U.S. DEPARTMENT OF COMMERCE

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
(NOAA)

HYDROGRAPHIC SERVICES REVIEW PANEL

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PUBLIC MEETING

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THURSDAY
AUGUST 30, 2018

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The Hydrographic Services Review Panel met at the Elizabeth Peratrovich Conference Hall, 320 W. Willoughby Avenue, Juneau, Alaska, at 9:00 a.m., Joyce Miller, Chair, presiding.

HSRP MEMBERS PRESENT

JOYCE E. MILLER, HSRP Chair
EDWARD J. SAADE, HSRP Vice Chair
DR. LARRY ATKINSON
SEAN M. DUFFY, SR.
LINDSAY GEE
KIM HALL
EDWARD J. KELLY
CAROL LOCKHART
DR. DAVID MAUNE
CAPTAIN ANNE MCINTYRE
CAPTAIN (ret. USCG) ED PAGE
SUSAN SHINGLEDECKER

JULIE THOMAS

GARY THOMPSON

NON-VOTING HSRP MEMBERS

CAPT ANDY ARMSTRONG (ret. NOAA Corps), Co-
        Director, NOAA/University of New Hampshire
        Joint Hydrographic Center
JULIANA BLACKWELL, Director, National
        Geodetic Survey, NOS
RICH EDWING, Director, Center for
        Operational Oceanographic Products and
        Services, NOS
DR. LARRY MAYER, Co-Director, NOAA/University of
        New Hampshire Joint Hydrographic Center

STAFF PRESENT

REAR ADMIRAL TIM GALLAUDET, Ph.D. (ret. USN),
        Assistant Secretary of Commerce for Oceans
        and Atmosphere, and Acting Undersecretary of
        Commerce for Oceans and Atmosphere, NOAA
REAR ADMIRAL SHEP SMITH, HSRP Designated Federal
        Official; Director, Office of Coast Survey
GLENN BOLEDOVICH, Policy Director, Policy and
        Constituent Affairs Division, National
        Ocean Service
CAPTAIN RICK BRENNAN, Office of Coast Survey
ASHLEY CHAPPELL, Office of Coast Survey
VIRGINIA DENTLER, Center for Operational
        Oceanographic Products and Services
COLBY HARMON, Office of Coast Survey
DR. NICOLE KINSMAN, National Geodetic Survey

CAPT ELIZABETH KRETOVIC, Office of Coast

        Survey

LAURA REAR McLAUGHLIN, Center for Operational

        Oceanographic Products and Services

LYNNE MERSFELDER-LEWIS, HSRP Coordinator

NEERAJ SARAF, Office of Coast Survey

ALSO PRESENT

MICHAEL EMERSON, Director, Marine Transportation

     Systems Management, U.S. Coast Guard

PAUL FUHS, President, Board of Directors, Marine

     Exchange of Alaska

WILLIE GOODWIN, JR., Chair, Arctic Waterways

     Safety Committee, Kotzebue, Alaska

JAY STERNE, President, Windward Strategies, LLC

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

2   (9:01 a.m.)

3   CHAIR MILLER: Thank you everyone.

4 Good morning and welcome to the Thursday morning

5 session of the Hydrographic Services Review

6 Panel.

7   I'd like to thank everyone for

8 yesterday's excellent session in the morning and

9 our remarks by Admiral Gallaudet and Nicole

10 LeBoeuf. Hopefully I didn't mispronounce that

11 name too terribly. LeBoeuf.

12   So the first thing this morning, as

13 normal for us, is we'll go around the room and

14 get comments. I think I'll mix it up a little

15 bit. Susan Shingledecker, how would you like to

16 start?

17   Everybody over there complained about

18 being last so I'll make you first.

19   MEMBER SHINGLEDECKER: I haven't even

20 got my laptop fired up yet with my notes.

21   (Laughter.)

22   MEMBER SHINGLEDECKER: I guess what

1 struck me yesterday really was our tour of the

2 Marine Exchange and just really the innovative

3 nature that Ed and his team have taken in their

4 approach to finding where the gaps are and

5 filling that.

6 And I think as someone who works in

7 the nonprofit sector, that's often what we do

8 best. And just seeing an example of another

9 really innovative organization that's looked at

10 ways to have really sustainable sources of

11 revenue, to continue the work that they do and to

12 just be able to overcome challenges that people

13 find with, sometimes with governmental entities

14 things take longer to get done.

15 And I mean, his team was saying, oh,

16 you guys need a weather station there, you need

17 some weather data, we can get that up in a week.

18 I mean, that was amazing.

19 So that was really the biggest

20 takeaway for me and just appreciation to Ed and

21 his team for all that they're doing and it's a

22 great model.

1   VICE CHAIR SAADE: Lindsay.

2   MEMBER GEE: Yes, Lindsay Gee. I think

3   I'll also repeat what Susan said, and I think

4   that reflects yesterday, as I said, coming to

5   Alaska it's like, you see it's the last frontier

6   and there are fewer people and they have to get

7   things done, they have big challenges and they

8   just get on and do it.

9   And I think that's a big difference we

10 see, and I think Ed's was a great example of

11 that. I was really very impressed.

12   A takeaway from yesterday, the AMEC

13 meeting, I guess it was good to, great to see

14 that moving forward and finally getting to the

15 blue bits I guess is what I would say.

16   It's good to see that and it would be,

17 it's important that, obviously for that move to

18 forward, all of that foundation data I guess that

19 --- underlying isn't seen, but that just has to

20 be done. So I think that's something, it was

21 good to see that happening and going forward.

22   MEMBER HALL: Hi, it's Kim Hall and I

1 knew Susan was going to steal my thunder.

2 I think the big thing with regard to

3 yesterday is that HSRP could use an emotional

4 support dog named Zoe. I'd like to see that

5 happen at the next meeting.

6 But really, I think to echo what Susan

7 said, it's amazing what they can do with so

8 little. And it's also amazing how agile groups

9 like the Marine Exchange, and I think Ed's group

10 here in Alaska is probably the gold standard,

11 even though they don't always need the gold

12 standard, they are a gold standard themselves

13 with regard to being flexible, agile and really

14 being able to meet the needs of the community

15 here. So I think that's something that we just

16 have to keep in the back of our minds.

17 I know that we have not heard much

18 here, most meetings we hear about PORTS, the

19 PORTS system. And I think up here what we've

20 learned is while it's a valuable system there are

21 other ways to go about getting some of that data

22 and that they have the capability to share more

1   with folks going by.

2   And yes, I know we would love for more

3   PORTS, especially if it was federally funded, but

4   if you can't get that, obviously some of these

5   more agile creative solutions have been very

6   helpful to the mariners up here. So thanks.

7   MEMBER THOMPSON: Gary Thompson. I

8   was very impressed yesterday with the Marine

9   Exchange for their innovation in their ways of

10   meeting the needs of the community. I think it

11   was a great example of a partnership with

12   government.

13   I too was impressed when they talked

14   about when somebody needs something they would

15   take action and get it done in a very short time.

16   So, a good example of what can be done in other

17   areas of the country.

18   MEMBER LOCKHART: I think this is

19   going to get really repetitive by the time we get

20   around to you, Joyce. But yes, same thing, I

21   think the Marine Exchange and the work they're

22   doing up here is just really impressive.

1   That same, like everybody said, being

2   agile, just going out and getting things done

3   that they know need to be done is a really good

4   example and, yes, I was really impressed. I

5   don't think there's anything to add to that that

6   people haven't already said, so.

7   MEMBER ATKINSON: I didn't even try to

8   comment about the Marine Exchange because I knew

9   it would be taken by now.

10   (Laughter.)

11   MEMBER ATKINSON: One thing that kind

12   of intrigued me was the, you know, where is the

13   shoreline and the activities that are going on to

14   define that between the different agencies. I

15   know in our home area shorelines are changing but

16   I hadn't thought about it that much and how you

17   actually define where they are and the

18   implications. So it might be nice to hear about

19   that more in the future.

20   MEMBER MCINTYRE: I'm going reiterate

21   the comments on the Exchange, I thought it was

22   great exposure.

1   The one thing in our group, when we

2   were visiting kind of the command central there,

3   we had some discussion about re-broadcasting and

4   pushing out of real-time data. And one of the

5   things that came up, that it's something that I

6   think we should as a Panel support, is NOAA data

7   being broadcast over AIS and kind of trying to

8   work better on that relationship in order to push

9   that, the PORTS data, out over AIS.

10   MEMBER KELLY: Good morning, Ed Kelly.

11   As usual, a lot of -- already stuff has been

12   stolen.

13   We haven't mentioned yet, but I

14   appreciate the directors' reports. That's a

15   great opportunity for us to just get periodic

16   updates of what the directors are seeing on their

17   dashboard and through the window looking ahead

18   through the windshield.

19   So, I always value that and I think

20   it's important, I'm glad we do that every time

21   and I hope we do continue to do that.

22   I'm glad that everyone has finally

1 realized that everybody involved in Marine

2 Exchanges are really cool.

3 (Laughter)

4 (Off microphone comment.)

5 MEMBER KELLY: Yes. Well, not all of

6 us but the best of them are. Of course, the

7 other point to realize, which some may have

8 picked up and some didn't, Zoe is the brains of

9 the operation. She hires Ed to be the public

10 spokesman because she doesn't like to leave the

11 house, that's all.

12 But I think the key thing is faster,

13 cheaper, better. We were hearing that with the -

14 - and we heard yesterday from the people in the

15 IOOS groups and the RAs.

16 RAs, Marine Exchange, there is a lot

17 of organizations, many of them nonprofit, all of

18 them, they're associated with the topics that we

19 are driving and want support from. And this

20 amazing stuff that can get done in Ed's Marine

21 Exchange is being done in a lot of other Marine

22 Exchanges.

1   And there's cool stuff being done in

2   a lot of the RAs. And I think we have to be a

3   little more structured to aggressively reach out

4   to harness and use some of that so far, perhaps -

5   - I wouldn't say un-channeled energy, but maybe

6   improperly or insufficiently channeled energy, to

7   get that stuff out there and get all of this

8   horsepower working together to help us forward

9   some of our projected goals.

10   MEMBER DUFFY: Yes, Sean Duffy, Big

11   River Coalition. And I've known Ed Page for

12   about 15 years and it was really neat yesterday

13   to put eyes on the work that he's been doing.

