

U.S. DEPARTMENT OF COMMERCE
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NATIONAL OCEANIC AND ATMOSPHERIC
ADMINISTRATION (NOAA)
+ + + + +
HYDROGRAPHIC SERVICES REVIEW PANEL
MEETING

+ + + + +
TUESDAY
MAY 22, 2012
+ + + + +

The Panel met in the Aleutian
Conference Room in the Hilton Anchorage, 500
West Third Avenue, Anchorage, Alaska, at 8:30
a.m., Matt Wellslager, HSRP Chair, presiding.
PANEL MEMBERS PRESENT:

MATT WELLSLAGER, Chair
SCOTT PERKINS, Vice Chair
RADM KEN BARBOR
LAWSON BRIGHAM, Ph.D.
JEFFREY CAROTHERS
CAPT. DEBORAH DEMPSEY
MICHELE DIONNE, Ph.D.

RADM EVELYN FIELDS
WILLIAM HANSON
DAVID JAY, Ph.D.
GARY JEFFRESS, Ph.D.
FRANK KUDRNA, Ph.D.
JOYCE MILLER

NON-VOTING MEMBERS PRESENT:

JULIANA BLACKWELL, NOAA/NGS Director
RICHARD EDWING, NOAA/CO-OPS Director
LARRY MAYER, Center for Coastal and Ocean
Mapping, University of New Hampshire

NOAA STAFF PRESENT:

CAPT. JOHN E. LOWELL, JR., Designated
Federal Official
HOLLY BAMFORD, Ph.D., NOAA/NOS Assistant
Administrator
LTJG MATT FORNEY, NOAA/OCS, Navigation Manager
of Alaska
CAPT. GERD GLANG, NOAA/NOS
KATHRYN D. SULLIVAN, Ph.D., Assistant
Secretary of Commerce for Environmental
Observation & Prediction, Deputy
Administrator and Acting Chief Scientist,
NOAA
KATHY WATSON, HSRP Program Coordinator

ALSO PRESENT:

ALAN BALDIVIES, Alaska Energy Authority
LARRY BISCHOFF, Holland American Line

BILL CREGER, David Evans & Associates
JOEL CUSICK, National Park Service
JON DASLER, David Evans & Associates
KAS EBRAHIM, Fugro Consultants
SHANNON EARL, Fugro Consultants
JOHN GERHARD, Woolpert, Inc.
PENELOPE GOFORTH, SeaCat Explorations

STUART GREYDANUS, Port of Anchorage
BILL HAZELTON, University of Alaska Anchorage
THE HONORABLE BOB HERRON, Representative,
Alaska State Legislature, House District 38
BRITTENY HOWELL
MICHELE JACOBI, Office of Response &
Restoration, Arctic ERMA

THE HONORABLE REGGIE JOULE, Representative,
Alaska State Legislature, House District 40
& Chair, ANWTF

COLLEEN KEANE, Pacific Environment

TOM LAKOSH, Public Interest Advocate for Oil
Spill Prevention and Mitigation and
Renewable Energy

CELESTE LEROUX

CAROL LOCKHART, Woolpert, Inc.

MOLLY McCAMMON, AOOS

STEVE MILES, David Evans & Associates

SANDRA MOLLER, Alaska Energy Authority

TOM NEWMAN, TerraSond

JOHN OSWALD, JOA Surveys

ED PAGE, Marine Exchange of Alaska

BOB PAWLOWSKI, Office of State Senator Kevin
Meyer and University of Alaska Anchorage

MICHELLE RIDGWAY, Oceanus Alaska and Alaska
Deep Ocean Science Institute

MARK SMITH, Vitus Marina

CAPT. MICHAEL TERMINEL, Edison Chouest

SCHAWNA THOMA, Office of Senator Mark Begich

THE HONORABLE MEAD TREADWELL, Lieutenant
Governor of the State of Alaska

LARRY WHITNEY

KYLE ZENCEY, Office of Senator Mark Begich

MIKE ZIEGERL, JOA Surveys

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

2 8:20 a.m.

3 CHAIR WELLSLAGER: Good morning.

4 Welcome to Anchorage. Nice to see some
5 familiar faces. Good to see some new faces
6 here as well. My name is Matt Wellslager.
7 I'm the chair of the Hydrographic Surveys
8 Review Panel. Scott Perkins, to my left, is
9 the vice chair. We have some administrative
10 things that we need to -- oh cool. All right.
11 Thank you.

12 Microphone 101, if you press the
13 speak to talk, it stays on until you depress
14 it, and it turns it off. Okay. As the HSRP,
15 we are authorized to have two meetings a year
16 with the emerging awareness of the need for
17 navigational services in the Arctic.

18 The panel discussed possible
19 locations for this meeting when we were
20 meeting in Norfolk, Virginia, with the
21 consultation of our Designated Federal
22 Official, Captain Lowell. The decision was

1 made to have the meeting here in Anchorage,
2 Alaska.

3 At this meeting, we're very
4 fortunate to have with us members from NOAA
5 administration, Drs. Kathy Sullivan, the
6 Assistant Secretary for Commerce for the
7 Environment, Observations and Prediction and
8 Deputy Administrator and Acting Chief
9 Scientist for NOAA; Dr. Holly Bamford, the
10 NOAA, I'm sorry, the National Ocean Service
11 Deputy Assistant Administrator; Melissa
12 Mountcastle, our NOAA representative for Human
13 Resources, who will help with the swearing in
14 of our new members; and I have a little bit of
15 a melancholy feeling as well, because this
16 will be the last HSRP meeting for Captain
17 Lowell, our DFO.

18 He is in the process of
19 transitioning, which was a new term that I
20 learned yesterday, into the private sector,
21 which will be started, I think, June 1st.
22 I've had the pleasure of working for Captain

1 Lowell for three years an HSRP member, and
2 with his retirement, there will be a
3 transition for a new DFO to take the place.
4 We'd like to thank you for a job well done,
5 Captain Lowell.

6 CAPT LOWELL: Thank you.

7 (Applause.)

8 CHAIR WELLSLAGER: In addition, we
9 have a court reporter who likes for us to
10 speak one at a time, with a little red light
11 on, so she can understand what we're saying.
12 You don't have to speak very slow or very
13 fast; just make it work.

14 The public people have to speak,
15 I'm sorry, the microphones that they can work
16 with as well. So please be sure to as you
17 address the audience or the panel, to have the
18 red light on.

19 One last bit of protocol.
20 Everybody has a blue folder, yes? If you look
21 inside that blue folder, you will see some
22 paper work, and lo and behold, on this paper

1 work there is some yellow, little yellow
2 marks. The little yellow marks are
3 significant. You want to fill those in with
4 whatever needs to be done in those spots,
5 because that's what you have to then give to
6 Kathy, so the paperwork is complete.

7 This one, Michelle. Very good.
8 She's to your left, three doors down. Captain
9 Lowell, would you like to address the
10 audience?

11 CAPT LOWELL: Not so much an
12 address. Just a few logistic things, as we
13 always do. If anybody didn't notice the door
14 right behind us, I actually don't know where
15 the heads are. Kathy?

16 MS. WATSON: Downstairs and just to
17 the right, just right down the steps here.
18 It's very easy.

19 CAPT LOWELL: Everybody is to have
20 breakfast. I hope everybody enjoyed it. I
21 think we have lunch coming in. Kathy, I'm
22 looking for confirmation. Lunch we catered

1 also for everybody here, so we would ask all
2 the members to not kind of wander off for an
3 hour and a half, to keep it on schedule and
4 moving.

5 Matt's already talked about the
6 microphone, speak slowly and clearly. One
7 quick note on acronyms. The court reporter
8 will struggle with them, so if you can, spell
9 them out the first time if you remember, and
10 if not, no matter. I will try to remind you
11 to spell out the acronym.

12 A couple of other reminders for
13 the old panel members and perhaps a quick
14 introduction for the new panel members. This
15 HSRP, the Hydrographics Services Review Panel,
16 is a federal advisory committee. It is
17 specifically authorized to advise and provide
18 recommendations to the NOAA Undersecretary
19 specifically on topics involving navigational
20 products and services.

21 The HSRP consists of 15 voting
22 members, 13 of which are here at the meeting.

1 We also have four non-voting members, yes,
2 four, of which three are at the meeting, and
3 I don't know if Larry Mayer has met everyone
4 here. He has been kind of a cloud floating
5 around, certainly for the last several years.

6 MR. MAYER: I've been called many
7 things in my time, but --

8 (Laughter.)

9 CAPT LOWELL: It's either Andy or
10 Larry who typically attend one at a time, but
11 they're both officially non-voting members of
12 the panel, including Juliana Blackwell, of
13 course, the Director of NGS, and Rich Edwing,
14 the Director of CO-OPS.

15 I am not a non-voting member. I
16 am actually the DFO, the Designated Federal
17 Official. So you can all talk around me. I
18 have nothing to say.

19 The HSRP is actually mandated to
20 meet biannually, two meetings per year, as
21 Matt said. We typically vote on where the
22 next meeting will be at the next one. I would

1 like to just note for everybody that if you're
2 not aware, that we are operating in somewhat
3 of a challenging fiscal environment, and so
4 perhaps that's something you should be
5 thinking about as we schedule our meetings
6 out. Just keep that in mind.

7 HSRP meetings are public and open
8 to the general public. All meeting notes are
9 taken and all discussions will be posted on
10 the website post-meeting. So please, there
11 are certain words we don't want to use, and
12 just remember that everything will be recorded
13 and made publicly available.

14 These meetings that the HSRP has
15 had are typically done in a panel format.
16 We'll bring in people to talk about area of
17 interest to the panel. There will be Q&As
18 with the speakers that the panel members will
19 engage with.

20 Hopefully, that will help set
21 things in your mind for either the
22 recommendations or the directions you want to

1 take this panel, to build out the knowledge,
2 to provide more in-depth analysis to the
3 Administrator of NOAA.

4 If you haven't looked at the
5 agenda, we have a full three days. Today is
6 actually broken out with a short field trip,
7 for a little hands-on experience down at the
8 Port of Anchorage.

9 So I would advise everyone to
10 dress somewhat more casually this afternoon.
11 Do we have time -- okay, we have a little bit
12 of time to change, and I imagine we'll go over
13 the logistics for that meetings as we get
14 closer.

15 Okay, with that said, I'll hand it
16 back to Matt, and welcome y'all here for the
17 meeting.

18 CHAIR WELLSLAGER: Thank you,
19 Captain Lowell. One other thing, two other
20 things actually, one of which, if some of you
21 look behind you, others of you look in front,
22 this is the first time I can recall having an

1 art display of landscapes presented to us at
2 these meetings.

3 These images are displayed on the
4 wall are a selection from the exhibit "Coastal
5 Impressions: A Journey Along Alaska's Gulf
6 Coast," sponsored by the Cook Inlet Regional
7 Citizens Advisory Council or RCAC, I guess,
8 and developed in partnership with NOAA Alaska
9 Fisheries Science Center, A-U-K-E, Auke Bay?
10 Auke Bay Laboratories, in the Alaskan Shore
11 Zone Partnership. The photographs were
12 selected from thousands of digital images
13 obtained from Shore Zone surveys, and reflect
14 the diverse, dynamic and often rugged, remote
15 land/sea margins.

16 The Alaska Shore Zone Program was
17 initiated by Cook Inlet RCAC in 2001, and
18 surveys in Cook Inlet and the Kenai Peninsula
19 have since developed into a partnership of
20 over 40 organizations with data and imagery
21 from over 40,000 kilometers of Alaska's coast,
22 now administered and served online by NOAA.

1 The goal is to develop an
2 inventory of biological and geological
3 habitats of the entire Alaskan coast. So this
4 is a daunting task, but it's amazing seeing
5 what we've got here. In the process, an
6 incredible archive of high-resolution digital
7 video and imagery has been developed, and this
8 exhibit is intended to share the diverse
9 natural history and spectacular scenery of
10 Alaska's often remote and inaccessible coast.

11 All imagery and data from the
12 Alaska Shore Zone Program are available to the
13 public for non-commercial use and are
14 accessible online. A flyer with contact
15 information is in the back here. So if you
16 get an opportunity during the break to look at
17 these, it's really quite amazing. There's
18 beautiful imagery and a lot of diversity in
19 the coastline of Alaska.

20 The second thing, many of know
21 each other but a lot of us don't. So at this
22 time, I would like to ask the HSRP panel

1 members to take a minute to introduce
2 themselves to the panel, what their expertise
3 are in the field, and we can all get a better
4 understanding of who we are and what it is
5 that we have to offer to the HSRP panel that
6 way. Dr. Jay, would you mind starting?

7 MEMBER JAY: I'm David Jay from
8 Portland State University. I guess my
9 expertise, the reason I'm here is mainly has
10 to do with tides and water level analysis, and
11 I also do work closely with the Port of
12 Portland.

13 MEMBER KUDRNA: Hi. I'm Frank
14 Kudrna. I'll be a new panel member, I guess,
15 shortly from Chicago. I previously sat on two
16 federal advisory committees, the Sea Grant
17 Federal Advisory Committee and the Science
18 Advisory Board for the Administrator.

19 I'm a civil engineer, hydrologist.
20 Ran my own practice for about 25 years, and we
21 recently merged with URS Corporation. One of
22 the titles I wear is the Chief Engineer of the

1 Port of Chicago. Thank you.

2 MEMBER MILLER: I'm Joyce Miller.
3 I am currently Director of Sea Floor Data
4 Services at the University of Hawaii. I'm a
5 certified hydrographer and am still doing
6 hands-on multibeam mapping, and I've been in
7 the business for about 35 years.

8 MEMBER BARBOR: I'm Ken Barbor.
9 I'm the Director of the Hydrographic Science
10 Research Center at the university of Southern
11 Mississippi. I'm a career naval officer. My
12 last tour in the Navy was as Commander of the
13 Naval Meteorology and Oceanography Command,
14 which runs the Navy's hydrographic,
15 oceanographic and meteorological programs.

16 I'm a previous Director of the
17 International Hydrographic Bureau in Monaco.

18 MEMBER JEFFRESS: Hi. I'm Gary
19 Jeffress. I'm educated in Australia. I'm a
20 United States citizen since 2003. I'm a
21 Professor of Geographic Information Science at
22 Texas A&M University Corpus Christi, and

1 Director of the Conrad Blucher Institute for
2 Surveying and Science, an endowed institute
3 which has established a tide gauge network for
4 Texas in cooperation with the CO-OPS, and
5 we've also established a Texas Spatial
6 Reference Center, in cooperation with NGS.

7 MEMBER BRIGHAM: Good morning.

8 I'm Lawson Brigham. I'm a Professor at the
9 University of Alaska Fairbanks. I was a
10 career Coast Guard officer involved in Polar
11 Operations, and on the panel here I'm working
12 on Arctic emerging issues.

13 CAPT GLANG: Good morning.

14 Captain Gerd Glang, NOAA. Currently, I'm
15 National Ocean Service on staff with Dr.
16 Bamford, or for Dr. Bamford and for David
17 Kennedy, engaged in strategic planning.

18 DR. BAMFORD: Good morning. Holly
19 Bamford with NOAA's Ocean Service, and my
20 background's in physical oceanography and
21 organic chemistry. But in our portfolio at
22 the Ocean Service, it deals with the

1 navigational services, special places like
2 sanctuaries, as well as coastal management.

3 DR. SULLIVAN: Good morning, Kathy
4 Sullivan, Assistant Secretary and Deputy
5 Administrator at NOAA. My portfolio includes
6 everything having to do with environmental
7 observation and prediction. So our ship-based
8 assets, aircrafts, spacecraft, gauges, buoys
9 and so on. My own background is academic
10 preparation in Marine Geology and Geophysics.
11 15 years with NASA; 18 years as a young
12 Reserve officer under Admiral Barbor's former
13 command, and just rejoined NOAA a bit over a
14 year ago.

15 CAPT LOWELL: John Lowell,
16 Designated Federal Official. Thank you.

17 CHAIR WELLSLAGER: Matt
18 Wellslager, Chair of the HSRP. I am the chief
19 of the South Carolina Geodetic Survey and the
20 geodetic advisor for the State of South
21 Carolina. Thank you.

22 VICE CHAIR PERKINS: Scott

1 Perkins. I am president of T-Kartor USA. I'm
2 a photogrammetrist by profession, cartographer
3 by trade. Expertise with shoreline mapping
4 for NGS and NOAA and shallow water
5 hydrographic surveys on inland waterways,
6 Illinois waterway and Mississippi River
7 waterways.

8 MS. BLACKWELL: I have no red
9 light, but can you hear me? Okay. I'm
10 Juliana Blackwell, Director of the National
11 Geodetic Survey or NGS, and my portfolio
12 includes geodesy and remote sensing, and the
13 mission of the National Geodetic Survey to
14 provide the National Spatial Reference System
15 to the nation.

16 MR. EDWING: Rich Edwing, Director
17 of the Center for Operational Oceanographic
18 Products and Services. We do tides, currents
19 and water levels along the coastal U.S.,
20 including the Great Lakes.

21 LT. FORNEY: Matt Forney. I'm the
22 NOAA's Office of Coast Survey, and I'm the

1 Navigation Manager of Alaska.

2 MEMBER CAROTHERS: Morning, this
3 is Jeff Carothers. I'm with the Pacific
4 Branch of Fugro Consultants. My background is
5 in oceanography and starting the business of
6 hydrographic surveying and high resolution
7 geophysical surveys in the late `70s.

8 MEMBER FIELDS: Good morning. I'm
9 Evelyn Fields. My background has been with
10 NOAA. I started with the hydrographic surveys
11 and spent most of my career doing hydrographic
12 surveying with NOAA. That's about it.

13 MEMBER HANSON: I'm Bill Hanson
14 with Great Lakes Dredge and Dock Company based
15 out of Chicago. We're the largest dredging
16 company in the U.S. and we also work
17 internationally. Our interest is in coastal
18 protection and seaport development.

19 I also sit on the Board of the
20 Ocean Engineering Program at Texas A&M, and so
21 we have an interest in advocacy for the
22 academic side of what we do, and also on the

1 commercial side. I'd like to see if we can
2 get that Port of Chicago working again.

3 MEMBER DEMPSEY: Deborah Dempsey.

4 I'm a seagoing person. Graduated from Maine
5 Maritime Academy in '76. 18 years of sailing
6 worldwide with Lykes Lines, and I've been a
7 pilot on the Columbia River bar for the past
8 18 years, and I understand I have some, not
9 shoes but big boots to fill, from Sherry
10 Hickman.

11 MEMBER DIONNE: Michele Dionne.

12 I'm an ecologist with the National Estuarine
13 Research Reserve System, which is a system of
14 28 reserves around the country, which are
15 state-federal partnerships with NOAA, and we
16 focus heavily on the connections between the
17 estuaries in the Gulf of Maine and the coastal
18 waters in the Gulf of Maine, especially when
19 it comes to food webs, and we think of fish as
20 the apex predators. Also birds are also
21 important, but my background is in fish.
22 That's what we study, fish, and we're also

1 very involved in local and national advisory
2 committees when it comes to determining how
3 coastal habitats will respond to changes in
4 patterns of inundation due to climate change.

5 MR. MAYER: I'm Larry Mayer. I'm
6 the Director of the Center for Coastal and
7 Ocean Mapping, CCOM at the University of New
8 Hampshire, and I'm also the co-director of the
9 Joint Hydrographic Center, the NOAA-UNH Joint
10 Hydrographic Center at the University of New
11 Hampshire, and it's in that capacity, as
12 Captain Lowell mentioned, that I'm sitting
13 here.

14 My background is Marine Geology
15 and Geophysics, and I think I've been doing
16 multibeam mapping probably as long as Joyce.
17 I guess particularly relevant for this meeting
18 is the work we've been doing north of Alaska
19 in the Arctic, mapping in support of potential
20 submission under Article 76 of the Law of the
21 Sea Convention.

22 MS. WATSON: Kathy Watson, HSRP

1 Program Coordinator.

2 COURT REPORTER: Hi. My name is
3 Kayla Gamin, and I'm your court reporter and
4 transcriber today. Some of you may remember
5 me from Hawaii.

6 CHAIR WELLSLAGER: Okay. Well,
7 thank you very much. Welcome everybody. We
8 have some very important business to take care
9 of right now. Our new members need to have
10 their official oath of office delivered and
11 would Dr. Sullivan be so kind as to do that
12 for us?

13 DR. SULLIVAN: All right. I'm
14 going to ask in a moment the new members to
15 stand. The full oath is here. You don't have
16 to be staring at the screen as we do this.
17 We'll go through it sentence by sentence and
18 ask you to repeat it.

19 You may in the first sentence use
20 either swear or affirm as you wish, and at the
21 closing, if you wish to not add in "so help
22 God", that is your prerogative as well. So if

1 I could ask all the new members please to
2 stand and raise their right hands. Repeat
3 after me.

4 (Whereupon, Admiral Barbor, Capt.
5 Dempsey, Admiral Fields, and Dr. Kudrna were
6 sworn in as members of the HSRP.)

7 DR. SULLIVAN: Thank you, and
8 welcome to the HSRP.

9 (Applause.)

10 CHAIR WELLSLAGER: We're also very
11 fortunate to have Dr. Sullivan address some
12 issues for us with regards to positioning for
13 America and the future, and Arctic Annex I and
14 II.

15 Dr. Sullivan plays a critical role
16 in directing administration of NOAA priority
17 work in the areas of weather, water services,
18 climate science and services, integrated
19 mapping services and earth observation
20 capabilities.

21 She provides agency-wide direction
22 with regard to satellites, space, weather,

1 water, ocean observations and forecasts, to
2 best serve American communities and
3 businesses. As deputy administrator she
4 oversees smooth operation of the agency.
5 She's the only person I know who has had the
6 opportunity to experience weightlessness in
7 both space and in the ocean.

8 So it's indeed a pleasure to be
9 able to have you here addressing us with this
10 meeting. Thank you very much.

11 DR. SULLIVAN: Thank you, Matt,
12 for that kind introduction. You know, the
13 astronaut background really does help a lot.
14 In Alaska, you come up and have a day like
15 yesterday, where at some moments you're seeing
16 all the grand volcanoes at the Alaska
17 Peninsula, and at other moments you're wishing
18 you could see the mountain for real.

19 But when you've gone over it 300
20 nautical miles and seen the entire Alaska
21 range above all the low cloud, that image sort
22 of sticks in your mind, and there are not too

1 many ground based views that you need to covet
2 after that one.

3 Well, Dr. Lubchenco, the
4 Administrator of NOAA, sends her regrets. She
5 wishes very much that she was able to attend
6 this meeting and asked me to personally pass
7 on her welcome to you all and her appreciation
8 for the work that you do.

9 With the formalities of the oath
10 of office out of the way, I congratulate again
11 all the new members of the panel. We're
12 delighted to have you on board. We welcome
13 and tremendously value the knowledge and
14 professional expertise that you represent, all
15 of you on the HSRP, and in particular the new
16 members joining today who really complement
17 the prior group in terms of both geographic
18 diversity and professional diversity.

19 We thank you very much for your
20 willingness to serve NOAA on this panel, and
21 I very much appreciate the chance to be here
22 as you join the fray.

1 I urge you, with your fellow panel
2 members to be forward-thinking and strategic
3 in your analyses of our programs in this area.
4 Your input and advice to the administrator can
5 absolutely help NOAA improve the quality,
6 efficiency and utility of our navigation-
7 related products, services and information.

8 I hope you make the tremendous
9 can-do spirit and pragmatism that's the
10 hallmark of this great state a hallmark of
11 your tenures on the HSRP. So with everyone
12 now duly installed, let's get down to the
13 business at hand.

14 Chairman Wellslager, members of
15 the panel, Lieutenant Governor Treadwell,
16 other special guests, colleagues and members
17 of the Anchorage and Alaska community that are
18 with us today, it's my pleasure and honor to
19 provide some opening remarks, to launch us on
20 the work of this week.

21 I'm really tremendously pleased to
22 be back in Alaska. It's been about ten years

1 since I was last here with the Pew Oceans
2 Commission. We got down to the Prince William
3 Sound side of the peninsula that day, and
4 yesterday we had a fabulous opportunity to get
5 down to the Kenai side, the Homer Bay side and
6 the Kachemak Bay side.

7 Once again, really drinking in the
8 stunning natural beauty of the entire
9 Anchorage-Kenai area, and connecting that this
10 time with the tremendous work that so many
11 groups within NOAA do with so many state,
12 tribal, local and other federal partners, to
13 advice science service and stewardship in this
14 region.

15 Every time I'm here, I'm impressed
16 with the knowledge, the multiple talents and
17 the "just do it" spirit that gets things done
18 in Alaska, and I was very much filled with
19 pride yesterday to see so many vivid examples
20 of how much NOAA does in this state, and how
21 all that work matters so directly and so
22 centrally to the lives and livelihoods of

1 Alaskans.

2 Every member of the Hydrographic
3 Services Review Panel comes from a profession
4 and a region in which they live this truth,
5 that NOAA's science service and stewardship
6 underpins lives and livelihoods in our coastal
7 communities in many vital ways. I hope the
8 deep import of this point pervades the work of
9 this panel for the entire week.

10 So I've already thanked the new
11 members. Let me now also extend my thanks to
12 them as well. Also, to the team that
13 organized this meeting and all of the
14 arrangements that let us work so effectively
15 this week, our heartfelt thanks for what we
16 know is a tough challenge.

17 I would be remiss if I didn't add
18 my personal thanks to several of the NOAA
19 Alaska-based staff, in particular Matt Forney,
20 our Navigation manager, who you just met; Amy
21 Holman, who's in the back of the room here,
22 our regional coordinator; and Kris Holderied,

1 who's not with us here. She's down in Homer,
2 where she works as the key liaison for the
3 Kasitsna Bay Lab.

4 Thank you all for your great
5 support for this region and your ongoing work
6 in the state and in the region. Lastly, I
7 would ask you to join me in also recognizing
8 the fine work of John Lowell. As has been
9 said, he'll be retiring. We'll see if he can
10 pass the retirement test. Many of us have our
11 suspicions about how he'll grade out on that.

12 But we will be losing him from the
13 uniform and losing him from NOAA's direct
14 service. His very, very many years of work in
15 this field and for this agency, culminating in
16 his work as Director of Office of Coast Survey
17 and the Designated Federal Official for this
18 panel, have been exemplary and tremendously
19 productive and very, very much appreciated.

20 So John, my personal thanks on
21 behalf of the Administrator and all of your
22 colleagues at NOAA. Thank you very much for

1 a tremendous body of work, service well-
2 rendered and a job very well done.

3 (Applause.)

4 DR. SULLIVAN: Well, as I don't
5 need to tell anyone in this room, maritime
6 commerce has been a critical piece of the
7 American economy since our earliest colonial
8 days.

9 In fact, NOAA traces its roots
10 fairly close to those days, to the year 1807,
11 when President Thomas Jefferson established
12 the Survey of the Coast to chart a new
13 nation's coastlines.

14 Now, more than two centuries
15 later, NOAA is still relied upon to provide
16 navigation products and services that ensure
17 safe and efficient maritime commerce. Today,
18 over 95 percent of our foreign trade enters or
19 leaves the United States by ship, generating
20 over 13 million jobs and more than \$1 trillion
21 in economic benefits.

22 No other transportation system,

1 air, rail or road, comes close to moving as
2 much cargo or generating as many economic
3 benefits as America's ports and waterways. In
4 today's challenging times, the importance of
5 the United States marine transportation system
6 simply cannot be overstated.

7 NOAA's Navigation Services Office,
8 consisting of the Coast Survey, the Geodetic
9 Survey and the Center for Operational
10 Oceanographic Services or CO-OPS, these
11 constitute one vitally important part of this
12 overall system, providing the informational
13 infrastructure that is so critical to safe and
14 efficient maritime commerce and a strong
15 United States economy.

16 These programs also serve coastal
17 communities in a number of other ways,
18 simulating sea level effects on coastlines,
19 selecting alternative energy sites, informing
20 and identifying geological hazards, informing
21 local, state and regional planning efforts.

22 It is no exaggeration to say that

1 NOAA is quite literally positioning America
2 for the future through these works. That
3 future will inevitably bring great challenges.
4 It will also provide grand opportunities.
5 There's an old adage that the first step to
6 getting to somewhere important is to know
7 where you are, and that's really what we are
8 all about.

9 When planning for or positioning
10 for the future, it's important to understand
11 where we are as well as the conditions we will
12 face along the way. All around us, we can
13 front everyday challenges to living and
14 thriving on this very dynamic planet.

15 At NOAA, it's our job to observe,
16 study and understand how this planet works,
17 and more importantly it's our job, it's in
18 fact our core mission, our central function
19 and our highest purpose, to transform that
20 understanding into actionable information,
21 something each of us can use to inform the
22 decisions and plans that we make every day.

1 All across this country, 24 hours
2 a day, the men and women at NOAA provide and
3 update services, information tools if you
4 will, in the form of forecasts and
5 predictions, maps, models, charts, graphs and
6 a variety of other products and services.

7 From observations to survey and
8 charting technology, accurate positioning and
9 real time data for emergency response or
10 stakeholder interventions, these offices work
11 every single day to make marine navigation and
12 transportation safer, more efficient and more
13 environmentally sound.

14 This supports not only the
15 navigation community but also the health of
16 coastal ecosystems, and hence the long-term
17 vitality of coastal communities. Overall,
18 NOAA's mission of science, service and
19 stewardship is reflected in these offices as
20 we work to position America for the future.

21 Looking over the agenda for our
22 week, it is great to see that so much time

1 will be dedicated to gathering input from
2 those who rely upon and support the
3 positioning and navigation services that help
4 us advance.

5 NOAA appreciates your attention to
6 ensuring that our services are not only of
7 superior quality, but also relevant, practical
8 and useful in the real world. There are
9 plenty of dramatic examples that show the need
10 for NOAA's navigation services, to help
11 position Alaska for the future.

12 For example, as sea ice
13 diminishes, as nations seek increasingly to
14 explore offshore energy and other resources,
15 we are confronting an area where we
16 essentially have an entire new coast opening
17 up in the Arctic.

18 NOAA has undertaken new surveys
19 and are producing updated and more accurate
20 charts. You'll be hearing more about and
21 important new chart later today, in fact. We
22 also continue to test, develop and deploy new

1 water level sensors that can hold up to Arctic
2 conditions.

3 We have developed an Arctic
4 nautical charting plan, and we're working
5 internationally through the International
6 Hydrographic Organization and other bodies, to
7 coordinate efforts towards mapping and
8 charting in the Arctic.

9 This summer, we'll conduct our
10 first transect of the Arctic Ocean using
11 modern survey technologies. These efforts too
12 are helping to position America for the new
13 Arctic realities. In addition to these fairly
14 traditional applications, there's an expanding
15 group of users and constituencies with an
16 interest in the data and services that these
17 programs provide.

18 This is especially true along the
19 coast, to support emergency response and long-
20 term planning. We're establishing new
21 partnerships to support these efforts,
22 including with regional partners like the

1 Alaska Ocean Observing System, with Molly
2 McCammon here in the back, who leads AOOS;
3 working with the Department of Interior, we're
4 accelerating the production of our Arctic
5 Emergency Response Management Application or
6 Arctic ERMA.

7 This is built upon foundational
8 data from our hydrographic services. ERMA is
9 a powerful web-based geographic information
10 system tool that is proven capable of filling
11 such emergency planning and response needs
12 during events like the Deepwater Horizon oil
13 spill in the Gulf of Mexico.

14 ERMA proved very valuable to the
15 first responders and the citizens along the
16 Gulf Coast, as they sought to provide
17 information and access information that helped
18 them understand what was happening, where and
19 when involving which partners.

20 ERMA is also being used today, I
21 would add, to track the movement of marine
22 debris from the devastating 2011 tsunami in

1 Japan.

2 In consideration of significant
3 telecommunications gaps in the Arctic, the
4 Bureau of Safety and Environmental Enforcement
5 at Interior has partnered with NOAA to develop
6 the capacity for ERMA to operate in remote
7 locations where Internet access is not readily
8 available.

9 Before emergencies occur, Arctic
10 ERMA can be an important emergency response
11 planning tool, providing a common operating
12 picture to emergency responders, who may one
13 day turn to ERMA to support their response to
14 events such as spills.

15 We're also collaborating with the
16 Arctic Council's Emergency Prevention and
17 Preparedness and Response Working Group, to
18 incorporate relevant data from other Arctic
19 nations into ERMA, and again, you'll get a
20 closer look at Arctic ERMA later in our
21 meeting.

22 Another innovative partnership is

1 NOAA's agreement with Shell Exploration and
2 Production, ConocoPhillips and Statoil USA to
3 collaborate in data acquisition and data-
4 sharing in the Arctic, a region which as you
5 all know well labors under severe limitations
6 in available and up-to-date data.

7 NOAA's Chief of Staff, Margaret
8 Spring, spoke about this emerging partnership
9 at the last meeting of this panel. Since it's
10 of particular relevance to the region we're
11 meeting in today, I'd like to take a few
12 minutes to share a bit more about the
13 agreement and our vision here.

14 NOAA envisions an Arctic where
15 decisions and actions related to conservation,
16 management and resource use are based on sound
17 science and support healthy, productive and
18 resilient communities and ecosystems. To
19 achieve this vision, we must continue to
20 acquire data and information that improves our
21 understanding of the physical and biological
22 processes and ecosystem functions.

1 Recognizing that no single agency
2 or entity has adequate resources to meet this
3 task alone, collaborative efforts and data-
4 sharing arrangements are clearly essential.
5 Our initial agreement with the companies I
6 mentioned before was signed in August 2011, to
7 help identify and pursue data needs in the
8 Arctic through collaborative data-sharing
9 activities under five themes: meteorology,
10 coastal and ocean currents, circulation and
11 waves; sea ice studies; biological studies;
12 and hydrographic services and mapping.

13 We thank Shell, ConocoPhillips and
14 Statoil for coming to the table and agreeing
15 to share their Arctic data with NOAA, and for
16 allowing us to make it publicly accessible in
17 turn. The memorandum of agreement lays out
18 the specific terms of the arrangement, and
19 identifies the types of data that can be
20 shared among the parties.

