW PANEL

Thursday, March 22, 2007

ORIGINAL

J.W. Marriott Hotel
Salon 2
1331 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

PANEL MEMBERS:

J. Scott Rainey, Chair, Consultant
Tom Skinner, Vice Chair
Durant & Anastas Environmental Strategies, Inc.
Jonathan Dasler, David Evans and Associates, Inc.
Elaine Dickinson, Boat Owners Association of the U.S. (BoatU.S.)
William Gray, Gray Maritime Company, Maritime Advisor to INTERTANKO
Richard W. Harkins, Consultant
Captain Sherri Hickman, Houston Pilots Association
Dr. Lewis Lapine, South Carolina Geodetic Survey
Admiral Richard Larrabee, The Port Authority of New York and New Jersey
Adam McBride, Lake Charles and Terminal District
Captain Andrew McGovern, Sandy Hook Pilots Association
Captain Minas Myrtidis, Norwegian Cruise Line
John Oswald, John Oswald and Associations, LLC
Admiral Richard West, Consortium for Oceanographic Research and Education
Larry Whiting, TerraSond Ltd.

Reported by: Richard D. Baker, Jr.

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P R O C E E D I N G S

CAPT BARNUM: I'd like to welcome everyone to the Hydrographic Services Review Panel. This is a Federal Advisory Committee that advises the administration on hydrographic services. I'd like to point out in the event of an emergency, fire, that there are two exits located in the back of this room and also the front of the room. The shortest distance out is the back of the room that leads into the kitchen. You go to the left about 20 feet and there's a stairway that goes right up to the street. There are bathrooms located back in the foyer just behind the elevators. I would also ask that the public that's attending today to please sign in. There is a sign-in sheet back on the table and also I would like to ask that folks when they speak that they announce themselves and that you speak slowly and you enunciate so that the court reporter can capture your words. Appreciate that.

And with that I'll turn it over to Mr.

Rainey.

CHAIRMAN RAINEY: Thanks very much. The one piece of administrative business I think is approving our meeting summary from Anchorage. I just want to get it right in to General Kelly and Admiral Lautenbacher. So if we could -- it's tab M, Mike, in your notebooks. If I could get a motion to approve the minutes.

A PARTICIPANT: So moved.

A PARTICIPANT: Second.

CHAIRMAN RAINEY: Is there any discussion on the minutes? All right. All in favor of approving the meeting summary. Opposed? Okay. Thank you.

I'd like to go ahead and start our business for today. Captain Barnum is going to talk to us about the budget overview for fiscal year '07-'08.

CAPT BARNUM: I'm just going to do it from the table here.

(Pause in the proceedings.)

CAPT BARNUM: I'll do it up here. Make sure I'm qualified to operate this equipment.

Jack, as I mentioned earlier, was called away on a family emergency and could not be here today so I'll be presenting the NOS budget briefing.

First off I'd just like to point out that, if you haven't seen it, the NOAA blue book, this is a bound copy. You can also access this off the NOAA web page, the front page at www.noaa.gov. There's a link straight to it that has the FY 2008 budget summary.

So NOS is all about America's oceans and coasts for a safe, healthy and productive environment. The pictures here are a ship and beaches and certainly the subsurface marine life and the importance that is to our planet and our community. All three are important and all three are critical in striking a balance in managing these for the economic prosperity and the enjoyment of our coasts.

I want to talk about some accomplishments for NOS this past year. One is the establishment of a new IOOS office in February of 2007. I'm not going to go into much detail here. The program director, Zdenka Willis, will be with us later today and give us much more detail on that item.

NGS completed a major readjustment to the nation's positioning infrastructure. This took two years to complete. The national readjustment provides our nation's positional infrastructure for transportation, mapping, charting and a multitude of scientific and engineering applications, and it updates all the GPS control points in North America. So this was done using a subset of 70,000 control points versus the half million that was required for previous adjustments.

So as you heard yesterday from Dave Zilkoski, NOAA is now number one in computing the satellite orbits, this is where we're going to be number one in accuracy.

Office of Response and Restoration, Mexico Marine Debris received $20 million last year in the supplemental. This is some examples of some of the debris they pulled out. They've completed about 60 percent of that effort. When receiving the funds we quickly got that out the door to start relief efforts.

CO-OPS is growing. There was also money in the supplemental for four more PORTS systems for Mobile, Pascagoula, New Orleans and Gulfport, and we are beginning to work on the hardened NWLON stations along the Gulf Coast critical to both emergency managers and also to the post hurricane surveys which need to be conducted to get the shipping moving again.

This is a slide on contracts. NOS contracts for FY06 totaled $75.1 million, ranged all the way from NGS $8.7 million for shoreline mapping, FNA surveys, height modernization, Coast Survey 20.7 for survey backlog, $20 million in supplemental for marine remapping, which I just

mentioned, and also 10.6 for the vessel time charter. And in addition, we talked about ISCM, that's $2 million for tsunami supplemental. That money was used to map the southwest coast of Puerto Rico, a very successful project where the data that was collected for updating the inundation model and also the chart. And lastly, CO-OPS $7.8 million, $4 million for maintenance installation and equipment to support field operations.

Here's the budget trend. Requested $3.8 million, which is $131 million, 3.4 percent above the president's budget. The request is $96 million below the FY 2006 enacted. It reflects the administration's guidance on discretionary spending. Certainly we're at war, trying to pay for Katrina and Rita, but as you heard yesterday from the admiral, we did successfully get some increases. Includes 51 and a half million dollars for adjustments in pay and 79.5 million for other program increases. It supports the president's Ocean Action Plan and the satellite continuity.

Here's a breakout of the individual line offices and the percentage increases. So for NOS it was 13.3 percent, reflecting a net increase of $55.3 million. NOAA's requesting $143.8 million for navigational service, $1.7 million above the FY '07 request.

This budget request supports NOAA's efforts to improve navigational advice and services, which will promote safe transportation.

Broken down by goal, you heard a lot about the program planning budgeting execution system in Alaska. This is how we look at it internally in Commerce and Transportation and this represents a net change of $6 million or 3.8 percent. So the FY 2008 budget request for Commerce and Transportation, which is a decrease from $17.6 million in the inactive targets resources again for safe and efficient transportation, also included in Commerce and Transportation is the programs aviation weather, surface weather and marine weather, similar to

where the Marine Transportation System is trying to target and support the next generation air transportation system and aerospace. The increases for Marine Transportation System will include $.7 million for AUV research to push ahead with AUV implementation to be a force multiplier for in-house ships and also to set a model for working with hydrographic partners. The $1 million upgrade for 45 priority National Water Level Observation Systems will include meteorological sensors so many of these NWLON stations also include meteorological sensors to refine the data points we have for our modems.

This graph shows the increasing trend of the MTS budget, again $1.7 million. And it also goes into supporting the IOOS plan, which I mentioned earlier, a $16.4 million request amount, which is a 16.4 percent change, and also $8 million for extended continental shelf mapping. That is money to map the outer continental shelf margins for Article 76 of the UN law to see each, UN law to

see each nation is able to submit a, make a submission to extend their continental -- not to extend the shelf, extend the boundaries of the limits of the continental shelf. This is only for the subsurface. That doesn't include the water column, but it includes the sea floor, which is valued at $1.2 trillion. So this money will be used to map those areas and also conducts tidal surveys and also do a data management effort. It's going to be a multiyear effort.

Integrated Ocean Coastal Mapping is highlighted in the NOAA planning and budget formulation. We're looking to move towards a multi-mission fleet and aircraft platforms, maximize the use of our fleet. There's an interagency working group on ocean and coastal mapping, of which I'm co-chair. We will be meeting this spring to look at a data inventory and how do we reduce duplicate work. So working together with the Corps of Engineers on their LIDAR projects, on their center of transport projects along the coast

so that we can collect a set of transport data and also collect data for the shoreline mapping.

Also the Senate has introduced Senate Bill 39, Title 3, Ocean Coastal Mapping Integration Act, to coordinate the federal ocean and coastal mapping efforts to decrease duplication and increase efficiency.

Interagency partnerships, we heard some yesterday about our partnerships with the Army U.S. Corps of Engineers and the ISCM efforts continue, NOAA has been meeting with Army Corps of Engineers to notify areas of partnership. Jack Dunnigan and General Riley have met in the past and created subtask groups. So we're looking at again working together for shoreline mapping, channel mapping management and joint technology research.

So finally wrapping up, we're working towards, again, balancing the act of our services for transportation and also management of our coasts, so this is the objective of the National Ocean Survey to America's ocean safety, health and

productivity.

Any questions? I know I went a little quick, I was trying to buy us a little bit of time for later so you'll have time to deliberate.

DR. LAPINE: Captain Barnum, I'd like to go back to one of the previous overheads, the summary by line office, about the sixth one back. One more. That one there. I'm not so interested in how well NOAA is doing in '08 compared to '07, I'm concerned about how poorly they're doing from '06 to '08. This shows a $122 million decrease for NOAA between '06 and '08.

CAPT BARNUM: That's correct. What's reflected in there is earmarks. So that's a reflection of the administration's view of earmarks that they feel they may not want.

DR. LAPINE: I looked through your budget and I couldn't come up with $122 million worth of earmarks. I'm wondering what programs are enacted, particularly since you look at the National Weather Service, who's doing better in '08

than they did in '06, NESDID is doing better in '08 than in '06, I'm wondering if the 122 million wound up going into some other line item. Don't mean to put you on the spot, but I want to put it on the record.

CAPT BARNUM: That's fine.

DR. LAPINE: I don't like the fact that the NOAA's budget has been decreased by $122 million.

CAPT BARNUM: That's fine. Certainly the input of this panel helps to adjust the priorities of the budget also.

DR. LAPINE: Captain Barnum, did you happen to see the Washington Post this morning, page 2?

CAPT BARNUM: I did.

DR. LAPINE: The reporter says U.S. Army Corps of Engineers miscalculated on levies. Now, I'm paraphrasing of course here to make a point. One of the items says because of a basic data discrepancy regarding sea level, canal walls and

levies were built one or two feet lower than they should have been. That sounds like a data issue to me. Sounds like something tide water levels or National Geodetic Survey should have been involved in. I don't think they have the resources to help issues like this. How much damage did Katrina cause because the levies weren't tall enough?

MR. ZIKLOSKI: I can't speak for the Corps of Engineers, but I can tell you that after Katrina and Rita they set up a task force interagency program evaluation team, we were part of it. So what you're reading from is what they, their report came up with. We've been working with it since the hurricanes so part of their strategy is to be able to make sure that doesn't happen again, so they're working with NOAA and FEMA and the rest of us to be able to make sure that that doesn't occur. But you're absolutely correct, it was data, it's a data issue between local mean sea level and vertical data and what they did and subsidence occurring. So it was a little bit more

complicated than just saying that the change in that area is due to subsidence. There were some changes, but the point being is that they're working and trying to prove that and they are involving NOAA in that process.

MR. SZABADOS: Mike Szabados. The Army Corps is working very closely right now with NOAA and actually has given guidance to its organization to follow NOAA's standards for geodetic and water levels. By the way, it was 1.58.

DR. LAPINE: Lou Lapine. I'm not throwing stones at either one of you, I'm concerned that you're not given enough resources to prevent something like this from happening in the future.

MR. ZIKLOSKI: And you have the right to say that.

CAPT BARNUM: And that's certainly what we talked about yesterday in taking a regional approach to a height modernization. Any other questions?

MS. DICKINSON: Elaine Dickinson.

What's going on with '07? I understand -- I mean is that impacting your operations since the '07 budget has not actually ever been passed?

CAPT BARNUM: Well, we got final CR for the year and it was a very interesting year in how the funding came to NOAA. Basically it was '06 enacted without earmarks. So internally the NOAA money was appropriated and that money was divided up if you will and is being vetted with the department and I believe also the Hill. I have yet to see any final numbers. It's going to be a challenge to get the money out to spend the money in the next six months or less.

RADM WEST: Let me spend a couple minutes on NOAA's budget. I think it's very important to understand the dynamics of NOAA's budget because it flows down to what we're concerned with here. Lou brings up a very good point, you have to remember this is the difference between what the president submits and what Congress gives him. That's a huge difference.

When you have about a quarter to a third of your budget earmarked historically, if you don't have a champion on the Hill to protect that it goes away. Two years ago we found that out in spades when all of a sudden we had a huge cut to NOAA's budget because there was no protection for the earmark process affecting NOAA's budget. That's when Senator Hollins retired. The last two years there has been a discrepancy of even a billion dollars between the House and the Senate marked on NOAA's budget. I mean I think you've heard me say this before, that's alarming, absolutely alarming for a mission central agency like NOAA.

So what you're seeing is the difference between what the president thinks they ought to get and what Congress says you ought to get, and intermixed in all this is the earmark process. And now there's a lot of things going on on the Hill, but these earmarks are going to be severely restricted from now on. They will never go away, but they're going to be severely restricted and

there will be some rules for how you get earmarks from now on. With the CR OMB told everybody, including NOAA, not to include earmarks. Well, that's easier said than done. If you send it over without it in your budget you're liable to be over there in front of somebody very important. So some of them will survive and that will be in the '07 spending plan. Is it on the Hill now? Did somebody tell me that, NOAA's budget? All right. So there will be some earmarks but a lot of them will be gone. And in the future a lot of them will be gone.

So this huge thing between what Congress says NOAA will have and what the present administration thinks they ought to have is certainly going to be a problem for us.

If you go back a couple of columns, let's talk specifically about your NAV services for example. Can you go back to that one?

CAPT BARNUM: Sure.

RADM WEST: The columns there, this is a

problem. You can see the difference between what's been submitted and what's enacted. So a lot of that has been the earmark process and a lot of mission-essential stuff done by NOAA has been in the earmarked, which is absolutely amazing. Some of the hydro services stuff is in there. So we've gotta do something to get rid of all that.

The CR is an opportunity for NOAA to submit a spend plan this year to roll up some of these earmarks into large important national programs, not individual earmarks. And I'm not going to get into it because it's a talk later but I do want to talk to you about the initiative of the Ocean Observing System, which for the very first time we have a line in the budget, I think Roger pointed it out, of $16 million to start to roll up all these earmarks into something that's important. That should be of concern to us here in the hydro services because hydro services are in fact supporting the Ocean Observing System.

At some point this nation will invest a

billion to a billion and a half a year to observe the ocean and report the data forecasts, et cetera, et cetera. Right now they spend a billion dollars on the Weather Service. As Connie said yesterday, people will be up in arms if they didn't see their weather report in the morning. They don't quite know where it comes from. It does come from NOAA. You brought up the weather service, everybody loves it. Not everybody loves the ocean stuff, they don't know anything about it. That's why I said yesterday NOAA has to, and Commerce too, get the words out how important NOAA is so that will help the other pieces of NOAA.

Anyway, that the kind of differences in the budget, we've got a huge problem. We've got to resolve it together. It flows all the way down to every part of NOAA, what the president submits and what Congress eventually gives you. The whole dynamics of earmarks now as a result of the scandals over the last couple of years is going to play another part in all this stuff. So that's

kind of the budget dilemma that NOAA has.

I'll keep my comments on IOOS until Zdenka gets here because I think that is really fundamental to hydro services too because it's clearly part of it. I want to see -- they put money in, and maybe Andy will talk about what's involved in mapping, I was absolutely amazed when I was up to his place how sophisticated -- well, we were all there a couple years ago. That was amazing. It's going to be a huge amount of money and effort. But why map it? Because we can't take our data to the UN and say this is our area because we haven't acceded to Law of the Sea. So where is your money on mapping it? It's going to take a long time. We should get started on it. But we have not acceded to Law of the Sea. We're the last nation in the world that has not acceded to Law of the Sea, which I find amazing. Another issue that's very, very important to NOAA and where they go.

Anyways, some comments on the budget.

CHAIRMAN RAINEY: I have a question. Given everything you laid out and Admiral West talked about, what's happening internally within NOAA at the program, the line office level as far as being able to try to look at, I don't know if you call it contingency planning, but we had a number of briefings on the PPB process. Within that system or process is there a way to manage your programs when you have this kind of disruption sort of in the expectation or the timing and flow of the budget? Is there a way you can look at your operational programs to kind of optimize and prioritize? I guess I'm interested in how you manage it.

It strikes me that all the briefings we had over the years, there's a tremendous amount of high priority missions going on, but we're always coming under where we would like to be to get to the hundred percent requirements. I'm wondering how you kind of suboptimize on a recurring basis or when you have an acute situation like this and how

those decisions are made in the NOAA structure.

CAPT BARNUM: Certainly it was a setback for us because '06 enacted versus what we were requesting, we were requesting additional monies for additional NRTs and that wasn't in the '06 budget, so. But using our model for pushing forward we have a plan, we're trying to push the money the best we can to continue to try to push forward. Certainly for this year there will not be NRTs 7 and 8. So we'll try again for '08.

CHAIRMAN RAINEY: Well, there are so many different ways to slice it I guess. But is there an emphasis to balance across the cross-cutting or the mission goals? In other words, I saw the ecosystem plus Commerce/Transportation. Is there a multi-balancing going on or is it programmatic or does it just kind to go up to a certain person and they sort it out? I'm wondering how, what the balancing and judgment, how you kind of -- on a little bit bigger scale than the NRT, is there a sort of a system in place to kind of

evaluate I guess various priorities?

CAPT BARNUM: Well, certainly in the chief financial office of NOAA they look at current events, current bills, some things may have popped up in the past year that we didn't expect. Satellites for one. They're certainly a big ticket item and compared certainly to what is spent for Marine Navigation Services.

But yes, there is a process that they attempt to work with OMB and the department and others that have a stake in the process of what the final spending plan is.

Certainly in the priority-setting process, we go through stakeholder input and certainly the report you delivered yesterday would be a factor in how we set those priorities.

CHAIRMAN RAINEY: Thank you. If I could ask you one other question. The evolution of the IOOS project -- the other thing I'm interested in understanding a little more about is the Integrated Ocean and Coastal Mapping. I've taken a look at

the bills and such. Is that going to be funded or what's the scale, what's the expected or anticipated impact to your programs with that initiative as it rolls out? Is that additional responsibilities or is it just another way to look at what you already are doing?

CAPT BARNUM: Well, it's certainly, as I mentioned earlier, cooperating with other mapping entities, whether it be private, collecting data that we could take and apply to the charts, or even with NOAA within other agencies. So it's trying to make use of -- the term map one is used many times. Certainly the standards we have for nautical charting are set because of the liability issues and making sure that we don't discriminate between noise, what's a danger of navigation, which may not be important to somebody doing habitat mapping, but it will be a resource issue. It's not that we can take the data and be able to put it in our existing process, we need the capability to adjust the data into our system, so yes, it will require resources.

CHAIRMAN RAINEY: And that is separate from the IOOS or that would be part of?

CAPT BARNUM: It's really kind of a separate issue.

CHAIRMAN RAINEY: Thanks very much.

MS. DICKINSON: Elaine Dickinson. In one of the '07 budget versions ENC conversion I think was essentially zeroed out. Is that work still going forward regardless?

CAPT BARNUM: It is. We had requested 6 million in '06 and got 4, so it slowed or impeded our progress for moving forward with the ENCs, it was certainly a disappointment. Again as was mentioned yesterday, by 2010 our goal is to get these ENCs in place because the Coast Guard is getting ready to promulgate regulations for the territory on ENCs, so we're still fighting an uphill battle to try to get that done. It slowed our progress.

Any other questions? Okay. Well, I certainly will be here. Thank you very much.

CHAIRMAN RAINEY: Thanks, Steve. Next briefing is Richard Edwing to talk us about the Hydrography Major Project. Richard Edwing is deputy director for CO-OPS, the Center for Operational Oceanographic Products and Services of NOAA and the project manager for the Hydrographic Major Project.

MR. EDWING: Thank you, Scott. Good morning, everyone. The presentation today is basically in three parts, a few slides on what this major project process is so you understand that and talk about where we are and the status of where we are in hydrography through this major project process and a last slide on some possible roles for this panel to participate in this process.

In late 2005 NOAA issued a new, what they call NOAA Administrative Order that kind of retooled their requirements and management process and as part of that process they established this major projects process. That process they had had in the past they put aside in the early 2000s and

as part of the retooling requirements process they brought it back and some of this has to do with bringing things up to date as well as helping them integrate better with the PBS process in recent years. So again, in late 2005 they established a process and at the same time identified 13 different major projects to start running through the process, which hydrography was one of them. That's a little table at the bottom cut out from the memorandum that was issued. And as a part of that process the NOAA councils have oversight of these projects and they have to appoint a project manager and I was asked to head this up.

So what makes a major project a major project? Well, it's high priority for NOAA, it's high profile, it's high visibility, it's important for many reasons and requires significant resources. The bottom line is they're making a major investment and want to make sure it's well-planned, well-executed and well-communicated throughout the organization. Of course it has to

follow all applicable government guidelines. Major projects should only be stood up by a deputy undersecretary and gets assigned to a council for review. Something called key decision points, and I'll explain those in another minute here.

Hydrography is assigned to the NOAA Ocean Council. Jack Dunnigan and Jim Bolsinger of the Fishery Service are the co-chairs of that, as well as they share oversight of the IOOS project. IOOS is also a major project.

So what are my responsibilities? I have to get a project team together, which cuts across a couple of different programs as well as four different line offices. NOAA Marine and Aviation Operations is the key player in our team obviously, they supply the vessels we use and some of the other assets. I have to be sure that we're addressing all the functional and operational requirements over the life cycle of this project. I have to be sure it satisfies the customer and NOAA, make sure I'm communicating the status of

this project to everyone that needs to know about, and schedule these key decision point reviews.

All right. The process itself is divided up into four steps called key decision points. At the end of each one of these I have to do briefings and get approval, which each KDP gets endorsed by the council, they can't approve it, they endorse it, and then I have to take that endorsed briefing to the NOAA executive panel, which is made up of the DAAs, the line office DAAs, and some other people, and they make a decision on whether to approve it or they may decide to send it up to the next, which is the DAA level panel for final approval.