14   And you know, it's my first time to

15   Alaska. I live in a land that's very different,

16   but it was interesting to hear that we have a lot

17   of similar challenges related to the coastline

18   and changing dynamics around it and how to get

19   the information out to the mariners, making

20   people aware of what's there and trying to find

21   ways to fill in what's not there.

22   And I think Ed and I both have kind of

1   the commonsense approach to, kind of like rivers,

2   we hit something hard we may bounce off but we're

3   still going to keep flowing and trying to find

4   the sea at the end. So thank you.

5   MEMBER MAUNE: Dave Maune from

6   Dewberry. Juliana and Admiral Gallaudet and I

7   did not go to the Exchange yesterday afternoon

8   because we were attending the Alaska Mapping

9   Executive Committee, AMEC meeting, which made me

10   very happy because I was able to present on the

11   Alaska IfSAR mapping success story.

12   And that success story is being used

13   as a model on how can we apply the lessons

14   learned along the way in doing the topographic

15   mapping of Alaska, to extend to the bathymetric

16   side of Alaska, which is our -- the next thing on

17   the docket.

18   And I'm especially pleased because the

19   AMEC, in the past, has had the USGS focus for

20   topographic mapping, and now we have co-chairs.

21   And the Admiral is Co-Chair of the AMEC now.

22   And so, he and the USGS director are

1   co-chairs. And I am absolutely delighted to see

2   that, and that will help us in that transition

3   from the topographic focus to the bathymetric

4   focus that's so dearly needed up here.

5   (Applause.)

6   MEMBER THOMAS: Okay. Julie Thomas,

7   HSRP. Geez, there were lots of things yesterday.

8   I really enjoyed listening to some of the new

9   technologies that are out from ASV and charting

10   as to the challenges of establishing a VDatum in

11   Alaska.

12   I loved Dave's IfSAR presentation and

13   hearing the Denali surveying story. That kind of

14   -- you don't appreciate sometimes what goes into

15   getting these, I don't know, scientific datums

16   that we need.

17   And Shep, I'm not going to quote you

18   exactly because I can't write fast enough, but

19   you made this statement which really rang true

20   with me yesterday. You said something about the

21   value of services, of NOAA services, for

22   engineering in the ocean environment and how they

1 contribute to the economic development and how

2 you need to package services in a way to make

3 them relevant to stakeholders.

4   And this, I think, was in relationship

5 to getting fuel ashore and what you might be

6 thinking about in the future to help survey that

7 shoreline area that's so difficult. I thought

8 that was a really nice statement.

9   (Off microphone comment.)

10   (Laughter.)

11   MEMBER THOMAS: I was copying it down

12 and I'm going, oh my God, I've got to capture

13 that, and then I don't know if it was right. But

14 anyway, I love that idea.

15   And I think that that's a real

16 benefit, obviously, of hearing these stakeholders

17 but also hearing on the new technology side

18 because it keeps pushing us into that arena of

19 what we're not doing, where the gaps are where

20 we're not covering yet. And I thought that was a

21 really key statement.

22   And of course, Ed, the Marine Exchange

1   was fantastic. And the little I have worked with

2   AIS in trying to deal with getting data in there,

3   my heart goes out to you because you've done a

4   great job.

5   RDML SMITH: Thank you.

6   MEMBER PAGE: I think my highlight and

7   the biggest observation of the day was how

8   impressed I was or surprised, how much beer HSRP

9   can drink --

10   (Laughter.)

11   MEMBER PAGE: -- in a sunny day on my

12   deck, so we have to replenish the keg I think,

13   but kudos to you there. And then follow-up by

14   gin, so I was very impressed actually.

15   I'm also impressed that, I appreciate

16   all of the positive comments. I think it's great

17   that in the very competitive Juneau Empire, that

18   we've made the front page for two days in a row.

19   There is no mention of Stormy Daniels or anything

20   else, you beat her out. So that's pretty hard to

21   do.

22   And it's eight pages, so you made the

1   front page. But I think the key thing there is,

2   it's a small paper only but it talks about very

3   relevant things to Alaska, so it's great that

4   Alaskans really do pay attention.

5   It's a maritime state. There is no

6   state more maritime than Alaska, when you think

7   in the enormity of it and how dependent we are on

8   it and what have you.

9   So NOAA is certainly a big player and

10   it's nice to see they're getting attention. So,

11   I was glad to see that kind of recognition of

12   NOAA and what we're trying to do here so that's

13   terrific.

14   Also, probably my more productive

15   point, I hope I don't put words in people's

16   mouths, especially since they were spoken at Red

17   Dog Saloon about 10 o'clock at night over a

18   couple of beers, but with Mike Emerson and the

19   Coast Guard we were discussing, how can we get

20   PORTS incorporated and the AIS dissemination

21   thing. So I think the Coast Guard is -- I know

22   the Coast Guard is interested because they did

1   this CRADA, and the report's not out yet but I

2   saw the draft report and of course, this

3   technology can work and whatever, we've been

4   doing it for five years.

5   So I'm very hopeful that, and the

6   opportunity to sit down with NOAA and the Coast

7   Guard and ourselves, the marine industry, all

8   have the same interests, can we somehow put this

9   together. So I think that part of the thing is

10 getting the right people together in a room and

11 an opportunity to explore, discuss, see, and see

12 some opportunities to move forward.

13   And certainly some technological

14 challenges but I think we've overcome most of

15 those things and we've demonstrated we can do it,

16 and we are doing it to some extend right now.

17   And the pilot program wraps up in a

18 month and the question is, do we go on or do we

19 stop. And I think that we have some ideas about

20 moving forward, so I think that was also very

21 productive.

22   And likewise, or similarly, the Marine

1 Exchanges in the country are meeting here in a

2 couple weeks, in Baltimore, and one of our

3 discussion items is, how can the Marine Exchanges

4 play a role in helping push out this data through

5 our AIS network. And we have a national AIS

6 network.

7 So there may be some quick easier ways

8 of going down this path, public-private

9 partnerships, accelerating some of the

10 implementations to capabilities. So, to that

11 end, I'm very pleased with it.

12 We want some tangible, we want some

13 products to come out of this that move the ball

14 forward, and I think we're going to move the ball

15 forward in several arenas as far as hydrographic

16 surveys and dissemination of data and the new

17 ways, approaches and technology, whatever.

18 So that's encouraging that it's not

19 just a meeting, it's a meeting that delivers and

20 provides some new opportunities.

21 So, I sure hope I didn't misrepresent

22 our conversation late at night over a couple of

1 beers but I think it's pretty close to the mark,

2 so thank you.

3   MR. EMERSON: Close enough.

4   MEMBER PAGE: Close enough, good.

5 Thanks, Mike. Glen.

6   MR. BOLEDOVICH: So, I don't have too

7 much to add to what everyone has said, I would

8 just -- so you know, we've been working with the

9 Coast Guard, trying for many years, to get data

10 put out of AIS. And so I always tell the Panel

11 every time we meet, so the best advocate for our

12 programs is not ourselves it's our constituents.

13   So if the Marine Exchanges can kind of

14 push that, that may be what helps to push this

15 over the top and we appreciate that support.

16   CAPT ARMSTRONG: Andy Armstrong. So,

17 like everyone, I was completely and thoroughly

18 impressed with the Marine Exchange and what

19 they're doing.

20   And I also appreciated and was

21 impressed with the IfSAR mapping presentation we

22 got at lunchtime. And I'd just like to point out

1   that I think it's notable that two members of our

2   Panel are key people in both of those really

3   important efforts and enterprises, so I think

4   that says a lot about the Panel.

5   And I'm really pleased to be part of

6   a Panel that has people on the leading edge of

7   these kind of services.

8   DR. MAYER: Larry Mayer, Joint

9   Hydrographic Center. And I of course thought

10 that the highlight was the presentation of the

11 Joint Hydrographic Center, but no, not really

12 actually.

13   I also was really thrilled to see the

14 bringing of the blue side to AMEC. I think for

15 years we've been seeing this kind of dividing

16 wall and I think it's wonderful to see that

17 connection.

18   There are still going to be issues in

19 terms of the actual transition, but the first

20 step is recognition of the problem. And I think

21 that's --- we're well over that, and I think that

22 one will be resolved.

1   The IfSAR mapping presentation, also

2   I thought was just fantastic. And hopefully it

3   kind of presents a model for maybe the way we can

4   address the offshore too.

5   I love that model about how all the

6   different constituents, in this case both federal

7   and non-federal kind of contributed to the cost,

8   or should have contributed. At least they were

9   on the list.

10   There was some zeros I noticed, but

11   should have contributed to the cost of the

12   collection of the data. And I think that's

13   something we might strive for in the offshore

14   too, but by far, to me, the highlight was the

15   Marine Exchange.

16   And I asked Ed a question when we were

17   there and I kind of -- I know the answer but I

18   felt I needed to ask it, and I said, do you ever

19   get people saying, well gee, that's something the

20   federal government should be doing, why are you

21   doing that, that's something the federal

22   government should be doing.

1   And deep inside the answer is

2   probably, yes, it is. But it is not happening to

3   the degree that is needed.

4   And I think it's a credit to Ed and

5   the other Marine Exchanges, all the Eds. And

6   it's a credit to the nation, too, and our kind of

7   entrepreneurial spirit and our agility that lets

8   the private sector, or nonprofit in this case,

9   step in and meet that need.

10   And, at least from my perspective, and

11   Ed might have a different view, seemed to be

12   embraced by the federal agencies that you're

13   actually helping because it is something that's

14   helping everybody.

15   So I was just so thrilled to see that

16   and I think it bodes well for the future. So, I

17   thank you all for that.

18   RDML GALLAUDET: Thanks again for

19   letting me join you all during this great

20   meeting. I'm going to echo a bit and add to what

21   Dave said about the Alaska Mapping Executive

22   Committee meeting we attended yesterday

1   afternoon, because indeed you're right.

2   This is the second time I attended

3   that as a co-chair. And we took that initiative

4   and we expanded the charter of this group to

5   include the wet side, and it was very much a

6   strategic move to get closer to the USGS and the

7   Department of Interior.

8   And so that's something that we have

9   made a priority at NOAA since I've been on board,

10   October 25th of last year. And so, very exciting

11   to do that.