21 Specific annexes to the agreement
22 will identify particular data sets that will

1 be unloaded and archived, and will specify how
2 the data can be made publicly available. I'm
3 very pleased to announce here today that Annex
4 1 has been signed, and that data will be begin
5 flowing shortly.

6 This first annex lays out
7 protocols for sharing three of the five data
8 themes identified in the original agreement:
9 the meteorology, coastal, ocean circulation,
10 currents and waves, and the sea ice studies.
11 Subsequent annexes will tackle biological
12 sciences and hydrographic services and
13 mapping.

14 These data can be used by NOAA to
15 bolster our ability to provide safe
16 navigation, support oil spill preparedness and
17 response, and help assure the safety and local
18 communities in the Arctic.

19 With these additional
20 meteorological, oceanographic and coastal
21 observations data, we'll be better equipped to
22 provide energy companies, mariners and coastal

1 communities with an enhanced scientific
2 foundation to support their decisions and help
3 them pursue safe economic opportunities in
4 these very fragile and rapidly-changing areas.

5 A number of specific data sets are
6 coming forth under the first annex, including
7 archived meteorological buoy data, 2012 near-
8 real-time weather buoy data, upward-looking
9 sonar data, coastal weather station data,
10 archived sea ice data, and 2012 near-real-time
11 ice data, vessel data and voluntary observing
12 ship data.

13 As we do with all externally
14 sourced data, NOAA will conduct quality
15 control on these data sets before
16 incorporating them into agency products and
17 services. In addition, we will make the data
18 obtained under the annex available to the
19 public.

20 Through both the quality control
21 processes and our transparent public access
22 provisions, we will ensure that the data sets

1 provided by industry under the agreement are
2 handled in ways that fulfill both the Federal
3 Standards for Information Quality Act and
4 NOAA's own scientific integrity policy.

5 This partnership is but one
6 example of NOAA's commitment to public-private
7 partnerships and good government. The
8 leveraging of taxpayer dollars to provide
9 scientific data and information to support
10 safe navigation, responsible economic growth,
11 job creation and energy security.

12 In short, this agreement helps us
13 meet the growing demands for NOAA's products
14 and services in an efficient and cost-
15 effective fashion. It also helps us realize
16 great progress towards our Arctic Vision and
17 Strategy, which we released last year.

18 NOAA's Arctic Vision and Strategy
19 is crafted to address Presidential directives
20 on the Arctic, as well as the needs and
21 requirements articulated by NOAA partners and
22 stakeholders in the region. The Vision and

1 Strategy encompasses all of NOAA's
2 capabilities, including fisheries management,
3 weather and sea ice forecasting, climate
4 services, mapping and charting for safe
5 navigation, oil spill readiness and response,
6 satellite, ship and aircraft observations,
7 oceanic, atmospheric and climate research.

8 For those who may not already be
9 familiar with it, we enunciate six priority
10 goals in the Vision and Strategy: to improve
11 our forecasting of sea ice; to strengthen the
12 foundational science that allows us to
13 understand and detect Arctic climate and
14 ecosystem changes; to improve weather and
15 water forecasts and warnings; to enhance
16 international and national partnerships; to
17 improve the stewardship and management of
18 ocean and coastal resources in the Arctic, and
19 to advance resilient and healthy Arctic
20 communities and ecosystems.

21 The new industry data-sharing
22 agreement is just one example of ways in which

1 we can come together in new partnerships, to
2 speed our progress on the collective
3 challenges, not only Arctic and in Alaska, but
4 across the nation as well.

5 I look forward to providing
6 another update to the panel as future annexes
7 come online, and welcome your thoughts on how
8 we might pursue similar agreements and
9 partnerships to address the challenges in this
10 state, and also in the regions that you
11 represent.

12 Another partnership that Margaret
13 reported to you on at your last meeting is on
14 the Committee on the Maritime Transportation
15 Systems or CMTS. Margaret currently serves as
16 chair of the CMTS Subcabinet Policy Advisory
17 Board, called the Coordinating Board.

18 Since 2005, when the cabinet level
19 CMTS was first chartered, departments and
20 agencies having an interest and obligation in
21 marine transportation have come together
22 regularly to optimize resources to improve the

1 country's marine transportation system.

2 Under Margaret's leadership, CMTS
3 is making progress on a number of fronts.
4 These include working with the newly-formed
5 White House Navigation Task Force, to provide
6 an inter-agency forum in which we can better
7 coordinate the federal infrastructure
8 investment decision-making.

9 It also includes identifying and
10 integrating eNavigation technologies and data
11 to deliver enhanced navigation information to
12 mariners, improving safety and efficiency. As
13 an example of this improved eNav
14 collaboration, we've got a beta test
15 integration of NOAA's PORTS system, that's the
16 Physical Oceanographic Real-Time System, with
17 the Coast Guard's automatic information system
18 for the Tampa port area.

19 They're also developing a response
20 to Congress on coordinating policy and
21 programs with respect to United States Arctic
22 marine transportation, and they're sponsoring,

1 with the Transportation Review Board, a much-
2 needed conference in Washington next month, to
3 help develop and recommend the use of
4 performance indicators in marine
5 transportation and waterways management.

6 Having a uniform set of indicators
7 will enable the CMTS to better assess the
8 state and the needs of the marine
9 transportation system. Finally, the CMTS is
10 working to develop a user friendly web-based
11 portal to provide a single, searchable source,
12 for access to the hundreds of government-
13 published marine transportation reports and
14 statistics.

15 As Margaret has mentioned to you
16 previously, your inputs and thoughts as
17 members of the Hydrographic Services Review
18 Panel on how NOAA can use and benefit from the
19 inter-agency coordination that goes on at the
20 CMTS is greatly appreciated.

21 Some may wonder why I've
22 highlighted efforts in an area that are

1 broader than the traditional navigation
2 services area, given the focus of the panel.
3 What I think this agreement highlights and the
4 way we're looking across, is the way we're
5 looking across our services at the broader
6 suite of users and needs.

7 We over and over discovered that
8 this helps us find new opportunities, possibly
9 new efficiencies, and certainly helps us
10 identify high points where the work being done
11 under the heading of hydrographic services,
12 under the heading of navigation, is actually
13 pertinent to and directly beneficial to other
14 stakeholders and to other scientific needs.

15 One of the fastest-growing demands
16 for NOAA's navigation services, of course,
17 comes from coastal states and counties, as
18 they seek to reduce their vulnerability and
19 exposure to coastal storms and sea level rise.

20 Facing very challenging decisions,
21 not least of which are long-term
22 infrastructure investment decisions, these

1 communities are turning to NOAA for accurate,
2 consistent and reliable positioning, water
3 level, hydrographic, shoreline and other
4 geographic data and services.

5 We had another great example of
6 that just yesterday on our visit down to
7 Kachemak Bay, where a LiDAR survey flown along
8 the north shore of that bay is providing
9 centimeter scale accuracy, a shoreline
10 determination, trawling-type characterization,
11 bed forms and land forms. We know why we did
12 it in the context of our renavigation services
13 mission, but frankly everyone there was quite
14 surprised to have the Kachemak Bay State park
15 ranger avidly seeking the data, because of
16 determinations that he needs to make, trail
17 maintenance that he needs to undertake, new
18 trails that are on his list, to try to build
19 in, with the LiDAR scale data, dramatically
20 simplifies and eases the planning and the cost
21 of doing that work.

22 So crossovers that we all tend to

1 not spot or undervalue when we move along with
2 our blinders too narrowly drawn pop up all the
3 time and are surely more than we have ever
4 found yet to be tapped. So this point is
5 tremendously well-illustrated also with
6 respect to the shorter sea ice season that the
7 Northern and Bering Sea communities are seeing
8 here in Alaska.

9 They're increasingly exposing
10 these shorelines to the ravages of great
11 storms. Entire villages have been forced to
12 relocate in western and northern Alaska. Last
13 year's October winter storm may be a harbinger
14 of the challenges yet to come.

15 In January, of course, we saw
16 these challenges illustrated vividly with the
17 emergency run to resupply Nome with fuel.
18 NOAA products and services, with the help of
19 the Coast Guard forces and focus of many
20 different agencies and partners were
21 invaluable to the success to that effort as
22 well.

1 We need to position our coastal
2 and state managers to prepare for new demands
3 here and across the country, and we must do so
4 in times of severe fiscal constraint. I
5 encourage this panel to investigate the
6 ongoing efforts to better coordinate among the
7 federal family with respect to services, and
8 especially to take a look at the efforts that
9 are associated with integrated ocean observing
10 systems, and integrated ocean and coastal
11 mapping.

12 The demand for sound coastal
13 science, precise geospatial data and real-time
14 oceanographic services is surging, as coastal
15 communities and industries seek access to
16 reliable expertise, good information, and the
17 information services they need to support the
18 everyday decisions they face, as they work to
19 sustain the lives and livelihoods, reduce
20 risks and plan for the future of their
21 communities.

22 NOAA works to fill this demand by

1 providing for the foundational positioning,
2 mapping, charting and observing systems for
3 safe navigation and efficient marine
4 operations. We integrate these services and
5 data to provide tools for emergency response,
6 to assess vulnerability, to plan for
7 adaptations and to make daily and long-term
8 planning and management decisions.

9 This diversity of expertise, this
10 multi-disciplinary approach and the commitment
11 to long-term partnerships, those are the
12 elements that are positioning America to meet
13 existing and emerging needs at the local,
14 regional and national levels.

15 We look forward very much to
16 hearing your input on how we can continually
17 improve and advance our navigation services
18 efforts. NOAA's mission and vision remain
19 valid and compelling, notwithstanding current
20 budget headwinds, but these challenges can
21 also create opportunities.

22 We need to tap into the creativity

1 and innovation within NOAA's workforce and
2 among our partners, to deliver new
3 technologies and new ways to communicate
4 information, as well as developing creative
5 new approaches to doing business and doing
6 business together more efficiently.

7 We also need to strengthen and
8 expand NOAA's partnership, thinking beyond our
9 traditional set of partners and identifying
10 new allowances, new alliances that can help us
11 achieve our collective goals. Here again,
12 your ideas and suggestions can help spark
13 innovation, which is especially critical in
14 these tight budget times.

15 You, the members of our
16 Hydrographic Services Review Panel, are very
17 valued advisors to NOAA on all these matters,
18 relating to and also flowing from,
19 hydrographic services.

20 However, you are also important
21 ambassadors for NOAA within your respective
22 professional circles. I hope you will use the

1 information you gain through this meeting to
2 provide recommendations to help guide the
3 agency, and help us better engage the public
4 and private sectors in bringing us all
5 together to move forward to address these
6 collective environmental and economic
7 challenges.

8 I challenge this panel to look
9 closely at NOAA's navigation services, to
10 explore the relationships and partnerships
11 that exist, to examine and identify ones that
12 might be established to meet the ever-growing
13 needs of an expanding user base, as we
14 continue our important work together of
15 positioning America for the future.

16 Thank you again. I'm delighted to
17 be able to spend the bulk of the time with you
18 today and tomorrow, not quite all of your
19 meeting. But I appreciate the invitation to
20 join you. I appreciate the privilege of
21 swearing in the new members, and I look
22 forward to learning, along with you, more

1 about this region and for my part, more about
2 the good work that you're doing as members of
3 our HSRP. Thank you very much.

4 (Applause.)

5 CHAIR WELLSLAGER: Our next
6 speaker, the keynote speaker as a matter of
7 fact, is going to be introduced as a favor to
8 me by Dr. Lawson Brigham. He was kind enough,
9 since he knows the gentleman, to best step up
10 and provide us some interesting information
11 about our keynote address. Thank you, Lawson.

12 MEMBER BRIGHAM: Thank you,
13 Chairman. Good morning everyone. It's a
14 pleasure for me to introduce our keynote
15 speaker.

16 Our speaker came to Alaska 40
17 years ago, after his education at Yale and
18 Harvard, or actually before he finished his
19 education at Yale, to work for Governor Wally
20 Hickel in many capacities.

21 He's a prominent businessman. He
22 has been an Arctic advocate from day one here

1 in Alaska, and has been a public servant. He
2 served on the Arctic Research Commission for
3 eight years and prominently as chair, and I
4 would say he might agree that one of the most
5 important accomplishments during his time on
6 the Commission was his influence in getting
7 the United States to review its Arctic policy,
8 and having President Bush sign that Arctic
9 policy, which stands today, word for word,
10 this very day as our national policy.

11 We're one of the few countries
12 where the head of state actually does sign a
13 policy statement on the Arctic. Mead was in
14 Governor Hickel's cabinet as a Deputy
15 Commissioner for Environment Conservation in
16 the early 1990's, has been a member of the
17 U.S. delegation to the Arctic Council since
18 its inception in 1996.

19 So he's been involved in all of
20 the Arctic Council meetings and all the
21 gyrations of the Council in interesting times
22 there. In November of 2010, he was elected,

1 I would say with a -- overwhelmingly as the
2 Lieutenant Governor of Alaska, and inaugurated
3 with Governor Sean Parnell in January of 2011.

4 It gives me great pleasure as an
5 HSRP member and as an Alaskan to introduce our
6 Lieutenant Governor, the Honorable Mead
7 Treadwell.

8 (Applause.)

9 LT GOV TREADWELL: Well, it's a
10 pleasure very much to be here. Lawson, thank
11 you for that introduction.

12 What Lawson didn't say was that
13 while I was chair of the U.S. Arctic Research
14 Commission, he was deputy director, ran the
15 Alaska office. We didn't get to see him much,
16 because he was actually crafting a document,
17 which I'd like to say is a first.

18 We had, through the Arctic Council
19 auspices, the first time that nations ever
20 came together, to look at the future of Arctic
21 shipping, through the Arctic Marine Shipping
22 Assessment, which Lawson chaired for the

1 Arctic Council.

2 Lawson, many other things. You
3 were able to sign the globe for sailing
4 further north and further south than anyone
5 alive, anyone who's ever lived, but as captain
6 of a Coast Guard ice breaker.

7 But I will tell you bringing eight
8 Arctic nations together to think about
9 something that explorers have been considering
10 and working on and losing their lives for, for
11 close to a thousand years is quite a
12 significant accomplishment. Thank you very,
13 very much.

14 I want to say, Mr. Chairman
15 Wellslager, thank you very much for bringing
16 this committee to Alaska. We understand that
17 resources are constrained. Dr. Sullivan, it's
18 wonderful to see you again.

19 I think I first met Dr. Sullivan
20 in the late 80's, around the time that she was
21 helping launch the Hubble and fix the Hubble.
22 It may well have been at a swimming pool in

1 Houston, near Johnson Space Center, where she
2 was showing a FACA advisory group like this,
3 that I was accompanying Governor Hickel on,
4 looking at the future of space exploration.

5 I've enjoyed our friendship now
6 for over 20 years, and thank you very much for
7 coming back to NOAA and being the leader you
8 are. Sorry David Kennedy didn't get to be
9 here. I got to meet David Kennedy first
10 during the Price William Sound oil spill, and
11 we've followed each other's careers for some
12 time.

13 Dr. Bamford, it's very nice to
14 meet you today too. Others on the group,
15 Captain Lowell, please don't really, really
16 retire, and Larry Mayer, as one other thing I
17 can say that I helped get going at the Arctic
18 Research Commission is that nobody was able to
19 figure out how we would get money for your
20 missions mapping the Arctic, so we just
21 started talking about it more loudly, without
22 OMB's permission.

1 Then ultimately they came around
2 with money for the project. So the 50 or 60
3 million dollars that you spent over the last
4 ten years; maybe it's not that much, I'm not
5 sure, but to figure out what our new territory
6 is in the Arctic. I'm very, very proud of
7 your work. Thank you very, very much.

8 Let me just say that this is a
9 neighborhood, and for those of you who are new
10 to Alaska, new to the Arctic, we like to think
11 very much of this place as a neighborhood at
12 the top of the world.

13 Since 1988, when we opened the
14 border between Alaska and Russia, we've done
15 everything we can to build this community up
16 here, because it's important that the
17 community know each other as change comes
18 about.

19 Lawson mentioned that we did push,
20 at the Arctic Research Commission for NPSD
21 '66, the Arctic policy of the United States,
22 and it is the policy in that -- and also

1 confirmed by Congress through the Coast Guard
2 Authorization Act, that we develop a marine
3 transportation system that is just three
4 words: safe, secure and reliable.

5 If you think about that policy of
6 the United States, and how to implement that
7 policy and that mission, your work of making
8 sure that we map the coastline of the Arctic,
9 that we map the navigation routes is very,
10 very important.

11 In the age of an accessible
12 Arctic, the question our nation has to ask is
13 are we ready, and the Hydrographic Services
14 that NOAA's programs provide are very, very
15 important to getting us ready. Before we talk
16 about coastal data, let me just go to a quick
17 geography lesson.

18 Alaskans love to put this map up.
19 In fact, I can probably even get you a PIN
20 with this map in it, and if I can't, two of
21 the legislators who are here, who will be
22 speaking later on today, Reggie Joule and Bob

1 Herron are good at handing them out as well.

2 We have 44,000 miles of coastline.

3 By some estimates, that's five times that of
4 the continental United States. We have
5 borders that are in transition. We have a
6 maritime border with Russia which the Russian
7 Duma has yet to ratify. We had a disputed
8 border with Canada in the Beaufort, where
9 hydrographic information and other information
10 is very important, getting to upgrades on
11 that.

12 We have disputed internal borders
13 between the United States and the state of
14 Alaska, certainly related to rivers and
15 navigable waters, and there's quite a bit of
16 work being done at our state level on
17 navigable waters, wet waters are navigable and
18 so forth. All of this depends on important
19 hydrographic information.

20 We also, you'll hear many times
21 today that the Arctic is changing
22 dramatically. Turnagain Arm, just south of

1 here, has the highest tidal range in the U.S.
2 and the fourth highest in the world, in Cook
3 Inlet.

4 Just last month, we had 2,666
5 seismic events. Last week, 428, and if that
6 doesn't change geography and topography, I
7 don't know what does. Some of it triggers
8 volcanoes, tsunami and other underwater
9 changes.

10 Coastal erosion has been estimated
11 to double in the 50 year period for a segment
12 of the North Slope coastline, according to a
13 USGS 2007 report, and we're seeing lots of new
14 sedimentation with thaw in rivers and rivers
15 bringing new sources of sedimentation to the
16 sea. This is important for navigation
17 certainly; it's also important for habitat
18 studies, to understand what's happening there.

19 Thousands of vessels ply Alaska's
20 waters each year. Large cargo vessels
21 transiting the Great Circle Route; fishing
22 vessels in the Bering Sea; commercial,

1 chartered, tug boats, barges, cruise ships,
2 and sport and commercial fishing has the
3 equivalent impact of nearly 90,000 full-time
4 jobs, and it's the largest fishing industry in
5 the country.

6 In both the IPY reports, the USGS
7 reports, other observations, have shown a
8 decrease in sea ice with changes, constantly
9 changing variables for our weather models. So
10 as you look at the Arctic and think about the
11 opportunities here, just think about this area
12 as key to America's fishing industry, key to
13 our global shipping industry, key to America's
14 oil and gas industry, and yeah we are now
15 third place, behind North Dakota and Texas,
16 but watch out.

17 I'm going to win back that. I've
18 got a semi-counterpart in North Dakota salmon
19 dinner after he overtook us last week, and I
20 want to win back a nice big steak dinner some
21 time soon. We are a tremendous aviation
22 state, where polar aviation is important to

1 the world. Close to 49,000 Alaskans work in
2 aviation.

3 We're a major mining state, a
4 major tourism state, and all of these
5 industries depend on hydrography, on weather
6 and science. Now I don't have a very good
7 numerator and denominator to give you today,
8 except that I will tell you that Michele
9 Ridgway, who chairs the Alaska chapter of the
10 Explorers Club, often reminds me.

11 She says "Mead, when I hear that
12 your responsibility is to work on Arctic
13 issues for the governor and also to work on
14 Arctic research, I look at that as saying that
15 your job is to advance multibeam mapping in
16 the Arctic."

17 So here I am, doing my job, to
18 advance that. She wanted me to remind you
19 that before the Trans-X consider this summer,
20 there's been no major multibeam mapping in the
21 Arctic, and we only got seven percent of that
22 ocean. Single-beam, I see Larry saying maybe

1 "no" is not the right way to put it. But
2 we're going to advance it anyway.

3 Let me just talk about Arctic
4 shipping potential for a moment, because this
5 is very much on our minds. I was in Los
6 Angeles the week before last, and one of the
7 things that happened in a meeting of
8 investment people from around the world was I
9 had dinner with the two people who lead the
10 Russian Investment Fund, the Russian Private
11 Equity Investment Fund.

12 This followed a visit that we made
13 to Russia in September of last year, where
14 Vladimir Putin convened a meeting of the
15 Russian Geographic Society. He laid down a
16 challenge last summer about Arctic shipping,
17 that I think America needs to pay attention
18 to.

19 He announced that he's going to
20 build nine new ice breakers. He announced
21 that the northern sea route would, for the
22 globe, take on the significance of the Suez

1 Canal.

2 Now when you think about it, the
3 Suez Canal carried 18,000 vessels last year,
4 and the numbers of transects of users of the
5 northern sea route from one end to the other
6 is probably about 18, 18 to 25.

7 But it's still a very significant
8 ambition, and one that I believe America
9 should pay attention to, because there's
10 nothing that goes in or out of that sea route
11 that doesn't come through the Bering Strait,
12 which many people around here refer to as the
13 Bering Gate.

14 Ice cover is at historic minimums,
15 but the fact is that technology and global
16 demand are as much advancing Arctic shipping
17 as receding sea ice is. I was in Louisiana
18 with Captain Terminel in March at the launch
19 of the Aiviq, which is one of the first
20 commercial ice breakers, American commercial
21 ice breakers working in the north, and we are
22 moving forward this summer on major offshore

1 exploration.

2 International shipping of oil and
3 gas cargoes through the Bering Strait is
4 growing rapidly, because geostrategically,
5 what this ocean means, think about this, is it
6 means that all of a sudden, with this route
7 open, natural resources in this part of
8 Russia, that might otherwise be only headed to
9 European markets, can now to go to Asian
10 markets.

11 Norway, with liquefied natural gas
12 at Hammerfest, has announced with the Russians
13 that they want to serve the much higher value
14 Asian market with LNG through the Bering
15 Strait, and will do some testing this summer.
16 So significantly, the advance of this ocean
17 gives the largest energy producers in Europe
18 an Asian option.

19 Likewise, it gives North Americans
20 an Asian option. There is a feasibility study
21 being done by the Koreans, to bring natural
22 gas from the mouth of the MacKenzie, which has

1 never been able to support an economic
2 pipeline, yet down to North American markets,
3 where Korea Gas is paying for a feasibility
4 study to go right past us, again through the
5 Bering Strait.

6 Here, we've got the possibility of
7 27 billion barrels of oils, 135 trillion cubic
8 feet of natural gas in this offshore area, and
9 it's quite significant that energy will be a
10 major driver for shipping. It's not just us.
11 Six of the eight Arctic nations are drilling
12 for oil offshore in the Arctic. So that's
13 something to be aware of.

14 Here in Alaska, we have a million
15 barrel a day challenge, where the governor has
16 said we'd like to take the Trans-Alaska
17 pipeline, which flows from Prudhoe Bay south
18 the Port of Valdez, which is now down to less
19 than one-third of its operating capacity. At
20 its height, it carried 2.2 million barrels.
21 Today, it carries less than 600,000.

22 We're trying to see development

1 onshore and offshore in the North Slope, to
2 help restore that pipeline, so it doesn't
3 become the world's longest chapstick. We
4 believe Alaska has the potential to keep
5 America strong for decades.

6 So from ports and mapping to
7 shipping, public and private investment in the
8 Arctic is taking off, and NOAA's work, NOAA's
9 hydrographic work is very, very important to
10 this for the nation.

11 Let me talk about a couple of
12 risks and challenges that we see as very
13 important with the state of Alaska. It's not
14 hard to connect the dots between vast energy
15 resources and accessible waterways.

16 A tremendous amount of energy is
17 about to be shipping all over the Arctic, and
18 it's going in both directions. Let me just
19 say this: the shippers, some of the shippers
20 who were here just earlier this month, will
21 tell you that yeah, we're taking -- I think
22 there were nine cargoes of gas condensate

1 taken off Northern Russia through the Bering
2 Strait last year.

3 Some of those tankers were filled
4 in the opposite direction with aviation fuel
5 headed to European markets. All of these
6 shippers will tell you they're looking for
7 backhauls as well. So it has led us to look
8 at four different things that we feel are
9 very, very important in Alaska related to
10 shipping.

11 Number one, first and foremost is
12 marine safety. There was a headline in
13 Friday's Vancouver Sun that said "Exxon
14 Valdez-like Oil Disaster in Arctic Feared.
15 Expert says sending fuel to China via fragile
16 choke point in Alaska waters almost guarantees
17 a major disaster."

18 Now that's the kind of, you know,
19 headline that talks about danger and is
20 supposed to help get us to act. I will say
21 this: The policy of the state of Alaska is
22 that we feel the dangers posed by unregulated

1 itinerant vessels are real and current, and we
2 are very concerned that we don't have the
3 regulatory capability for ships either
4 transiting the Aleutians right now or
5 transiting the Bering Strait, to even know
6 who's coming, to even know what they're
7 bringing, to even see if there's a contingency
8 plan that they've got filed appropriately.

9 And our capability to get that
10 legal regulatory issue depends largely on
11 passage of Law of the Sea. It's a very major
12 issue, and you'll find a number of ways I'll
13 list in a moment that we're working on this.

14 So number one is the marine safety
15 risks. I should say that besides the marine
16 safety issue that's very important to
17 Alaskans, we're also concerned about what
18 does, when the world is bringing energy past
19 your front door and people who live at your
20 front door in the Arctic are paying more for
21 energy than any place else in the world, what
22 can we do to get energy in Western Alaska to

1 more approximate global market prices, and not
2 the very high cost that Alaskans pay?

3 We also look at what this means
4 for the viability of our resources on world
5 markets, and when we ship a third of the ore
6 from Red Dog here to European markets, but we
7 do it around that way, we know that there's
8 greater value to our shareholders, to the
9 shareholders who live in the region with
10 Arctic shipping.

11 We see other prospects that could
12 also get on the water there, such as Northwest
13 Alaska coal. We also, as was mentioned by Dr.
14 Sullivan, we had the Renda that came in this
15 year, and the question is how can we cooperate
16 with energy in this region with other areas?

17 Then finally a question that
18 people are asking, especially in the
19 Aleutians, but being asked by our legislature
20 through the Northern Waters Task Force and
21 others is how do we take advantage of this
22 economically, so that we capture some of the

1 jobs? Kamchatka has said that they want to be
2 a transshipment port. Hokkaido has said that
3 they want to be a transshipment port.

4 The question is will there be a
5 transshipment port for the Arctic, where is it
6 going to be, and where's the appropriate place
7 for it to be, the most competitive place to
8 be, and there are many of us who believe that
9 the Aleutians will ultimately be that. So
10 that's the way we're looking at Arctic
11 shipping at this point.

12 Observation gaps. NOAA Chief Jane
13 Lubchenco publicly said last summer there's
14 insufficient Arctic climate data collection
15 and observation to do the modeling and
16 forecasting it's expected to provide, and we
17 appreciate her honesty.

18 A USGS report released at the same
19 time acknowledged Arctic science gaps, and
20 said the most challenging factor in Arctic
21 forecasting are changing Arctic climate
22 conditions. Brenda Pierce, manager of Energy

1 Resources Program for USGS said, "We may know
2 something now, but how will climate change
3 that? Or will it be storminess, or
4 oceanographic patterns, or waves?"

5 Alaska's Director of Emergency
6 Management, John Madden, put this in a local
7 perspective. "The biggest change in our
8 preparedness is for fall sea storms. The
9 changes in nature, timing and extent of sea
10 ice means that 30 year averages may be
11 useless."

12 Now if you think about that, that
13 really does speak to an observation gap. I
14 spoke to a group of Federal Emergency
15 Management folks this spring, and told them
16 what I'm telling you. Kathy mentioned the big
17 storm that we had last fall. We call it a
18 "burrricane." In fact, we don't give names to
19 these storms, like a lot of --

20 But if you had them in the Gulf,
21 you would definitely do that. The changes in
22 the nature, timing and extent of sea ice means

1 that our 30 year averages for snowfall, ice
2 flows and fall sea storms are useless.
3 Changes in the environment yield a change in
4 the consequence of natural disasters, and
5 changing activities in the Arctic add
6 increased uncertainty about the capabilities
7 we need to develop.

8 So the ongoing question is how do
9 we prepare for the worse, and conversely, how
10 do we swiftly mobilize? How do we allocate
11 resources when the environment is so
12 irregular?

13 I think a very important part of
14 that answer you'll hear from Molly McCammon
15 with the Alaska Ocean Observing System, the
16 work of CEON and how that nests into the
17 various Arctic regional and global observation
18 systems is very important to us.

19 I'm doing my best I can as co-
20 chair of the State Committee on Research, to
21 bring state agencies to the table to be a
22 contributor, as well as a taker from those

1 observing networks.

2 I can just tell you it's not just
3 for public safety, it's not just for shipping.
4 As Dr. Sullivan also mentioned, we have
5 tremendous wave and tidal potential here for
6 power in Alaska, and those hydrographic
7 services are very useful as well.

8 So if you don't get enough
9 information about that, Mr. Chairman, just let
10 us know. We'll be sure to get it to you. So
11 those are the two challenges, and let me just
12 give you -- let me finish up by saying here
13 are a number of things the state of Alaska is
14 doing to get ready for this accessible Arctic.

15 We're very actively involved in
16 the Arctic Council. We participated in the
17 negotiation of the search and rescue
18 agreement. But I also say this as a possible
19 recommendation for you. That search and
20 rescue agreement is a start, not a finish.

21 It's a start where the nations of
22 the north come together to figure out what are

1 our capabilities, how well do they play
2 together, but what are the deficiencies in our
3 capabilities and how do we fill those
4 deficiencies?

5 NOAA will be at the table, both
6 the hydrographic -- it will point up our
7 hydrographic deficiencies. It will point up
8 our modeling deficiencies, and a search and
9 rescue exercise, major search and rescue
10 exercise is the commitment the Arctic Council
11 made when Secretary Clinton signed that in May
12 of last year. It's very, very important that
13 we work that agreement, to get the best out of
14 it.

15 We've said the same thing about
16 the Oil Spill Task Force that is negotiating
17 a new mutual aid pact for the Arctic, a new
18 binding mutual aid pact for the Arctic. We
19 think that's important that we use the
20 exercises contemplated under that agreement,
21 again to point out our deficiencies and to
22 fill them.

1 Mr. Chairman, as you look at your
2 own recommendations, playing hard with those
3 new exercises to get what we need in the
4 Arctic, I think, is very important. We are
5 supporting Coast Guard studies on vessel
6 traffic in the Bering Strait, and you will
7 hear, in your agenda, about the Bering Strait
8 port access routing study.

9 I was very glad to hear the State
10 Department has now broached the issue with the
11 Russians on how we might begin to organize
12 this area of the Bering Strait. I would leave
13 it to you this way, because if you're looking
14 for resources to help cover hydrographic
15 needs, take a look at some other actively
16 growing areas of commerce, and how nations
17 have worked together to do that.

18 One example I'd like to think of
19 is the St. Lawrence Seaway. Master of a
20 vessel going through the seaway will cross the
21 U.S.-Canadian border 23 different times, yet
22 there's one number to call and our various

1 states, the United States and Canada cooperate
2 on that together, and figure out what we need
3 to have on the Great Lakes together.

4 The Bering Strait, having this
5 importance not just to the Russian-
6 administered northern sea route, Canadian-
7 administered Northwest Passage, our own
8 interest, the interests of nations across the
9 pond is such that understanding the
10 international capabilities to help us get what
11 we need is important.

12 I should say that we are also very
13 actively participating in the Aleutian risk
14 assessment study, where some of the money from
15 Selendang Ayu is helping us understand how to
16 keep more ships off the rocks there in the
17 Aleutians, and that's important.

18 We're working with the Coast Guard
19 to establish forward basing in Alaska, to
20 respond more quickly to maritime accidents and
21 spills. You'll hear later about the work of
22 our legislators' Northern Waters Task Force.

1 We're conducting a port study with the U.S.
2 Army Corps of Engineers to understand where we
3 might have a deep water port in western
4 Alaska. We are developing an AIS network with
5 a marine exchange of Alaska, and you'll hear
6 from Captain Ed Page tomorrow.

7 We're very actively involved in
8 the statewide digital mapping initiative, and
9 this is a place where the state is bringing
10 real money to the table. There will be a
11 meeting, a pan-agency meeting in Washington
12 late in June, where we're trying again to get
13 federal agencies to team up with us, to better
14 map Alaska onshore, but it very much relates
15 to the coastal and offshore charting that
16 you're supporting here.

17 We support the IMO mandatory code
18 for ships operating in polar waters. We
19 support ratification of the United Nations'
20 Conference on Law of the Sea, and I will tell
21 you that there are many conservatives. I am
22 a conservative. There are many conservatives

1 that don't support Law of the Sea. But I will
2 tell you this: For an Alaskan, we rely on the
3 200 mile limit for our huge fishing industry.
4 We rely on knowing who owns what to be able to
5 have a stable oil industry, and we're going to
6 rely on Article 234 for the appropriate
7 regulation to prevent oil spills.

8 That's why you'll see us saying
9 let's work out the other problems that people
10 have with that treaty around the country. But
11 it's very, very important for the future of
12 Alaska, and Alaska's contribution to the
13 nation that we move forward with Law of the
14 Sea.

15 You'll see us doing lots of work
16 with new platforms and unmanned aerial
17 vehicles. We have a NASA agreement. We're
18 excited about the FAA's requirement now that
19 they have an operating area in the Arctic for
20 unmanned vehicles, and we see that as an
21 important new platform.

