

1 VOLUME II

2
3 HYDROGRAPHIC SERVICES REVIEW PANEL4
5 PUBLIC MEETING - WEDNESDAY, APRIL 15, 2009
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9 The Public Meeting of the Hydrographic
10 Services Review Panel was continued on Wednesday, April
11 15, 2009, commencing at 8:32 a.m., at the Renaissance
12 Baltimore Harborplace, 202 East Pratt Street,
13 Baltimore, Maryland 21202, before Robert A. Shocket, a
14 Notary Public.15
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21 REPORTED BY: Robert A. Shocket

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1 AGENDA:

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3 FORMAL MEETING CONTINUES - DAY 2 WELCOME

4 Brief Recap of Day 1

5 THOMAS SKINNER, HSRP Chair

6

7 INTEGRATED OCEAN OBSERVING SYSTEM (IOOS) UPDATE

8

9 DISCUSSION WITH NOAA LEADERSHIP:

10 Mary Glackin, NOAA Deputy Director Under Secretary

11

12 NOAA BAY HYDRO II DEDICATION AT INNER HARBOR

13

14 MAPPING SYSTEM OF SYSTEMS AND IOCM UPDATE:

15 Jack Dunnigan, Assistant Administrator, National Ocean

16 Service

17

18 OPEN DISCUSSION - RECOMMENDATIONS, STRATEGIC PLAN WORK

19 from TAMPA HSRP MEETING, NEXT STEPS

20 FINAL PUBLIC COMMENT PERIOD

21 CLOSING REMARKS, ADJOURNMENT

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

2 MR. SKINNER: Welcome. This is the second

3 day of the Hydrographic Services Review Panel Meeting

4 here in Baltimore, Maryland. Welcome, every one. I

5 wanted to start off again just going around and quickly

6 introducing the panel members and the guests that we

7 have here. If we could start that, I will warn you, we

8 will probably do this again when the Deputy

9 Undersecretary arrives so this is sort of a practice

10 round. Larry, would you --

11 MR. WHITING: Larry Whiting, "tired."

12 (Laughter)

13 ADMIRAL WEST: Dick West, retired sailor.

14 MR. WELLSLAGER: Matt Wellslager, employed,

15 Program Manager.

16 CAPTAIN MYRTIDIS: Minas Myrtidis, Vice

17 President, Environmental Regulatory Compliance,

18 Norwegian Cruise Line.

19 MR. SZABADOS: Mike Szabados, Director of

20 CO-OPS.

21 MR. ARMSTRONG: Andy Armstrong, the NOAA

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1 Codirector of the Joint Hydrographic Center.

2 MS. WILLIS: Zdenka Willis, Director of

3 NOAA's IOOS office.

4 MR. WELCH: Ed Welch, Passenger Vessel

5 Association and the Union of Greek Shipowners.

6 MR. SKINNER: Tom Skinner with Durand &

7 Anastas, Environmental Strategies in Boston.

8 CAPTAIN BARNUM: Steve Barnum, director of

9 NOAA Survey.

10 MR. DUNNIGAN: Jack Dunnigan, still

11 learning, sailor, working, from NOAA.

12 MR. DASSLER: Jon Dassler, Director of

13 Marine Services, David Evans & Associates.

14 MS. DICKINSON: Elaine Dickinson, also a

15 learning sailor and with BoatU.S.

16 MS. BLACKWELL: Juliana Blackwell, Director

17 of the National Geodetic Survey.

18 MS. STUBY: Danielle Stuby, with National

19 Geodetic Survey, HSRP staff member. And if you guys

20 want to teach me how to sail or boat, I'm ready

21 anytime.

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1 Ms. DENTLER: Virginia Dentler, CO-OPS and

2 HSRP staff member.

3 MR. SKINNER: Mike?

4 MR. ASLAKSEN: Mike Aslaksen, National

5 Geodetic Survey.

6 MR. LOWELL: John Lowell, Chief, Marine

7 Chart Mapping Division, OCS.

8 MR. FERGUSON: Jeff Ferguson, Chief,

9 Hydrographic Survey Division, OCS.

10 MS. ERICKSON: Mary Erickson, Chief of

11 Coast Survey development, OCS.

12 MR. PARSONS: Roger Parsons, IOCM

13 coordinator.

14 MR. MARTIN: Ed Martin, office of Coast

15 Survey, and I'm glad to give a sailor lessons whenever

16 requested.

17 MS. TROMIG: Kristin Tromig, CO-OPS, Office

18 of Planning.

19 MR. ENABIT: David Enabit, Coast Survey

20 staff.

21 MR. SKINNER: Thanks very much. We'll get

1 a jump -- oh, I'm sorry.
 2 DR. JEFFRESS: Dr. Gary Jeffress, Professor
 3 of Geographic Information Science, Texas A&M
 4 University, Corpus Christi. I'm sorry I'm late. I had
 5 to buy some lottery tickets.
 6 (Laughter)
 7 MR. SKINNER: I think we'll jump right in
 8 and welcome jack. It's always a pleasure to have you
 9 and we appreciate you making time for your schedule.
 10 MR. DUNNIGAN: Thanks, Tom. Good morning,
 11 everybody. Once again it's really great to be with you
 12 all. I was in the door three minutes when Gary
 13 Jeffress gave me this great package about height
 14 modernization and why it's critical and important. And
 15 I think just a reminder of how important the work that
 16 you do and help us do really is.
 17 I was really glad to hear that your panel
 18 went well yesterday and that you learned a lot. Those
 19 continue to be some of the best parts of these meetings
 20 and somehow we got to think about a way of capturing
 21 that information so that we can use it. And I guess

1 what I learned this morning was that I need to learn a
 2 little bit more about Domino Sugar. So, I look forward
 3 to that.
 4 I wasn't able to be with you yesterday.
 5 You know I place high value on these. We had just a
 6 wonderful IOOS industry workshop kickoff and it was
 7 sponsored by the Interagency Working Group of Ocean
 8 Observations and that date was picked a long time ago
 9 and I had a fairly solid commitment to be there and
 10 emcee that event. And you know, what we're trying to
 11 do is to build out the sense of who really owns the
 12 need for ocean observing. And, the target right now is
 13 to look at sort of the third-level people. These are
 14 the people whose businesses depend on having good ocean
 15 observing data.
 16 And this was the first of a number of
 17 workshops. I think we're going to try to come to
 18 Houston sometime later in the year, and there's one
 19 that we're scheduling, we're not scheduling it directly
 20 but it's being scheduled for Copenhagen and then trying
 21 to coordinate it with all of the things that are

1 happening in that part of the world later this year
 2 with world climate conferences and things like that.
 3 So it's very exciting and it was something I needed to
 4 be there for and it would take something important like
 5 that to keep me away from one of your meetings. So,
 6 I'm glad to be here.
 7 I want to give just a little bit of credit,
 8 I have been travelling around a little bit and my, if
 9 it wasn't before, my new favorite cruise line is
 10 Norwegian. I was in -- I just mentioned this to Minas.
 11 I was in Hawaii doing a bunch of site visits a couple
 12 of weeks ago and talking to our educators and they were
 13 talking about this program and that program and they
 14 told me about the great work that Norwegian is doing in
 15 Hawaii to provide platforms for education for the
 16 school children of the state, where basically they
 17 just, you know, take the kids onto these cruise ships
 18 for a day and, you know, work with local educators,
 19 whether sanctuary programs and with others, to give
 20 them a real experience of the sea and those resources.
 21 So, thank you Norwegian really for doing that. I

1 wasn't aware that went on and it's a great thing to be
 2 able to do.
 3 Let me tell you a little bit about NOAA
 4 right now. Of course, you know, we bureaucrats are
 5 impatient people. We now have our new Undersecretary,
 6 and I met with her a couple of times on various issues.
 7 She is just an interesting person. She's a very nice
 8 person. And right now there it is her and a woman
 9 named Monica Medina, who was general counsel in the
 10 first, or the last Democratic administration and she's
 11 now a senior policy adviser. So the two of them are
 12 really trying to carry the entire political load for
 13 NOAA.
 14 And Mary Glackin, who will be here in a
 15 little, while has done a really great job in sort of,
 16 you know, making sure that things continued on and
 17 helping them get in. But the fact is right now,
 18 they're snowed under. They were hit by northeast
 19 fisheries conflicts the day that Dr. Lubchenco was
 20 sworn in. And we have had to go to the Secretary with
 21 a coastal zone management appeal over an L&G proposal

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1 in Long Island Sound which we upheld the state's
 2 objection so that can't go forward until we have some
 3 lawsuits.
 4 And, so that there have been a lot of
 5 things that have really just have overwhelmed them;
 6 otherwise, I think probably we could have gotten Dr.
 7 Lubchenco to be here. I think it's good that we're
 8 going to have Mary here and we're going to have a great
 9 event despite the rain for the Bay Hydro. But the tone
 10 and tenor right now really is full of expectations, a
 11 lot of optimism right now about NOAA and our ability to
 12 get traction and move forward with a lot of high
 13 priority issues. So, we're all feeling pretty good
 14 about the future right now.
 15 The other thing is that I want to just tell
 16 you about the CMTS because I know you're interested in
 17 that. The CMTS right now, it's amazing, you don't
 18 really see it until you're a couple of months removed
 19 but we built up a lot of momentum over the last two
 20 years and that will momentum is really still carrying
 21 the group forward. We have a number of integrated

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1 action teams that are operating on a multiagency basis.
 2 We decided at our last meeting to start a new one on
 3 collaborative research for, to support maritime
 4 transportation, and NOAA and the Corps of Engineers are
 5 going to co-lead that.
 6 So, although there are no new politicals
 7 who have started engaging, a lot of the senior people
 8 that you would typically expect to see at the CMTS are
 9 not there yet. Those of us who are sort of at that
 10 next level down are still meeting, still engaging and
 11 keeping the program moving forward.
 12 Now, that being said, we're only going to
 13 be able to do that for so long until some of the
 14 agencies, some of the other agencies really get
 15 politicals to be in there. MARAD, it will be while
 16 probably before they get their political leadership.
 17 And, so, you know, once those things sort out but CMTS
 18 right now is not standing still, waiting.
 19 I mean, the program that we have been
 20 building over the last couple years is still active and
 21 producing results. On the Nav technology side, David

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1 MacFarland is helping to lead, is moving forward with
 2 great speed.
 3 So, it's good to see that being able to
 4 continue, too. So that's really all I wanted to say at
 5 the beginning. Thank you very much, and look forward
 6 to having a good discussion this afternoon about some
 7 ideas I've got about the concerns for the future of our
 8 business and, looking forward to a good meeting. Thank
 9 you, Mr. Chairman.
 10 MR. SKINNER: Thank you, Jack. You raised
 11 a very good point. There have been a number of
 12 discussions both in this meeting and afterwards over
 13 dinner and so forth about eventually reissuing our
 14 report, including sections that highlight many of the
 15 panel discussions that we've heard in various locations
 16 across the country as a way of highlighting what I
 17 think what most of the panel feels is a very important
 18 source of information on the importance of hydrographic
 19 services so I think we're in sync on that. And we will
 20 be talking more about that in the last session this
 21 afternoon, so, stay tuned. Zdenka?

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1 MS. WILLIS: Yes.
 2 MR. SKINNER: You all set?
 3 MS. WILLIS: All set.
 4 MR. SKINNER: All right. We're ready to
 5 jump right in. As many of you know, Zdenka Willis is
 6 head of the Integrated Ocean Observing System office at
 7 NOAA and has been a frequent presenter here. And, as
 8 always, we look forward to what's going on in the world
 9 of IOSS.
 10 MS. WILLIS: Good morning. I'm going to
 11 provide the sides ahead of time and there's CO-OPS
 12 slides and I have a short amount of time so I'm just
 13 going to hit the highlights and hopefully we're going
 14 to generate discussion. I appreciate you giving me the
 15 opportunity to provide you an update. IOOS is not just
 16 PowerPoint slides anymore --
 17 MR. SKINNER: Use the mike --
 18 MS. WILLIS: All right. Yes, okay. So, I
 19 thought I could tell folks we're not just PowerPoints
 20 anymore, we have actually come a long way and where
 21 we have come in this whole thing of data integration

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1 and providing products to customers. You see our tag
 2 line. Part of what want to show you and bring your
 3 attention to, is we're really kind of brand IOSS. We
 4 have registered this trademark. We will very soon come
 5 out roll out and the official government IOOS site,
 6 WWW.IOOS.GOV. We're finishing up the comments from our
 7 interagency partners. We bought the domain. We're
 8 about ready to roll that out.

9 We could start to understand and brand this
 10 thing we call IOOS. At this point I am still NOAA's
 11 IOOS program outlet. I'll talk briefly about the
 12 legislation at the final part of this slide but we are
 13 still working on what does that legislation mean. We
 14 are meeting with Jack Dunnigan and the I-W2 on
 15 Thursday, our agency work group for ocean observing,
 16 and then when Jack as the chair of the IW-2, also my
 17 boss, and also the chair of the JSOST on Friday to
 18 begin to understand what that implementation means.

19 Meanwhile this is what inside my office we
 20 have been focused on and have done so for the last two
 21 years so I don't think this should be anything new.

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1 And this is what I will quickly go through other than
 2 our basic programmatic, which I'm sure you have heard
 3 most of that. So, when we talk about the data
 4 management and communications it's always hard to
 5 explain what that means. You know, very simply, what
 6 we are trying to accomplish is regardless of what type
 7 of oceanographic data and who collects it, that it's
 8 actually available in a consistent format or what I
 9 would like to refer to as a bi-chain management for
 10 oceanographic data. We recently completed a business
 11 case study on the value of integration. It is
 12 available on my Website, it is published, and we found
 13 inside NOAA between 25 and 50 percent of anybody's time
 14 is spent trying to find the data, get access to that
 15 data, reformat that data before they can even use it.
 16 And if we look at what we think we'll spend on DMAC,
 17 national DMAC, there's a net present value return of
 18 between 38 and 60 million. And that's just inside of
 19 NOAA and that doesn't even account for the value that
 20 we think that will generate for end user products once
 21 we get this data into a format where we can use it. So

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1 this is where we want to go on the national level.
 2 What have we done so far? We have
 3 certainly been advancing the IOOS-DMAC standards
 4 process. We have a slide on that. And in addition we
 5 have been doing what we call this acquisition planning
 6 approach. There are two documents. I think you saw
 7 both of those documents, a high level functional
 8 requirements concept of OPS. They are on the Web site,
 9 my Web site in a public forum. We've taken recent
 10 feedbacks. We've done the IOOS business case.

11 This is quickly what the high-level
 12 functional requirements in ConOps looks like. Really
 13 what it did was take the 55 or so documents that talked
 14 about IOOS and put it into what is it we're really
 15 trying to build as we move forward. And the high level
 16 function requirements is about the entire system. The
 17 concept of operations is focused on DMAC.

18 What did we do? We did a different kind of
 19 Industry Day than what Jack talked about yesterday on
 20 the 12th of March. This Industry Day was run by our
 21 Brands and Acquisition office and this was targeted to

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1 industries who might want to help us build this thing
 2 we call DMAC.

3 So we did that on the 12th of March and we
 4 had 60 participants from 35 companies. So that was a
 5 half a day event where we briefed in a little bit more
 6 depth the briefings that I'm giving you here, that is
 7 only focused on the DMAC. The request for information
 8 went out on FedBizOpps yesterday, so I sent that out
 9 via Z-gram. That's the best way I can get; it's the
 10 largest list I have. Again it's not really run by my
 11 office per se. That's run by acquisitions and grants
 12 so there's a number of questions and that is out on the
 13 street. That will be due in 30 days. That would be a
 14 market survey for us within the office to be able to
 15 understand how we move forward.

16 We will have a time to do one-on-one vendor
 17 meetings. They're scheduled in late May, early June,
 18 depending on the vendors that provide response. And
 19 then we're doing an analysis of acquisition alternative
 20 and that will be completed in August, and that will
 21 inform us on how we can move forward from an

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1 acquisition perspective.
 2 Meanwhile we can't, we're doing that
 3 because you need to be able to have all that in place
 4 when such resources become available to us to do that
 5 large-scale procurement. In the meantime we have been
 6 working on the data integration framework. You know,
 7 depending on what your favorite term is, you know, the
 8 Pilot Project, the first spiral of the DMAC, a risk
 9 reduction but nonetheless we have been working on that.
 10 And we talked about that we're going to do five
 11 variables. We've actually gotten and completed seven
 12 variables. And it's really from your primary providers
 13 inside of NOAA and we're moving out to each of our
 14 regional associations.
 15 And, so, this is who our partners are.
 16 I'll talk about, I'll show you an example of what the
 17 accomplishment is on the providers, our customers,
 18 working with regional associations, and then the
 19 partnerships that we have had with OGC and we have some
 20 emerging partnerships with Google. As you know, NOAA,
 21 Navy and many others have Google Ocean. We are in

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1 discussions with Google. One of their programmers was
 2 the DMAC data management communication rep for the
 3 Great Lakes so that gives us a leg up and they're going
 4 to start to use the DIF services as a way to wholesale
 5 get to the oceanographic data because they also don't
 6 want to be translating every single format that's out
 7 there. So that's really exciting.
 8 NSF has the -- OI -- Ocean Observatory
 9 Initiative, excuse me, and they have a side for
 10 infrastructure. They get to look out forward-thinking
 11 and cloud-computing many of the things I don't even
 12 understand and they're using an Amazon web services.
 13 They don't have any data to test with so the good news
 14 is we have a lot of data to test with. So those
 15 collaborations are really working well.
 16 Here it is in, you know, kind of graphic
 17 form for those of you who don't remember the data
 18 integration framework. And the other thing, I wanted
 19 to make sure that this was well-documented because you
 20 can have a pilot project and if you cannot repeat it,
 21 it really doesn't do us a whole lot of good. So, all

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1 of this is documented. It's being picked up
 2 internationally.
 3 We're checked into, you know, GEOSS has a
 4 data management group. Everybody has a data management
 5 group. Some of the folks were there yesterday. We are
 6 checked into all of those demonstrations that are
 7 happening at the international level. So really it's
 8 pretty amazing how the data integration framework is
 9 now becoming the foundation through all of these
 10 programs. And, we really worked hard at that because
 11 you don't want to be stand-alone because that flies in
 12 the face of the concept of an integrated ocean
 13 observing system.
 14 This is kind of how I put it up here.
 15 We're trying to figure out how is an easy way to
 16 explain how we've done the DIF. I mean, I can buy you
 17 a cup of coffee, I can buy you a glass of wine and you
 18 know what it looks like. I say that, and you and
 19 deputy kind of look at me, like what do you mean? So
 20 actually we need to actually change that so NDBC CO-OPS
 21 have databases and those databases were all delivering

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1 the variables in different formats because they were
 2 tailored to their own mission. There's nothing wrong
 3 with that but they were tailored to their own mission.
 4 So if I was a new forecaster to do a new
 5 forecast and I needed to get the data, I had to do
 6 multiple calls. So what this graphic is supposed to
 7 tell you, actually each one of those cylinders,
 8 ADD-IN-BBC -- CO-OPS look different as well, may have
 9 to color code it but suffice it to say all that data
 10 now that used to look different now comes out in a
 11 single format. So that's really where we have come
 12 and that really represents a new way of looking at data
 13 across NOAA. Regardless of who collects it you can
 14 have access to it in the same format.
 15 We have to go to that next level because
 16 this is again the first spiral and we were looking to
 17 what are the customers so this isn't the only customers
 18 working with but these are four focus projects that we
 19 are doing. So for coastal inundation basically we put
 20 water level and winds on top of the SLOSH. The SLOSH
 21 is the storm surge model that is used operationally by

1 our weather forecast office. There's an IOOS spot in
 2 there. Where does the data come from? It comes from
 3 CO-OPS. It comes from NDBC and we're trying to get the
 4 water level data in from Army Corps, all through this
 5 DIF service. And it's now on top of the machine. As I
 6 say, no more two-screen integration. It is being
 7 piloted right now with WFO Wakefield and WFO Slidell
 8 and they love it so much that every single WFO on the
 9 Gulf Coast and East Coast now wants it and now I have a
 10 load problem. That's a good thing. Okay? We're
 11 moving to discussing load problems on moving our data
 12 through but that's really cool.

13 Additionally we're working with Mary
 14 Erickson. I don't know if she had a chance to talk
 15 with you. She's leading the charge for our storm surge
 16 coastal inundation. Okay? So storm surge data
 17 inundation, tomorrow, so she's leading that so we're
 18 all trying to work with her to bring our projects into
 19 that larger plan.

20 We need to be able to get currents
 21 delivered – this is the one in the eastern part of the

1 Gulf of Mexico that was a bulletin again. People were
 2 doing that eyeball look. Now we have delivered those
 3 currents. We now have the ability to deliver that into
 4 other models that are actually transport models, okay?
 5 So we have a bulletin in the eastern part of the Gulf
 6 of Mexico and the western part is actually a transport
 7 model. In the New England area we're working the
 8 coupled model which a biological physical model and
 9 also some pretty exciting new sensors that are coming
 10 and being delivered from the IOOS world into the New
 11 England.

12 Integrated Ecosystems Assessment, we're all
 13 still trying to understand what an integrated ecosystem
 14 assessment is. How do we with start to get to that
 15 biological data? We met with Andy Rosenberg last week
 16 when he was in for the ORAP and trying to tackle the
 17 biology but that's the forerunner to tackle the
 18 biological data.

19 Hurricane intensity, this is looking at
 20 synthetic temperature and salinity and how that affects
 21 hurricane intensity forecasting. And we're looking at

1 historical storms. So far the data looks really good.
 2 The good news is that we're going to try to go
 3 operational with that. And then it delivers, and then
 4 since they're using the DIF data, again, it delivers a
 5 whole host of oceanographic data not previously
 6 available to the NCEP forecasters again without doing
 7 that translation. Subsequently we're doing internal to
 8 NOAA because we again have to document that return on
 9 investment of the hypothesis that integrated data to
 10 support multiple mission is cost-effective.

11 Standards, we continue to move forward on
 12 this. We are leading the world in this and the world
 13 is watching us and taking the standards. You know, we
 14 don't make up the standards. We're basically taking
 15 the standards that ISO, FTDC, OGP, pick your favorite
 16 standards body, and tailoring but you have to tailor it
 17 to what the intent is. And that's really what this is
 18 all about. So, you know, we've got our next DMAC
 19 steering team meeting in May. We're going to continue
 20 to refine the process and make sure that it continues
 21 to make sense.