So KDP 1 is a means of identification and definition, it's all about providing the context and the background. What is hydrography? Do we have good legislative mandates or some good requirements we can point to with confidence and say this is why we're doing it, this is why NOAA's doing it and not somebody else. These are our

chief customers, you know, the stakeholders, how does this fit into our strategic plan, what are the benefits of doing this.

A key element of this is identifying -- there's an assumption here in all of these that there's some sort of shortfall. Whatever level you resource now, you're trying to get to some other, you know, the full requirement. And there's a big gap there, a shortfall, so you have to identify that. You do a rough order of magnitude plus to get some sense of the scale of the cost you're looking at to get to this full requirement. Identify constraints, and you can see this is a very nice actual summary of the whole process, the road map I followed to deliver these KDPs.

The next one, KDP 2, is the real meat of this process. This is where you say okay, we've got a shortfall, how are we going to get from here to there, how are we going to get to be able to do all the hydrographic data acquisition that we need to do. That may be different paths to get there;

first we need to figure out what are the different paths, go through and do rigorous detailed cost schedule performance analyses, go through other steps here, but the key thing, the very bottom bullet here is called investment strategy. At the end of this we'll put forward to the council and up the chain the preferred path, what do we think is the best way to get from here to there. And it may get tweaked or changed or it may get sent back to the drawing board or whatever, but at the end of this process we're going to have an investment strategy which lays out the plan to get to the full requirement for hydrographic survey. And really the good thing about that is as we go through the budget processes that people were just talking about, everybody is going to be on the same page for how we get from here to there. Nobody can say any longer that gee, we're not going to give you funding for this because you're going about it the wrong way. The only reason they can help support this with some funding or resourcing is the high

priorities in the process. So at the end of KDP 2 we come up with this investment strategy and it gets approved hopefully, or it will at some point.

KDP 3 is just going back and doing some additional work on that, doing some further analyses just to make sure we got it all straight and forward just the execution. Each year we say we're going to do a certain level of activity, do we achieve that? Do we achieve it with the budget? This is the execution traffic for each year.

So that's really the process. Let me stop right there and ask you if there's any questions about the process. One thing that's a little unusual about hydrography in this process is that this process is mainly used for kind of new starts, big acquisition projects. You decide you need a new satellite or a new vessel or building or something like that, you're going to have discrete starts or stops. Hydrography, we've been doing for 200 years, so that's why a lot of this at the bottom, we've already been doing a lot of this

stuff at the bottom. That's to me, the KDP 2 is getting everybody to agree on that path forward. Let me stop and ask if there are any questions.

RADM WEST: Yeah, thanks. Most fundamentals of program management people's eyes glaze over. I think what would be better for the panel is if you could give us real world examples of how you use this to develop a hydro services contract program or however.

More important is how do you get external buy-in to these important programs? You mentioned that, but I can't figure out how you do that. You have a public session, whatever?

MR. EDWING: Well, that's part of why I'm here today, is to ask for your assistance.

RADM WEST: Okay, that's good. My next question is where does the FAC fit in, at what point do you bring it to the FAC, your hydro services Federal Advisory Committee, to take a look at what you're doing and get some expert advice? That should be probably in 2, right?

MR. EDWING: I agree. The last slide, let's talk and figure out how you guys --

RADM WEST: I suggest you do that. I haven't seen that since I've been here, I've been here for three years now. My recommendation to you is use the expertise this panel can provide as you develop these KDPs. That's my recommendation to you.

MR. EDWING: I fully agree with that. Any other questions on the process?

CHAIRMAN RAINEY: Could I ask a quick one? This looks to me like it's kind of answering my last question of how -- it seems to me if you go through this process at the end of the day and you're designated by the board or however you're explaining it there and you've got major project status, that seems to me you're first among equals in initiatives and I was wondering how many major projects are in NOS of the 13 that are existing right now? You mentioned IOOS and this one, which I assume is -- have you gone through the process,

is it designated or --

MR. EDWING: This has been designated as a major process.

CHAIRMAN RAINEY: This one is IOOS within -- you said --

MR. EDWING: IOOS is cross-cutting. We're working with them on a PBS system here, so I wouldn't say they're located in line offices.

CHAIRMAN RAINEY: Is there a possible answer? Are NOS-related like CO-OPS, Coast Survey folks involved?

MR. EDWING: I don't think there are any other NOS. There are no other NOS-centric major projects other than hydrography. IOOS cuts across all the line offices.

CHAIRMAN RAINEY: So like height mod or VDatum or NWLON and all the things we're talking about have not risen to, this is the one --

MR. EDWING: That's correct, but that does not mean that they won't be selected in the future. This is the first year standing this up

and we have 13 to run through and they're test driving the system this past year and there will be additional ones in the future.

CHAIRMAN RAINEY: Thanks a lot.

MR. EDWING: Any other questions on the process?

RADM WEST: I'd like to see the next time we get together you walk us through a specific project and how you did it particularly.

MR. EDWING: Sure, sure.

Okay. So this next part of the presentation is about where we're at in executing the hydrography major project.

We have completed key decision point 1, which again is all about establishing your requirements, make sure they're validated, scoping the project context, things I just spoke about. I did the briefing to the Ocean Council. It was endorsed. As part of that process they decided to establish a technical working group to provide some oversight for them, recognizing they didn't

necessarily have all the expertise around the table as well as the time to devote to this that really needed to be devoted. So Zdenka Willis is the chair of that technical oversight group. And KDP 1 has been presented to NOAA executive panel, at the time I submitted this presentation the approval was pending but they have since approved KDP 1, which authorized me in the process to move on to KDP 2.

At the end of this presentation, I believe it's in your books, I attached the KDP 1 briefing to the NOAA Ocean Council so you do have that for your reference. I'm not going to go through it.

RADM WEST: Sorry, I've been drinking coffee too long I guess. What I think would be more important to this panel is if you split the slide in half and actually follow through on the right what did you validate, et cetera, to walk us through to understand how you do your program management. Because this is kind of boilerplate stuff.

MR. EDWING: Yeah. In a half hour trying to cover what I'm trying to cover --

RADM WEST: My suggestion is get off the general regulations and walk us through how you do a decision process for a program. Something that's familiar to us and important to the Hydro Services Committee.

MR. EDWING: I'm going to get to that in KDP 2 and walk you through that in a more detailed level, because that's a key point where the FAC committee can step in and help provide input review.

RADM WEST: That's a good point. Your slide ought to say FAC committee, read the following and get back to me in 30 days what your recommendation is. Is that fair?

MR. EDWING: That's fair. At the end, the very end slide I wanted to have a discussion about how did you want to have interaction, so we can table that for a couple minutes, we'll get to that.

Just a few of the key things for KDP 1. This is a brand new project, we have to agree on these things up here such as the scope of the project, which is the 3.4 million square miles. We set an operational target of 510,000 square nautical miles, which falls at an annual target for 10,000 and we've got a major shortfall of 7,000 square nautical miles on an annual basis because we're only doing about 3,000 with the current resources. Part of that KDP was what's the scale of the dollars we're talking about here. We used kind of a mixed asset approach, we scaled up or ramped up I should say, contracts as well as some additional in-house capacity. And I think those numbers are in your presentation at the end. I'll just note that that's a generalized process, it's not in the president's budget or anything of that nature.

So how are we approaching KDP 2? The first thing to do is identify the alternatives, what are the paths that we're going work through to

get to the 10,000 square nautical miles? To do that we're going to take things that we do and break them down to the most basic building blocks. We acquire data through contracts, through in-house vessels, we manage data, we do tidal zoning. We've broken out what it takes to do hydrography down to these building blocks. And we're going to run those through some economic analysis and, after looking at that, try to put this back together and come up with this investment strategy. Pick the best one that's going to get us to the 10,000 for the agency.

So what are the alternatives? Kind of a foundational assumption here, this is something the FAC has already weighed in on, we need to maintain core expertise to provide proper oversight, so any alternative is going to start off with that basic assumption. One way to get from 3,000 to 10,000 is just ramp up contracts, do nothing else but ramp up contracts, that's one way to get there. Another way is do some sort of mix, ramp of contracts and

have some in-house capacity, that's another thing. And really something that we're going to overlay on top both those are technology infusion, a lot of potential efficiencies both in terms of just reducing costs and/or ending up with a better product by infusing technology. Our basic assumption is that will help move our in-house capacities as well as the private sector capacities forward in the same way. So we're going to look at that differently and overlay on top of those first two alternatives.

So those are the main three paths we're going look at to get to the 10,000 square nautical miles.

I talked about these building blocks. For each one of these things, such as acquiring hydrographic data with a contractor, in-house vessel or managing data, infusing technology, you have to say okay, for each one these things how much does it cost us to do that thing? When we do that thing, how many square nautical miles does

that produce? Because that's the unit that we're going to have to use to tie all this stuff together. Is there a schedule associated with how you roll something, how you project something forward like that? For all those building blocks we're going to have to document all the assumptions we're making, because nobody has crystal balls into the future, so we're going to have to make certain assumptions about providing the basis upon which we're making some of these projections.

I'll give you some more detail on the building blocks after I walk through the next couple of steps of the KDP process. Our guidelines for doing this is the economic analysis of using the U.S. Navy handbook, which has a lot of good information on major acquisitions. Circular A-76 provides all the guidance for direct costs, indirect costs. Looking at a five-year window, 2010 to 2014. Operational cost projections. NOAA is just starting its 2010 budget planning at this point in time. We're going to look at a longer

time window for the capital costs of any new vessel or major technology and things like that.

Again, technology infusion, there's lots of different technologies and different kinds of technology, sensor technology, positioning technology, data management technology, there's all sorts of technology we would have to look at, but we decided the way to handle all that and make it manageable is if there are things we see as being infused within that 2010 to 2014 time frame, we were fairly comfortable with the good cost numbers and good production numbers from those, we're going to include that in our building blocks. If there are things just over that horizon that are showing promise but we don't have really good costs on, really good production estimates on, we're going to identify those and use risk mitigation.

The same thing goes for IOCM, you heard from Steve's presentation, there's a lot going on there. How it all plays out is not real clear at this point. It's clearly going to have an impact

on what we're doing with hydrography but we can't quantify that, so again we're going to do some risk mitigation on our project plan and investment strategy to deal with that. And at the higher level, as Steve talked about, NOAA is looking at multi-mission vessels which go beyond a mapping mission, which also plays into that. Risk mitigation is associated with that.

So when we get through all that analysis and come up with a, come up with what we need to try to pick our investment strategy, some of the criteria we're going to use, it's got to be a cost effective strategy. It may not be the lowest cost one because there's other things to consider but it's got to be cost effective, it's got to be executable obviously. We can't ask for everything in the first year or there's no way it's executable. We have to minimize the risk of things. Things in the world are always changing, how do we mitigate some of those risks, technologies, that sort of thing, and of course we

have to maximize the support we are going to get for this from both internally and administrationally. How's Congress going to receive this? And the stakeholder support, which is again is where you play a key role as you represent that community.

That's kind of the four subcategories that I've broken down KDP 2 and that's how we're approaching to answer your question.

I'm going to back up a little bit and talk more in detail about the building blocks. Some of these we're calling direct data acquisition building blocks where we use contract services to acquire hydrographic data. Of course that can vary by survey type, survey location, depth, bottom type, those sorts of things, including sidescan, multibeam, LIDAR technologies and things like that. In acquisition we're including in-house data acquisition, the existing four vessels that we've dedicated to hydrology right now. Those have variable costs as well, different sizes vessels

have different costs. We need to maintain some level to maintain expertise. And we're looking at new vessels. Again, all sizes of new vessels that could be built to handle different complements of launches. Different variable costs of production. Right now NOAA is considering NOAA survey vessels, which are these multi-mission type vessels which we may get away from dedicated vessels. It's not clear how that's going to move forward at this point, so I have to do risk mitigation.

Technology infusion, another direct data acquisition. Some of the things we're looking at within that five-year window where you have some fairly good costs and scheduled performance estimates or AUVs and there's different flavors of those, there's salinity, multibeam, moving vessel profilers you can put on the main vessels that are continuously looking at the salinity and density of the water column that's needed to adjust soundings. Those are just some examples of things within the 2010 to 2014 time frame.

There's data acquisition support building blocks. There's the human capital that does all the survey planning, all the contract management, all the data management, as well as ITS has to go along with that. There's tide control process when you're doing tidal zoning or when you do a new data acquisition you need short-term tide gauging quite often. So you need to take a look at performance for all of those.

And of course human capital is always a large part of any project. We're doing kind of one main piece, which is what's the human capital component we need to really maintain core expertise as well as ramp up, whatever way we ramp up, how do we have to increase that. Of course each one of these building blocks may have a small human capital piece developed along with it because that's part of the cost of doing that piece. If you're going to be integrating AUVs you may have to ask people with special skills to maintain those, maintain and deploy the assets.

So that was a little bit more detailed look at KDP 2. Right now we're just at the building block stage, still gathering a lot of information. In some cases even at a building block level we have to look at some alternatives on how to project costs forward. There are different ways to go forward. As we drill down into some of these things we're finding some complexities we have to deal with. So we're really pretty early in the KDP 2 process.

As I pointed out in a couple places in this, the process requires external review for this to be communicated across all venues. HSRP has already done some work, we pulled up some of the recommendations and documents that HSRP's already generated and used that as some of our guidance for starting to stand this up.

I'm here to ask that you work with me on KDP 2 and I guess we can do it a couple of different ways depending on timing. When I'm ready to come back with a draft KDP 2 I can come to

another meeting like this or you guys can do a virtual review. Do you want to participate, how do you want to participate?

CHAIRMAN RAINEY: Maybe this is a good time to ask a question. At first I think I misunderstood. So you don't have to go to be -- you've achieved you said the designation for a major project.

MR. EDWING: That's correct.

CHAIRMAN RAINEY: I thought that meant that you've gone through the whole process. So to be designated you only have to show sort of the steps, you have to kind of commit and persuade folks up the chain that you're going to complete the process, you've completed KDP 1 and then that was enough to say okay, that looks like a meritorious project, we're going to designate it and go forward?

MR. EDWING: It's designated up front by virtue of NOAA's making a significant investment.

CHAIRMAN RAINEY: You must have, I'm

going to call it a business plan, but you must have to submit something to persuade the panel that this -- there's only 13 in all NOAA. There's got to be something, there have been some answers to all these questions up front, otherwise how are you going to persuade somebody they want to give it the designation.

For example, one of the first things is define the need. What is the problem statement or what's the gap or the need, is that something you could share with us or how you define that? I'm kind of wondering where the answers are in the process. I'm understanding you're now in KDP 2, but I really would be interested in kind of what the main answers or assumptions are that got the project designated, that approved it through the board and then where we are, where we can help. Does that make sense?

MR. ZIKLOSKI: Rich, why don't you explain the process, in terms of how the 13 were established, because -- in the future what you're

saying is exactly what would happen. Somebody would have to convince NOAA. They look through what we've done in the history and say this is a major project because of how much effort we're putting into it. It's already established that we're doing it, so we're trying to fit some existing programs we're doing into this system so that in the future new programs would do that, but these are existing. Rich didn't go and ask -- they said we have these 13 major projects.

CAPT BARNUM: Ultimately the dollars put it in the category of a major project. So when they looked at these initial projects, 13 qualified for lack of a better word to be hydrographic major projects because of the dollar value associated with it. So NOAA is looking at these high dollar projects and wants to make sure they're executed properly so basically giving hydrography high visibility within the organization?

MR. EDWING: Right. These are all existing projects that we're kind of circling back

and filling in some of the paperwork now if you will for those. In the future if they would consider a major new project, a new satellite, some new building, then you have to establish what are the requirements. You'd have to go through this KDP 1. If you don't pass that you're not going to move forward with that project.

CHAIRMAN RAINEY: Adam.

MR. MCBRIDE: Is there some question of whether hydrography is a major project and are we in fact taking a project or an actual process, a core process that we've been doing for hundreds of years and backing it into some new process and what effect is that going to have in terms of what you actually do, what consequences, are we changing hydrography by telling some ocean panel what that involves? I have no idea why we're doing this. Basic question.

MR. EDWING: It puts this project under a high level of review. I mean at the end of this we have approved all the way up to the vice admiral

level an investment strategy. Right now across NOAA you can put forward projects and pitch them through the PBS process, but those aren't bought into across the board. Through the major project process, this gets flying across the board, all the NOAA line offices from NOAA budget office, from all of the different elements --

MR. MCBRIDE: Is NOAA not already committed to hydrography?

MR. EDWING: It is. But they're spending a lot of money on this and they want to make sure it's planned and executed to the highest degree available. And it's a process that helps ensure it and document it. So it may be we might change how we do business or it may be we're just going to validate that the way we are doing it and have been doing is the best way possible forward. I don't know the answer to that right now until we get through this process.

RADM WEST: Probably should have started the whole lecture, I'm sorry, presentation by what

you just said, you are trying to put some structure into where there wasn't structure before. The PBS system, you don't want to go there. It's a DOD thing where you actually go to school before you take a staff position, so it's that complicated, they're trying to put some program management structure into NOAA, which is important, because, quite frankly, in the past programs have been done, stovepipe, in places around, they're trying to put this across the budget process and get involved and I totally support what you're doing.

The problem is you're confusing the advisory committee. We're there to help you with hydrography and hydro services and we're getting confused. What you've just said is they're trying to put some management structure into regional programs. Most federal agencies have requirements for designation of major programs, usually it's cost, the number of pubic money put into it, could be life support systems or public interest or whatever, but we should see from you what your

criteria is in NOAA for a major program and then show what you're trying to put hydrography into that, but more important take advantage of the expertise that you have in this committee that's called an advisory committee for a good reason, to advise you. KP whatever it was, 2, you were trying to look at the technologies for the five year, whatever it was, from '10 to '14. Bring it to this group. I know there's a lot of expertise here in this. At what time do you bring that to this group? That's what we want to hear. Anyway --

MR. EDWING: I'm here to work with you on how you want to interact in this process.

RADM WEST: I'm on a roll. Don't just say what can you do for me, tell us what you want. In 60 days, 90 days or my next milestone is November, I need the input on this. Mr. Chairman, co-chair, can I get a subcommittee to work with me, whatever you want. This goes for some of the questions from yesterday. I mean I got glazed over and they said we need you to help us. Help you do

what? Let us know. Everybody's busy, they're all going to leave and go back to their job. We've got a lot of expertise in this committee and you're not using it. Didn't mean to stop. I'm running on empty, appropriation letters are due tomorrow morning.

MR. EDWING: I'll be glad to come back. I can look and see what steps would be appropriate to send material to the committee for you. Sending stuff sometimes doesn't work very well for virtual reviews.

RADM WEST: I think what you should do is give it to our chairman and the co-chairman and we'll decide how to best get that back to you. Give us some time lines and questions related to it, we'll either do it or won't do it, one of the two.

CHAIRMAN RAINEY: I guess that's where I was kind of going. It had gone through the first step, so there has been a problem statement or the need that's been defined and I think that would be

a great place to start if we knew what NOAA thought. We presented our report. I guess, you know, I've had a lot a talk with the members and things and I think we've come a long way, in some cases just speaking generally I think our experience is we're running on parallel tracks and trying to stay relevant but it's taken a lot of effort sometimes to try to get our phasing right or whatever. So the more kind of focused, if everybody knows what we can do and the timing of it, that will help us tremendously and be on point. I think our report is good that we delivered yesterday. If we kind of know where you guys are, I realize you're doing a million different things, but if we can focus our problem statement down to something we can get our hands on and get back to you it would be a good idea. I guess if we knew what NOAA thinks the need is and the requirements and then where the different, you know, where we would be useful to provide some input or validation or comment on the submissions of the different way

points as you go through the process with some lead times so we can respond. We can't turn it around in a day. It's been a difficult thing, the HSIA, it was too early to comment and then too late to comment. We're getting caught between the switches continuously. So maybe with the major projects as that process ramps up might be another process --

MR. ARMSTRONG: Andy Armstrong. Rich, I think what you're seeing here is a little indication of the fact that the panel's a bit stunned that this is going on. We're already through the first step. The panel has been working on lots of advice and it's just now hearing about this project.

MR. DASLER: Jon Dasler. I guess I want to get some clarification. It sound likes we're talking about reestablishing the basic groundwork for why NOAA is doing hydrography and we're seeing a lot of good budget issues, as Lou pointed out, NOS dropped 122 million from '06 and the National Weather Service is up 82 million, and this seems

like a real opportunity -- I'm assuming once you get buy-in, the jump to 10,000 square nautical miles per year and what is all put into this, that that could increase the base. Is that just a logical follow-on? This then is a pretty major component of the existence of Coast Surveying and those operations, yeah, I guess I'm surprised we're just hearing about this now. It seems like a pretty involved effort that really hinges on a lot of the core hydrographic components and what NOAA is doing.

MR. EDWING: Point taken, Andy. There's a couple of reasons. Again, this is a brand new process. There have been some pickups this past year, we're really reluctant to kind of take it out on the road yet. For all these projects I think the satellite, one of the satellites, it's not that NOAA is going to decide not to go forward with satellites, but what they're saying is just want to be sure we've crossed all the Ts and dotted all the Is as far as filing the paperwork if you will to

make sure we've documented the requirements properly. This is -- I see KDP 1 as catching us up to where we are today. A lot of this is a look at work that this group had done and put up on its website as far as looking at hydrography and the core expertise and things of that nature. So yes, we're coming to you for that direct, I guess oral interaction, but we were using the work that you've done to get to this point, but this is the point that's really important, is now how do we move forward. That's where I think you play a very valuable role. I'll work with Scott and whoever else you'd like to designate to look at our varying schedules and other things and just try to see how to mesh, how both of these, your process and my process are working so that you can play a role in this and decide if you want to play a role in this.