22 I'd be remiss to say that we are,

1 if I neglected the fact that we have a Marine
2 Pilots Board that has been looking at Arctic
3 shipping very intently. We've got an Aleutian
4 ports study that's been proposed, and finally,
5 Dr. Sullivan mentioned Margaret Springs'
6 chairmanship of the CMTS.

7 I will tell you, and this is
8 something, Mr. Chairman, your committee should
9 look at, the draft report that CMTS is
10 bringing together on Arctic shipping. Make
11 sure that your recommendations on hydrographic
12 mapping, hydrographic needs are included in
13 that. Dr. Brigham and I helped Congress draft
14 that legislation at the beginning. That
15 assignment was given to CMTS.

16 There's some update on that
17 legislation working its way through Congress
18 right now, and I guess I'll put it this way.
19 If America doesn't think hard about this
20 Arctic shipping potential, we're lost.
21 Somebody else is going to go up there and
22 rearrange the furniture. If it's not us, we

1 may not be happy with the arrangements we get.

2 We have every legal opportunity to
3 be there, but we've got to stand forward and
4 take our responsibility. So with that, I just
5 would like to say that on behalf of the state
6 of Alaska, on behalf of many of the great
7 people here in this room who work these issues
8 every day, we're very, very happy that you
9 came here. I'm happy to answer any questions,
10 and thank you so much for coming. Godspeed
11 in your work.

12 (Applause.)

13 MEMBER BRIGHAM: You want to take
14 some questions?

15 DR. SULLIVAN: Sure.

16 MEMBER BRIGHAM: Do we have time
17 for questions, Mr. Chairman?

18 CHAIR WELLSLAGER: Yes, as a
19 matter of fact we do.

20 MEMBER DIONNE: I want to ask
21 about that initial map, which was similar to
22 the one you have up now. It's an amazing

1 view. I've never looked at the North Pole
2 from above, and whatever you want to call it.
3 What do you call this?

4 LT GOV TREADWELL: It's a polar
5 projection.

6 MEMBER DIONNE: Okay. What
7 portion --

8 LT GOV TREADWELL: It's the only
9 map I have in my office, by the way.

10 (Laughter.)

11 MEMBER DIONNE: What portion of
12 the air surface are we looking at here, the un
13 -- the submerged part?

14 LT GOV TREADWELL: Yeah. I was
15 going to say about one-eighth, 11 or 12
16 percent. If you quizzed, and I'm not talking
17 about Jay Leno's quiz of the person on the
18 street, but if you quizzed most Americans of
19 which oceans bordered the United States, the
20 Arctic would be dropped off almost every time.
21 Yet we are bordered by the Arctic Ocean.

22 MEMBER DIONNE: That other map

1 with the Alaska obliterating the Mississippi
2 Basin, you could do yourselves a favor by
3 coloring in the parts of the U.S. border that
4 aren't bordered by ocean, because Maine did
5 pretty well on that map actually, and we got
6 a few extra --

7 LT GOV TREADWELL: Yeah, and by
8 the way, as an Alaska who's worked a long time
9 to support marine science, we admire much of
10 the work that's gone on in Maine, in commerce
11 management. We've had a number of experts
12 from Maine up here working with us, and thank
13 you for being here.

14 MEMBER JEFFRESS: Gary Jeffress.
15 I must say I'm very impressed with your
16 knowledge and the background that you have of
17 this issue. I only wish Texas had leadership
18 as smart as you.

19 But my question is regarding the
20 Bering Strait there. It's going to be a choke
21 point, it looks like, for the traffic, and I
22 can't get sort of the scale of why that is.

1 Is that going to require some kind of
2 transportation traffic system to monitor the
3 flow of traffic through that gap?

4 LT GOV TREADWELL: You know, I
5 would urge you to take notice of the Coast
6 Guard's port access routing study. But also
7 you will hear from Alaska natives while you're
8 visiting here and so forth.

9 Just remember that most of the
10 food on people's plates in these coastal
11 communities comes out of this ocean, okay.
12 Now whether it's people that rely on whaling,
13 on walrus, on seals.

14 I remember being the Kaktovik one
15 time, and people who were driving heavy
16 equipment for a living had stopped, because
17 some Belugas had gone by, and so they had gone
18 out to catch dinner.

19 The point is is that we are very
20 reliant on the resources of the Bering Sea for
21 subsistence, as well as economics. What that
22 means is that when ship traffic goes through,

1 you want to make sure that it's not in
2 conflict. Now if you're Shell and you're
3 operating up here, you're under a huge amount
4 of regulation there.

5 But if you and I go by a Liberian
6 tanker, we can sail at will where we want to
7 sail, and there's no vessel traffic system.
8 So at the very least, it would allow us to at
9 least know who's coming, know what the threats
10 are, let them know, listen, we'd really rather
11 than you sail west, on the west side instead
12 of on the east side.

13 It's not necessarily going to be
14 static shipping lanes because ice changes,
15 migration patterns change and so forth.
16 That's why it's important for us to have the
17 data, but it's also important for us to link
18 up with the Russians, even if it's a small
19 number of ships.

20 I mean we've seen big fights just
21 on the track of the icebreaker Healy during
22 whaling season. So it's important that we

1 have that choke point and we avoid conflict
2 later.

3 MEMBER BARBOR: Ken Barbor. You
4 know, I appreciate your perspective on this
5 global and national energy and transportation
6 issues that we need to get under our wing.
7 However, you had but one very brief tourism,
8 in particular in ecotourism, which I would
9 think is a stressor for hydrographic services.

10 LT GOV TREADWELL: Yes, it has
11 been, and I saw a Canadian presentation where
12 the Canadian Coast Guard will show you several
13 specific places that's been a stressor in the
14 Northwest Passage, for absence of hydrographic
15 data actually.

16 I was involved in kind of the
17 creation of ecotourism in this region with the
18 Russians years ago. In the early 90's, I was
19 part owner of a company that bought close to
20 5,000 people to Wrangel Island on the coast of
21 Chukotka, and a lot of it was using Russian
22 vessels and Russian charts and a Russian coast

1 pilot type cases.

2 This is an area that potentially
3 will grow. These are ships that want to go
4 off the normal track, and I think it's
5 important for many different reasons, many of
6 the reasons that Dr. Sullivan mentioned, that
7 we have the good baseline data.

8 So I guess I wouldn't assume, I
9 mean for example, and Mr. Chairman, at some
10 point in this, as you look at the Arctic, I
11 hope you get the Arctic submarine lab and the
12 Navy folks to tell you what their requirements
13 have been, because we had a very interesting
14 situation in the Arctic Research Commission,
15 when we declassified data that had been taken
16 by most of our submarines during the Cold War.

17 There's close to a 1,000 mile
18 stretch right here, where we didn't want to --
19 where the Navy did not want to declassify the
20 data, because basically they were following a
21 single track. I was out on the ice last
22 spring, where the captain of the USS

1 Connecticut told me that coming through the
2 Bering Strait, he encountered 90 foot deep ice
3 keels, where the play, the state of play
4 between the bottom of the ice keel and the
5 bottom of the ocean gave him, for a very long
6 submarine, just about 50 feet of play and very
7 little wiggle room to meet his transit.

8 And the point of it here is that
9 there's, you know, whether it's for military
10 purposes, where you may need to go off the
11 beaten track, so to speak, or tourism, it's
12 very important to have full hydrographic data
13 in this area.

14 CHAIR WELLSLAGER: We have time
15 for one more question. Anybody else?

16 LT GOV TREADWELL: Dr. Terminel?

17 CHAIR WELLSLAGER: Oh, I'm sorry.

18 CAPT TERMINEL: In your experience
19 in the Arctic and the missions that you sat
20 in. Two weeks ago, Commandant Papp suggested
21 that he needed six ice breakers, and the US
22 Coast Guard has a study that calls for \$1.2

1 billion per icebreaker. In your experience,
2 and the need for the surveys that are going
3 on, where do you think this is going to come
4 from?

5 LT GOV TREADWELL: Well, I guess
6 I'll put it this way. Thank you. Captain
7 Mike Terminel, I hope you get to meet while
8 you're here. Mike is with Edison Chouest and
9 I was with him on the launch of the Aiviq.

10 First off, there's -- I'll tell
11 you, that Alaska is very happy that the budget
12 this year has one icebreaker, one new
13 icebreaker in it. There's a suggestion, and
14 I testified before a Congressional hearing in
15 December, where we said let's look at leasing
16 icebreakers, because we may be able to get
17 them for the two to three hundred million
18 dollar range, rather than the eight to nine
19 hundred million dollar range the Coast Guard
20 is contemplating.

21 I guess I would put it this way,
22 and Lawson and I, there's one other steak

1 dinner bet that I've got, that Lawson and I
2 will probably have to settle around 2020,
3 which is how much trans-Arctic shipping is
4 actually happening.

5 His Arctic marine shipping
6 assessment has predicted that most of the
7 shipping will be destination shipping in and
8 out of the Arctic, some tourism and science,
9 not much trans-Arctic. I see, talk to people
10 who see this trans-Arctic opportunity a lot.

11 I'd put it, I'd like to answer
12 Captain Terminel's question this way. A
13 billion dollar ice breaker is barely worth a
14 mile of dirt in the Panama Canal, and if this
15 ocean really is going to play the role in
16 global commerce that some people contemplate,
17 we've got to look at the investments.

18 Furthermore, if you're going to
19 have unregulated shipping come through and not
20 be preparing for oil spills, we have a
21 problem. That's why Article 234 and some
22 other things may encourage people to join up

1 with OSROs, that could pay for some of this
2 ice-breaking capability.

3 The U.S. does not charge for ice-
4 breaking at this point. Canada and Russia do.
5 I'm not urging the U.S. to start charging, but
6 I think it is important that the shipping
7 risks cover the costs of preparing for oil
8 spills. But those are some of the questions
9 that we were grappling with in a White House
10 meeting just before the President's budget
11 came out this year.

12 MEMBER DIONNE: You were
13 mentioning return on investment. Wouldn't 1.2
14 billion somebody said, wouldn't that create a
15 few jobs in this country?

16 LT GOV TREADWELL: Yeah, yeah, you
17 know, and I guess one of the interesting
18 questions is how much will this advance
19 American commerce versus Asian commerce. I'll
20 tell you, a group of lieutenant governors met
21 with the Chinese premier in October, and we
22 were all looking the scoreboard of our various

1 states on trade issues with China.

2 I said well, I've got an asterisk
3 next to our number, an asterisk next to our
4 number on the scoreboard, because while we do,
5 while China is now our largest trading partner
6 in Alaska, the fact is it's a much larger
7 contributor to our economy, where we're joined
8 at the hip in Asia's global air transportation
9 through Anchorage, the fifth largest air cargo
10 port in the world, with air cargo that's
11 headed to Europe.

12 I heard what Dr. Sullivan was
13 saying about the importance of shipping,
14 bringing 95 percent of global trade.
15 Ultimately, if this route, one of these three
16 routes can lop 40 percent off the distance
17 from East Asia to European markets, somebody's
18 going to figure out how to use it.

19 And whether, while it may be East
20 Asia and the European trade, I believe the
21 United States citizens here and places like
22 Adak, Dutch Harbor, other places, could get

1 jobs helping to service that trade in western
2 Alaska.

3 CHAIR WELLSLAGER: Okay. Well
4 thank you very much. But before you leave, we
5 have a special presentation we'd like to make
6 with you.

7 DR. SULLIVAN: So Mead shared a
8 bit of a story of one our earlier meetings,
9 and another piece of that story is he was
10 looking at that time for some maps, some
11 insight about Kamchatka, and he was going to
12 meet with senior officials from Kamchatka
13 shortly afterwards, and he said he couldn't
14 find any good, you know, aerial or space-based
15 imagery that sort of gave a regional
16 perspective.

17 I of course said I know exactly
18 where you can find some. I took a couple, the
19 STS-9 crew took a couple. You know, here's
20 who you call.

21 There was a significant
22 international furor over the ones that were

1 taken in 1983 by STS-9, so much so that we
2 were sternly cautioned to not point, don't put
3 any fingers on shutter buttons when you're
4 anywhere near these areas.

5 So it was quite a flap, but
6 they're fabulous images. It's, you know, an
7 American official, so I told an American
8 taxpayer where to find this great image, and
9 he duly did. Not long afterwards, having a
10 meeting with the governor of Kamchatka, trying
11 to open up tourism and asked about maps and
12 maps are quite classified in that society.

13 Mead said well that's okay. I
14 have a great picture to give you. He brings
15 out this gigantic picture, which was
16 undoubtedly classified above Top Secret in
17 that country. So I thought it would be fun to
18 sort of parallel that and update the story
19 some 20 years later, with not a photo, but
20 what you actually asked me for the first time,
21 which is a map.

22 For those of you who may not know,

1 there's a very great back story here. This
2 has to do with Kotzebue, one of the
3 significant towns on the west coast of Alaska,
4 that's a major access point and supply point
5 for a lot of smaller coastal communities and
6 inland dwellers.

7 Formerly, the area around Kotzebue
8 was charted no better than 1 to 700,000. It's
9 a very dynamic shoreline with seismicity and
10 storms, as we both talked about. Stakeholders
11 were bringing forth requirements, critical
12 requirements to update that, to improve access
13 to the region.

14 A three-year effort led by NOAA,
15 with a Hydrographic Services charter, but
16 absolutely critically involving contractors
17 and stakeholders from around the region as
18 well. From within NOAA, our CO-OPS program
19 provided tide gauge data. The National
20 Geodetic Survey provided shoreline mapping.

21 I would add some of that was
22 through partnerships with the U.S. Geological

1 Survey, that make it possible for federal
2 agencies to have access to what are called
3 National Technical Means, which is the
4 shorthand for the satellites that I won't talk
5 to you about. And then Office of Coast
6 Survey, with the hydrographic surveying.

7 So Mead, I'm delighted to present
8 to you the new 1 to 50,000 scale Kotzebue
9 chart area. Here you go, and I suppose in a
10 small comic sidebar about the joys of dealing
11 with the federal government, one would think
12 that we would present this to the lieutenant
13 governor of the great state of Alaska framed
14 or mounted.

15 But in fact, it is not legal for
16 NOAA as a federal agency to do this. Our
17 charter is to produce useable charts, in paper
18 or electronic formats as navigators may need
19 them. It is not to make tchotchkes and
20 present those.

21 So with my apologies, Mr.
22 Governor, we leave it to you to determine how

1 you wish to display it in your office.

2 LT GOV TREADWELL: I appreciate
3 that. Thank you very much.

4 (Applause.)

5 LT GOV TREADWELL: Well, I'll make
6 sure that the people doing the western Alaska
7 port study have this chart. Thank you, and by
8 the way, when I did hand that picture to the
9 Governor of Kamchatka, his jaw dropped.

10 He reminded me that he had been a
11 fighter pilot in Vietnam, and not exactly on
12 the side that we were on. But it did help us
13 open up trade and commerce there. Thank you
14 very, very much.

15 (Applause.)

16 DR. SULLIVAN: And I understand
17 that our presenter, Reggie Joule, has joined
18 us as well. I know he'll be speaking to us
19 shortly today. But Reggie, we'd also be
20 honored to give you a copy of the same chart,
21 with the same caveat that you have to decide
22 how you want to frame it.

1 (Laughter.)

2 REP. JOULE: That looks familiar.

3 DR. SULLIVAN: Well, look a little
4 closer to the right now.

5 REP. JOULE: I can see almost
6 where my house is.

7 DR. SULLIVAN: Oh, there you are.

8 REP. JOULE: I'll tell you how
9 things are going and how much -- I was just on
10 a teleconference with the Northwest Arctic
11 Borough Assembly out of Kotzebue, and as I was
12 listening to NOAA and others present here, I
13 was also listening to NOAA and others present
14 up in Kotzebue this morning as well.

15 But this will be given to the
16 people at home. Kotzebue is my home
17 community. So thank you very much.

18 (Applause.)

19 CHAIR WELLSLAGER: Okay, very
20 good. We have scheduled a 30 minute break.

21 So --

22 CAPT LOWELL: Just one logistical

1 announcement.

2 CHAIR WELLSLAGER: And before we
3 have that break, we have one logistical
4 announcement. But during that please, the old
5 existing panel members meet with some of the
6 new panel members, or the guests that we might
7 have, and we will get started back at about
8 10:30. But one minute.

9 CAPT LOWELL: Yeah, just one last
10 logistical announcement, and this one is
11 actually for the members of the public who are
12 here.

13 First off, welcome. We always
14 like to see public at all federal advisory
15 committees. We do have a visitor sign-in log,
16 and I would request everybody please sign your
17 name. It's required by law that we do take
18 note of who comes, and I would like to note
19 that there's a public comment period at the
20 end of every day.

21 So should anybody wish to stand up
22 and make a statement to the panel members, by

1 all means. I believe it's scheduled for 5:00
2 today, 5:30 maybe.

3 MALE PARTICIPANT: It's 5:30.

4 CAPT LOWELL: But regardless, at
5 the end of every day, the public will have a
6 chance to stand up, and the mics will be open
7 at that point.

8 MS. WATSON: 5:30 it's scheduled,
9 public comment.

10 CAPT LOWELL: It's scheduled for
11 5:30 today. All right. Thank you very much.

12 (Whereupon, the above-entitled
13 matter went off the record at 9:55 a.m. and
14 resumed at 10:35 a.m.)

15 CHAIR WELLSLAGER: Welcome back.
16 I see a few empty seats, but I think they're
17 going to slowly start filling in. Next on the
18 agenda, the delivering NOAA's navigation
19 products and services for the Alaska Arctic
20 region. Captain Lowell will start this for
21 us.

22 CAPT LOWELL: Okay. We're back

1 online. As before, good morning everybody.

2 VOICES: Good morning.

3 CAPT LOWELL: My name is John
4 Lowell. I'm the outgoing -- well, I guess the
5 DFO for the next three days. I'm also the
6 Director of the Office of Coast Survey, as
7 you've been told before.

8 What I'm going to do is take a
9 couple of minutes here to kind of run through
10 what it is that we've done over the last
11 couple of years, and what it takes to get a
12 nautical product, and this one is a specific
13 nautical product, the chart, which is designed
14 for the end user, which is typically a Solis-
15 type vessel, operating in an area.

16 But in the case of Kotzebue, it's
17 actually quite a few smaller vessels that will
18 be operating in and out of there, sporting
19 basically Kotzebue and the interior areas that
20 Kotzebue supports. Now although it says
21 "Office of Coast Surveys," it's not Office of
22 Coast Survey. I meant to actually correct

1 this slide.

2 This is a combined nav service
3 effort, and it involved both federal assets
4 and contractors, and it's to give you kind of
5 a little bit more in depth, over and above
6 what Dr. Sullivan was talking about on her
7 last little presentation.

8 So let me start it off with the
9 National Ocean Policy. There is a draft
10 implementation plan out there. The panel has
11 been briefed on this before. I'm not going to
12 go into a lot of details, but there are nine
13 big objectives there, two of which are
14 involved in this particular project that I'm
15 about to talk about. One of them is the
16 mapping observations and infrastructure part,
17 and the other is Arctic as a geographical area
18 of interest. So there's two areas called out
19 in the National Ocean Policy that have helped
20 refine what it is we're doing.

21 So I'm talking about Kotzebue.
22 Now Kotzebue is a small -- well, I guess it's

1 a pretty good-sized village for that part of
2 Alaska up on the coast. It gets iced in
3 during the winter. It's ice-free during the
4 summer. There is a major airport there, and
5 it supports quite a bit of the interior from
6 that area.

7 They typically take a number of
8 barges that go up there, fuel barges, cargo
9 barges and such. The port is not necessarily
10 a port as you will see this afternoon. In
11 fact, I believe it's -- in fact, I know it's
12 a very, very small port.

13 What they do is they lighter off
14 all of the larger barges onto very small
15 barges specifically built for the area. They
16 draw, I understand, about four feet, and then
17 the tug companies bring them in and out where
18 they pick up their fuel and their cargo.

19 So what we did is a number of
20 years ago is we recognized the Arctic as an
21 area of interest. We sent our navigation
22 manager up there to try to get some idea of

1 what is it people need, where are we lacking
2 in information, which of course the answer was
3 everywhere, and where is it that we need to
4 operate. How do we need to prioritize our
5 forward progress through that area?

6 Kotzebue stood out for a number of
7 reasons. This thing is right in the way for
8 me to look at this. But anyway, Kotzebue was
9 identified as part of the plan. It was also
10 a slight step north. The Office of Coast
11 Survey and the Office of Marine and Aviation
12 Operations have not operated up in the high
13 Arctic in quite a few years.

14 So you could say we were kind of
15 getting our feet wet when we were operating in
16 the Bering Strait area in 2010, and then in
17 2011, we went north a little bit further in
18 the Kotzebue. So this is kind of a normal
19 progression of events.

20 So I should also mention, and I
21 know the old panel members have been briefed
22 on it, but for the new panel members who

1 haven't seen it, that there is an Arctic
2 nautical charting plan the Coast Survey put
3 out, I believe last year or early this year,
4 February 10, 2012.

5 It identifies actually a series of
6 charts to support the maritime infrastructure
7 that we foresee coming. Although it's not in
8 draft anymore, it actually went into a final.

9 Of course, these documents are
10 always in draft and so any input that anybody
11 in any of these regions has, we are open to
12 listen to it, and it will be modified
13 accordingly. There's a little URL where it's
14 located.

15 So where are we at? 16005, that's
16 just a chart number. No quiz on that. But it
17 is actually the best available coverage for
18 Kotzebue prior to the release of this new
19 chart I'm going to be talking about. This is
20 on a 1 to 700,000 scale.

21 Kotzebue is right in here. So
22 it's not as far north as Barrow up here.

1 Here's the Bering Straits down in here. So
2 we're just kind of moving our way north.
3 Here's Red Dog, I guess, in reference, because
4 I think we'll be talking about that in passing
5 also.

6 But you can see there's a lot of
7 shipping traffic that kind of goes up through
8 the Strait. The barge traffic kind of hugs
9 the shore coming over here, to support the
10 Anchor Out, and then the lighter off into
11 Kotzebue. That's pretty much how it's
12 working.

13 So the customer request comes in.
14 Industry and government in Kotzebue request a
15 larger scale chart, and we put it on the
16 schedule for acquisition, excuse me, to try to
17 get the chart out by the 2012 season. To do
18 that, you have to plan ahead. So although
19 this is not exactly in a timeline here, we did
20 visit Kotzebue in July 2011.

21 This is during the acquisition.
22 We had already had -- the shoreline was in

1 progress at the time. The tide gauges were
2 already installed and operating, and the
3 vessel, the ship, the NOAA ship Fairweather
4 was up there collecting data. We just went up
5 to see how things were going, and talk to the
6 stakeholders in the area, to see how and any
7 final changes they might want on that.

8 So here you go. This is kind of a
9 blowup of the 1 to 700,000 scale. So here's
10 Kotzebue. This is the shoreline. I don't
11 actually -- I don't know how old it is off the
12 top of my head, but you can pretty much be
13 assured that all that data is way, way
14 outdated.

15 You'll see it shows a big shoal
16 here offshore, and there is a shoal there, but
17 you'll see what the new data that there is,
18 our passageways through it. Of course, to try
19 to land a ship with this, on this scale chart
20 is pretty silly.

21 This is a picture of a current
22 meter going in there. So tides were collected

1 summer of 2011. CO-OPS, of course, oversees
2 all this. This is a combination of --
3 actually, is Rich here? Is the Red Dog a
4 NWLON station? I actually don't know.

5 Okay. That's a NWLON. I
6 understand one of these was a VDATUM tide
7 gauge, and this one I believe the Fairweather
8 put in, or maybe both of them were VDATUM tide
9 gauges.

10 So what we did is we -- VDATUM is
11 another project that's ongoing. We were
12 trying to collect some background water level
13 data to support VDATUM offshore.

14 So we piggybacked on those gauge
15 installations. We added some more in here to
16 support the hydro for when it was acquired.
17 So we had some contractors putting in the
18 gauges, and we had, like I said, the ship put
19 in on one gauge as far as I know.

20 So here's another blowup of it.
21 You'll notice that everything's getting really
22 big. This is what they call an overzoom here.

1 So the shoreline was collected by NGS over the
2 time frame of October 2011 to February 2012.
3 I believe I've been informed that that was
4 collected using what's referred to as NTM.
5 Juliana can shake her head on that.

6 That's National Technical Means,
7 which means the satellites come in or the
8 imagery comes in in a classified form. They
9 do have a classified SCIF in the building.
10 The products are derived, and they take it to
11 a scale that's non-classified. That data is
12 then provided to Coast Survey in a non-
13 classified form, to be added to the product
14 and get it out to the end customer.

15 So I guess we should thank
16 Department of Defense for quite a bit of the
17 help moving this project along on the
18 shoreline side. So now we've got the tides,
19 the water level end. We've collected the new
20 shoreline, and I might add a couple of notes.

21 You'll see there's huge
22 differences here, and a lot of this is a scale

1 problem. But some of it is just old. I mean
2 the shoreline does move around quite a bit
3 here.

4 So if you were to go look in the
5 charting plan, it actually has the chart
6 layouts, the projections, what did we plan to
7 produce. So while all of the tides were being
8 collected and the shoreline was being worked
9 on, we actually laid out the new chart.

10 Now this is a 1 to 50,000, as Dr.
11 Sullivan mentioned. It's a much, what they
12 refer to as larger scale. It's a much easier
13 to use from a navigation perspective, and once
14 they have the framework and the grids and all
15 the external stuff laid out there, is they
16 applied the shoreline and started to get ready
17 for the hydrography when it comes in. The
18 hydrography, like I said, was collected in
19 2011.

20 Now all of this was kind of blue
21 on the 1 to 70,000 with those big shoals
22 offshore. What you've seen here is actually

1 the coverage. These white lines here, this is
2 actually where they collected hydro data. So
3 that wouldn't have been on the chart had we
4 not collected the data.

5 This is moving forward. So there
6 you go. The hydrography's collected in summer
7 of 2011. So the soundings are now applied,
8 and you can clearly see that there's a
9 navigable channel. It goes up through here.
10 There's still, I think, I don't know. Can
11 anybody read those numbers in there?

12 I think there's definitely a
13 controlling depth issue here, but it's about
14 six feet. So the four foot draft tugs have to
15 shoot in and out. But they're very cautious,
16 and this is also quite a few miles offshore.

17 So this is like a three mile run.
18 I'm guessing the three nautical mile line is
19 out here somewhere, and the barge is typically
20 anchored out in this area for the laddering
21 operations.

22 Maritime boundaries. I don't know

1 how much we've talked about maritime
2 boundaries within the FACA, but one of the
3 uses of a nautical chart is it establishes the
4 maritime boundaries. It goes through a
5 process where they establish the inner limits.
6 They do these closing lines. They'll
7 establish where they are.

8 Those are all internationally
9 agreed upon rules and regulations that put
10 those into place, and then you put in the --
11 oh, that's a territorial sea. So there you
12 go. That's the three nautical mile line. So
13 this is actually quite long. This is quite a
14 ways out.

15 So the maritime boundaries were
16 reviewed. They were shifted slightly, based
17 on the new shoreline, and all the new offshore
18 boundaries were laid in there accordingly. We
19 also created a 1 to 25,000 harbor coverage.
20 So that's a blowup of this area right here.
21 It was dropped up there, I believe the next
22 chart shows you.

1 So now the barge is coming in. I
2 believe this is where they tie up, right up in
3 this area here. It's slightly out of the
4 weather. I mean it's not really -- it's a bit
5 of an open roadstead type harbor. But you do
6 get some protection compared to other areas.

7 Now I'm actually going to shoot
8 back here a couple of slides. Well actually
9 this will do it. One of the things we did do
10 when we were up there in 2011, when myself and
11 the head of the charting division visited, is
12 we were actually working further north with a
13 ship.

14 But based on input from the
15 community there, is they really wanted
16 additional information down south. This is
17 Kate Blossom, and Governor Treadwell just
18 mentioned he's worked with the Army Corps on
19 a potential deep water port for the Arctic
20 area.

21 This is one of the areas of
22 interest. You'll notice deep water goes right

1 up, very close to the shore here. So by
2 simply shifting our area south slightly, we
3 could easily grab that area, supply that
4 information to the people doing the deep water
5 port studies, and we can make a decision, a
6 more informed decision of this area. Should
7 they decide to go there, the chart's pretty
8 much ready to go.

9 And of course the goal here was,
10 as I mentioned before, most of these areas are
11 iced during the winter. There's not a lot of
12 navigation. So what we wanted to try to do is
13 get it on the street and available to the end
14 user for ice breakup in June, and this is a
15 series of bullets here I'll just touch on.

16 When we got the products out,
17 print on demand, it was available the first
18 week of May. The raster nautical chart was
19 also the first week of May. The lithographic
20 chart, which is of course based on a printing
21 schedule over at the FAA, will be out at the
22 end of May, beginning of June, and the

1 electronic nautical chart, which delays
2 slightly the raster, as we do all the primary
3 work on the raster right now, will be out in
4 early June.

5 Coast pilot update. The new
6 edition is printed, is scheduled to be printed
7 in early August and should there be any
8 fundamental changes there, they'll go out in
9 a local notice to be provided to the mariners
10 for use, if there are any there.

11 So other products supported by
12 this new charting data. I'll mention ENC
13 direct to GIS. This is a program where we
14 take our ENC data.

15 Once it's in there, we'll break it
16 apart into different formats, to provide the
17 ENC data in other formats to other users, and
18 typically these are GIS users. I believe
19 there's probably some 20 plus formats that we
20 just simply automatically distribute the
21 product in.

22 Digital coast. This will be

1 loaded up into the NOAA Digital Coast website,
2 and it will update the benthic, the
3 hydrographic and the maritime boundary files
4 that are in there.

5 I believe ERMA, we'll have a short
6 talk on ERMA coming up quick, and hopefully
7 this new type information will then serve as
8 a better backdrop for any of the users of the
9 environmental responsive management
10 application such as ERMA. But the data will
11 be available to anybody using any type of
12 front end that they wish to use, and that's
13 the end of that.

14 So it was a quick little walk-
15 through of what it takes. But obviously, it
16 takes more than just a few people to put a
17 chart out there. It takes a couple of years
18 of effort. It takes a lot of planning and a
19 lot of engagement with the end user. So
20 hopefully, we'll be putting that chart to good
21 use this year, and thank you all very much.

22 (Applause.)

1 CHAIR WELLSLAGER: Are there any
2 questions for Captain Lowell? Gary?

3 MEMBER JEFFRESS: Gary Jeffress.
4 John, when you do the international
5 boundaries, does the Department of State get
6 involved, or do they just accept what you do?

7 CAPT LOWELL: The Department of
8 State typically doesn't get involved unless
9 there's a border dispute. That whole area,
10 of course, we have an agreed-upon border with
11 Russia, so it's really not a problem. What
12 we're talking about is the inland where the
13 closing lines are, where the territorial seas
14 are.

15 There is some federal-state issues
16 involved, and I was going to try to talk to
17 the Governor, because he kind of referenced in
18 passing during his talk about navigable waters
19 and some disputes there.

20 I wasn't sure if he was referring
21 to the boundaries, because typically the
22 people that are affected when boundaries

1 shift, specifically if they go inland, is that
2 ship's fishing oversight and regulatory
3 actions, and that's when the states get a
4 little, or the fishermen actually get
5 involved.

6 CHAIR WELLSLAGER: Just a second.
7 Joyce.

8 MEMBER MILLER: Yes. John, what's
9 the magnitude of the charting requests for
10 Alaska, in terms of, you know, how many
11 thousands of nautical miles, and how much is
12 priority one on the Coast Survey list?

13 CAPT LOWELL: I would say all that
14 is kind of laid out in the Arctic charting
15 plan. We've laid out what we feel is a
16 reasonable first look as to where vessels
17 would go around either through the Bering
18 Straits or the Bering Gate, up around Alaska
19 should they be taking the Northwest Passage.

20 I believe the graphic has about
21 44,000 square miles, which is pretty much
22 doubling the amount of work we need to do, and

1 that's just a little thin strip all the way
2 around there. I should mention that the
3 Fairweather this year is schedule to make that
4 run. It will run all the way out to the
5 Canadian border and back as kind of a
6 reconnaissance this year.

7 Then hopefully when the Rainier
8 and the Fairweather and the contractors are
9 all kind of tooled up the following year, then
10 we'll make a bigger push as to focus in on
11 other areas to collect more navigationally
12 significant data.

13 CHAIR WELLSLAGER: One more
14 question.

15 VICE CHAIR PERKINS: Captain, you
16 said it took two years to get through that
17 chart update process. So under the, you know,
18 looking forward, and trying to, you know,
19 build on what was spoken earlier this morning
20 of being strategic and being efficient, can
21 you speak or do you have a prediction for what
22 the chart update cycle could be or should be

1 in the future?

2 Because the economic drivers in a
3 two-year cycle, it appears that we have a
4 tremendous gap that we need to close on the
5 timing and the efficiency of how we can get
6 these charts produced. So what is our
7 strategy and our strategic look forward to
8 shorten that cycle?

9 CAPT LOWELL: I would make sure
10 we're talking the right language here.
11 Updates is something we do frequently, and we
12 do about 50 charts a week we do updates for.
13 But what we're talking about here is a new
14 product.

15 VICE CHAIR PERKINS: Yeah, yeah.
16 I misspoke. Clearly, that wasn't an update
17 chart going from 700 K to 50 K. So a
18 correction.

19 CAPT LOWELL: Yeah, and when you
20 go to a new chart, is you literally have to go
21 back to -- well, certainly in the Arctic
22 region you start from nothing, or virtually

1 nothing.

2 You pretty much start over, and
3 that means you have to go back to square one
4 and you go try to find imagery for the
5 shorelines, establish where do you need to put
6 new gauges in to establish the water level
7 controls, things of that nature.

8 VICE CHAIR PERKINS: So to shorten
9 that cycle, do we have a strategy? I mean
10 when this group writes our report to the
11 Director, and when we go back individually,
12 not collectively to Capitol Hill to work these
13 issues, I guess I'm struggling with what is
14 the weakest link in the chain that helps us
15 shorten that cycle to one season instead of
16 two?