1 Waves and currents, very important to you
 2 here. We have completed the National Waves Plan.
 3 CO-OPS is working the MOU with the Army Corps to ingest
 4 waves into ports. I'm sure Mike talked about that.
 5 This is actually taking a look at it from a holistic
 6 perspective. It's out on the Website. It's been
 7 there. We're following up with HFR. No, we're not
 8 going to go variable by variable because yes, we do
 9 need to be integrated. These were kind of unique
 10 elements of the program that we felt were suited to
 11 having these plans. The HF radar, we've got a hundred
 12 of them on the Net right now. We've got a really
 13 exciting, going live with the Coast Guard on the 20th
 14 of April. They have a search and rescue, called
 15 SAROPS.

16 The SAROPS version one was the first time
 17 it took any live environmental data from that and
 18 SAROPS 2.0, so they're releasing SAROPS 2.0, and behind
 19 that is an environmental data server, 2.0 and for the
 20 first time they're going to actually take on the East
 21 Coast the HFR currents so basically from North Carolina

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1 all the way up into the New England area and we'll be
 2 able to put some money back into the New England area
 3 to get the four radars that went off the Net last year
 4 back on the Net.

5 And not only the currents are important but
 6 there's a forecast system that forecasts the currents,
 7 about six to eight, six to twelve hours out and that
 8 was developed by one of our partners in the IOOS region
 9 and now the Coast Guard is going operational with that
 10 on the 20th of April. So we're excited about that.

11 What does my office do? We're still
 12 working the frequency issue. We're on experimental
 13 frequencies and we are doing all the engineering work
 14 that one must do to get your frequency to an
 15 operational perspective. And that's in the World
 16 Conference in 2011. And then we are working the data
 17 management to make sure again all the data is available
 18 in that standard format, the primary data service at
 19 MDBC Scripps at Rutgers.

20 Just for a reminder, there are eleven
 21 regional associations and the Alliance for Coastal

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1 Technology makes up the regional coastal component of
 2 IOOS. I put this up because I don't know how right now
 3 a better way to show you the projects that are going on
 4 in the regions. This came out of the regional
 5 assessment that we did in December. We put eyes on
 6 every single project so we know what was going on. We
 7 continue to put the fact sheets out on the Web site so
 8 you do know what's going on. And there really is, you
 9 know, regardless of what the IOOS mission is we
 10 certainly have projects that are completing. Certainly
 11 at LA Long Beach we've got the harbor project that has
 12 been completed.

13 I know the work in San Diego and there's
 14 also discussions to work up to San Francisco, which
 15 allows you a tailored look on the conditions that are
 16 there, overlaid on NOAA charts that have been
 17 referenced to Google Earth, which is new, and not only
 18 do you have the outcome of the buoys but you also have
 19 the virtual buoys. The Caribbean has picked up the
 20 same concept with the virtual buoys for the output of
 21 the models based on what we did in the Long Beach LA

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1 area because that is something that the ferries'
 2 captains needed in the Caribbean. So this is, if
 3 there's any one of these that catch your eye, I think I
 4 can talk to all of them and as I always tell folks this
 5 chart is exactly wrong and just about right. So if I
 6 say that I've got about four of the RAs working on it,
 7 it may be five. I was trying to compile this.

8 A sense of validation and verification,
 9 that's the Alliance for Coastal Technology, a
 10 consortium of eight universities, and they're working
 11 on, they just completed salinity and they're working
 12 on some, interestingly enough, there's a tie to the
 13 Great Ships Initiative which is looking at invasive
 14 species and ballast water systems for getting rid of
 15 invasive species in the Great Lakes, the first one in
 16 the Lakes. They're actually tied into the Alliance for
 17 Coastal Technology because the Alliance for Coastal
 18 Technology has been looking at some of those testing
 19 methodologies for understanding what you can or can't
 20 do to the ballast water to protect from invasive
 21 species.

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1 Our regions are certainly taking
 2 observations out there. They're providing data
 3 management and they're doing models. And the reason I
 4 put this up is because this is the kind of things
 5 they're also putting together at regional data assembly
 6 centers, as we are putting together the DIF. They also
 7 have architectures out there. And those architectures
 8 are pretty mature in some cases.

9 And the good news is we had them all in
 10 town for two days on the 10th and 11th of March and by
 11 the middle of 2010, and hopefully by the end of this,
 12 well, we will by the end of this fiscal year, five of
 13 the regions will be completely compliant with the
 14 services that you saw that we have orchestrated there
 15 inside of NOAA and by middle of 2010 all eleven will be
 16 compliant. So the good news is we now have visibility
 17 into the structures that they have in place and we're
 18 starting to move this out nationally.

19 IOOS regional funding tends to be a topic
 20 everybody likes to understand. Here is the layout.
 21 Fiscal year '09, it's really 21 million we wrapped up.

1 We did get a one million dollar earmark for the
 2 Alliance for Coastal Technologies, which is just
 3 wrapped up in the \$21 million for the region, so if you
 4 look at budget tables and can't quite make that
 5 correspondence.
 6 As we move forward, in fiscal year '10,
 7 that's really a bridge year for us from a funding
 8 perspective for IOOS, for the IOOS regions. As you
 9 know, we started the competitive process in fiscal year
 10 '07 and then we had an additional competitive process
 11 in fiscal year '08. I have a mix-and-match so we will
 12 do a limited geographical FFO. We've just put
 13 that draft, that sensor validation and verification, we
 14 put that draft into Grants Online. That comes out in
 15 July because NOAA does that twice a year, July and
 16 December. And, we'll process those through in October.
 17 In fiscal year '11, we're really going to
 18 try to really put an FFO out -- I would like to do it
 19 for five years if I can -- that really states the core
 20 capabilities and the core needs that the regions will
 21 meet and we are basing that on a regional business

1 model that was developed for us with our programs
 2 support contractor. That's also publicly available.
 3 And we will be working very hard with our regions and
 4 inside my office over this next year to complete that.
 5 You know, the timeline for us is April of 2010, when we
 6 have to have the draft FFO in. That's kind of the
 7 outcome of the discussions that we need to have.
 8 I have a NOAA port captain coming into my
 9 office on the 11th of May who will be the division
 10 chief for all of my regional communication,
 11 legislation, policy and planning. So, we've had that
 12 gapped, since Timmy Van (phonetic), who was there was
 13 selected to be one of NOAA's regional coordinators.
 14 We do continue again. IOOS is about
 15 integration so there are a number of interagency
 16 projects that we actually connect to. And, these are
 17 our list here. I won't go over all of them. I think
 18 the one most interesting, the National Water Quality
 19 Monitoring Network. They also need to monitor and put
 20 sensors out. We're trying to understand what their
 21 sensor network layout is. Unfortunately right now it

1 says we think we need about 50 per IOOS RA. That
 2 doesn't quite help us but what we are working on is at
 3 the national level making the services that we've put
 4 out under IOOS compatible with the services they're
 5 putting out for water quality. So that work is going
 6 on.
 7 We need to bring the biology in. We're
 8 working with OPUS. I've already talked about our
 9 Oceans Observatory Initiative with NSF. We're working
 10 with Roger and the interagency working group on
 11 Integrated Oceans and Coastal Mapping to understand, to
 12 be using the regional associations to better understand
 13 those regional needs.
 14 Another factor that watches out for us is
 15 the marine protected areas so there a joint paper on
 16 how IOOS can support the marine protected areas and
 17 again we participate heavily in the GEOSS working
 18 groups as well as making sure the data integration
 19 framework is checked in. As we said, it's the
 20 underpinnings of the ocean data in the GEOSS structure.
 21 Legislation, the good news is it passed.

1 We are now trying to understand the elements of the
 2 legislation. There is a number of governance
 3 discussions. We have a council, a committee, an
 4 office, an advisory panel. RAs are no longer RAs.
 5 They're RISIS (phonetic). Because we couldn't keep
 6 standard terminology, we have do, we understand we have
 7 to do rulemaking on certification for these RAs. There
 8 is a discussion of liability. We have had our first
 9 initial meetings with the lawyers. The first half of
 10 the paragraph is comfortable; the last half of the
 11 paragraph is making the lawyers very uncomfortable.
 12 There's a number of reports. There's one
 13 actually due in six months to understand that
 14 private-public partnership. This one probably scares
 15 me the most because in one year the administrator of
 16 NOAA and the Director of NSF are supposed to do an
 17 independent cost estimate of everything there is to do
 18 with ocean observing completely unabridged to Congress.
 19 I haven't quite figured that one out yet. So we're
 20 reviewing this. As I said, we'll talk with the
 21 interagency working group on ocean observing and the

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1 co-chairs of JSOST and the IWGOO as well as trying to
 2 make sure that the agency of NOAA understands what that
 3 interpretation is.
 4 We are trying to build a communications
 5 effort as to what does IOOS from an interagency
 6 perspective mean. We will move to a U.S. IOOS Website.
 7 We are trying to do the branding of the IOOS still
 8 within the context of the agency that we work in, of
 9 course that I work in, NOAA. Here's an example of the
 10 IOOS outreach material. We're in final draft with
 11 IOCM, which is another one that's available. National
 12 Ocean Service's Website is really moving forward and
 13 trying to get information out with regard to all of the
 14 ocean services. They've come up on our National Ocean
 15 Service Website, there's twitters and there are
 16 podcasts. We've been trying to be very supportive of
 17 that. We have two podcasts, what is IOOS and then a
 18 second one about the glider. The glider that's going
 19 to go back across the Atlantic, for those of you who
 20 followed the Z-gram last year, the students from
 21 Rutgers had been crossing the Atlantic, developed a

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1 leak by The Azores. It did sink last year. We're
 2 about ready to launch the new glider. We were hoping
 3 to do it on Monday. Weather is the problem right now.
 4 We need to do one more test run and hoping to get that
 5 out. We also have Ocean Hall videos. I'm sure you're
 6 familiar with Ocean Hall. We have the first video
 7 associated with IOOS and the second one is IOOS and sea
 8 level rise, which we're working with CO-OPS on that
 9 one. And that I think is it and I think I can take
 10 some questions before Mary Glackin's talk, if you would
 11 like.
 12 MR. SKINNER: Great. Thanks, Zdenka. I
 13 didn't think it was possible but you actually sound
 14 busier than your Z-grams would indicate. So keep up
 15 the good work. I know, being on this panel, there
 16 seems to have a certain cache with being retired. So
 17 I'm a retired GOMOOS board member but when I was
 18 involved with the organization there was some serious
 19 funding issues. Some of the money from the L&G
 20 projects went to just keep the doors open instead of
 21 expanding the system, which I think was very

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1 unfortunate and I think it's great to hear that you
 2 have gone back in and reestablished the radar system
 3 and I think taking a rising tide, floats-all-boats type
 4 of approach. I think it's great.
 5 MS. WILLIS: Thank you.
 6 MR. SKINNER: Questions and comments? I
 7 think that there have been a couple of meetings when
 8 something IOOS-related has come up and we have had
 9 meetings with this panel and we've seen if we can get
 10 you on the agenda and it's too late in the process and
 11 we've missed that. I don't think we've seen you for a
 12 little while. And I think that's my fault for not
 13 paying close enough attention. But I think it would be
 14 great if we could work you into the standard meetings,
 15 if we can fit it into all the things you're working on.
 16 MS. WILLIS: Be happy to.
 17 MR. SKINNER: Any final comments? Great.
 18 Thanks very much.
 19 MS. WILLIS: Thank you.
 20 MR. SKINNER: I just want to point out,
 21 Roger introduced himself earlier but it seems to be

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1 reunion week. Always nice to have you back, Roger.
 2 Doing great work on the IOCM issues. And we have been
 3 joined by Helen Brohl, former panel member, I think who
 4 was mentioned earlier. Helen, you probably don't know
 5 this but John Oswald was here yesterday so we're sort
 6 of doing a stroll down not memory lane but it's nice to
 7 see you all back here again today.
 8 We're very pleased this morning to have
 9 Deputy Undersecretary Mary Glackin here. All of you
 10 know that Ed and I met with her last year at about this
 11 time to go over some of the work the panel has done. I
 12 think we had a very productive meeting. We're thrilled
 13 that you're here and we look forward to your comments
 14 and welcome.
 15 MS. GLACKIN: Thank you. Thank you.
 16 MR. SKINNER: Oh, would it be helpful to
 17 just introduce everyone so you know who you're talking
 18 to?
 19 MS. GLACKIN: Sure. Well, I did have a
 20 chance to kind of look at you, you know, look at who
 21 is on the panel and go over that, so, but, I would be

1 happy if you wanted to go around.
 2 MR. SKINNER: Want to do a just quick
 3 round-the-table?
 4 MS. GLACKIN: Okay.
 5 MR. WHITING: Yeah, Larry Whiting, retired,
 6 hydrographic surveyor, formerly with Terra Surveys,
 7 TerraSound now.
 8 MR. WELLSLAGER: Matt Wellslager, I'm a
 9 program manager with the South Carolina Geodetic
 10 survey.
 11 MR. MYRTIDIS: Minas Myrtidis, Vice
 12 President of Environmental Regulatory Compliance for
 13 Norwegian Cruise Line.
 14 MR. SZABADOS: Mike Szabados, Director of
 15 CO-OPS.
 16 MR. ARMSTRONG: Andy Armstrong. I'm the
 17 NOAA Codirector of the Joint Hydrographic Center at the
 18 University of New Hampshire.
 19 MR. WELCH: I'm Ed Welch from Alexandria.
 20 I do governmental relations work for the Passenger
 21 Vessel Association and the Union of Greek Shipowners.

1 nearly 32 years starting in the Weather Service and
 2 then kind of bouncing around after that. And, it's my
 3 pleasure to be here today. And I would like to start
 4 first by thanking you for your service to NOAA. NOAA
 5 really does rely on the advice and we really value the
 6 perspectives that come to us through forums through
 7 this panel and other similar forums like this across
 8 NOAA. So thank you for your service.
 9 My job here this morning, what I thought I
 10 would do is set a bit of context for you about the
 11 change in administration and what we see, that means
 12 for NOAA. We want to give you a little bit of kind of
 13 how we have been talking about the messages in
 14 transition and what we're hearing from the
 15 administration and Congress. We have had as kind of a
 16 major priority climate services, so I want to spend a
 17 few minutes on that and then talk about our
 18 administrator's priorities. She's currently flying
 19 back from Hawaii where she opened a new learning center
 20 there, started with a shovel in the ground for a new
 21 learning center so she wasn't able to be here today,

1 MR. SKINNER: Tom Skinner with Durand and
 2 Anastas, Environmental Strategies in Boston.
 3 MR. BARNUM: Steve Barnum, Director of
 4 Coast Survey.
 5 MR. DUNNIGAN: Jack Dunnigan, NOAA.
 6 MR. DASSLER: Jon Dassler, Director of
 7 Marine Services at David Evans and Associates. We're a
 8 NOAA contractor for hydrographic services.
 9 DR. JEFFRESS: Gary Jeffress, Professor of
 10 Geographic Information Science, Texas A&M University,
 11 Corpus Christi.
 12 MS. DICKINSON: Elaine Dickinson, BoatU.S.
 13 We represent 600,000 recreational boat owners.
 14 MS. BLACKWELL: Juliana Blackwell, Director
 15 of National Geodetic Survey.
 16 MS. CHAPPELL: Ashley Chappell, NOAA.
 17 MS. GLACKIN: Okay. Well, in turn I'm Mary
 18 Glackin, NOAA's Deputy Undersecretary. There's mostly
 19 new faces in the room for me so I'll take a minute to
 20 kind of tell you. I'm new to this position, about 18
 21 months ago, but I'm not new to NOAA. I've been at NOAA

1 and then end on really the specific mission area here
 2 of hydrographic services.
 3 So, this is really an exciting time for us
 4 in NOAA. Never has NOAA had an administrator appointed
 5 as early as we have, under this administration, and
 6 we're very fortunate to have Dr. Jane Lubchenco as NOAA
 7 administrator. She's an ecologist by training from
 8 Oregon State University. I think one of the things
 9 that was really exciting about her nomination when this
 10 came out before Christmas was that she was nominated
 11 with Dr. John Holdren over here on the right-hand side.
 12 He's the President's Science Advisor and the head of
 13 the Office of Science, Technology and Policy.
 14 And specifically President Obama talked
 15 about these two as a pairing combination and the
 16 overall importance of science to this administration
 17 and really emphasized that. So, we had, I believe, the
 18 first subcabinet level position nominated in the
 19 federal government, in this transition team. So I
 20 think it speaks very well of NOAA and I was able to be
 21 with Jane last week when Vice President Biden did her

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1 ceremonial swearing in. So that's been great.
 2 We also are fortunate to have on board
 3 Governor Gary Locke, who many of you might recognize
 4 the name. He's the former Governor of Washington
 5 State. So again, this was actually only the second
 6 time in the Department of Commerce's history that we
 7 have had a governor come into this slot. Very
 8 typically it's the businessmen but we have somebody
 9 that's actually been involved in government, been very
 10 much a user of NOAA's services from a coastal community
 11 so it's really a kind of a wonderful alignment of those
 12 issues. And he's tremendously engaged. He's a
 13 workaholic. He works us till eight o'clock at night
 14 sometimes but he's here and he's on board.
 15 The other two that I have shown here are
 16 Carol Browner, as you know from the press, is working
 17 President Obama's issues in climate and energy at the
 18 White House, extremely engaged and we have been meeting
 19 with her and her task force on a number of things and
 20 I'll talk about those as we go through. And then Nancy
 21 Sutley is the Chair of the Council on Environmental

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1 Quality there that is so concerned with so many of our
 2 resource issues that are here. She was actually on
 3 board on I think January 22nd in her slot and was able
 4 to spend some time with us.
 5 So we have all in all I think for the
 6 players within the administration an amazingly skillful
 7 group of people that are, actually NOAA's on their
 8 radar screen and they're engaged with us. All of these
 9 people on the screen I have met with, you know -- and
 10 I'm not a, the most senior level -- in the course of
 11 just the last couple of weeks and all. So I think that
 12 we're feeling, you know, quite energetic and quite
 13 hopeful and we're hoping that Dow Jones kind of keeps
 14 going up like that and all the Stimulus because that's
 15 really the issue, I think.
 16 Just to speak a little bit about Congress
 17 and the Congressional elections there, a lot of
 18 turnover and things are just still settling out on
 19 that. So, you know, not only is Senator Stevens, who
 20 had been a big supporter for NOAA not there but three
 21 of the House Ocean Caucus co-chairs that we had been

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1 working with, Tom Allen, Jim Saxton and Wayne Gilchrest
 2 are not back as well. We also more on kind of some
 3 our dry-side programs, Nick Lamson in Texas was also
 4 not reelected. But then there's a lot of shifting.
 5 We have Mark Udall, who's from Colorado,
 6 where we have a big presence, is now on the Senate
 7 side. We have Senator Inouye, a long-time NOAA
 8 supporter up at the chair of the full appropriations
 9 and Rockefeller and Kay Bailey Hutchinson in Senate
 10 Commerce Committee. Brian Baird is there that we have
 11 been working with, is the chair of the House Committee
 12 on Science Technology and the Subcommittee on Energy
 13 and Environment. And that's kind of a key committee
 14 for us as we move forward with a number of energy
 15 issues. And then Barbara Mikulski remains the chair of
 16 our Appropriations Committee.
 17 So, we're working through kind of those new
 18 relations up there. Dr. Lubchenco has spent, you know,
 19 I would say quite a bit of time on the Hill and is very
 20 actively engaged there so we're working to build those
 21 relationships.

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1 Staying on the Hill front, I thought I
 2 would just highlight to you kind of the things that we
 3 have been looking at but not yet confirmed within the
 4 administration where we'll push through. You are
 5 probably familiar with NOAA's interest in an Organic
 6 Act that would give us some overall basic authorization
 7 there. So we haven't made a decision in this
 8 administration whether to go forward with that or not
 9 but it's kind of basically sitting there.
 10 There's a number of reauthorizations that
 11 we're very interested in moving forward with. Coral
 12 reef, our Coastal Zone Management Act, we've been doing
 13 an incredible amount of work in the last couple years.
 14 The Sanctuary Amendments Act is there, and then Zdenka
 15 just talked to you that we have been successful in
 16 getting the Coastal and Ocean Observing Act through,
 17 offshore aquaculture and then the Harmful Algal Bloom
 18 and Hypoxia Research Act.
 19 So we're going to be kind of sort of
 20 sorting through that with this administration in terms
 21 of, you know, how things will move forward. I can tell

1 you overall from an administration point of view the
2 number one focus area here is energy and what we do
3 about cap-and-trade (phonetic) and how we move forward
4 with alternative energies. On that front, NOAA has
5 been active at the table in talking about the ocean
6 environment and potential sources of alternative energy
7 there.

8 The other thing we have been very active
9 about is that as we move forward with any kind of
10 energy legislation, it needs to be underpinned by good
11 observations and science. And we need to be prepared
12 as we adopt an energy policy to basically be prepared
13 to reassess and reiterate that policy. So as we go to,
14 for example, limit carbon emissions, we need to make
15 sure that what we're doing at the smokestack really
16 pays off in the atmosphere and the carbon is really
17 responding the way we think.

18 And that's going to take good measurement
19 systems to do that. It's going to take understanding
20 the full cycle, the full carbon cycle and things like
21 that. So NOAA has very much positioned itself as I

1 think the kind of honest broker for providing the
2 science and information on areas like that.

3 At the bottom here, the National Climate
4 Service, we see in a number of bills up on the Hill
5 that we have been actively working on, and I'll come
6 back to that. And one of the challenges I'll also
7 highlight later is our satellite programs and some of
8 the challenges there.

9 I think Steve Barnum talked to you a little
10 bit about money yesterday. This is kind of a big
11 picture on money. So, you're I think pretty familiar
12 that NOAA had been in a really painful situation
13 through FY05 to '08 and being flat at 3.9 billion so
14 we're very pleased to be up. Our basic appropriation
15 was 4.4 billion. We hasten to remind everybody, you
16 know, we have been eating pay raises and cost of living
17 over the time so that looks like a great increase but
18 in some areas there's not an increase because of the
19 way the devil in the details work out and in other
20 areas it just about gives you some breathing room to do
21 that. So we do, we were fortunate in getting 850

1 million in the Stimulus Package and we will talk a
2 little bit more about that as we go through as well.