12   And some things came up that I think

13   this group ought -- should be mindful of. And

14   that is, I know we tend to focus our discussions

15   around the navigation contributions of

16   hydrography, but there are many more and very

17   important.

18   One occurred when I visited the

19   Department of Homeland Security officials. And

20   that is the importance of knowing the sea bed and

21   tsunami modeling and planning. A real concern

22   for this state.

1 And so charting in the Arctic and the

2 Atlantic, or pardon me, in Alaska, is very

3 important for that purpose, to improve our

4 tsunami prediction and warning.

5 Another piece that wasn't addressed,

6 but I'm very mindful of every day, is support to

7 our fisheries and habitat characterization and

8 conservation. And mapping is critical to that.

9 And then thirdly, as might have been

10 discussed I think at some point during this

11 meeting, is the need for mapping and

12 characterization to implement the President's

13 Critical Minerals Executive Order. Because there

14 is no real, as USGS has noticed, there is no real

15 boundary there at the shoreline, the potential

16 exists offshore as much as onshore.

17 In fact, I thought it was really

18 extraordinary, I read an article, a peer-reviewed

19 journal paper that one of our scientists

20 published, that the mineral potential of the

21 Pacific, I think it's called crustal zone and the

22 Clarion-Clipperton Zone, exceeds that of all

1 terrestrial sources by three orders of magnitude.

2 A thousand times.

3 So that's the potential we have

4 offshore. And we are going to, we need to study

5 that, map it and use that to our advantage

6 knowing that we are 100 percent dependent on

7 foreign sources for rare earth metals.

8 So, great opportunity here and I thank

9 you for allowing me to contribute.

10 RDML SMITH: Thank you, Admiral. I

11 wanted to take a different perspective on the

12 Marine Exchange. I agree with everything that

13 everyone said.

14 I guess what's tickling around in the

15 back of my mind is, here is this really great

16 nimble organization that's able to get the right

17 people on board, have flexible IT, have authority

18 to do things at the right time and the right

19 place, be responsive to customers.

20 What is it about the structure of

21 government that constrains us from being that

22 guy?

1   And I'm looking a little to my left

2 here for some thinking about on this --

3   (Laughter.)

4   RDML SMITH: -- because I think there

5 are those things that we talk about, about

6 ourselves, about backlog and hiring, IT systems

7 that are too constrained, and we hear that all

8 the time amongst ourselves. But when you add it

9 all up, it keeps us from being that guy.

10   And I think that there's a loss to the

11 American people as a result of that, of us not

12 being able to be that nimble. So that's the

13 challenge I will take home with me, is to try to

14 be that guy and to keep making my organization as

15 nimble as we can within the constraints of the

16 law.

17   RDML GALLAUDET: I'll wager here,

18 Shep, that you are that guy already and that,

19 look at how much, what percent do you contract

20 out for hydrography?

21   RDML SMITH: About half.

22   RDML GALLAUDET: About half. That's

1   a great development that we want to continue. And

2   so, I'm talking about public-private partnerships

3   and seeking to partner more with the private

4   sector.

5   The National Ocean Policy talks about

6   leveraging the National Oceanographic Partnership

7   Program, for example, which is a superb vehicle

8   for that. And so we are moving forward to do

9   just that, to reinvigorate NOPP and other

10   activities like it.

11   And we're doing it in a fairly big

12   way. So we realize that the government-only

13   approach is not --- it's sluggish, it's not agile

14   and so we're making, we're prioritizing that kind

15   of cooperative effort.

16   And I can go into the details of

17   workforce management and other things, but we'll

18   have a discussion, but know that that's our aim

19   is to not be that guy.

20   CHAIR MILLER: Shep, I would say,

21   first of all you have to get a dog named Zoe.

22   (Laughter.)

1   CHAIR MILLER: Two things, or a couple

2   of things I'd like to highlight, and the first

3   one is the AMEC. First the IOOS group being with

4   us, and now the AMEC group is just terrific in

5   seeing how all these Panels can work together.

6   And the second one is, again, about

7   working together. Things that I've heard here,

8   from the water level panel, how critical water

9   level is.

10   From Larry, what the new technologies

11   are and what it's looking like. From all our

12   stakeholders of, we need the flexibility and the

13   agility.

14   From Shep saying that broadcasting

15   weather data is a navigation issue, it's not a

16   Weather Service versus NOS type of -- but that

17   broadcasting data on an AIS is a navigation

18   service.

19   And I'm thinking, particularly since

20   I come from the mapping, or the bathymetry side,

21   I think there are some potentially really good

22   partnerships from the Allen Tours, from the

1   tugboat people, with the type of technologies

2   that Larry is talking about and then prioritizing

3   small scale, really small surveys in areas of

4   interests.

5   If we could get sort of a starter

6   group on how do you put together a small survey

7   system with the appropriate technology, not just

8   necessarily multibeam, to meet these individual

9   needs of small communities.

10   And I went back, and I used to work

11   for a guy who is sort of crazy, but he was a

12   pilot and he wanted to put a multibeam sonar in

13   the float of a float plane. Now, there's another

14   potentially wacky idea, but I think this Panel,

15   and bringing together the three Panels, really

16   does a lot for that kind of synergy of effort.

17   Ed.

18   VICE CHAIR SAADE: Ed Saade. So, in

19   no particular order, just listening to everybody

20   and thinking about all this, my list starts off

21   with Larry's presentation and application of the

22   ASVs improvements.

1   And as I've always maintained, as the

2   NOAA charting and funding that goes into UNH and

3   invents all kinds of great new ways and new

4   technologies gets absorbed by industry, we adapt

5   all these types of things and go make a lot of

6   money on things that were originally invented or

7   produced through U.S. tax dollars.

8   And it's real obvious to me, with

9   what's going on at UNH, here's another one that's

10   going to easily be adaptable to lots and lots of

11   applications. So I thank you guys for that.

12   And I want to reiterate on the merging

13   of the data sets and the types of things that

14   were being talked about with the AMEC

15   presentation and the idea to take all this land

16   and terrestrial data and take it right through

17   the shoreline and start to merge it with the

18   hydrographic data.

19   It's great, to me personally, to see

20   this. I've been running around Alaska for about

21   ten years advocating for this, trying to get

22   people's attention on it because we were able to

1 do this off California ten years ago with about

2 24 agencies involved and move -- do exactly that,

3 to move the data right through the surf zone with

4 the support of several federal agencies plus the

5 state agencies.

6 And to be frank with you, it's been

7 frustrating for ten years to not have anybody

8 else pick up that momentum and keep doing it, so

9 it's great to see.

10 And as Dave pointed out, having the

11 Admiral on the Committee now, that's fantastic,

12 because let's face it, the data that's going to

13 get collected now to make this one giant database

14 for Alaska is going to be really dominated by the

15 marine environment.

16 So NOAA's participation is critical to

17 make this happen. And with Shep's organization

18 and Juliana's organization, that's right where

19 all that merging is going to happen, so this is a

20 really great time to see all this coming

21 together, so thanks.

22 MR. EDWING: So, I'll certainly second

1   all the things said about the Marine Exchange

2   earlier but I will also highlight the AIS aspect.

3   As Glen said, we've been working with

4   the Coast Guard for many years now trying to get

5   PORTS data out over at the national level, and

6   we've kind of been ready for a number of years

7   and kind of waiting to take that last step.

8   Actually, in places where we did

9   demonstration projects, Tampa Bay and Columbia

10   River, that data is going out. It's continued to

11   go out after those demonstration projects have

12   been done.

13   So it was great to see how it's, you

14   know, the work that's being done up here at the

15   Marine Exchange and perhaps looking for

16   alternative ways to get that data out.

17   And once we get PORTS data out, that

18   just opens the door for NWLON and all sorts of

19   other environmental data to get out there. And

20   that was one of the original visions of AIS was,

21   not just a maritime awareness, but also getting

22   the environmental data out.

1   So, very much looking forward to

2   working Ed and others to help move that forward.

3   And then the other thing I'll say is,

4   I was also very pleased to see the -- our USGS

5   colleagues here yesterday and the AMEC meeting in

6   the afternoon, even though I'm not a part of

7   that.

8   You know, USGS and NOAA are both

9   science agencies, we're both working in the

10   coastal areas. There's a lot of great

11   complementary things we are doing and maybe could

12   be doing or should be doing.

13   And there's actually a larger

14   coordination effort going on right now between

15   NOAA and USGS, based upon a meeting that was

16   attended by the Admiral and at the highest levels

17   of NOAA and USGS last year. And there's a number

18   of themes that were created and then people are

19   moving out on that.

20   But I think yesterday was just one

21   really great example of that, you know, what that

22   collaboration can achieve. So, thank you.

1   MS. BLACKWELL: I'm Juliana Blackwell.

2   I was delighted to be able to have the Alaskan

3   Mapping Executive Committee effort be highlighted

4   during the session yesterday, as well as to be

5   able to have the meeting in conjunction with our

6   time here at the HSRP.

7   And I think being able to highlight

8   those interagency cooperative efforts, and

9   especially for the National Geodetic Survey,

10   being able to highlight some of the other things

11   that we do that we don't necessarily focus on

12   when we talk about the maritime side, but the

13   fact that the underlying information that NGS

14   provides, is being used by other federal partners

15   and is quite critical to work such as updates for

16   topography, et cetera.

17   I really, really appreciate the fact

18   that we have NOAA and USGS, Department of

19   Interior leadership support, to continue those

20   efforts here in Alaska. It also relates to other

21   efforts that are happening in the other states,

22   jointly with USGS and other federal partners.

1   So I think keeping that in mind

2   because a lot of times we do hear negative

3   things, how we're not working well together. And

4   I think these are great examples in addition to

5   what we heard earlier in the week, just how these

6   different groups are working together well and

7   how we are supporting each other. And

8   coordinating where things seem to be a little bit

9   blurry.

10   And I think what we mean by

11   hydrography, what we mean at NOAA by hydrography,

12   what USGS is referring to when they say

13   hydrography. I think keep that in mind that

14   words have multiple meanings and applications.

15   And it's important to understand the context of

16   what's being discussed.

17   So I think we're doing a great job of

18   bringing those things together and ironing out

19   those concerns that, what do you mean by that and

20   how are we going to work together in this coastal

21   space so that we make sure we're getting the most

22   out of everything.