17 CAPT LOWELL: Well, I also
18 included a lot of this as the customer-
19 stakeholder outreach part, and we did that for
20 a couple of years, even before. Because on
21 the assumption that what you -- in one of
22 these budgetary environments, what we want to

1 do is make sure we're doing the right things.

2 We can't do everything for
3 everybody; what we can do is focus in on that,
4 and part of that focusing, it takes a lot of
5 time to get that done. Then you kind of look
6 at what are the resources you have, and then
7 aim it in the right direction at that point.
8 So I'm not sure -- it's hard to answer that
9 question.

10 VICE CHAIR PERKINS: I understand.

11 CHAIR WELLSLAGER: One more
12 question. Bill.

13 MEMBER HANSON: Yeah. Captain
14 Lowell, since you used this as an example, it
15 begs a couple of additional questions if we're
16 going to talk about this in more generic
17 terms. But what is the process, you referred
18 to the locals requesting this mapping? What
19 was the process for them to request it, and
20 also, how is this paid for?

21 CAPT LOWELL: Well, it's paid for
22 pretty much out of hide. In other words,

1 there's no new money. We have a budget and we
2 spend the budget on surveying and mapping, and
3 this area was simply prioritized and it went
4 to the top of the heap.

5 The customer requirements
6 processes, we have individuals scattered
7 around the region. We refer to them as nav
8 managers. Mr. Matt Forney, who's here
9 somewhere -- Matt over there in the corner is
10 our Alaska regional navigation manager.

11 He is tasked to go out and talk to
12 the regional stakeholders, attend regional
13 meetings, harbor safety committee meetings,
14 conferences, anything and everything. We do
15 also send other people up from the lower 48 up
16 to this region.

17 But their whole job is to kind of
18 collect these requirements on a national
19 scale, and then go through some sort of a
20 vetting process, to look at where it is we
21 need to focus our effort.

22 MEMBER HANSON: So if the question

1 was asked if everybody wants to chart next
2 year, the question becomes what is our
3 capability in order to respond to those types
4 of requests, both budget-wise and staff-wise?

5 CAPT LOWELL: We're pretty much
6 stretched right now, just maintaining the
7 suite we have. Obviously, when you put a new
8 chart out there, it's simply more work,
9 because Scott asked the question about
10 updates. It now becomes something we maintain
11 long term, so that there's a continual tail on
12 that new chart.

13 So we do look at the new builds
14 very critically, to make sure that they are
15 duplicative in any way, and we're serving a
16 real requirement and need. At that point,
17 they go in the suite of -- we build it and it
18 goes in the suite, and we have to manage it
19 for the next maybe 100 years, 200 years in the
20 case of New York Harbor.

21 MEMBER HANSON: So it's part of
22 the discussion about what is the need versus

1 what is our capability. How do we meet those
2 needs?

3 CAPT LOWELL: I'm not sure I quite
4 get the question.

5 MEMBER HANSON: It's a bigger
6 question about budgets and responding to the
7 navigational needs.

8 CAPT LOWELL: No. I hear what
9 you're saying, and I acknowledge it. It is a
10 tight environment we're operating in.

11 CHAIR WELLSLAGER: Okay. We've
12 got two more questions, and then I'm sorry, I
13 know. Two minutes. David and then Lawson and
14 that's it.

15 MEMBER JAY: David Jay. I noticed
16 then when you had that inset that, of the
17 harbor itself, that there was no depths on
18 those wetland areas. So I mean this obviously
19 is another area where you didn't have enough
20 resources to get done what's an important job.

21 I mean what are those wetlands
22 that bears on future development, and

1 evaluating managing ecosystems, and
2 evaluating, you know, long term change in
3 ecosystems.

4 CAPT LOWELL: You are hitting on
5 one of the questions we're always fighting
6 with internally, is Kotzebue chart was
7 designed and built with one target audience
8 involved, and that was the safe navigation to
9 support the economic needs of the community
10 and inland.

11 All those other areas that you're
12 talking about, and actually the Fairweather,
13 of course, is not the tool to use in the
14 shallows. So what we want to do is tag
15 additional resources, bringing in the right
16 tools and technologies, to meet those other
17 needs.

18 MEMBER JAY: It seems like LiDAR
19 could have worked.

20 CAPT LOWELL: LiDAR could have
21 worked. I don't recall. Actually, I was just
22 talking to Admiral Barbor, and he, the new

1 LiDAR system that the U.S. JVLTX program has
2 is actually punching through some pretty
3 turbid water right now.

4 MEMBER DIONNE: So you're doing
5 subsurface LiDAR as well as --

6 CAPT LOWELL: Bathymetric LiDAR,
7 yes. Well, we didn't do any on Kotzebue. We
8 have.

9 MEMBER DIONNE: Earlier this
10 morning, maybe from Dr. Sullivan?

11 CHAIR WELLSLAGER: Actually, I
12 think that was terrestrial LiDAR that they
13 were looking at, not bathymetric LiDAR.

14 MEMBER DIONNE: But even so, we
15 have LiDAR at that level for accuracy for
16 terrestrial?

17 CHAIR WELLSLAGER: Yes.

18 MEMBER DIONNE: Oh, okay. That's
19 not what I've been hearing from the EPA.

20 MEMBER BRIGHAM: Yeah, John. Do
21 you have in your report what would be asked at
22 a Congressional hearing, is how much of the

1 United States Maritime Arctic is in fact
2 charted to international current,
3 international navigation standards?

4 When we were doing the AMSA, we
5 were asked by the diplomats how much of the
6 Arctic Ocean is in fact charted safely, for
7 safe navigation of international traffic? So
8 do you have a good number from, let's say, the
9 Aleutian chain to the Canadian-U.S. border?

10 CAPT LOWELL: Well, I would say
11 one chart at least.

12 (Laughter.)

13 CAPT LOWELL: Obviously --

14 MEMBER BRIGHAM: I might not be
15 convinced, but --

16 CAPT LOWELL: I mean I think the
17 further offshore you are, the safer the
18 transits, that people need to apply, you know,
19 a cautionary approach to navigating in the
20 Arctic. As you are very well aware, offshore
21 there is traffic out there. We haven't seen
22 too many problems. There are some reports of

1 potential issues, but recent data out there is
2 the stuff we've collected recently, and that's
3 -- I think you could almost put a couple of
4 pins on there, and that's would be all the
5 coverage we have.

6 MEMBER BRIGHAM: Well, I mean the
7 issue is if we're going to have traffic
8 routing, ecological sensitive areas, marine
9 spatial planning, it better be charted and the
10 hydrography better be complete coverage to do
11 that stuff.

12 Because if you don't, I mean the
13 baseline, I mean I'm preaching to the choir
14 here, but the baseline won't be there to do
15 those kinds of things, to manage safely.

16 CAPT LOWELL: Obviously, it's a
17 regional problem. We only have so many
18 resources, and they're very, very focused on
19 clear requirements right now. But everything
20 like, you know, safety, port of refuge type
21 work that we're doing down around the Aleutian
22 chain right now, that needed to be done for

1 decades. So we're chipping away at it.

2 CHAIR WELLSLAGER: Larry, did you
3 have something you want to say? No. Okay,
4 Michele.

5 MEMBER DIONNE: Is this considered
6 sort of a dynamic area, in terms of
7 sedimentology? I mean do you expect a lot of
8 changes?

9 CAPT LOWELL: You're talking about
10 the Kotzebue area right now?

11 MEMBER DIONNE: Yeah.

12 CAPT LOWELL: I think those shoals
13 move around a bit. My understanding is the
14 barge company goes in and puts buoys in. They
15 have some, you know, small vessel that kind of
16 tracks out where that little channel is. It's
17 known to naturally occur there, and they mark
18 it slightly differently every year. So I'm
19 not sure how long that chart will be useful,
20 but at least one year by God.

21 MEMBER DIONNE: When you have built
22 a few multimillion dollar houses, there is a

1 little more interest in terms of mapping.

2 CAPT LOWELL: Well, I think we
3 need to talk to the Governor about that.

4 MEMBER DIONNE: Yeah. You cannot
5 put them on the wetland but you can put them
6 pretty close for most states.

7 CAPT LOWELL: All right. Thank
8 you very much.

9 CHAIR WELLSLAGER: Our next
10 speaker is Michele Jacobi.

11 MS. JACOBI: Thank you all, and I
12 realize that I'm standing between you and
13 lunch, so I will try to make this quick and
14 cover the topics that you want to hear. I
15 just have to reestablish my Internet
16 connection, but I will get there.

17 Okay. So I'm here to talk to you
18 today about ERMA, which is the Environmental
19 Response Management Application, and I'm from
20 the Office of Response and Restoration.

21 My colleagues, Amy Martin, Allison
22 Bailey and Hayley Pickus are all actually in

1 Kotzebue right now, working on gathering data
2 for this project. So they send their regrets
3 and they have sent me instead.

4 As you heard this morning from Dr.
5 Sullivan, ERMA is a data compilation and
6 visualization tool. It's been built in
7 conjunction with the University of New
8 Hampshire, U.S. EPA and NOAA, and the intent
9 of this tool is to help environmental
10 responders have the information they need in
11 order to prepare for and respond to incidents
12 that may impact our trust resources.

13 So it's kind of a deal in which
14 you want the full picture, and a picture is
15 worth a thousand words. So if you have all
16 the data together, you're likely to make more
17 informed and proper decisions about how to
18 respond to the incident.

19 So again, ERMA is intended to
20 provide kind of a centralized information
21 port, and increased communication between the
22 different agencies that are responding, as

1 well as the general public.

2 We've used ERMA in the past to
3 deal again with preparedness, and so we often
4 attend drills with the Coast Guard and with
5 industry. We look at it for oil exploration;
6 we can deal with it for hurricanes that are
7 coming through, because we have that type of
8 information.

9 My end of the area is actually
10 with assessment and natural resource damages
11 assessment for the resources, after an event
12 like this has occurred, and then some of you
13 might recognize ERMA from the fact that it was
14 the common operational picture during
15 Deepwater Horizon.

16 So we could take the information
17 from the command post and share it directly
18 out to the public, to be very transparent in
19 what was going on down in the Gulf.

20 So real quickly, we have a data
21 center which receives information. Either it
22 could be from the satellites, it could be from

1 ships, it could be from weather buoys, or it
2 can be from a command post, and this data set
3 is unloaded on the fly, put into the data
4 center, and then streamed out over the
5 Internet.

6 So it doesn't matter if you're in
7 Barrow, Alaska, you're here in Anchorage or in
8 D.C., you can go to a website and pick up this
9 map.

10 I don't mean to scare you with
11 this diagram here, but this is the basic
12 software infrastructure of ERMA, and the point
13 here is that we have both restricted data that
14 happens during an event, an incident oil
15 spill, that's sensitive, as well as public
16 data sets, things like the bathymetry, land
17 use, the environmental sensitivity index for
18 the shoreline. All these data sets are from
19 the publicly-available.

20 They go out. We also reach out to
21 our partners, to the Office of Coast Survey
22 for the charts, to the National Weather

1 Service for the weather data. We work with
2 the Coast Guard for the vessel tracking. This
3 information is then fed into ERMA, so we don't
4 have to maintain it and we're going to the
5 true source. Then it goes out to the web, and
6 anyone who has the URL can access the
7 information.

8 So the benefit, key benefit I find
9 in ERMA is that you don't need special
10 software to install. It's just your web
11 browser that you can go to and get the
12 information. Again, if you have everyone
13 looking off the same picture, you can improve
14 collaboration and coordination among the
15 agencies that are responding, and again, be
16 transparent to the public about what's going
17 on in an area.

18 So and the best feature I find of
19 it is it's very customizable. So you have
20 different sets of information that you want to
21 show. So you can customize the map to display
22 whatever your particular need or interest is.

1 It could be the charts, it could be the
2 weather, it could be the hill shade or the
3 recent bathymetry. All that can be overlaid
4 with information like habitat and what have
5 you.

6 So what we're doing for Arctic
7 ERMA, because we've made these ERMA's in other
8 parts of the country, is we're trying to
9 represent significant activities in the
10 Arctic, which is defined from the U.S.,
11 Canada-Beaufort, Chukchi, and down to the
12 Bering Straits.

13 We're looking to include not just
14 U.S. data but reaching out to our partners in
15 Canada and the other international communities
16 in the Arctic, to include their data feeds as
17 well. And again, we're not creating much new
18 information. We're leveraging existing
19 programs.

20 So the new information that we put
21 in is during an actual event, but we leverage
22 in the existing groups like GENA, AOS, the

1 other feeds in the area. What's really good
2 about building the Arctic platform is we've
3 just come off of Deep Water Horizon. So all
4 the lessons learned from that last two years
5 can be directly applied to this new emerging
6 area for us.

7 Just quick background. ERMA was
8 initially funded within internal NOAA money.
9 We also got money from OSRI, to set up the
10 site development and work with the response
11 community. And then you may have heard just
12 this past spring, BSEE put another pulse of
13 money into the system, in order to expand our
14 capabilities and take us both online as well
15 as offline.

16 So sometimes in this area you lose
17 communication, and we can do a stand-alone
18 version of this. So when you're not connected
19 to the WiFi because of infrastructure, you can
20 still access these data sets. And again,
21 we're also reaching out to get new data sets
22 from the local communities, like this workshop

1 that's going on this week in Kotzebue, to help
2 with natural resource damage assessment.

3 So these are the basic information
4 that's in ERMA, and I will get to a demo. So
5 we have base mapping information, weather and
6 buoys, resources at risk, and we can also look
7 to documentation as well. So we have a
8 Kotzebue chart that we just put in last week,
9 and the interesting thing about ERMA is you
10 can actually zoom in to the particular scale.
11 So it's a cascading charts, and so they change
12 by the zoom scale as you move in.

13 We also take in the electronic
14 navigational charts, and as soon as the
15 Kotzebue one becomes available, we'll take
16 just as the captain was speaking, we'll take
17 that feed in directly, put it into our system.

18 Again we have the active oil and
19 gas lease areas for the region. We have the
20 shipping routes and we have a compilation of
21 past incidents. The marine life at risk from
22 previous data sets. That's not to say as new

1 data sets come along, we're not going to
2 include them. But we try to get as much of
3 the base data as we can.

4 And of course, because this is a
5 spatial thing, we're going across borders. We
6 can go from the U.S. into Canada, because you
7 know that your trust resources don't obey the
8 state boundary. We've also put in the area
9 contingency plans for oil spill response, and
10 so you have each of these locations on the
11 map, where if a spill occurred, there would be
12 a certain set of actions that you can take.

13 So we link directly out to the
14 source file, and you can figure out exactly
15 what booming strategy, what resources are
16 there, what's the most at risk species, and we
17 have hard copy maps as well available.

18 Again, we're reaching out beyond
19 U.S. borders. We take data feeds directly in
20 from Norway, which is interesting because of
21 course we have a language issue when we get
22 the data sets in. So this has been a lessons

1 learned for us in developing ERMA, when
2 dealing with multiple languages from data
3 feeds.

4 We're taking in the sea ice, and
5 so you can see over time, the forecasts from
6 the National Ice Center, as well as you can
7 post photos. So when you see that this is 80
8 percent coverage, what is that photo or what's
9 the picture of that ice information actually
10 mean?

11 And then we have real-time data
12 feeds that I talked about before. This is an
13 example of the HF radar that we get from the
14 AOS feed, along with some currents
15 information. We also have put in like the web
16 cams from Barrow, Alaska. So you can see what
17 the conditions might be if you were on the
18 street corner there.

19 ERMA was used this spring in order
20 to visualize the Nome fuel delivery, in which
21 we were looking and tracking the Healy as it
22 went north, and we could also actually put in

1 images of what they were seeing off their
2 bough. So that was a good test for ERMA as we
3 were just getting it up online.

4 Now I'm going to jump into the
5 demo and hope that the WiFi is working
6 smoothly.

7 MEMBER DIONNE: The BSEE is an
8 acronym that I'm not familiar with.

9 MS. JACOBI: Sure. A part of DOI,
10 the Bureau of Safety Environmental
11 Enforcement, the agency formerly known as MMS.

12 So this is just a live feed off of
13 my air card, and I've just put on some
14 information. So you have a map window, you
15 have your standard, you know, you can move
16 around the hand. You can zoom in and zoom
17 out. We have a whole mess of data here on our
18 layers tab. But what I'd like to do is make
19 a lot of bookmarks, which zooms directly to
20 information that's of interest.

21 So here, what I have shown are all
22 the ships from the Coast Guard, as well as the

1 sea surface temperature and then the wind
2 bars. So I can just kind of zoom in an area
3 and it's going to come in and show me the
4 direction of the wind and the information
5 coming from the Weather Service. Yep.

6 MEMBER DIONNE: Real-time, right
7 now or what?

8 MS. JACOBI: Yep, so see I have my
9 little time stamp here? Right there, and
10 please people, if you have any questions, just
11 jump right in. So I just pulled up a couple
12 of zooms for you, to show -- I wanted to show
13 the real time buoy feeds.

14 Again, this is coming from the
15 National Data Buoy Center, from CO-OPS and
16 from AOS. These are the different data feeds
17 in which I can actually -- if I go to the
18 Identify button, I click on my tide station.
19 I'm going to link back out to the CO-OP site
20 and I'm going to get the data feed there.

21 The same would go with the buoy,
22 in which I have the information that's

1 conveyed from the stream, and I can also link
2 back over to the source page. So --

3 VICE CHAIR PERKINS: Ms. Jacobi?

4 MS. JACOBI: Yep.

5 VICE CHAIR PERKINS: Is this built
6 on top of open source GIS standards, or is it
7 on commercial off the shelf?

8 MS. JACOBI: No, it's built on
9 open source standards, because that was the
10 most cost effective way to go, and allowed us
11 to adjust, based on stakeholder needs pretty
12 quickly.

13 VICE CHAIR PERKINS: So is it a
14 common data standard between ERMA of Alaska
15 and ERMA of Norway?

16 MS. JACOBI: I'm not sure I'm
17 totally understanding your question. If the
18 Norway feed is OGC or open-source compliant,
19 I can receive the information. I have a
20 language barrier, though.

21 VICE CHAIR PERKINS: Yeah, but as
22 we open this Arctic shipping lane and the two

1 areas come together, do we have a common data
2 standard already established, so as that as
3 your buoy data becomes of interest to them and
4 their data becomes of interest to us or
5 whoever's stuck in the middle, do we have a
6 common data standard already mapped out, so
7 that this system will work all across?

8 MS. JACOBI: So the request has
9 been made that we follow the open-source
10 compliant format, which, fortunately, many off
11 the shelf products like ESRI deliver in that
12 mode. So do we have a formal written down
13 contract that says all new data will go this
14 way? No, but we do have a best practice in
15 which, as we meet with the different councils,
16 we say we're using open source standards. We
17 would like you to do the same.

18 VICE CHAIR PERKINS: Okay. So
19 have the eight Arctic countries all agreed to
20 that data standard?

21 MS. JACOBI: That I do not know
22 the answer to. I know that I have data from

1 Canada, Norway and we're working on two other
2 countries. Most GIS groups are trying to be
3 proactive and go to that standard.

4 VICE CHAIR PERKINS: Okay, thank
5 you.

6 MS. JACOBI: Yep, and then I'll
7 give you just a couple real quick ones. We
8 also have the multibeam data sets that are
9 coming in. So here's an example in which I
10 have the contours. I have the recent
11 multibeam bathymetry data sets.

12 In addition to showing the area
13 that was surveyed, I can also link out to an
14 actual map of it for the final product.
15 Again, we have the shipping routes, the areas
16 in which vessel traffic would go and let me
17 show you this legend here, in which I can have
18 the ice concentration as well as where BOEMRE
19 is looking, for oil exploration.

20 I can zoom in here and I can see
21 that these are the areas in which BOEMRE has
22 looked for seismic surveys. Then I have one

1 more for you. To go back to the nautical
2 charts -- oh, I knew it was going to be a demo
3 and something was going to break. Oh, there
4 it is. There's it is. There's the hill
5 shade.

6 So here in which I have the
7 nautical chart, but let's say I also care
8 about the hill shade. So I can go back over
9 to my layer file and I can bring this to the
10 front and it will overlay. So I have
11 seamlessly put on the hill shade from, you
12 know, the survey, alongside of the chart.

13 So I thought that was something of
14 interest to this group. So that's kind of my
15 overview for that. Then I was just going to
16 hit with next steps for Arctic ERMA, would be
17 again moving forward to again get more data
18 sets, make sure that we're receiving
19 information from our fellow countries for the
20 Arctic, do outreach to the local communities
21 to define their natural resource data
22 information and information that they find

1 relevant to their communities. Did you have
2 a question?

3 MEMBER JEFFRESS: Yes. Are you
4 working on any smart phone apps to integrate
5 crowdsourcing data, which apparently is a
6 growing source of really good information, as
7 long as you can get like the latitude and
8 longitude correct, in the right format, et
9 cetera?

10 MS. JACOBI: So that is a hurdle
11 that we want to go towards. It's a so quickly
12 advancing field, in which we have some efforts
13 going towards smart phone or iPad apps. We're
14 kind of hoping that our base, open-source
15 software, takes the lead in that, so it's not
16 so much on our guys to do that.

17 But we do have groups investing in
18 that, because I know within six months, that's
19 going to be need. We do have folks who go out
20 and do shoreline assessments, and they use
21 their mobile phone. They take a picture. We
22 can take that feed in. So we can do photo

1 recognition off of, you know, smart phone
2 picture. I think there was another question.

3 MEMBER KUDRNA: Yes. NOAA also
4 has, through AOS' regional associations, a
5 principal charge of collecting data from a
6 common place. It looks like you're also
7 asking for similar data. What is the
8 relationship between ERMA and the regional
9 associations, so there's a clear indication of
10 path of data, locally collected, available?

11 MS. JACOBI: Yes. The best
12 practice, and Molly can speak to this as well,
13 would be that rather than double-asking the
14 community, we go first to AOS.

15 Someone from AOS is actually at
16 the workshop that we're doing this week in
17 Kotzebue, and so that's the way we'd like to
18 go going forward, in which to not duplicate
19 any effort, and to leverage off of the
20 existing compilations that AOS has done. I
21 know there's a question in the back.

22 MS. THOMA: Hello. My name is

1 Schawna Thoma and I'm with Senator Begich's
2 office, and there's been a lot of talk about
3 tsunami debris. Does it seem like the ERMA
4 would be an appropriate tool to use for
5 tracking debris as it moves, potentially moves
6 toward Alaska and other regions?

7 MS. JACOBI: Yes, so the Marine
8 Debris Program for NOAA is actually part of my
9 office as well. So when confirmed data
10 reports for debris are in, we actually put
11 that within the Pacific Islands ERMA, because
12 the source of the debris came from Japan and
13 the Pacific Islands. But as it goes forward,
14 we would then display it in other ERMAs as
15 needed.

16 MS. THOMA: Thank you.

17 MS. JACOBI: Yes, sir.

18 MEMBER BRIGHAM: Yes, I'd just
19 answer what I think our vice chair asked about
20 data. It's the World Meteorological
21 Organization and its subgroup working on
22 Arctic. The Arctic states wouldn't go kind of

1 rogue and independent of the rest of the
2 world.

3 The same with IHO and the Arctic
4 Regional Commission. We're working on
5 standards together, so there's some
6 consistency. We have a working group in HSRP
7 that's dealing with Arctic issues that I'll
8 report on this afternoon.

9 But I'll say that one of our
10 points is that the database that you need to
11 run the trajectories and all of that is not
12 here in Alaska, specifically sea ice, tides
13 and currents.

14 But there's a longer list. So our
15 working group says that, and this is not a
16 criticism of the ramp-up of this; it's a
17 criticism that we don't have the observational
18 network to support some of the output.

19 If you ran trajectories today of
20 the data I just saw on the maps, they would
21 not be robust, I would say. They would be
22 kind of swags and guesses on where the oil

1 might go, whatever you're trying to model. So
2 the system is tremendous, but for the Arctic,
3 where there's not robust observations, it's --

4 We're not there yet without the
5 level of observations that we need in high
6 resolution form, I think, to get output from
7 the model. At least that's what our working
8 group will tell us all and report in to the
9 Administrator.

10 CHAIR WELLSLAGER: Michele.

11 MEMBER DIONNE: Yes. I'm a member
12 of the New York COOS, which is the Northeast
13 Regional Association of Coastal Ocean
14 Observing Systems, Strategic Planning and
15 Implementation Team. We call it the SPI team.
16 But anyway, you know, they've been struggling
17 since their inception with how to have
18 standardized data templates and formats, and
19 they have been working on that.

20 But they have a ways to go, and I
21 would think that you'd want to communicate
22 with all the Coastal Ocean Observing Systems

1 of what you're doing, so at least they're
2 aware of it, because they're a good source of
3 data feed, not for the Arctic but maybe it's
4 just the scale that's throwing me off.

5 When I saw your slide with all the
6 buoys on it, it kind of wowed me. I mean it
7 seemed like a lot of buoys, compared to what
8 we have in the Gulf of Maine. So maybe it's
9 just a scale thing.

10 But a couple of other questions
11 that came to mind, Dr. Sullivan was talking
12 and related to what you're talking about, of
13 course, is that is this a model that can be
14 transplanted to any other part of our country,
15 you know, is we sort of know what to
16 prioritize, which areas of our coast we ought
17 to map to a better scale or Y unit the maps?
18 Can you do that with what you've set up here?

19 MS. JACOBI: Sure. We have
20 actually, ERMA's in a variety of regions around
21 the country, that have -- we actually started
22 in New England, because of course we were from

1 the University of New Hampshire, so it would
2 be best to start in your backyard.

3 MEMBER DIONNE: Right. I'm sure
4 New Hampshire is well-mapped. I'm not worried
5 about New Hampshire.

6 MS. JACOBI: And so it's a
7 standard framework in which we lay down in a
8 geographic area, dictated usually by the Coast
9 Guard or EPA, and then we put in our national
10 layers, which is the whole buoy feed that you
11 saw for the country.

12 MEMBER DIONNE: Right, yes.

13 MS. JACOBI: And so, yes, it can
14 be applied across the country.

15 MEMBER DIONNE: Yes. So I would
16 just suggest maybe a little bit of dialogue
17 with the Coastal Ocean Observing Systems. I
18 don't know how many there are. There must be
19 10 or 12 by now.

20 MS. JACOBI: Yes, absolutely.

21 MS. RIDGWAY: Thank you. Michelle
22 Ridgway with Oceanus Alaska, and also with the

1 Alaska Deep Ocean Science Institute, and you
2 were speaking about the Gulf spill.

3 I was wondering to what extent
4 ERMA was involved in tracking and monitoring
5 dispersal of oil at depth, tracking the oil
6 plume underwater, and if you were involved,
7 what do you envision as being your source of
8 data for such tracking of a spill in the
9 Arctic?

10 MS. JACOBI: So right now, ERMA is
11 not a 3D visualization tool, so we don't go
12 subsurface on that end. It's just not within
13 the 2D scale of this. We have within our
14 office different modelers that do that work,
15 and they do the 3D visualization.

16 I think in the long run ERMA could
17 get there or a variation thereof to visualize
18 it. But it's more Emergency Response Division
19 modelers that do that sort of subsurface. But
20 there was information collected during the
21 response that did look at those events. I
22 just didn't visualize it in ERMA, because it

1 was subsurface.

2 So my last points were that we're
3 intending to launch this in June, so it's
4 coming right up, and our next steps would be
5 to take this out to drills and events of
6 opportunity, such as the Shell drill that's
7 going to occur later on this week for the
8 tabletop. So that's my presentation. Yes,
9 sir.

10 MEMBER JAY: David Jay. I noticed
11 that your web hosting seems to be out of the
12 University of New Hampshire, not out of NOAA,
13 and is that planned to transition to NOAA?
14 We've certainly had a bad experience with
15 other contractor databases going away after a
16 time period if they don't get brought into the
17 --

18 MS. JACOBI: Right. No, our
19 office is fully committed to ERMA on that end,
20 and I think in the long run, our goal is to go
21 into a cloud environment, within the federal
22 cloud, and that's taken some steps in which to

1 get that IT and infrastructure put forth.

2 When we go there to the federal
3 cloud, that would be our next step. But right
4 now, we have a very good partnership with UNH,
5 and it's worked very well to this point
6 because of our Cooperative Research Institute
7 there.

8 CHAIR WELLSLAGER: I've got a
9 question.

10 MS. JACOBI: Yes, sir.

11 CHAIR WELLSLAGER: The URL, is
12 this for anyone to be able to use? Is it a
13 secure URL?

14 MS. JACOBI: Yes. So again, we're
15 not launching it until in June, next month.
16 But yes, you have an address, and then if you
17 were looking at restricted data, emergency
18 responders would have a special login and
19 password.

20 But information like the charts,
21 the CO-OPS data, the weather, that's all
22 public information that's available. So you

1 wouldn't need a special login for that.

2 CHAIR WELLSLAGER: So where would
3 I go to find that information?

4 MS. JACOBI: So when we totally
5 launch out to the general public next month,
6 there's a URL for that, and I have a sheet for
7 the information on that. It's just not quite
8 ready for prime time. That's why I'm hesitant
9 on that, but we'll pass that out for sure.

10 CHAIR WELLSLAGER: That's fine,
11 okay.

12 MEMBER DIONNE: You get something
13 for the Gulf of Mexico on Google. Somebody
14 was interested in that a few minutes ago.

15 MS. JACOBI: Yes, right. Yes, sir.

16 CAPT LOWELL: Yes. You're talking
17 about these systems as a regional, regionally-
18 implemented and regionally controlled. Is
19 there, you know, like a central point that you
20 can kind of go in and see all of these, and
21 simply go to the region you want, or do you
22 have to actually go to the Arctic region or

1 the Gulf region or the Maine region?

2 MS. JACOBI: Because of the breadth
3 of data sets that come in, particularly like
4 for the Gulf of Mexico, you know, there's tens
5 of thousands of layers there. So we didn't
6 want a centralized database, because it would
7 slow down the timing.

8 However, this summer, we're
9 redoing our architecture, in which although we
10 might have data tables that are relevant to
11 that region, you could see them by a single
12 upload and appear in other regions. But
13 that's more work to be done this summer, but
14 I do see that need, to be able to see data
15 across regions. Yes, sir.

16 MS. WATSON: Excuse me. Please use
17 the microphone so that you can be transcribed.

18 MR. CUSICK: Joel Cusick, GIS
19 specialist for the National Park Service.
20 Does ERMA currently serve up the best
21 available NOAA vectorized shoreline, or are
22 the data sets that you ingest or the shoreline

1 that that data set was derived from, multiple
2 sources, USGS, et cetera?

3 MS. JACOBI: I think the goal in
4 the long run is to serve up the best rectified
5 NOAA shoreline. I think that's coming soon,
6 and we would take that feed when it was
7 available. Right now, as of today, we're
8 serving up the current shoreline. I think
9 maybe Juliana can speak more to the shoreline
10 stuff.

11 Their office does put out a GIS
12 format, and we would ingest that feed
13 directly. It's probably within the next
14 couple of months. That would be the desire.

15 MS. BLACKWELL: Michele, this is
16 Juliana Blackwell. As far as what ERMA takes
17 in now, I don't know what the plan -- I don't
18 know what you're currently taking in for
19 shoreline other than what you've already
20 mentioned.

21 The best available shoreline is
22 being utilized and working through the Coastal

1 Services Center to make that available, and I
2 would expect that, you know, merging those
3 products into your product is something that
4 we'd all want to have happen. I don't have a
5 timeline or an idea of how that is
6 progressing.

7 MS. JACOBI: And that's exactly
8 where we pull the current shoreline now. We
9 go from the coastal marine spatial planning
10 shoreline and the digital atlas, and we pull
11 those data sets in, along with the raster
12 charts. So --

13 MEMBER MILLER: Just one comment.
14 I know that there's a University of Hawaii
15 group, the IPRC, I think it's International
16 Pacific Research Center, and they are doing --
17 just for informational sake -- they are doing
18 modeling of the debris paths and so forth.

19 So it's, I don't have the URL, but
20 just IPRC is under University of Hawaii and
21 you can find it.

22 MS. JACOBI: Thank you.

1 CHAIR WELLSLAGER: Thank you very
2 much, Michele. That was very interesting.

3 MS. JACOBI: Thank you.

4 (Applause.)

5 CHAIR WELLSLAGER: It is now time
6 for lunch. Now please keep in mind too, we
7 are planning to depart for the Port of
8 Anchorage site visit at 1:00, and the idea is
9 to dress down, if you will, a little bit, try
10 to get some more comfortable clothes on,
11 business casual type of thing.

12 So before we leave at 1:00, it
13 would be good if maybe you could take ten
14 minutes out, 15 if you see the need to, to go
15 back to your room and get some comfortable
16 shoes on, maybe a sweater or lose the tie,
17 whatever you want to do at the time. But try
18 to be back here at one o'clock.

19 LT FORNEY: Actually, let's shoot
20 for 12:30. Our goal is to be at the port and
21 they're all ready to go, by one o'clock. So
22 let's please shoot for departure around 12:30.

1 CHAIR WELLSLAGER: The speaker
2 doesn't end at 12:30.

3 LT FORNEY: I do believe the
4 speaker is supposed to end at 12:30, and then
5 transportation to is going to go from 12:30 to
6 1:00. So our goal is to be at the port by
7 1:00.

8 CHAIR WELLSLAGER: Okay. Change
9 quickly. All right, very good.

10 MEMBER DIONNE: When are we back
11 here?

12 CHAIR WELLSLAGER: Well, we'll be
13 eating -- oh, be back here after the thing?

14 LT FORNEY: After the speaker.

15 CHAIR WELLSLAGER: After the
16 speaker time, run to your room real quick and
17 then come back.

18 And there will be breakout
19 sessions on Thursday. If the panel members
20 here and the general public would like to
21 please sign up for participation in one of the
22 four user group breakout sessions, we'd

1 greatly appreciate that, and I guess it's
2 lunch time.