3 I will make the point on this slide here
4 that, you know, it's a challenge for us to execute the
5 amount of money that we have now. There's a lot of
6 pressure on us for the Stimulus Package. Never in my
7 federal career have I seen kind of guidance and
8 constraints the way they are to move forward. So we're
9 definitely working through that in the administration.

10 We don't have the 2010 numbers out yet.
11 Just the top line came out from the President in
12 February. Our projected roll-out date for the Stimulus
13 is May 5th. That's when -- not the Stimulus -- for the
14 2010 budget. That's when the President will put out
15 the full details of his budget. We will have a
16 constituent stakeholder meeting to kind of go through
17 our budget and we will have the typical things that we
18 have with our bluebook and other supporting materials
19 on that. So, over the next couple weeks that will come
20 out. And, I can tell you our budget people are
21 stressed because it's been so long, you know, we've had

1 a hard time getting the ball to settle down onto a
2 number.

3 I want to just spend, when coming into this
4 transition I want to take you through on the next
5 couple of slides, the areas that we see as kind of
6 national challenges that NOAA needs to respond to. But
7 we had a couple of areas of urgent issues that I'll
8 just briefly touch on here so that you are aware of it
9 because these of the kind of things that take a great
10 deal of time of senior management, not just at the NOAA
11 level for the first two but even larger than that.

12 We have two very large satellite
13 acquisitions going forward, one for a polar orbiting
14 satellite, one for a geostationary satellite. They're
15 very expensive investments and they've been very
16 challenging for us. So we're still making adjustments
17 in those management plans and all. There's been very
18 keen interest on the Hill and I guess my message to you
19 is if you track NOAA's budget very much and
20 relationships up on the Hill, we're, you know, we very
21 much have the message from the Hill is that we need to

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1 get our satellite acquisition problems solved.
 2 And I think the Hill is somewhat sensitive
 3 to the fact, various pockets on the Hill, that because
 4 there has been so much money going in satellites, other
 5 programs haven't been able to grow in the way they
 6 would like them to grow. This is I think something
 7 that we're very sensitive to and working on and Dr.
 8 Lubchenco is committed to addressing.
 9 The last one, in ship acquisitions, I would
 10 say is pretty much some good news. We've worked
 11 through some challenges there. You can see the Bell
 12 Shimada, which is a fisheries survey vessel went into
 13 the water late last summer, early spring, and, we've
 14 worked through some of the challenges on that. So that
 15 and its sister ship, The Pisces, we'll be taking
 16 ownership of later this summer. And, we're very much,
 17 this is all part of our fleet recapitalization and
 18 moving it through.
 19 Down the bottom is the Ferdinand Hassler
 20 and this is still an artist's representation here but
 21 we should still be able to take an actual picture of

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1 that ship in the water at the end of May, so we're
 2 looking forward to that. Again we've worked through
 3 some of the challenges there. This will be doing
 4 hydrographic surveying for us so we're very excited to
 5 get this swath vessel in our fleet and get some
 6 experience with that.
 7 So let me, this is kind of my overview
 8 sheet that was really a culmination of a lot of work
 9 NOAA did internally about looking at what some of the
 10 national trends and challenges were and then matching
 11 them up with areas that we felt that only, that NOAA
 12 had a clear mandate to kind of respond to. So, I'll
 13 speak to each of these as we move forward in the next
 14 couple of slides there saving climate for the end
 15 because I have a few more slides on that.
 16 So I want to start actually with this issue
 17 of coastal area. And the challenge that we see and
 18 very much hear from our constituents that we work with,
 19 particularly coastal states, is that we have to
 20 position the nation in a place that it's better able to
 21 reduce the impact of both economic and social things of

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1 both coastal hazards, habitat lost and coastal
 2 pollution.
 3 So we have been working through this in
 4 developing things like coastal adaptation strategies
 5 and we see as one of the main underpinning for this a
 6 reauthorization of the Coastal Zone Management Act.
 7 You know, very much we have challenges in getting
 8 support for some of our coastal programs because I
 9 think that they sometimes are perceived as really state
 10 programs as opposed to moving forward a national
 11 priority. We feel that there should be a national
 12 priority for that and I think that one of the things
 13 that should be a clearer priority is encouraging
 14 development and management at the coastline in a way
 15 that does make communities and businesses more
 16 resilient to challenges here.
 17 This is something I think our new
 18 administrator has also picked up and echoed for us and
 19 I will talk a little bit more. I have kind of a slide
 20 about some of her unique messages here. But there's a
 21 lot of work to be done here. And there is a real

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1 intersection between the physical environment here, the
 2 biologic environment and then the particular
 3 communities and businesses that work forward here.
 4 The second area is oceans and marine life,
 5 and we see it as a real challenge for us as being able
 6 to basically sustain the ecosystems that we have. You
 7 know, it's kind of interesting in fisheries that I
 8 think if you went back ten years ago you didn't hear
 9 the word protein very much. You know, the words were
 10 all different but now there's a growing recognition
 11 that we have a very large population to feed in this
 12 world and fish and the protein from fish, which is
 13 really valued, as the studies have said, needs to be a
 14 key part of this.
 15 So we're fully committed to implementing
 16 the mandates that we got under the Magnuson-Stevens Act
 17 basically to end overfishing and rebuild these
 18 fisheries. We're uniquely concerned about the impacts
 19 of climate change to that and particular issues like
 20 ocean acidification and what will what that mean for
 21 shellfish and fish and, of course, we're already seeing

7

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1 migrations of fish as well.
 2 We have challenges in protecting marine
 3 mammals and some other protected species there in their
 4 vulnerable habitats. Again this is really exacerbated
 5 by population development, coastal development as well
 6 as climate change there. This is where we highlight
 7 leading the implementation of IOOS that Zdenka just
 8 talked about.
 9 And then finally we see a need to lead the
 10 development of marine aquaculture and offshore
 11 aquaculture regime. And this again is still kind of
 12 being debated in this administration how we'll move
 13 forward with that. I don't expect this will be one of
 14 the first things out the box but there is a clearly a
 15 demand from this from industry and the fact that we
 16 import so much aquaculture right now and have so little
 17 control under the circumstance on which it's developed.
 18 Okay. High impact weather and water, you
 19 know, my talking point on this is generally that this
 20 nation really enjoys, I think, a good level of weather
 21 services and water services in this country; however,

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1 it's insufficient for the challenges that we have.
 2 Some of us have been watching really carefully what's
 3 been happening up in the Minnesota, the Red River of
 4 the North there and you can see that if you've tracked
 5 this closely that our forecasts are good but they're
 6 not good enough for the kind of planning that needs to
 7 happen there and the critical and actually costly
 8 decisions that need to be made by communities.
 9 So, we're interested in doing a number of
 10 things here. I've just spoken to kind of improving
 11 water resource management. We still have an overall
 12 goal to be improving our hurricane track and intensity
 13 forecast. We have made a lot of progress on hurricane
 14 track over the last ten years.
 15 We have made much less progress on
 16 hurricane intensity, and for those of who that came
 17 from around the Gulf area when you go to bed at night
 18 and it's a Cat-1 and you wake up the next morning and
 19 it's a CAT-3, it doesn't feel so good and your
 20 decisions will be completely different. We're very
 21 much working with our sister agency, the National

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1 Science Foundation, because there's some basic
 2 challenges there. And I also think this is driving us
 3 to look at new technology, too, for things like aerial
 4 unmanned vehicles to be gathering data.
 5 The last two things I'll highlight here
 6 that I haven't spoken to, one is fire weather
 7 forecasting, and we're seeing more challenges with
 8 fires in this country, and it's really gotten to be a
 9 great challenge as people tend to live in places that
 10 are at risk for fires. So, again, we're going to be
 11 working with our sister agencies to try to improve our
 12 models there. And it was certainly a sober reminder
 13 for anybody that saw on the news what happened in
 14 Australia about six weeks ago and the challenges there.
 15 And then finally, you may not know it but
 16 we make forecasts for solar storms. And you may not
 17 even know why you care but it's basically because of
 18 your cell phone and every other piece of electronic
 19 information. So, there's quite a bit that we need to
 20 do there to improve our forecasts out to four days to
 21 really protect the energy infrastructure in this

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1 country and air transportation as well as global
 2 positioning and those type of things.
 3 So, in transportation the team worked hard
 4 on this to try to look at, of the many needs that we
 5 have to improve an overall transportation system, what
 6 is it that needs to be done? And, there's an element
 7 of this that has to do with air transportation in
 8 working with the Federal Aviation Administration to
 9 improve weather information we give them to support the
 10 development of what they call the Next Generation Air
 11 Transportation System.
 12 But the other area that really came really
 13 very much to the forefront for us when we looked at
 14 this area is the Arctic and how underserved the Arctic
 15 is and how many basic NOAA services should be provided
 16 there especially given the critical time with climate
 17 change and what we're seeing.
 18 So, we've been clearly highlighting this
 19 and developed some strategies for how to address this.
 20 There's a lot of impacts here, I think, with respect to
 21 not only navigation and positioning but also kind of

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1 basic weather information that you would like to have
 2 to be operating in this environment. We see as we move
 3 forward probably the State Department will be a partner
 4 with us as we address how to meet some of these demands
 5 as well as the National Science Foundation.
 6 So now I'll get to climate. And this is,
 7 NOAA has, you know, decades' worth of history with
 8 respect to understanding the climate system and
 9 providing some basic datasets for people to use. I
 10 think that the conclusion that we had come to over the
 11 last two years or so -- and this was based on advice
 12 from our own science advisory board, from national
 13 academies and all -- is that as an overall community of
 14 climate scientists we hadn't done a very good job at
 15 really making it very easy for users to find
 16 information. And we were certainly hearing that in
 17 NOAA with people like Coastal Zone Managers trying to
 18 say to us or saying to us, you know, what should I be
 19 assuming for sea level rise; what's going to happen
 20 there?
 21 So, NOAA has proposed the establishment of

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1 a National Climate Service and as is articulated here
 2 that we feel that this by necessity -- we don't feel,
 3 we know -- that this going to have to draw on the full
 4 capacity of the government and other sectors. And I'll
 5 talk a little bit more about this, next couple slides.
 6 Just a little kind of entree here to make a
 7 really significant point that I think is important
 8 about climate services, and that is climate and climate
 9 change really is an additional stressor on other things
 10 that are happening. So climate change is influencing
 11 the kind of extreme weather we get. We know we're
 12 seeing more heavy precipitation events, more very light
 13 precipitation events. We know we're seeing more
 14 droughts there, so how you deal with those kind of
 15 things needs to be taken in the context of what you're
 16 doing day-to-day.
 17 Similar things with food supply,
 18 sustainable ecosystems; you know, that's another one
 19 where when you look at coastal development it's not
 20 just that climate has changed and that sea level is
 21 rising but it's the whole population growth and the

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1 pressures on the coastline. It has to do with how to
 2 manage those coastlines. So that when we think about
 3 providing climate services we very much recognize they
 4 have to be delivered and developed in a way that's
 5 aligned with other challenges that exist in these
 6 areas.
 7 As I've alluded to already, we see a really
 8 strong demand for climate services. It's been in
 9 legislation up on the Hill, a proposal there. The
 10 National Academy just basically recognized that, saying
 11 here, we need coordinated federal efforts to provide it
 12 but there should be a lead agency that would have broad
 13 participation. And that's very much what we're saying.
 14 The kind of demands that we're seeing are
 15 from basic resource managers, whether people are
 16 running water infrastructure projects or things like
 17 that, and, policy and legislation. The whole issue of
 18 how we mitigate carbon really depends on climate
 19 information and data there to do that.
 20 I just have a little bit of kind of
 21 examples to give you a little taste of the kind of

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1 services we're talking about. And we did these in a
 2 way of what is it we're currently doing and what is it
 3 we think we could be doing in the future and near
 4 future.
 5 I want to talk first, though, or highlight
 6 first this bottom part because, you know, it all begins
 7 with observations. You can't be delivering any of
 8 these things without observations, and it's got to have
 9 a very active science program, a research program
 10 underpinning it because we don't understand everything
 11 about the climate system. And then hand-in-hand with
 12 that is modelling capability to be able to do it. So
 13 this is the whole trio here that this all rests on.
 14 When we look at particular things and
 15 coastal systems, you know, we're currently providing
 16 services for sea level monitoring but we feel that what
 17 we should be doing within three years is really
 18 providing sea level and inundation prediction systems,
 19 to put tools in the hands of people that they can run
 20 "what if" scenarios and really understand what the
 21 impacts are going to be twenty years from now, forty

1 years from now, so that very large infrastructure
 2 projects can be adjusted and people can make decisions
 3 on their risk levels.
 4 In water resources we have had a focus
 5 really being driven by Western governors for drought
 6 early warning information systems. This is a service
 7 we've stood up over the last three years but what we
 8 think is we really need to be providing extreme
 9 projections for infrastructure and design operations.
 10 We know today issues like a hundred year flood, that's
 11 not a construct that works anymore. You know, the next
 12 hundred years isn't going to look like the last hundred
 13 years. So how people make decisions, we've got to
 14 reprocess a lot of data and make adjustments in that.
 15 So you can imagine the partnerships here, everybody
 16 from Corps of Engineers to state and local people in
 17 doing that.
 18 In living room resources we're currently
 19 trying to understand ocean acidification and most
 20 importantly the impacts of ocean acidification. But
 21 what we think we could get to in just a few years is

1 some early warning systems. It's interesting, as we,
 2 as I have the experience of briefing people that aren't
 3 so familiar with NOAA mission areas and things like
 4 that, as I say, people, it's amazing the number of
 5 people that think the ocean is a bathtub so if we just
 6 melt more water in the Arctic it will all come up. And
 7 they also think it's pretty homogeneous so if it's a
 8 little more acid, it's a little more acid everywhere.
 9 So I think providing this kind of information is going
 10 to be critical.
 11 And then I alluded to before, energy, so,
 12 there's really quite a variety of things. Our data has
 13 been used for a long time to support things like wind
 14 energy, solar data, and we have put out things like
 15 heating degree days and people make projections, power
 16 companies make projections on even our one day, or not
 17 even, but on our one-day forecast in other things. But
 18 what we really see here is we've got to be able to be
 19 in a position to better support systems for both carbon
 20 and renewables.
 21 So like what I talked about before in

1 limiting carbon but then in looking at renewables, you
 2 know, what are we going to be able to get in terms of
 3 wave energy out of the ocean? How will we be able to
 4 get that? How about, you know, the heat transfer, the
 5 OTEC kind of things, will that be a sustainable energy
 6 source for us?
 7 So there's a whole suite of things there
 8 and this is the area that we're really in pretty active
 9 discussion in trying to formulate some plans to move
 10 forward as part of the whole overall nation's energy
 11 thing. So I think this discussion will go on the next
 12 year, I'm sure.
 13 I want to make the strong point here about
 14 partnerships. I've highlighted it all already. But,
 15 as we stand up the National Climate Service, it really
 16 is going to require very coordinated efforts among
 17 federal agencies with states, with academic partners --
 18 there has to be a strong research component to this --
 19 and with the private sector. We don't view that the
 20 federal government is going to be in a position to be
 21 really helping Monsanto make their decisions. We

1 really think there should be just the way there's the
 2 Accu-weathers and the weather channels today, a big
 3 business model for businesses to come in, pick up basic
 4 government datasets and then work to apply it there.
 5 And then the last point here is this really
 6 strong connection between users all the way back to the
 7 research community. We need to be driving research
 8 agendas but at the same time we need to have
 9 investments in research that are addressing the
 10 unanticipated things that users can't think about or
 11 think that they need. So, those are kind of some of
 12 the parts of the partnership that we have to think
 13 about.
 14 And, so let me segue a little bit. This
 15 was what I pretty much gave you was what our story was
 16 to the incoming administration team and I would say
 17 it's resonated very well. Kind of what our
 18 administrator has been kind of shaping up as her top
 19 priorities within all of that, is moving forward
 20 fisheries to end overfishing and rebuild stocks. But
 21 she is looking at this in a very holistic approach and

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1 if anybody is from the New England area, do I have any
 2 New England people here? If you watch New England
 3 ground fish in the way this is played out it's very
 4 much the recognition that we have to look at whole
 5 communities and how to deal with the economics of that.
 6 And I have there down the bottom here that
 7 she really sees integrated ocean planning and
 8 management. She would like to see us moving forward
 9 with promoting more spatial planning and how we use
 10 coastal ecosystems and balance those. If we're going
 11 to have less fishing effort there, then whatever the
 12 comparable things that we're balancing with that and
 13 how do we work with communities to do that. So, we're
 14 still kind of shaping up this dialogue within NOAA but
 15 I expect that you're going to see more integration of
 16 these issues here.
 17 And then I have alluded to already are
 18 satellites, that we have to maintain the critical data
 19 that we get there but at the same time in particular
 20 with our Polar Program which we do with the Department
 21 of Defense and NASA is to get the management costs and

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1 schedule issues under control. In opportunities, the
 2 National Climate Service, she has wholly embraced and I
 3 think we have good support within the administration to
 4 move that forward. And, so, that will be part of the
 5 dialogue as we go.
 6 And then I think just to say a few more
 7 words about this Integrated Ocean Planning and
 8 Management, which, you know, is part of kind of what
 9 we've been talking about in NOAA with an
 10 ecosystem-based approach to management but I think what
 11 we're going to see is more visible nesting of things,
 12 you know, what happens in Chesapeake Bay scale versus
 13 what happens in the larger marine ecosystem out there
 14 where the users are different.
 15 There's a different scale of science that
 16 needs to be brought to bear. She'll be looking, you
 17 know, the whole intersection of how do we both use and
 18 protect marine resources but at the same time create
 19 and move forward an economy so that we are doing a
 20 little bit better job up front about where we can be
 21 doing some of this off-shore energy development,

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1 whether it's L&G terminals or actually drilling there.
 2 And that's part of an overall plan. So, we've
 3 certainly seeing states like Massachusetts move out in
 4 that arena and I think her vision is that we can move
 5 forward there.
 6 And then the point here, that this is
 7 particularly important in the Arctic because we, you
 8 know, there's a lot of, everybody is looking at the
 9 Arctic right now in terms of, you know, some of our
 10 energy solutions but I was listening to this morning
 11 about how Secretary Salazar from Interior spent the day
 12 yesterday in Alaska and, you know, he didn't hear a
 13 common message. He heard people from, you know, both
 14 ends of the spectrum in terms of drilling there and
 15 what should happen.
 16 So, I think NOAA's role in really
 17 supporting states through Coastal Zone Management Act
 18 and for bringing the right kind of science and tools to
 19 the table in terms of what if, you know, what we could
 20 do, will be a big part of it.
 21 I'm going to kind of wrap up here in the

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1 theme that I started with, and kind of thanking you for
 2 your service. So your special report that you put out,
 3 which was I think so well-timed to come into this
 4 administration, has been part of what has been
 5 informing this. And I think things like the periodic
 6 letters that you have done to NOAA administrators are
 7 very helpful information. NOAA, as you know, has a
 8 fairly rigorous planning and programming process and
 9 those are just the kind of inputs that come in here.
 10 In terms of our investment priorities and
 11 kind of where we have used the panel's advice, I think
 12 we continue to pursue increases in both in-house and
 13 contract hydroservice capacity so I think you know we
 14 have about \$40 million of the Stimulus that's going to
 15 be going into this arena. We have our Spend Plan for
 16 the Stimulus up on Capitol Hill now. We're waiting.
 17 We're hopeful to get Congressional approval on that
 18 next week when Congress is back. We feel that we'll be
 19 able to move these things.
 20 We're still sensitive to and have, will be
 21 starting dialogues with this administration about the

1 PORTS capability, both working towards expanding it and
 2 then increasing their funding and dealing with the
 3 issue about what's federally funded versus any local
 4 funding for that. I think Height Modernization, we
 5 see, you know, multiple, the multiple benefits of this,
 6 and not only continuing to build support for this
 7 within the Department of Commerce but also with our
 8 sister agencies that depend upon this. And then
 9 working to expand the water level network, we have some
 10 modest work going on in 2009 and we're going to go be
 11 looking to moving forward. So I think I'm going to
 12 stop there and see if there are any questions.

13 MR. SKINNER: Great. Thank you very much,
 14 Mary. I think that we share some of the optimism you
 15 talked about. We had a very informative budget
 16 briefing yesterday. We, of course, would like to think
 17 that our report was helpful in that process but I think
 18 as Admiral West and others have mentioned that the real
 19 day-to-day work to get the right information in front
 20 of the right people to bring about those budget
 21 increases were the NOAA staff that we have been working

1 is delivering are great and excellent and very useful.
 2 If there was a common theme it was that there needs to
 3 be more of them. They need to be faster. They want
 4 more. It's the same issue that I think was mentioned
 5 earlier.

6 So that's actually a very positive message.
 7 And I think we had seven great presentations, one that
 8 was I think a little unusual for us was from the
 9 Domino, the person representing the Domino Sugar
 10 facility here in Baltimore, and I think most of us were
 11 fairly amazed that the suite of projects -- suite of --
 12 I didn't mean to say that, that was unintended -- the
 13 full range of hydrographic products that their facility
 14 uses was quite impressive and was a very good
 15 ambassador for hydrographic services.

16 MS. GLACKIN: Great.

17 MR. SKINNER: With that there are questions
 18 or comments and you're welcome to join us back here if
 19 you want to make it more of a discussion or however you
 20 want to handle this.

21 MS. GLACKIN: Maybe I'll sit down but I'm

1 with over the last six years. And we very much
 2 appreciate all the work that they have done. They've
 3 really done a fantastic job. So thank you all very
 4 much.

5 Having said that, there's no rest for the
 6 weary or the underfunded so we should, I don't think
 7 any of us are content to let things stand where they
 8 are so I think this afternoon we'll be talking about
 9 how both short-term and longer-term we can continue to
 10 help NOAA with some of the both programmatic and
 11 funding issues.