MR. ZIKLOSKI: What Dick said is what I tried to document in your Tab L in the very back after my presentation. I had an issue that I got tasked on, what I wanted you to do from that

standpoint, I'm curious if that's what you're talking about, a date specific like that. I don't know if it's clear or not, but in the very back of my presentation, this is something that if this is what we ought to start -- we don't need to talk about it now, but from the committee, the group, if this is enough guidance, then this is good. If not then we kind of tweak how we do this task so that we give you enough information and maybe go back and forth. But then someone like Rich could come in and say yeah, here's what it is and I'll follow this format.

RADM WEST: There's lots of specifics, I think you want the Federal Advisory Committee to endorse your major program structure. In order to do that or get me to sign up, I'll sign up on the oversight, but as far as the ten-year survey and square miles, I know Jon and Andy can give you that expertise, but we've got to have something to go by.

CHAIRMAN RAINEY: I don't know, maybe

you can answer this either way, but do you have or could you paraphrase how NOAA came out on the need, the statement of need or purpose, or if you don't have that, I don't know if you had a chance to see our preliminary final report, was that consistent with NOAA's statement or purpose of need for this major project? I just would love to know how you framed it because that really drives what, you know, to me, everything else and what that sort of proposition is at the outset. KDP 1, what is the need description?

MR. EDWING: Well, that's what's at the back here with a description of what is hydrography so people have an understanding, and there's a description of why you need to know what the depth is, because otherwise ships will hit that bottom and bad things will happen.

CHAIRMAN RAINEY: I mean to the extent of what's the shortfall, right?

MR. EDWING: There's the need and there's the requirement. Steps through some other

things. Here's where we get into the 3.4 million square nautical miles, we set an operational target of approximately 500,000, out of that falls the 10,000 annual requirement. That's all covered in this, this was the presentation.

CHAIRMAN RAINEY: Was it refined to the point where you had a projected timetable, at some point you want to get to there? I'm just kind of wondering how defined this thing is. I know the problem is you're not controlling the resources you have to put into it and just maybe project some technological efficiencies and some other things. I just kind of --

MR. EDWING: Some of what you're saying is what we're trying to figure out in KDP 2; how are you going to get there and how much of that cost are you resourced at that level, so we're trying to figure out what's the best how, you know, how that will fall into some of those other answers.

RADM WEST: I guess the question I have

for NOAA, I think it's good it's been designated a program of significance, but I don't know what that means, does that mean when the money goes down that they're the first to be fed or what does it mean?

MR. EDWING: It means -- you asked what are the criteria --

RADM WEST: It's important but what does important mean? Is it 12 or 13?

MR. EDWING: There's 13.

RADM WEST: 13. Well, that's good, I think hydrography ought to be a major project, but what does that mean, more oversight, does it get more money, when money goes down is it first to be upheld and the minor programs get it next? What does that mean?

MR. EDWING: It's going to improve its chances to get more funding, not to be a bulletproof vest against cuts, those are happening for whatever reason, but it's going improve its chances to get funding. We now have an investment strategy right up to the highest level of NOAA

endorsed by the vice admiral himself through the process. Nobody can throw rocks at it and say you're going about it the wrong way because NOAA has decided we're going to do it. I can also tell you the OMB examiner is very interested in this. So this will pay dividends not just within NOAA but pay dividends to DOC and this is a hammer we can use.

RADM WEST: Absolutely correct, and that's why you put good program management in place, so you get credibility up the line. In order to keep it, sustain it, you've got to be able to show that it is a major program and you're supporting it that way. That's the key. Next year it falls down and loses money, you lose all your credibility.

MR. DASLER: Along those lines, my question back to you, to me it seems like a pretty key process, are you getting the resources to do this? Seems like this really could drive the future of hydrography.

MR. EDWING: You're right. This is an in-house effort. I'm gotten very good cooperation, collaboration from across different NOS programs that are on the team as well as OMAO. It's not going as fast as I'd like. This is a fairly select group of people who have the skills to do this and they're tasked with other things, this isn't the only thing we're all doing, so it's not going as quickly as we'd like, but it's moving forward.

CHAIRMAN RAINEY: Thanks for all this interaction, this really helps us catch up with the focus. One of the things I wanted to ask you when you were showing through the different slides, what we have up there is the area of course. I want to ask just one other thing. In the scope of this then, when you were looking at the various alternatives and such, you looked at the in-house and contracting and the combination. What my question is is under this umbrella of this major project status, would this subsume or would this include the fleet recapitalization, would this

include not only the surveying side but through the pipeline to, you know, mapping and charting and then dissemination of the project? Would the ENC project fall under the umbrella of the hydrographic, this major project or is this simply on the survey side?

MR. EDWING: It's mainly on the acquisition side. There had to be some bounds drawn someplace, this is mainly on the acquisition side. All the data management is in there, which is a big part of it.

CHAIRMAN RAINEY: To me that, the immediate flag I would see with that is if we keep putting on that side of the equation, on the acquisition side, and say we're successful, which would be a good thing, but at the end of the day you want to get it out of the can, process it into your end user, and if there isn't some balancing, if we super prioritize the acquisition side I think we're already in a state where we've got to equalize a little bit across that whole process

because you want to have a place for that data to go. So I don't know whether there's a scoping adjustment or if that's been thought through. Is that a concern?

MR. EDWING: Yes. I appreciate your concerns and in some respects I don't disagree with them, but we did think that through and drew the lines with care. We did not include production of the nautical chart for a couple of reasons. One is there's a lot of other things going into making a nautical chart, there's shoreline and things of that. Do we start including that? And for tide support --

CHAIRMAN RAINEY: It seems it would be ironic to go through all this and put a huge effort in it and have the ENC just crash, just be stuck. It wouldn't include the rationalization of the processes and the one digital process, this is really focused then on just the surveying side of this.

MR. EDWING: And that's why we

purposefully included the data management processes between the hydro acquisition and the nautical charts so that's where the major ramp-up is. As you know, multibeams use such huge amounts of data, so we are capturing the requirements to manage processed quality control, those data before they get to the nautical charts, so we believe we've dealt with that problem.

RADM WEST: I think you're getting good advice from the committee already. Can you back up one slide please? Which one defines what hydrography is? Okay. I read this as hydrography is a major project in NOAA, covers everything, but what you just said in response to Scott was it does not. And that's a problem I think because, like I said, some of it, not all of it, then it's not successful. So I think you've got a little bit of a problem here in how you defined hydrography as a major project.

MR. EDWING: Some of it goes back to the DUS designation where there's a dollar amount there

that includes certain things and I was bound by those. And we looked at that. We didn't say yeah, we're going to just blindly accept that and again for some of the reasons I just went through we took the balance.

MR. ZIKLOSKI: Wouldn't that be part of the function of this panel? To me that's part of what --

CHAIRMAN RAINEY: We think so, but we've got to know what's going on. We're smart but --

MR. ZIKLOSKI: I understand. Just a little bit. One of the many processes in NOAA we're trying to improve. Part of what I would say when we come here and Rich does something like this, we'll get better as we move on. But for now what you just said is an important aspect, we need to make sure it comes back to us, we should take that message back, do we change this major project or look and see how this major project should be linked to other ones so there's some way of making sure there is one, and I think there would be-- my

point is it gives credibility to Rich. If it comes from this board saying hey, we heard about your major project, here's your KDP 1, should it come here prior to going to the council and so forth to get some advice, that's true, but that's already passed. But still, taking that back is some good message he can use to think how it incorporates it. From now on we figure KDP 2 as he's gone through, he ought to have some sub working group here as he's putting the material together that he runs it back and forth, not the whole committee but a working group to say here, I'm going to get these ideas to you and get your comments as I'm building it and come to you prior to doing it. So that's what I would say the role of the panel would be.

DR. LAPINE: Rich, I have a problem with that definition of hydrography. You can't do hydrograph without tide and you really can't define the zero fathom curve without shoreline. So I don't think that is a good definition of hydrography.

MR. EDWING: The shoreline goes on the chart.

DR. LAPINE: And while we're talking about that, the need isn't to make a nautical chart. If that's our need, we're going to go from number 13 to zero. Our need is to prevent ships from running aground. The need isn't to feed data to a piece of paper or electronic chart.

MR. EDWING: I think you're getting to this.

DR. LAPINE: It's not compelling. I wouldn't buy it. You need to go out there and collect some soundings so you can make a chart? So what if I don't make a chart? What's the consequences of not having a chart? I think that's the need, not to fill a database full of numbers. So that worries me. And if I'm going to be under the scrutiny of the administrator, I'm going to want to have a more compelling case for why I need to do hydrography and I think it's a serious mistake to leave out tide and shoreline.

MR. EDWING: Tides was not left out, that's in there. The shoreline was left out. It was outside the bounds because it feeds into the chart in parallel with the hydrographic data acquisition.

DR. LAPINE: If we form a subcommittee and I'm on that subcommittee I guarantee you we're going to recommend that shoreline be part of the definition of hydrography.

MR. SKINNER: Tom Skinner. I just wanted to make sort of a general comment. This is directed more to Captain Barnum. Something that Admiral West mentioned was very important for future briefings, we've had a lot of very good briefings from NOAA folks to bring us up to speed but I think it's important in the future to frame all the future briefings with what does NOAA recommend we do with the information we're about to receive and be able to start by saying, you know, there is a role that the FAC can play on this particular issue, here's what we think the role is,

let us give you some background on where we are or what the issues are and then sort of frame the issue for us to then do something with the information. I think we're at the point where we have the background information, the general good knowledge of what hydrographic services are, but in the future it would really help to focus on what we do with that information, to have that up front.

CHAIRMAN RAINEY: Would it be acceptable if we get a group -- we've got some time this afternoon where we're going to be looking at going ahead. This is certainly something of huge interest to us and it sounds like it's a positive step in getting the management and oversight in there. If we get a working group or some folks that are interested, we have a couple things, fleet recapitalization and there may be a couple others that come out of the meeting, but this one will sure be a high priority for us. It seems to me it's exactly what we're stood up to help with. If we can get a working group together and work

closely on where you are in that process and then how to best gauge moving forward. Like you said, I hope that the work we've been doing, you've been able to benefit from that or use that from the recommendations and I hope our report's helpful as well. Would that be an acceptable way? We'll get a group of folks who'd be willing to work with us on that and kind of be our team on that and we can kind of work with you to help frame it where you think we can put to best effect.

MR. EDWING: Certainly, I'll be glad to work with you on that. If that approach doesn't work we'll find a different approach. The key group has to weigh in on this, we have to find a way.

CHAIRMAN RAINEY: Again kind of in the fog of working with the budget this year, once you get this designation, does it last on and on and the agency commits to it or do you have checkpoints where you can lose the designation? Is there anything between now and the end of the fiscal year

that you would see you'd need from the panel? Is there any near term input or interaction?

MR. EDWING: The first chance of this to have any impact is going to be 2010, because that's where we're starting to plan this investment strategy. That's where NOAA is in its current planning process. This fiscal year is not particularly relevant to this. It's more just what's the schedule we're going to try to move forward on and how does that match up with your request.

MR. ZIKLOSKI: One thing, Rich, what's your best guess that you're going to try to have your KDP 2 done?

MR. EDWING: I want to have it done hopefully by the end of this fiscal year.

MR. ZIKLOSKI: To me that's what he's asking, what can they do and what can you do to get some of the information from the committee so they have input into your KDP 2, which is what you want, and it should go through the NOAA process much

better if you get the input of these experts. Clearly you can turn around and say they had input into it when you get pushed back to some of your things back at the office, so that's what I would look at. I think that's what you were trying to get at.

MR. EDWING: We're trying to, shooting to get KDP 2 at least ready for presentation before the end of this fiscal year.

CHAIRMAN RAINEY: Well, I would suggest maybe if we could then, maybe we can get together and get a group of volunteers here, maybe everybody will want to be on it, this afternoon. Maybe our first step would be to look at where you are on how to deliver that and give us some specific focus questions or help frame it and we'll get that to the group and see if we can get back to you on that in a time frame.

MR. EDWING: Thank you. Anything further?

CHAIRMAN RAINEY: Thanks a lot.

Okay, we'll do one more presentation and then we'll take a break. It's a pleasure to have Captain Parsons back with us and we sure appreciate all his help and leadership as our designated federal officer and he's going to talk with us about the fleet recapitalization study with the Office of Marine and Aviation Operations.

CAPT PARSONS: Good morning. Again my name is Roger Parsons. It's good to see a lot of you -- all of you.

CHAIRMAN RAINEY: Appreciate your honesty, sir.

CAPT PARSONS: I know the hardest job in this room is the gentleman trying to keep track of what everybody's saying, so let me know if I'm speaking a little too fast.

I'm with a company called BMT Designers and Planners under contract to the Office of Marine and Aviation Operations. What I have been asked to do is to develop a ship recapitalization plan, and this is an important issue. It follows fairly

closely with what Rich and others are doing in major projects in NOAA. Although we're answering the mail from the Hill, back in 2005 the Appropriations Conference Report requested that NOAA develop a ship and aircraft modernization plan. It was realized that NOAA ships and contract vessels were important to meeting the data acquisition needs of NOAA. But truth be known, NOAA has never had a comprehensive investment strategy for maintaining a fleet. NOAA has a fleet of 19 ships, average age of about 28 years. That's down considerably from where it was a couple years ago. But the Hill realized that the maintenance of a fleet and the acquisition of ships was not due, over the last five or seven years due to some comprehensive strategy that NOAA had. We, NOAA had acquired T-AGOS vessels, seven of them right now, because these vessels became available, and it was fortunate that they had, to replace aging ships. NOAA built the RONALD H. BROWN by coming onto the end of the Navy contract, reeled in three previous

ones. The old GUYANA 64 (phonetic), another T-AGOS vessel, was acquired and funded for conversion because of an earmark. The SWATH vessel will be under construction soon because of an earmark. So the Hill was concerned that the method that NOAA was going about to maintaining a fleet was not comprehensive enough or was not a smart business practice and they needed to develop a comprehensive investment strategy. Certainly nobody can argue with that.

NOAA over the years has developed a number of port modernization plans, a number of requirement documents that attempted to define the needs of the organization and the needs of supporting them with infrastructure in terms of ships, satellite, aircraft and so forth. Only a very few of these plans, if you will, have made it through the organization and have gone to the Hill. So there is not something to educate the authorizers, to educate the appropriators as to why there's a need for aircraft, a need for ships to

satisfy at-sea data acquisition. It's more than just ships are getting old, it's more than just NOAA has requested nearly 20,000 operating days to satisfy their missions. It's got to be something more than that, it's got to be a process that lays out why we do, why what NOAA does is important, what the impacts of not doing it are and how we can meet those needs.

So back in early 2006 NOAA submitted a plan, it did not make it through the organization. NOAA came to BMT and asked if we could take a look at the best way to go about developing this comprehensive plan.

NOAA is late on answering mail. I'll talk to you a little bit about the schedule that was set out. We're going to approach this in two parts. One is a ship capitalization plan, the other is an aircraft recapitalization plan. And I'll describe the ship plan in terms of three major parts. The recapitalization plan, an interim study to address fishery surveys vessels 5 and 6 and then

the eventual report to Congress. What I will be asking the Federal Advisory Committee to do is two things; one, take a look at the approach we're taking, does it make sense as I was describing. Two, the draft recapitalization plan, our goal is to have it completed in September. We want this committee to take a look at it. Again, as you see what I described, this is not a plan for building ships. This is plan for describing the needs and requirements and the optimization of some mixture of governmental assets and contractor assets, and we need your feedback because you are a diverse group, we have hydrographers, we have coastal zone managers, we have vessel operators. It's important to get that feedback and get your perspective on what we're doing.

So there are primarily four major components of the recapitalization plan development. One is the mission needs assessment, the next is requirements development, then an analysis of alternatives, then an optimization

analysis. While we're developing these, what is not being developed is standalone documents, they're components of the overall capitalization plan. I'll discuss each one of those as we go through it. We started this process in January. The end goal is in October to report to Congress and in October the recapitalization plan and its completion.

So what do we mean by a mission needs assessment? We need to define NOAA's missions in terms of those programs that have a requirement for at-sea data. We're asking the programs -- and of the 46 NOAA programs there are roughly 17 of them that have current at-sea data requirements and an additional three or four that will have future requirements. We're looking at the period from FY '09 to FY '24, a 15-year period. What are the needs, what are the future needs of NOAA and how do we satisfy those. We're not defining the mission needs in terms of ships, we're asking programs forget about ships, forget about aircraft, forget

about satellites, what is it that you do, what are the requirements of your program, what are the shortfalls, and I think Lou had a good point there. What we're asking, we'll be describing the shortfalls in capability, not in terms of we don't have enough days, we don't have enough plane hours, but what are the socioeconomic impacts of not being able to satisfy each mission. Hydrography, MTS, a 10,000 square nautical mile goal currently acquiring 3,000 square nautical miles a year with a 7,000-mile gap, what does that mean? What are the socioeconomic impacts of not closing that gap? What are the benefits of closing that gap? As easy as that sounds, it is difficult for NOAA, many of the programs, to define it, and that's what we're working with them to define.

Marine echo systems has a hundred percent capability or requirement to assess X number of fishery stocks, they're only being able to assess a small percent of them. What is the impact of not collecting the data needed to meet

their hundred percent capability? So we're defining those currently.

The justifications important to tie in to the socioeconomic impacts is important. This organization has for too long just equated requirements with days, and we want to get away with that. So we're not looking at the mission needs in any way shape or form in terms of the system that is needed to satisfy those needs.

The next step will be in the requirements development. We will translate missions into high level operational requirements. A number of the modernization plans and other requirement studies that have been done over the past in NOAA drilled down too low in terms of we need a ship with this many square feet putting out this much horsepower. We're staying away from that in here. We want to take a look at a higher level, a broader perspective on what the operational requirements are, what the mission profiles are, where do you need to operate, what time of year do

you need to operate. I think what we will find, without jumping to any conclusions yet because this is early in the process, we're going to find that many programs have similar mission needs and can be satisfied -- or similar requirements for at-sea data acquisition. We want to define those in terms of goals and thresholds, optimization of generally what type of system is needed to satisfy your mission needs. And this is the process by which we will say can we satisfy them with aircraft assets, can we satisfy them with space-based assets or do they need to be satisfied with ship-based assets? So we're drilling down as we go.

Perhaps the next two steps are the most important part of this recapitalization study. The first is an analysis of alternatives, what are the potential solutions for satisfying these data acquisition needs. If we determine that ships, and most people suspect that a majority of the data acquisition needs will for the long or short term, I should say for the next 10 to 15 years, most will

continue to need to be satisfied with a ship platform capability. So we'll look at the various alternatives. Marine and Aviation Operations currently has a contract with the Centers For Naval Analyses to take a look at some life cycle costs for various ways of operating ships, either government owned and government operated, government owned and contractor operated, contractor owned and operated or contractor owned and government operated. There's a number of models and they're looking at rough orders of magnitude over the life cycle of a ship. We're not talking about who's going to own, but just general orders of magnitude of what it might cost if in fact we're going to satisfy most of these requirements with ship documents.

The other big component on this is optimization, how best, once we determine the types of systems that are going to be required NOAA's at-sea data acquisition needs, what is the mix of government owned vessels and government operated

vessels and contractor owned and operated vessels or any derivative of those. There is no answer. We have 19 ships now, we will go up momentarily to 21 over the next couple years and then back down to 18 under the current ship replacement plan. But we're trying to do something broader than that. The plan right now or timelines or ships on those timelines say this vessel will be 40 years old, 50 years old, but the appropriators and the authorizers need to bit more about that why is it important that NOAA either lease vessels or build vessels or invest in their current assets and how is the best way to go about that, what is the best investment strategy for meeting the data acquisition requirements.

Part of this process will also be to look at the current and emerging technologies, how with AUVs or unmanned aerial systems or the development of imaging systems, how will those impact NOAA's ability to require needed data. We'll certainly be working on the hydrography

component closely with Captain Barnum and Rich Edwing on the major hydrography project to ensure that what we are recommending in terms of investment strategy is sort of on the same page if you will with these various major projects. We certainly don't want to do these independently, we have no desire to do so.

So taking these components we will develop what we're calling the comprehensive recapitalization plan, a series of recommendations to NOAA for maintaining its ability to acquire, observe and monitor data needed to satisfy the mission needs that have been established by NOAA. Again, I mentioned it's going to be a 15-year plan.

In the material I gave you there was a rather bold-looking schematic that lays out generally the process in terms of establishing mission needs and requirements and then drilling down and taking a look at whether air, sea or space-based assets are going to satisfy the requirements. And just follow the dark blue, this

follows the path of a ship-based system where we'll evaluate each of these components.

This next one maybe described as a little bit better if you will. You can't have a lot of coffee to watch this, Admiral. But if you follow the center line, assuming that recommendations follow the ship-based path, what size vessel, once you determine what size vessels will generally meet your requirements, then you start looking at the contractor owned ships or government owned ships. If you go down to the government operated ship spectrum you need to look at what is the condition of the existing fleet. Marine and Aviation Operations has totally gone through a material conditions assessment on each and every one of these ships. The fact that a vessel is 30 years old does not necessarily make it obsolete. The fact that a vessel is 30 years old and only has a life expectancy of three more years is something we ought to know. What is the need or what is the level of a vessel required to keep that

asset moving whatever recommendations follow are important.

The same issue on the contractor owned ships. We can look at the contractor role in UNOLS vessels and then sort of a subset of that, the contractor data where NOAA is not involved in the leasing or operation of vessel but what they're interested in is the data that comes from those platforms. There will be a set of recommendations that will recommend an ideal mix, a smart business mix of assets to continue to meet NOAA's at-sea requirements. And again, I think perhaps the biggest challenge is to get NOAA, the programs of NOAA to stop thinking in terms of your requirements strictly in terms of dates. Hopefully the amount of data, the capability of collecting data at sea in 2007 is different than it will be in 2014. New technologies develop, efficiences are realized, we're talking about in NOAA ISCM, the ability to optimize and maximize data collection for a whole host of programs, not just MTS or not just fish

habitats, but the ability to require data to be used by similar, diverse numbers of users. So the ability to require data one day today, hopefully we will double or triple that ability on that same day years from now.