3 MEMBER BRIGHAM: You want us back
4 here at 3:30, though, to have our briefings of
5 the working groups?

6 CHAIR WELLSLAGER: Yes, yes.

7 MEMBER BRIGHAM: That's for
8 everybody, right?

9 CHAIR WELLSLAGER: That's correct.

10 (Whereupon, at 11:32 a.m., the
11 above-entitled matter went off the record and
12 resumed at 12:03 p.m.)

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

12:03 p.m.

CHAIR WELLSLAGER: I would like to take the opportunity to welcome the Honorable Reggie Joule to address the HSRP panel.

REP. JOULE: Good afternoon, everybody. My name is Reggie Joule. I serve in the State House of Representatives here in Alaska, and this afternoon, I'd like to, first of all, welcome to our state.

My district is just a little bit north of Anchorage. It runs from the Canadian border to the northern coast of Alaska, almost to the Russian border and the western coast of Alaska.

It has an area roughly of about 120,000 square miles, just a small piece of real estate that includes ANWAR, Prudhoe Bay, NPRA, vast coal reserves over by Point Lake. The largest lead and zinc mine in the area, which is the Red Dog mine, which the Lieutenant Governor talked about a little

1 earlier.

2 So that's -- the two largest
3 communities are Barrow and Kotzebue. I am an
4 Inupiaq person. Translated, I guess that
5 would mean I am Eskimo. We created the
6 Northern Waters Task Force by resolution in
7 2010. Mead Treadwell, our Lieutenant
8 Governor, as somebody very involved in the
9 Arctic, had a much better sense of what was
10 happening nationally and internationally with
11 conversations about the Arctic.

12 He made a phone call, and one of
13 the other things that I do is I chair a group
14 of legislators called the Bush Caucus, and we
15 are a group of legislators who are mostly
16 rural. So and not generally speaking, not
17 connected by road except maybe in one or two
18 cases.

19 But we are not Anchorage, not
20 Fairbanks representatives, but almost the rest
21 of the state. They contacted the Bush Caucus,
22 to see if there would be an interest in

1 putting a task force together to take a look
2 at some of the issues with regards to the
3 conversations of the Arctic. So we dubbed it
4 the Northern Waters Task Force.

5 Because of our ice and its melting
6 all of that you're familiar with, what does
7 that mean for the state? What does it mean
8 for industry? From my perspective and the
9 people that I represent, what does it mean for
10 the local people, those who call that area
11 home?

12 There's opportunities and
13 challenges for the groups that you see there,
14 and at this point and at this juncture,
15 because this becomes a little bit more
16 important later, the United States is a member
17 of the Arctic Council because of the location
18 of the state of Alaska.

19 And so we are seated. Our
20 geography plays a very important factor,
21 present and looking forward to what's going to
22 happen in the Arctic, and how data-gathering,

1 research and all of that plays important, in
2 addition to the fact that here we are in 2012
3 and 2013. Canada will take over the chair of
4 the Arctic Council.

5 Two years later, in 2015, that
6 will be the United States. Do we have a plan
7 on how we use that chair essentially in North
8 America for the next four years? These are
9 the members. Our task force was made up of
10 people from the legislature, both the House
11 and the Senate; also from the administration,
12 with our Commissioner of Environmental
13 Conservation, North Slope Borough Mayor Edward
14 Itta, Unalaska City Manager Chris Hladick,
15 Nome Mayor Denise Michels, NANA Corporation
16 Vice President Chuck Greene. We had Alaska
17 Marine Conservation Council, Dave Kubiak. So
18 we had a broad representation on that group.

19 We were to find a way to create a
20 state-federal commission, responsible for
21 overseeing development. I don't know that we
22 got all there, but at least you'll see from

1 the recommendations we started down that
2 trail. Facilitate regional coordination,
3 cooperation and outreach, to keep the local
4 stakeholders informed, and finding a way for
5 them to be engaged in the activities of their
6 homeland; identifying coordinated efforts of
7 mutual concern for federal, state, local and
8 international agencies, and to conduct
9 hearings around the state.

10 I'm not used to one of these
11 things. I keep craning my neck to look back
12 and the screen's right in front of me.

13 These are the places that we met.
14 You can see that we met in some of the bigger
15 cities. We toured the Red Dog mine.
16 We went to the small community of Wales, which
17 is in the Bering Straits just north of Nome,
18 where you can see Little Diomed Island, which
19 belongs to the United States, and just beyond
20 it, you can really see Big Diomed Island,
21 which belongs to Russia, and you can see the
22 Russian mainland. Sarah Palin should have

1 been there.

2 I can't believe I just said that.
3 Having said that, you could see Russia from
4 Wales, and you could see Russia from Alaska.
5 But more importantly, that community is the
6 community that's going to see probably more
7 than anyone else the marine traffic.

8 Whether it's support marine
9 traffic for the North Slope, for the Red Dog
10 mine, fuel barges, groceries, heavy equipment
11 for construction, all of those things, and the
12 summer, the beginning of the drilling season
13 for Shell, and all of the traffic that's going
14 to be associated with it.

15 Their concern in the community of
16 Wales is pretty simple. You can wrap it up in
17 two words: food security. So we heard public
18 testimony from them.

19 We heard also from Wainwright,
20 which is just south of Barrow. Wainwright is
21 a little bit different community.

22 Most of us, as indigenous people,

1 have some real concerns about all of activity,
2 the offshore. But it's not our decision.
3 It's a federal government decision, and the
4 community recognized that, and they didn't
5 want to play politics with it on who was for
6 it, who was against it.

7 Their attitude was: if it's going
8 to happen, how can we position our community
9 to mitigate and to benefit, which was pretty
10 astounding for me to see. Very forward-
11 thinking, and so we are able to just hear
12 experts from universities, the military.

13 Oh, I might mention, because in
14 the make-up of our membership, while Rear
15 Admiral Tom Ostebo could not be an official
16 member, he was a liaison and attended pretty
17 close to every single meeting that we had, and
18 the Coast Guard was present when we went to
19 Wales and some of these other communities, and
20 it was great to have people there.

21 This is the area, these are the
22 areas that we chose to focus on. Arctic

1 governance; oil and gas and mineral
2 development; Arctic fisheries; marine
3 transportation; Arctic research; and
4 infrastructure.

5 These are in our executive
6 summary. These were our top three
7 recommendations coming out. We recommended
8 that the state of Alaska and the federal
9 government provide Alaskans with meaningful
10 opportunities to participate in Arctic policy
11 and Outer Continental Shelf development
12 decisions, particularly with those Alaskans
13 likely to most be impacted by changing
14 conditions.

15 Meaningful local input, utilizing
16 local and traditional knowledge with our data
17 collection, with your research. Oftentimes,
18 that age-old knowledge is the reason to
19 conduct some of the science and research that
20 needs to be done, as we're looking forward,
21 while that information is still there.

22 We recommended that the Alaska

1 state legislature create a commission to
2 develop a comprehensive state strategy for the
3 Arctic. That was coming out as we wrapped up
4 our recommendations in December, and came out
5 with this report in January.

6 Since that time, the Alaska
7 legislature passed a resolution creating the
8 Arctic Policy Commission. Those members will
9 be named by the president of the Senate and
10 the speaker of the House, and it will consist
11 of 20 members. It kind of morphed into
12 something a little bit bigger than we had
13 anticipated.

14 One of the things that we found
15 with the Northern Waters Task Force was that
16 with 11 members, we were missing stakeholders,
17 and so as the legislation went through the
18 process, the legislature expanded the
19 membership to 20 members, and they will be
20 appointed, if not later this summer by early
21 fall.

22 We also recommended that the

1 Alaska state legislature continue to urge the
2 United States Senate to ratify the United
3 Nations Convention on the Law of the Sea. Now
4 I'm sure most of you are aware that a lot of
5 the action to address that issue is just
6 getting underway in the United States Senate
7 as we speak.

8 There's going to be a huge push,
9 with I think conservatives, environmentalists
10 both, coming to the table, making their pitch
11 to the United States Senate, to ratify this
12 treaty and climb on board. That would be in
13 the best interest of everybody from Hillary
14 Clinton to -- if you look at all of the
15 surviving presidents, former presidents of the
16 United States are all on board.

17 This is something this country
18 needs to do, and that is something that the
19 legislature sent a resolution back to
20 Congress, to support the Senate in making that
21 change.

22 Changes in the Arctic make it

1 necessary to evaluate the adequacy of existing
2 Arctic governance structures, and to consider
3 adjusting these systems and creating new ones
4 to better suit developing needs. The evolving
5 Arctic will require unprecedented cooperation
6 among Arctic nations to sustain communities
7 and environments. That's just -- it's kind of
8 the obvious, stating the obvious.

9 In Alaska as we developed our
10 resources, we've had the luxury of being able
11 to develop those resources on state lands,
12 primarily oil and gas. That's where we get
13 our revenue. Looking forward, we're just not
14 in our backyard anymore.

15 When we get into those waters, oil
16 spills don't know boundaries, fish don't know
17 boundaries, and the marine transportation that
18 we're going to see, that we are seeing evolve
19 will be using both the Northwest and soon the
20 Northeast Passage, or the Northeast Passage
21 and soon the Northwest. So there will be a
22 lot of targs-boundary issues.

1 We support the development and
2 implementation of a comprehensive Arctic
3 strategy. We know we have one, what we don't
4 see is the implementation for that strategy
5 coming from our Congress. You've heard it
6 today; we're a little bit behind the eight
7 ball. There's a lot going on, and I don't
8 think we're ready.

9 For you all, I know to some degree
10 your hands are tied. But we have to continue
11 to make the case on behalf of you and the
12 things that you're trying to do in terms of
13 data collection, in terms of the research that
14 needs to happen.

15 If you're not able to do it all,
16 is it not so much in your best interest but
17 the interest of the country and the state,
18 maybe to consider contracting some of that
19 stuff out, so that gets done maybe not on all
20 of us just your shoulders, but sharing that
21 load with other competent businesses, that can
22 accommodate those same issues.

1 And we have another recommendation
2 here with regards to Arctic governance, that
3 the state of Alaska and the state legislature
4 support greater international cooperation and
5 engagement with the Arctic Council and with
6 the Inuit Circumpolar Council.

7 Russia, United States, Canada,
8 Greenland are members of the Inuit Circumpolar
9 Council, and they're very active. ICC Alaska
10 is very active, and part of our message was to
11 self, because we need to utilize local
12 entities that have a relationship with
13 international bodies, and use that resource.

14 Oil and gas, mineral exploration.
15 The U.S. Geological Survey estimates 13
16 percent of the earth's undiscovered oil
17 reserves and 30 percent of the undiscovered
18 gas reserves are in the Arctic. The majority
19 of oil is likely to be offshore, and we will
20 find out here in the next few years, as
21 drilling, to find out what quantities.

22 Drilling has been done. We know

1 it's there. It's how much is there, and then
2 how do we get it to market? In perspective,
3 this may equate to 90 billion barrels of oil,
4 1700 trillion cubic feet of gas, or 44 billion
5 barrels of gas liquids.

6 We have a 40-year history and
7 experience in Alaska oil and gas exploration,
8 production and transportation. Now there's,
9 as I just briefly mentioned, that we have 70
10 wells have been drilled off of Alaska's north
11 coast.

12 The Trans-Alaska Pipeline, which
13 has transported over 15 million barrels of oil
14 in the Arctic over the years, and we need to
15 build on this experience and extend
16 infrastructure and transportation systems to
17 accommodate new exploration and continued
18 production.

19 As the Lieutenant Governor
20 mentioned, we are less than 600,000 barrels a
21 day in the Trans-Alaska Pipeline. The
22 Northern Waters Task Force recommends that the

1 state of Alaska and the U.S. develop a
2 framework for the identification, acquisition
3 and sharing of data to support leasing,
4 permitting and other agency decisions.

5 We recommend that the state of
6 Alaska and the U.S. support continued
7 improvement in the ability of industry and
8 government to prevent, contain, control and
9 remediate spills in the Arctic.

10 This bullet, I think, highlights
11 how inadequately prepared we are. We
12 currently don't have very much of this, but we
13 have people who are working on it, and I think
14 more resources need to be committed, both from
15 the public and the private sector, and that we
16 also recommend that our University here in
17 Alaska be established as an oil spill research
18 center.

19 Arctic fisheries. Some years ago,
20 the North Pacific Fisheries Management Council
21 closed the Arctic waters from the point of
22 Bering Straits all the north to the Canadian

1 border, for the purpose of trying to see
2 whether or not, and gathering data to see
3 whether or not there would be a sustainable
4 harvest of different species there.

5 So it's currently closed for the
6 purpose of seeing whether or not at some point
7 it could be opened. As some of you are, I'm
8 sure, aware, we contain some of the world's
9 largest, most valuable fisheries. Scientists
10 are discovering that a number of sub-Arctic
11 species, such as cod, herring and pollock, are
12 expanding their habitat further north and
13 creating commercial fishing opportunities.

14 This is the kind of assessment and
15 data collection and research that needs to get
16 done, before we make the decision to jump in
17 there and get our feet wet. The third bullet
18 is one I just mentioned at the opening. We
19 recommend increasing fisheries research and
20 monitoring in the area.

21 We encourage the state of Alaska
22 and the United States government to continue

1 actively negotiating fisheries accords with
2 other nations. We recommend that the state of
3 Alaska and the federal authorities prepare
4 strategies to maximize the degree to which
5 local communities and resident Alaskans can
6 benefit from the development of commercial
7 fisheries in waters north of the Bering
8 Straits.

9 You know, whether it's oil and
10 gas, resource development, fisheries, we have
11 other nations who want to develop these
12 resources. We also have communities that have
13 very, very little economy.

14 When you have to go, and I smile
15 with somewhat envy here, when I go and pay \$4
16 and I think it's 42 cents a gallon for
17 gasoline now here in Anchorage, and when I
18 was home this spring, I filled up 12, 15
19 gallons.

20 Two six-gallon jerry jugs and a
21 three gallon tank in my four-wheeler, \$102.
22 And yet this is how we provide for our food

1 security, whether it's the utilization
2 motorized transportation. We've kind of
3 evolved. Dogs are only for sport these days,
4 or mostly, and so we've evolved as technology
5 has evolved, and it comes with a very steep
6 price.

7 Marine transportation. We spent a
8 lot of time on this, and this part we had, as
9 you can well imagine, relied quite heavily on
10 the Coast Guard to put this part of the
11 recommendations together.

12 Diminished sea ice has led to
13 increasing commercial shipping and two trans-
14 Arctic sea routes. An estimated 6,000
15 individual vessels operated in the Arctic in
16 2009.

17 Tourism and passenger vessels are
18 increasing, and I kid you not. You know, my
19 family originates from Point Hope. If you
20 look on the map, it's north of Kotzebue, south
21 and west of Barrow. It's one of the oldest
22 continuously inhabited places in Alaska.

1 But they're starting to see cruise
2 ships. Cruise ships are popping up around
3 Barrow, and sometimes, you know, we overreact
4 to the wrong thing. Alaskans and especially
5 folks in my area kind of reacted, as one could
6 expect, in opposition or with very much
7 concern to drilling in the Arctic for oil and
8 gas.

9 I think marine transportation is
10 the thing that we need to be watching. I
11 talked, I listened to briefly, when I wasn't
12 on a teleconference with the assembly at home,
13 but as I listened and I glanced at the map and
14 I'm grateful for that, and I listened to the
15 questions of how does this get paid for, how
16 are we going to do all of this, and the
17 thoughts that go through my head is, you know,
18 the people that I represent don't care who
19 pays for it.

20 Let's make this information
21 available, so when it comes to marine
22 transportation, we have safe routes, charted

1 routes for that transportation to occur in.
2 Because at the end of the day, if anything
3 happens with boats running aground -- we had
4 a fuel barge last year get free from its tow,
5 and we were very concerned. How is that going
6 to impact our food security?

7 A lot of this for us, I'm
8 switching hats between being chairman of the
9 Northern Waters Task Force for Alaska, a
10 representative of a district, and a person in
11 Alaska who personally but also represents
12 people who use much of this area for food
13 security.

14 Tourism. You can see there's
15 great reason to be concerned. This is a
16 traffic pattern during the summer of 2010. It
17 doesn't quite look like I-5, maybe more like
18 I-10, depending on which part of the country
19 you're from. But there's lots and probably
20 going to get bigger or even more complex.

21 The Bering Strait is a unique
22 international waterway, gateway to Arctic

1 shipping. The Bering Straits is a unique link
2 between the Arctic and the Bering Sea
3 fisheries, which account for over half of the
4 commercial harvest in the nation.

5 Safe shipping through this area is
6 critical for the protection of the region,
7 world class commercial and food security
8 resources. Subsistence sometimes is hard to
9 explain from an indigenous point of view. But
10 when we use the words "food security," it kind
11 of cuts through the mustard. And so I'm using
12 that a little bit.

13 So here's the recommendations. We
14 recommend that the United States, the state of
15 Alaska and the international community work to
16 finalize the Polar Code. We recommend that
17 the United States, the state of Alaska and the
18 international community examine whether to
19 establish an offshore vessel routing scheme
20 for circumpolar marine traffic, including
21 through the Aleutians.

22 You heard a little bit earlier

1 about some of the concerns with that and why.
2 We support the increasing short- and long-
3 range navigational aids in the North America
4 Arctic, and extending automatic identification
5 system vessel tracking across the North Slope
6 waters, to Tuktoyaktuk, which is in Canada,
7 northern Canada.

8 I'll just take this opportunity to
9 give you what I thought was feet on the ground
10 example, of why this is so important. Wales,
11 Alaska a year ago, actually it was almost a
12 year ago. It was in the summer, ice-free.
13 The community is saying well, we see a lot of
14 traffic but we also see some dumping. How do
15 we report the dumping?

16 I said, well, there's the
17 Commissioner of DEC there, and the
18 Commissioner of DEC, Department of
19 Environmental Conservation, said, actually,
20 that's not our jurisdiction. That belongs to
21 the Coast Guard.

22 And they said, well, we need the

1 numbers. We need the numbers of those
2 vessels. They're kind of like the identifying
3 numbers on an airplane if they're flying below
4 500 feet. So I thought of this place down in
5 Juneau. Bob, what's the name of it that
6 tracks all these vessels? The Marine Exchange,
7 thank you, and I said, actually, here's what
8 you do. If you can get the date, time and
9 direction, that's all you need. You can call
10 the Marine Exchange and you can have an
11 identified boat right there, because they'll
12 know when it was there, date and time and
13 which way it was moving, north or south.

14 So between the Coast Guard and the
15 community, it was like "Oh, wow. This is
16 pretty cool." So it was great. Arctic
17 infrastructure, you've heard a little bit
18 about ports and harbors, the need for marine
19 vessels. You heard a little bit about the
20 Renda and the Healy this winter, trying to
21 bring fuel to Nome.

22 When I saw this, I thought to

1 myself, wow, is this a peephole to the future?
2 Oh, the slide on the left, that's my home
3 community. Just thought I'd bring that up.
4 Oh, I'm sorry. The slide on the left, oh,
5 this one. This is the front street of
6 Kotzebue. That's sheet piling and that
7 protects us from erosion.

8 So our recommendations are there.
9 I've got about three minutes, but as you can
10 see, we need to make sure that the people that
11 fund budgets understand that we need
12 icebreakers for our people to do the jobs that
13 we task them with.

14 If we're going to see more of
15 this, are we going to continuously have to
16 look to foreign fleets to take care of our
17 business?

18 The mapping issue. Important
19 recommendation. It's going to be very
20 important as we talk about harbors. This is
21 just polar icebreakers of the world, you can
22 see where we fall. It's kind of like our

1 education statistics, not quite at the top.

2 Research. Rather than talk to
3 each one of these, what I will say is we
4 understand there's a need for research. You
5 are responsible for much of it, as are other
6 federal agencies, and I guess what we
7 recognize is the need to synthesize that
8 information so that there's integrated and
9 accessible.

10 So with that, that's the Northern
11 Waters Task Force, and I will tell you that a
12 full report of the Northern Waters Task Force
13 report can be found on, let me see if I can
14 get the right acronyms. It's ANWTF.org. A
15 full report can be found there.

16 I thank you for the opportunity
17 for allowing me some time to come in and make
18 this short presentation. I will just go on to
19 say that I do look forward to the Arctic
20 Policy Commission being put together. Many of
21 the other countries have these, and our state
22 doesn't.

1 Our nation has one, sorta kinda,
2 but really no plan of implementation. So we
3 look forward to the continued work. Good day
4 and thank you very much.

5 (Applause.)

6 MEMBER DIONNE: Can I ask a quick
7 question about the state and federal policy?
8 Would you folks be vulnerable at all to the
9 sort of thing that happened to the Cree during
10 the development of HydroQuebec, being
11 displaced, moved out of the way if you're in
12 the way, that kind of thing?

13 REP. JOULE: I'm sorry. I'm not
14 able to hear.

15 MEMBER DIONNE: Okay. Well, in
16 Quebec, the Province of Quebec, there was a
17 hydro project. There is a hydro project, but
18 it involved, even in this late day and age,
19 where we're always saying we're so sorry with
20 what we did to the indigenous peoples, they
21 were removed out of their subsistence way of
22 life, because they were in the way.

1 REP. JOULE: We have shown, I
2 think, over time, we've got about 40 years of
3 oil and gas development. There's about 30
4 years or 25 years of the Red Dog Mine, that at
5 least on the onshore areas, they've been able
6 to coexist. But it's taken some work on both
7 sides.

8 Now we're moving to the offshore,
9 actually the action has been in the offshore
10 more recently, and that's where the concern is
11 with, and that's why I bring up the issue of
12 food security. I think that with the data
13 collection, with the utilizing and maintaining
14 open communications and more than just
15 communications, but dialogue with local
16 people, will go a long ways to reducing some
17 of those conflicts and finding a way forward.

18 CHAIR WELLSLAGER: Captain Lowell,
19 could you --

20 CAPT LOWELL: Yes. I just wanted
21 to thank Reggie for his time, for coming out.
22 We really appreciate it and the views on the

1 Northern Task Force, and I believe we'll go
2 ahead and check that URL and send it out to
3 all the panel members, the complete report.

4 There's a number of good
5 recommendations in there. Actually, I noted
6 the one on data-sharing, so --

7 REP. JOULE: Well, you know, I'm
8 going home this afternoon. My community's 30
9 miles above the Arctic Circle. We still have
10 ice and we're waiting for breakup.

11 But it's a wonderful time of the
12 year, and it's too bad -- and I understand you
13 went down to south central Alaska, and got to
14 see some of the areas around Homer and some of
15 the things going on down there.

16 But we're a very diverse place,
17 and it's unfortunate you're not able to see
18 all of it. But it would take some time.

19 CHAIR WELLSLAGER: Here's a
20 coaster for you.

21 REP. JOULE: Oh, thank you.

22 CHAIR WELLSLAGER: Thank you very

1 much.

2 (Applause.)

3 CAPT LOWELL: Just a quick one on
4 logistics. Will all the panel members, I hope
5 everybody's in fairly reasonable attire at
6 this point, head on down to the lobby and
7 we'll go ahead. I believe there's a number of
8 vans.

9 We'll all get in the vans. We'll
10 head over. There will be two groups going,
11 and I guess we'll just handle that off the
12 cuff once we get to the port. So let's keep
13 on moving here, and we'll all come back,
14 reconvene at three o'clock for continued
15 discussions, for anybody who wishes to come
16 back.

17 MS. WATSON: And the room will be
18 locked.

19 CHAIR WELLSLAGER: Oh yes. The
20 room will be locked. If you want to leave
21 your gear in here, we'll go ahead and secure
22 it up.

1 (Whereupon, at 12:42 p.m., the
2 above-entitled matter went off the record, and
3 resumed at 3:34 p.m.)

4 CHAIR WELLSLAGER: Okay. For
5 those of you that aren't familiar with what
6 we've got going on right now, in the Norfolk
7 meeting, we had a facilitator come in on
8 Thursday before the meeting ended, and we as
9 a panel did some brainstorming and came up
10 with a need to see what's going on, make some
11 changes, track some things, create working
12 groups.

13 Of the three working groups that
14 were created, one was Legislative Policies and
15 Initiatives. The second was Strategic
16 Mission-Centered Effectiveness, and then the
17 third was Emerging Arctic Priorities.

18 During the course of the six to
19 eight months since the meeting, we've had
20 conference calls; we've worked internally,
21 tried to come up with ideas, and the ideas now
22 are what we're going to present to the

1 committee as a whole, to see basically where
2 things are.

3 There is also going to be a need
4 for the new panel members, to see what we've
5 done and to sign up to join some of the, one
6 of these three groups, because what's going to
7 be said here is still a work in process. So
8 nothing's going to change. It's just going to
9 be this is where we are at this point in time.

10 All right. The chair of our
11 Legislative Policy Initiatives is Susan
12 Shingledecker, who was or probably still may
13 be pregnant and unable to make this meeting.
14 So Scott Perkins, the vice chair, was kind
15 enough to say he would take the ball and run
16 with this, and Scott's the first up. So
17 Scott, if you could please?

18 VICE CHAIR PERKINS: Great. Thank
19 you, Chairman. As Matt said, Susan is the
20 chair of this working group, and I want to
21 thank Joyce and Jeff and Matt for their
22 contributions on it. So we've been working

1 this issue since Norfolk, a variety of -- not
2 a variety, a series of conference calls, and
3 we've broken this down into four bullet areas,
4 you know, from a legislative affairs and
5 policy standpoint.

6 So looking at the Hydrographic
7 Services Review Panel and possible
8 opportunities for cost savings in this. David
9 Kennedy presented at a conference, I heard in
10 D.C. earlier this year, you know. The net
11 result is about a 17 percent reduction, you
12 know, in the budget, for the nav services, for
13 the tri-services.

14 So being cognizant of that, what
15 can we do as a panel to save costs, you know,
16 so that we can preserve dollars for the
17 programs, because it's the programs that are
18 important, not us as a panel. Looking at the
19 Hydrographic Services Improvement Act that's
20 up for re-authorization, you know, 113th
21 Congress, you know, there will be an
22 opportunity.

1 There are things there from a
2 legislative standpoint that the members of
3 this committee individually may have an
4 interest in working that legislation, you
5 know, on the Hill, in trying to get some
6 beneficial language changes in the existing
7 HSIA Act.

8 The topic of user fees, which
9 another working group has been tasked with,
10 crosses over to obviously this one, and then
11 we were looking at if we went forward with
12 another ten most wanted report, what could we
13 do differently in that report that would
14 better support, you know, our initiatives
15 here, you know, from that point of view.

16 So looking at the cost reductions,
17 you know, geographic locations of the meeting.
18 So some of the industry feedback that we
19 received is that we have become an exclusive
20 organization, and it's difficult to attend an
21 HSRP meeting is one point of view.

22 So meeting locations in Hawaii,

1 meeting locations in Anchorage for those of
2 our east coast peers, there's a little bit of
3 a school of thought that geez, you know, it's
4 just very difficult to get to an HSRP meeting.
5 They've been in Duluth, they've been in
6 Hawaii. Now they're in Anchorage.

7 I would say, my observation, you
8 know, if direct observation is worth anything,
9 our attendance and our participation this
10 morning at this meeting, you know, exceeded
11 what we've probably had at any of those other
12 locations. Definitely trumped the attendance
13 we had in Norfolk, Virginia.

14 So geography does matter. So I
15 think there's a pro and a con to that
16 argument, but it is something we could be
17 aware of and consider from a cost standpoint.
18 The meeting logistics, you know. What
19 possibly could we save if the HSRP meetings
20 were hosted by panel members at their place of
21 business or by their resident university or
22 government agency?

1 You know, there's a certain cost
2 point of entry to have a meeting at a public
3 forum like this. Could we accomplish the same
4 thing, preserve some funding that could be put
5 back to the Nav Services line offices? So
6 that's part of the school of thought and the
7 discussion that's been going on in the working
8 group.

9 The other issue is the panel
10 member compensation, the stipend. We are in
11 a unique class of FACAs, HSRP. It is not
12 common for FACAs to be compensated for their
13 time. So that's another issue that as a
14 panel, and as our working group, that we
15 identified.

16 You know, it's a significant
17 portion of the overall budget for the FACA,
18 you know, for HSRP is the compensation that we
19 receive. So you know, open kimono.
20 Everything's on the table, no holds barred,
21 right? That's our task, is to look at these
22 things and review them.

1 So that's what this working group
2 has identified and we kept it to four. I mean
3 there's no point in having a long laundry
4 list. So that's what the working group has
5 been engaged in.

6 The HSIA re-authorization in 112th
7 Congress, you know, call it a lame duck
8 Congress, call it an inept Congress. I don't
9 care what you call it. HSIA is not going to
10 go forward, right? But fortunately, before
11 Paul Bradley's reassignment and now with Craig
12 Woolcott, unfortunately who couldn't be here
13 with us, NOAA staff has been engaged with
14 Congressional staffers. There has been
15 advance work on draft wording, draft
16 legislation.

17 So when the 113th Congress
18 convenes, you know, it's our understanding
19 from the working group that NOAA is prepared,
20 and that there have been some draft
21 legislation already prototyped, so that we can
22 go to the 113th Congress with the HSIA re-

1 authorization, hopefully favorable, you know,
2 to both our industry partners, to our academic
3 partners and to the tri-services.

4 Another issue is if we're going to
5 release the most wanted report in 2013, how
6 could we develop a stronger tie, you know, in
7 that most wanted report in the HSIA
8 legislation? You know, the most wanted report
9 was kind of a stand-alone thing that prior
10 FACAs did.

11 For the new members, if you
12 haven't seen or received a copy of it, I'm
13 sure that we can facilitate you getting that.
14 It's a good reference document, but it's not
15 necessarily the way we want to go forward, you
16 know, and report out our activities from this
17 particular panel, you know, that's engaged now
18 through our terms.

19 You know, inside HSIA there are
20 recommended levels of authorization. One of
21 the things that, you know, we look at one
22 simple program, the mapping and charting base,

1 and then inside that, the shoreline mapping
2 program that I'm familiar with from my prior
3 work as a contractor.

4 You know, the funding on it is
5 woefully insufficient to meet the need. So
6 the discussion came to user fees. How could
7 we generate more revenue for these programs,
8 more funding for these programs, and could it
9 be done through user fees?

10 Could a GPS user fee be put in
11 place? Could a user fee, similar to what
12 sportsmen pay when they buy motor oil and
13 fishing lures and, you know, and I forget the
14 name of the legislation that funds that for
15 Fish and Wildlife. But could a similar user
16 fee for geospatial possibly be something that
17 we could take to the 113th Congress, as a way
18 to generate mechanism.

19 I like the idea of a tollgate up
20 here at the Bering Gate. I thought it was a
21 good idea this morning. You know, and so
22 looking at language specifically, you know, to

1 the Arctic region in that regard. There's a
2 lot of commerce that's going to take place
3 here.

4 There may be an opportunity where
5 user fees could help self-fund, you know, some
6 of the efforts, and could also be used as a
7 funding mechanism potentially for ports. Both
8 of those items are assigned to different
9 working groups.

10 Looking at the level
11 appropriations, and I know the chart's hard to
12 see, but it's a woeful story, right? We had
13 ARRA funding in 2008. Things spiked up and,
14 you know, adjusted for inflation. We're not
15 getting any more money, so we have to be
16 better stewards of the money we have, and make
17 it go farther and try to find that strategic
18 way to be more efficient with it, and be
19 better stewards of the taxpayers' money to
20 meet the needs of safety of navigation.

21 You know, there is current
22 legislation that prohibits the use of user

1 fees for the acquisition of nautical data. So
2 that may be legislative wording that we need
3 to work, or our associations, peer groups,
4 other people of shared interest could work
5 that issue, and try to get, you know. Maybe
6 we can get different wording in there that
7 opens that door up for us with the HSIA re-
8 authorization.

9 You know, if we go forward with
10 the ten most wanted, one of the things in the
11 working groups said that we definitely should
12 do is develop a one-page summary about HSIA.
13 At the end of that working group, trying to
14 tie that legislation back to the most wanted
15 list, to make that connection, you know.

16 Maybe there's a way to use that
17 type of a report to help gain some traction
18 for re-authorization of HSIA, you know, in the
19 next Congress.

20 Obviously, any way we can tie it
21 together to the private sector, creation of
22 jobs, economic benefit, create that casual and

1 beneficial relationship between that
2 legislation and the broader economy will
3 probably help us with the sell and the
4 delivery on Capitol Hill.

5 MEMBER DIONNE: Can you just put
6 Wal-Mart on the bottom of that list?

7 VICE CHAIR PERKINS: So that's
8 what the working group has been focused on,
9 you know, for our working group. You know,
10 there are two other working groups that came
11 out of the meeting in Norfolk that had been
12 created, so you'll hear, you know, briefings
13 from each of them.

14 I think, you know, entertaining
15 some questions from each working group at the
16 conclusion and then a further discussion at
17 the end. So this is where you push the button
18 and a red light comes on.

19 CHAIR WELLSLAGER: Okay. So do we
20 have any discussion questions for Scott?

21 Yeah, Frank.

22 MEMBER KUDRNA: On the first topic

1 of cost savings, I guess when I first saw your
2 list, I would have -- I think those are good
3 items you listed. I would have assumed they
4 would have been broader, looking at the
5 function of NOAA and not just the FACA
6 committee.

7 VICE CHAIR PERKINS: Yeah. When
8 we talked about it at the working group, you
9 know, fix our own house first, right, live in
10 a glass house. The concept was kind of that
11 leadership by example, you know. If we can
12 demonstrate that as a working group, as a FACA
13 that we're willing to preserve funds for the
14 programs, you know, take that step first and
15 then look.

16 I guess it's not our job to be an
17 audit agency, you know, as a panel, you know,
18 for these programs. It's our job to review
19 and make recommendations for improvement,
20 efficiency, you know. So we were trying to
21 avoid getting into that being an audit or
22 making an analysis of the financial

1 performance of any one of the three branches.

2 MEMBER KUDRNA: So the working
3 group definition, is it -- it's both or it's
4 just the FACA?

5 VICE CHAIR PERKINS: Well, I don't
6 want to misstate this, but the HSRP panel's
7 job is comment and review, not audit. So we
8 were trying to balance that line.