12 Just a couple of comments. In addition to
 13 the budget, one of the things that sort of echos,
 14 Zdenka's comments about the data demand overload. Boy
 15 it's kind of hard to manage but it's much better than
 16 having no one want it. And, I think one of the things
 17 that we have heard particularly at yesterday's
 18 stakeholder panel -- and I know Captain Nielsen is here
 19 from the Pilots -- I don't mean to put words in your
 20 mouth but I think the general message was that the
 21 products that NOAA, the hydrographic products that NOAA

1 happy to take questions.

2 MR. SKINNER: I think this is not a shy
 3 crowd so I would imagine that you'll probably have
 4 several questions.

5 MR. WHITING: I was going ask, Larry,
 6 what's the stock market doing today?

7 MS. GLACKIN: If I knew that I wouldn't
 8 have this job.

9 (Laughter)

10 MR. WELCH: Well, Mary, thank you very much
 11 for your presentation and we hope at some point in the
 12 future we can actually get the new administrator to
 13 come when her schedule settles down a little bit so we
 14 would like to work with you and her staff as a
 15 possibility of that in the future meeting.

16 MS. GLACKIN: Yes.

17 MR. WELCH: Your discussion of the Arctic,
 18 one of the things we talked about yesterday were the
 19 significant lease sales that have taken place in the
 20 Chukchi Sea out there, and the huge amount of money
 21 that the federal government, Minerals Management

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1 Services obtained from those lease sales but eventually
 2 assuming those lease sales are developed, there's going
 3 to be a need for increased hydrographic services from
 4 NOAA up in that area.

5 And, we've talked informally about whether
 6 there ought to be some kind of approach from NOAA to
 7 MMS saying that when you're going out into these
 8 frontier areas that eventually is going to translate
 9 back into demands on us to do hydrographic services,
 10 maybe there ought to be some kind of a funding sharing
 11 of all these huge amounts coming in from the lease sale
 12 to help fund the additional hydrographic services
 13 rather than having you have to go up to the Hill and
 14 beg for an appropriation or to ship something from a
 15 traditional area to another. So, we would encourage
 16 you to look at funding sources, sort of traditional --
 17 nontraditional funding sources to help augment the
 18 existing programs.

19 Another thing that I've thought of is that
 20 the administration has got to, has made a request, I
 21 think, to extend the Superfund tax and there's an

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1 equivalent oil spill tax and in fact NOAA had some
 2 legislation last year to make NOAA response actions
 3 fundable out of oil spill trust fund.

4 Well, hydrographic services and ports
 5 prevent oil spills. It seemed like to me to be a very
 6 logical proposal to say, look, some of the additional
 7 uses of NOAA from that oil spill trust fund could be,
 8 you know, help fund the maintenance of ports or some of
 9 the hydrographic services. So, rather than just having
 10 to rely solely on annual appropriations and, you know,
 11 the vagaries of the budget process I would encourage
 12 you to look at funding sources like those two.

13 MS. GLACKIN: Yeah, I think that -- thank
 14 you. And we're definitely pursuing that with the oil
 15 spill thing. I would say in general, though, we have a
 16 hard time getting that one past OMB. You know, they
 17 definitely look at those revenues coming in as their
 18 offsets on the budget. But I do think that your
 19 overall point -- and this is I think what we're trying
 20 to do in the Arctic -- is we need to look holistically
 21 at this. We can't be doing one thing in one part of

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1 the government that's going to, you know, push a budget
 2 of activity up there and not have the underpinning data
 3 and all for safe infrastructure.

4 So, I'm really pleased, Ashley and Steve
 5 have done a lot of work pulling together kind of an
 6 Arctic strategy for us that we're hoping to push, you
 7 know, up into the administration that says, got to look
 8 at this whole thing and come to terms with it.

9 MR. WELCH: I have one other comment, in
 10 that we appreciate NOAA and the various folks here
 11 doing what they did to assert themselves with the
 12 Stimulus Bill. It would be great if we could get,
 13 particularly for the ports, funding the administration,
 14 new administration to actually put that in the budget
 15 as a line item as opposed to having a congressional
 16 ad-on each year. So we would encourage you to take a
 17 look at that.

18 And I have one last question, which is as
 19 far as the Stimulus Bill, there was money for
 20 completing the work, I guess, on one of the fisheries
 21 research vessels and you mentioned one of the others.

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1 With these two new fishery vessels coming on do you
 2 have, what implications might that have as far as
 3 speeding up replacement of hydrographic vessels, since
 4 the fisheries vessels are coming in perhaps ahead of
 5 what people predicted?

6 MS. GLACKIN: Yeah, I think that it will,
 7 you know, certainly this is what the Stimulus Package
 8 did overall for us is it took some things out of our
 9 pipeline so we can accelerate and move up. So, you
 10 know, we're going to kind of more aggressively pursue
 11 and have those debates. You know, I will tell you just
 12 kind of honestly, and I think this is true across the
 13 board, in the federal government, is that OMB took a
 14 pretty hard line on 2010 given what we got in Stimulus,
 15 so, but still I think it puts us in great shape for
 16 2011 and we've got a little more runway there to make
 17 those choices.

18 MR. WELCH: Which you're heavily involved
 19 in right now as far as getting ready for things, and
 20 pass-backs and things, isn't that correct?

21 MS. GLACKIN: What, in '11?

1 MR. WELCH: Yeah.
 2 MS. GLACKIN: That's right, we have. Well,
 3 the '11 schedule is kind of delayed because '10 was so
 4 delayed so we haven't actually yet gotten to the point
 5 of sitting down with our administrator of kind of what
 6 we've got to make some decisions. But, yeah, we can,
 7 that's what I mean. We got a little bit of runway to
 8 '11 to run this up before we submit to OMB. So these
 9 are the kind of discussions that we're going to be
 10 having.
 11 MR. WELCH: Thank you.
 12 MR. WEST: Mary, thank you for coming. I
 13 know you have been pretty busy the last few months
 14 running the show so thanks for coming. We talked a lot
 15 about IOOS, and a lot of your new missions, et cetera,
 16 and a lot of us are jumping up and down with the new
 17 bills that were passed, that legitimize a lot of stuff
 18 with the oceans. But what's missing in everything I
 19 have heard in the last couple days is Department of
 20 Defense.
 21 Arctic, we've been operating in the Arctic

1 MR. WEST: A lot of us are looking at
 2 climate service, what do you mean, what's that going to
 3 look like, is there going to be turmoil in NOAA, how
 4 you going to stave that off, how the rest of the
 5 program's going to go so a lot of the folks that, you
 6 know, hopefully Secretary Locke will help you
 7 legitimize all that, so.
 8 MS. GLACKIN: Yes, yes. I think it's going
 9 to take, you know, we're going to have all be a little
 10 patient as we kind of sort these things out because,
 11 you know, for example, on the whole ocean governance
 12 thing in the federal government, we have, you know,
 13 this administration hasn't had a chance to sit down and
 14 look at it. They did have, as many people probably
 15 know, the GOCE folks come in with some priorities last
 16 week so we have teed up some internal discussions on
 17 that. I do think, you know, we're very much hearing
 18 from Council on Environmental Quality; you know,
 19 they're kind of looking for NOAA leadership on this
 20 issue here.
 21 And, I think your point about DOD is an

1 for years and pretty -- there's been lots and lots and
 2 lots of info what's going on up there and how to
 3 operate. In fact, it's even easier to operate up there
 4 now. So, DOD needs to get involved with that and I
 5 would like to see that, and plus with IOOS. In fact,
 6 DOD is starting to look at the technology now that
 7 we're using for ocean observing. It's to the point now
 8 where you can actually make a section of the ocean
 9 transparent. I mean, it's not one sensor but a series
 10 of them. So they're starting to look at this.
 11 So, I think DOD needs to get much more
 12 involved with what you're doing on ocean observing,
 13 climate change all that other stuff. I'm not quite
 14 sure how the process was put in place to do that but I
 15 don't know where that is, which leads me to into the
 16 organic piece of all this. A lot of us pushed that for
 17 many, many years. I'm not sure how that's going to be
 18 received in the new administration but I do hope
 19 there's some means to define NOAA's role, I mean, in
 20 writing or formalize it somehow.
 21 MS. GLACKIN: Right.

1 excellent one and I think we're looking for
 2 opportunities for kind of richer engagement there than
 3 we've had in some of these areas but I agree with you
 4 and we now have, you know, Admiral Titley's coming in,
 5 which I think is a great selection there and we've got
 6 a good, good background of working with him.
 7 MR. WEST: DOD's assessment is going to
 8 kick off this next week, so that all hopefully -- thank
 9 you.
 10 MS. GLACKIN: Yeah, yeah.
 11 MR. SKINNER: Other questions? Gary?
 12 DR. JEFFRESS: Thanks also, Mary, for being
 13 here. One of my interests, coming from Texas, I'm
 14 involved with the surveying profession. We educate
 15 surveyors in Texas and we're pretty much involved in
 16 the Height Modernization Program. And my experience
 17 over the last few years, I have seen a lot more
 18 communication between NOAA and FEMA and the Corps of
 19 Engineers than I've seen in decades. I've actually
 20 been in the United States here for twenty years now.
 21 So, I'm very impressed that that's going on

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1 but I still think there needs to be more of it. FEMA
 2 is like right now trying to update its flood insurance
 3 rates maps around the country, using elevation control
 4 that was put in back in the 1940's, which is out of
 5 date and a lot of it's missing, which is what Height
 6 Mod's all about. And they seem to be going off on this
 7 tangent of doing this mapping and not giving any
 8 concern to the control in the National Spatial
 9 Reference System they're trying to tie it to.
 10 And I know, like Ed saying that Minerals
 11 Management Services is a source of funding for some of
 12 the NOAA services, FEMA is also I think a source of
 13 funding if you can convince them to do that. They're
 14 wasting a lot of money on mapping that's tied to
 15 ineffective control but I encourage NOAA to keep this
 16 communication and establish more communication with
 17 FEMA and the Corps of Engineers.
 18 MS. GLACKIN: Thank you. That's a great
 19 point.
 20 MR. SKINNER: Jon?
 21 MR. DASSLER: Yeah, just along those

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1 lines -- thanks also for being here but along the same
 2 lines that Mary was mentioning is the Columbia River
 3 Treaty, which is a treaty between U.S. and Canada, both
 4 again it's flood issues and there's a lot of mapping
 5 effort that they're looking at for that effort. In
 6 memorandum of understanding with Corps of Engineers on
 7 mapping efforts where it could be coordinated with what
 8 NOAA is doing on the Columbia River and what the Corps
 9 of Engineers is doing, I think it would really be a big
 10 benefit in helping moving that forward --
 11 MS. GLACKIN: Okay.
 12 MR. DASSLER: -- and getting everybody on
 13 the same page because datums and a lot of those issues
 14 continue to be a problem there as well.
 15 MS. GLACKIN: Yeah. Thank you. Those are
 16 great highlights. It's actually on our to-do list and
 17 I have somebody working on putting together NOAA's
 18 portfolio for the whole Department of Homeland
 19 Security, because we want to take Dr. Lubchenco over to
 20 meet with Janet Napolitano and kind of talk about, you
 21 know, the whole set of things. So, great, great

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1 highlights.
 2 MR. SKINNER: Any other questions? Mary,
 3 again thank you.
 4 MS. GLACKIN: I'll be around. Thank you.
 5 MR. SKINNER: Great. Thank you. Just one
 6 sort of last comment about the support we've gotten.
 7 We, I think the panel feels that consistently we've
 8 gotten a high level of support from the NOAA staff
 9 internally for our meetings that allow us to make we
 10 hope informed decisions and recommendations so we do
 11 appreciate all the time that's spent by NOAA staff to
 12 help us out so thank you.
 13 MS. GLACKIN: Thank you. Great to hear.
 14 Thanks.
 15 MR. SKINNER: We have time now for public
 16 comments. If there is anyone signed in that would like
 17 to make some public comments to the panel, please
 18 indicate. Anyone? Helen?
 19 MS. BROHL: Unless there's someone else --
 20 thank you. I see by the schedule, I guess you're still
 21 going to have the dedication in the pouring rain but we

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1 look forward to that. My name is Helen Brohl. I'm the
 2 Director of the Committee on the Marine Transportation
 3 System and as Tom indicated I was a member of the
 4 panel. And so it's a pleasure to be here. It's a
 5 pleasure to see everybody. And, allow me to thank Mary
 6 Glackin and Jack Dunnigan for their extraordinary
 7 support to the CMTS. Jack Dunnigan is our day-to-day,
 8 and frankly without his support and the support of NOS
 9 I don't think we would be nearly as effective as we
 10 have been in the last two years.
 11 But I just wanted to take just a quick
 12 moment just give you a quick update on the CMTS, and
 13 we'll go on but I'll be here for the rest of the day if
 14 you have questions. And, I think at one point you were
 15 provided copies of the National Strategy and the Marine
 16 Transportation System, a Framework for Action. This
 17 came out in July of last year. I brought a dozen
 18 copies with me for people who may not have had gotten
 19 one in the past and I just wanted to give you a quick
 20 update.
 21 This plan even though it was approved under

1 the previous cabinet still is very timely. These are
 2 issues regarding the marine transportation system that
 3 had been talked about for a lot of years. And there's
 4 a great deal of emphasis on marine safety. And we did
 5 take to heart the recommendations of the Most Wanted
 6 list that Admiral Lautenbacher brought to the CMTS last
 7 year. And so I hope that you have had a chance to make
 8 note of those. And we're currently developing an
 9 implementation plan for the strategy so it is not just
 10 a document that collects dust. And we are addressing
 11 the number of issues as it relates to marine safety
 12 that I think you would be comfortable with. But it is
 13 in development and we hope that we'll have it for our
 14 CMTS coordinating board, which is our subcabinet level
 15 board, in June and hopefully then the full committee,
 16 the cabinet level committee on the CMTS will approve
 17 that implementation plan in July.

18 One of the other things that we have done
 19 recently, the board approved the development of a
 20 research and development integrated action team. That
 21 was done just on March 19th. The goal of this team is

1 to provide the CMTS with the strategic capability to
 2 identify, develop and implement innovative research and
 3 technologies, to address the pressing challenges
 4 identified in the National Strategy.

5 Now, the goal is to not to replace these --
 6 it's going to co-chaired by the Army Corps of Engineers
 7 and NOAA. We sincerely appreciate that leadership.
 8 The goal is to in the end develop a marine
 9 transportation research plan and implementation
 10 strategy that will provide a framework for research
 11 investments out to 2030. It will not usurp existing
 12 research programs by the agencies. That's not what the
 13 CMTS does. But the goal will bring together the R&D
 14 experts in marine transportation to develop an overall
 15 arching list of priorities, and of course to be very
 16 clear about the way in which they would work together
 17 to fulfill those.

18 And we've continued, we're almost finished
 19 with a full assessment on the marine transportation
 20 system. The Army Corps of Engineers took the lead on
 21 this with the Bulpee Center and in fact there were six

1 reports to be completed on the assessment and most of
 2 which are completed but not approved. They include an
 3 overall assessment of infrastructure needs, MTS
 4 economic and productivity challenges, environmental
 5 challenges, assessment of MTS safety challenges,
 6 national security challenges and institutional
 7 challenges. And the final report will be a summary.

8 Now, we hope to have this done by the third
 9 quarter of the calendar year if not by the end of the
 10 fiscal year. Just like everybody else, everybody's
 11 attentions are diverted to Stimulus, to new priorities,
 12 and that is no different with the Army Corps of
 13 Engineers. However, we had the ability for an
 14 interagency way to take a look at this and in some
 15 cases TRB subcommittees have looked at them and if the
 16 HSRP members have an interest in looking at any of
 17 these to review, then I suggest talk about it with your
 18 NOAA representatives and we can talk about a way to
 19 make that happen in a productive and/or helpful as way
 20 because we would appreciate that.

21 Also, I wanted to give you just a quick

1 update on the Navigation Technology Integrated Action
 2 Team. Dave MacFarland, Captain Dave MacFarland, who
 3 works for CO-OPS, Mike Szabados, in NOS is the lead,
 4 the NOAA lead for this Navigation Technology Team and
 5 he has been here to provide updates in the past. But
 6 just to let you know where that's going, it is going
 7 gangbusters and it is in many respects our most
 8 successful -- from my perspective, because of my
 9 background working with you all -- our most successful
 10 interagency effort and we have to thank NOS and Mike
 11 Szabados and the NOS offices for their assistance.

12 But to give you a quick update, the AIS
 13 communications with the Mariner, the NOAA Ports data
 14 had been combined with the Coast Guard's AIS
 15 presentation. And we have a test of the system in
 16 Tampa Bay right now and that will continue for the rest
 17 of the year. And Mike, please jump in if I'm saying
 18 something incorrectly because, as you know, I know this
 19 big picture but I'm not the data geek. And we'll do
 20 additional testing that is scheduled to be conducted on
 21 the Columbia River this year.

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1 There was also a test of AIS communications
 2 with the Army Corps' real-time current meter effort on
 3 the inland river system. The goal of this is to bring
 4 the inland system up to real-time in a way that is
 5 compatible with the coast so it's a seamless system and
 6 the Army Corps put that on a high priority and they've
 7 set up 18 current meter areas. Because, as you can
 8 imagine, having barges run into locks and dams is not a
 9 good idea, does not help the infrastructure of the
 10 system. And those are areas of high current and very
 11 dynamic system. And, while you would presume that this
 12 had already been underway in the inlet system, it
 13 wasn't as advanced on the coastline. So they're in
 14 trials with that as well.

15 NOAA is finalizing their specs for Army
 16 Corp. Digital Precise Channel Limit Data, and for
 17 receipt of Army Corps Depth Survey Data, and both of
 18 these specifications are due to be completed in May of
 19 this year. The Army Corps and NOAA have agreed on the
 20 definition of a common water level datum. I think Mike
 21 may have mentioned that in the past to you. But Army

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1 Corps then needs to assess nearly 3,000 projects, and
 2 that's nearing completion but the expected conversion
 3 of these projects to a new common water level datum
 4 could be accomplished by 2015.

5 And while that sounds like a long way off
 6 it is a very expensive prospect for them to completely
 7 change the manner in which they're doing things. It's
 8 at least \$30 million and it's my understanding that
 9 maybe a little bit of Stimulus money went towards this
 10 to perhaps push that forward.

11 Army Corps wave data collected at several
 12 major ports is available to NOAA for inclusion in the
 13 Ports data being disseminated, and NOAA is preparing an
 14 MOU that will cover the sharing of this data. And it's
 15 expected that a final version of this MOU will be ready
 16 by this summer. Okay. I got a nod in the affirmative.
 17 And the vertical datum transportation tool being
 18 created in NOAA is actively supported by Army Corps, is
 19 progressing on schedule with additional areas due to be
 20 completed this year.

21 Now in some respects there are activities

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1 that, especially the integrated coastal mapping effort,
 2 we have a lot of mutual people on the same team which
 3 is terrific because the goal of this is to be holistic
 4 and advance these efforts to have a seamless system.
 5 And I harken back to Bill Gray, who was a member of the
 6 Hydrographic Services Review Panel, who wrote the
 7 initial assessment of the marine transportation system
 8 back in 1996.

9 And the goal, one of his biggest concerns
 10 on behalf of Intertanko was the fact that as a mariner
 11 perhaps you have buoys, you have different products and
 12 projects and proposals to address navigation services
 13 for the marine transportation system but how do they
 14 all work together. And I wish he was here because I
 15 think that's what we're doing, and, in great measure,
 16 and it's really all because of the participation of the
 17 members.

18 But, lastly I also wanted to mention to you
 19 that one, of course, thank you very much for the
 20 recommendation to the administrator proposing the
 21 continuation of the CMTS. It does not exist in

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1 legislation or executive order. It exists by
 2 Presidential directive, which is the weakest form of
 3 authority; however, we have good feelings from the
 4 Department of Transportation's Executive Office to
 5 continue supporting the CMTS.

6 Additionally, the board this year at the
 7 March meeting supported us moving out on legislation
 8 rather than executive order and we're doing our
 9 homework to make that happen. We do need to make sure
 10 that a few more politicals are in place before we, you
 11 know, shove it through. But we sincerely appreciate
 12 the fact that the HSRP propose continuation of this
 13 CMTS in one form or another.

14 So we hope to have legislation, draft
 15 legislation to the coordinating board in June, again,
 16 hopefully for the CMTS approval and we can move forward
 17 in June. And again this could not happen without the
 18 extraordinary support of NOAA. I can't tell you how it
 19 made a big difference in the last couple of years. And
 20 thank you, Mary, for being there in the in-between
 21 times and we look forward to working with the

1 administrator. And I'll be here for the rest of the
 2 day to answer any questions because I know you need to
 3 get moving.

4 MR. SKINNER: Just thanks, Helen. Any
 5 quick questions for Helen? Thank you for continuing to
 6 make the connections between CMTS and this panel. I
 7 think it's very important to do that and we appreciate
 8 you taking the time to do that.

9 MS. BROHL: I'll put these, I just have a
 10 dozen copies of the strategy. I can put them out in
 11 the front for you unless you want to make sure the
 12 members get them first.

13 MR. SKINNER: I note, think I'm seeing a
 14 trend here. Yesterday NOAA received a quote, virtual
 15 hug, from one its sister federal agencies. You're
 16 getting good feelings. This sounds like an entire sea
 17 change in Washington so I think it's a positive
 18 development.

19 MS. BROHL: Fingers crossed.

20 MR. SKINNER: I think right now we're ready
 21 to break and maybe if people want to grab a cup of

1 be willing to continue to engage with us as we move
 2 through this process.

3 I think in a way this is a big deal and
 4 it's something that we need some help from people in
 5 the real world, and probably we'll need some support
 6 from people in the real world over the long-term if
 7 we're going to carry it out.

8 Then there are others in the room who are
 9 with us here who have been a part of the discussions
 10 we've been having and so I certainly will ask them to
 11 participate, Captain Barnum and Andy Armstrong,
 12 certainly Roger Parsons -- is Roger back -- has been a
 13 part of this.

14 But I guess one of my jobs in the system is
 15 to think about the future, and, you know, have some
 16 visions and some plans for how well we're going to be
 17 able to execute these critical missions in coming
 18 decades, not just years but decades. It's especially
 19 important when you think that a significant portion of
 20 our capability is defined by hard assets that have a
 21 very long life span, forty, fifty years for our large

1 coffee before we head over, is that accurate?