1   Also, just on my last comment, is on

2   the subject of topography. Most of us flew into

3   Juneau, or maybe other places first and then into

4   Juneau, just keep in mind, it's really important

5   to know where those mountains are and also to

6   know where things are when you can't quite see

7   them clearly.

8   It's really important to have that

9   mapped and really appreciate the support of USGS

10   of getting that work done here in Alaska so that

11   we can all benefit from that. Thank you.

12   CHAIR MILLER: Thank you everyone for

13   all the excellent comments. Next on the agenda

14   is a brief update. We're running a tad late but

15   we've got some elbow room later in the morning,

16   so we want an update from our technology working

17   group. Ed?

18   VICE CHAIR SAADE: I think they're

19   queuing it up.

20   CHAIR MILLER: One thing while they're

21   queuing things up that I neglected to answer, in

22   my eight years with HSRP, that was the first time

1 I've ever seen the amount of representation from

2 USGS at one of our meetings. I don't know past

3 that history if they've attended before but it

4 was a really excellent chance to work together.

5   VICE CHAIR SAADE: Okay.

6   CHAIR MILLER: Yes.

7   VICE CHAIR SAADE: All right, I can

8 read from my notes here. This is a summary of

9 what -- oh, here we go, good timing.

10   This is a summary of what's been going

11 on since we met in Miami. Next slide please.

12   The planned activities for the next

13 six months, potential collaboration with the

14 Science Advisory Board and other topics and ideas

15 from anybody in the group. So we'll probably

16 skip bullet four in the interest of time right

17 now.

18   So, next slide. So, over the past

19 five months or so we had a presentation on Chart

20 of the Future: A Path to Textual

21 Interoperability, Briana Sullivan, which was very

22 much an e-version of the Coast Pilot. And I

1   thought it was a really interesting presentation,

2   really interactive.

3   It's also interesting to note that the

4   folks that we saw on the panel earlier this week

5   have memorized the Coast Pilot so much that they

6   don't even refer to it anymore, so that's another

7   hurdle and interaction we'll have to think about

8   as this moves forward.

9   And then Ed gave a presentation on AIS

10   through the GoToMeeting process so the general

11   public outside of this group could get a feel for

12   it. But obviously being in his office and seeing

13   it firsthand is really where you feel the real

14   power of it.

15   And then we had a couple of different

16   detailed discussions with SAB, mostly with myself

17   attending their meeting up in New Hampshire in

18   July.

19   Next slide. We'll come back to this

20   topic later on this afternoon, but the planned

21   topics for the next six months, we want to have a

22   GoToMeeting based on some of the requests and

1   discussions with SAB, I'll get to that in the

2   next slide.

3   And also, it's time for an update on

4   Seabed 2030 status, data transfer updates. And

5   we'll organize one of those for either in

6   November, I think we were thinking, and then one

7   other month, probably early January or February

8   before we get together in March.

9   So, we'll position those two. And the

10   technical discussion, we've asked Larry to have

11   one of his staff or students talk about

12   specifically multibeam echosounder and derived

13   products from that relative to fisheries

14   applications and things.

15   And of course, any ideas from the rest

16   of the Panel, please speak up.

17   Next slide. So this is some of the

18   feedback derived from the discussions with SAB

19   and where the parallels or overlaps might be,

20   relative to HSRP and SAB.

21   Two key items. Number one is

22   leveraging hydrographic mapping and measurements

1   for Fisheries uses.

2   For some of this in this organization,

3   this is obviously already happening and it's

4   being, growing more mature in larger applications

5   all the time, but from the SAB side it was pretty

6   apparent that was news to them.

7   So we think this is a really quick hit

8   that's going to be beneficial to demonstrate how

9   all these different varieties of ways that we

10   collect multibeam data and backscatter and maybe

11   some other real-time data acquisitions and

12   generate the derived products that are

13   immediately available, or quickly available and

14   immediately applicable to what the Fisheries

15   folks are doing and researching.

16   And then to increase that awareness in

17   conjunction with SAB relative to what seems like

18   a common activity for the HSRP people.

19   So, that first step is what we

20   mentioned before, is to develop an informational

21   webinar with invited speakers and make sure that

22   those within the SAB that want to attend are

1 aware of it and get that --- spend enough time

2 during the webinar to ask questions and expand on

3 all this.

4 Next slide. So the other idea that

5 came up was taking all the data, basically the

6 types of data that Shep's group and Juliana's

7 group acquire and use that for forecasting and

8 modeling conditions in nearshore, coastal, and

9 estuarine navigable waters.

10 So this is a little bit less

11 immediate. This is something that everybody is

12 interested in and it's going to take time to

13 develop and it's going to take a lot of

14 interaction and discussion to be able to get a

15 path on how to go forward with this.

16 So part of that is the increased

17 availability of real-time data streams,

18 computational platforms, data assimilation. All

19 the different types of physical characteristics

20 can be measured, waves, currents, tides, et

21 cetera.

22 So what is needed to increase the

1   development of such a multi-use forecasting tool

2   within NOAA?

3   Well, that's a big question and a big

4   picture and that's something that we'll -- the

5   best we can do is kind of point people in the

6   right direction and put together the right people

7   in the two respective organizations to try and

8   move this forward in much larger steps rather

9   than just a wish list.

10   So the first step of what we agreed

11   to, review the literature and continue

12   discussions, develop the approach for

13   articulating the set of best practices for

14   multipurpose, nearshore, and estuarine

15   forecasting tools. And that NOAA could utilize

16   and leverage --- so you can see there is a lot

17   more development and work to do on this one and

18   we're going to do our best to keep the ball

19   rolling on that. I think that's the last slide.

20   Yes.

21   So that's a quick look at what we've

22   been doing in the working group. If you have any

1 questions or if you want to talk about it later

2 today, whatever your pleasure.

3   MEMBER THOMAS: I guess I don't

4 understand number two. But, I mean there is so

5 much work being done in the forecasting realm

6 right now.

7   Did they say they want to integrate

8 all of the forecast products or --

9   VICE CHAIR SAADE: I think the desire

10 was to take the data that is real-time now data

11 and how do we start to build that into modeling.

12 Now --

13   MEMBER THOMAS: Oh, so --

14   VICE CHAIR SAADE: -- if there are

15 good examples of that, just like with the

16 Fisheries Habitat Assessment --

17   MEMBER THOMAS: Right.

18   VICE CHAIR SAADE: -- if there are

19 good examples that we can demonstrate back to

20 them, the things that are already occurring, that

21 would be the first step.

22   And obviously there's some types of

1   things that are going on with the Weather Service

2   and all that. But I think it was, not Weather

3   Service-related, it was more to do with the types

4   of things that are trying to predict long-term

5   conditions along the coastline.

6   MEMBER THOMAS: And as it particularly

7   pertains to the Fisheries, right?

8   VICE CHAIR SAADE: Not necessarily

9   Fisheries.

10   MEMBER THOMAS: Oh, okay.

11   VICE CHAIR SAADE: There was, in the

12   meeting in New Hampshire, there was a great term

13   that was coined that I thought had captured a lot

14   of things and it was natural infrastructure.

15   And in particular, for instance, the

16   types of things that go on when we do mapping and

17   charting for Shep's group, where you're mapping

18   reefs and rock outcrops and things like that.

19   MEMBER THOMAS: So characterization ---

20   VICE CHAIR SAADE: That type of

21   infrastructure that's natural on its own and how

22   that ties into the whole big picture of

1   infrastructure.

2   MEMBER THOMAS: Okay. Thank you.

3   VICE CHAIR SAADE: Shep?

4   RDML SMITH: Yes. I think there was

5   one --- what I thought was quite an interesting

6   but a little aspirational side of that

7   prediction, which was prediction of sediment

8   transport.

9   Which is pretty immature compared to

10   hydrodynamic modeling or atmospheric modeling.

11   But we have important data that could support

12   that type of modeling for coastal stability and

13   that sort of thing.

14   VICE CHAIR SAADE: Yes, I agree. And

15   I think some of it is them asking the right

16   questions that we don't necessarily ask.

17   We might have a lot of the data that

18   can support it, but it's not necessarily

19   something that's at the forefront of the way we

20   think, in this group.

21   CHAIR MILLER: Any further comments on

22   the Technology Working Group?

1   It sounds like you're making good

2   progress. Okay, at this time, albeit a little

3   late, I'd like to call up the Alaska Panel. I'm

4   sorry, the Arctic Panel.

5   Ed Page and Ashley Chappell will be

6   leading this session, and I will turn it over to

7   them.

8   MEMBER PAGE: Testing, one, two.

9   Anyway, I think we have a great panel up here now

10   that I kind of coerced, to some degree, to come

11   up and talk about Arctic issues.

12   But all subject matter experts from

13   different perspectives, they've been there, done

14   that in different fields. And I think that

15   they're going to offer different perspectives of

16   the challenges that we have for maritime safety,

17   environmental protection and efficient maritime

18   operations and the role that NOAA can play in

19   that, facilitate, ensuring that increased

20   maritime operations out here go well.

21   So, I'm first going to offer up Mike

22   Emerson. He's a 1984 graduate of the academy,

1   which is important because he's an even year,

2   that makes him a good guy.

3   But I think the interesting

4   perspective from Mike is that he's both flown for

5   several, sailed on several Coast Guard ships but

6   also then became a pilot, a C-130 pilot. So he

7   understands that navigation issues from the

8   aviation community, that some areas are ahead of

9   the maritime community, and also the maritime

10   community.

11   But as head of Waterways Management

12   Senior Executive Service after 30 years, now he's

13   Senior Executive Service for the Coast Guard,

14   head of Waterways Management for the United Coast

15   Guard. Which to me is overwhelming when I think

16   of all the issues that he has between buoys and

17   aids in navigation, pilot navigation, goes on and

18   on.

19   And to get him up in Alaska to talk

20   about issues I'm really appreciative that he'd

21   take this effort to do so. And he also is a

22   great social beer drinker which is even more

1 important. He learned that in the academy too

2 though so, we know how that works. Mike, please.

3   MR. EMERSON: Thanks, Ed. It's great

4 to be here, Admiral, I appreciate you having us

5 up. And thanks to my buddy, Ed Page, for

6 inviting me personally. I've been trying to be

7 like you for a long time.

8   Juneau is a great place for this

9 meeting. It's a perfect waterway environment.