I mentioned a FSV 5, Fishery Survey Vessel 5 and 6 interim report that is being done parallel to this process but under a separate contract. Fishery Survey Vessels 1 through 4 have all been authorized and appropriated, FSV 5 and 6, the fifth and sixth in the class, there's authorization for them but the background material as far as needs or requirements and analysis of alternatives is just being completed. That will help to justify the investments in new Fishery Survey Vessels 5 and 6.

Rich talked about multimission and certainly multimission capability with the importance of this process, the entire ship capitalization process, and perhaps one of the most important things is defining what we mean by

multimission. There will not be a single platform capability of satisfying all of those mission needs. I mean that's just, it would be impractical. There's a lot of core capabilities that should be able to satisfy most if not all of our vessels. It's a matter of defining those and making sure that that capability is present in government vessels and in contract vessels in the future.

A report to Congress will be a summary, executive summary of the comprehensive plan. The target is to get through NOAA and to the Hill in October. So our draft for a capitalization plan that follows these procedures, the goal is to have that ready for a number of independent reviews in September. One of the reviews we would like to get is from this Federal Advisory Committee. OMAO is looking at other groups and individuals and they will want to get this plan and the ultimate recommendations as well. So there probably will be a half dozen independent looks at the plan before

this thing is run down the chain and through NOAA and Congress and OMB.

Questions on the process I described, again, there's two pieces; one, we ask that you to a look at the process that we're going to use, and again, this is not a plan that will drill down to we need vessels with this kind of space, 400 meters of wire, we're looking at big picture stuff. Hopefully as the recommendations are accepted and if some of those recommendations involve investment in the current fleet or the need for funds to design and build vessels or the need to require additional contract capabilities, those recommendations have the documentation behind it to justify it. So NOAA sees this plan, sort of two processes. One, it's smart business. Even if Congress had not asked for this, this is something that needs to be completed and needs to be refreshed every couple years. It doesn't do any good to continue to point back to a 1990 plan and say why wasn't that updated. This is something we

continually have to update, keeping it current as new programs come on-line and have needs, some programs fall off-line and lose those requirements. So it is the goal of NOAA and OMAO to keep this plan current, keep it refreshed and use it as an education tool as well.

Comments on the FAC's role and what can provide to us.

CHAIRMAN RAINEY: Roger, thanks. My initial impression in looking at the extent of this, it certainly seems like a good approach to me personally. One of the things I was wondering or a couple comments. It seems like a lot of the ultimate answers are going to hinge upon the answer you'll get from NOAA on what the requirements are, and you mentioned to try to get them away from just sort of focusing on it. Again, my observation is that it seems like we talk a lot about the effort we're going to bring to the endeavor rather than the results we're going to achieve. I think that's out of the necessity because you're not in control

of the resources you're going to get to pursue it and all the things we talked a little bit about with Rich. But one of the things I thought was helpful or maybe compelling is the extent you can sort of set out, even if they're goals or whatever, the extent NOAA can maybe identify not only are we going to just try to do the best we can with whatever we get, but to set, I don't want to say benchmarks, but for example to be able to say okay, we're going to focus on this navigationally significant area and we want to get to the point where we can do a resurvey cycle, our goal's to do that every 50 years, and try to come up with sort of those results, requirements-based results with the shorelines. Similar thing, to say we want to get the priority of the port area charts done in a five-year turnaround cycle and the rest of the open shoreline in a ten-year, try to couple up with a sort of level of achievement.

In Anchorage we talked a little bit, we had our annual briefing on the hydro surveys

priorities document, one of the things I was trying to ask or comment, I was suggesting, and I think others on the panel agree with me, was part of the message that's compelling here is we split it into critical areas. That's kind of the benchmark, survey back, then merging critical priority one, two and down to -- the one really compelling point of that is I don't think anybody ever -- you're never going to get to those priority twos, threes, fours, fives in the effort we have. I think if NOAA can focus on that and kind of be able to say this is really what we're trying to accomplish, be as definitive as they can on there is a need and therefore we have to get this work done. Seems like we never quite get there. We talk about how much there is to do but I don't know if we ever really make a compelling case for so what if we never get it done.

So in the front end of this, if they can really give, you know, a range, but to really define the problem and level of work, I think that

will really help drive the mix and be able to justify down the road, you know, this is the capacity we need to achieve this level or this level or this level. That's maybe a little bit tangential, but it seems like the front end assumptions are just kind of -- otherwise we just have this sort of well, we're going to put in whatever effort we get resources to do subject to funding and all that. Even if the agency can answer those goals and make them more public and solid, I think it would help a lot.

CAPT PARSONS: You're right. We need to present a compelling argument, and your term and we use it often, so what. If you've identified a shortfall, what is the impact of not closing that shortfall, not closing that gap, and NOAA needs to do a better job of defining that in terms of all of the programs, particularly when we're talking about a major investment in fleet and contractor resources. If we, if NOAA can't describe the impact of not being able to close that gap, we

don't stand much of a chance of making an argument for investing $80 to $100 million in each major asset.

MR. DASLER: Following on, I guess it's a questions to Captain Barnum and Roger's efforts on the recapitalization plan and Richard's efforts on the hydrography major project, they appear to be pretty closely linked, being able to articulate those needs, is there cross correlation going on? It seems to be it could be a unified effort. Is that happening?

CAPT BARNUM: Yes, it is. Out of the hydro major project will come the identifying need and then comes the how, the how of what investment we make either in-house or to contract out the alternatives that Rich talked about, the approaches.

CHAIRMAN RAINEY: Could I ask one other thing? You mentioned there were 17 direct programs and a direct need for hydrography and three or four additional.

CAPT PARSONS: Need for at-sea data.

CHAIRMAN RAINEY: Okay. Do you have an opportunity to also try to take a look, I know it's very difficult, but to look at -- I know the NOAA fleet has helped out for some Homeland Security surveys, we talked about the emergency response and recovery capabilities. Is there a chance in the scope of your work to also focus of course on NOAA's requirements but to look at where NOAA kind of bumps up against Corps of Engineers, NGS, kind of the other -- just not just NOAA but they're talking so much about integrating the effort and coordinating and all that, do you have an opportunity to at least include some thought about how NOAA also is called upon very frequently to help some of these other agencies, the national needs and capabilities here? Is that something you can look at a little bit as well?

CAPT PARSONS: Yeah, and while there are not year-to-year requirements by the Homeland Security Program Office, that is one of the

programs that has an implied need for data acquisition if you will. We look at emergency response as needing data, that will be part of the process, and we'll look at interoperative ability and the ability in a fleet to communicate and support federal, state and local agencies as well. I can't tell you how that will fit into it but that's certainly a small component.

CHAIRMAN RAINEY: Can you also look at NOAA's need, we talked a lot about inherent government -- one of the huge purposes I think or services that the NOAA fleet is providing is also training platforms for NOAA in-house. Is that something that you're looking at as well, are you working with Steve looking at the -- as you look ahead, continue that component in the mix?

CAPT PARSONS: Yeah, and certainly we've begun discussions the last several months with all these 16 programs, including MTS, and the ability to maintain a core capability in hydrography is certainly one of those mission needs.

CHAIRMAN RAINEY: Thanks.

RADM WEST: Just a follow-up on Scott's question. There is a federal -- I think you're familiar with FACSI, the federal agencies are looking at the total federal investment in the ocean infrastructure, mostly ships, so you need to be part of that. That's where the homeland defense, the Coast Guard is part of that. The problem you have with any recapitalization of fleet ships is time and money. It takes about ten years from the time you decide to build a ship like that, they're very, very expensive, and the important part of all that, they learned that in FACSI, it kind of goes back to Rich's, the reason I point out Rich is the technology in 10 to 14 years, of the things you will be asked on the Hill, we're going to be taking the new technology to replace ships. Just because you had 50 ships ten years ago, that doesn't mean you need 50 ships ten years from now because you haven't looked at the technology of how many vehicles, all that stuff, so when you do these

ship recapitalization plans you've got to make sure you get at the right people to look at that technology for you. That's the first question you will be asked. That's why I brought it up in Rich's presentation, you ought to take advantage of that and go through it.

DR. LAPINE: Roger, that was an excellent briefing. I thank you for defining what we need to do to help you. I don't see there's going to be a problem with us reviewing this and providing you feedback.

Again, going back to the previous presentation, since you're looking at ships and aircraft, I think it's important that the hydrographic major project specify that shoreline be included and so in your report you'll have the requirements both for the ships and the aircraft. I don't know how you do that. That's worked out between --

CAPT PARSONS: Right, as I indicated, in order to move the process along we're first taking

a look at ships with a close follow-up on the aircraft.

DR. LAPINE: I think you did an excellent job but I would like you to go back to one of the flow diagrams. This is only -- that one right there -- only a suggestion. It seems to me before you decide whether you want a contractor owned ship or government owned ship you ought to look at the existing ships.

CAPT PARSONS: Good point.

DR. LAPINE: That's just a suggestion.

CAPT PARSONS: Other comments? What Captain Barnum also asked me to do very briefly is give you a couple of quick updates on the status of the Swath vessel and the status of the assessment of aircraft acquisition. These are milestones with the comprehensive plan, it's not in there, but the draft plan by September.

SWATH Coastal Mapping Vessel update. I'm not sure if you've been briefed on this in the past. This is a two-phase fixed price contract.

Phase one was a design competition, which was awarded to VT Halter Marine in September 2004. Phase two was an award for contract design, excuse me, detail design, and that was exercised by Halter in September of this past year, in 2006. Keel laying is scheduled for the 15th of June which I believe may coincide with your prospective meeting date next time, contract delivery date 12 months later. It will take a year to build and deliver to NOAA.

FY '02 to '06 appropriations is a little over $19 million, there were 18 million additional funds that have been rescinded over the last four years. There is $19 million available to the SWATH program. What does that mean in terms of eventual ship and delivery? NOAA is not able to fund everything it would like to fund on this vessel. They would certainly like additional management reserves, some additional improvements such as dynamic positioning, integrated bridge system, increased A-frame capability in addition to crane

loads, and there is not sufficient funding at least on the ship acquisition side of the House, for complete spare parts and outfitting. So NOAA is going to get a capable vessel. Would they like to see a more capable vessel with additional improvements? Right now there's sufficient funding to develop and deliver a vessel to NOAA in June, probably June of '08. This vessel is one that's going to be replacing the RUDE, which will come off-line about the same time.

Quick look, I think you may have seen this before, this is what the designers envision the vessel will look like. Certainly a little larger than perhaps four years ago as we envisioned it, but certainly looking forward to a very capable platform.

The second update real quick on the damage assessment aircraft. This is funding that was made available through the Hurricane Supplemental Bill, $12 million to acquire an aviation to replace the Citation II jet. The NOS

mission particularly for damage assessment, the new profiles that require a lower, slower aircraft than what the Citation II can provide, sources were sought in January of this year. The RFP will go out this week I believe, Mike is here, but sometime in March the RFP will go out to request proposals for aircraft that will meet the needs. Contract award in June. The delivery of the aircraft and the aircraft that will be able to meet these needs can be either previously owned or a new aircraft. Either way an aircraft needs to be delivered to NOAA June of '08 and the aircraft will be operational by the beginning of the FY '09 hurricane season.

Instrumentation, NOS is considering a large format digital camera and topo lidar to be put aboard the aircraft. Total aircraft acquisition costs, i.e., the $12 million that have been appropriated will determine exactly what exact package and when will go aboard that aircraft.

This will give you a quick look at some

of the potential aircraft that could be meet the minimum requirements set forth for this damage assessment aircraft. So again, that RFP goes on the street I believe this week for June of '08.

Comments on either the schedule of SWATH or damage assessment aircraft?

RADM WEST: Can you go back to the ship for a second? What's the total cost?

CAPT PARSONS: Total available funds are $19 million.

RADM WEST: You're going to build that ship for 19 million?

CAPT PARSONS: Yes, sir.

RADM WEST: Okay. But there's no spare parts.

CAPT PARSONS: Minimal spare parts.

RADM WEST: No management reserve, no -- where are you going to pay for the spare parts?

CAPT BARNUM: I believe in the '07 spending plan, that has not been decided yet, I think there's consideration for these.

RADM WEST: One of the challenges of the FACSI said is to justify building new ships you're going to be operating them, so if you build them and can't operate them, that's not good. So just a heads up.

CAPT PARSONS: Again another example of why a comprehensive plan is required. Keep in mind SWATH is acquired through --

MR. MCBRIDE: Can you define management reserves on the other side?

CAPT PARSONS: Management reserves are those funds required for the level of oversight that you would optimally need to assure that this vessel is built and delivered as needed and you have to build that into the cost. Certainly there are various levels, various thresholds --

MR. MCBRIDE: Project management services.

CAPT PARSONS: That's correct.

RADM WEST: There's the first indication there are plenty of problems when you take away the

management reserve.

DR. LAPINE: Roger, you mentioned the RUDE was coming off-line there. Has there been a look at what operating costs are currently for the RUDE and how that's going to compare to operating this vessel?

CAPT PARSONS: Steve, can you address that?

CAPT BARNUM: There is an operational differential and that is being put into the budget request to make up the difference.

MR. OSWALD: John Oswald. That was a real good presentation. We had a briefing either the first or second meeting, I think it was Captain Manzo, he came and gave a briefing on the thing at the time, and I see it in this one, the use of charter vessels, contractor owned, government operated, et cetera. He made a comment at the end which caused a spirited debate for a while on the vessel time charter, which had not been -- it had been agreed to I think but it hadn't been an

operation thing. There had been theoretical studies on it. The comment was made that that was going to be one of the ways to go. NOAA's had about two and a half years starting in the fall of 2004 with the Alaska season and then most of 2005, NOAA did this vessel time charter, so it's a contractor owned vessel, another contractor operated it, and NOAA, I'm not sure, three or four officers were sort of a management team on board. Then going forward again this season in Alaska with the same vessel, different contractor. So could you comment -- it's one of the mixes there. Was that, can you comment was that a good thing, was that the way to go as Manzo said?

CAPT PARSONS: With my current hat on I can't comment.

CAPT BARNUM: We didn't have government personnel, we had some observers aboard, but SAIC was the, actually collected the data processing data. We have asked in the '08 request to provide the time charter and address the backlog and leave

that flexibility up to the contractors to offer up the best way to acquire the data. We put the requirement out and then if the contractors so chose to use a vessel, the best way to acquire the data, we agreed with that and that's how we proceeded.

RADM WEST: Do I read this profile as it was originally appropriated at 27 million?

CAPT PARSONS: Yes, sir.

RADM WEST: So that's that you thought it was going to cost to build this thing?

MR. ARMSTRONG: It was funded step-wise and it was two steps forward, one step back. Several times.

RADM WEST: You're confident you can go from 19.1? That was the original design cost. Minus the last paragraph.

CAPT PARSONS: Minus, yes.

CAPT BARNUM: Again, we still have not seen the final 2007 spending plan. Those requirements will be addressed in that. We do

understand there are shortfalls and things we'd definitely but we certainly don't cut off our nose to spite ourself.

CHAIRMAN RAINEY: Questions for the budget. We've got the tasking -- if we can get a group together and have some input by September that would be timely for your purposes?

CAPT PARSONS: Well, the first piece as soon as you can get me -- this is an ongoing process. Any input as to the process we're following, certainly we'd like that at the earliest opportunity. We'd like to deliver the draft comprehensive plan to the committee in the September time frame.

CHAIRMAN RAINEY: All right.

CAPT PARSONS: When we find out what your meeting schedule looks like, maybe coordinate that towards the form.

CHAIRMAN RAINEY: Thanks very much. Let's take a ten-minute break here.

(Brief recess.)

CHAIRMAN RAINEY: Thanks very much. Our next presentation is Mr. Darren Wright, the PORTS manager for CO-OPS. Let me yield the floor to Mike Szabados to introduce Darren.

MR. SZABADOS: Thanks. One thing I want to highlight is that you heard from Helen Brohl yesterday about the CMTS and some of the activities, and included in that was some of the IATs that are going on, specifically Navigation Technology Integration, which is being led by NOAA, but there are many federal agencies participating, including the Coast Guard. The presentation that Darren Wright, PORTS program manager, is going to overview and actually ask for some guidance and direction on is in collaboration under that activity. But I also want to recognize the collaboration going on between federal agencies like the Coast Guard on this activity. With that, Darren.

MR. WRIGHT: First off I'd like to say a little about myself. I'm the PORTS program manager

for a little under a year, replacing Dave McFarland. My presentation today is a brief one, which I'm sure will be appreciated on day two of your meeting here. It's brief because I believe most of the people in the room are familiar with the PORTS program and the Coast Guard's AIS program. I will explain about each of those programs and how we're going to integrate the two.

First I'd like to acknowledge the presence of Commander Brian Tetreault. He's the Chief of Vessel Traffic Services in the Coast Guard. He's also going to be the project manager for the Coast Guard part of this program.

First I want to start off with the NOAA PORTS program is Physical Oceanographic Real-Time System. Basically a network of sensors that we installed by the request of the users in the area. They let us know where they would like the sensors installed and we install the different types of sensors at the locations that they request. We have three different types of current meters, a

side-looking one that can shoot a beam across a channel so you can see what current's going across the channel. We also have a buoy-mounted system that can measure the currents going down, and a bottom-mounted system that can give a profile of the currents going up. Of course we have water level, we have an air gap sensor you can install at the bottom of a bridge and measure the distance between the surface of the water and the bridge. We also provide individual meteorological sensors.

At the moment we have 13 of these PORTS systems installed around the country that service 39 different seaports. This coming year we have a very busy schedule for installing five new PORTS systems down in the gulf, four of which were mentioned by Steve as part of the Hurricane Katrina supplemental in Mobile, Pascagoula, Gulfport and New Orleans, and we also have one in Port Arthur, Texas, that has been waiting a little while to have the system installed, we'll have this one installed this year. And in '08 currently we have two more

scheduled, one up in Cherry Point, Washington and the other one down here in Lake Charles.

This is a graphic kind of describing the Coast Guard's AIS or Automatic Identification System. At present the AIS system works where there's a transceiver aboard a vessel and their position is transmitted out and shared with other vessels in the area and shared with the Coast Guard so everybody knows where everybody is. It's a safety precaution. And at the moment we have coverage in critical areas in various ports. The Coast Guard is now involved in a national program where they're going to have coverage across all the coastlines around the U.S. Increment 1, which they have now begun, they're going to be adding more receiving stations, which will give them greater coverage in the critical port areas and also critical coastline areas. They have two more increments, increment 2 and increment 3, which will expand that coverage. Increment 2 will go out to about 50 nautical miles and cover the whole

coastline and then increment 3 will incorporate satellites and it's more of a worldwide type sharing of information.

Increment 1 here is still, it's one way where even though they're adding more reception stations, it's still a one-way system where data is transmitted from ships to each other and back to the U.S. and shared with the Coast Guard.

I'll get into increment 2 in a minute because that's where our program is going to be incorporated. This is just a sample display of a third-party vendor who takes the AIS message from the AIS receiver that's aboard most of the commercial vessels and displays on top of the GIS and shows you -- these little triangles here are the different vessels that are, this is New Orleans on here, you can see where the different vessels are and you know what's coming around the bend before you can see it.

Now to the project that I'd like to talk about today is integrating PORTS data into the AIS

system. The AIS message has 22 different message types. The one we're going to be focusing on here is binary message where we can broadcast, we can assemble a message from PORTS and transmit it through this binary part of the AIS message. This is a slide I borrowed from the Coast Guard. I'm not going into all of these details but basically it's saying that we can compose a message and broadcast it off of the AIS message, but it's for external applications outside of the AIS to be sent to the Coast Guard, they will compose the message and then send it to the AIS box on board the vessels and then a message can be created by the third-party vendor. That's what this is describing.

The part we're going to be working with the Coast Guard now is taking the PORTS data and getting it to them in real time, creating a binary message, and then the Coast Guard will get that right here, they'll transmit it out to the vessels. This is an AIS box that receives all the messages,

that binary message will be accepted by that and passed through to third-party vendor software which will take that message and display it on some sort of GIS or display. We'll also be working with third-party vendors on taking that information and displaying it in a meaningful fashion.

This is step 2. The difference between this and step 1 is that there are a few more receiving stations but in step 2 is where you get two-way communication. Up until now it's only been one way; these guys can share their position with each other but not really any sort of data messages. Increment 2 of the national network you will be able to transmit data, the Coast Guard will be able to transmit data back and forth. This is where we will be sending the data to the Coast Guard and will be able to send it to all the vessels also within the window.

This display here is showing, where we have the red circles are where we have PORTS locations and the stars are where we have VTS

centers and these blue ones are the Corps of Engineers have a few projects going to the VTS centers and they're also doing the project as well. Our first projects we're going to be doing are going to be in New York and Houston where we have coexisting VTS centers and PORTS, they will be our test beds for this project and once we have that established at those two centers we'll be moving to the rest of the PORTS centers where we have VTS centers and PORTS data in the same locations.

Then as the project evolves and the Coast Guard's coverage expands to cover the rest of the coastline, then we'll start working on integrating data from the National Water Level Observation Network. At the moment a lot -- all these in the Great Lakes and many of these along the coastline are transmitting data real time or every six minutes is what we consider real time, in real time, but as the Coast Guard's project in increment 2, that time line will kind of flesh out with the time line that we have, all of our data

being transmitted in six minutes real time. And we'll work to incorporate all this data into getting that data into AIS as well.