2 MR. BARNUM: Yeah.

3 MR. SKINNER: Great. We'll be back here
 4 around noontime for lunch.

5 (There was a break in the proceedings for
 6 ceremony and luncheon.)

7 MR. SKINNER: We're going to reconvene the
 8 panel. I think there's a pretty good chance we will
 9 spend a little bit less time on the latter parts of the
 10 agenda this afternoon on planning and probably about an
 11 hour or so, hopefully, we'll be out of here by around
 12 three o'clock. And, first up is Jack Dunnigan on some
 13 mapping initiatives.

14 MR. DUNNIGAN: Thank you, Mr. Chairman.
 15 So, I would like to share with you some thinking that I
 16 have been doing, and I have actually been doing it for
 17 a long time but it really just over the last couple of
 18 months has started to come together. And, we've been
 19 having a number of extensive discussions in-house, and,
 20 then I'm going to ask you certainly to have some
 21 discussion about this but I'm going to ask you also to

1 hydrographic ships. And, as a member of NOAA
 2 leadership, I see a lot of things that are big issues
 3 in NOAA.

4 What NOAA does not do well, to nobody's,
 5 you know, there's no person who is the reason for this
 6 but I have never seen NOAA do a very good job at being
 7 able to plan and execute long-term large capital
 8 investments. Mary talked a little bit this morning
 9 about some of these that are problems for us right now,
 10 our large satellite investments and our fleet
 11 investments are problems as well.

12 So, you know, things that cost a lot of
 13 money in a 4 billion dollar agency, you know, where the
 14 whole program, you know, one program might cost a
 15 billion dollars over five or eight years, that's really
 16 hard for us to be able to maintain. We've got to build
 17 a large new combined center of activity for all NOAA
 18 folks in Honolulu. It's going to cost \$250 million.
 19 NOAA doesn't have a way of coming up with \$250 million.
 20 We need to rebuild our laboratories in that La Jolla.
 21 It's going to cost somewhere between 80 and \$90 million

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1 and those are falling off the cliff. We don't have a
 2 way in NOAA of coming up with 80 or \$90 million at a
 3 shot to do something like that. These are the kinds of
 4 difficult things that an agency the size of NOAA has a
 5 problem with.

6 So, as I have been looking at those things,
 7 I have also been thinking about our legacy missions in
 8 maritime transportation, in particular nautical
 9 charting, and recognizing that for, you know, most of
 10 the last 200 years when we've needed assets to take us
 11 to see, you know, we built and bought them, and the
 12 profile of being able to do that has changed
 13 significantly just over the span of my career at NOAA.
 14 You know, when I was a young NOAA lawyer, we had twelve
 15 or thirteen hydrographic survey ships and today we have
 16 three, maybe four by the end of May.

17 But, you know, the numbers, now, of course
 18 they are a lot more efficient than they were back in
 19 the days when we were using lead-lines but there's
 20 still been a long-term decline in the investment in
 21 those assets. And, not only that, but the assets that

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1 are there are not young. You know, The Fairweather and
 2 the Rainier are, you know, beyond 40 years, heading
 3 quickly to 50. The Jefferson is newer but we just
 4 decommissioned The Rudy. The Hassler will be a great
 5 new ship but, you know, there's obviously something
 6 that's going to be still experimental about that new
 7 ship design and how well it's going to be able to
 8 perform. So, we have a lot of lessons to learn there.
 9 That's not a clear answer.

10 So, part of my job is to think about how
 11 are we going to be doing these missions in 2050 because
 12 whatever assets we own we're going to own for that long
 13 and we need to be able to think in those kind of
 14 timeframes. So, I have been sitting in some of these,
 15 you know, large NOAA investment meetings asking myself
 16 how are we going to, you know, go to sea in 2040 and
 17 2050 because we have to be planning that day.

18 You can look at the NOAA vessel
 19 recapitalization plan that the Office of Marine and
 20 Aviation Operations completed last year. And, if you
 21 look out in that plan, what you'll see is that there's

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1 a major repair period that's scheduled for The Rainier,
 2 which is our most productive vessel, but she'll lose
 3 what, 18 to 24 months probably while that's happening.
 4 And then, you know, somewhere in the 2015 to '18
 5 timeframe there's a plan to build and bring online
 6 another vessel but it's not called a hydrographic
 7 survey vessel, it's called an NSV1, NOAA survey vessel.

8 And, we don't know what a NOAA survey
 9 vessel is. We have to figure that out in the
 10 intervening period of time. It's hopefully to be some
 11 kind of a multi-mission basic platform that could be
 12 configured to be used for hydrographic work, habitat
 13 work, maybe fisheries work to try to build in some
 14 efficiencies. And there's a huge assumption that that
 15 makes sense, by the way, that all of these missions can
 16 be served by a common platform.

17 So we have a lot of thinking to do there
 18 but nominally at least that first NOAA survey vessel
 19 would be a Rainier replacement. There's nothing in the
 20 hydrographic, in the vessel recap plan that talks about
 21 replacing The Rainier. There's nothing in there that

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1 talks about replacing The Thomas Jefferson. We're not
 2 thinking, you know, that far ahead.

3 So, you know, for a mission and a business
 4 model that relies so much on large capital assets, my
 5 developing concern was that we weren't thinking far
 6 enough ahead and planning to really be able to carry
 7 out our future.

8 And then there was a whole other set of
 9 thoughts that came to me. Oh, and by the way,
 10 recognize that our business model has developed over
 11 the last ten to fifteen years to rely a lot more on the
 12 private sector to help do those missions for us. And I
 13 think that's a good thing and I think, you know,
 14 whatever is going to happen, you know, we're going to
 15 need to go there. We're don't need to have twelve or
 16 thirteen large hydrographic survey ships probably. We
 17 do need to be able to go to sea but maybe in a
 18 different way.

19 So, then the whole, the other second line
 20 of thinking that I went down was to think about
 21 changing technology, recognizing that until 60 years

1 ago we were collecting bathymetric data the same way
2 the Phoenicians did and we have had what, three major
3 Tsunamis of technology change that have hit us over
4 that 60 years and if you believe Moore's Law, those
5 technology refreshes are going to be overwhelming us,
6 you know, what, twice as fast as they move along.

7 So the one thing I know is, is that in 2050
8 we're not going to be doing hydrographic work the same
9 way we do it today. I have no idea what we're going to
10 be doing but I do know it's not going to be the same
11 way that we're doing it today so we shouldn't be
12 building large ships today based on today's technology.
13 We have to somehow be able to think farther ahead.

14 And, it occurred to me that we would be
15 better off thinking about our future if instead of
16 thinking about, well, how are we going to build the
17 next hydrographic survey ship, we thought about this
18 really in terms of what this is, which is a data
19 acquisition program. And, we thought about developing
20 a system of systems that was focused on acquiring data
21 and information, oh, and by the way managing that data

1 and information and moving it through a pipeline to
2 products and services that people can actually use, try
3 to be more end-to-end rather than say, my gosh, how are
4 we going to replace The Rainier or The Fairweather or
5 The T.J.

6 And so with sort of that amount of
7 background I started talking to some people inside the
8 organization. I talked to Steve Barnum, talked to
9 Roger Parsons and when I first started doing this I
10 started talking about we got to get all this
11 bathymetric data, it's bathymetry, it's bathymetry, and
12 finally Roger just kept beating me over the head saying
13 it's not about bathymetry, it's about data acquisition,
14 about what's going on in the oceans, and it isn't just
15 about nautical charting. It's about all of the
16 multi-mission things that NOAA is focused on doing
17 today. So habitat characterization is going along with
18 nautical charting as sort of a fundamental part of
19 facing our mapping future.

20 And as matter of fact -- just a little bit
21 of an aside -- this California program has been a great

1 thing, where the State of California, which had some
2 really habitat-related reasons to want to do Benthic
3 (phonetic) characterization along the whole California
4 coast, has brought in some resources of their own.
5 They're using our, some of our hydrographic expertise
6 and contracting with one of our contractors, with
7 Fugro, and everybody is just really pleased that this
8 has been coming along. It's been a win-win both from
9 the nautical charting as well as the Benthic
10 characterization site.

11 So it's really sort of validating the
12 concept of having IOCM. And I think that's really good
13 but to me that just sort of reemphasizes the need for
14 us to sort of step back and really try to think
15 futuristically and systematically about what we need to
16 do, not, not to say, oh, my gosh, how are we going to
17 replace The Fairweather, will the NSV work as a
18 replacement for the Rainier; those are the wrong
19 questions, I think, at least, that was where I started
20 and frankly all the more discussions that I have been
21 having with folks have tended to validate that view,

1 that that's the kind of discussion that we have to
2 have. And frankly that's the kind of discussion that
3 you folks have some very particular expertise that I
4 think would be helpful to us as we think through and
5 plan where this is going to go.

6 I have put together within the Ocean
7 Service what we're calling a Tiger team. And it's not
8 just within the Ocean Service. We have some folks from
9 other parts of NOAA that are a part of this, and I'm
10 going to be meeting with them tomorrow morning, in sort
11 of a kickoff. And we're trying to put together the
12 beginnings of white papers and thought pieces that can
13 generate, stimulate thought and questions and analysis
14 and ultimately lead us to a point where we can try to
15 get a commitment.

16 What I want out of NOAA -- Mary's gone --
17 what I want out of NOAA is a commitment to build a
18 system of systems to collect this data over a long
19 period of time. I want to start thinking about
20 acquiring Benthic and ocean data the same way we
21 acquire data about the atmospheres for doing weather

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1 forecasting and prediction. You know, we always ask
 2 ourselves, you know -- to be crude -- why does
 3 satellites eat our lunch in the NOAA budget process?
 4 And part of the problem is it's because they are,
 5 they're bigger, they're end-to-end, they're not one-off
 6 pieces, they're systematic, they're tied to stuff that
 7 make large investments make sense from a programmatic
 8 standpoint. And that's how we have to start thinking
 9 about our hydrographic missions and our need to carry
 10 those out. So, that team is going to start working
 11 tomorrow.

12 Next Friday, a week from tomorrow, I'm
 13 going to have a similar kind of a discussion with
 14 stakeholders and these are, this is going to be a
 15 little, about every three times a year, I will sit down
 16 in Washington. And we usually do it at Ocean
 17 Leadership, and call in 25 or 30 people that are our
 18 constituents. It's not the same people all the time
 19 but we'll specifically invite folks depending upon what
 20 it is I want to talk about.

21 So sometimes it will be a very diverse

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1 group, if I'm talking about budget for next year right
 2 after the budget rollout. When we were thinking where
 3 we wanted to go with Coastal Zone Management, it was
 4 focused on coastal managers and environmental groups.
 5 Now, this is going to be a group that's very much
 6 attuned towards navigation and hydrography and also
 7 systems. I want to see if there's some way for us to
 8 get, you know, the large companies that would really
 9 care about helping us build this system of systems,
 10 companies like Lockheed or Northrop or SAIC or the
 11 others that we see a lot in the satellite world.

12 Because, in the long run if we can develop a piece of
 13 business that's of interest to them, they're going to
 14 help build the constituency to make this work on
 15 Capitol Hill. You know, we're not really always in a
 16 position to be able to do that.

17 So, I want to see if it makes sense from a
 18 business operations standpoint to work towards a kind
 19 of a program that would have strong enough industry
 20 participation at the building level so that, you know,
 21 there would be more than just us coming in through the

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1 NOAA budget process and asking for the funding. So I'm
 2 going to have that a week from today -- or, excuse me
 3 a week from tomorrow.

4 And the next level that I have to do -- and
 5 I have had some one-off discussions with folks from
 6 other federal agencies but at the same time that Roger
 7 was beating into me the thought that this is not just
 8 about nautical charts, I also realized it's not just
 9 about NOAA. A lot of agencies have concerns about
 10 this, clearly. The Navy has got an interest. NGA has
 11 got an interest. USGS has got an interest. EPA's got
 12 an interest, and probably MMS does.

13 I mean, there's a huge community of federal
 14 agencies that needs to be brought in to be a part of
 15 this so that we can get some leveraging done. And that
 16 will be at another stage down the road. I'm not
 17 exactly sure, you know, when that will happen but I do
 18 recognize that that's something that has to happen as
 19 well.

20 So, I think that this is the next big idea.
 21 I think it's critical for all of us to be aware of the

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1 need to sort of think out of the box and start building
 2 our future before it takes control of us and look at
 3 what we really see the requirements to be and how we
 4 can organize something to get it to move forward.

5 And I don't really have much more to say
 6 than that. I spared you a PowerPoint. I just wanted
 7 to sort of tell you what was on my mind and what I have
 8 been thinking about and invite you to engage with us
 9 and become a part of this process as we think it
 10 through. I'd like to have some discussion of it here
 11 today and, you know, any, certainly any advice that you
 12 would have for me as to how we should take these
 13 initial steps through the process. But these are
 14 initial steps. You know, my thoughts are not very well
 15 formed yet. I see a problem out there. I see a need
 16 to try to grab the issue and make it work for us. I
 17 think it's going to be tied to new technologies.

18 You know, for example, we may, instead of
 19 having six launches floating on The Rainier we may have
 20 a mother ship that would grab, you know, 200 AUVs that
 21 would, you know, go out for ten or twenty days and come

1 back and report and get a new battery pack and head out
2 and do some more. I mean, that may be the future of
3 what we have to do. It's a very different business
4 model so we shouldn't be building a ship today that's
5 designed to take, you know, four, six or eight launches
6 out and do business the way we do it now.

7 So, that's sort of, you know, the
8 background I wanted to kick this off with and stimulate
9 some discussion. Now, Andy and Steve and Roger, others
10 who have been involved, I don't know if you want to add
11 anything at this point but what I would like to have
12 today is just sort of some discussion about your
13 reactions to this and see what advice you have about
14 how we ought to go about it that I hope, you know,
15 generates some willingness for a continuing engagement.
16 Thank you.

17 MR. SKINNER: Thanks very much, Jack. Any
18 of you want to add at this point or just jump in when
19 you want?

20 MR. ARMSTRONG: I think Jack has laid out
21 pretty well, you know, what kind of thoughts he has and

1 unfolds. I think there's a lot of support. There's a
2 lot of challenges that need to be addressed and I think
3 certainly this is a good approach to take and the HSRP
4 will be a valuable source for advice and
5 recommendations as we move forward in this.

6 MR. SKINNER: Great. Just one sort of
7 clarifying question to sort of kick things off. Jack,
8 what I heard was that under this type of scenario it
9 may be possible to envision NOAA as organized on
10 something like a data acquisition section, a product
11 development section, and a policy development section.
12 Just as a hypothetical; I don't want to sort of put
13 boxes in it. But what you're talking about is sort of
14 a resulting, potentially resulting in a restructuring
15 of NOAA as a way to think differently about
16 accomplishing your mission.

17 MR. DUNNIGAN: Yeah, I haven't thought
18 about that so I wouldn't say that that's a part of
19 what's in my mind. What I think is, is that we need to
20 think about the problem in pieces and view this as
21 essentially a data acquisition activity. You know, I

1 I think that, you know, I just hope that the panel here
2 is willing to kind of put their comments in. We have
3 our chance in the office with Jack and, so, encourage
4 the panel members to join in this discussion.

5 MR. SKINNER: Roger, do you want to add
6 something?

7 MR. PARSONS: I hope Jack told you what he
8 told me. I missed the first part of it. But, no, I
9 think the opportunity is ripe to sort of take a look at
10 what the future holds for ocean and coastal mapping, as
11 Jack said, take a look at where we want to be in twenty
12 to thirty years and build a business case on how to get
13 there. We're certainly doing a pretty efficient job
14 right now. We can always do better. There are a lot
15 in the federal agencies that heard Jack's initial
16 challenge, Army Corps, USGS to name a few, and want to
17 be part of this. I think those agencies are challenged
18 in terms of capacities and capabilities as well and the
19 technology holds the key to this.

20 So, it will be interesting to see how the
21 development of this vision and the business case

1 got asked a question once when I was a Goal Team Lead.
2 We were dedicating a ship which I think became the
3 Yocahantas Explorer, and I was expected to set aside \$5
4 million for some operational bridging funds and I
5 didn't do it.

6 And so when I was making my presentation to
7 NOAA -- is Steve Austin still here? Yeah, Steve's
8 predecessor, Bonnie Morehouse asked me, "All I want to
9 know is, is the ship going to sail or not?" And I
10 wasn't cheeky enough. You know, what I should have
11 said was, "I don't care." You know, because to me it's
12 not a question of the ship and too often I think that's
13 how we think in NOAA. We think in terms of the
14 question of, you know, the asset rather than the
15 mission that is trying to be carried out.

16 So, so, I started by thinking about, oh, my
17 gosh, given all of these large capital acquisition
18 problems that NOAA has, how are we ever in the next
19 twenty years going to be able to replace The
20 Fairweather? And finally the more I thought about it I
21 said that's the wrong question. The question is, how

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1 are we going to acquire data that we can then use for
 2 lots of different purposes? And that's been sort of
 3 the whole orientation of what Roger's been working on
 4 with IOCM.
 5 So I don't see, there may be some
 6 organizational, NOAA organizational issues that end up
 7 being tied to this but I don't see them driving it. I
 8 think this is still basically a question of how are we
 9 going to plan systematically over a long period of time
 10 to have a program that incorporates new technology and
 11 acquires data we need in the most efficient way
 12 possible.
 13 MR. SKINNER: Thanks. I actually wasn't
 14 thinking that what should be driving it is reorganizing
 15 NOAA. I was just sort of taking it to the next,
 16 thinking it through that if your goal is to do a, think
 17 differently about how you do your mission, that that
 18 sometimes could lead to, well, does this make sense to
 19 keep things straight. That's several steps ahead but I
 20 just wanted to see if that was on the page. Admiral?
 21 MR. WEST: Yeah, Jack, you're obviously

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1 right on. You got on two challenges, though. One is
 2 change is so extremely hard in the federal government.
 3 It's just hard. And number two is you've got so many
 4 different agencies involved with the ocean stuff. When
 5 I was working on navigation stuff with the Navy, there
 6 was five different agencies making charts and maps and
 7 they didn't talk to each other and their standards were
 8 all different, et cetera, et cetera.
 9 So, that's another challenge, plus the
 10 federal government is not very good at doing large
 11 program management anyways unless you're going to have
 12 a professional force to do that for you, so, you know,
 13 NOAA was never set up to do that. That's why I have
 14 always said that your satellite ought to be set aside
 15 and made a specific program and not suffer as cutting
 16 the rest of the major -- minor programs.
 17 One thing you might want to look at, some
 18 people might be familiar with the UNALS fleet, which is
 19 university-based federally funded ships to do ocean
 20 research. At one point there was 40 some of them and
 21 they're getting old. And how to replace them, it was,

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1 you know, the academic community wanted one-for-one; I
 2 had one of those and I want another one, without taking
 3 into consideration the technologies that, you know,
 4 AUVs, you know, bottom, all sort of capabilities.
 5 So in the Navy because they spent a lot of
 6 money building these ships we looked at it for three
 7 years and you came up with it's a single hull, it's a
 8 multipurpose, et cetera, it may have a moon-pull
 9 because -- et cetera. So that's all been done. It's
 10 done by the federal government and it's there. You
 11 don't need as many but you need different technologies.
 12 NOAA can use this ship. If you build it quiet you can
 13 use it for other missions, et cetera, that's all there
 14 in the histories. So it's there; you just going to go
 15 kind of pull it together with the right folks.
 16 MR. DASSLER: I think it's really
 17 refreshing to see that kind of forward thinking and
 18 moving it forward, because I think that's really the
 19 key thing, that the launches probably are going to be
 20 replaced. We've looked at that for a while where we
 21 would be sending boats out and rather than just having

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1 one boat collecting data you're going to have
 2 autonomous vessels or semiautonomous running alongside
 3 and parallel, similar to the Dolphins Systems. And we
 4 experimented with that a little bit in the Gulf of
 5 Mexico, or Mobile Bay for the hurricane debris mapping
 6 with a small surface craft that was just collecting
 7 data. But I think moving forward, you're right, it's
 8 going to be those large ships supporting those
 9 operations but it's not going be launches, it's going
 10 to be other things.
 11 The other thing we have heard from the
 12 Oregon Coast on their concerns in mapping is the
 13 accuracy standards. Right now they look at IHO
 14 standards and say this isn't accurate enough for
 15 habitat mapping but a lot of times that data is
 16 collected to a much higher accuracy than just an IHO
 17 standard but they see that as flag.
 18 So, getting more people on board on these
 19 programs on the data acquisition, also Roger's efforts
 20 in integrated ocean and coastal mapping and again n
 21 just collecting bathymetry data. We were talking about

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1 towing, moving vessel profilers that have dissolved
 2 oxygen sensors so they can look at, you know, dead
 3 ocean for measuring dissolved oxygen and other things
 4 that could be acquired at the same time to be more a
 5 comprehensive package. And it's refreshing, I guess,
 6 to see that's where NOAA is headed.
 7 MR. SKINNER: Elaine and then Gary.
 8 MS. DICKINSON: Elaine Dickinson. I think
 9 your you've hit the nail on the ahead. I sort of had
 10 the same thought for a long time. To me building big
 11 ships and paper charts is sort of like, you know, with
 12 bricks-and-mortar stores are to E-commerce. I mean,
 13 everything is moving electronically now. I see that in
 14 the print industry. You know, paper printing is just
 15 falling by the wayside.
 16 But, in addition to the data acquisition
 17 mission, if you could also think the next step, and
 18 that's data distribution, because that's the other, you
 19 know, that's the next step after you acquire
 20 everything, you have to get it out to everybody. And,
 21 you know, if I had to guess I would say in the future

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1 it's all going to be electronical (phonetic) . It's
 2 going to be something downloadable. It's, you know,
 3 it's going to be something that is very efficient to
 4 deliver to massive numbers of people.
 5 And I think the old ways of distributing
 6 all of your information like with printing paper charts
 7 and getting them to the store and all that kind of
 8 stuff, that's all going to change. I mean, it's kind
 9 of changed now. Most boaters get an electronic chip
 10 and they put it in their chart blotter. So, we're kind
 11 of, I think that's where everything is going but if you
 12 can think about the distribution equation as well
 13 beyond just how are you going to get the stuff.
 14 MR. DUNNIGAN: Be very end-to-end, yeah.
 15 DR. JEFFRESS: Jack, Australia faces the
 16 exact same problem. Australia has got a big coastline
 17 and we only have 20 million people and it's about the
 18 same population as Texas. So we don't have the
 19 resources to do intensive hydrographic surveys. So
 20 they actually going back fifteen years or so invented
 21 an airborne technology to do bathymetric charting,

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1 which was a single-dual laser system, a green and red
 2 laser flying across the water, one penetrates to the
 3 bottom and the other one gets a reflection off the
 4 surface of the water. And it's of course all
 5 integrated with GPS, et cetera, now, and shore-based
 6 tide gauges. And, but I think there's a lot of the
 7 United States that could be covered by that technology.
 8 It needs clear water; that's the problem. So you can't
 9 do brown water with it. But it's a technology that
 10 kind of answers the question you just asked about what
 11 are we going to do in the future.
 12 MR. DUNNIGAN: But it's single beam?
 13 DR. JEFFRESS: No. It's a scanning system.
 14 MR. DUNNIGAN: Oh.
 15 VOICE: LIDAR.
 16 MR. DASSLER: LADS.
 17 DR. JEFFRESS: LADS.
 18 MR. DUNNIGAN: LADS, okay. Yeah, Yeah,
 19 what I want to think about is, why does it need clear
 20 water?
 21 DR. JEFFRESS: Because the laser can only

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1 penetrate clear water --
 2 MR. DUNNIGAN: Well, but maybe there's
 3 another technology. You know, that technology is not
 4 what we're going to be using in ten years.
 5 DR. JEFFRESS: Well, exactly but --
 6 MR. DUNNIGAN: So, you know, our
 7 opportunities I think are going to change. And I just
 8 think we need to, you know, be thinking about platforms
 9 for doing that work that are adaptable. And, you know,
 10 at first I thought geez, we'll end up doing all of this
 11 with AUVs.
 12 DR. JEFFRESS: Right.
 13 MR. DUNNIGAN: And, but you're sort of
 14 raising the point that, you know, if we can get the
 15 right match on LIDAR or some airborne technology it
 16 might be a lot more efficient not to use AUVs at all
 17 but to use UASs.
 18 DR. JEFFRESS: Right.
 19 MR. DUNNIGAN: So --
 20 MR. DASSLER: But you could deploy all of
 21 those even off of a ship.