10 It's the party hat of waterways.

11   I'm so impressed with the tour and the

12 relationship with the Marine Exchange. And

13 you're really taking market share from the Coast

14 Guard and probably soon from Uber and other

15 expansion opportunities, so good on you.

16   I'll say that it's very telling with

17 a new Commandant that one of the first luncheon

18 guests that he invited over was you, Admiral

19 Gallaudet. I think it signals the great

20 relationship that we have.

21   So I'm going to speak in broad brushes

22 here today because we are already speaking with

1   one voice. We're aligned on a lot of different

2   areas, and I'll just emphasize a couple very

3   quickly.

4   But the fact is, you coming over early

5   on in Admiral Schultz's career really has made an

6   impact. We've got requests from NSF now and Army

7   Corps and others, to get to that executive dining

8   room.

9   So, two things happening with the new

10   administration and with the new front office and

11   the Coast Guard. There's been a renewed

12   emphasis, or a new emphasis, on maritime

13   commerce.

14   So we are seeing the maritime

15   transportation system and the efficiency and

16   effectiveness and profitability and all of those

17   things, safety, come up in every discussion that

18   we have.

19   And I will tell you that as the

20   director of not only the waterways management but

21   also of navigation and marine safety, I am also a

22   member of that hair club.

1   Next slide. To understand the

2   waterways you have to be a user. And when you

3   have a boat fire and it's efficiently put out by

4   three response fire boats, the Metropolitan

5   police and then the last blue light is, oh good,

6   here comes the Coast Guard.

7   And they ask who's the master and I

8   got everyone off safely, and they say, good job

9   skipper, what's your name and I hesitated and my

10   daughter said, tell them who you are daddy. Oh,

11   no, no, no.

12   (Laughter.)

13   MR. EMERSON: So titles are not

14   important here today. Next slide.

15   (Laughter.)

16   MR. EMERSON: But, it's more about

17   action. And one of the things that we do is put

18   together an Arctic strategy every couple of

19   years.

20   We led the nation in looking at the

21   Arctic and saying, we need a strategy, we need to

22   have some accomplishment here. And we don't have

1 to have just icebreakers, this isn't a strategy

2 to sell icebreakers and get Congress to go, oh,

3 keep up with the Russians.

4   It was really about having Arctic-

5 capable ships, airplanes, boats, people. To

6 operate in the Arctic you have to train in the

7 Arctic and it's not a game show, as you all well

8 know, this is a home team. And you've got to

9 prototype the right resources.

10   So we are doing that in our strategy

11 with a design on presence. We have to establish

12 presence, and I think NOAA likely too, will have

13 to increase their presence. And we're going to

14 have to speak with one voice about how we do

15 that. More on that later.

16   Next slide. What's new to the

17 strategy and the current rewrite that's on the

18 Commandant's desk and ready for signature, I'll

19 suggest, is not only that we want to continue to

20 modernize governments and play nicely in the

21 Arctic Council, the Arctic Coast Guard Forum and

22 play with the other waterfront countries in the

1   Arctic, we want to certainly broaden our

2   partnerships and work well with the interagency,

3   the federal, state, local, tribal, with my good

4   buddy Willie.

5   We also want to take a close look at

6   security. There are threats to our sovereignty,

7   there's new interests at the Department. The new

8   S-1 now is looking at engaging all of the

9   Homeland Security agencies.

10   An analysis and a strategy toward the

11 trade activities, the Fisheries activities, the

12 immigration challenges. Any of the emergent

13 conditions you may have as waterways open and

14 traffic increases and more tourism and more

15 passports, et cetera.

16   So you're going to see more emphasis

17 on security.

18   And I will tell you that there are

19 legitimate concerns with freedom of navigation

20 activities. The Chinese are operating throughout

21 the Arctic. The Northern Sea Route, the

22 Northwest Passage inclusive. And then even the

1 Polar Route.

2   We've got a lot of research vessels

3 and we've got a lot of area that the Coast Guard

4 has got a responsibility to be able to respond

5 to, to monitor, manage, and certainly respond to

6 law enforcement or search and rescue.

7   Next slide. So at present, today,

8 tomorrow and the day after, we'll continue to do

9 a mobile and seasonal presence.

10   And we are -- you got a brief probably

11 from Admiral Bell. I didn't see Tuesday but I

12 know he must have commented on how he deploys a

13 thousand people every year to Arctic Shield

14 operations up on the North Slope. We operate out

15 of your hometown, Kotzebue, Willie, and we fly

16 aircraft up and down the coast, we have liaisons

17 talking to remote communities. And we continue

18 to work with our interagency partners, NOAA as

19 well, gathering information.

20   We need data is a common theme that we

21 hear. We help you collect it with the Healy and

22 with putting science teams on.

1   Again, with that great relationship,

2   just a couple of years ago when I took over the

3   reputation of the Healy front four of the command

4   on the Healy, was not so flattering. The

5   scientists felt like they were second class

6   citizens and like they were civilians at

7   headquarters.

8   And we've, I think, changed that.

9   They just finished the first semester of the

10   summer with the scientists, and I got

11   unbelievable accolades from some of your

12   leadership that said that everyone was treated so

13   well.

14   Great relationships, people taking

15   initiative, working well together, and so this is

16   a good time to play nice, I like it.

17   Next slide please. The strategy for

18   the Arctic certainly includes the icebreaker.

19   And we've made no secret that it will have

20   sensors, it will have weapons, it will be able to

21   gather information.

22   It's a transport vessel, but it's also

1 going to continue to be an asset that's useable

2 for the interagency science and academic

3 communities. It does have the cranes and the

4 deck space and the modularity to be able to take

5 on different science equipment and deploy those

6 and work with unmanned surface and undersea and

7 air assets and do a lot of different R&D efforts.

8 And it's going to have weapons. And

9 we can talk more about that if you like, but

10 building six of them.

11 Congressman Garamendi and others

12 continue to signal that we're going to pay for

13 these, we're going to get them, so we're feeling

14 fairly confident that as we build out the other

15 ships that you've heard about, we're going to

16 build the nation's primary ice-capable surface

17 fleet that gives you the visible presence. And

18 it goes back to having waterways and being in

19 those waterways, being visible.

20 Next slide please. There's a cerebral

21 aspect to the Coast Guard, the prevention side

22 that Ed's mentioned a number of times. And this

1 is the part, the world that I work in.

2 We recently conducted an important

3 analysis --- we didn't recently, this is a ten-

4 year-old effort. Some of you have been around

5 this for a long time.

6 And this was a project that we engaged

7 initially with all the remote communities and

8 agencies and government officials in Alaska, and

9 then we extend it over to discussions with our

10 neighbors to the west and put together some

11 recommended track lines.

12 Voluntary routing system. And then we

13 acknowledged and dignified at IMO some areas to

14 be avoided. And so far we have just one remaining

15 area near the center of the boundary line that we

16 need to get approved. That's on the slate for

17 this coming session at IMO that starts in

18 October.

19 But, there are many different

20 information areas that you could put under the

21 word planning. Looking at the Bering Sea in this

22 ten year study effort really gave us a sense of

1   what the traffic is, what the infrastructure

2   requirements are, the Aids to Navigation, what

3   opportunities there are for leveraging new

4   technology for continuing the science effort and

5   getting that good PORTS information formalized.

6   And then taking that effort, the next

7   step is taking that to the North Slope, and as

8   the Northwest Passage emerges, we'll already have

9   the planning in place.

10   Next slide. So my wrap-up here is

11   that there are a lot of places we could

12   collaborate. I hit them in broad strokes, I know

13   that, but we need a joint voice on how we

14   establish ourselves, maintain a presence, or

15   sometimes establish one.

16   But speak with one voice on planning.

17   How we use the U.S. areas, the offshore areas

18   that are source, potential sources for resource

19   development. So, how we lease those.

20   We're going to have to do some

21   planning there and interagency coordination.

22   Look at the R&D opportunities, and we've talked

1   about some of those unmanned capabilities and

2   what have you.

3   Increased awareness is a good cue for

4   mentioning electronic charts, moving maps. All

5   of the bridge management systems now are way

6   smarter than the car I drive and some of the --

7   even my ten-year-old computer.

8   These new systems are all dependent on

9   good information. And everything that we've

10   approved policy-wise and electronic charts, we've

11   said they have to use NOAA data.

12   So, you all have to help with us in

13   making sure that those products to the public are

14   good and that they contribute to marine safety.

15   Certainly, we've talked about PORTS over AIS and

16   other electronic MSI, Marine Safety Information

17   technologies.

18   And finally, infrastructure. My

19   comment here is, one, it's a little bit edgy but

20   the State of Alaska and others have asked us, do

21   you need a deepwater port, and of course we can't

22   say that because then we'd be asked to pay for

1   it. Probably NOAA has the same challenge, and

2   even DoD has the same challenge.

3   But if we all indicate very strongly

4   that the State of Alaska needs a deepwater port

5   and the State of Alaska needs nav aids and

6   communication towers and lower earth orbit

7   satellites, et cetera, then we'll start to get

8   some momentum. I think that's what the Congress

9   is waiting to hear and hopefully waiting to fund.

10   My sense is that, Admiral, there is a

11   good relationship with the Coast Guard, I hope it

12   continues, and I'm certainly on board for helping

13   to align us on any of the projects that this

14   review puts up. Thank you.

15   (Applause)

16   MEMBER PAGE: Is it working? Yes,

17   okay. Thanks, Mike. Willie Goodwin is a good

18   friend, Alaskan Native.

19   This is his backyard, the Arctic is

20   his backyard. He's well respected, he's one of

21   the Native elders up there in that region of our

22   Arctic.

1   He's fished and whaled and lived up

2   there, but also has some time in the lower 48, or

3   in this area at Sitka, he went to high school at

4   Sitka, Mount Edgecumbe. But he's really from the

5   Arctic.

6   And his demeanor, his ability to work

7   with others and his leadership have lead him to

8   be the Chairman of the Arctic Waterway Safety

9   Committee, which brings in all kinds of

10   representatives from the maritime industry and

11   the people who live up in the Arctic, and

12   agencies to kind of collaborate and come up with

13   standards of care and good marine practice and

14   come up with products that enhance maritime

15   safety, environmental protection so that his

16   neighborhood is not negatively impacted in the

17   future by increased maritime activity.