So the reason I'm here this morning is, one, we're at the very early stages of this. We met with the Coast Guard in January to discuss this and I just wanted to present this to the committee and just to get your approval on yeah, this is the right way to go and start spending some time to invest in this project. And again, step 1, is to get the PORTS data integrated with the AIS at coexisting VTS centers. Then as the project goes on and we get all the PORTS stations integrated we'll start working on the Water Level Observation Network and getting all that data into the national network. That's basically all I have. Any questions?

MR. DASLER: Jon Dasler. What is the data that's being transmitted, it's water level data or --

MR. WRIGHT: Actually we'll be able to

transmit all the different types of data. The only one that there's not a set format for right now is that air gap sensors I mentioned earlier. But the rest of them, the water level, meteorological data and the current data, we will be transmitting all of that data.

MR. DASLER: This could also be a tremendous benefit in terms of hydrography. I mean the survey vessels you have out there, most of them have AIS, we can get realtime transmissions, it goes back to a question that was raised several meetings ago, right now there's kind of this backlog of preliminary tide versus verified tide, but if that can become more of a realtime effort and broadcast over AIS, that can tremendously improve the production efforts in applying realtime tide directly to hydrographic survey.

MR. WRIGHT: I think this will be really big in the way of getting the data out to the ships way before they can get them now. Right now we provide Internet access and phone capability and

you have to be within coverage. Once increment 2 is established they will be able to receive these transmissions 24 nautical miles before they get to the coastline. They'll know what's going on before they're even close to the ports.

MR. DASLER: Again backing up to the, the ships are navigating on these tides. I mean it seems that's the logical step, would be to increase that turnaround time to verified tides.

MR. WRIGHT: I think for this community, I don't know that we'll ever be able to verify the data in a realtime setting quick enough for this sort of, for the people using this data to bring the ships off the channel. I don't know if we'd be able to verify something in real time and turn it around quickly enough for them to use like that. However, we do have a realtime monitoring group that monitors these data 24/7 around the clock and they're looking at data and making sure the data is good. If they see bad data they shut it off right away. That capability we have now.

RADM WEST: Could you update us on what requirements there are going to be for a lot of folks out there who won't have AIS updates?

MR. WRIGHT: I'll defer to Commander Tetreault in the back here. You want to come up here, Brian?

CDR TETREAULT: Yeah. I'm Brian Tetreault for the record. The current regulations, there's international requirements under the Safety Life at Sea Convention for vessels, I'm going to simplify here, roughly over 300 gross tons on an international voyage. Those have been in existence for almost two and a half years now. So that's the current international requirements. There's domestic carriage requirements, United States law, currently within the VTS areas where we have Vessel Traffic Services, vessels, again I'm simplifying a little bit, roughly over 65 feet commercial vessels operating in a VTS area. Under the Maritime Security Transportation Act of 2002 Congress gave us authority to expand that nationwide to all

commercial vessels over 65 feet in all U.S. navigable waters. We currently have a draft regulation that is hopefully going to be published within the next six months to a year that will implement those. So speaking to time line, roughly the nationwide carriage requirement for AIS for the commercial vessels over 65 feet hopefully will be in the next year to year and a half.

RADM WEST: No requirement for if they're uncommercial?

CDR TETREAULT: Correct, correct. However, there has been a development of what they call a Class B AIS device, which is a lower capability and lower cost AIS box intended for voluntary carriage. So the hope is that smaller vessels, fishing vessels that may not be required will want to carry this as a navigation safety tool.

MR. MCBRIDE: Commander, my name's Adam McBride, I work in a port where we have a great deal of ITB and tug tow crossing traffic throughout

the main channel. Is the 65-foot requirement applied to the entire tug and tow or just the tug itself?

CDR TETREAULT: Actually, I just said I simplified, there are actually more requirements for towing vessels based on whether they're towing and the horsepower, so it's likely that most commercial towing vessels will be required.

MR. MCBRIDE: We're seeing on our own AIS pretty consistent that most tugs and tows are carrying -- many of them do not do anything other than turn it on, they're not including of the useful information. Is that a requirement as well, do they have more than just the off/on switch?

CDR TETREAULT: The law says if you're operating AIS you have to operate it completely. Enforcement, which we're responsible for, is another matter. So yes, they're supposed to be filling in that information and keeping it updated. We haven't really had the resources or the effort to enforce that to the extent we'd like to.

Another thing that's comes to mind is that is part of this project and the work we're doing with the Army Corps of Engineers, there is a lag obviously between the requirements for vessels to carry AIS and what we'd like. We'd love all these vessels to have AIS now for navigation safety so we can keep tabs on them, but it's only in certain areas that it's required. For example on the western rivers there's no requirement for AIS carriage. With the corps we're working on providing realtime current information near locks and dams with the hope that, one, it will certainly improve navigation safety, but also encourage vessels to voluntarily carry AIS because there's a definite benefit for them.

MR. MCBRIDE: Thank you. I have a question for Darren as well. Darren, you mentioned that the integration with the VTS will start with the PORTS systems and then move secondly to the NWLON systems. Given that your NWLON systems are much more extensive already, tell me why that

particular phasing -- PORTS systems are, ought to be much more extensively located, but we're not there now, the NWLON systems are much better coverage nationwide, why didn't you go there first?

MR. WRIGHT: Well, because we thought the PORTS data is the realtime data that for safety reasons we wanted to get that out there first. The format of the data is going to be identical. Once we get it done for PORTS, integrating water levels, it's pretty much done. Trying to figure out how to get all that data to the Coast Guard in some sort of timely manner, but the reason we started with PORTS is for the realtime aspect.

MR. MCBRIDE: I missed the first part. What's your time frame on this integration?

MR. WRIGHT: I didn't give one.

MR. MCBRIDE: I'm asking for one.

MR. WRIGHT: Okay. A time line I just kind of threw out there and I included as part of the pack was we hope to by next spring have worked enough that we have the binary format all worked

out and are able to patch the data and get it to the Coast Guard by then. So we're hoping by early spring next year for New York and Houston to have something worked out.

CDR TETREAULT: If I can add to that, there's some parts on our side with the technology where we have a refresh update to our existing systems where we think we may have to do some work there, so it will be tied to our capability to modify our systems, but that sounds about right.

MR. MCBRIDE: SO that falls in the fiscal, and are you confident you have the resources, budgetary requests to accomplish this? I'm asking either one of you.

CDR TETREAULT: I am.

MR. SZABADOS: I'll answer for the NOAA side, we're ready to move, we're probably a little bit ahead of the curve with our centralized data processing especially with our work values. We prepositioned ourselves to acquire this information from the Coast Guard and actually one of the things

we're doing hopefully early April is to have a meeting of all the key players and then have a agenda and time lines come. I think we can have Darren come back when we do have that schedule to give you an update.

CAPT MYRTIDIS: Minas Myrtidis. Let me ask you something, I wasn't sure I understand, right now on worker ships they have the ability of transmitting and receiving certain set of data. How do you anticipate to integrate the additional data? Do you know where that system itself would have to be modified or this is something, a function that is readily available? I'm not aware because we haven't done that before.

MR. WRIGHT: The third-party vendor who takes the message from the AIS box, that has not been created yet to receive any sort of data. So we're going have to work with them to, one, get a format of that binary message and do something with it. The AIS message has a part in it, a binary area that can accept these messages. It's just a

matter of getting formats nailed down and transmitting information in that area, that binary area. So as far as the AIS box, it's just going to be receiving that, passing it through to the third party.

CAPT MYRTIDIS: The reason I'm asking, in my company, that's Norwegian Cruise line and Sail America, I was wondering if -- we're going to want to have some deadlines and understand when these things are going to be in place in order to then push manufacturers to get the equipment. You know, it's not as easy as it used to be. You take something out, you're just replacing these things, they cost a lot of money. I want to make sure we understand everything that goes behind it.

CDR TETREAULT: Yes, sir, we definitely appreciate that. And that's one thing that the -- in the creation of the binary messages, it's an approval process. And the idea is so that once we approve a binary message, this format would have to be changed on the on-board equipment, the

manufacturers can get to know that, it should just be, I know I'm making a lot of assumptions when I start talking about computer equipment, but it should just be a fairly simple upgrade to existing programs, especially on a vessel that has a fairly sophisticated system. We are working with some of the vendors. There's international and national forums that we're going to be engaging on this to make sure we get those formats out. There's also an existing meteorological and hydrological binary that has been published for several years now that's in a testing format. I believe we're going to try to stick with that for the initial testing. Several manufacturers are already deploying and selling systems that can handle that, so we're hoping to use the existing binary so that existing systems can use it.

CAPT MYRTIDIS: Thank you very much. I think that's an excellent idea. I want to make sure suppliers, you know, sometimes we forget to look at what's behind it. Another question I have

is, I'm not sure it was clear how you selected the size that you intend to first implement the system.

MR. WRIGHT: The red circles are locations where we already have PORTS systems installed and the stars are locations where there are VTS centers already in place. Actually at a pilots conference several months ago folks in Houston, pilots in Houston and New York at a technical advisory committee stood up and said, one, we want to do this, and two, we would be happy to volunteer. So that's how we got those two picked out to start with, and then naturally the next thing to do would be put it in place where we have coexisting locations.

CAPT MYRTIDIS: If the stars are VTS site, the red circles are the PORTS sites --

MR. WRIGHT: Again, I borrowed this slide from Brian here. This is the Corps of Engineers, they have a couple of systems co-located with --

CAPT MYRTIDIS: Actually you're planning

to try to implement this system in New York for example, right?

MR. WRIGHT: Yes. Right here and down here in Houston.

CAPT MYRTIDIS: Okay. How about up in the west?

MR. WRIGHT: They're going to be our test beds. Once we get a format worked out, stuff gets working there, we'll move to the rest of them, probably all at once.

CAPT MYRTIDIS: I don't want to sound selfish, but with all due respect to the rest of the industry, there is very large traffic of passenger vessels. Probably this is one area you need to focus, who could definitely use this data.

MR. MCBRIDE: To focus with the pilots. Andrew McGovern. There's two key parts of this project. First is integrating the data and working with the Coast Guard to get the data on board the ship using the AIS. I look at that as an integrator. And the second part is working with

the different partners and customers in using that information. In this case one of the customers is the pilots working with their third-party vendor and what do you do with this information, how is it best displayed. That's where the test beds are here to take that information, how best to display it. And we're going to be working with the pilots and their vendor to do that. I think you just raised an important point and if you could identify it, what other groups we should be working with to help to integrate this information and work so this information can be useful with other applications. Your onboard systems on your cruise ships would be another good partner in this.

CAPT MYRTIDIS: Of course, because we don't always trust the pilots. No, I'm just kidding.

MR. DASLER: Not to beat a dead horse, but I think this is a real opportunity for implementation of realtime verified tide and I'd for us to just think outside the box, because that

is still going to be a huge benefit. If ships are navigating and tankers are approaching based on these tides but we're still getting lag times and meaningful processed surveys, just that whole effort, we hope NGS can do it on the core side and provide realtime verification of data. I mean they really need to start taking a close look at that to make that a realtime availability and think outside the box.

MR. SZABADOS: I see this as one of the first steps in doing that, but also I mentioned working with the, you indicated the Army Corps information as well as the National Data Buoy Center, the buoy data so that ships in the region get that information also. That is the direction we're going. It's not just PORTS but PORTS was the first step to help integrate that information. I also wanted to mention there's work being done under the CMTS where Coast Survey and working with CO-OPS on how to use this technology. And one of the things they do is taking the PORTS data through

the AIS, I believe it's the Norfolk area test bed, this early summer or late spring where they're going to take the information and have dynamic charts. Again, it's a demonstration project. I just wanted to mention that, shows great potential for this.

DR. LAPINE: I would just like to say that I am really proud to see how the Coast Guard and NOAA are working hand in hand. Reminds me of the days when you started your DGPS network and you worked with NOAA to build a slightly better, more accurate system and I commend this process. This is really great stuff. I look forwards to seeing some sort of chart in the future that has all of this information on it for the navigator, so a great job, guys.

MS. DICKINSON: Elaine Dickinson. Quick question for the commander. Under the current rules who is required to have an MMSI among the commercial ships?

CDR TETREAULT: I think I can only speak

for as it relates to AIS, which is easy. If you have AIS you're going to have MMSI because the system won't work without it. I imagine you're also talking for VHF radios and that sort of thing and that's outside my area of experience.

MS. DICKINSON: The reason I ask, for the Rescue 21 system we're providing MMSIs only to recreational boaters. I noticed a flurry of activity among tug and barge companies coming to us saying we need an MMSI and we want you to register us. We're not set up for that. They said well, we have to have it because of AIS, but I never knew if it was an actual requirement for them or not.

CDR TETREAULT: For AIS, speaking technically, it is an MMSI and has to be unique, which MMSI is, for the system to operate. We've already seen some problems. The gentleman earlier asked about what related to enforcement. That's one we are enforcing because that can really hurt the system. That's an interesting observation, I hadn't heard that. I do know folks back at the

Coast Guard that are working on that would be interested in that and I can get an answer back to you.

CAPT MYRTIDIS: Actually for the MMSI, if you do have a radio station on board now that's VHG, you are required, there's no doubt about it. The same goes with the AIS system. So if you have an authorized licensed station aboard then you include MMSI.

MS. DICKINSON: Surprisingly a lot of these companies are saying they're not required to have an FCC license so that's why they didn't get an MMSI, which was surprising to me but apparently it's true for some of them.

MR. SKINNER: Tom Skinner. I want to make a couple of general comments that I think both apply to PORTS and IOOS for the next presentation. We always come back to funding, how to do you fund all of this stuff. I think there's an opportunity, may have been overlooked, I'm not sure how involved NOAA has been on this. Today's Boston Globe talked

about a $27 million fine against an oil company for some spills. And I'm pretty sure a lot of other federal agencies like EPA and Fish and Wildlife Service, just guessing here, will be in the U.S. Attorney's Office trying to see if they can get some of that money for their programs. I think there's a potential here and it makes a very good link, at least a good attorney could, to have some of those monies go to PORTS programs and this type of innovations for funding. Another opportunity, we did this in the project I'm working on up in Massachusetts, is for mitigation funds from offshore projects. And originally we had proposed several millions of dollars for offshore buoys, and that's another potential opportunity to get some funding.

MR. WRIGHT: Thank you.

MR. OSWALD: I would like to make a --

MR. SKINNER: There's also state funds. I don't expect NOAA to keep track of every state and all the particular funds, but having a cadre of

people out there watching some functions could possibly be used for this type of thing is also very advantageous.

MR. OSWALD: I'd like to make a comment, follow-up to Jon Dasler, folks need to think outside the box a little bit. You've got a great piece happening right here, but I guess I was always under the impression that the PORTS system, Sherri's taking these ships and Adam's taking the QUEEN ELIZABETH and all these ships through the harbors, it's pretty much verified data. So I guess the official thing it is not verified data; is that correct? The PORTS data that the captains have on these ships?

MR. SZABADOS: It's quality controlled data. The verifying process is a none realtime process. That's something which we have to move towards.

MR. OSWALD: We're sort of exploring this in support of hydrographic contracts. You typically have redundant sensors to this PORTS,

this can be highly automated and it would definitely help the hydrographic NOAA assets, the contractors, because currently we get verified data on Sunday night, it's about a week delay. NOAA has requested money in previous budgets to streamline the processing. There is a big processing backlog, but by contracting in-house on this -- so this is the first step that I think this could be automated where you have verified tides on both basically. Then you've got to talk about the zoning model, that's another issue. Any encouragement on that? It's a great start. Just take it a little further.

MR. SZABADOS: John, I don't disagree.

CAPT BARNUM: It was mentioned earlier that this is just the start of what we hope to go into realtime integrated charts and realtime positioning of ships. This is all tied into the, again that integrated action that Helen talked about yesterday on demonstrating the possibilities of what we can do with the technology we have now.

RADM WEST: Tom brought up an

interesting thing about funding, concern about funding. The U.S. Ocean Commission recommended taking $4 billion from the general treasury, which part of that comes from offshore royalties on gas. Where do the fines go that Tom just mentioned? Do they go in the general treasury?

CAPT BARNUM: We were just talking about that, I may have been mistaken. My point was I know there have been some meetings set up with some of the U.S. Attorneys in Portland and Boston, and for whatever reason, maybe if they can't get the money, I still think NOAA should be there if the other agencies are. But again, that's something that was just raised as a possibility. But the mitigation angle is definitely a possibility. And that was done under the state review, not federal.

CHAIRMAN RAINEY: Thank you very much.

Our next presentation, Ms. Zdenka Willis, the director of the NOAA Integrated Ocean Observing System program office, she's going to address an informational briefing on the evolution

of the IOOS program.

MS. WILLIS: Good morning and thank you for giving me this opportunity to brief you here today. And I do come as an information brief and I will start by telling you that I also have what we call in NOAA major project designation and that occurred on, by memorandum in 2005. But I'll start up front by saying we are pre-KDP 1 so the train has not left the station on IOOS and we welcome all help that we can get on IOOS. This is the outline I'm going to use for the briefing this morning, and so I'll start.

So in November 2006 Admiral Lautenbacher requested NOAA take a fresh look at our IOOS efforts and provide recommendations on how NOAA could exert greater leadership and make measurable progress in the advancement of IOOS, and I was part of the team that was formed to do this and we wanted to review lessons from existing NOAA efforts. It's not like NOAA has not been involved in IOOS for quite a while, and we focused on three

questions when we put this team together: What can NOAA do that would fundamentally contribute to the United States of the America IOOS effort? What is feasible for NOAA to implement? And what can be accomplished in the next 36 months?

What the team concluded was that NOAA IOOS efforts would not be successful with part-time leadership, no strategic goals and no authorized central programming management. So in December of 2006 we briefed Admiral Lautenbacher, Mr. Jack Dunnigan provided the briefing, and we offered two recommendations. The first is that we should establish a program office dedicated to the administration of NOAA IOOS activities, which included collaboration with our federal and nonfederal partners, and that NOAA should implement an initial operating capability for data integration and we looked at that as a data integration framework.

This was accepted in December of 2006 within NOAA and we began the process of starting

the program office within NOAA.

This is a high level schematic of the organizational relationships, and I always tell people that you must live two places in NOAA; you have to live someplace in the actual organizational structure, and so the NOAA IOOS program office does live under NOS and the administrator there, Jack Dunnigan, but we do represent all of NOAA. We have to do this, as we said, in concert with our federal and nonfederal partners, and so Dr. Rick Spinrad, who is our assistant administrator for Oceanic and Atmospheric Research, still has that interagency and international tie. When we look at the program office and we look at IOOS project management in the terms that we're using here it's twofold. First are major project designation, which is system acquisition. We're also using this title because within NOAA's budgeting system, which we call PPBES, we are also a program within the budgeting system, so we're able to develop our requirements, compete for funding if you will, as

well as developing a major acquisition program.

Similar to hydrography, since we have been working in the capacity of integrated ocean observing, there is capacity that exists out there both within NOAA at the federal level and at the regional level. We've got to be able to understand what that capacity is and bring that together. So my program office, which by the way I have to tell you we're doing the paperwork to do the program office because NOAA can't do that without permission, so we are setting up the program office, but we did not subsume existing capability within NOAA. But the philosophy behind this program office is we cannot create new within the program office. For example, if that capability exists, then we guide and buy if you will if we need to requirements. So for example we're working with Mike Szabados, in fact we're meeting next week for a session to determine requirements back and forth. The National Data Buoy Center provides capabilities. We have archive centers within NOAA,

so you don't see them coming underneath me as a program office because the philosophy is we have to engage in leverage capabilities.

We do have an interagency structure under which we work within to ensure that what NOAA is doing is contributing to what the United States is doing. And what is depicted on, as I look at the right-hand side of the slide, we are working with an office called Ocean.US and in fact over the next two months we're in the process of moving the IOOS office to a building in Silver Spring, happens to be located on Wayne Avenue so we call it the Wayne Avenue Building, and co-located with us will be the office of Ocean.US, which is currently in Claredon but is losing their lease, and also within NOAA Mike Johnson's Office of Global Observations, if I said that correctly, so that because IOOS has both a coastal and a global component, we think that that synergy will allow us to better work together in both within NOAA and in this interagency process.

Okay, so this is what we've done. I became official in February. So we've actually basically just stood the office up. And we expect official program office, we're physically located in the AA's front office and it will take us about six to nine months optimistically to get the designation, but that's part of what we need to do to bring that forward.

So let me now focus on what it is when we talk about this data integration framework and the assumptions that went forward in putting this together and the way we pitched this. We went back and we talked about requirements earlier when you heard from hydrography, so what are the requirements to have this thing called IOOS? And so we've had a lot of briefings, I'm sure you've seen a lot of briefings that talked about various programs and plans and action plans that talked about the need to do this, but we have to be able to answer a question. And while these are broad questions they are questions that we can answer,

and that is ensuring that global climate, the problem that we see as global climate is not well understood, coastal populations and coastal ecosystems at risk. And so as you start to develop your requirement to develop a system that's going to do that, what's the kind of information that you need to be able to answer those questions?

We certainly need the data, we certainly need improved models, we need improved government, we need improvement access to information so we can start to develop the requirements to be able to do major systems acquisition in an enterprise-wide fashion from a NOAA perspective that, again, works in concert with what we're doing in the United States. These IOOS core variables, they come from the documents put out by Ocean.US, the IOOS Development Plan. This is not to say that these are the only variables that are needed in the oceanographic realm. It is to say these are the 24 variables that have at least been identified and agreed to through the interagency process, and we

determined that we could not certainly integrate in a short time frame all 20 variables, so we're going to concentrate on five, and the five we're concentrating on in this first 12 months are that which you see in bold.

Certainly temperature and salinity are key and sea level are certainly key for making a climate perspective. Surface currents are very key to our harmful algal blooms and surface currents in the models that you see here.