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1 MR. DUNNIGAN: Sure.

2 MR. DASSLER: Once they get small enough.

3 MR. DUNNIGAN: True.

4 MR. DASSLER: So basically that ship then

5 is providing that processing transport to get those

6 products out, I mean, so right off the ship they can

7 pretty much be ready to go out to the users. So you

8 have all of those resources to get that data out that

9 are just monitoring the acquisition of the data and

10 deploying those systems but then having that platform,

11 taking that all the way through as far as possible.

12 MR. SKINNER: Other --

13 MR. WELCH: Jack, it seems like to me what

14 we're looking at is, if I can look at, switch to NASA

15 as a comparable, they committed to a huge expensive

16 technology with long-life Space Shuttle, and for thirty

17 years they've been trying to figure out, they've been

18 trying to do their missions to fit the technology as

19 opposed to, and, so what that says is if you spent all

20 your money on a long-lasting technology, and your

21 predictions are wrong, you have eventually problems

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1 accomplishing what you want to do and problems

2 maintaining the public support for running those,

3 running that technology.

4 But I don't think you ought to fool

5 yourself in the fact that, I mean, we can just

6 necessarily expect that if you have more diverse

7 technologies or technologies with shorter life, to take

8 care of the rapid transition of development of

9 technology, that it is necessarily going to be any

10 cheaper in the long run. You may end up spending a lot

11 of money, over, spread out over a number of years for a

12 wider variety of evolving technology, that, you know,

13 one big slug of money for a big ship.

14 So, what I would be concerned about is if

15 people feel like going down this road is necessarily

16 going to result in fewer budget demands because there

17 will be people to seize on this and say, ah-hah, this

18 is the way to go because we won't have to contend with

19 budget demands from these folks to the same extent.

20 MR. DUNNIGAN: Yeah, I think you make a

21 good point. But I guess my observation of the NOAA

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1 system is that it's easier for us to spend \$3 million a

2 year for twenty years than it is for us to find \$60

3 million.

4 MR. WELCH: Sure. Oh, of course it is.

5 MR. SKINNER: Other comments?

6 MR. WELCH: It also gives you the

7 opportunity to make a mistake once in a while without

8 it being overly costly. You know, you can more quickly

9 identify that you went the wrong way and reversed

10 course and write off the mistake in investment and move

11 in a different direction, which is actually a good

12 thing.

13 ADMIRAL WEST: And Jack, I would like to

14 also encourage -- thanks on getting the industry

15 involved. I encourage you to keep doing that. The

16 oceans have never been supported by the large

17 industries because there's no money. Look at NASA. I

18 don't know, they're 18 billion at this point or

19 whatever. There doesn't a week go by that you can't

20 see a full-page ad in the New York Times or Washington

21 Post or something on the Space Shuttle or the F-22, or

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1 you name it. I can't remember the last time I saw

2 something associated with the oceans.

3 And so we've got to get industry involved

4 with this but they've got to see a profit. They're a

5 for-profit organization. So we've got to show

6 something. That's why there's a subtle importance to

7 this bill we had passed on IOOS. I have had industry

8 tell me more than once, you give us a bill that we can

9 work with on the Hill and we'll help you. Because, we

10 never had that before because investment in our oceans

11 was mostly earmarks and no funding line that they could

12 see where they could grab ahold of.

13 Now they've got an Integrated Ocean

14 Observing System and I think you're going to see that

15 that's going to help industry because they want to get

16 involved. There's a lot of money in the oceans.

17 There's a lot to do there but they needed something to

18 work with and, so, I encourage you to keep grooming the

19 industry. I'm glad yesterday went well.

20 MR. DUNNIGAN: Yeah.

21 MR. SKINNER: Other comments? I would just

1 like to add to what was said earlier. We had a
 2 presentation yesterday on strategic planning at NOAA by
 3 Paul --
 4 MS. DENTLER: Doremus.
 5 MR. SKINNER: -- and there were some really
 6 interesting aspects to what he was talking about in
 7 terms of looking forward and, you know, he was sort of
 8 joking about, well, we don't actually expect any of
 9 this to come true; we're not predicting things. But,
 10 it seems to me that NOAA is asking the right questions
 11 and I think it's very encouraging to see at all
 12 different levels at NOAA people saying "what if" in
 13 terms of future development. So, I think we'd very
 14 much like to be plugged in and I think that this is a
 15 really positive step.
 16 MR. ARMSTRONG: Jack, I'm sensing a little
 17 bit of a dichotomy here in the way some of the
 18 discussion has gone in that we tend to be talking about
 19 attracting industry with big tickets and big amount of
 20 money and on the other hand talking about avoiding
 21 large, large expenses and recycling with lower costs.

1 And I'm wondering if you could sort of comment on how
 2 you see that apparent dichotomy.
 3 MR. DUNNIGAN: My impression as to what it
 4 is that, that really gets the interest from some of the
 5 large companies that work on our satellite programs,
 6 for example, or with NASA is consistency of an
 7 investment in a systematic program over time. It
 8 doesn't have to be a billion dollars all the time,
 9 although, let's face it, this is not going to be an
 10 inexpensive mission to execute. I mean, you know,
 11 America has the choice of walking away from the mission
 12 but I just can't fathom that we would do that.
 13 So, yeah, it's an expensive mission to
 14 execute today. I mean, it's probably what, what's your
 15 budget, 40, \$50 million? I mean, we have, we do a lot
 16 of expenditure today. So, what I think -- excuse me --
 17 what I think the industry really would like to see is
 18 to have us not focus on building the next Fairweather
 19 but actually talk about, you know, a systematic
 20 approach to collection and management distribution of
 21 data and information. Because then they can see that

1 there's a long-term in it for them rather than just a
 2 one-off and we need to quit thinking one-off, which is
 3 just the typical way of NOAA doing business.
 4 MR. DASSLER: Seems like the other key to
 5 this, too, is the integrated mapping effort.
 6 MR. DUNNIGAN: Oh, yeah.
 7 MR. DASSLER: I mean, as a taxpayer you
 8 look back and you see all of the boats that are being
 9 purchased for the Corps of Engineers and then boats
 10 that are being built for fisheries and all the, you
 11 know, unique applications but again if you could just
 12 pool that resources and just that effort to a more
 13 integrated data acquisition that's going to meet USGS
 14 needs, Corps of Engineers, Fisheries, I mean, I think
 15 that's a huge first step that could bring in a lot more
 16 funding that's right now being so disbursed there's
 17 just not enough room to cover it all.
 18 MR. DUNNIGAN: Well, Roger is the Chairman
 19 of the Integrated Ocean Mapping Subcommittee of the
 20 JSOST, the interagency working group. And so he and I
 21 have been talking about other agencies and what their

1 interest is. I have had some discussions myself with
 2 USGS and with the Corps of Engineers. But, as I said
 3 earlier, I think that the federal community for wanting
 4 to deal with it is a lot bigger and that's probably,
 5 you know, after, you know, our, my discussions this
 6 week and next week, the next place I'm going to go is
 7 try to, you know, get that federal family together and
 8 have just basically this same introductory level
 9 discussion and start building the community of
 10 consensus about where it is we want to go. So I agree
 11 with you, I think it's a good point. Roger, you want
 12 to comment at all on the other agencies' sort of aspect
 13 on this?
 14 MR. PARSONS: Yeah.
 15 MR. DUNNIGAN: Because I know you're real
 16 sensitive to it.
 17 MR. PARSONS: Yeah, certainly and it's no
 18 secret here that NOAA is and will continue to be the
 19 primary ocean and coastal mapping agency but others
 20 including Navy and Corps of Engineers and Army Corps
 21 and USGS, Park Service, everybody's got a piece of it.

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1 But I think they like NOAA are challenged in terms of
 2 what their capabilities are and what their capacities
 3 are. And individually there are no federal agencies
 4 meeting their ocean and coastal mapping goals. It's
 5 just not happening.
 6 So, certainly the better part of doing
 7 business well is to leverage and cooperate. And again
 8 that, that works to a certain extent, and as Jack has
 9 indicated, the route we're taking now with existing
 10 technologies and with existing systems is only stabbing
 11 at the entire piece bit by bit. So, we do have to
 12 think bigger. We do have to think globally. We do
 13 have to bring the rest of the, not only the federal but
 14 the state and regional mapping interests together as
 15 well. This can't be done piecemeal. We've found that
 16 out.
 17 MR. DASSLER: And what seems like a good
 18 opportunity moving forward is the Arctic, right? So
 19 rather than have a lot of different agencies building a
 20 vessel that's going to work well in the Arctic, as you
 21 build a vessel that's going to work well in the Arctic

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1 and support all of those missions, and it seems like
 2 that might be an early opportunity to move forward
 3 because there's definitely going to be a need there.
 4 MR. DUNNIGAN: Yeah, and the only coda that
 5 I would put on that is not to think of building the
 6 vessel that will work in the Arctic but thinking about,
 7 you know, systematic unified acquisition of data and,
 8 you know, keep the focus there rather than on the
 9 asset. I mean, the asset will be there to do the job.
 10 It's like it's a very expensive pencil.
 11 ADMIRAL WEST: There was another one of the
 12 bills that was passed, that group of five was, I think
 13 here again, subtly important to what we're doing here
 14 today and that's ocean exploration. There's not been a
 15 lot of interest in the ocean because it's pretty
 16 boring. What the hell have we done to get people
 17 excited about the ocean? Ocean exploration is
 18 exciting, going out and discovering things, get it to
 19 the kids and stuff. But if you're going to go explore,
 20 you better have a map. And the map is bathymetry and
 21 surveys and stuff we just don't have. So, I think

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1 that's shot in the arm for the OE and the NERRS
 2 programs being codified in law, too. So there's a lot
 3 that's changing in these last few bills.
 4 Back to the Arctic research vessel, there
 5 is one being built by the NSF. The original estimate
 6 for the Iceharden (phonetic) ARRB was 60 to 70 million.
 7 You don't even want to know what it is now. I mean,
 8 that's the challenge we have with ocean stuff. If you
 9 want to build one and you can't even build -- they
 10 wanted two. They can't even build one for double what
 11 the first one cost now because there's no long-term
 12 vision on how to handle these long-term investments,
 13 so.
 14 MR. DUNNIGAN: I think they actually did
 15 get the money for that in the ARA --
 16 ADMIRAL WEST: They got the money but it's
 17 twice what the original --
 18 MR. DUNNIGAN: About 120, I think, yeah.
 19 ADMIRAL WEST: So that money's got to come
 20 from someplace. It's going to come from the regional
 21 UNALS (phonetic) vessels. Something's going to give

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1 when something like that happens. There's got to be
 2 some, well --
 3 MR. DUNNIGAN: You're right.
 4 MR. SKINNER: Other comments and questions?
 5 This has been helpful.
 6 MR. DUNNIGAN: It's been very helpful. I
 7 detect that folks are interested and want to stay
 8 engaged so that's the other objective I had for the
 9 conversation today. And, you know, what always helps
 10 me and would help any of us in any of these is to have
 11 you point out where we're wrong, you know, to push back
 12 on things that might not make a lot of sense. So I
 13 don't come into these discussions hoping that
 14 everybody's going to say great idea, go for it.
 15 It's always good to know, you know, where
 16 there might be some holes in our thinking that we have
 17 to patch up. So, please, you know, feel free and I
 18 encourage you that as we continue through this to, you
 19 know, be critical where you think it makes, where it's
 20 important because we want to make sure we do it right.
 21 But thank you. It's very helpful and we'll, I

1 guarantee you we will talk about it again next time we
2 get together because I'll update you on what all these
3 discussions meant and where it seems to be going and
4 I'll get some more advice from you.

5 MR. SKINNER: Thanks very much. I think
6 there was a potential comment --

7 MR. KEARSEY: Yeah. Brad Kearsey. I'm
8 from leg-affairs --

9 MR. SKINNER: Can you grab a microphone,
10 either from the -- I think those are live.

11 MR. KEARSEY: Are they still on? Is it on?

12 MR. SKINNER: Yes.

13 PARTICIPANTS: Yes.

14 MR. KEARSEY: I know I can talk to you
15 about this anytime, Jack. And one of the other things,
16 you know, kind of covering the portfolio of OMAO and
17 NOS or Marine Transportation is let's don't forget
18 about that most important asset being people, about how
19 they fit into this whole system. You know, that's the
20 biggest cost as we have in the organization, is those
21 people things and we always forget about it including

1 the training. We're having a tough time of folks going
2 to sea. I mean, this new generation just don't want to
3 go out there and go spend time out there. So, when you
4 have this Tiger Team, you know, please look at that
5 aspect of it, too, about how we can, you know, tackle
6 that big challenge that we have today, throughout the
7 whole organization, so.

8 MR. DUNNIGAN: Yeah, and I should have said
9 this, Brad, but that's an excellent point. And we do
10 have OMAO as a part of the Tiger Team, and Admiral
11 Bailey will be with me next week at the stakeholder
12 meeting. So, we're really trying to open this up and
13 make it a real one-NOAA thing.

14 MR. KEARSEY: Yeah, he passed that on.

15 MR. DUNNIGAN: Yeah.

16 MR. KEARSEY: I just wanted to bring up the
17 people thing.

18 MR. DUNNIGAN: Yeah. That's great. Thank
19 you.

20 MR. DASSLER: I guess just also just
21 touching on staffing because I know that's been an

1 issue for a while, but I would not rule out the
2 possibility of contract staffing to helping on some of
3 those operations as well. I mean, that was, there was
4 some discussion about that years ago.

5 MR. DUNNIGAN: Oh, sure.

6 MR. DASSLER: So, contractors working
7 aboard NOAA survey ships as well just to help on that
8 staffing problem, maybe resolve some of your training
9 issues and that kind of thing, just to toss that out as
10 well.

11 MR. SKINNER: Any final comments?

12 MR. DUNNIGAN: Everything needs to be on
13 the table.

14 MR. SKINNER: That's a good way to end it,
15 for now.

16 MR. DUNNIGAN: Thank you very much.

17 MR. SKINNER: Thank you, Jack. We're going
18 to move into the final portion of the meeting, which is
19 sort of forward-looking both for the recommendations
20 from this meeting and where we go from here. I think
21 yesterday we pretty much decided that for the

1 recommendations from this meeting I would draft up a
2 letter, and, thank you very much, I think it was Ashley
3 who put together the notes from yesterday -- I found
4 those very useful, I hope others did -- and circulate
5 the letter so that the panel members can add and edit
6 and then schedule a conference call that would be
7 noticed in the Register to approve the positions or the
8 recommendations, hopefully in about I think -- what's
9 the lead time for meeting maybe four or five weeks from
10 now for the Register? If we did a conference call,
11 because we have to approve our recommendations.

12 MS. CHAPPELL: Two weeks.

13 MR. SKINNER: Two weeks? Okay. Well, I
14 don't think we can get it done that quickly. So, maybe
15 about four weeks from now, focusing on having the
16 letter done and sending it off as an initial timeframe.
17 Is every one comfortable with that? Is that -- nod
18 vigorously. Great. Okay.

19 The second portion of it was just to spend
20 a little bit of time on the strategic draft, strategic
21 plan that came out of our Tampa meeting. It was in

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1 your packet. It does have some fairly small typed
 2 print in it but hopefully you had a chance to take a
 3 look at it. I know Captain McGovern had a couple of
 4 corrections in the handout. Primarily I think the
 5 biggest ones were on Pages 11 and 12, the notes from
 6 the groups. Does everyone have this in front of them?
 7 Am I going too fast?
 8 It's Page 11, group one, brainstorming,
 9 number two should be decrease annual survey backlog
 10 rather than increase annual survey backlog. It seems
 11 rather cruel to include that in our strategic plan when
 12 we've spent so much time elsewhere. I think that that
 13 is repeated a couple of times, so, further down under
 14 top items, number two, it appears again, decrease --
 15 increase annual survey back -- this one says lob (sic),
 16 I think it's log, and that should be decrease annual
 17 survey backlog.
 18 And, going over to Page 12, it appears
 19 again under strategies, number two, the first bullet,
 20 and the first bullet under action deliverable -- again
 21 this is Captain McGovern's notes -- increase survey

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1 production to 3,000 to 10,000, it probably should be
 2 a square -- I assume that's what it is but I think,
 3 whatever it is, it just needs to be added in there.
 4 MR. ARMSTRONG: Should it say 3,000?
 5 Shouldn't that be from 3,000? I was just wondering if
 6 the wording on the increase survey production would be
 7 from 3,000 to 10,000, was that what --
 8 MR. SKINNER: I think that's the intent. I
 9 think that these were just typed up as results of what
 10 was on the sheet. So, if it clarifies, goes to say
 11 from 3,000 to 10,000, I'm fine with that. Any, any
 12 other changes or recommendations to what we have here
 13 from the Tampa meeting? Jon?
 14 MR. DASSLER: I just have, I think I have a
 15 problem with one of the reflection items on page three.
 16 And I'll make my comment and then maybe let Juliana
 17 speak to that. But under the fourth one down, on the
 18 second column, GRAV-D allows GPS to get accurate
 19 elevations, I mean, I think that kind of sends the
 20 wrong message because actually GPS provides very
 21 accurate height information and it's actually GPS

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1 that's been able to point out a lot of the problems we
 2 have of the National Spatial Reference System. So
 3 really what GRAV-D is doing is it's allowing us to
 4 develop a more accurate National Spatial Reference
 5 System which then GPS fits into. And it seems to be a
 6 little misleading, I guess, just the way that's worded
 7 there, but --
 8 MR. SKINNER: Can you say that again, how
 9 it should read just so we can capture it?
 10 MR. DASSLER: GRAV-D will allow for a more
 11 accurately defined National Spatial Reference System
 12 from which we can get GPS, accurate GPS elevations.
 13 MS. BLACKWELL: I'm not sure that -- I
 14 think it could be refined a little bit more. I don't
 15 have the exact words but I think the intent of the way
 16 it's stated here is allowing GPS to get the accurate
 17 orthometric elevations, basically the elevations that
 18 would be more comparable to relative sea level. And,
 19 so, GPS gives you elevations now but it's elevations to
 20 a lot of us not as helpful for the types of elevations
 21 you need for tying it to water level. So I think

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1 there's a better -- there's something in between. I'm
 2 not sure what that exact wording would be but --
 3 MR. SKINNER: Can we -- I don't see this as
 4 a huge --
 5 MR. DASSLER: No, I think my point, just
 6 the way it's worded now it leads people to believe, I
 7 think there's a common misconception that GPS does not
 8 provide accurate, relative elevation information. In
 9 reality it does and that's how we found there's
 10 problems in the National Spatial Reference System. And
 11 it's really defining that and I guess it's again just
 12 maybe trying to word that a little differently so it
 13 doesn't propagate that misconception, I guess.
 14 MR. SKINNER: I definitely agree with you.
 15 If you think there's some language in between, maybe we
 16 can spend some time offline.
 17 MR. DASSLER: Sure.
 18 MS. BLACKWELL: Okay. The only other thing
 19 I would throw out is maybe GRAV-D with GPS and the
 20 combination of the two things will provide the most
 21 accurate elevation. So, that would be, my initial

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1 change to that would be GRAV-D in conjunction with GPS
 2 will get accurate elevations or the most accurate
 3 elevations.
 4 MR. SKINNER: Is that --
 5 MR. DASSLER: Sure.
 6 MR. SKINNER: -- okay? Is that -- Bob,
 7 were you able to get all the acronyms?
 8 STENOGRAPHER: I didn't hear any acronyms.
 9 (Laughter)
 10 STENOGRAPHER: Yes, sir, I got it.
 11 MR. SKINNER: Great. Thanks. Other
 12 changes? I guess the only one that sort of jumped out
 13 to me a little bit was on Page 7, year one actions,
 14 second bullet, on the subbullet, develop simple
 15 one-pagers from panel perspective for the uninformed.
 16 If this is sort of a public document, I'd much prefer
 17 to have it end at "perspective" rather than refer to
 18 the great unwashed. Does anyone have an issue with
 19 that? Okay.
 20 MR. ARMSTRONG: Where are we looking at?
 21 MR. SKINNER: This is on Page 7, year one

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1 actions. There are two major bullets under, second
 2 major bullet under the subbullet says develop simple
 3 one-pagers from panel perspective for the uninformed.
 4 And I would recommend just stopping at that,
 5 "perspective." Is that all right? Okay.
 6 In terms of where we go with this, I think
 7 this is a very useful exercise. I know at the end of
 8 the day in Tampa we were all pretty exhausted but I
 9 found it very useful going through this again. I like
 10 the idea of using this more as a sort of a matrix with
 11 the sort of five strategic goals, visibility and
 12 awareness, budget, long-time viability of products and
 13 services, climate change and efficiency on one axis
 14 with the Five Most Wanted on the other. It's not a
 15 perfect matrix but it's useful in terms of keeping
 16 track of some of the things that we talked about at
 17 past meetings that we've begun to forget.
 18 And I would suggest that as we go forward
 19 we continually refer to this. It might be a good idea
 20 to dust it off before each meeting and go over what we
 21 had worked on. If people have other suggestions on how

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1 we incorporate this into our work, I think this is, we
 2 can spend a little bit of time here discussing this. I
 3 would like to make sure that we do utilize this. We
 4 did spend a lot of effort on it and it's easy once its
 5 done to leave it on the shelf but I don't think we
 6 should. Ed?
 7 MR. WELCH: Tom, some of our public panel
 8 yesterday were pointing out some NOAA products that
 9 they felt if like they could be simplified in
 10 presentation they might be more useful to people. So,
 11 in that spirit do you think perhaps the staff could
 12 reproduce these on, in one page to a page, and put them
 13 in numerical order?
 14 MR. SKINNER: Well, this a sort of an IQ
 15 test to see if we could follow it along but I think I
 16 got to the center of the maze by the end of it. But
 17 there were, there was a little heads-up that there was
 18 a photocopying, something, so, I think we can work on
 19 that and make sure that this is something that people
 20 can use easily to be used regularly by the members.
 21 MS. CHAPPELL: They're on the Web page.