18   So, he came all the way from Kotzebue

19   here and I'm really grateful you made this trip

20   and always good to see you and hear your

21   perspective. So Willie, if you would, please

22   tell us your perspective on this. Thank you.

1   MR. GOODWIN: Thank you, Ed. And I'm

2   very happy to be here. Good morning, my name is

3   Ergogat (phonetic), my Inupiaq name. My nickname

4   is Willie Goodwin.

5   Two hundred generations I believe, at

6   least in my area, have inhabited the Cape

7   Krusenstern National Monument. And that's what

8   the Park Service did a paper on, 200 generations

9   of human habitation in the monument.

10   But I believe it goes further than

11   that because we were once called mammoth hunters

12   and now we're caribou hunters. And the stories

13   I've heard go much further than 200 generations.

14   I am part of the Kikiktagruk Inupiaq

15   or Kotzebue area from the Malamute Inupiaq people

16   of Alaska. My region, the area I'm from, is the

17   size of Indiana with about 6,800 people living

18   within that area, which includes the coastal

19   areas and the rivers that come in.

20   I am Chairman of the Arctic Marine

21   Mammal Commission and the Arctic Waterways Safety

22   Committee. I'm here to tell you a little bit

1   about how we deal with protecting the Arctic

2   waters that are so vital to the survival of the

3   Inupiaq and Yup'ik people.

4   You know the rest of the world has

5   just found out that the Arctic is changing. For

6   those of us who live there, change is pretty much

7   all we've ever known. We have adapted to many

8   changes we have faced for thousands of years.

9   First came items like iron, tobacco,

10   outboards, new hunting practices due to climate

11   change. We have used these changes to our

12   advantage and would like the opportunity to

13   participate in today's changes because we have no

14   choice but to adapt. And we are very good at it.

15   No matter how it changes, the Arctic

16   is harsh, so we watch out for each other and

17   share what we have and what we know.

18   Next slide please. The first step to

19   developing safe practices for Arctic waters is

20   becoming familiar with those who are on the water

21   and why they are there. Local communities are

22   increasingly having to share the water with

1   developers and researchers.

2   Next slide. For those of us who live

3   there, we are part of the natural world. We

4   follow its seasons.

5   The animals provide our nutritional

6   health, we know our ecosystem and we know our

7   fellow creatures like we know each other. Our

8   social systems are built around the ecosystem in

9   which we live.

10   This is part of our heritage as a

11   subsistence hunting culture. We depend on the

12   Arctic ecosystem for our food security, for life

13   itself. And because it is always changing season

14   to season and year to year, we survive by

15   adapting to those changes.

16   Our local residents need subsistence

17   resources to remain available for hunting. This

18   is why we are talking about, when you hear us say

19   that we are concerned about our food security.

20   Protecting the availability of our

21   resources and our food security is written into

22   federal law in Section 101(a)(5)(a) and (d) of

1   the Marine Mammal Protection Act.

2   But working to protect our food

3   security doesn't mean that we oppose development.

4   Development can bring jobs to our communities and

5   these opportunities are important to us.

6   We are happy to share our region with

7   development interests and scientists conducting

8   research when they are willing to work with us on

9   resolutions to conflicts that bring shared

10   opportunity and success rather than win-lose

11   outcomes.

12   Next slide please. With recent

13   increases in Arctic vessel traffic, the Arctic

14   Marine Mammal hunter groups came together in 2012

15   at the request of the U.S. Coast Guard to form

16   the Arctic Marine Mammal Coalition, or AMMC.

17   The Coalition is comprised of the five

18   Arctic Marine Mammal Hunter Co-Management Groups,

19   the Alaska Eskimo Whaling Commission, the Eskimo

20   Walrus Commission, the Nanook Commission, the Ice

21   Seal Committee and the Alaska Beluga Whale

22   Committee.

1   True to its mission, the AMMC has been

2   successful in providing communication and

3   education between Arctic coastal communities and

4   the U.S. Coast Guard, NOAA, and other regulatory

5   agencies on issues related to the expected

6   impacts of increased ship traffic in the Arctic,

7   on our way of life and subsistence activities.

8   A large accomplishment of the AMMC has

9   been to bring together the Marine Mammal Groups

10   with municipal government, the Alaska marine

11   pilots, vessel operators, the tourism industry,

12   researchers, and oil and gas to form the Arctic

13   Waterways Safety Committee.

14   Other areas of the U.S., coastal U.S.,

15   have similar stakeholder groups usually called

16   harbor safety committees. The purpose here is to

17   create a stakeholder process where those using

18   the waterways can reach consensus on safe

19   practices for local marine areas.

20   The Arctic Waterway Safety Committee

21   is composed of a wide array of Arctic maritime

22   users and stakeholders that fall under three

1   categories: subsistence hunters, industry, and

2   other representatives. Each category has five

3   seats and each with a vote on decisions made by

4   the organization.

5   Next slide. The area of interest for

6   the Arctic Waterway Safety Committee extends from

7   the St. Lawrence Island, north along the Arctic

8   coast of Alaska to the Canadian border.

9   We were formally incorporated in

10   October 2014 and meet two times per year. We

11   have developed a standard of operating care for

12   research vessels and are in the final stages of

13   completing the waterway safety plan.

14   The U.S. Coast Guard has acknowledged

15   that the Arctic Waterway Safety Committee is a

16   key player in waterway safety and will be able to

17   look to these safe practices as they develop

18   measures for managing the increases in Arctic

19   vessel traffic.

20   Next slide. The marine mammal hunter

21   groups, especially the Alaska Eskimo Whaling

22   Commission, work with NOAA to provide information

1   on sensitive areas for publication in the Coast

2   Pilot.

3   An example of that is the timing of

4   the hunts and contact information should vessels

5   be in the area during that time. We also provide

6   VHF channels and provide buffer areas for

7   communities.

8   Funding and capacity have been an

9   issue in providing the Coast Pilot with updated

10   information. I think you will see the hunter

11   groups providing more detailed information in the

12   future as we complete our safety plan.

13   The next slide. For us hunters, real-

14   time ship-to-shore communications is vital to our

15   safety and the protection of our resources.

16   There are areas that need to be respected for our

17   subsistence activities, not only during our

18   hunts, but during the migration of our marine

19   mammals.

20   Right now, information is difficult to

21   access. It relies on vessel operators' knowledge

22   and adherence to the Coast Pilot. If operators

1   could communicate in real-time with our

2   communities, it would be very helpful to us.

3   The next slide. As I said before, the

4   Arctic, in our communities, rely on the resources

5   from the sea for our survival.

6   For us, it isn't just economic gain or

7   results from research that are at stake. We have

8   seen a dramatic increase in marine traffic and

9   impact to our communities is significant.

10   We must continue to work to plan

11   solutions that avoid environmental mistakes. The

12   knowledge and experience and the culture of

13   sharing and adapting found in our local

14   communities is a very large part of that.

15   The Alaskan Native subsistence hunters

16   must be included as part of that solution, and

17   done in ways that are possible with the limited

18   resources for those communities.

19   I would also like to personally give

20   a big thank you to retired Commander James Houck,

21   who led us through this process as we tried to

22   figure out what we need to do when we started to

1   see large ships. Thank you.

2   (Applause.)

3   MEMBER PAGE: Thanks again, Willie.

4   Next is Paul Fuhs. I could talk about an hour

5   about Paul Fuhs, but I better not.

6   But we do go back 35 years, back when,

7   a little bit more destructive relationship, when

8   I was involved with Marine Safety and the

9   Aleutians and Paul was mayor of Dutch Harbor.

10   But on a side business, he was building the

11   community, but destroying ships for us. So he

12   took his skills as an underwater diver and

13   explosives expert and blew some ships that were

14   problematic environmental hazards in the Aleutian

15   Islands.

16   So we had some pretty colorful times

17   back then. And, over the years, we've had more

18   mellow types of relationships, traveling to the

19   Galapagos Islands, I've been in Norway and

20   Iceland and in Alaska. But he's also, was very

21   instrumental and is our president of the board

22   for the Marine Exchange of Alaska, and he was

1   there, when we sat down, in a bar, and drew up

2   the plans of starting the Marine Exchange.

3   So he's been key as far as what we've

4   developed over the years, been a great friend,

5   but also a mentor and a great leader. But he's

6   involved in so many aspects of Alaska. He was

7   commissioner of the Department of Commerce years

8   ago.

9   And so he understands the blue

10   economy, if you will. He also understands the

11   importance in protecting our environment, having

12   been involved in many marine casualties,

13   including Exxon Valdez spill. So, Paul, please

14   do.

15   MR. FUHS: Thank you. I think I'll go

16   ahead and stand, if you don't mind? So, I want

17   to just say how proud we all are to have you all

18   here and to hear the important work that you're

19   doing. And some of the things I want to talk

20   about today is how we might take some of your

21   work and make it operational for the vessels. I

22   think that's really important that we have that

1   transmission capability.

2   I do want to point out that the Marine

3   Exchange, it was not because of some government

4   regulation, or some reluctant or resistant

5   industry. Industry took the lead in putting this

6   together, because of our shared commitment to

7   safe, efficient, and environmentally responsible

8   operations. So, our board represents the entire

9   industry.

10   So I've been speaking a lot about

11   these Arctic issues, even to our school kids, and

12   to try to bring awareness to them. And one thing

13   that struck me, as I did, was the importance of

14   maps. And I know maps are really important to

15   you. It's one of the most important

16   communication methods that you have. And, just

17   an example of how powerful maps are to our

18   consciousness and understanding of the world,

19   here's a map of the world.

20   And, even for sixth grade kids, this

21   is really disorienting for them, and for us. And

22   of course, there's no up or down in the world,

1   it's round and we're floating in space, but our

2   concepts of maps are more like this.

3   And this is what we grew up with.

4   Well, that makes us feel a little more

5   comfortable, but it's still a distorted picture

6   of the world, because this is what we call the

7   Mercator mentality that we all grew up with. At

8   least this map doesn't have Alaska in a little

9   corner, down on the edge.

10   (Laughter.)

11   MR. FUHS: But, you know, it's really,

12   you know, this is the view of the world that we

13   want to show. And this really shows the

14   connectedness of the Arctic. And, in economic

15   terms, it's really important, because 80% of the

16   industrial production of the world takes place in

17   the northern hemisphere. Yet, currently, we're

18   stuck with two inefficient and problematic routes

19   for transporting our goods for trade.