So then the next question was integrate so what to do what. So when we put this briefing together we focused on four theme areas that work has ongoing within NOAA, and those four theme areas you can see. There's a couple things about these theme areas and in the interest of getting through the briefing here, let me go over a couple things. One, if we deliver just those five variables, you should not assume that we have solved integrated ecosystem assessment. Four of the fifth are considered critical variables for integrated

ecosystem assessments, but we certainly need to have more from that perspective. The other ability here when we looked at these four theme areas, it does run the gamut in time from near real time through to long-range climatological databases. So we're able to look at it from those perspectives in the models and certainly in the models and the theme areas that are up here, it's not just a NOAA effort, there's significant coordination on some of these theme areas certainly outside NOAA down to the state level. And one of the things we have to be careful is what's the definition of integration, and that's always, we use that word, we use the word interoperable and we use the word integration, so the terminology we're talking about here is integrating long-term data series and time and space.

Now, to anybody who, in this audience here, that's a very broad definition because time and space will be defined differently based on where it's going. It's going to be defined

differently for hurricane intensity than it will for coastal inundation, whether it's a near realtime event or looking at planning processes for coastal inundation. So that's our key, is to figure that out. We have done some initial meetings within the NOAA offices and their contacts to define what the time and space programmatics are for these four areas and we're just now assessing information.

Another thing we have to make sure is when we look at the integration of these variables under these models, not only are they ready mathematically and scientifically, but we have funding profiles and products to go with that. We're in the process of doing that now. This is how we portray, again call it a data framework of how we will start to do that requirements assessment that allows us to start with the first five variables and then to continue to expand into 20 variables. And when we determined that temperature for example integrated is a product

that requires us to do a number of things before we deliver that product, and that is the integration of the many platforms, and we have about 12 within NOAA, that actually collect temperature. They come in via various communications lines. They arrive at different offices within NOAA, different things happen to them and most of it gets to one of the archive centers, but some of it doesn't get to the archive center. So by focusing on that we have to do the real hard science and systems engineering that's going to get us to the delivery and the integration, which is where we're focused on with IOOS here of those data. We also understand we're not the only ones collecting that, both at the federal and at the regional level. So we are working through Ocean.US and the DMAC team, Data Management and Communications team over the next several months to develop the standards that are required for both a data transport and a data format and QA and QC so we can make this data interoperable.

Then as we said, we take it to these theme areas and we build the framework and build the process both from a requirements and an execution perspective to get this delivered to these models. Then we have to understand do we get any better. You know, it's all about you need to be able to provide better services, so in addition to asking scientifically and programmatically can we get there, we need to understand the test criteria that allow us to know that we got there. We have to develop the test bed, whether it's within NOAA or within our national framework, to be able to understand that, and then we would expect at the other end that we have better models and theme areas and then we can extend that out further as we put the framework together.

So when we look at this, now, this is a framework of running the data through. To be able to get through this, this is also implicit, that we have to identify the blueprint for what we call our initial operating capability, because we all know

that platforms collect the data that come through communications lines, they go into computer systems at various places and people do things with that. So we're not in this initial operating capability in the first 12 months as worried about putting more platforms in the water. We will indicate all of those platforms are contributing the data as we look at it by variable and then understanding what I like to call now supply chain management of oceanographic data of various variables and moving that through. So we will have, at the end of the first 12 months, our aim is to have the framework and the processes there that we have for delivering variables and we've got five of them that we need to integrate as well as identifying what is an initial operational capability for this enterprise we call IOOS and therefore you can now develop what are the costs and what are the requirements to move forward. So at the end of 36 months you will understand where your gaps are in observations as well as data management as well as delivering that

to users.

This may not be quite as applicable as I listened to the conversation this morning to you here, but I will go through it for you in looking at our regional IOOS activities. As we all, I think you know that NOAA in FY '08 has IOOS budget lines in addition to the regional component that you see here is 2.5 million for the DMAC and then another couple, about 2 million for work with NWLON and MDBC, so it's about $16.5 million in FY '08 that's concentrated on the regional piece and we have begun a competitive process. The binary announcement went out in December for the transition of previously Congressional earmarked coastal ocean technology systems that comes into a competitive process. That is underway. We received 128 letters of intent. A panel, an interagency panel reviewed those and 42 of those proposals have been asked to do a full proposal.

The idea is that we do want to understand the capacity and the observing capacity

that's out there in the regions. There's some phenomenal capacity out there in the regions. We want to be able to capitalize on that, we want to be able to understand how to take that from the -- into an operational IOOS system that does contribute additional data from the, to the national perspective at the regional perspective, and we do intend to do this in a competitive process as we move forward.

I'll just put this up. This is -- you all are familiar with NOAA's outreach in regions. Within IOOS there are regional associations. There are 11 regional associations in different levels of maturity that we are working with to establish, when I say we, it is we in the larger interagency process to get them established as the regional governance for the Coastal Ocean Observing Systems and they're labeled here by region and what you're seeing up here with the various dots are previously earmarked projects. Some of them involve observing systems such as in the Gulf of Maine and the Gulf

of Mexico. Some of them are other capabilities like ACT, which are national capabilities to look at sensor technology, so it is a mix of actually systems. This is basically going through the various years that have been funded so there's a mix up there of observing systems and modeling capabilities.

This is various-- so I was asked to come here. I think what we find very positive is that within NOAA we have now centralized and designated IOOS versus a major project, a program in the budgeting system and a central office to guide all of NOAA's IOOS efforts in a single way forward that is hopefully understandable as we move through this. We are in the very beginning stages of that. I have six people on staff. We are in the middle of trying to stand the office up and move to a new location, meet the new requirements for the budgeting program process for '10 to '14 and begin the requirements developments. So all of those right now are parallel on any given day. I think

I'm working five different fiscal years. So I just leave with you that, but the positive, two most positive certainly, for the first time in the president's budget we have an IOOS line for DMAC and regional, and secondly, NOAA has determined that this is important to have a guided effort. My job is really to represent NOAA, it really is to bring NOAA's efforts together in collaboration with our federal and nonfederal partners so we can realize IOOS as it was envisioned over seven years ago now. I think that concludes my brief.

RADM WEST: I think it's important for the panel to understand that this is the first time that there's a line for IOOS in NOAA's budget. There's been a lot of folks doing a lot of work to get that to happen. There's a lot of angst to that. It all goes back to the earmarking process that's systemic in NOAA's budget. All those regional systems you saw up there were started in earmarks, so you can say had it not been for earmarks you wouldn't have had that capability, so

that's an argument for it. The arguments against it is when earmarks go away they go away. They're extremely important to the future of ocean observing. The first thing you want to do for an Integrated Ocean Observing System is to figure out what the hell's going on out there. The president said go ahead and proceed with that. We are at a stage literally, why I haven't been able to have dinner with you the last couple nights, is happening right now with the Hill, that they'll take this budget line and take these earmarks that are almost literally all that I represent in the academic and private ocean research community, I'm trying to convince them to send a letter to the Hill by Monday that says we'll give up all these earmarks if in fact there will be a competitive pot that we can work with and expand and grow into an Integrated Ocean Observing System. For you that have gotten the earmarks before, you know how hard that is to do because of the angst, can NOAA do it, can NOAA get the money out the door, can we get the

money from the Hill, et cetera, et cetera, but I think right now if we don't make this happen this year, then we've lost the opportunity for several years just by the political process. I think she's explained what they're trying do very, very succinctly. We have a golden opportunity in this budget cycle to make this all happen. It's an example of the problem that you brought up earlier about NOAA's budget where there's such a discrepancy because it's earmarks versus a rolled up important national program that should be funded for the long haul. Hydrographic service, absolutely fundamental to any ocean observing system. We've got to push for NOAA. That's not a sermon, just a thought.

CHAIRMAN RAINEY: John.

MR. OSWALD: John Oswald. As a follow-up to Dick's comment, the $11.5 million that's in the budget this year to fund regionals, how does that compare with, I guess '06 was the last official budget, all the earmarks for the

regionals, is it in the same range or is that 50 million or --

MS. WILLIS: In the FY '06, 26 million in the earmarks for the various grants. When you look at the FY '08 process, which is the 11.5, which is the number, again we are running a process here within '07, and as Steve said, none of us have our actual spend plans yet, but we can tell you that we're not up to the 26 million in what we're looking at in '07, which is the budget as worked out, but the number you saw there, the 11.5, is FY '08.

RADM WEST: That's separate from these earmarks. What you want to do is roll up earmarks into a larger pot and grow on it. Of course the climate right now for earmarks in this town is not good. In fact the '07 spend plan will show some fallout of that. So it's going to be hard to have earmarks for the future. Unless you've got a very powerful source of earmarking you may not get it. It's certainly not something we can build a future

ocean observing program on, so it's important to take those earmarks, roll them up, it's important for NOAA to do that and then let Congress, who think it's important to do it, add the proper amount of money to it so we can get on with this.

CHAIRMAN RAINEY: Okay. Captain McGovern.

CAPT MCGOVERN: I just have a question on, well, go back to the sixth slide, the first of the -- keep going, I'll tell you. That's it.

Okay. One of the problems that I think the industry has had with IOOS since the beginning is being basically blocked out, and if you look up here, you've got your global climate, coastal populations, ocean and coastal ecosystem, Commerce and Transportation is nowhere on that slide. There's nothing to do with Commerce and Transportation anywhere on that slide and that's one of the problems we've had. Even in the regional meetings, when you go there it's all academics and we feel like the amount of money

they're talking eventually about going to IOOS and all the monies going to PORTS, we're not getting it yet. We feel like if this takes off and it's not brought up that Commerce or Transportation is part of this, then eventually we'll get blocked out completely. That's a problem. You can see right here, it's not included.

MS. WILLIS: I will take that back and as we will note down as we develop level 1 requirements, and it is certainly -- you know, certainly I agree in the first four that you see there that Commerce and Transportation as we look at it here, it is not there, but I will take that back and make sure that we have the requirements written that we can articulate it from that perspective as well.

MR. MCBRIDE: Using the PORTS systems are not one of the inputs?

MS. WILLIS: The difference I think here is that we didn't focus on the PORTS system or NWLON or cruise buoys. We have 12 different

systems that do temperature, and so one of the differences instead of focusing on the integration of a specific system, we're looking at the integration of the variables, which are not trying to distinguish just in semantics but allows us to bring that framework. If the right and the best system is PORTS, which we haven't done that walk-through with Mike, and please don't take that to say I'm changing everything and PORTS is not important, then that is the feed for that variable, but this is really looking at how we integrate the data regardless of which platform it comes from, so it's a slightly different way of developing those requirements.

MR. MCBRIDE: You're looking at integrating that platforms but you have not included PORTS systems --

MS. WILLIS: It's one of the platforms, so we will integrate the temperature from that platform that we get from PORTS as well from the other 12 platforms that are in the water.

CHAIRMAN RAINEY: I don't know if it's the immediately previous slide. Three folks asking the same question. It was the time line slide that shows the first 12 months and all. Yes, yes.

Has that clock started? I know we've had a couple of -- Ocean.US has run with this and we've had a couple rounds of the implementation or development plan, so are you in -- you mentioned you stood up officially in February, so in this 36-month outlook, in 36 months then your plan is to have an initial operating capability and so for the next three years you will be developing and will deliver the four ones that you outlined?

MS. WILLIS: Actually we've got a bumper sticker and all my office gets very nervous when I said 5, 4, 12. The first 12 months was to deliver the five integrated variables to the four theme areas in 12 months and our clock started the 1st of February 2007, so that we actually have the ability to integrate, which means setting national standards for those five variables so we can

integrate them and know that we've got the programmatics there for the catcher's mitts as I call them on the theme areas. So my clock started on the 1st of February of 2007.

CHAIRMAN RAINEY: Then I guess will Tom pick up on the thread the folks had mentioned, we gotta float all boats, but when would you see an opportunity in the process to or do you see an opportunity to bring in deliverables that would facilitate NOAA's Commerce and Transportation strategic goals? Will you go all the way to the end with these four before you could pick up things that might -- I realize there will be some synergies here, but I was kind of told and I know this is a way oversimplification, somebody told me that the National Science Foundation, that's more research science focused and then IOOS, the thing that differentiated these two big -- this was going to be an operational one. I'm wondering how this --

MS. WILLIS: Let me answer that in two

ways. Right now we're writing level 1 requirements and I've seen the first two drafts. And so the first thing we can do is effect the level 1 requirements that ensures that we work across -- we need to work across all goal leads. We haven't seen it yet. We're starting to socialize this level 1 requirements across all the goal leads within NOAA. So ecosystem, Commerce and Transportation, climate, weather and water. And that's really who we need to make sure we're supporting because we're supporting NOAA in their mission. So that's the first way.

I don't have a real good answer on how quickly we can establish the process to get to variable 6 and theme area; our sixth variable and our fifth theme area, I don't have a good feel for that. We are right now taking a look at defining that and the process in the blueprint of what we consider initial operating capability, but in all of this as we define our initial operating capability, while we're focused on the variables

here, we have to still stay looking down line, so we put that blueprint together of what's the capacity across the United States of America right now. Because while I certainly agree with the competitive process and moving things forward in a competitive nature, we have to understand how much it's going to cost us to operate this. We talked about earmarks, they've gone in large part to academic institutions and other institutions, and that's great, but how do we make that -- what's the cost to operate it and where are those lines of who pays for what part of the operation? All of that has to be taken into account as we begin to really develop full requirements. So I know it's a little, not as succinct as I'd like to be right now, and we're about six weeks into actually defining that, but I can tell you for sure as we move this level 1 requirements document through, it has to be concurred with on the goal leads. So that I think is the first opportunity to make sure that we at least get that articulated correctly.

MR. ARMSTRONG: Andy Armstrong. Zdenka, I'm looking up there and I see temperature, salinity, sea level currents, that those come from a variety of NOAA platforms, maybe a dozen you said. All of those things come from the PORTS system and those are going to get, those variables from a variety of sources are going to go into an integrated data framework for delivery of products downstream someplace as I understand. So what's going to happen as that evolves with the 12 platforms that may be delivering the same things through other processes to other users? Are those going to be subsumed, are they going to continue? What's going to happen there?

MS. WILLIS: The short answer is that's what we need to assess, whether those particular platforms get subsumed. This is not a drill about getting to a single platform or a single location to deliver data. There are capacities out there that will help us deliver a, if you will, common operational picture from an oceanographic, and that

includes biology, chemistry and physics, and it might still need to come from multiple platforms and still be processed at different places. The intent here is to integrate that data so that the sum is greater than each of the parts. So this isn't a let's go from 12 systems down to two systems. If some systems don't make sense, then at the end of 36 months maybe there will be, there should be an investment decision made and that's part of the outcome of why we did it in a framework. I know it's hard to read, but it's basically an inventory to identify both the observation gaps and inventory assessment if you will of what's out there.

CAPT MCGOVERN: I guess two things. One just to follow up on that. I thought that was going to be one of the positive aspects of IOOS, is that we've only got so much money to spend and to have redundant sensors, obviously if they're not in the same place they're not in the same place, but redundant sensors in the same place is a waste of

money. So get the information, we don't need it six different ways. Anyone can use it the way they need to use it.

I guess the other -- I don't know what the other - oh, when you have all this come out the other end, let's say one of the things the industry needs with PORTS is the fact that it is quality controlled. If we have -- I guess my issue is if all these sensors are coming in, is there going to be a way when people look at this data for operational use that they know whether it's then quality controlled or not? So there has to be some indication.

MS. WILLIS: And when we briefed this and focused that the output was a temperature product or an integrated salinity, the only way you can get to that to make it useful is to make sure it's in a format that could be used, whether there's the automated QC and then -- you know, the quality assurance. And so by focusing within NOAA on delivering a variable as a product, we have to

do that. In fact, what we're looking at doing in the next three months, and actually I'll go back and start the briefings this afternoon as my team's been putting this together, is what's the right process whereby we get to national standards. Because it's more than QC and QA. There's the transport standards, there's things like vocabulary, how do we know as we tag the data, you know, is that that same data that gets all the way through the supply chain management, and those are some huge issues not only in the United States but nationally, and to bring it home when we -- data is not always tagged. In fact it's not tagged in many cases. Just think about vocabulary, how many different ways that you are referred to in your professional organization. I'm a retired Navy captain, so you will see my name as Captain Zdenka Willis or Captain Z.S. Willis. And so that's the same person but it's got a different identifier and our computers don't know that. That's some of the really hard work that we need to do to actually

integrate that. And that's not sexy, it's not fun and it's hard and labor intensive and it costs money. And why we briefed it this way is to be able to actually focus on that so we can get those standards published. There's been a tremendous amount of work to do that in all of those areas because what you want as a user is to know you have the right quality data from whatever sensor it comes from in a usable format, and what you really need is the information and the tactical decision made. I'm just trying to in the first part of the Integrated Ocean Observing System to be able to flow the information, so what the real product is, whether it's go, no go or stoplight or whatever, makes sense for your individual user.

This framework does depend on our folks within NOAA that as we develop that integration of those, that raw information data into quality assured and assessed information that they are extending out to the users, and you don't see that reflected on the framework and that's another, as

we start briefing this around, that's another comment that's been made on this framework, that we don't actually get to the users. That's part of my office's job, to make sure we use it in the capacity at NOAA. Those who are out here with the users to make sure we're bringing that through.

MR. DASLER: Jon Dasler. Just a follow-up comment to what Andy was talking about. We have been around a lot of sites where there are sensors that are all co-located and I guess as a taxpayer I have concern that there's a lot of funding going to National Weather Service will have a gauge co-located with a gauge with USGS, there maybe academic programs that have gauges, we've seen sites where there's been three or four gauges all co-located. If nothing else coming out of this process too is an evaluation of that. Do you see that?

MS. WILLIS: Absolutely. Certainly first within NOAA, keep hammering that message home within the interagency and we're working through

the interagency working group for ocean observation and I would encourage folks to continue to bring that issue up. Yes, that is an output of this framework so we do proper investment management on sensors regardless of where they come from in NOAA. And I should also say that not only is IOOS doing this, there's another acronym, GOIDE, and again it's also a, not competing with IOOS but trying to make sure from an architecture standpoint that not only for the ocean sensors but for the remainder of the sensors within NOAA that we get to this right inventory assessment. And that's one of the things from IOOS, is that we represent NOAA and we're supposed to represent making sure that we have that investment, but I just want to make sure you know that we're not doing it just the ocean, that's where my office is, but it's also on the remainder of the sensors, and then through the IWGOO and the remainder of the interagency processes we're trying to also make sure we work that. But I encourage you to continue to voice that concern.

MR. DASLER: I think you just answered my second -- just even beyond, though, but other agency gauges, hopefully that framework can address that as well.

CHAIRMAN RAINEY: Thanks very much. It sounds like if I understood then our avenue to interact with you would be through our goal lead and our representation we have through our program offices. And we will be able to communicate with you.

MS. WILLIS: Oh, absolutely. And you can communicate directly to us. Our intention is to make the process as transparent as possible and more than happy to share the level 1 requirements. The first two versions were unreadable in my perspective, so we want to get to a level where it's readable and the KDP process within NOAA is what we determine it to be. We want to make sure that we do it right. As I said, the train has not left the station on this. We have some near term deliverables that we want to make sure we're

showing success, but if we don't put in a good baseline requirements and acquisition strategy, then we're really not going to get there in the end and the end is to have a functional IOOS system within the United States.

CHAIRMAN RAINEY: Thanks very much. We're going to go ahead and take a break for lunch. We have a few folks that need to --

(Pause in the proceedings.)

CHAIRMAN RAINEY: All right. I know there's some folks that need to check out, we're running a little bit late. We had public comment on the agenda. I guess if individual members need to check out, are there some more public comments this morning? Folks will have another opportunity at the end. Seeing none, let me give you a quick what we've got lined up.

I would like to spend this afternoon going over a couple of things when we come back. I think there's no problem at all in adjourning on schedule. I think I'd like to get as many comments

from the members while we're here on our report so we can get that finalized very quickly. I have drafted a recommendation that I'd like to propose and see if we can approve just an initial recommendation on the fleet recapitalization plan. I'd like to solicit volunteers of interested members that will work with me on the fleet recap and the hydrographic project, and then I'd like to have some discussion about how we, kind of the mechanics for our meeting and what we can do to work with NOAA to shape our agenda and tailor our work going ahead. So those are the things I'd like to cover this afternoon. I'd like to adjourn then until, we do have lunch rolling in but we are running a little late, let's give folks until 1 o'clock.

(Luncheon recess.)

CHAIRMAN RAINEY: It's 1 o'clock. I'd like to go ahead and let's start and run through the things I mentioned before we broke for lunch. If people have to come and go, you know, checking

out or, you know, let's keep the lunch rolling. But let me recap what I thought we could handle and see if there's new business and all. Our main objective or one of our main objectives for the meeting was to present our report, special report. I talked with a lot of you and you all kind of said you want to get this wrapped up, so I'd like to spend some time while we're here to take on board the comments you have, you know, as we finalize the draft.

I prepared a very brief but hopefully helpful recommendation on the fleet, just an initial recommendation on the fleet recapitalization plan, and I'd like to have a look at that and then I'd like to talk about how we can move ahead on our interaction with NOAA on the hydro major project and fleet recapitalization project and then discuss maybe some mechanics moving forward on how we set our agenda. There's been lots of questions about the next meeting. Like I said, the main effort will be on the report

but let me say -- we have this up on the screen. Gebhard Veeley (phonetic) had prepared some materials for us and we tasked them and indicated it would be helpful to have some initial comments from the panel with the anticipation of us being able to take another look at the draft approach or study when it comes out in September. I think I can read it from here. The HSRP supports NOAA's proposed approach to the NOAA fleet recapitalization study. The HSRP recommends that the study's missions needs assessment is consistent with NOAA's hydrographic hydrography major project. The HSRP recommends that the recapitalization study consider and where appropriate incorporate requirements identified by the FOFC process, which is the interagency process Admiral West was informing us about, which is looking at the overall serving capability. My thinking with this is it acknowledges that this is ongoing, includes a couple of comments we made in our discussion. If I could get a motion on that and a second if there's

any further discussion.