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1 MR. SKINNER: What's that?
 2 MS. CHAPPELL: They're available on the Web
 3 page.
 4 MR. SKINNER: On the Web page, right.
 5 MR. DASSLER: One Web page.
 6 MR. SKINNER: And that is something, and
 7 I'm at fault for that, too. When they were first
 8 distributed I took a look at them. I did not look at
 9 them again till last night and it's a part of this,
 10 part of wanting to talk about it is to remind all of us
 11 that I think it's a good idea to do that, including
 12 myself. Any comments or further discussion on the
 13 strategic exercise that we did in Tampa?
 14 (No affirmative response)
 15 MR. SKINNER: I think the last portion here
 16 and probably the, I think one of the most significant
 17 is where we go in the next year or so. There are a lot
 18 of things happening. We've seen some successes in
 19 terms of programmatic and budget issues, which I think
 20 is great, but let's not lose the momentum. How do we
 21 become or how do we continue to influence what happens

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1 at NOAA, particularly in hydrographic services? And
 2 there have been some initial discussions at yesterday's
 3 meeting. There were some sidebar conversations last
 4 night after the meeting.
 5 As I throw this out here for general
 6 discussion, there was, there seems to be a general
 7 consensus that we need to revise and update -- let me
 8 rephrase that -- update the Five Most Wanted report. I
 9 think the core of it is sound. I think the Five Most
 10 Wanted are still valid. I think we have a lot of new
 11 information based on stakeholder panels and some other
 12 changes that have happened in the last three years that
 13 make it, I think, fairly important to reprint the
 14 recommendations with inclusions such as what's going on
 15 in the Arctic, some of the comments we've heard from
 16 the stakeholder panels.
 17 And also I think Glen, at one of our
 18 earlier meetings he said that on the congressional side
 19 if it has a date the year before it's, you know, it's
 20 sort of last, the last decade report; you have to stay
 21 current on this.

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1 So, with that in mind we're thinking, well,
 2 what would we need to do to move forward on this? And,
 3 I think everyone has discussed how useful the
 4 stakeholder panels are and how useful it would be to
 5 include that in our report, you know, that we have gone
 6 around to different places in the country. One of the
 7 issues with doing that, though, is that we haven't been
 8 to each region in the country.
 9 We still have two fairly significant areas
 10 that we haven't, have not been to. One is the Great
 11 Lakes and one is the Pacific. And, where you have sort
 12 of two things that are coming up against each other,
 13 one is the need to come up with a revised report fairly
 14 quickly, I think. I don't think that it helps too much
 15 to wait another year-plus to issue the report if
 16 decisions are being made, you know, in the next six
 17 months. On the other hand, it's tough to make the
 18 point that we have gone around and listened to everyone
 19 when in fact we haven't if we've left out two fairly
 20 significant areas.
 21 So, one of the things I wanted to throw

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1 open was what would people like to do in terms of, do
 2 people have the time, do they have the energy, do
 3 NOAA have the ability to support the panel to try and
 4 move forward aggressively with sort of a complete,
 5 revised report in the next eight to ten months? Do the
 6 panel members have enough time and energy to do that?
 7 And, those of you who have been through it before
 8 know -- I can see some people sort of putting their
 9 heads down on the desk saying, "Oh, no, not again," but
 10 I think it's a question we have to ask about, do we,
 11 you know, do we strike while the iron's hot and do we
 12 have the resources and energy to do that.
 13 MR. WELCH: Tom, I speak as a panel member
 14 that came on after the report was done so I didn't have
 15 anything to do with the report before then. I found it
 16 exceedingly helpful as a new panel member to have that
 17 as a reference point. And I'm not sure how comfortable
 18 I would have been as a new panel member getting my feet
 19 up, you know, getting into the process and being able
 20 to contribute meaningfully to a report that was in
 21 progress or that was two-thirds of the way done.

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1 So what I'm getting to is we're scheduled
 2 to have a shift in some of the panelists within the
 3 next year and it would seem like to me all the
 4 panelists now have a degree of familiarity with this
 5 report and it would be much easier for this group of
 6 people to get it revised in whatever way than to expect
 7 our, a new, I mean, surely there will be plenty of
 8 carryover but the new folks will have a steep, quick
 9 learning curve. So I would be, everything else being
 10 equal, assuming the time and the resources are there, I
 11 would think that this is the group to do it.
 12 MR. SKINNER: Gary?
 13 DR. JEFFRESS: I agree entirely. I think I
 14 suggested yesterday to do this, and I really don't
 15 think it's a lot of work. I mean, basically the
 16 document still stands as it is. We need to just update
 17 some of the statistics and maybe some more recent
 18 events that will shake someone up. And I don't think
 19 it's a big effort. I think we should just go and do
 20 it.
 21 MR. WELCH: For example, and I don't

1 remember whether there's any -- I think probably what
2 we're likely be wanting to revise is the elaboration as
3 opposed to conclusions and trying to focus on more
4 recent justifications that may have occurred. And I
5 don't remember whether there's any reference to the
6 National Response Teams in this document or not but if
7 there were, I mean, we could put in to the extent that
8 the NOAA National Response Teams had a role in the
9 Hudson plane crash, for example.

10 MR. DASSLER: Right. And I think
11 additionally adding -- we talked about this the other
12 day, too -- adding input from the stakeholders, some of
13 those comments. I mean, we can go back through some of
14 those meeting logs to pull some of that out and get
15 that into the report because I think they had some
16 pretty meaningful stakeholder panels and some pretty
17 valuable input that could be put in there as well.

18 MR. SKINNER: I think one possible way to
19 do it is to do sort of a box with one highlight from
20 each of the stakeholder groups so you hit all the
21 differently geography, the geographical areas,

1 different types of users and so forth but there are a
2 number of ways to do that. Gary, I think you're right
3 in that the report's largely written and I don't mean
4 to go back and change a lot of it. I think it stands
5 largely on its own.

6 On the other hand, even some relatively
7 minor additions or changes is always more effort than
8 we think it's going to be. And I hope if we get to
9 December and we decide to go down this course and you
10 all say, see, that was easy, I would be very, very
11 happy to be proven wrong but I just want to make sure
12 that people are prepared that even some relatively
13 minor changes takes a fair amount of effort. Helen,
14 did you have a -- yeah.

15 MS. BROHL: Okay. I don't want to
16 interrupt anybody else. If I could just add just from
17 the outside and the value of the document that you have
18 now, and why -- just to reiterate what Ed said -- the
19 value of it is someone new. It would be great if every
20 federal advisory committee had something that defined
21 them a bit. And that document was presented to the

1 Navigation Safety Advisory Committee at Coast Guard.
2 It gave them a sense of who you were and where you were
3 and where your interests overlapped. It was given to
4 the CMTS. It became part of what we put into the
5 national strategy for the MTS. It had value there but
6 it helps define who you are as well.

7 And to the extent that the current members
8 want to have their imprint on what it is they think is
9 important, I encourage you to do so. I do respect the
10 fact that it's a lot different than putting a new date
11 on the current document but you do want it to be timely
12 because psychologically anything that's dated in the
13 previous administration could seem as if it, even
14 though everything kind of stays the same and you have
15 the same interests and it just becomes more, more so,
16 the timeliness right now would be important. Those are
17 just my thoughts.

18 MR. SKINNER: One of the things that might
19 work in our favor is, I think one of the things we have
20 to wait on is if we did decide to do, finish out the
21 sort of regional types of meetings we have been have

1 something is that we don't have to start work on any
2 changes after that meeting. We can start now on the
3 revisions with placeholders for what we hear at
4 subsequent meetings, so, you know, through this,
5 through this year. Trying to put a positive spin.
6 Andy?

7 MR. ARMSTRONG: I guess one of the
8 questions was, could, would we have time to go to two
9 more regions and get stakeholder input and have this
10 document sort of redone with this group. So, I haven't
11 heard any discussion on that and I wonder if it's
12 feasible legally or logistically to split the panel for
13 sort of a HSRP meeting that was built around
14 stakeholder input in two different places so half the
15 panel go to the Great Lakes and half the panel go to
16 the Pacific. I volunteer to go to the Pacific.

17 MR. SKINNER: I'm sure it will be a lonely
18 trip there.
19 (Laughter)

20 MR. SKINNER: That was also part of the
21 discussions, of the sidebar discussions with

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1 logistically do we even have that capability to do it
 2 and could it be split off. I think it's all on the
 3 table. There are questions that we don't really know
 4 the answer to and we don't know whether even there are
 5 the financial resources to support this kind of effort.
 6 But, in sort of working back from what we, what was
 7 discussed as what we would like to see as a product it
 8 seemed that these were the things that we really had to
 9 spend some time talking about today. Dick, did you
 10 have a --
 11 ADMIRAL WEST: Procedure-wise you can split
 12 it. You just put the announcement there is a
 13 subcommittee in the public announcement to do the
 14 following, and such and such. It's been done before.
 15 MR. DASSLER: I guess just a question on
 16 it. So we're looking at waiting to release the final
 17 report till we get input from those other two
 18 stakeholder regions; I mean, we would have everything
 19 ready to go and just insert that or is that not going
 20 to be timely enough?
 21 MR. SKINNER: Well, first I think we need

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1 to answer the question, you know, this is certainly my
 2 view that having done some work in the CZM arena, with
 3 the Pacific Islands that you almost raise more issues
 4 or more problems than you solve by not including them
 5 on something that's pretty important to them. And,
 6 same -- I know Helen's here so I will say this very
 7 loudly -- that, you know, obviously the Great Lakes are
 8 a critical portion of the mission here. So, that I'm
 9 perfectly, if people disagree that that's not an
 10 important part of it, you know, feel free to speak up
 11 but again I think that we run a real risk in saying
 12 that we've listened and here's what we've come up
 13 without hitting all of the sort of major geographical
 14 quadrants.
 15 MS. BROHL: Who is it your trying to
 16 impress? I mean for political purposes you want to get
 17 the Northwest and for, I mean Congressional purposes --
 18 MR. SKINNER: I'm sorry. Can you speak
 19 into the mike?
 20 MS. BROHL: I'm sorry. I mean, if you're
 21 going to attach just anecdotal things to certain points

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1 that you are making in the document, it doesn't have to
 2 be geographically represented as long as there is
 3 somebody from industry or somebody from stakeholders
 4 who supports that concept or you have a follow-up to
 5 that one comment. In the end, if this is about
 6 reinforcement, using the stakeholder stuff to reinforce
 7 what you're trying to say or to justify why you're
 8 saying it, does it have to be geographically
 9 represented as compared to you just have to have people
 10 who sound impressive or are impressive or say the right
 11 things and come from geographic areas that are going to
 12 impress whoever it is you're trying to impress?
 13 MR. SKINNER: I guess I'm not, I wasn't
 14 thinking about -- I was thinking more that it would be,
 15 I wasn't thinking specifically of who we were trying to
 16 impress. That was not the way I was framing it. I was
 17 thinking of it in terms of it's a national panel and to
 18 represent in a report that we've been diligent in terms
 19 of getting stakeholder input, you need to have both the
 20 different sectors and the different geographic areas
 21 represented. I think we have heard slightly different

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1 takes from the same sectors in different parts of the
 2 country, same message has been there but with a
 3 slightly different twist and I think those are
 4 important to try and capture. Ed?
 5 MR. WELCH: Tom, was there a meeting in
 6 every area preceding the first report?
 7 MR. SKINNER: No. But we didn't -- the
 8 reason why I think it would be more important is if
 9 we're doing the stakeholder section in the report that
 10 it points to the fact of where we haven't been or where
 11 we haven't received input if we only highlight, you
 12 certain geographic areas.
 13 MR. WELCH: It just seems like to me we're
 14 bumping up against two things, the need for this panel
 15 to do the report versus to have meaningful visits to
 16 some of the places we haven't been before.
 17 ADMIRAL WEST: I think we did the bulk of
 18 the report prior to starting to listen to stakeholders.
 19 I mean, we've done that in the regions -- so the bulk
 20 of the report was done by us. We thought it was
 21 important and it was. And then we started going out

1 and confirming it with stakeholder meetings. So we're
 2 kind of verifying what we thought was important, and
 3 which adds a lot of credibility to the report.
 4 So, whether you have all the regions or
 5 not, that's a different story. You can -- just a
 6 procedural thing -- you can go out as subgroups of,
 7 formal subgroups of the panel and go out and gather
 8 information but you have to remember you have to bring
 9 that back and have a quorum of the full FACA Committee
 10 to approve it. So you can go do a couple subs but you
 11 still got to get together. It doesn't necessarily have
 12 to be in person but you still got to publicly,
 13 everybody agree with the fact-finding subgroups. You
 14 look like I'm -- no, Tom --
 15 MR. SKINNER: Me?
 16 ADMIRAL WEST: No, you see what I mean?
 17 MR. SKINNER: Yeah. Yes.
 18 ADMIRAL WEST: Okay. Good. Yeah.
 19 MR. SKINNER: I think I was just insulted.
 20 ADMIRAL WEST: No, not at all. I just
 21 thought --

1 MR. SKINNER: I'm not quite as dumb as I
 2 look but almost.
 3 ADMIRAL WEST: No, I inferred I was the
 4 dumb-looking guy.
 5 MR. BARNUM: Tom?
 6 MR. SKINNER: Yeah, please.
 7 MR. BARNUM: I think it's probably good and
 8 certainly the ideal goal to try and reach all the
 9 various regions of the United States and its
 10 territories but to be fair if you think in terms of our
 11 last meeting we had representatives from Alaska
 12 speaking to us in St. Petersburg, so on issues
 13 important to the Arctic. So, there may be some ways we
 14 can creatively maybe cover some of those inputs in our
 15 next meeting. Elaine?
 16 MS. DICKINSON: Do you think the goal is to
 17 have a date of 2009 on the next report or is that too
 18 ambitious?
 19 MR. SKINNER: I think that even if we were
 20 to scrap the, you know, only have one, if we're only
 21 going to have one more meeting and work starting

1 tomorrow on the new report, it would be so close to
 2 2010 that we just for longevity sake we should put 2010
 3 on it. But I would defer to the people who know how
 4 the Hill works and publications work. Other, yeah,
 5 Elaine?
 6 MS. DICKINSON: Well, I guess there's two,
 7 two thoughts there. To do it quicker gets it out there
 8 sooner, which is good with the new administration but
 9 if you put 2010 on it, then it lasts longer. So I
 10 don't know which is better, which is worse. I mean, I
 11 don't think it would take that much for each person on
 12 the panel to go through the old report and mark it up
 13 and then send in, each person could just send in what
 14 they think needs to be changed or a suggestion for a
 15 new piece of information and have somebody collate that
 16 into a new draft.
 17 MR. SKINNER: I was on the receiving end of
 18 some of that the last time and it's not nearly as easy
 19 as it sounds. And again I'm not trying to pour cold
 20 water on getting something out quickly. I think it's
 21 just important to be realistic about what it takes.

1 And I think we actually want not just to have sort of
 2 a -- well, I'll leave it at that. We can work out, if
 3 we agree to move forward with reissuing the report or
 4 revising the report, we can work out the details and
 5 the logistics. And, if it's done in 2009 we can still
 6 put 2010 and bill it as an advanced copy. Other
 7 thoughts? Yes?
 8 MR. MYRTIDIS: Yeah, what I think we should
 9 do is -- there's fifteen of us, right? We should
 10 divide in little groups of three, probably, pick one
 11 recommendation, each group, work until the next
 12 meeting. When is going to be our next meeting?
 13 MR. SKINNER: We haven't set it yet.
 14 MR. MYRTIDIS: Okay. Around October,
 15 September, something like that?
 16 MR. SKINNER: It's up in the air, I think.
 17 MR. MYRTIDIS: And, you know, take all the
 18 input that we have and bring it up at the next meeting,
 19 discuss it and come to a conclusion. I think we can do
 20 that. I agree with you. It may take some time but I
 21 agree with the rest that, you know, the majority of the

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1 work is done so we can go ahead and just adjust it.
 2 MR. SZABADOS: But the reality of a CR in
 3 October, I would recommend we meet -- in October -- we
 4 meet in September, that we might have a little more
 5 flexibility, you know, availability of resources.
 6 Limitations may be put on us for September -- for
 7 October-November timeframe.
 8 MR. SKINNER: Yeah, Jack?
 9 MR. DUNNIGAN: It just occurs to me if we
 10 don't have this done by October we're going to miss a
 11 window. I mean, right now is the time, like the JSOST
 12 people did, did the update of their report and to have
 13 the opportunity, now, they have met with Dr. Lubchenco,
 14 they might have a chance to meet with the Secretary.
 15 You know, by the time you get into real-life 2010, the
 16 wheels are going to be turning, the cadences are going
 17 to be moving and your ability to really get traction
 18 isn't going to be as good as it is, as soon as
 19 possible. So whatever your work schedule is for
 20 dealing with this, my recommendation is that you plan
 21 for whenever your next meeting is to make your

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1 decisions and put it to bed and authorize your officers
 2 to take it in and start marketing it. Don't let it
 3 drag out.
 4 DR. JEFFRESS: I agree. I think the sooner
 5 we do this the better. And what I would really like to
 6 see is a document regularly every two years that's
 7 updated. So go for 2007, 2009, 2011, 2013, because,
 8 you know, the world is changing pretty quickly and you
 9 got to stay relevant and you got to stay on top of it.
 10 That's my opinion.
 11 MR. MYRTIDIS: Tom, I agree. And I think
 12 we can do that and I would really, I would, really
 13 would like for the panel to think, this suggestion. If
 14 you recall this is how came about with the initial
 15 recommendations. We were divided in small groups with
 16 a common interest and then we collated everything
 17 together because that gave people the opportunity to
 18 focus on one topic at a time versus looking at the
 19 entire report.
 20 MR. SKINNER: Right.
 21 MR. MYRTIDIS: So I think that will be

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1 helpful. I think we can assign ourselves, you know,
 2 based on expertise, if you like, to address one
 3 specific recommendation, and then correspond, have a
 4 meeting in September if that is to be and then have it
 5 published by October, like Jack is suggesting.
 6 MR. SKINNER: I think the, I think, Jack,
 7 your point about it really needs to be done by October
 8 refocuses the effort. So why don't we -- maybe we can
 9 do this by e-mail in terms of dividing up the chapters
 10 and thinking about a stakeholder section. And I think
 11 that just for the ease of logistics if we can do --
 12 Elaine, you usually an issue in September? Is it
 13 sooner? I forgot. I know we were talking about this
 14 last night.
 15 MS. DICKINSON: Oh, for a meeting?
 16 MR. SKINNER: For a meeting, is early
 17 better than later?
 18 MS. DICKINSON: Doesn't really matter.
 19 MR. SKINNER: Okay. So maybe if we can aim
 20 for September. We had discussed Chicago at one point.
 21 MR. MYRTIDIS: Why don't you want to

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1 consider Hawaii, for example? Jack told us how many
 2 wonderful things are there that NOAA is doing plus we
 3 have a cruise ship there every Saturday that I would
 4 like to invite you to check out. I mean, you can have
 5 the public portion of the meeting on a Friday or you
 6 can even go on a cruise, you know, for a few days and
 7 have the meetings onboard the Pride of America.
 8 VOICE: Does that depart from D.C.?
 9 (Laughter)
 10 MR. SKINNER: I think that's an excellent
 11 idea. All in favor?
 12 (Laughter)
 13 MR. PARSONS: Tom, just to throw into your
 14 equation, there's going to be some public interest
 15 drawn to the Great Lakes later this summer with the
 16 Fiftieth Anniversary of the Saint Lawrence Seaway.
 17 Also there have been some preliminary discussions
 18 already between the Great Lakes mapping community,
 19 including the Canadians and the U.S. about the
 20 development of a, let's call it a Lakes and Coastal
 21 Mapping Plan. And so while the plan will not be fully

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1 developed at that point, there will be discussions
 2 underway and perhaps that community certainly would
 3 like to participate in your discussions.
 4 MR. SKINNER: Thanks Roger.
 5 MR. WELCH: I think we ought to separate
 6 the meeting time and place from the port process and
 7 what I would suggest is that we take a short period of
 8 time, you know, a week, two weeks, and have all of us
 9 commit to looking at the recommendations of the report,
 10 none of the supporting text but the recommendations,
 11 and see if we're all comfortable with the
 12 recommendations as they stand or if anybody says wait a
 13 minute, I think recommendation two needs to be
 14 modified.
 15 Then once we have a conference call or an
 16 e-mail exchange or whatever, once we're clear on
 17 recommendations, then we can take each one
 18 sequentially, as Minas has suggested, and see if we
 19 have suggestions about the supporting text of it. I
 20 mean, we're, I'm sort of assuming that we'll say the
 21 recommendations are fine as they stand but really we