20   So, what's been looked at a lot more

21   is a northern sea route, Arctic operations.

22   We're seeing increased traffic. What we're going

1 to see here is -- and this is for container

2 operations, which is the next breakthrough for a

3 real world trade route.

4   To have a world trade route, you

5 really have to have container operations. And

6 this is using Adak as a hub, connecting northern

7 sea route traffic to the Great Circle Route

8 traffic, which would probably be the most

9 efficient way to do it.

10   This is a lot of the traffic that's

11 happening right now. This is Russian LNG

12 production coming across. There's going to be 13

13 vessels doing this. You see the savings of about

14 20 days.

15   And, you know, one of the other

16 options that this represents is that, if we can

17 put fueling stations, we can actually replace

18 some of the more polluting fuels in the Arctic

19 with LNG, if we can use these ships to create

20 fueling stations. Athis is another thing the IMO

21 is looking at right now is heavy fuel oils.

22   So, you know, a lot of this is

1 facilitated by the use of icebreakers. And one

2 concept we're working with it "Uber for

3 icebreakers." There aren't that many of them, so

4 what we're looking at is, you know, those that

5 are available should be available to be used,

6 especially in an emergency situation.

7   Now, this looks like a pretty big

8 vessel. This is about 25-megawatt nuclear

9 icebreaker. But the next iteration, the two that

10 are just coming off the ways into service are 65-

11 megawatt icebreakers and there's a 110-megawatt

12 that the keel has been laid and it's going to be

13 coming.

14   So, the shippers on the northern sea

15 route for containers operations tell us that we

16 need to be able to guarantee at least six months

17 a year operations before they'll change their

18 distribution patterns. So, because of this,

19 prevention is absolutely critical.

20   And, why? Oil spill response is

21 limited, infrastructure is limited, you know,

22 marine mammals, the index species live at the

1 surface of the water, they'll be most heavily

2 impacted by a spill. And, as Willie Goodwin

3 pointed out, that's what they're depending on for

4 their food. And the financial and environmental

5 costs would be just catastrophic.

6   So, one of the things that -- and I

7 don't know how many people here work in oil spill

8 response, but if you were to guess, in good

9 conditions down south, what would be considered

10 to be a very successful cleanup operation of oil?

11 What percentage of the oil would you think would

12 be considered very successful? And the amount is

13 five percent is considered a very successful oil

14 spill operation.

15   Well, that's just not acceptable in

16 the Arctic. So, back in the days when I worked

17 with Ed, how did we do pollution prevention?

18 Well, this was when I worked as a diver. Well, I

19 was a little bit younger there. Look at that,

20 I'm even smoking. Holy cow.

21   (Laughter.)

22   MR. FUHS: But, you know, what we do,

1   because of lack of oil spill response and because

2   a vessel would wreck on the beach, had fuel

3   onboard, and it was risking another vessel to try

4   to come in and save it. Then I'd come in and,

5   you know, load up all the tanks with explosives

6   and incendiaries, and this is 160,000 gallons of

7   diesel going off at one time.

8   And it was so effective, there wasn't

9   even a sheen on the water afterwards. So I think

10 we did, like, eleven ships like this. But they

11 don't let you do that anymore.

12   (Laughter.)

13   MR. FUHS: So, you know, that's why,

14 you know, these other measures are so important,

15 our safety measures. Now, these are the

16 prevention measures that we currently have in

17 place. You saw a lot of these at the Marine

18 Exchange.

19   Vessel tracking, monitoring, early

20 detection of problems, rooting measures, vessel

21 of opportunity, who's the next nearest vessel

22 that can help? These are important.

1   Improved hydrologic-meteorological

2   data, transmission of this data to the vessels,

3   and some international agreements for prevention

4   measures. Because there's about eight nations in

5   the Arctic involved in this Arctic shipping, and

6   we need to have more harmonized regulations and

7   agreements on this.

8   Mariners like it. It's easier to get

9   compliance if people know they have the same

10   regulations and expectations wherever they go,

11   rather than going one mile further and now I'm a

12   completely different regime. So, that's

13   important.

14   And NOAA can play a very important

15   part in this, because you play a very critical

16   role in the Arctic Council Committee on

17   Protecting the Marine Environment, and, right

18   now, they're involved in a best practices process

19   to identify best practices. And one of your

20   mates, Peter Oppenheimer, is the co-chair of that

21   committee, so we're hoping that we can get

22   support for putting these U.S. measures forward

1   as best practices.

2   They have been adopted as alternative

3   planning criteria by the U.S. Coast Guard, so

4   we're hoping today to seek your agreement to help

5   put these measures forward.

6   Well, we've talked about dynamic

7   resource protection here. Well, this is when

8   Shell was operating, and we came in and this was

9   a conflict avoidance agreement with the marine

10   mammal hunters. And we can digital fence any

11   area, and that's what we did in this area here.

12   I'm sorry you can't see the pointer. But this

13   was the area where they agreed to not go into,

14   and, you know, we assured that they didn't go

15   into it.

16   For part of this, because of marine

17   mammals, people have said, well, let's make

18   marine-protected areas, but these animals move

19   around. So you need to be able to really say,

20   "now they're here, now they're there, here's

21   where the hunting is."

22   Willie's been documenting the changes

1   that have been happening up there. So we really

2   need a dynamic process to do this, and that's one

3   of the capabilities at the Marine Exchange.

4   The other thing we're doing is

5   protecting all the fiber optic cables. So we

6   digital fence these. If they ever get a break in

7   the fiber optic cable, they come to us and say,

8   where's the intersect with the vessel?

9   We've had a couple of them, one was a

10   Coast Guard vessel on Puget Sound, one a

11   commercial vessel in Cook Inlet drug anchor and

12   separated the line. But we tell them exactly at

13   that moment where it was, so they can go find and

14   repair it. They don't have to pull out thousands

15   of miles of fiber optic cable to find it. So, I

16   know this is the backbone a lot of your systems

17   that you use to transmit your data, as well.

18   These are some of the international

19   organizations that we've been working with. The

20   Polar Code has been adopted. There's a section

21   in the Polar Code on operations manual and

22   navigation. So we're hoping, if these best

1   practices can be identified, those could be

2   included in the voyage planning for voyages in

3   the Arctic.

4   These are some of the weather stations

5   that we've put in. And I want to give a big

6   thanks to AOOS that's provided a lot of the

7   funding for these weather stations. And, you

8   know, as we heard, we've been doing this and

9   effectively sending the data and other data out

10   to the vessels under a research agreement.

11   We need to take the next step where we

12   have the permissions to be able to do this on a

13   permanent basis. And I understand that there are

14   some other parts of the United States that really

15   aren't interested in it, but hopefully we can

16   come to an agreement that the areas that do want

17   to do it, can. If the rest don't want to, they

18   don't have to, but at least we'd have the

19   permission to be able to take some of the data

20   that you folks generate and make it real for the

21   vessels: ice data, hazards to navigation, marine

22   mammals, weather data, all of that.

1   Again, you heard about virtual buoys.

2   In ice, you can't put a physical buoy, so we're

3   able to digitally generate buoys that they can

4   see on their AIS Guidance Systems. We're able to

5   provide for the hunters out in the Arctic, for

6   vessels can see them and they can see the other

7   vessels.

8   This is a speed zone at Glacier Bay,

9   and where whales concentrate and they used to

10   send out there with a Zodiac and a radar gun, but

11   now we do it like this. If somebody violates the

12   speed limit, a report automatically goes to the

13   vessel owner and to the National Park Service.

14   The vessel owner, if it's a captain that's not

15   following the rules, it's going to get on him.

16   For the Park Service, if you violate it enough,

17   you're going to lose your right to go into

18   Glacier Bay. So we call this the truth serum.

19   And these are the routing measures

20   that were adopted by IMO, but, as is pointed out,

21   they are voluntary and we do think that they

22   should also be -- have their regular tracking and

1   monitoring activities that we have.

2   And, you know, what we do is, you

3   know, we can, as a regulatory body, tell

4   somebody, hey, we're in the wrong area, but when

5   we tell them, they voluntarily move. It's kind

6   of like, you know, an airplane coming into the

7   airport. You've never heard a pilot complain

8   about somebody saying, hey, you're on the wrong

9   runway or you're about to run into somebody.

10   So, we never get, you know, kicked

11   back, and often they just say, hey, thanks, it's

12   nice to know someone's watching our back out here

13   in the middle of nowhere.

14   So, these are some of the barriers and

15   solutions. We do need these permissions for data

16   transmissions. We need to verify marine mammal

17   data so that we can do the digital fencing. We

18   need to install some more transmission equipment.

19   Now, this AIS software and hardware,

20   IMO puts out a protocol of what your AIS system

21   has to be able to transmit and receive. And, to

22   this point, they have not made that protocol to

1 be able to receive it. So, some manufacturers

2 do, some manufacturers don't.

3   So, a recommendation to IMO to upgrade

4 the requirements for software to be able to

5 receive meteorological and other safety data is

6 important. And then these international

7 agreements for implementation in the Arctic.

8   And I guess that's it. So thanks,

9 again, for coming. I look forward to working

10 together with you.

11   (Applause.)

12   MEMBER PAGE: Thanks, Paul. The next

13 speaker is Jay Sterne. Jay and I first met on a

14 plane flying back from Barrow, which is now

15 called Utqiagvik. But he was working for Senator

16 Murkowski, at the time, and Fisheries.

17   And he's got a lot of experience and

18 knowledge in Arctic issues and works with the

19 Port of Nome and other Arctic communities and I

20 always enjoy sitting down with him. I always

21 coming out a little smarter after talking to Jay

22 about all these issues. But he likes to make

1   things happen and it's good to have his profound

2   knowledge shared with us on some of these issues

3   that we see coming down the pike. So, Jay, if

4   you would, please?

5   MR. STERNE: Thank you, Ed. I think

6   the first thing I'll say is, I'm president of

7   Windward Strategies, which is a one-person

8   company based here in Juneau. Our second

9   employee, I think, will be called Zoe, Jr., based

10 on what I've heard.

11   (Laughter.)

12   MR. STERNE: But thank you, Ashley,

13 Lynn, Madam Chairwoman, Admiral Gallaudet,

14 Admiral Smith, the HSRP Panel, thank you for

15 coming to what is now my hometown of Juneau.