9 But we said we can look at our
10 piece of that budget that is spent on us as a
11 panel, that would be within our domain, you
12 know, for our consideration, and it goes into
13 the HSIA re-authorization.

14 So I believe it was Admiral West
15 that got the wording, got the funding put in
16 place that pays the stipends to this
17 particular FACA. Somewhere around between
18 1,300 and 1,600 other FACAs exist. I'm not
19 100 percent certain on this answer, but we may
20 be in an extreme minority as FACA members
21 receiving this compensation.

22 So in this particular economic

1 climate, we said that was an area that we
2 could touch, that had to do with the finances,
3 without getting into their business and trying
4 to look into the tri-services branches, into
5 their finances.

6 MEMBER KUDRNA: I think those are
7 fine recommendations. In just all the other
8 FACAs I've served on, have taken that
9 efficient license much larger. If you're
10 talking about a 17 percent reduction in a
11 portion of the agency, I think there's a need
12 to look at a broader swath than just the FACA
13 committee.

14 MEMBER MILLER: But one of the
15 things that we are looking at is what was --
16 the authorization bill has numbers in it, and
17 so that budget we looked at, we are looking at
18 what were the preceding authorized numbers,
19 and taking recommendations from like Paul, who
20 was advising us, to look forward to the re-
21 authorization, to make recommendations on what
22 the overall budget, you know, what the HSIA

1 should recommend.

2 So we are looking at a broader
3 sense. Scott, I would say that we were
4 looking at that little piece of the HSRP
5 expenses as sort of a first step perhaps.

6 VICE CHAIR PERKINS: Uh-huh, yeah.
7 You know, the working groups were formed in
8 Norfolk. This is our first meeting since
9 then, you know, and as a new panel member, I'm
10 going to say I welcome you, Frank, to join,
11 get in the working group and to bring that to
12 the table, because we're creating from scratch
13 here, so there's nothing off the table.

14 So don't let my response -- I
15 don't mean to be stonewalling you. Maybe we
16 should look deeper at the finances, you know,
17 of the operations of the tri-services, without
18 overstepping the authorized role and
19 responsibility of the HSRP. Yes Chairman.

20 CHAIR WELLSLAGER: One other
21 thing, Frank. In looking at the meetings and
22 such, we are to hold two a year. Well, all

1 right. That being said, it doesn't
2 necessarily say how the meetings have to be
3 held or where they have to be held, and
4 discussion has been within the working group
5 itself, to instead of having both of the
6 meetings at locations of somewhere other than
7 say Capitol Hill or the D.C. area, if we were
8 to have one of those meetings there, we could
9 accomplish a few things actually, probably a
10 bit more readily.

11 One, we would have a greater
12 possibility of having more administration
13 people be able to attend those meetings and
14 provide input. Secondly, we would not have to
15 worry about travel costs for NOAA
16 administration, and thirdly, as Scott
17 indicated, there is a chance that we might be
18 able to have the meetings facilitated at some
19 of the committee members' locations
20 themselves. Like USBoat would be a
21 possibility.

22 So a significant amount of money

1 might be able to be saved in something like
2 that. Now, you know, it might be a small drop
3 in the bucket, but it's at least us showing
4 the tri-office directors that we're trying to
5 help save money for them, because you know in
6 essence, they're the ones footing the bill for
7 this whole thing.

8 VICE CHAIR PERKINS: Great. Well,
9 we have two other --

10 MEMBER BRIGHAM: Well, I'd just
11 comment that --

12 VICE CHAIR PERKINS: Certainly
13 Lawson.

14 MEMBER BRIGHAM: The Arctic
15 Research Commission is a FACA, and routinely
16 we fund, we pay for the time of the
17 commissioners. In fact, we have commissioners
18 go out to various meetings and are on boards,
19 on working groups. Whenever they do that,
20 those actions, their time is at least somewhat
21 reimbursed.

22 All senior level people like all

1 of us, I mean it's a routine thing. I don't
2 think this is an anomaly. I think if we look
3 at all the FACAs, I'll bet, I think we looked
4 at it in a commission, 20 percent had some
5 funding arrangements. Depending upon the
6 level of the commission or the working group,
7 and if it was fairly high level, experienced
8 executives kind of people, that it's just --
9 it was just a routine thing.

10 VICE CHAIR PERKINS: Yeah. Like I
11 said, that wasn't a GAO report, that it -- the
12 National Geospatial Advisory Committee is a
13 FACA, and that one is, you know, run by
14 Interior. The members of that FACA are not
15 compensated. My prior service to the Small
16 Business Administration in a similar capacity
17 wasn't.

18 But yeah. But we wanted to put it
19 on the table, you know, just and you're all
20 here. You know, if nothing else, it ought to
21 get a reaction, right?

22 MEMBER KUDRNA: And in answer to

1 your question, I'll volunteer.

2 VICE CHAIR PERKINS: Great. Well,
3 I will turn it over to Dr. David Jay, who's
4 going to report next on their working group
5 activities. Thank you.

6 CHAIR WELLSLAGER: Okay. Real
7 quick before we do that, having seen or heard
8 what Scott had to show for a presentation of
9 what we've actually done as the working group
10 for the re-authorization, is it a feeling of
11 the panel that we're moving down the right --
12 we're moving in the right direction?

13 Is there changes that you think
14 should possibly be considered or made, or I'll
15 open the floor up for discussion, as to the
16 general consensus as to what progress we've
17 made to date within this group.

18 MEMBER JAY: If I might, Matt. I
19 think I suggested to you earlier that it might
20 be a good idea if each of these groups took
21 what input we could get here, and then had a
22 dinner meeting of the group, you know, got

1 together over dinner and as a preparatory
2 thing to the next stage of trying to take this
3 a little bit further.

4 CHAIR WELLSLAGER: Okay. If we
5 were going to do something of that sort, that
6 probably won't work in this meeting. But it
7 would be something to consider because we have
8 --

9 CAPT LOWELL: Yeah, John Lowell
10 here. I was going to say it's probably a
11 reasonable idea, and I was just noting that on
12 the last day here, there is a, looks like an
13 hour set aside to kind of consolidate the
14 views on the progress of the working groups
15 and the direction that the working group is
16 going.

17 So I think you're right. I think
18 we can take some input until the all the
19 working group members here have listened to
20 it. Maybe refine that a little bit,
21 informally, off the record, and then try to
22 consolidate the opinion of the panel as to

1 that's the direction you want these working
2 groups to go.

3 I think where we want to get at
4 the end of this meeting, is some affirmation
5 that the working groups are doing the work
6 that you want them to do and they're headed in
7 the right direction, barring any slight tweaks
8 of the activities within the working group.
9 So I think that's reasonable.

10 CHAIR WELLSLAGER: Okay, good.
11 Thank you. Bill?

12 MEMBER HANSON: Matt, if I can
13 just ask, what is the next step with this, the
14 next --

15 CHAIR WELLSLAGER: Lawson.

16 MEMBER BRIGHAM: Well, I think
17 that in our letter to the Administrator, that
18 we should have one page for each of the
19 working groups, bulletized list or something
20 of issues that all of, that we could get
21 consensus on from the whole of the HSRP, and
22 attach it to the Administrator.

1 We might not get agreement with
2 all the NOAA staff, on the issues or consensus
3 there, but we might get consensus among the
4 HSRP on some headway on some of these issues.
5 I think it should be reported out, because we
6 have the working groups.

7 CHAIR WELLSLAGER: We do that, and
8 I think if we were to build on what Captain
9 Lowell had suggested on Thursday, we could
10 kind of put our minds together and see where
11 things are going, and if we want to modify the
12 direction, change the direction or do
13 something at that point in time, we'll come up
14 with that idea then.

15 Right now, it's more of a this is
16 where we are in the grand scheme of things,
17 and we're reporting out.

18 MEMBER HANSON: That's great.
19 This is a great start. I think it's all good
20 stuff. Just we'll make sure when we draft a
21 letter, that we give something that is
22 actionable, something they can actually do

1 something with, not just make us feel better
2 about having done our jobs.

3 CHAIR WELLSLAGER: Right.
4 Michele.

5 MEMBER DIONNE: Another point to
6 make would be that, thank you, is that, you
7 know, you're going to have these working
8 groups doing homework in between meetings, and
9 that's another sort of value-added element to
10 it, what the FACA does.

11 CHAIR WELLSLAGER: Joyce.

12 MEMBER MILLER: It would be -- I
13 think it would be very useful. For instance,
14 I worked on the user fees issues, trying to
15 figure out what the legislation was and so
16 forth, and got some good feedback from NOAA
17 staff. But from those of you in the Coast
18 Survey that have been there for a long time,
19 you know, know how these things run.

20 You know, to say well, I don't
21 think you have a snowball's chance in wherever
22 of getting user fees in or yeah, that's a good

1 thing to consider, you know. It might be
2 practical. It's just that would be the
3 feedback that I'd be looking for, before we go
4 any further in trying to figure out what to
5 recommend, just from the experienced people
6 that have run these gauntlets.

7 CHAIR WELLSLAGER: Right. Okay.
8 Dr. Jay.

9 MEMBER JAY: Thank you. Well, as
10 you can see, the first place that I did
11 somewhat rename the committee, I called it the
12 or we called it the HSRP Strategic
13 Effectiveness Committee, a subcommittee. The
14 wording that was suggested to us seemed rather
15 long and cumbersome.

16 So we decided we would rename
17 ourselves, and also these are our committee
18 members, and we will need one item of
19 business, of course, is probably going to be
20 to replace Sherri, since she's no longer with
21 us, and we probably do need someone else to
22 work on this.

1 So like the previous group that
2 Scott was -- whose work Scott was describing,
3 we also picked four areas or worked on four
4 different areas that were chosen at the
5 previous meeting, the first of which was
6 improving and supporting the port system. The
7 second one was responding to changing water
8 levels and inundation threats. The third was
9 improving NOAA's products and services and we,
10 to a large extent, did take our inspiration in
11 that area from the ten most wanted list of
12 2007, was that put out?

13 MS. WATSON: The first one, and
14 then the update was 2010.

15 MEMBER JAY: Yeah, okay, and since
16 I don't think most of those have happened,
17 those aren't necessarily outdated. So we went
18 back to those. Then Gary's idea of improving
19 outreach and branding, that seemed like a real
20 important topic where we could maybe do
21 something original.

22 So PORTS. Well, I don't think I

1 have to tell most of you that PORTS is
2 critical for safe navigation and important to
3 many management activities and agencies. The
4 PORTS systems now exist in 21 major U.S.
5 harbors out of, I think it's about 175 places
6 where there's considerable, some level of
7 commercial navigation. That's not a
8 particularly high percentage.

9 They are inconsistently funded.
10 They tend to be a lot of the local
11 arrangements and funding is uncertain from
12 year to year. This is a real problem. I
13 haven't talked to anyone who said they have
14 all the instrumentation that they'd like.

15 There might be a port somewhere
16 that's perfectly happy with what they've got,
17 but our local people are not, and I know
18 several other groups would like more sensors,
19 and there's no way to by and large -

20 Well, there's no systematic way to
21 come up with funds for upgrading a system or
22 even deciding what system ought to be

1 upgraded, other than just a local group taking
2 initiative and deciding they want their own
3 system upgraded and paying for it themselves.

4 Models are woefully chosen. I
5 understand there is an effort to stabilize
6 with FVCOM as a universal model. But I think
7 it's probably fair to say that -- well, there
8 are pros and cons to that, and I'll talk about
9 that a little bit later.

10 So we thought that we had the
11 following suggestions, and we phrase these at
12 this point as suggestions, and they're very
13 much for the group and comment, public comment
14 to discuss.

15 We should clarify funding
16 mechanism or mechanisms. Does that mean user
17 fees, and it's not obvious if you don't use
18 user fees where money is going to come from in
19 the present environment.

20 One approach to the
21 instrumentation problem would be to establish
22 a minimum set of sensors. Navigation is not

1 the only user. There are important management
2 activities, and even if one conceives of
3 management as the primary user, that may
4 suggest sensors that are, in addition to those
5 that might be used by a captain needing to nav
6 -- or a pilot needing to navigate a ship.

7 For example, in our situation,
8 relating specifically to the modeling,
9 dredging is a big issue, and modeling, you
10 know, sediment transport would in our system
11 be a highly desired modeling component. That
12 might not be a typical issue. Maybe nobody,
13 you know, other systems might not care about
14 that at all.

15 So there will, I think, my thought
16 on this anyway is there will need -- there
17 will continue to be a tension between
18 localization of models, you know, we need this
19 model because it does this, and the desire,
20 necessary desire from the NOAA side of things,
21 to for heaven's sakes we've got to standardize
22 on one model. That's just a tension that

1 we're probably stuck with.

2 We also felt that it would be
3 useful to possibly expand PORTS to other
4 seaports, where a cost-benefit analysis
5 suggests this makes sense. However, in the
6 present funding climate, that will not happen
7 unless there is some user fee arrangement.

8 The first problem, the clarified
9 funding mechanism, has to be dealt with, in
10 order to even consider doing that. Finally,
11 there are a lot of observing system efforts
12 out there now. PORTS is not the only one.
13 Better exchange of data and an ability to see
14 all of the instruments in an area might be
15 very helpful to some, at least some users.

16 And in terms of innovation,
17 looking internationally to see what are they
18 doing in Hamburg; what are they doing on the
19 Danube River. We're not the only place in the
20 world, or what are they doing in Melbourne.
21 The Dynamic Under Keel Clearance stuff came to
22 the Columbia River from Melbourne, Australia.

1 So there is interesting innovation
2 going on in various parts of the world that we
3 need to learn about.

4 Okay. So water levels and
5 inundation issues. We tend to think of the
6 water level spectrum as roughly having four
7 parts: mean sea level, tides, waves and
8 surge, and due to climate change and of course
9 there are tsunamis on top of that, and then
10 but due to climate change and varying other
11 factors, in different parts -- along different
12 parts of our coastline, different parts of the
13 spectrum are changing.

14 So because partly of subsidence,
15 sea level rise is quite rapid on the U.S. Gulf
16 Coast. Sea level rise, tectonically, the U.S.
17 West Coast is broken up into a lot of little
18 bits, and in some places sea level rise is
19 important, some places it's not.

20 On the other hand, there's a broad
21 stretch of the U.S. West Coast where even
22 despite minimal sea level rise in the last 20

1 years, there's been increased coastal erosion
2 due to increased wave action, bigger waves and
3 more severe storms.

4 So no one needs to be able to
5 respond flexibly with better information for
6 users, and one of the challenges here is the
7 sheer length of diversity of the U.S. coast,
8 and then also the issue of the historic NOAA
9 data are poorly known, inaccessible and not
10 really catalogued anywhere, and for issues
11 like sea level rise, where long records are
12 extremely important, this is a big issue.

13 This is when I kind of got stuck
14 here, because I wasn't quite sure where else
15 to put it, the coupling diverse models that
16 deal with different aspects of coastal change
17 is really important, and yet pretty hard to
18 do, and involves cooperation with people
19 outside of NOAA.

20 In terms of suggestions, we need
21 to improve data delivery and model coupling
22 for planning, management and mapping, and for

1 crisis response. The ERMA stuff was very
2 informative today. I was not aware of that,
3 and so that, we may need to put that into our
4 thinking here.

5 One thought that we had was that
6 given the overwhelming amount of -- the
7 overwhelming need relative to the financing,
8 let's put it that way, that we needed to
9 prioritize coastal areas. I gather from what
10 I heard today that there is some of that going
11 on already, with what -- Captain Lowell told
12 us something about that, and we'd like to know
13 more.

14 Geodetic information. GPS units,
15 we thought, should routinely be installed on
16 tide gauges wherever possible. I was talking
17 to someone from Australia yesterday, who told
18 me that a significant fraction of their 14,
19 count them 14 federally funded tide gauges by
20 his agency had GPS units installed. It's not
21 a very big place in population, but they've
22 been working on that.

1 And then a thought that occurred
2 to me was the taking into account the various
3 factors, changing elevations in PORTS. Could
4 we update this more continuously, rather than
5 every 20 years, roughly, which is when the
6 epoch changes now?

7 Historic data recovery. Well, as
8 expensive as data recovery may be, it's
9 cheaper than new data collection, and if we
10 make the comparison to meteorology, a very
11 large amount of effort has been done, gone
12 into re-analysis of the historic record, which
13 of course implies, the whole subset of that
14 implies a very large data recovery effort and
15 QA associated with that.

16 So products and services. We've
17 got a rising demand, larger ships and more
18 traffic, more coastal planning for more
19 people, as more than half of our population
20 lives in these coastal counties.

21 There's a problem with
22 coordination of data levels. Katrina made that

1 particularly apparent, that in New Orleans at
2 least, various agencies simply didn't know how
3 high their dykes were relative to other dykes.

4 Coastal erosion, in some parts of
5 the country anyway, is certainly a very
6 serious problem that threatens public safety,
7 ecosystems and infrastructure. We just saw
8 with the tsunami, the tragic Japanese tsunami,
9 even though it was not along our coast, there
10 was a substantial amount of damage along the
11 U.S. West Coast.

12 Then there are specific needs.
13 All right. Only one more. Specific needs in
14 remote areas like the Arctic and Pacific
15 Islands. So, all right. So I will go through
16 those very quickly, I guess, is the answer.
17 We need to better use the NOAA fleet, the
18 public-private partnerships, something the
19 first group also mentioned. We needed to do
20 something about that.

21 Improve dissemination of data
22 levels, integrate real-time GPS into surveys,

1 improve coordination. This is something we
2 took straight off of the ten most wanted list;
3 improve coordination with other agencies that
4 also have tide data. So in our local
5 situation, we have USGS gauges in the river
6 that are not visible to PORTS users.

7 We need to improve mapping outside
8 of navigation channels for other managers, and
9 prioritize specific apps and services that
10 will bring broader recognition.

11 Outreach. NOAA is not very well-
12 known. We aren't doing a good job of getting
13 people to recognize how much NOAA does for the
14 public. Sometimes NOAA-funded products aren't
15 very user friendly, and many people use NOAA
16 products and services without knowing that
17 they are. We had that exact discussion at our
18 last meeting in Norfolk.

19 So we need to think, define what
20 are our users, hopefully some new ones and
21 what do they want. Gary's idea that each tide
22 gauge should have a Facebook page. Are there

1 perhaps apps for Google and iPhone that can be
2 defined, that would be, you know, bring
3 recognition?

4 Can the logo, can NOAA, the
5 legislation be changed such that the NOAA logo
6 goes along with the use of NOAA data? Are
7 there opportunities for more, you know, TV
8 weather clips, that they use NOAA spokespeople
9 or NOAA spokesmen, you know. NOAA puts out
10 clips that get used.

11 Is there a NOAA mascot? That was
12 Michele's idea. I thought it was a great
13 idea.

14 Well not Smokey, but I mean you
15 know, is there -- and then user fees, which is
16 a perpetual topic there.

17 MEMBER DIONNE: I just thinking
18 about when we took our daughters to see the
19 Lion King in Times Square. Is that where they
20 have those things? No, Broadway. Anyway, how
21 about a nice big sign, you know, a big neon
22 sign for NOAA there? Just joking.

1 MEMBER JAY: So those were our
2 preliminary thoughts, subject to your further
3 input.

4 CHAIR WELLSLAGER: Gerd, Captain
5 Glang.

6 CAPT GLANG: Gary Glang. Thanks,
7 David. Was the working, or is the working
8 group aware or made aware of NOAA's storm
9 surge road map? It's a recent effort in the
10 last half year, I think. It's cross-NOAA, to
11 look at better developing a strategy to
12 holistically address NOAA's surge modeling
13 activities across the different line offices?

14 MEMBER JAY: We were not aware of
15 that. If you could forward us --

16 CAPT GLANG: Yeah. We can get you
17 a point of contact on that. It's --

18 MEMBER JAY: That sounds like a
19 great --

20 CAPT GLANG: And it looked at a
21 range of things, very similar to what you
22 looked at, including all the way through to

1 the social sciences and understanding how
2 communities respond to things like surge
3 warnings and storm warnings. So you guys
4 should, would probably learn something there
5 as well, and be able to incorporate that.

6 MEMBER JAY: Your key word was "we
7 should learn something." That was one thing
8 I felt when I was doing this, that I just
9 simply didn't know enough and we need more
10 communication about this, because we have
11 diverse skills here, and we need input from
12 all of these.

13 CAPT GLANG: That didn't come out
14 totally right. I wasn't trying to denigrate
15 the working group. I meant would eliminate
16 you on an activity ongoing within NOAA, and
17 we're not good about sharing that externally
18 all the time.

19 MEMBER JAY: Yeah.

20 MEMBER DIONNE: You know, if you
21 want to use, I guess the thought was out there
22 to use FVCOM as a universal model. But 10, 12

1 years ago, the Reserve system developed a
2 graduate research fellowship program, and it
3 seems like you could offer up fellowships to
4 students who want to take an FVCOM and
5 customize it for specific, you know, PORT
6 systems or other, you know, non-PORT systems.

7 But that has worked quite well for
8 us. Of course, we just cut that budget in
9 half, because we don't have enough money to
10 pay for toilet paper at the Reserves right
11 now, so we'll get it back.

12 CHAIR WELLSLAGER: Okay. For the
13 sake of time, thank you, Dr. Jay. Lawson, if
14 you could come up right now, and then we could
15 kind of tie in any questions or discussion we
16 wanted to have after this last presentation.

17 MEMBER BRIGHAM: When we
18 established this working group, it wasn't
19 quite clear exactly what the focus is. I
20 mean, Arctic is a huge topic today. There's
21 a lot of hype associated with the topic of
22 Arctic within the government and within the

1 media, et cetera, and trying to sort through
2 all of that is a challenge for just the three
3 of us.

4 Matt was a member, but kind of ex-
5 officio, so he will be blamed for some of our
6 recommendations. But we need, in this working
7 group, and I'll say at the beginning, because
8 my last point is this really does need to be
9 a standing working group, if we're really
10 serious about looking at Arctic.

11 Because it's hugely complex. It's
12 very broad, and we need some more talent
13 within this working group. But nonetheless,
14 Steve from the commercial world, Andy, of
15 course, a retired NOAA captain, hydrographer
16 extraordinnaire, myself as a Coast Guard
17 officer and all three of us go to a lot of
18 Arctic meetings around the world, and so we
19 think we have at least some feel.

20 We could have taken the tact of
21 looking at NOAA's strategy and picking away at
22 your nice strategy and implementation plan.

1 But as was said already, we're not an audit
2 team, and we considered it, but threw it out
3 quickly.

4 That's not an approach this should
5 be, partly this working group from HSRP, be
6 educational and be informative to the NOAA
7 staff and to NOAA itself, in some avenues
8 where you might not hear the messages that we
9 have to say.

10 So the first thing we decided to
11 talk about was well, what do we believe, in
12 our expertise, are the driving forces in the
13 United States Maritime Arctic? We should kind
14 of start at that level, and here they are.
15 You don't necessarily see trans-Arctic
16 navigation, which you heard a lot about this
17 morning.

18 And offshore oil and gas around
19 the circumpolar world, and particularly in the
20 United States Maritime Arctic, is driving
21 green traffic levels, like this summer's
22 Armada of ships with Shell. Onshore in the

1 future, coal, maybe a ramp-up of the largest
2 zinc mine in the world at Red Dog, etcetera,
3 will drive marine transport systems to take
4 Arctic natural resources out of the Arctic to
5 global markets.

6 We do see, of course, expanding
7 traffic along the northern sea route. It's
8 not necessarily, a very low percentage of it,
9 will ever be trans-Arctic navigation. Most of
10 it will begin carrying natural resources from
11 northern Norway, western Siberia to China,
12 maybe to Japan, Korea, et cetera.

13 But mostly, summertime operation,
14 vast natural resources carried by mostly
15 Russian flag ships, but a few international
16 flag ships to China.

17 Then we all believe that through
18 the next couple of decades, probably make
19 Larry happy, that we need to explore this
20 Outer Continental Shelf. Whether we ratify it
21 or not, we need to continue our important
22 surveying of this region of our, presumably

1 our Arctic.

2 So it's a huge issue. It's not a
3 traffic issue, but it's a funding issue. It's
4 a national strategy. It is part of the
5 Arctic, and NOAA is a player in all of that.
6 Our notions of what drives our team, what
7 drives Arctic marine transport is very
8 consistent with what is said in the Arctic
9 Marine Shipping Assessment, probably no
10 surprise since I chaired this thing.

11 But Steve played in it
12 and others. It's very clear, from 100 people
13 working for a year looking at future
14 scenarios, that it's not sea ice retreat; it's
15 global economics, it's natural resources.

16 So the global trade route message
17 is a bit extrapolated, a bit promoted and
18 isn't the real message. It's the tie of
19 Alaska's natural resources and the circumpolar
20 world to the rest of the globe. You see that
21 word "governance."

22 There isn't a lot of governance in

1 the United States Maritime Arctic. We have no
2 special regulations for shipping or for
3 operations of ships in our Arctic, no
4 different than around the rest of the country.
5 So that's an anomaly with the International
6 Polar Code, with proactiveness in IMO on the
7 part of the Coast Guard and NOAA and other
8 agencies.

9 Hopefully, there will be a Polar
10 Code which we will -- with a mandatory polar
11 code of navigation. We will pass domestic
12 legislation presumably implemented into
13 national law. I show these images, because
14 NOAA and the world promotes this new ice-free
15 Arctic, and this is from the least extent sea
16 ice, at least in the satellite record if not
17 human record.

18 But when we look at the real
19 messages, and in our message to you from our
20 working group, the practical issue is the
21 place is ice-covered nine to ten months out of
22 the year, either partially or fully,

1 throughout the century and beyond.

2 It may be thinner. The character
3 of the ice is changing, but just the fact that
4 it's ice-covered has huge implications
5 obviously for regulation, the economics of
6 shipping. But all we hear, even from NOAA, is
7 the reverse. Place is ice-free. Everybody
8 here in this room would understand it's not
9 ice-free in the middle of the winter.

10 But nonetheless the message is
11 twisted, we believe. It's the reverse of what
12 it is. The place is still ice-covered,
13 dangerous, complicated place, hard to make
14 money, you name the issue. So the promotion
15 and the use of only observations, and the
16 messages out of that about the Arctic and all
17 the use of the passive microwave and all the
18 satellite imagery is, has been misinterpreted,
19 I think.

20 Here are some of our key issues.
21 So in our first meeting, we kind of discussed
22 the whole of the issue. What are some primary

1 messages to our group here? But here are some
2 very specific issues that we will try to
3 address in the next couple of slides, but also
4 in the future.

5 It's the availability of new
6 hydrographic surveying assets. In other
7 words, either commercial, Coast Guard,
8 Sikuliaq, et cetera, and I'll get to that.
9 The issue of new monitoring and surveillance
10 systems, and the information that comes out of
11 all of that, all the traffic maps that you'll
12 see. I'll show one, but you'll see with Ed
13 Page and the Marine Exchange, we saw one
14 already.

15 All of that data and information
16 is being used today, and we expect even more
17 and will influence the strategy of
18 hydrography, and the planning and the
19 infrastructure needs. We have all this data.
20 We must use it for decision-making, and that
21 will be a period of transition to do that.

22 We note and report that the

1 importance of integrated observations. We do
2 have a lack of sea ice, in our opinion, tides
3 and current observations in the United States
4 Maritime Arctic today. I don't know how you
5 work, run the ERMA without those observations.
6 We can't, at least to get the trajectories and
7 all the information.

8 So the lack of observations will
9 have impact on the federal response, and the
10 capability to monitor spills and whatever and
11 respond appropriately, without the
12 observation. So that's music to your ears.
13 But nonetheless, our group, a bunch of
14 mariners say hugely important the observations
15 to the federal response.

16 And then it's just the notion, as
17 you would suspect, the huge complexity and the
18 need for data is increasing every day. We
19 have efforts on marine spatial planning, lots
20 of indigenous issues. This international
21 maritime regulations and designations. There
22 may be traffic routes, etcetera, all need

1 robust information and data, which we don't
2 have in the United States Maritime Arctic
3 today.

4 And then finally this issue, of
5 course, of adequate funding. There's no way
6 in the decades ahead that the federal
7 government will be able to fund all of our
8 needs for infrastructure, and it has to be
9 future novel public-private partnerships.

10 Just to show the complexity, the
11 Russian Arctic and this flow of traffic, and
12 of course all this flow of traffic goes from
13 the Russian Arctic through Bering Strait and
14 down to China or other countries. The
15 complexity of indigenous use and its meshing
16 with all of the other new uses that we may
17 have in the Arctic, and here's just this
18 example, a well-known and complicated
19 situation with indigenous whaling.

20 Of course, one of Ed Page's Marine
21 Exchange maps. We looked at the maps for the
22 last couple of years and think that the most

1 sensitive area for the United States Maritime
2 Arctic is the west coast of St. Lawrence
3 Island. That's because it's a merger of lots
4 of traffic from the northern sea route, both
5 Russian traffic and whatever.

6 If that area is not well-sounded
7 and surveyed, et cetera, we're likely to have
8 -- there will be a high probability of some
9 sort of accident in that region, without
10 proper observations and surveying.

11 Calls by the Arctic Council to
12 have a seamless integrated comprehensive
13 monitoring and surveillance system, based on
14 AIS, real-time data and data fusion, passing
15 the data between countries. A big issue, and
16 it's a complex issue, it's ongoing.

17 Then we've had some recent
18 studies. I played in these, although I wasn't
19 the driver. It was out of the Arctic Marine
20 Shipping Assessment, we had an effort in the
21 Arctic Council and in NRDC and IUCN to
22 identify what are the biologically, ecological

1 sensitive areas and significant areas in the
2 whole of the Arctic.

3 I picked out this out of the
4 report, and the whole of the Bering Strait
5 region, as you might guess, is among the most
6 sensitive, significant bio-eco regions on the
7 entire planet. You can see all the yellow
8 represents the regions, which covers the whole
9 of the region. So that amplifies, I think,
10 the complexity that we have the whole thing.

11 One notion is, of course, that you
12 can't close off this and even regionally close
13 off this strait, this international strait for
14 freedom of navigation, and the notion of even
15 closing it off in certain seasons is anathema
16 to international law.

17 So some of our actions, and then
18 I'll summarize with a couple of comments. We
19 think that the new Sikuliaq, which will be
20 operated by our university is a national
21 investment. It's a couple of hundred million
22 dollars, operated by UNOLS and by our

1 university, should be par, should have
2 multibeam and operate and survey wherever we
3 can with this ship, just as one.

4 Maybe you've talked to UNOLS
5 already. We weren't quite sure, and Andy was
6 going to follow up. We think that the
7 nation's buoy tenders should maybe have the
8 shallow draft icebreaking ships could have
9 multibeam, could survey coastal areas. The
10 investment could come from somewhere.

11 But if we're not going to have new
12 NOAA survey vessels, we must look for other
13 options, and commercial assets, we actually
14 think that the Aiviq, the Walrus, the new
15 ship, has no oceanographic gear, right, Mike?
16 No multibeam.

17 Well, it's one of the most modern
18 icebreakers and largest commercial icebreakers
19 on the planet. It happens to be one of the
20 sole U.S. commercial icebreakers. So what
21 kind of partnership could we have with Chouest
22 and Shell to operate that ship in maybe some

1 different ways in surveying the United States
2 Maritime Arctic.

3 There will be other offshore
4 players, and we want to have -- we would
5 recommend the same partnership that NOAA has
6 with Shell, with those other partners in the
7 future, and one of the partners is Norwegian,
8 I think. One of the developers is Norwegian,
9 I should say.

10 In this new upcoming GAO study
11 that's been called for by the Congress, we
12 think we should input somehow either HSRP or
13 individuals talking to the GAO program folks
14 that are doing, that will conduct this study,
15 some notes and thoughts about the Arctic,
16 because I think the study is driven by some
17 notion that there's duplicative systems,
18 right, and that we can eliminate systems.

19 Well, there's hardly much
20 duplication in the Arctic. There's no
21 observations or no collection system robust.
22 So we should note that. Now who the "we" is,

1 whether it's HSRP directly talking to the GAO
2 folks, I don't know. But we think we should
3 have a say in that.

4 We, our working group thought that
5 the U.S. delegation to IHO, the International
6 Hydrographic Organization, and its Arctic
7 Regional Hydrographic Commission, newly-formed
8 in 2010, should press, as one of our national
9 efforts or issues, for coordinated,
10 collaborative surveying, like we've done with
11 Canada in the Louis St-Laurent and the Healy.

12 Then finally, as I mentioned
13 already, we think that this is a hot topic, a
14 complex one, probably should have a standing
15 committee in HSRP.

16 We talked about maybe doing
17 surveys, but we don't know the legalities and
18 you know, having a FACA do a survey of
19 stakeholders. It might not be appropriate.
20 So we need some legal advice on that. So
21 those are some actions.

22 If you don't mind, I want to just

1 run through something on the AMSA, and I'll
2 come to it. This Arctic Marine Shipping
3 Assessment was negotiated in part by the
4 United States and all the eight Arctic states.
5 So when State approves it, it approves it on
6 behalf of the United States, and hopefully
7 passes it to the federal agencies.

8 So we believe, our working group
9 and of course all of us in AMSA, believe this
10 is a framework for each of the Arctic states,
11 for attacking the issues of environmental
12 protection and marine safety, and all of the
13 recommendations we have, 17 of them, are
14 around this rubric of safety, people and
15 environment, and then the important
16 infrastructure.

17 I wanted to just run this through
18 for two minutes here. This is where we are in
19 the Arctic states. This is where we are in
20 the United States too, in orchestrating
21 elements of these recommendations. A lot of
22 Arctic state engagement now in WMO, IHO, IMO,

1 et cetera, all the acronyms, with Arctic
2 issues.

3 We have a SAR agreement, signed by
4 the Secretary of State two years ago in New
5 Greenland, the first negotiated holistic
6 Arctic agreement in the history of the eight
7 Arctic states. But you see in black a number
8 of other measures and recommendations that we
9 haven't made a lot of progress on.