CAPT MCGOVERN: I move.

CHAIRMAN RAINEY: A motion on that and a second. All right. Open it up for discussion or comment. All right. Well, I'd like to move--

MR. SKINNER: Maybe someone can answer this. Would it help to have something in there that recognizes that this is part of the dual approach of an in-house capability of the fleet and also, but the other side is also recognizing the private contractors? Or you want just to focus on the fleet? Thinking of in terms of if it's used on the Hill, just recognizing this is not the only component of NOAA's hydrographic service.

CHAIRMAN RAINEY: My thinking on that as it was presented, I think they were looking at the approach, I'll go to the tab here, but my recollection was -- I think that's an excellent point, but it looked to me like the approach as outlined and proposed was, I think they called it the AOA alternate, the alternatives anyway, and

they were looking at that, not only just in-house and the contract support but also the UNOLS vessels, those are the vessels that are either owner operated, like many of them are the academic institutions, oceanographic research, but I think that was in the scope, is to look at the needs and then look at the various alternatives to meeting those which would encompass much more than just the NOAA organic requirement. I think that would be okay.

MR. SKINNER: I mentioned it more as a, if our recommendation is going to be used for somebody who doesn't have the full context of it, it might help avoid having questions asked about the other side, but I fully support it as it is. It's just a question of whether that helps answer some anticipated questions.

CAPT MCGOVERN: Can you repeat for me what FOFC stands for? I guess this doesn't deal with the SWATH portion of the presentation. Is there an opportunity to deal with funding estimated

costs for that vessel? Another shortfall, it suggests to me that we're building a vessel which is not what NOAA wants and which they may not be able to operate. Is this the right place to do it?

CHAIRMAN RAINEY: My personal feeling would be that might be important but maybe separate. This would deal with it in that the study would anticipate and I think would consider how the SWATH is coming, that's projected to be online and the study is going to incorporate it from a -- that will be one piece of the mission, the mission needs requirement. But I think you do raise another point and it may be an opportunity to have a separate recommendation specifically on the SWATH if we have a focused enough understanding of the issue. Other than we obviously are going to make a general statement of concern on that, but I don't know -- what would your feeling be?

CAPT BARNUM: I was just going to say on the SWATH, again, we don't have our '07 spending plan so we owe you a get-back on that. But

certainly if there's concern, we can certainly express that, put that in the recommendation, but again, this was an earmark that was over several years and had some rescissions, and we'll move forward to build this vessel and there was additional money I believe in the Senate marked '07 and of course that all changed in the way money was appropriated. Again, we don't have an '07 spend plan yet. That's been delivered for execution. I don't know whether money is there or not at this point.

CHAIRMAN RAINEY: How about FOFC?

RADM WEST: In 1996 legislation was passed to set up all the federal agencies, 15 of them, that have a piece of the ocean issues, and one of the requirements was to set up a committee to look at the infrastructure, it's called Federal Ocean Facilities Committee. FACSI 1 came out in '02, that report just was concentrating on the UNOLS, the government built and owned fleet operated by the academic research community. FACSI

2, which is ongoing right now, has expanded to include, may or may not be icebreakers, just about everything that's not DOD or Homeland Security vessels also. It does include NOAA, so they should, this is a good recommendation to coordinate that. That's a federal committee looking at infrastructure. They wanted to look at satellites and airplanes and all that stuff, but it got too hard.

MR. DASLER: Just to follow up on Tom's comment and kind of cut off the questions, it makes sense to have a preamble if maybe we can do that now.

CHAIRMAN RAINEY: Would it be acceptable to just say the HSRP supports NOAA's proposed approach for the NOAA fleet recapitalization study, including in-house and outsourced capability?

MR. SKINNER: Jon and I are shrugging shoulders at each other so I assume that means yes.

CAPT BARNUM: I was going to add look at the second paragraph, should it be assessment be

consistent?

CHAIRMAN RAINEY: No objection. Instead of is. There's no reason why we couldn't add another sentence that says that the HSRP is concerned with the current status of the SWATH. I don't want to say contract and advise, update us on --

CAPT MCGOVERN: In order to help them maybe chase the money, we recommend that NOAA pursue funding to restore the, and we can list the bullets there.

CHAIRMAN RAINEY: Yeah.

MR. ARMSTRONG: Management versus spare parts.

CHAIRMAN RAINEY: What I would like to do is Captain Parsons said in his presentation, I believe the last paragraph there on the page with the SWATH, that we can just incorporate, essentially that NOAA pursue the shortfall so that we get a whole vessel.

CAPT BARNUM: If I could add in the very last statement instead of contract we should say concerned with the funding for completion, outfitting and operation and maintenance.

MR. ARMSTRONG: I think the way you started -- I agree the way this one started is liable to create some concern.

CAPT BARNUM: Yes. Funds for completion, outfitting and operations and maintenance. And then strike contract.

CAPT MCGOVERN: Maintenance of the SWATH CMV.

(Discussion held off the record.)

CHAIRMAN RAINEY: Maintenance of the SWATH, get rid of the contract.

CAPT MCGOVERN: You want to put CMV or the name of it? Will they know what we're talking about? CMV, coastal mapping vessel, or even the name, is it going to be --

CAPT BARNUM: No, the name hasn't been selected yet. It's pretty much known internally as

a SWATH.

CAPT MCGOVERN: The HSRP recommends that NOAA pursue funding to recoup management reserves, vessel capacity improvements, spare parts and outfitting, that's what you're missing. It's actually right out of one of the slides in the book.

CAPT BARNUM: Okay. Probably want to add the operations and maintenance too in addition to the slide, looking at the longer term picture.

RADM WEST: That's the problem with earmarks, they don't come with longer funding, they come one at a time.

CAPT MCGOVERN: Pursue funding -- that NOAA pursue funding. Is this going to restore this or these call for in-flights at one time, right?

MR. SKINNER: This is going to cover the cost.

CAPT MCGOVERN: Pursue funding to cover the cost of.

CHAIRMAN RAINEY: Vessel completion.

CAPT MCGOVERN: Management reserves, vessel capacity improvements, spare parts and outfitting and then operation and maintenance.

RADM WEST: Do we need recommendations for that?

MR. SKINNER: We actually have one recommendation but if we have the recommendation that Andy just did, do we need the first one? We just add the SWATH somewhere in there?

CHAIRMAN RAINEY: Right.

CAPT MCGOVERN: They're really two different programs, recapitalization and building the SWATH.

CHAIRMAN RAINEY: What Tom is pointing out, the second to the last ultimate paragraph there is now superseded by the last one, so it's a restatement that instead of saying we're concerned about it we're going to a recommendation and that's implicit that we're concerned about it. We just add for the SWATH vessel at the end of the last one.

CAPT BARNUM: If I could add one correction, instead of vessel capacity it should be vessel capability.

CAPT MCGOVERN: The slide was wrong.

CHAIRMAN RAINEY: So with permission for technical grammatical corrections, any further discussion on the proposed recommendations here? All in favor? Opposed. Okay. Thank you.

Is there -- let's talk about the two tasks we have, since we're on the recap. Are there folks, is there somebody that would be interested in working on a working group on the fleet recapitalization study? Maybe that's -- we made initial comment there. Let me back that up. I think then let's look at that and if you have further initial comments we can take a break and take those on board and in September when we have the draft we can deal with that one. And I'll double-check, but if he has a need that arises before then and it's specific, we can stand something up to respond to that when that comes in,

anything they particularly need our help on, otherwise we'll leave that open to receive members' input on that.

On the major project for the hydrography, is there somebody, a group of folks who would be willing to work on that? I will be happy to help out. I was wondering if there were some folks that could help me frame the issue for the committee and do kind of an initial scope of work on that and --

MR. WHITING: I'll help you out on that.

MR. ARMSTRONG: You can probably add Lou to that too.

CHAIRMAN RAINEY: Okay. And Adam? Okay. All right. Thanks.

The other two things that I had in my mind to take a look at, to discuss the mechanics but also the report. So I think I'd like to get into the report. Very quickly let me say we have not locked in any future meeting dates. A couple of members, I got this through NOAA, we looked at

the budgets and heard a lot about the CR and such, but there were several folks that were wondering if there might be an opportunity to do a meeting in conjunction with the Hydrographic Conference and also there was a possibility that you might try to do something in conjunction with the SWATH keel laying we talked about, which is June 15th. The hydro conference will be too close on the heels of this and with the current state of the budget we're not certain but it's not likely we'd have a full meeting at the SWATH. There was -- I will continue to talk with the folks, but right now there's no time set. We've looked at what the budget can do in the time to turn it around, so we don't have a date in focus yet. As soon as we can start to get that, see some opportunities there, what's going to be financially doable and staff-wise doable, we'll get word out to the panel. So we're looking for opportunities to go with that. Admiral.

RADM WEST: Are you going to talk any more about future meetings?

CHAIRMAN RAINEY: I'd like to pick up kind of the mechanics, how to work with NOAA and get some things we talked about and noted on the agenda, how we get that set, so yes, I'd like to do that and I guess go ahead do that now.

RADM WEST: You've got to make progress or it will go away. Keep that in mind. If there is a budget issue I think NOAA has a lot of facilities around, if they can use their own facility to host this thing, it will save a lot of money and let the group see things. Going into the field you gotta see things. Consider using one of your labs as a place to hold this in the future and stuff like that, and for you to pick up things that are important to you for us to look at. Here again, go back to using us as your expert group, it's free other than paying a rate to and from there. On that subject, if you take back to your folks that we really are special government employees in support of you. Even though it might not sound like it at times, we're not the enemy and

we're here to really help. Kind of take that approach.

MR. ZILKOSKI: I think we can find NOAA facilities around the country. When you talk about work groups, I would like the group to set up a small work group to look at the ten-year plan. I realize there are a lot of folks around the table that don't clearly understand it, but clearly Lou and Jon and John are the three could give me some good input into it and vet it through the rest of the group. So that's work group I want you to --

CHAIRMAN RAINEY: Thanks, Dave, and I apologize, I did want to do that as well, that's the other task we have, and the last page of Dave's presentation kind of lined that out and we can get a group of folks to flesh that out and see exactly what you need. I'll check with Lou, he had to leave. Are there other folks? Okay, John Oswald. And Jon Dasler. And I'll try to help out and work with the group as well. Okay. Thanks.

Mike.

MR. SZABADOS: I'd also like to have a working group work with us on a couple of items on the integration of PORTS and AIS.

CHAIRMAN RAINEY: So you anticipate having -- I'm not sure what -- you just want to have a group to just check in on --

MR. SZABADOS: Actually Andy -- do you want to respond?

CHAIRMAN RAINEY: We can set something up. I just wasn't sure if you had a task that you wanted to get something on right now or --

MR. SZABADOS: Part of the tasking would be once we get the information integrated to AIS, the second phase of how the information should be displayed. And I think there's some corporate knowledge here which can help us work with the community.

CHAIRMAN RAINEY: Surely.

CAPT MYRTIDIS: I would like to help. They said I'm not allowed to.

CAPT MCGOVERN: Sherri and myself and

Minas.

CHAIRMAN RAINEY: Okay. Anything further them on the task mechanics? I think that's a good exchange. Okay. All right.

CAPT BARNUM: On the future meeting, I know we haven't got our spend plan yet, but I would be cautiously optimistic to use that word. I think we could probably arrange something at the end of our FY. Certainly one of the thoughts with the slide was to see some real event for the membership for the year and also give them the gulf, maybe some of the marine mapping work that's going on as well and some of the height issues that folks are dealing with.

CHAIRMAN RAINEY: All right. The other, the main thing I'd like to do is take a look at our report. Unless, again let me ask members if they have any other comments you want to make before that or you want to dedicate time to getting our report in? I know that a couple of folks were able to get some comments in and we saved those, we have

those on file, and you sent in the e-mail when you first received the report back. One of the things, just in talking to our, to Barbara and others that have helped us put this together is their view is if you have a copy of the document and you can make written comments in that document, that will help them the mechanics of making those edits. If you have comments on what you've seen or found, if you can leave them before you go today we can get those picked up.

I can tell you a couple of just sort of generic or global comments that I have. Clearly there's typographical errors. We're going to get those cleaned up. You've seen those. We can always double-check each other on those. One of the things as a general comment, we provided a considerable number of photographs and graphics and we did not see which ones were selected until the draft. Many were selected that were credited to the Corps of Engineers, and while the photographs were no problem with them, I'd like to use NOAA

graphics to represent the NOAA program and so one suggestion I would have is take a look at the body of photographs we have to illustrate our points and see if we can do that. There was also inconsistent crediting. Some credits were put in for a certain photographs and others were not, so I think we need to be consistent in how we handle that. These are kind of minor sort of proofreading things. Does anybody have any objection to those kind of global things, for fixing that? Okay.

There were several individuals, please look at the way that your name and affiliation is represented in the masthead if you will. We need to get Tom, Tom's in there as the vice chair, a quick comment we picked up right away. Some folks that sent us e-mails saying their organization or title may have been incorrectly listed, so please get those in to us.

I guess I'll quit talking and open it up. Tom Skinner had a good idea about the front cover. I'll let you explain that.

MR. SKINNER: Thanks, Scott. Just looking at the cover here, and you got these the last three or four years, I thought this was -- I always associate this is with our group, whether intended or not it's sort of become our logo. Why not just have something that looks like this with the title of the report here so you're in some respects branding the group? Seems pretty simple, it doesn't have to be a loose-leaf thing bound, but is we want to get recognized over the years I think it helps to have a consistent look, and then on the inside just follow the same thought.

CAPT MYRTIDIS: I agree.

CAPT MCGOVERN: Just a couple small edits. Based on what Admiral Lautenbacher said yesterday, on your letter to the chair, I thought it would be to remove, you know, his name, well, the address from the top and just start with basically an open letter. This way it could be used to anybody if it's dropped on the Hill. And the other is some of these pictures, I like them

but I think to a lot of people that may not understand what they are, maybe a small caption. I mean if you look on page 5, I assume that's a sensor on the top, most people are not going know what that is.

CHAIRMAN RAINEY: I agree with that.

CAPT MCGOVERN: For instance on page 5 up in the corner, that little picture, any idea? Most people -- just small captions on a lot of these pictures would probably help a lot to explain what they are. Especially if you're going to take it to the non --

CHAIRMAN RAINEY: I agree. I would like just for the record to acknowledge, to pass on I guess or talk just a minute about the suggestion of an open letter. I agree with that and I was delighted that Admiral Lautenbacher's sort of immediate reaction to this was, we did have a prebriefing but very quickly he wanted to have this widely disseminated, which is I think reflects very favorably on our work. So if it's not, this is

what I don't know, we have been constantly, consistently advised of capabilities but more of our limitations, so as long as NOAA has no problem with that I'm fine with it. The one opportunity I was hoping to have come in was a substantive addition to the report for going from our preliminary finding to our final. I was hoping that we could get kind of an official letter back from Admiral Lautenbacher to include in the report and simply sort of what he -- the comments that he gave to us yesterday would be terrific, acknowledge receipt of it and it went through the importance of hydro services and some of the important recommendations, something that basically just grabs the talking points he had yesterday and puts it in there, I think that would be nice to have in the report. However we can marry those up.

RADM WEST: I was thinking about the open letter, I'm not sure we can. I think what Connie meant yesterday was get it to my boss. I think we are a Commerce backup. So send it to

Gutierrez, send it to both quite frankly, send it to Gutierrez and send it to Oceans and Atmosphere and then it becomes a public document. I think we're going to have to do it that way. It would be nice to have Connie's endorsement but I wouldn't want to wait because you want this out quickly, the Hill is working on the '08 budget, NOAA is working on the '09 budget.

MR. DASLER: What about just taking Andrew's comment about not addressing the letter that's incorporated but as we send those on there'd be a cover letter to go with it so then it can be used for line distribution.

CHAIRMAN RAINEY: Basically I delete the top three lines.

MR. DASLER: Right, and it makes it more generic for general distribution, but you can still have a company letter when it gets distributed.

CAPT MCGOVERN: The letter would come from the chair to the Secretary, please find the attached report and then you can -- technically we

have reported to the Secretary. But he takes the attachment separately, which is this. I don't know. I guess the lawyers could fool around with that.

CHAIRMAN RAINEY: I take your point. I think we could just delete the header and just start with the body of the letter.

CAPT BARNUM: Remember that the FACA works for the administration, as the admiral pointed out to Commerce. So I think Admiral Lautenbacher was saying yesterday it's good telling me but also tell my boss. So I also agree with Admiral West, I think you need settle it here because time is fleeting for this report and it's critical.

CHAIRMAN RAINEY: Then I would suggest that we simply delete the first four lines and leave the date. We have the date on the document somewhere. And just basically start out this special report. It goes on in the text to explain who we are and who we report to and as Captain

McGovern suggested, we can also submit, put a transmittal letter on it and sent it up and the administrator and staff on his behalf can also disseminate it through the chain. I don't see how that can run afoul -- is that acceptable to the panel? Does that accomplish the intent? Okay.

MR. DASLER: I have had some comments on what we talking about on some of the graphics. Page 13, I sent an e-mail, it just seemed odd when we were talking about what we can't see, there's a picture of the satellites up there and there's no representation of a side scan image, so there's different methods and possibly just replacing that with a side scan on that page. And then on Lou's, the graphic on page 8 where it says estimated population of 80,500. That's actually an uninhabited island.

CHAIRMAN RAINEY: So that estimation is a little off.

CAPT MCGOVERN: It didn't say people. I don't know if NOAA has it, does NOAA have the side

scan of this anchor before they found it?

CHAIRMAN RAINEY: What page?

CAPT MCGOVERN: 13. It would helpful to tie in the two.

MR. SKINNER: That would be a really good representation, particularly for the description so people knew before and after.

CAPT MCGOVERN: I don't know if you have them or not, but if you do it would be good.

CAPT BARNUM: The surveys that were done postaccident, there were several folks out of there and the contractor wasn't hired to do this. So again, this is an area of the channel that was not surveys done after the fact.

CHAIRMAN RAINEY: The answer is I don't know if we can get it but we'll try. I can tell you that we had photos previous that we were not able to use, so this is not an easy thing. Time is of the essence here clearly, but we can certainly see if we can get that.

CAPT MCGOVERN: Don't let it slow you

down.

CHAIRMAN RAINEY: Again, similar to the inconsistency and the accrediting, adding a caption to explain a picture that's not self-evident, I don't know to the extent we can mess with the layout, but obviously you got pictures of one thing and the discussion on it on different pages. To the extent we can quickly put a picture of what we're talking about, we can maybe take a look at that. We have to do what we can. That's as important as some of these minor --

CHAIRMAN RAINEY: Any members that reviewed, this one of the things most important to me and took some time, we went diligently through a program analysis to work with -- this is an acknowledgment up front. Rich and Barbara and all of our folks that work regularly, those offices really made this possible. We had some difficulty with challenging issues. Does any of the members see any technically inaccurate statements other than the population on this island? I want this to

be as bulletproof as possible.

MR. DASLER: There was a statement in there about one and a half obstruction per survey but then when you look at --

CHAIRMAN RAINEY: Two and a half, right?

MR. DASLER: I think it says one and a half. If you look at the '05-'06 field season you've got 800 and some detons. On page 14 in the first paragraph it says NOAA finds new hazards at the rate of about 2.5 per day, see Table 1, so there was a discrepancy on that one.

MS. DICKINSON: I think, Scott, you said one and a half yesterday when you were presenting it to the admiral and it's two and a half.

CHAIRMAN RAINEY: So it's twice as bad as I said yesterday.

MR. DASLER: Even at two and a half, in the '05-'06 field season it was 800 and some, I think that now is probably more accurate, there's more been effort than in '05 and '06. And you wouldn't really want to look at it as -- I don't

know if you want to break that down into data acquisition, but it seems even two and a half is an underestimate.

CHAIRMAN RAINEY: We'll take it for action and come out with our most accurate number and stick to it.

MR. SKINNER: Looking at some of the images that represent the growth of vessels over time, it seems to me that some of the images that we saw yesterday at the first presentation were a lot more, conveyed the information a lot better than some of the illustrations here. I hope we can get those and plug them in. Or just go with these, but I thought they did a much better job providing the wow factor in terms of the vessel size.

CHAIRMAN RAINEY: Okay, if you have a specific one, you can identify specific ones we can certainly see about using those I guess. Again, we probably have to do that pretty quickly. If you have a particular one in mind we can check.

MR. SKINNER: Okay.

MR. DASLER: Just to expedite it, in terms of the side scan sonar image replacing it with one of Iraq, replacing the satellite imagery on 13 that was submitted before, if people feel that's okay --

CHAIRMAN RAINEY: Are you referring to the one that you had?

MR. DASLER: In an e-mail I sent earlier when we addressed this I sent several side scan images, we have one of Iraq that could go in there.

CHAIRMAN RAINEY: All right. I had mentioned we received everyone's e-mails, we have those, but Elaine and John both talked about the recreational boater representation. As you see it now in the document, is that page sufficient or if you had some specific changes that you wanted to make? I'm not sure where --

MS. DICKINSON: Page 25.

CHAIRMAN RAINEY: And I guess throughout, is that satisfactory?

MS. DICKINSON: I think that page is

good.

MR. ARMSTRONG: On page 4, I think I sent a comment in earlier, the second paragraph there, the lower paragraph just doesn't make sense to me. I don't know what we're trying to say there. The one talking about the earmarks and percentages. I can't follow any logic in that paragraph. Maybe it's just me.

CHAIRMAN RAINEY: Okay. I'll give that one to the Secretary and see what happens. I think if everybody's had a chance to take a look at what he's asking about, the point I think that's trying to be made there is the impact of the earmarks, it's a large percentage. So when you look at the trend for the programs budget, you can consider the amount of percentage that's derived from earmark rather than base budget. Do you have a better way of presenting it? How do you think makes that point maybe more clear or to clear that up? I think what we're trying to get at there is the budget trend is low and what happens is the

president's request comes in and I think what's trying to be said there is that then you get the earmarks and it pluses it up, which appears it's not so bad, but really the trend is downward in the administration. So how would you make that more clear?