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1 ought to make sure we're all comfortable with that.
 2 MR. SKINNER: Yeah, I think you're probably
 3 right. I was mixing two things but I think we need to,
 4 we need to work on both. And, I would like to make
 5 sure we, I guess one of the reasons, I suppose we can
 6 divide up things today but I think it would be easier
 7 to do that by e-mail. And, as you say, people can go
 8 through the report again, read through it, have a
 9 better sense of which chapter they would like to work
 10 on and then start dividing things up.
 11 But, I don't, my sense is that when we have
 12 not, when we have left the meeting without some idea of
 13 when we're going to meet next we spend a lot of time
 14 that goes by before we focus on the next meeting again
 15 and there's time lost in terms of advertising for the
 16 hotel rates and whatever else has to be done for this.
 17 So, I think you're right, they are sort of separate
 18 procedures but they're both things that we need to at
 19 least somewhat pin down.
 20 MR. WELCH: I'm okay doing both today. I
 21 just thought one discussion ought to be independent of

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1 the other.
 2 MR. SKINNER: Dick?
 3 ADMIRAL WEST: Thinking back to the report
 4 again, I think we also would like to have input from
 5 NOAA folks because I know they have taken action on
 6 some of the things we've said, because that was three
 7 years ago, and we want to make sure that we reflect in
 8 there what we told them to do and they have done.
 9 Mike, you know, you can take a look. So, you know, it
 10 doesn't necessarily have to be their words but we got
 11 to make sure that what we've told them to do they are
 12 doing or are reflected in our report, that's been done
 13 or in process or making progress.
 14 I mean, I think PORTS is probably a good
 15 example where we, I mean, we started out the first damn
 16 meeting beating that one to death and I think we're
 17 making some nice progress. So the report when you
 18 update it should show that and recognize that NOAA and
 19 the federal system is responding. So I think we're
 20 going to have to ask, well, they're members of the
 21 board, I guess, so you should be part of this review

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1 process.
 2 MR. SKINNER: Yeah.
 3 ADMIRAL WEST: And I think we ought to use
 4 the stakeholders of reinforcement of what we said, you
 5 know, like the little, like you said, the little
 6 halo-box where so and so from Miami said this and
 7 whatever. Just a format suggestion.
 8 MR. SKINNER: Great. Thank you. Other
 9 comments? So, sort of as a roughed-out game plan --
 10 and feel free to jump in and help me here. The next
 11 two weeks panel members will be looking over the report
 12 again, jotting down some notes, what could be added,
 13 what's been done. I think it's -- and maybe, Admiral,
 14 I'm putting words in your mouth but it's important to
 15 recognize what's been accomplished as well as what is
 16 left to be done and what on the greater scheme of
 17 things has changed, what are some of the new emerging
 18 issues that still fit in with the Five Most Wanted but
 19 need to be mentioned and culled out in a revised
 20 report. And for just a regular conference call would
 21 we need, I think where we're dividing up a task that

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1 doesn't require public notice, does it, or is it -- I
 2 forget what the --
 3 MS. WATSON: That's an administrative
 4 process. Don't need the Federal Register notice to go
 5 out, no.
 6 MR. SKINNER: We don't need it, okay. So
 7 it would be relatively easy to coordinate this --
 8 relatively being the operative word -- either through
 9 e-mail or if we need to on a conference call. Does
 10 that sound like an okay, acceptable way to proceed?
 11 And, then we will look -- I don't think we actually
 12 voted on going on the American Norwegian Pride.
 13 CAPTAIN MYRTIDIS: What was that?
 14 MR. SKINNER: I think that was tabled or
 15 something happened.
 16 CAPTAIN MYRTIDIS: That's Pride of America,
 17 Mr. Chairman.
 18 MR. SKINNER: Okay. Thank you for that
 19 correction.
 20 CAPTAIN MYRTIDIS: And if you don't learn
 21 how to say it I don't think you're going.

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1 (Laughter)
 2 MR. SKINNER: I think realistically,
 3 however, as enticing an offer that is, that it's
 4 probably more realistic to think that we will be
 5 somewhere Continental side but I suppose that's -- boy,
 6 everyone's staring at me like I've got two heads.
 7 "What are you doing? I've already got my suntan
 8 lotion."
 9 (Laughter)
 10 MR. SKINNER: Mike?
 11 MR. SZABADOS: I think we have some time to
 12 pick the location. And why don't we reflect on, based
 13 on some requirements, you know, where best to hold the
 14 meeting next but where the constituency, where we want
 15 to reach out to and then probably pass that around
 16 through the e-mails and get recommendations in the next
 17 couple weeks.
 18 MR. SKINNER: I then go back to the fact
 19 that the meetings where we don't sort of say this is
 20 where we want to head to we lose two months, I think,
 21 and I just don't want to be in that position. I don't

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1 want to put the NOAA staff in the position of having to
 2 scramble to do all the due diligence that you have
 3 for a meeting like this. So I know it's difficult.
 4 Trust me, I'm feeling all of your pain right now. But,
 5 I think we need to sort of narrow it down and decide
 6 where we want to have this. And we had talked about I
 7 think at the last meeting going to Chicago. It's where
 8 the President is from. It is sort of the --
 9 MS. CHAPPELL: So is Hawaii.
 10 MR. SKINNER: So is Hawaii. Thank you,
 11 Ashley. You're making my job so much easier. He's
 12 also from Indonesia.
 13 (Laughter)
 14 MS. DICKINSON: It's a big port.
 15 MR. SKINNER: You're all enjoying this,
 16 aren't you? But, I would, I guess I would put out
 17 there that sometime in September that we try and do a
 18 meeting in Chicago. The question Jack asked, is there
 19 a larger port on the Great Lakes?
 20 MS. BROHL: I can answer that. Me, me, me,
 21 call on me.

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1 MR. SKINNER: All right. "The Answer
 2 Lady."
 3 MS. BROHL: Technically it's Duluth,
 4 Minnesota, is the largest port and probably like the
 5 tenth largest in the country. And, the caution about
 6 Chicago is that you don't necessarily get a lot of
 7 stakeholders there. Believe it or not, it's kind of
 8 whacky in terms of its maritime groups and people. The
 9 Coast Guard once held their annual Harbor Safety
 10 Conference there. I may have been the only person from
 11 the Great Lakes who attended that meeting, a sad but
 12 true thing.
 13 Now, if you want to do the Seaway thing,
 14 that's, their thing is July in Messina, New York. It's
 15 not really going to be in Chicago but Messina is where
 16 the big hoopla is going to be and that's in July.
 17 However, Ann Arbor, Michigan is where the IOOS folks
 18 are, where you have the Great Lakes Commission.
 19 Cleveland is where you have District 9 Coast Guard
 20 It's where you have the Lake Carriers Association,
 21 which is the domestic lake carrier guys. You also have

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1 the group I used to belong to, used to work for, the
 2 Great Lakes Shipping Association, has a lot of members
 3 there. You want to get vessel agents. You want to get
 4 operators.
 5 Chicago really isn't the home of pilots.
 6 It isn't the home of, it doesn't have a strong port
 7 authority presence. Chicago is a cool place, no doubt
 8 about it, but Cleveland, you're going to get actually
 9 more stakeholders, and if you went somewhere in the
 10 Upper Lakes you probably could, too, as well. I'm just
 11 saying that you would have more people if you go to
 12 either Ann Arbor if you want the IOOS types and the
 13 Great Lakes Commission type. Cleveland is where you're
 14 going to get a lot of actual stakeholders, I think.
 15 But Duluth is pretty, too.
 16 MR. SKINNER: Great. Thank you, Helen.
 17 Dick, did you have something --
 18 ADMIRAL WEST: Only that the Ocean
 19 Commission had a great public hearing at the Shedd
 20 Aquarium there in Chicago, that was pretty-well turned
 21 out, so, I mean, it's a different crowd but that's a

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1 place to have it.
 2 MR. DASSLER: We could probably all go to
 3 Hawaii.
 4 (Laughter)
 5 MR. SKINNER: Sense of the panel? What's
 6 that, going to Hawaii?
 7 MR DUNNIGAN: We're going to Hawaii.
 8 MR. SKINNER: What's that, Hawaii?
 9 MR. DUNNIGAN: So we're going to Hawaii.
 10 (Laughter)
 11 MR. SKINNER: So we're going to Hawaii and
 12 Jack's paying.
 13 MR. DUNNIGAN: Well, that's true.
 14 (Laughter)
 15 ADMIRAL WEST: There's not going to be a
 16 huge difference in cost.
 17 MR. SKINNER: What's that?
 18 ADMIRAL WEST: There's not going to be a
 19 huge difference in cost in going to Hawaii or Chicago.
 20 MR. DUNNIGAN: I just bought my wife a
 21 ticket to and from Hawaii for \$438.

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1 ADMIRAL WEST: For 465 you can fly from
 2 Providence to Washington, D.C.
 3 MR. SKINNER: Let the record state that I
 4 have been violently overruled.
 5 (Laughter)
 6 VOICE: I like the idea of the Great Lakes.
 7 I mean, really --
 8 MS. BROHL: Rock 'n Roll Hall of Fame.
 9 Come on.
 10 VOICE: Got the Indians.
 11 MR. SKINNER: All right. I'm getting mixed
 12 messages here. Larry?
 13 MR. WHITING: I have to coordinate a little
 14 bit of this with my wife, you know, if we're going to
 15 Hawaii.
 16 MR. SKINNER: I'm sure that will be our
 17 primary consideration here, Larry. Thank you for
 18 adding that to mix.
 19 (Laughter)
 20 MR. WELCH: I have a question.
 21 MR. SKINNER: Yes.

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1 MR. WELCH: We mentioned Thomas Jefferson.
 2 You know, when Thomas Jefferson sent Lewis and Clark
 3 out, he didn't ask for enough money to fund the entire
 4 thing. He said to his people, you know, "Once I got
 5 them out there, I can always tell Congress I have to
 6 have the money to get them back." So if we were going
 7 to Hawaii, if we went out the last week of September
 8 and extend it over to October, would we get stuck in
 9 Hawaii or not?
 10 VOICE: You don't want to do that.
 11 MR. DUNNIGAN: We don't want to do that.
 12 MR. SKINNER: Well, if you want to -- let's
 13 get a sense. How many panel members would prefer to go
 14 somewhere in the Great Lakes, either Duluth, Chicago or
 15 Cleveland?
 16 (No affirmative response)
 17 MR. SKINNER: Come on.
 18 (Laughter)
 19 VOICE: Raise your hand, Tom.
 20 ADMIRAL WEST: Jack, where would you prefer
 21 to have the panel if you had to pick --

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1 MR. DUNNIGAN: Well, I would prefer Great
 2 Lakes. But I do recognize where the chairman of my
 3 appropriations committee comes from. And not being
 4 there -- and let me tell you folks, I mean, the Pacific
 5 Islands are some of the most exciting places for the
 6 stuff that NOAA is doing right now, there no question
 7 about it, especially if you're worried about the real
 8 global implications of geospatial work and elevations.
 9 There's some very scary stuff on the horizon in some of
 10 those low-lying islands. So there's good reason to go
 11 to both places.

12 ADMIRAL WEST: You didn't answer my
 13 question.

14 MR. DUNNIGAN: Well, I did. I said if I
 15 had my choice, absolutely, I think we ought to go to
 16 Great Lakes. But there's a good case to be made for
 17 Hawaii and, like you say, it might not be that much
 18 more expensive. It's just every time you go to Hawaii
 19 it looks bad. You have no idea how much guff I took in
 20 the last two weeks about a ten-day trip to Hawaii that
 21 was all business, from my own staff, not Mary. Mary

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1 knows it was all business. That wasn't a problem.

2 MR. WELCH: Tom?

3 MR. SKINNER: Ed?

4 MR. WELCH: If we went to Hawaii in the
 5 spring and it coincided more or less with the
 6 Congressional spring break, there would be a chance --
 7 might not be a big chance -- of getting one of the
 8 Hawaii Congressmen or Senators to be involved.

9 MR. DUNNIGAN: The summer break.

10 MR. WELCH: But there certainly would not
 11 be at the end of the fiscal year, September or October.

12 MR. DUNNIGAN: August, right? August
 13 break. I mean, spring break was last week.

14 MR. WELCH: Yeah, I'm talking about next --
 15 a year from now, a year out.

16 MR. SKINNER: Ashley?

17 MS. CHAPPELL: Have you tabled the idea of
 18 two meetings, one in this fiscal year and one in the
 19 next fiscal year, just not immediately after the start
 20 of the year?

21 MR. SKINNER: I think that Jack's comment

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1 that this needs to be out by October has effectively, I
 2 don't see why we would need to meet after the rep
 3 came out until the following year until after January.

4 There's no reason to try and push one in. I think the
 5 reason to have two meetings was if we're going to try
 6 and cover both bases in the Pacific and the Great
 7 Lakes. I don't think that's possible by October --

8 MS. CHAPPELL: Right.

9 MR. SKINNER: -- just logistically. So, to
 10 answer your question, yes, I think we have eliminated
 11 it and we're doing one meeting between now and
 12 January -- between now and the end of December. So
 13 that is just, we just narrowed it down. And we may
 14 wind up just as Mike suggested, deciding it in a couple
 15 weeks though I think that that just sets us back a
 16 little bit. I guess, I don't know for a fact that it
 17 costs the same. I am concerned about how it looks. To
 18 some extent, though, I think that that works against a
 19 very important region that we're responsible for, to
 20 some extent. So I'm sort of torn. I think politically
 21 in some ways it just looks better if we're in the Great

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1 Lakes.

2 MR. WELLSLAGER: I think we need to go to
 3 the Great Lakes. I mean, Jack basically made a good
 4 statement, it would look better if we went there right
 5 now. Ed made a very good point, and that if we can
 6 time it for next year, spring break, there's a
 7 possibility we would have a political power that would
 8 be there in Hawaii that we can go and have and attend
 9 the meeting as well. Just, I think that's where we
 10 need to go, as much as I don't want to do it but I
 11 think that's probably the best logistic thing we should
 12 do right now.

13 MR. SKINNER: Sense of the panel, is there
 14 any other -- yeah.

15 DR. JEFFRESS: Yeah, I like Jack's idea of
 16 doing it this August during the summer break,
 17 congressional summer break in Hawaii to have political
 18 support there and invite someone from the Great Lakes
 19 to be on the panel.

20 MS. BROHL: That would be me you're talking
 21 about?

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1 DR. JEFFRESS: Yes.
 2 (Laughter)
 3 MR. SKINNER: Jon, were you going to say --
 4 MR. DASSLER: No.
 5 MR. SKINNER: Well, I think we've talked
 6 about this a fair amount. I would like to make sure
 7 that people can break a little bit. I'm not sure how
 8 much more we're going to get accomplished going back
 9 and forth. Can I just take of a straw poll about,
 10 let's put two on the table, either Hawaii in August or
 11 Great Lakes in September, and see which, who would
 12 prefer what, given the two.
 13 (The above was said off-microphone)
 14 MR. SKINNER: Oh, I'm sorry. You want me
 15 to say that all over again?
 16 (Laughter)
 17 STENOGRAPHER: You don't have to. That's
 18 all right. I got it.
 19 MR. SKINNER: All those who would prefer to
 20 meet in Hawaii in August, if we can -- and this is sort
 21 of subject to available funds and all the rest --

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1 please indicate so.
 2 (Hands raised)
 3 MR. SKINNER: One, two, three, four, five
 4 -- and those who prefer September in Chicago or Duluth
 5 or Cleveland.
 6 MS. WATSON: Does my vote count?
 7 (Laughter)
 8 MR. SKINNER: Looks like four and four.
 9 It's about the same.
 10 VOICE: Flip a coin.
 11 (Laughter)
 12 MR. SKINNER: Well, can we -- I think some
 13 of it would depend on whether, you know, how much it
 14 actually costs to do a trip to Hawaii. Would it be
 15 possible to --
 16 MS. WATSON: Cost comparison?
 17 MR. SKINNER: -- get some -- yeah. Is
 18 that easily obtainable?
 19 MS. WATSON: We can look at flight
 20 schedules and per diem.
 21 MR. SZABADOS: Just by e-mail next week

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1 maybe we can get all the members, the ones that are not
 2 here even. There are about five members not present.
 3 MR. SKINNER: Right. But I think that
 4 having, if we're not going to decide here then before
 5 we decide something by e-mail if we can get some more
 6 information on it, that I think would help make, help
 7 us make a decision.
 8 MS. WATSON: All right. I'll work on that.
 9 MR. SKINNER: Larry?
 10 MR. WHITING: Is the Congressional break is
 11 really bad for people that are involved in any type of
 12 politics around here? Because we have to be at where
 13 our Congressional people are at, not in Hawaii in
 14 August, so.
 15 MR. SKINNER: Gary?
 16 DR. JEFFRESS: Isn't our biggest political
 17 support the Senator from Hawaii? That's the whole
 18 point, to get him to come to our panel meeting, and
 19 another point is I don't know if it was the Governor or
 20 someone from the Hawaiian government was on TV this
 21 week, complained about there's absolutely no one going

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1 to Hawaii right now.
 2 MR. DUNNIGAN: Hotel bookings in Hawaii
 3 right now are down 18 percent from what they were last
 4 year.
 5 MR. GARY: Part of the Stimulus.
 6 MR. SKINNER: All right. I guess as much
 7 as I'd hope to come away --
 8 MR. DUNNIGAN: Down 17 percent in
 9 Cleveland.
 10 MR. SKINNER: -- from this meeting with some
 11 direction on where we're meeting and when, I think we
 12 will have to defer this for a week or so, hopefully,
 13 and if it's okay, try and get some ballpark figures on
 14 the relative costs of --
 15 MS. WATSON: Okay.
 16 MR. SKINNER: -- Great Lakes versus Hawaii.
 17 I'm sorry to have taken so long on this. This seems
 18 like a fair amount of time to spend but I think that I
 19 want to make sure that we really had spent some time on
 20 the geographical aspects of what our committee is
 21 looking at and I think that it makes it actually

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1 slightly more difficult where we have to choose between
 2 one area over the other rather than trying to do both
 3 of them. But I think Jack's point is well taken,
 4 time's a-wastin' and we got to be fairly quick with
 5 getting out a revised report. So, thank you for
 6 putting up with this discussion. Dick, did you have
 7 your hand up or did you want to say something?
 8 ADMIRAL WEST: (Shaking head from
 9 side-to-side)
 10 MR. SKINNER: No, okay. With that, is
 11 everyone clear on what's going on? We've sort of got
 12 three things, where there will be a letter circulated
 13 for the recommendations from this meeting. And I'm in
 14 charge of getting that out. There will be a couple of
 15 other revisions made to the strategic notes from the
 16 Tampa meeting and those will be online.
 17 Is that the best way to do it, I think, and
 18 people can print them. I think if all the panel
 19 members take that on as their own responsibility and
 20 have that as part of your working documents for this
 21 group, and third is to go through the HSRP, start

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1 looking at where you think some changes should be made
 2 and focusing on what chapter you would like to work on,
 3 and fourth, be prepared for some e-mail traffic in
 4 about a week, hopefully, to decide on the location of
 5 the next meeting. Sound okay? We haven't had a vote
 6 at this meeting. You like that. Okay. Well, actually
 7 we can have one now. Is there a motion to -- is there
 8 any further -- Jack?
 9 MS. DICKINSON: We voted on the minutes.
 10 MR. SKINNER: Oh, that's right. Thank you.
 11 MR. DUNNIGAN: Yeah, just quickly. For my
 12 earlier discussion I didn't realize that we had
 13 actually gotten this into your packets. So that's what
 14 this paper is all about, it's the first two-pager
 15 coming out on the question of the future of mapping.
 16 And I assumed everybody knows Steve Austin, who is down
 17 here at the corner of the table, but Steve's basically
 18 the director of all programming for NOAA. So I'm glad
 19 you were here for this discussion. Thank you very
 20 much. It's very helpful.
 21 MR. AUSTIN: I've taken notes.

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1 MR. DUNNIGAN: Thank you. I hope you are
 2 --
 3 MR. SKINNER: Yeah, we're going to
 4 Cleveland.
 5 (Laughter)
 6 MR. DUNNIGAN: Programming, not budgeting.
 7 MR. SKINNER: Oh. Well, then we're going
 8 to Indonesia.
 9 (Laughter)
 10 MR. SKINNER: Any final comments?
 11 ADMIRAL WEST: Dates are more important
 12 than places at this point.
 13 MR. DUNNIGAN: Yeah.
 14 MR. SKINNER: Okay. Well, I think we'll
 15 try and work as quickly as we can on both. Anything
 16 else?
 17 (No affirmative response)
 18 MR. SKINNER: Is there a motion to adjourn?
 19 PARTICIPANT: So moved.
 20 MR. SKINNER: Second?
 21 PARTICIPANT: Second.

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1 MR. SKINNER: Any discussion?
 2 (No affirmative response)
 3 MR. SKINNER: All in favor?
 4 PARTICIPANTS: Aye.
 5 MR. SKINNER: Any opposed?
 6 (No affirmative response)
 7 MR. SKINNER: Any abstentions?
 8 (No affirmative response)
 9 MR. SKINNER: Great. Thank you all very
 10 much for a productive meeting and see you somewhere,
 11 sometime in the near future.
 12 (Meeting adjourned at 2:43 p.m.)
 13
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 21

1 State of Maryland.
2 Baltimore County, to wit:
3 I, ROBERT A. SHOCKET, a Notary Public of
4 the State of Maryland, County of Baltimore, do hereby
5 certify that the within-named witness personally
6 appeared before me at the time and place herein set
7 out.

8 I further certify that the proceedings were
9 recorded stenographically by me and this transcript is
10 a true record of the proceedings.

11 I further certify that I am not of counsel
12 to any of the parties, nor in any way interested in the
13 outcome of this action.

14 As witness my hand and notarial seal this
15 29th day of April, 2009.

16

17

18 _____
19 Robert A. Shocket

20 Notary Public

21 My Commission Expires:

22 November 1, 2010

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