10 For protecting people, a whole
11 range of issues. Been good progress by all
12 eight Arctic states, reporting that community
13 engagement with indigenous communities is
14 quite good and robust now, and we've
15 identified these eco-significant areas. But
16 you can see a lot of other issues haven't been
17 addressed yet, mostly by IMO.

18 Then finally, it's the marine
19 infrastructure issues. There's been some
20 headway on Arctic marine traffic systems,
21 because the AIS is robust. We have now
22 satellite coverage, and then as an ongoing

1 environmental response capacity agreement, I
2 am part of this, and we're negotiating an
3 agreement that will relate to response and
4 preparedness for oil spills in the Arctic.

5 Three other images. I'll just let
6 you look at them and won't comment. I have to
7 comment about this one. That's a pretty
8 searing image of the 21st century for the
9 maritime world. All of us, many of us are
10 part of that world, and to have this happen a
11 century after the Titanic is quite
12 extraordinary.

13 These same ships, of course,
14 operate on the west coast of Greenland, and
15 we're just going to wait to have one of these.
16 Of course, in the west coast of Greenland,
17 whether it's in the summer or whatever season
18 you operate, there probably will be five, six
19 thousand people lost, because people can't
20 swim ashore. They'll freeze in the life
21 boats, et cetera.

22 We ran some scenarios in the AMSA

1 just like this, and for the coast of
2 Greenland, and the temperatures are pretty low
3 in the water. So the questions are for not
4 us, the insurance industry, IMO, investors,
5 operators, a long list of people.

6 So this is kind of what we'd like
7 to prevent at least from happening throughout
8 the circumpolar world. I'll stop there.

9 CHAIR WELLSLAGER: Okay, Lawson.
10 Thank you very much. I guess now we could
11 look at addressing the panel that we've got
12 there presently for questions and answers.
13 Larry?

14 MR. MAYER: Yes, a question for
15 Lawson. Lawson, you've highlighted the
16 increasing focus on the Arctic and outlined a
17 number of drivers that put tremendous pressure
18 on NOAA to deliver a range of services.

19 But those same drivers put
20 pressure on many other agencies, the
21 Department of Interior, the Coast Guard, the
22 Department of Defense.

1 You also outline how the
2 logistical difficulties of the Arctic have led
3 to some amazing collaborations and
4 cooperations. Is there an emerging
5 opportunity here to actually look inward; not
6 think about these international collaborations
7 and cooperations, but inter-agency, within our
8 own government, to use the logistical
9 difficulties of working the Arctic, to truly
10 collectively address some of the issues --

11 MEMBER BRIGHAM: Well, I think
12 that the first thing you'd look at is the
13 federal fleet and how you define it, and who
14 should play. I mean I, of course, have some
15 bias, because I was a Coast Guard officer.
16 But I always believed that the Coast Guard
17 cutters that I commanded were a floating
18 observation platform, and that should be even
19 surveying or having multibeam aboard, and
20 wherever we went, we'd take data for the
21 nation.

22 There are relationships. I know

1 you have them with the Coast Guard, but I'm
2 not sure at the level that might -- that we
3 should have here early in the 21st century.
4 I mean I -- it's not just the Coast Guard.

5 MR. MAYER: I just wonder if this
6 is an opportunity.

7 MEMBER BRIGHAM: Well, we
8 recognize -- I mean yes. As a working group
9 of HSRP, we just don't think there's
10 economizing being done, recognizing that
11 probably there are not going to be a lot of
12 new hydrographic survey ships, like there
13 won't be many icebreakers.

14 So what have we got now? What's
15 the capability to the ships, how could they be
16 reconfigured. But we do have this UNOLS
17 vessel, which is a very capable icebreaking
18 ship, scientific vessel, we think could be
19 used not only by NSF and by university
20 research, but again for the national good.

21 CHAIR WELLSLAGER: Joyce.

22 MEMBER MILLER: Yes. There's a

1 related thing that your last slide of
2 recommendations, it was all about
3 coordination, and this is sort of a -- have
4 you considered or is there any Arctic
5 representation on the IOCM group, which is
6 unfortunately another relatively poorly funded
7 inter-agency group, I believe.

8 I don't even know what the status
9 of it hardly is anymore. But it was something
10 I was a member of a few years ago, and I
11 haven't really heard much about it. But in
12 terms of the Arctic, this would be one group
13 that should be doing the kinds of things that
14 you're looking at, in terms of integrated
15 mapping.

16 MEMBER BRIGHAM: Yes. We tried to
17 stay to the subject of infrastructure, which
18 is a complicated one, and not go too broadly
19 into some of the policies and things. But
20 you're right.

21 But there's a lot of coordination
22 supposedly going on in the government today on

1 ocean issues at the highest level. Whether
2 it's completely effective or not, who knows.
3 I don't think that some efforts really touch
4 some of the practical infrastructure issues as
5 they maybe should.

6 Tough issues need maritime
7 expertise, and evaluating how much
8 infrastructure or not is a tricky thing to
9 discuss, all expensive too. Well, we have
10 CMTS, but I have yet to see something that
11 commented on some of these issues.

12 CHAIR WELLSLAGER: I have a
13 gentleman here that would like to address
14 something with you, Lawson.

15 MR. LAKOSH: Yes. Thanks, Captain
16 Brigham.

17 CHAIR WELLSLAGER: I think you
18 need to turn the mic on.

19 MR. LAKOSH: Yes. I think it's
20 on, yes. With regard to the international
21 agreements, there would necessarily have to be
22 a premise as to what regulatory standard is

1 applied for response in any of these waters,
2 and one would like to think that it was OPA
3 `90.

4 But as you know, we have quite a
5 problem here getting full compliance from
6 regulated shipping as it is now, and I was
7 wondering, you know, if the requested GAO
8 might address particularly what was questioned
9 here, is whether there is going to be
10 cooperation, inter-agency cooperation to bring
11 the standard of response up to OPA `90 levels,
12 in order to set a standard for what should be
13 contributed to by the Coast Guard through its
14 OSLTF funding, to contribute to the OSROs for
15 their response to international or innocent
16 passage shipping.

17 Because part of what you're
18 addressing here is international shipping,
19 which is not regulated by OPA `90, but is
20 necessarily -- but spills from that shipping,
21 must necessarily still be responded to, to OPA
22 `90 standards by the Coast Guard.

1 I could get into some other issues
2 here that I was hoping would be addressed with
3 regard to the contingency planning
4 methodology, which is quite different between
5 the NOAA spill tools analysis and the Coast
6 Guard EDRC analysis.

7 But beyond that is the basic
8 question of whether the regulated vessel
9 traffic will be required to fully fund the
10 OSROs in cooperation with the Coast Guard,
11 which must also contribute, due to the
12 percentage of traffic that is truly an
13 innocent passage.

14 MS. WATSON: Excuse me. Could you
15 please identify your name and your company?

16 MR. LAKOSH: Yes. My name is Tom
17 Lakosh, L-A-K-O-S-H. I'm a long-standing
18 stakeholder and critic of oil spill
19 technology, and in particular the Costa
20 Concordia.

21 I just put in a request to the
22 captain, to the sector commander, to deny

1 entry to the Carnival Spirit, which also owns
2 the Costa Concordia and the two other ships
3 that lost power due to fires in their engine
4 rooms.

5 That vessel is contracting Chadux
6 Corporation, which is not qualified to -- as
7 their OSRO, which is not qualified to respond
8 in open ocean but only in inland waters and
9 canals. So you have that ship, sister ship of
10 the one on its rail, transiting waters with no
11 salvage laddering and firefighting capability,
12 no effective ocean spill response capability,
13 in areas where there are qualified oil spill
14 response organizations, namely OSRV in Prince
15 William Sound, CISPRI in Cook Inlet.

16 How we can ever hope to obtain the
17 necessary inventories to both prevent and
18 respond to spills, when the Coast Guard is not
19 regulating the vessels that it can? And how
20 do we not only get it to regulate the vessels
21 that are subject to OPA '90, but then
22 contribute the extra quantities necessary to

1 respond for that innocent passage traffic as
2 well?

3 MEMBER BRIGHAM: Well, lots of
4 wide-ranging issues there, Tom. I think, one,
5 I should dispel the notion that this GAO study
6 is fairly broad. It's actually very narrow,
7 I think. It's looking at data collection
8 systems.

9 I think their look is to
10 economize, was my gut feel for it, and so it
11 wouldn't cover the response systems in place
12 or anything like that. It's really data
13 collection. You know, I mean for the Arctic
14 at least, the effort needs to go in for this
15 International Polar Code on addressing ship
16 standards, structural standards, marine safety
17 equipment, but primarily pilot house
18 competency.

19 So if we're really going to look
20 at prevention rather than talk about response
21 all the time, which most of us do, we must
22 have some international standards, and I think

1 that's a representation of incompetency in the
2 pilot house directly, for whatever reason.
3 It's very clear.

4 But when you extrapolate kind of
5 this system up to the Arctic, where we have no
6 standards, it's in the prevention business, I
7 know the response is very complicated in the
8 Arctic because all the eight Arctic states
9 have different systems and regulatory systems
10 to respond.

11 We're dealing with it in this
12 agreement ongoing in the Arctic Council, or
13 facilitated by the Arctic Council, the eight
14 Arctic states, to harmonize in a way some of
15 our response mechanisms. So there's a future,
16 at least internationally, harmonizing some of
17 this.

18 I know you're addressing and
19 interested in internal U.S. inconsistencies,
20 but --

21 MR. LAKOSH: Well, the question is
22 whether it is actually contradictory to what

1 you're saying, that there are no standards in
2 the Arctic, that all U.S. waters are subject
3 to OPA '90.

4 If that's going to be the standard
5 for response, how do (a) we get the regulated
6 vessels to contribute their necessary OSRO
7 fees, and (b), how do we get the Coast Guard
8 to supplement those regulated vessels with
9 OSLTF funds, so that we could fully fund the
10 OSROs to provide the level of prevention and
11 response required by law.

12 MEMBER BRIGHAM: Yes, no. Yes, I
13 hear you. I misspoke. There are no Arctic-
14 specific regulations today --

15 MR. LAKOSH: No.

16 MEMBER BRIGHAM: -- for the United
17 States Maritime Arctic, none. There are many
18 in Canada and Russia, with both their two
19 different regulatory systems. So I can only
20 say that we in our little working group didn't
21 address the array of issues here.

22 We may get to them, as we get more

1 expertise on our working group, but we didn't
2 look to kind of analyze the inconsistencies of
3 how the United States approaches some of these
4 environmental protection strategies.

5 We weren't really looking for that
6 because the subject is so vast. But it is,
7 and we note your concern on this one --

8 MR. LAKOSH: Well, I'd be happy to
9 lend some expertise to that effort. If I give
10 you a ring, maybe we can --

11 MEMBER BRIGHAM: Sure. We want
12 stakeholder input. In fact, tomorrow, we're
13 having a discussion on emerging issues and
14 trends, and you might want to participate in
15 that tomorrow.

16 MR. LAKOSH: Yes, because there is
17 in fact a need to establish the quality
18 standards for Arctic salvage tugs and Arctic
19 spill response equipment, et cetera.

20 MEMBER BRIGHAM: Bring it up --
21 bring it up tomorrow too, and I'll note it
22 here. Thank you, Tom.

1 CHAIR WELLSLAGER: There will be
2 one for Arctic Emerging Priorities, and
3 there's a sign-up sheet over here. So if you
4 would like to, please, by all means, sign up
5 for that and be part of the panel discussion
6 tomorrow, that would be spot-on.

7 Very good. Okay. Thank you very
8 much. That's actually quite interesting, and
9 for the new panel members, we have heard the
10 three different breakout groups that have put
11 forth some work, have done some work as
12 together, trying to come up with ideas,
13 working on issues.

14 The strategic mission, if you look
15 at things, that's nuts and bolts. That's how
16 things are working right now within the Nav
17 Services branch. The legislative policy
18 initiatives which we were working with are
19 something that's going to be addressed next
20 year, and hopefully we can get the HSIA
21 passed.

22 Then that group will look to

1 moving into something else. Then the Arctic
2 priorities, as we've seen here, is going to be
3 an issue that will have a lot of stuff that we
4 need to deal with, and it seems to me at
5 least, having heard what we've heard today and
6 what I think we'll be hearing in the working
7 groups and the stakeholder breakout, not
8 stakeholder, but the panel discussions
9 tomorrow, quite a bit more interesting input.

10 So what I guess I'm going around
11 to in a round-about way is with the new panel
12 members, please think about these, and we
13 would like very much for you to join -- I
14 would like very much for you to join one or
15 two, if you would feel so inclined, but at
16 least one.

17 And there's a desperate need to
18 fill in Sherri Hickman's spot, so that David
19 has a fourth. If one pilot, one can be
20 replaced by a second pilot.

21 We're not going to, you know,
22 actually ask right now, but please think about

1 that, and before the end of this meeting on
2 Thursday, provide to us what you would like to
3 do for the panel discussion. I greatly
4 appreciate it.

5 I would also like to thank Matt
6 Forney for coordinating an excellent site
7 visit for the Port of Anchorage today. That
8 was actually quite interesting. There was
9 interesting input in our group with the
10 captain of the Midnight Star -- Sun. My bad,
11 and I am not familiar with how the turnout was
12 on the other ship.

13 But it was interesting in the fact
14 that there's some shoaling taking place and
15 there's some other issues in the navigation
16 channel that kind of cause one to scratch
17 their heads, especially when they're requiring
18 three feet of water between the keel and the
19 bottom of the channel, and that doesn't
20 necessarily seem to be in place.

21 I would like any input from the
22 group that went onto the container ship as to

1 what their captain or master may have
2 mentioned as the concerns, and let's open this
3 up for a little bit of input about the site
4 visit. Kathy.

5 MS. WATSON: Chair, excuse me. I
6 have one question. We have on here the agenda
7 for the new panel members. I need for them to
8 finish their HR paperwork with Melissa.

9 Now whether or not you want to
10 wait and do it in 30 minutes. She's going to
11 be here, but we've got to get that completed
12 today, and she's right outside the room.

13 CHAIR WELLSLAGER: Okay. I wasn't
14 sure when I saw the orientation, what we were
15 --

16 MS. WATSON: That's what that
17 meant, for them to finish their paperwork.

18 CHAIR WELLSLAGER: Okay, my bad.
19 Melissa's out there. Okay. For those of you
20 that have not had a chance to finish that,
21 that would be very helpful. But getting back
22 to the input and the site visits. Ken.

1 MEMBER BARBOR: I think one thing
2 we found on the Kodiak Horizon, it was
3 interesting. Again, the same idea there, that
4 shoaling, and highly variable. That was
5 offered up by John and embraced by the
6 captain.

7 But when we went to the chart, it
8 did not have a tabulated box on there that
9 would give you, you know, a Notice to Mariners
10 update cycle on when the Corps had surveyed
11 that are, and all you were left with was, you
12 know, controlling depth established at such
13 and such a year.

14 So they're, the captain clearly
15 had some concern over the variability and its
16 maintenance, and the chart didn't offer him
17 any good feeling about when it was maintained
18 or otherwise.

19 So I think that might be a quick
20 fix, if you entered a tabulated box there on,
21 you know, controlling depths and the Army
22 provided you that information.

1 CHAIR WELLSLAGER: Lawson, please.

2 MEMBER BRIGHAM: Yes. The state
3 of Alaska and Anchorage has been encouraging
4 1,000 foot cruise ships to come into this
5 place that we saw today.

6 CHAIR WELLSLAGER: Really.

7 MEMBER BRIGHAM: It is hard to
8 believe that there's enough space and depth,
9 and that we might be asking for a problem with
10 one of those ships coming in. I know that's,
11 you know, for the tourism, for the -- very
12 rarely. But recently, there have been pretty
13 large cruise ships, you know, 5,000 passengers
14 come in here and sit there at the pier.

15 But you know, looking out just as
16 a mariner and seeing the shoals, I mean I
17 don't know. It just seems like may be some
18 issues to think about.

19 CHAIR WELLSLAGER: Right, right.
20 Matt Forney, is the Corps of Engineers getting
21 ready to do a survey of such that -- are we
22 getting ready to do something? I'm sorry.

1 LT FORNEY: Yes. So this is Matt
2 Forney, Manager of Alaska. We currently
3 there's two shoal areas that are actually of
4 concern, and actually the reason I was walking
5 that way was I was going to actually pull up
6 a nautical chart.

7 CHAIR WELLSLAGER: By all means.

8 LT FORNEY: So if you give me one
9 moment, I can definitely pull that up and
10 probably explain this a little better.

11 CHAIR WELLSLAGER: Please. Yes.
12 It was interesting as I was looking at this,
13 and I think Matt will point it out as well.
14 You've got a couple of aids to navigation
15 showing a range for incoming that oh yes, I
16 just so happened to go over a shoaling area
17 that is interesting.

18 And with the dredging that was
19 taking place next to the ship that we were on,
20 they were taking the spoil area and pumping it
21 out into the middle of the channel, just to
22 keep the flow of stuff going. I can't help

1 but think that's going to do nothing more than
2 deposit on the shoals, unless the currents are
3 strong enough to just keep that glacial silt
4 moving off into other locations.

5 LT FORNEY: So, just to kind of
6 define this, the two areas that are of real
7 concern is there's this area right here. It's
8 called Point MacKenzie Shoal. The other area
9 that I do believe the admiral was referring to
10 is this channel over here, which is the Knik
11 Arm Shoal.

12 The Knik Arm Shoal is currently,
13 as you can see, 35 feet as of August of 2008.
14 This is the area that the Army Corps of
15 Engineers is going to be surveying this
16 summer. Right now, we are getting reports
17 from the Southwest Pilot Association that
18 they're seeing depths of around 27 feet.

19 Using tide, they can calculate
20 that down to a mean low or low water. So the
21 Corps is going to go in, conduct a survey. Of
22 course, they have to know how much money they

1 need to go and get to be able to go and pull
2 those, that sediment out of there. So that is
3 their first goal.

4 Also, starting this summer,
5 there's another effort by the Army Corps of
6 Engineers to further understand and figure out
7 what's going on with this Point MacKenzie
8 Shoal. So this Point MacKenzie Shoal is
9 actually, over the last few years, actually
10 growing outwards. I'm not sure if you've
11 heard from some of the captains on the
12 Horizon, but they definitely need to use tugs
13 when they're bringing vessels into this area,
14 whereas historically they never have.

15 All of a sudden you throw in a
16 large amount of current as well as ice, tugs
17 are definitely necessary. So one of the
18 things that is -- that they want to do is to
19 define this shoal. Is it shrinking, is it
20 growing? So it's going to be a five year
21 study. Actually, last year it did shrink a
22 little.

1 So if it's shrinking, nature's
2 taking care of it for Army Corps, and if it is
3 growing, do they dredge a channel right
4 through the center of it.

5 As you can see, this line right
6 here is the range line that actually marks
7 this channel, but they also want to see if
8 they could possibly dredge right straight
9 through the center of that thing, and make it
10 so that they can come in.

11 Because most ships come in, and
12 then come in and go portside too. Especially
13 on the roll-on/roll-off vessel, their door is
14 on the port side of the vessel. So they have
15 to go portside too. With this shoal, they're
16 actually required to come in here, come and
17 then swing around.

18 So one of the ideas is to either
19 what do you do with this shoal? Shave it, go
20 right through it, or do nothing to it? So
21 that's kind of the idea of this five-year
22 study.

1 And that's actually one of the
2 things that Army Corps, as well as NOAA is
3 working together, to try and understand and
4 model currents in this area, to actually
5 figure out what is happening to all the
6 sediment.

7 Very, very good question, and it's
8 a huge undertaking, especially with at the
9 head of this, there's a large river that just
10 continually dumps glacial silt into this, into
11 the Cook Inlet as well.

12 LT FORNEY: Yes, yes, and that
13 actually, the modeling is occurring now, I do
14 believe. I think they have the data. It's
15 just a matter of them throwing it into the
16 system to create those models.

17 MS. WATSON: Could you please use
18 the microphone?

19 CHAIR WELLSLAGER: Could you speak
20 into the mic please? He projects. I should
21 have said something anyway. My bad.

22 MR. MILES: Steve Miles with David

1 Evans. So I guess that begs a couple of
2 questions is, from the Army Corps's
3 perspective. So they're acknowledging that
4 the depth is not maintained to its federally
5 authorized depth. Is that an accurate
6 statement?

7 LT FORNEY: Yes.

8 MR. MILES: It sounds like is what
9 we're hearing.

10 LT FORNEY: Yes, and it's --

11 MR. MILES: -- which is not too
12 many --

13 LT FORNEY: They are acknowledging
14 that, and also this area, I know that I did
15 hear from another group that was on the Kodiak
16 Horizon, that they were concerned about this
17 being a resurvey area, and yes, this indeed,
18 from the Forelands all the way up to past the
19 port, up to Point MacKenzie, it is a resurvey
20 area of NOAA and we usually resurvey that
21 about every five years.

22 This is the fifth year that we

1 have gone without a survey, and it's
2 definitely one of our priorities next summer.

3 MR. MILES: What's the depth in
4 this area?

5 LT FORNEY: The depth in this area
6 is --

7 MR. MILES: -- channel.

8 LT FORNEY: The channel itself
9 right here, which is the shoal that is
10 currently, the pilots are reporting 27 feet.

11 MR. MILES: No, its federally
12 authorized depth?

13 LT FORNEY: Yes. It's 35.

14 MR. MILES: Thirty-five, and the
15 width of the channel?

16 LT FORNEY: It is, I do believe
17 it's 1,008. Nope, 1,017 feet.

18 MR. MILES: Okay, thank you.

19 LT FORNEY: You're very welcome.

20 MEMBER DIONNE: So was there a
21 plan to put a PORTS infrastructure in here at
22 all, or --

1 LT FORNEY: I'm going to let Rich
2 comment on the possibility of PORTS.

3 MR. EDWING: So the water level
4 station you saw at Anchorage today --

5 CHAIR WELLSLAGER: Rich, on the
6 mic.

7 MR. EDWING: Sorry. So the water
8 level station you saw today, as well as the
9 water level station down Cook Inlet a bit in
10 Nikiski is a PORTS system for the Port of
11 Anchorage. But it sounds to me like they
12 needed a real-time current meter on the other
13 side, Port MacKenzie, given the currents
14 issues we heard about.

15 MEMBER DIONNE: But that's not
16 ready to rock and roll yet --

17 MR. EDWING: Yes, using the NWLON
18 station. When we establish a PORTS system, it
19 automatically incorporates any NWLON stations
20 that are in the area.

21 MEMBER DIONNE: Would there be in
22 the planning process for covering water levels

1 along the U.S. coast, where it makes sense to
2 think about kind of, I don't know, like
3 interweaving PORTS systems and NWLON systems,
4 you know, not duplicating.

5 Not having them just always for
6 the same places. You just told me you have
7 two right now, so that's --

8 MR. EDWING: Well, I'd say they
9 are interweaved, because when we're, you know,
10 the NWLON is the foundational system, and
11 whenever we're looking at doing a PORTS, we're
12 really adding on to that existing
13 infrastructure, observing infrastructure.

14 You may want to add additional
15 water level stations to address some of the
16 local needs, or current meters or air gap
17 systems or whatever, you know, whatever the
18 local needs are. But we're really starting
19 with the NWLON as the foundational system.

20 MEMBER DIONNE: And a really good
21 bathymetric map of some kind?

22 MR. EDWING: Right, although

1 that's not part of the PORTS system, but you
2 know, it is part of the overall information
3 infrastructure that NOAA tries to provide.

4 MEMBER DIONNE: Right. So the
5 ships are actually measuring the bathymetry
6 themselves and relating it to the NWLON data?
7 Is that the idea?

8 MR. EDWING: Well, the ships are
9 taking depth soundings to make sure they have
10 enough under keel clearance, but it's all
11 referenced to mean level low water, which is
12 what the channels are dredged to and the
13 charts are referenced to. So it's all to that
14 common reference plane.

15 LT FORNEY: And also, just for the
16 panel, just so you can actually see where
17 Nikiski is in relation to Anchorage. I know
18 we throw out a lot of names in Alaska that a
19 lot of you, I'm sure, are not familiar with.
20 So if we do, please stop us and have us point
21 them out to you.

22 CHAIR WELLSLAGER: I'm sorry. Did

1 you have something you'd like to say?

2 MR. DASLER: Yes. I've got
3 another two bits on this stuff as well.

4 CHAIR WELLSLAGER: Okay. First
5 off, could we wait until the public session
6 for that because this was something that we
7 were actually seeing about a port visit that
8 we just did, and the public comment period
9 will be in about 20 minutes, 25 minutes.

10 MR. DASLER: That's fine. If
11 everybody's available to answer questions,
12 that's fine.

13 CHAIR WELLSLAGER: We won't be
14 going anywhere. Fair enough. Thank you.
15 Anything else about the visit that we seem to
16 need to address?

17 MEMBER MILLER: I just wanted to
18 say, the captain on the, now I can't remember
19 the ship's name, the Kodiak was -- he said
20 that when they transit those areas, he has the
21 depth sounder on all the time, and he was just
22 extremely uncomfortable with -- he said he had

1 left three months ago and it was 30 feet
2 clearance, and he came back three months later
3 and it was 27. So that's sort of the --

4 CHAIR WELLSLAGER: A loss of three
5 feet in three months?

6 MEMBER MILLER: Yes.

7 CHAIR WELLSLAGER: Wow. Anything
8 else? Ken.

9 MEMBER BARBOR: I'm not sure
10 whether this is reflected on the chart there,
11 but he also commented on the port facility on
12 the far shore there, and that that appeared to
13 have changed a lot of the dynamics in the
14 area, and it surely -- it looked like a nice
15 groin for sediment transport management to me,
16 but yes, it could play a role in that.

17 CHAIR WELLSLAGER: Something new
18 at this meeting that we're looking at doing
19 was outlined here is deliberations and
20 recommendations for NOAA, and what, the thing,
21 the idea was for this is, okay, based on what
22 we've seen today, based on the input that

1 we've received from talking to, say, the
2 captains of the ships or things that we've
3 actually heard, do we know of any or have any
4 thoughts as to what we could put forth as
5 possible recommendations from what we've done
6 today that will go into the letter of
7 recommendations to NOAA administration? Ken.

8 MEMBER BARBOR: I'll reiterate my
9 one comment, is that I think that chart should
10 have a tabulated block on there with the
11 latest surveys, or at least something where
12 that captain could have gone to and said aha,
13 this is really old data or it's current.

14 CAPT LOWELL: If I may?

15 CHAIR WELLSLAGER: Sure.

16 CAPT LOWELL: Just one comment to
17 Admiral Barbor there, is as I'm looking at it
18 now, they don't have a tab on this because
19 they have the actual channel information
20 labeled on the chart itself. If you were to
21 zoom in -- where did Matt go? Could you just
22 zoom in again?

1 It actually has that information
2 right in there. Now what we typically don't
3 know is, and maybe this is more local
4 knowledge and we could have had a note in
5 there, but what this is saying is there's 35
6 feet for a width of a thousand foot, and the
7 survey was done August 0, what was that, 8?
8 I guess I can't see from here.

9 So that's the actual tab, and for
10 those of you who don't know what tab is, is
11 typically on an authorized channel, we might
12 actually halve it or quarter it if it's wide
13 enough up the entire length. So you would
14 have reaches of channels with four quarters in
15 it.

16 Each quarter would have a
17 controlling depth, and that's what the admiral
18 was referring to. In this case, because it's
19 one channel, one width, they just laid it
20 right on the chart. So I think the
21 information is all there to the mariner. Just
22 didn't recognize it at the time.

1 MEMBER KUDRNA: Just an
2 observation. Of all the parts of NOAA which
3 is part of the Department of Commerce, what
4 we've talked about today really should light
5 up the Department of Commerce because it's
6 jobs, economy, future growth and those type of
7 things.

8 I haven't seen mention of the
9 Department of Commerce in anything we've
10 talked about, and we ought to find a way of
11 getting this communicated to the Department in
12 some way because this is substance to the
13 principle missions of Commerce.

14 MEMBER DIONNE: So, Matt, I think
15 what we just heard about the changes that
16 weren't noted on the charts was from the visit
17 to the other ship than the one we went to?
18 Yes, that's all right.

19 Anyway, one point was that the
20 captain of the ship that we visited basically
21 said that he prefers the paper charts. So
22 updates of the sort that Captain Lowell is

1 always reminding us are sort of made on, you
2 know, continuously, wouldn't necessarily show
3 up on a paper chart that was older than the
4 last update.

5 So but I think the comment was
6 made from the captain of the other ship,
7 right?

8 CHAIR WELLSLAGER: Well, the
9 captain and the second mate that we were
10 working with both indicated they did use the
11 ENC. I mean they had the facility there on
12 the deck, I mean in the bridge of the ship
13 itself.

14 MEMBER DIONNE: Right.

15 CHAIR WELLSLAGER: Old habits are
16 hard to break, and the captain, who obviously
17 keeps up with the coast pilot, made the
18 changes as they were published to the nautical
19 charts that they have to work with, but they
20 like having a piece of paper in their hands
21 and looking at things when they're doing that.

22 Joyce, did the captain on the

1 other ship, was there any discussion about the
2 ENC versus paper charts or --

3 MEMBER BARBOR: Yes. He did have
4 an ENC on the bridge, brought it up. I noted
5 there was some knobology lacking there, so I'm
6 not sure, you know, whether it's a strictly a
7 situational awareness tool or, you know. But
8 he also needs a backup, so his paper charts
9 were easily at hand. So I would say he's
10 probably a paper chart guy.

11 CHAIR WELLSLAGER: There was a
12 common kind of statement that, you know, when
13 electricity fails, it's kind of hard not to
14 replace something like that as well.

15 CAPT LOWELL: Just to add a little
16 bit to Admiral Barbor's comments. John
17 Lowell. The system we saw on the bridge was
18 actually a software package, but it was not
19 installed in what they refer to as a tight,
20 certified way.

21 It wasn't an ECDIS system and it
22 wasn't installed. Well, we don't know if it

1 had the proper, you know, multiple master-
2 slave relationships, electrical backups on the
3 emergency generator, could it run 12 hours on
4 a battery. All of that's the IMO side of the
5 house.

6 Now I'm kicking myself now,
7 because we didn't ask him those questions,
8 because his ship would fall under the carriage
9 requirements that are starting to be
10 implemented in 2012. So ECDISes will be fully
11 implemented on all SOLAS vessels in five
12 years, and his vessel will need to have a
13 fully type-certified installed ECDIS system,
14 of a much more robust nature than that.

15 So he can't use it to navigate on
16 it. In fact, when I did dive a little bit
17 into the info on the thing, it clearly labeled
18 that, those charts, they were TRANSAS charts
19 as not for navigation, although they are based
20 on NOAA data. So making a long story out of
21 a short question. Sorry.

22 CHAIR WELLSLAGER: David.

1 MEMBER JAY: David Jay. I was
2 wondering what with the many situations more
3 frequent Corps of Engineers survey, and the
4 electronic charting capabilities, why are the
5 Corps surveys not just merged right into the
6 electronic charting, so that you get detailed
7 soundings in the channel and nearby areas.

8 CAPT LOWELL: Well, for a variety
9 of reasons. I would say there are some areas
10 where the pilots specifically, Deborah's not
11 here, have actually started working directly
12 with, they refer to them as portable pilot
13 units, but small, portable versions of a
14 system that they can then overlay at a higher
15 resolution point data that the Army Corps may
16 provide for them.

17 And then they can integrate that,
18 from a pilot's view, for navigating the
19 vessel. What NOAA typically does is we try to
20 accelerate the application of that, the
21 tabulated information that we were just
22 talking about, onto the chart quickly, and

1 that goes through a Notice to Mariner process.

2 In other words, we try to get it
3 out within a week or two weeks of receipt from
4 the Army Corps, and we just get out, in this
5 case, it would be whatever the depth is,
6 whatever the survey data is. That's what
7 punches out through the system very quickly
8 via the local notice. The Coast Guard does
9 the NGA Notice to Mariner and of course our
10 updated products. It would be simply
11 reflected on that.

12 But the high resolution point
13 data, or the higher resolution point data is
14 not typically put on a NOAA chart, mostly
15 because it would obliterate the, you know, it
16 would just be a big blob and it would be
17 unuseable at the scale of the paper chart.

18 MEMBER JAY: Right, but like the
19 world is going electronic, to a large extent.
20 So you think it would be useful to have it
21 available in that format.

22 CAPT LOWELL: And like I said, is

1 sometimes the pilots working with other
2 manufacturers would take that Army Corps data,
3 decimate it to some level so that it is
4 useable at the scale of the product. But NOAA
5 has not gotten into that realm yet.

6 We do have some data transfer
7 issues with the Army Corps. They are very
8 district-oriented. Each district deals with
9 a slightly different flavor of what we deal
10 with, and there's no one-size-fit-all yet.
11 But we are actively trying to engage on a
12 national level to see if we could put some
13 national standards in place. But we're not
14 there yet. We have a ways to go.

15 MEMBER HANSON: And from a
16 navigation -- this is Bill Hanson --
17 navigation standpoint, David, that most Corps
18 districts do post their after-dredge surveys
19 on their website. So they are available to
20 the pilots for navigation purposes. Whether
21 or not Anchorage does that, I'm not sure.

22 But there's obviously some

1 coordination that could be had. But for
2 navigation safety purposes, I think the Corps
3 does as good as they can with the pilots.

4 MEMBER JEFFRESS: This is a
5 question for Matt. Matt, are you informed if
6 a vessel actually does scrape the bottom, and
7 how often does that happen?

8 LT FORNEY: I would definitely be
9 informed. As far as I know, it has not
10 happened, due to the fact that we do have a 30
11 foot tide range here within Cook Inlet, and
12 the pilots actually require a ten foot under
13 keel clearance when transiting that channel as
14 well.

15 MEMBER JEFFRESS: So what we're
16 talking about here is highly unlikely to
17 happen anyway, right?

18 LT FORNEY: Well, if shoaling does
19 continue, your tide window shrinks of when you
20 actually have that under-keel clearance, and
21 that's a tough one to say. So, yes, dredging
22 is going to be necessary to avoid that

1 situation.