MR. SZABADOS: Maybe with the president's request and inactive as opposed to using the term earmarked? I don't know if that would be a better way.

MR. DASLER: Like some of Lou's comments, the president's request for '07 and '08 compared to the '06, $122 million shortfall in the NOS budget.

CHAIRMAN RAINEY: How about if we take that for action, look at that paragraph, I'll work with the programs and try to take another stab at that and put that out very quickly.

MR. ARMSTRONG: The reason I make this point, we're asking for more money, this is a key paragraph in the request for additional funding.

And I don't think -- it doesn't make sense to me as it's written.

CHAIRMAN RAINEY: All right. I have that. We'll respond to that. I was asked, I don't know the source, somebody here let me know, one just came to me for consideration, we have included in the draft the letter that we sent up on the Ocean Action Plan. It was asked do we also want to include the letter that was drafted on the Division for Coastal Management. I only have one copy of that and I realize I can read it, but it was I think in a previous meeting, so I need a sense of do we want to get that also included.

(The chairman read the aforementioned letter.)

That was a letter that was drafted at the previous meeting and forwarded. I guess I'm offering -- there was a suggestion just made to me, I just need to get the committee's sense of do you want to add that into the report as we did with the Ocean Action Plan or do you think that sentiment is incorporated in the body sufficiently? Does this

add value as a separate inclusion?

MR. SKINNER: Actually I'm not sure that I think that the Ocean Action Plan letter adds to the report. It seems to be -- I mean it was a statement and I think it was a good one, but it seems to be just sort of tagged on at the end. So I guess I'd suggest we take that out and leave this out. We really want it to be the most wanted, not a compendium of everything we've done on the panel.

CHAIRMAN RAINEY: Other thoughts? Let me just open the floor for -- that's a good point. Go ahead. I don't want to go through all the motions, let's talk about it please.

CAPT MCGOVERN: I agree with Tom. Even though there are other worthy things we accomplished, a straightforward message is best left alone.

MR. DASLER: I would agree with that.

CHAIRMAN RAINEY: Just so we're clear then, we should make the decision to strike the letter that was in there in light of that that was

all part of our deliberations and sort of an interim step to the report that we have. Let's get a motion on that. Tom made the motion, Jon seconded it. Everybody in favor of striking the letter in the preliminary draft. All aye. Opposed? Okay.

CAPT MCGOVERN: On that, because all these letters are like on the website, I don't see the website addressed in here. Maybe that could be added somewhere on the front. When it talks about the charter, it gives you all of those. To review the current charter please go to.

CHAIRMAN RAINEY: Thanks for that. That's something we had planned to do, is get the website. We're going to do some work on the website, have this available and go back and organize the references. We'll have a website in there.

MR. SKINNER: Instead of an appendix, to have further information and have each document listed. Can we get a U2 version of this?

CHAIRMAN RAINEY: Who was responsible for the jingle? Barbara from the -- our secretarial supporter on this and program offices as well, you know, as we've gone through the process and taken it back down in-house, are there needs you have that you're not getting answers to here while I have everyone here as far as the mechanics of how we can make these changes? Are you sensing any gaps here we haven't talked about? What can we go? The bottom line is we want to turn to on this, wrap it up and get it so that the vice admiral has it and we will be final with it in time for him to be able to take it to the Hill and the Committee on Marine Transportation. Do you see any mechanical steps we need to address?

MS. HESS: Nothing except Captain McGovern, we talked the other day about trying to make sure we get the right pictures and some of the needs he had, he was going to let us know. So if anybody is in that same boat as Captain McGovern, make sure -- we receive thousands of pictures, and

in Ann's defense, had a lot to go through.

CHAIRMAN RAINEY: Kind of a situation where it was difficult to pick, so if you have specific pictures, maybe even if you sent it to us before, it might help us a lot. This is what I'm talking about. That will really speed things up.

Okay. Any other, anybody else, any other changes? Barbara, for the final, the final final, we'll be able to send out a PDF for people to say yep, it's there and we can get a response back we're good to go to production. All right.

MS. DICKINSON: This is more of a cosmetic question, but your highlight color that you picked is sort of this mud brown. I don't find it very attractive I gist. Is this like the final format? Where you have highlighted sections and it's reversed out all it's all this kind of brown thing.

CHAIRMAN RAINEY: That was the selection made by our contract person. What I don't know, again it's just my ignorance of the printing

production process, but I know we had some challenge getting it back, but I believe we've got our content back and the fonts and such. I think the answer is we'll check, but we're going to get some help now with production to finish the printing with NOAA, so we'll have to go with what their capabilities are I believe in the short term. I'll look into that, I don't know if we have the capability of changing that, the print. I assume we would.

MS. DICKINSON: Who's going to do the printing, NOAA?

MS. HESS: We have the paperwork in place to have GPO do a major print job but it's going to take a while, we're talking about whether to do it in-house.

CHAIRMAN RAINEY: First what's happened is that we had a very -- the process was very complicated with the government printing. So our mission here is to finalize it. When we get that done we're done, then it's just a matter of

production. What I envision may happen is, depending on the lead times and requirements with GPO on the big volume of it, we may be able to do a short run of the final document in-house at NOAA and maybe -- that's what we're looking at now. We contracted out to do much of this, we recently concluded that relationship, and we're getting our hands back on a document so we have a little bit more control and agility in our production process. So that's where we are and it's happening kind of real time. We're going to make the deadline for NOAA's purposes to have this thing. I think we'll make our final edits to this and then I'll apprize you of what we've been able to work out on the actual process of that, but just to pick up on Elaine's comment, do you have a suggestion, a color? I certainly agree with you. If we can change that, what do you think would be particularly, what would be better?

MR. SKINNER: Can I jump in? I think one of the ideas we mentioned briefly when talking

about the outside design was also have that carried over on the inside. The primary colors are sort of black and blue, black for the print and blue I guess for water, hydro. And I don't know if we need to spend a lot of time on it here, but I would be willing to work with whoever NOAA is going to be overseeing. Just sort of pull that from what we've been using right along as the easiest way to do it and maybe try and clean up some of the graphics and layout on the inside if that's possible. So I agree with you.

MS. DICKINSON: I would just say on some of the type where you really are trying to highlight something, you want it to stand out a little more, just a slightly brighter color, whether red or something like that. I mean brown behind some of the pictures is fine. I was thinking more about some of the headlines. Just kind of a little blah to me. Some people scan documents; if I can't read the whole thing, I'm going to flip through pages, read the headlines.

MR. ARMSTRONG: On page 8 in the first paragraph -- before I say this, are you looking to, for direct suggestions now or do you want me to, did you want us to just mark this up to hand in?

CHAIRMAN RAINEY: I guess it would depend on the complexity of it. Is it something --

MR. ARMSTRONG: I'm just going through now.

CHAIRMAN RAINEY: Go ahead.

MR. ARMSTRONG: You say NOAA's capacity to survey and process a hundred thousand, maybe we should say survey and chart. Then we say in the last sentence an objective that NOAA believes achievable, maybe we should change that to the HSRP believes achievable.

CHAIRMAN RAINEY: Okay. Any objection to those two changes? Okay.

MR. SKINNER: Scott, maybe we could set a time frame next Monday or something to get all the comments in so that people have time, on the flight back or whenever, to take a look at it, get

everything in, if it's not in by noon on Monday, then catch the next, the supplemental report. So I don't know, is that acceptable to everyone? That way we can have a little bit of time to go through it one last time.

MR. ARMSTRONG: I think we should give the chairman the authority and our approval to make such changes as he deems appropriate from our suggestions.

CHAIRMAN RAINEY: One thing I will owe you, when we get everything, we'll get a quick rewrite about the section talking about the earmarks and get that to you. I'll see if I can get that out in the street Monday. We can play around with that and get that clarified. Is there any other further comments while we're here on the report? Again, I really appreciate everybody, this has been a big project for us. I think we'll get it out in a timely way. Hopefully it can help these programs have something for third-party validation of the programs and all these different

processes they have going.

All right, seeing nothing further, is there new business?

CAPT MCGOVERN: I want to discuss times on future meetings.

CHAIRMAN RAINEY: I don't know if I might -- well, what we talked about before if is we got -- we talked a little bit about it, which is kind of the limit of what I know. To kind of say it again, we have no dates selected because, primarily because of the budget issue and timing after this meeting. We're looking at possibly -- go ahead.

CAPT BARNUM: I was going to suggest, again I was being cautiously optimistic, but it might be best to pick a date now and maybe back off of that, but again, I'm cautiously optimistic. I think we're okay to have another meeting before the end of the fiscal year. My suggestion would be to pick a date and location again for the next date before the end of the fiscal year.

CHAIRMAN RAINEY: We have time. I would certainly want the panel to get these -- if folks have a preference for time or location we can certainly discuss it in a few minutes here and see if we can make that work.

MR. WHITING: I have a preference for the Norfolk Hydrographic Conference. In June is a bad time to leave Alaska even for a retired individual. I would appreciate it being earlier than June or later.

CHAIRMAN RAINEY: They just said we can't, that's next month or the month after.

MR. WHITING: We have two things we need to continue working on from my understanding from Captain Parsons and Rich, that these things are priority to be done by September. You put things off until June again, I think you keep trying to compress things into a time period that's busy for everybody. I would go quickly personally. But I guess I should say I'll probably attend either one.

MR. DASLER: Sounds like June is off the

table so we're talking about September.

CAPT BARNUM: I think what Scott was saying is our concern is we're talking about two months away for organizing another meeting, for procurement of the room and all the logistics would be tough for us. I would think realistically summer all the way up through September, not September 30th, that has its own implications.

MS. DICKINSON: I'll throw in my vote for August because that's a really slow month for me. In September things start getting really really hectic again. August is always good as far as I'm concerned.

CHAIRMAN RAINEY: My problem is I want to hear views. It's always very, very difficult, scheduling is always hard for me. Everybody has different seasonal issues and such. I can't obviously commit now because I've got to get back with NOAA and see what's doable. We can find something to shoot for and try to make that work. My early indications were that trying to do it in

conjunction with the hydro conference is just -- but we can contract in the future on that. I do appreciate what Larry is saying, we'll keep working on. Adam, did you have any comments you want to make?

MR. MCBRIDE: July or August is fine with me.

CHAIRMAN RAINEY: I don't want to keep drawing this out. If there is no other business I would like to go ahead and -- Admiral.

RADM WEST: The more I think about it the more I think we ought to put something on the record as far as the ocean observing not addressing the transportation part of this. However, you want to word it. I think we ought to just from us to NOAA to make sure that -- I'm just thinking we need to go on record saying -- because historically some of the push-back on the ocean observing has been initially it was designed by the academics, there was a push-back on data management, we got over that, now as we put the architecture together the

regional associations popped their head up and there's push-back from them. I think there has -- I'm thinking out loud. I think before we lose you all we should go on record today to say don't forget that part of it. I'm not sure how you want to do that.

CHAIRMAN RAINEY: Do you think you could draft something, do you want to take a ten-minute recess, draft it and I can talk with the program folks or see if we can clean up that earmark paragraph and come back in 15 minutes and see if we can get an agreement on those and have those wrapped up?

CAPT MCGOVERN: I think we go on the record every meeting with this IOOS issue and then by the next meeting they forget again.

RADM WEST: We need to document, the program manager for it, she needs to -- you tell her to include it in her brief. Whatever that takes. We can give you a couple sentences.

MR. SKINNER: There was a side bar at

the very beginning of lunch, I think Bruce may have been --

MR. VOTE: Bruce Vote (phonetic), I work with National Ocean Services and I work on IOOS issues as well as marine transportation. I talked with Zdenka, and we are going to include the marine transportation system as one of the societal challenges on that slide. So when this goes out it should be more comprehensive in terms of what the societal challenges s are and not just some related --

MR. ARMSTRONG: I hope it will also be on the back end, not just the challenges but the output end.

MR. VOTE: Outputs and deliverables.

CAPT MCGOVERN: It probably still would be good to get it on the record. I'll try to figure out something. Maybe in the next five minutes.

CHAIRMAN RAINEY: We had on the agenda to go to 3 and open for public comments if there

are any. I know folks have flights. I would certainly like to beg the panel's indulgence and take a ten-minute recess and try to attack those two issues, the IOOS one he's talking about and the earmark answer, have an agreement on those before we left if we could do that, would that be acceptable?

MR. SKINNER: Can we go back to the recommendations slide or screen that we already had so we have them all listed there, the fleet recapitalization? And then just below that just put another subtitle, NOAA recapitalization and put NOAA, what is it, IOOS structure. And HSRP recommends that NOAA include a fifth --

MS. DICKINSON: If you look in the book there's three on that slide when we're looking at societal challenges.

CAPT MCGOVERN: There's only three there, it would be on the other end and your decision tools would be --

MS. DICKINSON: It's under K.

MR. SKINNER: As a maritime transportation component, or navigation, I don't know what the right terminology is, the societal challenges, the decision tools.

(Pause in the proceedings.)

MR. SKINNER: I think what we're trying to do, Scott, is pointing out a box that we have in the HSRP report. I think what we want to do is make some additions to the current NOAA IOOS model that was presented today. Right? Okay, so adding, on this recommendation the component I think would be the societal, you want something added in there on societal challenges, you want something there on decision tools, and is there a third or fourth place where you want it at? Is this making sense to anyone?

MR. ARMSTRONG: I think what you just said makes a lot of sense, if you understand what they're trying to do, trying to focus on the core variables and the core variables that fit your societal challenge and your decision tool is what

they can focus on in the 12 months without disrupting the process she's already undertaken. I think you should probably think of what is that societal challenge. I would not leave that up to her to decide it. I think get just a bullet, a few words that you say this is our basic societal challenge and here is our basic decisional tool you want to see in there and then work with her on what that means.

CAPT MCGOVERN: I guess societal challenge could be a safe and efficient marine transportation system, there's your challenge.

MR. SKINNER: Okay.

CAPT MCGOVERN: The go/no-go is, gotta think about that for a minute.

MR. SKINNER: What if we just add HSRP recommends that NOAA have a safe and efficient marine transportation system component, the societal tools--

CAPT MCGOVERN: Societal challenges.

MR. SKINNER: And acknowledge the role

hydro services provides. And acknowledge, and acknowledge the role of hydrographic services in the IOOS structure. Come on. I'm almost finished here. In the IOOS system. How's that? Do you guys know what that means? I think the idea was in the early stage of the flow chart or model that there be the safe marine transportation system there and then corresponding outputs throughout the model that incorporates it into the IOOS system.

CAPT MYRTIDIS: I think you want to say societal challenges, not societal tools.

MR. SKINNER: Oh, sorry.

(Discussion held off the record.)

MR. SKINNER: Motion to accept this amendment.

MS. DICKINSON: Second.

CHAIRMAN RAINEY: All in favor? Okay, accepted, thank you. Is the other one ready to go? Let me yield the floor to the --

MR. SKINNER: I've never seen anyone distance themselves so quickly. This one we're

trying to capture the full, both the inputs and outputs in the model that was gone over this morning but still keep it open enough, so we came in, came up with this language. The societal challenges were, they were sort of the input side and the decision tools were the other end of the model.

MR. DASLER: Do we want to say should or could improve -- actually down the last sentence. Yeah.

MR. SKINNER: That's fine by me. And maybe also change the or on the last line to and.

CAPT MCGOVERN: I think just get rid of the the in front of dynamic and make chart plural.

MR. SKINNER: Mike.

MR. SZABADOS: This was for the accomplishments for the next 12 months and I believe they were looking for not demonstration but actually execution. Are we prepared to go operationally with integrated dynamic charts in 12 months?

MR. ARMSTRONG: That was 36 months.

MR. ZIKLOSKI: It was three years.

MR. SZABADOS: Oh, okay.

MR. SKINNER: Do people want time to digest this?

RADM WEST: Second.

MR. SKINNER: All in favor. Opposed. Ayes have it.

CHAIRMAN RAINEY: All right, that was easy. Thanks very much, that helps a lot because now we can get those out of the way. The other things I think are cut and paste and identifying photos and we've gone through the typos. Last call for any other business before we go to public comment.

RADM WEST: Just another comment about the next meeting. I think we ought to keep the momentum going. We have two or three things we can review with NOAA in the next few months. Roger said he wanted to have something to the Hill in October, which means going through NOAA will take a

while, so we ought to see that and with our support I think we're going to do some things. Zdenka will have her budget, she'll have our recommendations, we'd like to see where they are with that, I suggest we have this at one of your facilities, which will cut down the cost significantly. My suggestion is, I mentioned to some folks, Great Lakes observing system has been there quite a while and it's kind of a neat little thing to look at or the Northwest, just to keep the momentum going, my suggestion.

CAPT MCGOVERN: I'd like to second that. I'd be very interested as well to see an update on the FY '08 budget process, see where that's going to end up. I'm concerned if we fall back to two meetings per year we certainly won't be able to maintain any headway.

MR. DASLER: I heard that the 200th anniversary exhibit is on display in Seattle, I'm not sure when that will be -- Northwest or Seattle location.

MR. SKINNER: I don't know if this is appropriate for a full meeting, but Oceans Week is in June I think. I don't know if there's ever much of a presence or it's much on the agenda for that week in terms of this type of stuff, but we have a report, we should probably be trying to use that as an opportunity to promote what we're recommending.

CHAIRMAN RAINEY: One of the things I certainly would like to do, I think we can set it up is that if -- June sounds like it's going to be tight, but if there's members at the hydro conference at the Ocean Week, at the next meeting we can report out the significant events that relate to what we're doing there and maybe also individuals can carry on, pass the information at those conferences as well. So we'll try to keep track of those events that are significant and areas we're dealing with for sure. I'll pursue them further with Steve and take those suggestions and see what we can do on those suggested sites and times and get back to you as soon as we can.

CAPT BARNUM: I'd be glad to work with you on that. I don't know when the Seattle exhibit closes, I think close to December, but I have to check on that. Another opportunity is certainly back here in D.C. in July. I guess that's a bad time.

RADM WEST: It's not the timing, it's the location.

CHAIRMAN RAINEY: All right. Let's open the floor here, last call for any --

MR. ARMSTRONG: This is going to be a new subject. Although it doesn't look like we'll be able to get a meeting for the Hydrographic Conference, I'd like to encourage all the members of the board that can to attend the U.S. Hydrographic Conference in Norfolk, Virginia May 14th through 17th, it would be a great opportunity to get some additional education and exposure to the entire hydrographic community and profession in the U.S.

CHAIRMAN RAINEY: Thanks, Andy. We did

that in San Diego, it was definitely good. All right, seeing no further business can I open it up if we have any public that managed to hang in. A couple and I'll recognize you for any comments. All right. The door closes quickly. All right, well, again thanks very much. I think it was a good meeting and a lot of work went through this. It was an opportunity for us to meet again with the administrator and everybody. I really appreciate the comments. I think the delivery of our report was well presented and well received and gives us a lot to follow up on.

MR. WHITING: I have one question about the Hydrographic Services Improvement Act. Are we going to have input into that wording or is it just going to come off the Hill someday and that's going to be it?

CAPT BARNUM: The Hydrographic Services Improvement Act, we're expecting to have some time to review that as we talked about at the August meeting in Alaska. However, in the meantime this

past fall we had, it was picked up by the department and it is now moving through the system. My understanding now is we will see what it comes out to.

MR. WHITING: Thank you.

RADM WEST: In a request on your next meeting, as soon as you can let us know so we don't juggle the books like we did the last time and cause a lot of angst. It doesn't cost any money to put a date in a book, you can always cross it out. As soon as you come to some resolution as to where and when, let us all know.

MS. DICKINSON: What were the dates, Andy, May 14 what?

MR. ARMSTRONG: May 14th through 17th. 15th is the formal start, 14th is the exhibit setup and those kinds of things.

CAPT BARNUM: Just talking about dates here, I heard a raspberry on July in D.C. certainly and am I hearing consensus, you see something in June or something in August? I'm hearing two

different things. Want to meet sooner to keep the momentum going. Looking for general consensus on a date.

CAPT MCGOVERN: July and August are obviously real big vacation months, the last two weeks of August about half the workforce takes off. June's not bad or I know Elaine suggested September, but how early, right after Labor Day?

MR. MCBRIDE: Somebody mentioned Seattle.

CHAIRMAN RAINEY: The 200th anniversary NOAA has, I don't know if traveling is the right word, it's temporary, there's a very big outreach looking at the history of NOAA. They're staged throughout the country, 200 years, the maritime museum, I believe it's housed in Seattle, it's an exhibit running for a certain amount of time and the question was we don't know when the curtain call is on that but possibly we could do something in conjunction when that exhibit is there.

MR. DASLER: I heard it's supposed to be

there at least another six months I think down at the Seattle Center.

CHAIRMAN RAINEY: All right. We'll take that for action absolutely and put out the alternative as quickly as we can and we'll get the -- if you have specific recommendations please get them to Barbara and myself I guess as soon as you can. I guess we agreed on Monday, next Monday by noon, and then we're going to pack this thing up. I think it's really kind of in the proofreading stage. Unless there's other business I would like to accept a motion to adjourn with many thanks.

CAPT MYRTIDIS: I'd like to make a motion of acknowledgment of your good work, thank you very much.

CHAIRMAN RAINEY: We'll see you to be determined.

(Hearing concluded at 3:10 p.m.)

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STATE OF MARYLAND

COUNTY OF BALTIMORE

I, Richard D. Baker, Jr., a Notary Public in and for the State of Maryland, County of Baltimore, do hereby certify that the aforegoing is a true and accurate transcript of the proceedings indicated.

Richard D Baker Jr am

Richard D. Baker, Jr., Notary Public

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