2 MEMBER MILLER: This is a question
3 for Matt too. It seemed like from what we
4 heard from the captains, that you know, they
5 have concerns, and I'm sure they give them to
6 their companies. Do you meet with the
7 captains, ever to kind of update them on, okay
8 the Army Corps has a survey coming now.

9 It just seemed like it might be a
10 good outreach thing, you know, to talk
11 directly to the captains when they're in so
12 that they, you know, they know something's
13 going to happen if nothing else.

14 LT FORNEY: And actually,
15 unfortunately, I don't get a chance to talk
16 with the captains all that often. Today was
17 actually a pretty special day. Generally,
18 when the captains are in port, it's their --
19 it's generally their rest time. It's a time
20 that the boat's not moving around. It's not
21 underway, and they don't have to be awake, and
22 it's actually a pretty quick turnaround.

1 Those vessels come in around 7:00 to 8:00
2 a.m., and then they usually head out,
3 depending on the tide, today was actually,
4 they like to get out by generally three
5 o'clock, but due to tide today they were out
6 at 4:30.

7 So it's one of those things where
8 I actually generally hear from the in-port
9 gentlemen like Brad Brown and George Lowery,
10 with each of the two individual companies, and
11 then I do keep in touch with the pilots very
12 regularly.

13 MEMBER MILLER: I was thinking,
14 though, that it might be -- you know, I don't
15 know, a web page or something that could tell
16 about this is what's expected to happen in the
17 port in the next six months, you know, Army
18 Corps survey expected, just something that,
19 you know, they could get a feeling that
20 they're tied in.

21 Because I mean the captain didn't
22 know the difference between an Army Corps

1 channel and maintain channel and a NOAA
2 channel. He just said, you know, when's the
3 next survey? And it just, it might be a good
4 outreach tool to give them a little bit more
5 confidence that yeah, something is going to
6 happen soon.

7 LT FORNEY: That's a great
8 recommendation, and I'll definitely look into
9 that outreach.

10 CAPT LOWELL: Yeah. Just to add a
11 little bit on that. Number one is in a
12 perfect world, the end user wouldn't care, and
13 he wouldn't even have to ask. It would simply
14 occur, and you know, the surveys would get on
15 the products that they need at the right time
16 and it would be delivered in the appropriate
17 way.

18 But jumping back to your
19 opportunities to meet with the captains, that
20 actually came up to me today. We actually
21 reached out to one of our other HSRP panel
22 members here, Steven Carmel of Maersk, and he

1 actually offered up.

2 You know, big companies typically
3 will bring in the captains all together in a
4 room, to do some sort of a, you know, indoc --
5 maybe not indoctrination, but updates on
6 whatever the corporate policy changes might
7 be.

8 He did offer up an opportunity for
9 us this year. Unfortunately, it was at the
10 very last minute, but we've worked with him to
11 get more notification so we can get a
12 representative to attend the Maersk meetings,
13 and I'm thinking there might be an opportunity
14 to work with one of our divisions, to actively
15 engage the major carriers within any region,
16 to see if we can get a similar opportunity.

17 Not necessarily talk about every
18 captain individually, but when you have vessel
19 captains coming together for other reasons, to
20 simply have an hour to sit down and talk with
21 them, and we would certainly have our
22 navigation managers attend those. So it's a

1 great idea. Thank you.

2 MEMBER MILLER: Yeah. It might
3 just be one of the suggestions from today's
4 meeting, you know.

5 CHAIR WELLSLAGER: Okay, John.

6 MR. DASLER: I guess to follow up
7 on Admiral Barbor's comment on the channel.
8 So if the Corps isn't regularly dredging it,
9 so the Alaska district doesn't really have or
10 the Anchorage district doesn't really have
11 active dredges, they have to come up either
12 from Portland district or they have to
13 contract it out.

14 So having that tabulation.
15 Obviously, they're not maintaining it to 35
16 feet. I mean I think the recommendation of
17 really tabulating that. So when they do, at
18 least are doing surveys but they can't dredge
19 it and maintain it to that, at least it would
20 be easier to update that.

21 Even with the -- so even if you
22 had that shoal you wanted to put it on there

1 now, that takes down the channel, you really
2 can't add a sounding in there as it stands.
3 So that tabulation might be a good way to
4 approach that issue. If they're going to
5 just, even if they just survey it and are not
6 dredging, at least it could be made --

7 I mean hopefully they would put
8 out a local Notice to Mariners, like you said.
9 So at least they should be looking at that on
10 the way in. And then just one more comment on
11 the ship observations. I mean that is
12 somewhat subjective. I mean you don't really
13 know what the tide. You have a 30 foot range
14 tide.

15 So even if they're getting real-
16 time tides and you've taken that and
17 correcting it as you cross it, you don't know
18 what that tide is doing, if it's really coming
19 in. You know, the gauge is going to be easily
20 three feet different than where the ship is at
21 the time.

22 CAPT LOWELL: Yeah. I think

1 you're talking about really a navigational
2 support system, because when you look at all
3 the moving parts here, it gets to be very
4 complicated and it is sometimes a bit of a
5 bear to manage.

6 But our policy within NOAA, from a
7 charting perspective, is as channels become a
8 certain size, they either become halved or
9 quartered, and of course every time we have an
10 Army Corps survey delivered to us, we have a
11 very rapid turnaround on that.

12 There is a little bit of quality
13 review, but once that's done, it typically
14 goes out as tabulation updates. In this case,
15 it would simply be erase 35, install your 27.
16 It would go out as a local Notice to Mariner,
17 and it would then become the controlling depth
18 of the channel.

19 Now sometimes we do get a request
20 that although our policy would say, based on
21 the scale, you know, we can't really quarter
22 that, but we might be able to do that anyway.

1 I think there's some wiggle room in there.

2 MR. DASLER: You don't really
3 quarter that on the charts. So that channel -

4
5 CAPT LOWELL: Actually, we
6 physically quarter it on the ENCs, and we'll
7 do an analysis of the quartering on the paper
8 chart, and then in the tabulation show, you
9 know, outside, left center, right center,
10 right outside, and there will be a physical
11 controlling depth of that quarter channel, in
12 a tabulated form.

13 The whole idea, and sometimes we
14 actually put spot soundings that are shallower
15 than the tabulation, because we simply want to
16 give the most depth for the channel, but
17 highlight a specific safety issue that might
18 be right on the edge of the channel. But we
19 don't want to shoal the channel for something
20 right on the edge, and people would simply go
21 around.

22 The pilot, she's still not here,

1 would simply deal with it by giving it a wider
2 berth. So we do have a couple of tricks up
3 our sleeves there, but we do take the channels
4 as a very high priority activity for us.

5 CHAIR WELLSLAGER: Anybody else?
6 Going once, twice. Well, okay. We'll be
7 about ten minutes ahead of schedule right now.
8 Oh, I'm sorry. Yes. That's what I was getting
9 ready to do. Wow, all right. Public comment.
10 I think we have a gentleman here who would
11 like to address us.

12 MR. LAKOSH: Yeah, well in
13 particular --

14 CHAIR WELLSLAGER: I'm sorry.
15 Could you give your name please?

16 MR. LAKOSH: My name is Tom
17 Lakosh, L-A-K-O-S-H. I provided it to the
18 transcriber.

19 MS. WATSON: Please speak in the
20 microphone.

21 MR. LAKOSH: Yes, I will. As
22 previously provided to the court reporter.

1 With respect to dredging, since you folks last
2 did that, there's been a classification of the
3 beluga as endangered. Has there been an EIS
4 to evaluate or any data collection or analysis
5 to determine whether the dredging action or
6 spoil would adversely impact the beluga, its
7 prey species or the capture thereof?

8 LT FORNEY: So actually I'd like
9 to clarify that, that NOAA does not do the
10 dredging operations. That is actually Army
11 Corps of Engineers, and they are going to be
12 here tomorrow. They're going to have one of
13 their chief engineers here to discuss that,
14 and honestly, I cannot speak to how Army Corps
15 of Engineers handles that.

16 So I really do encourage you, Tom,
17 to come back tomorrow, to talk directly with
18 Coast Guard.

19 MR. LAKOSH: Okay. But you guys
20 do all of the hydrographic surveys. You
21 measure the currents, the depth, turbidity and
22 all of that stuff.

1 Well, the other part of why I
2 wanted to talk to you folks is the collection
3 of that type of data for very specific oil
4 spill response purposes. The new salvage
5 emergency towing requirement requires that the
6 towing vessel, the emergency towing tug, be
7 capable of executing a rescue in 40 knot
8 winds, but then that has to be commensurate
9 with the ambient waterway conditions,
10 including wave action and currents.

11 So I'm hoping that you'll, you
12 know, all of the current data that you collect
13 to depth, which is more than the CODAR surface
14 recordings that have been done in Cook Inlet,
15 that those be transmitted to the Coast Guard,
16 so that they can evaluate the types of tugs
17 that they need to rescue the vessels that OPA
18 90 mandates they be capable of rescuing.

19 And so that we can get, you know,
20 currents to depth, because a three knot
21 current to depth is equivalent to a 70 knot
22 wind force against the hull of a vessel. So

1 you know, not only do we have, you know,
2 blazing winds through the Inlet, but you know,
3 eight knot currents up here.

4 So I'm hoping that that
5 information will be transmitted to the Coast
6 Guard, both the captain of the port, the
7 sector commander and the sector, Coast Guard
8 Sector 5431 that issues permits for OSROs and
9 so forth for this area, and you know, that
10 there be comprehensive data sufficient to not
11 only calculate the towing forces that are
12 required, but to also calculate the dispersal
13 of oil, using ASTM F-1780 and the commensurate
14 programming that NOAA has created, and spill
15 tools to evaluate oil spill response
16 requirements, to be effective as required by
17 OPA 90 and the Fair Water Pollution Control
18 Act. Thank you.

19 MEMBER MILLER: I've got a
20 question.

21 CHAIR WELLSLAGER: Joyce.

22 MEMBER MILLER: What current meter

1 assets do we have here? I mean are their
2 current meters available or --

3 Rich?

4 MR. EDWING: Well there's no
5 permanent real-time current meters. I mean we
6 offer those through the PORTS system. But we
7 do around the country each year do a couple of
8 tidal current surveys, to update tidal current
9 predictions for use by, you know, for safe
10 navigation as well as Coast Guard and others
11 for oil spill response.

12 We actually did a fairly
13 comprehensive survey of Cook Inlet back in,
14 I'm going to say, 2004-2005 time frame. It
15 was over a couple of years.

16 I think it was something in the
17 order of 50 different locations, where we put
18 in current meters and took measurements at
19 different, you know, profiles and all that
20 information's available through updated tidal
21 current predictions for those locations, which
22 are widely --

1 You know, before we come up and do
2 a survey, we do some community outreach, to
3 make sure we know if there's any, you know,
4 first of all to inform people we're coming up
5 to do this, to make sure we're aware of any
6 new requirements there may be for new
7 locations, and then afterwards, we also
8 advertise that we've done this and here's when
9 the new information's coming out.

10 CHAIR WELLSLAGER: Our ex-panel
11 member would, I think, like to address us in
12 a public forum.

13 MR. DASLER: Sorry. I'll have to
14 learn to start sitting on my hands more.

15 CHAIR WELLSLAGER: Name please?

16 MR. DASLER: Jon Dasler with David
17 Evans and Associates and a ex-member of the
18 Hydrographic Services Review Panel. I just
19 wanted to extend my gratitude to the panel.
20 I mean I was pretty impressed with the work
21 that's going on and things that are happening
22 through the working groups, and just had a few

1 comments that I wanted to address.

2 One I guess was with the Arctic
3 working group. I think that's great that
4 they're thinking outside the box, you know,
5 how can they get other ships out collecting
6 data and getting that. But I just also wanted
7 to raise some of the other issues, that it's,
8 you know, it's the tide support and the
9 systematic survey coverage of an area that's
10 going to make the best benefit, as opposed to
11 the GEBCO data for the general ocean
12 bathymetric charting.

13 And then having qualified
14 hydrographers to making sure all that data is
15 being collected to standards. But you know,
16 certainly something like that could happen,
17 but there's those other pieces that need to be
18 integrated into that, and meshed to make
19 products that really is going to benefit the
20 hydrographic branches.

21 You know, one of the main missions
22 is trying to get that kind of data that's

1 going to minimize the effort for the
2 hydrographic branches, so they can get it on
3 a chart, so they have the standards that
4 they're following in all of that.

5 Another one was on the water
6 levels. I think you really don't want to
7 confuse subsidence with sea level rise, any
8 more than you would want to consider glacial
9 rebound with sea level lowering. I mean
10 they're really different things, and you need
11 to address them separately.

12 Rich, maybe you can speak to this,
13 but I think in the Gulf, they are updating
14 tides every five years, as opposed to the 19
15 year epic and because of those issues.

16 MR. EDWING: Yes, down in the
17 Gulf, and I think even some areas of Alaska,
18 where you've got fairly extreme land
19 subsidence or glacial rebound, we are updating
20 the tidal datums more oftenly, you know, more
21 frequently than normal because of that rapid
22 change. So it's on a five year scale.

1 MR. DASLER: And then I think one
2 more thing I would add to the, you know,
3 what's happening at the NWLON stations, is you
4 know it's not just the water levels and the
5 currents and meteorological data. But there's
6 also that link that I think is too often
7 overlooked, is that geodetic tying.

8 So tying to the National Spatial
9 Reference System and ellipsoid heights,
10 because really you want to go, you know, it's
11 relative to what. So even if you do you have
12 glacial rebound or subsidence, and then how
13 that can support the datum. But that should
14 be as important as water level, as making that
15 geodetic tie to that.

16 CHAIR WELLSLAGER: So in essence
17 you're saying we should have co-located cores
18 with an NWLON station?

19 MR. DASLER: Yeah. I mean it
20 doesn't necessarily have to be cores, but at
21 least get the observations and make the ties
22 and do a long observation to a core site, and

1 not just -- and I guess I was referencing
2 ellipsoid heights, because a lot of times it's
3 just level to benchmarks. But you also want
4 to get that tie to the ellipsoid as well,
5 because as we all know, there's differences
6 there with geoid models and everything else.

7 CHAIR WELLSLAGER: Juliana.

8 MS. BLACKWELL: Just to follow on
9 with that Jon, we do realize that there is a
10 lot of work to be done, to make sure that the
11 water level stations are connected to geodetic
12 control, and one thing that maybe not all
13 panel members are aware of, but putting a GPS
14 or GMSS receiver on a tide gauge is going to
15 show you exactly that motion right there.

16 But it's not a, certainly wouldn't
17 be necessarily a stable platform. So it's
18 really important whether or not there's a GPS
19 unit right on the tide gauge platform or not,
20 is to have that connection to something stable
21 inland.

22 And so the network of core

1 stations that we collect data 24-7 for, having
2 that repeated data day after day, month after
3 month, year after year, really provides the
4 National Geodetic Survey that, you're saying
5 like a 20 year tide record.

6 It shows us what's happening at
7 those locations over time, so that we can
8 assess where stable areas are. But it's also
9 important to monitor those changes at those
10 tide stations, and those connections to
11 benchmarks in the ground.

12 So there's a number of ways to
13 make those connections, and systematically
14 being able to tie each NWLON station into
15 something that's known is the important thing,
16 so that you can bring that control and have it
17 be consistent across the nation, not localized
18 in such a way where you cannot bring things
19 together to do your modeling.

20 So we realize that this is an
21 ongoing continuous effort that we want to make
22 better, and working with CO-OPS to try to

1 collate cores and NWLON stations, and to make
2 the correct connections, so that we can
3 monitor what change is happening on land.

4 CHAIR WELLSLAGER: Rich.

5 MR. EDWING: So just to follow up
6 on that, I agree with Juliana, and indeed this
7 has been addressed or taken up at the
8 international level through the GOOS, the
9 Global Ocean Observing System, where they're
10 also recommending, you know, any station
11 that's a GOOS station should have some sort of
12 co-location.

13 There's not quite agreement on
14 what co-location means just yet. Is it within
15 a kilometer or five kilometers? They're still
16 kind of grappling with that issue. But I
17 think that issue is getting attention, is the
18 bottom line.

19 CHAIR WELLSLAGER: Dr. Jeffress.

20 MEMBER JEFFRESS: Just to follow
21 up on what Juliana says, in Texas, following
22 Hurricane Ike in 2008, the U.S. Army Corps of

1 Engineers came up with some funding to put in
2 the two big Sentinel tide gauges in Texas.
3 For those who don't know, a Sentinel tide
4 gauge is a massive steel structure, four foot
5 diameter, one inch thick steel pipe going into
6 the mud 100 feet, then tapering down to a
7 three foot diameter section that comes out of
8 the water above mean sea level, about 30 feet,
9 massive supposedly hurricane-resistant
10 structure.

11 So the Corps funded the two of
12 those for Texas following this hurricane, and
13 they also funded core stations to be co-
14 located with these massive tide gauges. For
15 all the reasons that Juliana just said, but
16 another reason that they want to use in the
17 future is to use these core stations for the
18 control for dredging.

19 This is actually using automated
20 machine control using the precise GPS real-
21 time positioning from a core station, to
22 actually control the elevation of the

1 dredging, so that they can dredge exactly to
2 the depth that is required, without over-
3 dredging.

4 A lot of the dredging that occurs
5 in the United States because of old datums,
6 and the fact that they're still using tide
7 staffs rather than tide gauges is creating a
8 lot of over-dredging, which is costing the
9 Corps a lot of money.

10 So they think moving forward using
11 these core systems, machine-controlled,
12 they'll be able to get much more accurate
13 finished design elevations, closer to what
14 they're supposed to be.

15 CHAIR WELLSLAGER: Joyce.

16 MEMBER MILLER: Yeah. I wanted to
17 go back to your first point, Jon. I think
18 Coast Survey has done a really excellent job
19 of doing some coordinated mapping. In the
20 Pacific and in the Caribbean with the Coral
21 Program, and the other panel members heard
22 about this when we were in Hawaii, there was

1 a 2002 survey in the Northwestern Hawaiian
2 Islands with two qualified hydrographers from
3 NOAA aboard, using the University systems, and
4 charts were updated from that.

5 In the Caribbean, there have been
6 several surveys jointly with Tim Battista of
7 the Coral Program, where Coast Survey was a
8 close cooperation. And then in the mapping
9 that the Coral Program did in the Pacific,
10 where we mapped, for benthic habitat mapping
11 purposes strictly, the 50 islands in the
12 Pacific, Gerd and Rick Brennan and a couple of
13 other people have been very instrumental in
14 where they can, pulling that data in, if
15 nothing else to update contours, not
16 necessarily for soundings on charts.

17 But there has been a very
18 concerted effort by Coast Survey to do the
19 type of things that Lawson was talking about,
20 in terms of coordinating mapping, using
21 University systems, using you know, other NOAA
22 systems that are not necessarily for

1 hydrography.

2 And you know, I think back to my
3 comment about OSC or IOCM earlier, you know,
4 I think we want to encourage that type of
5 thing, and actively look for those
6 possibilities. You know, maybe having the --
7 Larry's center has a group called the
8 Multibeam Advisory Committee.

9 They are now going out to the
10 UNOLS ships to help the University set up the
11 systems correctly, so that they could be used
12 for that type of thing. We had the first
13 visit and that worked very well on the UH
14 ship.

15 But you know, there are those
16 opportunities, and we just need to keep
17 looking at them, you know, and I don't know
18 what the HSRP can necessarily do. I mean I
19 would suggest that if there are IOCM meetings,
20 somebody from HSRP should go to them.

21 But you know, that type -- you can
22 get not necessarily, you know, the highest

1 quality IHO standard data, but especially in
2 incredibly remote areas like the Northern
3 Mariana Islands, the closest tide gauge was in
4 Guam, 500 miles away.

5 I mean you're not -- but is it
6 multibeam data better than data the Japanese
7 took during World War II? I mean maybe.

8 MR. DASLER: And I guess I would
9 just say, and I acknowledge, I mean, a lot of
10 that, you know, having those NOAA people on
11 the boat and people with the expertise.

12 But we've also seen, I mean
13 traveling around, when we were doing our
14 meetings and would go to Providence and we
15 would see the regional ocean partnerships, and
16 there's not always that care that's being put
17 on that data.

18 It's quite, I mean it's a shame
19 that it's a waste of taxpayers' money.
20 They're not following standards. I mean there
21 are many cases where they are, but there are
22 also very many cases where they're not. And,

1 you know, we teamed with NOAA on the West
2 Coast Governors Agreement, and in part where
3 they had like a \$20 million grant to fund some
4 of the regional ocean partnerships.

5 It was trying to establish and
6 identify standards and work with Pacific
7 Hydrographic Branch. So if you're going to go
8 out and collect this data, there should be
9 some review ahead of time on what's your
10 program, what equipment are you using, what's
11 your quality control procedures.

12 It doesn't have to be the full
13 hydrographic specs and deliverables, but there
14 needs to be a standard, and you know, it needs
15 to be followed. If people are going to spend
16 the money.

17 It costs a lot of money to go out
18 there with these ships, I mean fuel costs
19 going up. You want to make sure they're
20 collecting it, you know, to where we get the
21 most benefit.

22 IOCM, you know, that's coming

1 along. You know, that's started back up
2 again, you know. With Roger's passing, that
3 kind of lagged a little bit. But I think
4 that's coming back online now.

5 CHAIR WELLSLAGER: David.

6 MEMBER JAY: David Jay. In
7 addition to the navigation, sea level rise
8 studies are an important use of the NOAA tide
9 data.

10 I was at a meeting in California
11 last week, and three National Academy of
12 Science people on one of the climate panels
13 identified lack of knowledge of what the
14 vertical motion of our tide gauges is as, you
15 know, just a really major issue in climate
16 science.

17 So we need to also keep -- so I'm
18 encouraged that the gauges are, or GPS units
19 are being in use in association with gauges.
20 But we really need to -- that's a high
21 priority issue for a number of reasons.

22 CHAIR WELLSLAGER: Thank you.

1 Larry, do you have something you wanted to
2 say?

3 MR. MAYER: Well, I just wanted to
4 follow up on Jon and Joyce's comments. I
5 think, I'm surprised as a newcomer to this
6 committee that there isn't a closer connection
7 with the IOCM effort, and because everything
8 that Jon described and Joyce described,
9 there's authorization. It's basically there
10 are statutes now that say these kinds of
11 things have to be done.

12 How it's implemented is another
13 story, but if this panel would give its
14 authority to that process, I think that could
15 help rejuvenate that effort.

16 CHAIR WELLSLAGER: Go ahead.

17 CAPT LOWELL: Yeah, just to follow
18 up. The panel, the old panel I suppose, I
19 should refer this to, was briefed several
20 times on IOCM. I believe Roger briefed it out
21 maybe as long as two years ago. Many of the
22 panels here are new since then.

1 So I think it's probably a
2 reasonable idea that one of the outcomes
3 should be an update on the IOCM, and I can
4 give you the 30 second update right now, is we
5 do have a new IOCM lead to replace Roger, who
6 we're very excited about, Ms. Ashley Chappell,
7 who most of you may know or some of you may
8 know, and we do have the new IOCM mapping
9 standards are available. I do believe they're
10 past the draft stage at this point.

11 So they're available for use on
12 any platform who's out there and collecting
13 data on basically a vessel of opportunity type
14 of an approach.

15 It sets those minimum standards.
16 It touches on all the things that you just
17 referred to, and it acknowledges that based
18 on, you know, the project, things may be not
19 exact, but we just want to know where it is
20 we're, you know, what pieces are we missing,
21 and then how can we mitigate to deal with
22 those.

1 So there has been progress on
2 IOCM. In fact, I thought you were on the
3 review panel of the IOCM mapping standards.

4 MEMBER MILLER: I was, and somehow
5 with Roger's going and so forth, I sort of
6 dropped off the face of the earth, and that
7 has always been a problem. That was always a
8 problem being out in the Pacific. Sorry, but
9 NOAA is very Silver Spring-oriented, and if
10 you're out in Honolulu, you almost don't
11 exist.

12 I'm sure it's worse here in
13 Alaska, you know. It's just like oh, they're
14 there. And so we sort of ran our own IOCM
15 program mostly because I knew Gerd or Rick or
16 all these guys I'd worked with and, you know,
17 it was -- you just hooked up and did it.

18 CAPT LOWELL: Right. What we're
19 trying to do is go past that ad hoc approach
20 to mapping, and establish some sort of a
21 standard operating procedure that we can get
22 on many different platforms, and so far we're

1 working certainly on the broader NOAA suite of
2 acquisition groups.

3 We're engaging heavily with
4 fisheries. I believe UNH was involved in some
5 of the offset measurements that we were doing
6 on the, I believe it was the Dyson, and we've
7 collected some really interesting data from
8 them, and we're trying to extract bathymetry
9 from their water column systems that they have
10 for fisheries mapping.

11 So I think we're making progress
12 on many of these fronts. There's another
13 project called a Rolling Deck to Repository
14 that has been implemented in UNOLS to collect
15 data in the capacity of vessel of opportunity,
16 and we're applying that on NOAA vessels.

17 So that we have the standard, we
18 have the vessels that may or may not be
19 configured properly, but we know where the
20 gaps are. We can address them piece by piece,
21 and slowly start that data flow coming in, and
22 then once we go past the UNOLS vessels and

1 NOAA vessels, we roll it out to the Coast
2 Guard vessels or to other vessels of
3 opportunity such as tugs, etcetera, etcetera.

4 CHAIR WELLSLAGER: Larry.

5 MR. MAYER: To follow up on a
6 point of Joyce's, would it not make sense for
7 the HSRP to have an official liaison to the
8 IOCM working group? I mean it seems to me
9 that they're so intimately tied, and they
10 could help each other. That could make a lot
11 of sense.

12 CAPT LOWELL: No. That's
13 absolutely no problem at all. Like I said, I
14 was very surprised Joyce wasn't already on
15 that list, and should anybody else wish to get
16 it, there's a large number of emails there.
17 So be careful what you ask for.

18 Anybody else that wishes to get on
19 that list, we'll certainly get a list of
20 people and we'll talk to the IOCM coordinators
21 and get them on that list. Now whether the
22 HSRP wishes to establish a coordinator,

1 somebody, a belly button, that would be a
2 different thing that can be done. That's up
3 to the panel.

4 MR. DASLER: So John, will any of
5 that funding, will any of the, I guess those
6 requirements and standards be tied to funding
7 then? I mean that's what really needs to
8 happen to make it, give it any teeth, right?
9 Anyway, make that a recommendation.

10 You know, as Miles mentioned too,
11 it would probably be good, you know, on the
12 Hydrographic Services Review Panel, to have
13 somebody active in the Coast Guard and the
14 Corps of Engineers involvement, because I mean
15 the real navigation issue which really that
16 whole triangle between NOAA, the Coast Guard
17 and the U.S. Army Corps of Engineers, in
18 getting that whole picture in the whole
19 navigation scheme.

20 One great thing that we
21 participate in a lot in Portland, they started
22 a maritime industry breakfast, where they

1 invite all the agents and Crescent has started
2 coming down as the nav manager to some of
3 those meetings, but a lot of good information
4 comes out of that, and it might be a good way,
5 you know, for Matt to interface with a lot of
6 the community.

7 I don't know if you meet regularly
8 with the shipping agents and that kind of
9 thing. But typically the whole maritime
10 community comes in for a breakfast once a
11 month, and they raise the issues and concerns.

12 My last point is I guess related
13 to U.S. nautical charts. So Kotzebue may be
14 the only U.S. nautical chart that's fully up
15 to date. I know in the 2010 report, and maybe
16 you can address this, but we pointed out that
17 50 percent of the data on U.S. nautical charts
18 predates 1940, most of it antiquated, lead
19 lines, partial-coverage surveys.

20 The recommendation was to actually
21 be setting the target of mapping 10,000 square
22 nautical miles a year. During the ARRA

1 funding years, we were probably up to close to
2 5,000 square nautical miles, and we said, I
3 think, last year was more like 2,500.

4 I think that should continue to be
5 a push, for making that, to update U.S.
6 nautical charts.

7 CHAIR WELLSLAGER: Lawson.

8 MEMBER BRIGHAM: I'd just get back
9 to this new couple of hundred million dollars
10 icebreaking ship for UNOLS. I mean I just
11 cannot believe that it won't be part of the
12 federal survey fleet in some way. But we
13 talked to the program manager, and there's no
14 --

15 We mentioned hey, what kind of
16 hydrography, what kind of charting, what are
17 you going to be doing with this new ship, and
18 it wasn't much communication among UNOLS and
19 NOAA. So look, I agree wholeheartedly with
20 what you're saying, but for the Arctic, where
21 we have this vast area that hasn't been
22 surveyed anyway, I don't know. I think these

1 kinds of special ships with no new NOAA
2 icebreaking ships or Coast Guard icebreaking
3 ships coming, here's one and it's whole soul
4 is research, exploration.

5 It just seems like a given that
6 people would be detailed from NOAA on board
7 the ship with the right equipment. The
8 investment would be made, and for 300 days a
9 year, wherever that thing goes, it will take
10 some reasonable data and information for
11 hydrography and charting.

12 But I don't know. It just seems
13 like an opportunity not to be missed.

14 MR. DASLER: And I guess I would
15 just follow up on that by saying I wasn't
16 advocating against that. I think it's a great
17 idea. It's just, it's the standards and
18 everything else that goes with it as a whole
19 package that you need to consider.

20 MEMBER BRIGHAM: The uniqueness of
21 this ship, just one more point, is of course
22 it's shallow draft, and most of the area

1 around the coast of Alaska is shallow shoal
2 waters, and so this kind of ship could in fact
3 go places where other ships could not go,
4 including deep draft NOAA ships, etcetera. So
5 I don't know. Opportunity, that's all.

6 MR. MAYER: Yeah, and to follow up
7 again on something Joyce mentioned, the
8 Sikuliaq will be a primary target for this
9 Multibeam Advisory Committee, and the idea is
10 to ensure that the data they collect is as
11 close as we get to hydrographic standards as
12 possible. So I think the vision you have is
13 certainly feasible.

14 CHAIR WELLSLAGER: Okay. I think
15 this has been a very productive first meeting,
16 first day meeting, and I'm sorry. Did you
17 have another comment?

18 MR. LAKOSH: Yeah. Tom Lakosh
19 again. I just wanted to follow up, since
20 there was this inquiry about the availability
21 of current profilers, to make an official
22 request from a public stakeholder that there

1 be made available current profilers to
2 accurately gauge the currents between the
3 surface and 62 feet, at least, as the depth of
4 the largest oil tankers, as the draft of the
5 largest oil tankers, in very specific areas.

6 Clearly, Upper Cook Inlet, the
7 Forelands, Kennedy entrance, Hinchinbrook
8 entrance, Rocky Bay, Zakov Point areas, Buoy
9 9 in Prince William Sound and the Valdez
10 Narrows, Unimak Pass, the pass next to Shemya
11 and I'd say probably the Bering Strait as
12 well, should necessarily -- these higher
13 current areas should necessarily have the
14 current profilers either positioned on the
15 weather buoys immediately adjacent or more
16 likely like the science center did have a
17 towed array, but modified to take the upper
18 bin of water rather than the lower bin, you
19 know, flip it upside down to get 62 feet to
20 the surface rather than -- typically it's 20
21 feet and down.

22 MEMBER CAROTHERS: This is Jeff

1 Carothers. Are the NOAA vessels equipped with
2 ADCP units at all? Or I don't know even if
3 John's boats do NOAA work. Are they equipped
4 with any of these ADCP devices?

5 MR. DASLER: No, we have them, but
6 we don't use them.

7 MEMBER CAROTHERS: Okay. I mean
8 that may solve the issue he was talking about.

9 MR. LAKOSH: And the point being
10 is that this data has to be used to calculate
11 the hydrodynamic forces on the largest ships
12 transiting these areas, so we can get an
13 accurate gauge of the types of tugs we need to
14 conduct salvage operations.

15 I mean NOAA has gone out of its
16 way to do the science with regard to spill
17 response. NOAA now should be doing the
18 scientific analysis, data collection and
19 hydrodynamic calculations to assess exactly
20 what we need as tugs, because not only have
21 the Coast Guard not done it anywhere in the
22 lower 48; they're allowing salvage operators

1 from the lower 48 to claim response capability
2 in Alaska, and we need Alaskan response
3 capability that's capable of operating in the
4 waters up here.

5 You know, Lawson will tell you
6 about, you know, Arctic conditions. But they
7 range to, you know, vicious tides and vicious
8 winds and sea states, in addition to the ice
9 that we have to cope with up here, and we need
10 to be able to tell the Coast Guard with
11 scientific certainty exactly what they need to
12 prevent catastrophic spills, you know, mainly
13 in these high traffic passages that I've just
14 mentioned. Thank you.

15 CHAIR WELLSLAGER: Okay. I would
16 like to wrap things up. Thank you very much
17 everybody. Very productive public comment
18 session. Kathy, did you want to tell us about
19 dinner tonight and how we're going to do that?

20 MS. WATSON: Dinner plans,
21 everyone who wants to join for HSRP group
22 dinner, meet in the lobby at 6:35. It's about

1 a 10, 15 minute walk to Simons and Seaforts,
2 refreshing walk, and Gary, I need to see you
3 or the HR person, please. And that's it.

4 LT FORNEY: And just so in case
5 there's any folks who don't make the meeting
6 down in the lobby, the address of the
7 restaurant is 420 L Street.

8 MEMBER MILLER: We're on F?

9 LT FORNEY: We are currently on
10 the corner of E and 4th. So the best way to
11 get there is once you leave the lobby on Third
12 Avenue, hang a left and just follow the road
13 all the way around, and it will actually turn
14 into L Street. The restaurant's right there
15 on the right.

16 CHAIR WELLSLAGER: The meeting is
17 adjourned. See you tonight or tomorrow
18 morning at eight o'clock.

19 (Whereupon, at 5:52 p.m., the
20 meeting was recessed, to reconvene on
21 Wednesday, May 23, 2012 at 8:00 a.m.)
22

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Hydrographic Services Review Panel

Before: NOAA

Date: 05-22-12

Place: Anchorage, AK

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