16   Prior to moving to Juneau last year --

17 so I am very much a newcomer compared to you and

18 Molly -- I lived for 25 years in D.C., as an

19 attorney, lobbyist, Hill staffer. But I thought

20 I'd go a little bit further back to explain a

21 little bit why I've always gravitated toward

22 marine environmental issues.

1   Before going to law school, I was the

2   varsity sailing coach at New York Maritime

3   College, and I spent about 300 days out of the

4   year on the water, largely on the East River,

5   sometimes over by Kings Point where, I think, Ann

6   and I used to compete against each other back in

7   the college days.

8   And I would get these tar balls washed

9   up onto my docks, up on the small 420s. And I

10   was a punk kid at the time, and I would get into

11   this beat-up Boston Whaler and I would go over to

12   the Coast Guard Fort Totten Station. And I had

13   the audacity to yell at Coast Guard officers

14   about how terrible it was that these big tar

15   balls were just getting discharged into, you

16   know, the East River and washing up on the deck.

17   I was told that it was really

18   difficult to address this, from the Coast Guard's

19   perspective. They didn't have the regulatory

20   authority, they didn't have the physical

21   capability to go after a lot of the materials

22   being just pumped out at night while the coastal

1　　fuel barges are going through.

2　　　　　　　　In a small way, that lead me to go to

3　　law school and I wanted to get involved in marine

4　　environmental issues. So, here I am, a few years

5　　later.

6　　　　　　　　One of the things that I was asked to

7　　talk about is infrastructure, maritime

8　　infrastructure in Arctic, and why do we need it?

9　　And, when I first got out of law school, I worked

10　　on international marine and environmental policy

11　　issues in D.C., and I found it very interesting

12　　the different legal regimes that applied to the

13　　Antarctic and the Arctic.

14　　　　　　　　And it was really, really very simple.

15　　People live in the Arctic. And, as Willie said,

16　　they have lived there for a very, very long time.

17　　And in order for people to live and thrive in the

18　　Arctic, in the U.S. Arctic in particular, you

19　　need to have infrastructure to support them.

20　　　　　　　　So, as you have spent a little bit of

21　　time in Juneau, if this is your first time in

22　　Alaska, or if this is one of many trips, you know

1   that logistics and getting things done in Alaska

2   are extremely challenging. And I think what the

3   Marine Exchange has been able to achieve in its

4   short life span is a real testament to the

5   creativity and the work ethic to respond to those

6   challenges.

7   So, maritime infrastructure in the

8   U.S. Arctic needs to support the peoples and the

9   communities. They've got to address the

10   increasing maritime traffic. And I'm not going

11   to be repetitive with a lot of the information

12   that's already been shared in the last couple of

13   days.

14   I also want to highlight the fact that

15   there is growing strategic interest. As Mike

16   said, you know, there are a lot of countries that

17   are starting to pay attention to the Arctic, and

18   the U.S. has a very strong invested interest in

19   being a stabilizing force. There's also

20   significant natural resource potential, both on-

21   and offshore. And then, as we've heard quite a

22   bit from this panel, there are unique challenges

1   in responding to a maritime incident and, and,

2   particularly, an, and oil spill.

3   So, one of the things that I was

4   exposed to, again, right out of law school, was

5   the 1992 Rio Earth Summit. And the term

6   sustainable development" is a little bit, I

7   think, sometimes forgotten, but also a little bit

8   misused. But the very first principle really

9   underscores that sustainable development means

10   allowing people and communities to thrive in a

11   natural environment.

12   And I think that's one of the most

13   significant challenges in the Arctic. It's

14   relatively pristine, the logistics are

15   challenging, and people have a vested interest in

16   cultural history, but particularly with

17   subsistence fishing and hunting. If you don't

18   have a pristine marine environment, you don't

19   have marine mammals. And if you don't have

20   marine mammals, you don't have food security.

21   I can't say it anywhere nearly as

22   eloquently as Willie does, but I can't underscore

1   enough how this impacts logistics,

2   infrastructure, planning, U.S. federal policy,

3   international policy.

4   So, I've touched on some of the core

5   issues to address, hunting and fishing on a

6   subsistence level. Commercial fishing in the

7   U.S. Arctic is becoming an increasing topic of

8   discussion. As the marine environment changes,

9   it gets a little bit warmer, NOAA is doing quite

10   a bit of survey work, further north in the Bering

11   Sea and up in the Bering Straits region. And

12   that may lead to increased commercial fishing

13   activities for some of the main commercial

14   species that are caught in the Bering Sea: cod,

15   pollock.

16   And if that starts happening in

17   significant volumes, then you start looking at,

18   do you bring the product to shore, is it going to

19   be processed in shore-based processing

20   facilities, as it is in Dutch Harbor? Or, if

21   it's going to be catcher-processors, who are

22   then, you know, operating offshore and then

1 bringing frozen product that has to get

2 transshipped out of the region.

3   We talked a lot about the regional

4 marine transportation. One of things that I want

5 to highlight is, for remote communities that are

6 not connected to the road system -- and if you're

7 not familiar with that term, talk with anybody

8 who lives off the road system in Alaska.

9   That means a lot of your goods,

10 household goods, you might have a dishwasher

11 delivered by Amazon Prime by a barge. You know,

12 you may buy a car on CarMax, but you don't have a

13 CarMax in your village, so that's going to be

14 delivered by barge. Building materials, gravel,

15 all of that, and particularly, diesel fuel. You

16 know, the hope in the future is that more

17 renewable resources and LNG may be available for

18 these communities, but right now diesel is the

19 life blood in the winter.

20   Onshore resource development. You've

21 heard a little bit about the red dog mine.

22 You've got to get that product out, so you need a

1   port. You need a port with very good charts so

2   that vessels coming in and out of there, very

3   large vessels, don't run aground.

4   Offshore resource development. I'm

5   not going to go too much into offshore oil and

6   gas exploration in Alaska. That could be its own

7   two- to three-day seminar here. But I will

8   highlight that when Shell was active in the

9   Chukchi Sea the vessel traffic was very, very

10   robust, and it lead to crowding of harbors, it

11   lead to the Fennica incident.

12   I thought that was a very good

13   characterization, early on this week, about how

14   the vessel traffic dynamics in Dutch Harbor

15   changed, because it hadn't been that crowded. A

16   lot of the traditional anchorage areas, you know,

17   were at capacity and a vessel straight out of,

18   you know, what they thought was a safe lane.

19   And, you know, that had a significant impact.

20   The other thing that I'll mention,

21   because this is a NOAA meeting, when Shell really

22   ramped up, so did NOAA. And one of the areas

1   that they were really trying to get ahead of the

2   curve was, if there were an incident, if there

3   were some kind of an oil spill up into Chukchi,

4   how would you respond to an unusual, or large,

5   marine mammal mortality event?

6   And this speaks right to the coastal

7   infrastructure. I did some briefings with the

8   Office of Protected Resources, and one of the

9   challenges that they identified very quickly

10   going into some of the coastal villages is, how

11   do you get power down to the beach? How do you

12   get volunteers up to the impacted site? How do

13   you cage a polar bear and de-oil it?

14   There are a lot of challenges that you

15   don't face in the Gulf of Mexico where it may be,

16   you know, relatively simple to get vessels,

17   people, and equipment onsite to address these

18   problems.

19   National and homeland security

20   missions. Very recently, Commandant Schultz and

21   Secretary of the Navy Spencer did a tour up in

22   northwest Alaska. They stopped in Nome, and

1   really highlighted the growing, not just

2   interest, but prioritization for both agencies to

3   have a physical presence.

4   We've talked a lot about icebreakers,

5   but I'll take a quote from Secretary Spencer, who

6   acknowledged that since the 1960s, the U.S. Navy

7   has had a physical presence in the U.S. Arctic,

8   and in the international Arctic, as well, but

9   that's been submarine presence. And what he said

10   is needed now, with the Chinese and the Russians

11   and many other countries operating there with

12   their icebreakers, is what the U.S. needs is big

13   gray ships with even bigger American flags.

14   And, you know, with NOAA's increased

15   operations, with the Coast Guard increasing their

16   operations up there, what you need is some

17   shore-based infrastructure.

18   We talked about protection of the

19   marine environment. And the other thing I'll

20   mention, in that context, is that if Shell, or

21   any other company, never comes back to the

22   Chukchi or the Beaufort, oil and gas exploration

1   is going to continue to proceed on the Russian

2   side of the boundary, and there are no fences.

3   There may be electronic fences to keep vessels

4   away from marine mammals, but we haven't come up

5   with an electronic fence that's going to keep an

6   oil spill that occurs in Russian waters away from

7   Alaskan waters. And that's a big problem.

8   And when I worked for Senator

9   Murkowski it was one of my biggest frustrations

10   about certain stakeholders, outside of Alaska,

11   really pushing back against the development of

12   shore-based and response infrastructure. You

13   know, their assertion was, it's not a good idea

14   to do oil and gas exploration in the U.S. Arctic.

15   Agree to disagree, but, with what's going on in

16   Russia, you have to be prepared for some pretty

17   significant consequences.

18   So. what are some of the drivers for

19   U.S. policy? It's been great to see multiple

20   agencies here. It's been great to see members of

21   the Alaska congressional delegation, the Senate

22   Commerce Committee. We've got representatives

1   from the Governor's office, we've got others who

2   have come in from the State of Alaska,

3   Alaska-native organizations, and I'm hopeful that

4   there are regional and local governments that are

5   online through the webinar process.

6   It really takes collaborative input.

7   It really takes cooperation. Because, again,

8   it's really hard to get things done in Alaska.

9   Permitting, timelines, logistics, construction,

10   all that drives up costs, and that's if you're in

11   a perfect world of alignment with policy

12   interests.

13   So, you know, I really encourage

14   everybody around the table and in the room and

15   those listening to try and find those areas of

16   common ground, work with the Alaska congressional

17   delegation, you know, Senators Murkowski,

18   Sullivan, Congressman Young, the Dean of the

19   House, they are all tireless advocates for the

20   Coast Guard, for NOAA, for getting things done in

21   a very proactive way.

22   But it's that level of effort that is

1 often necessary to get even some of the basic

2 local infrastructure. And I'll talk a little bit

3 more about ports and harbors in a second. But,

4 because this is HSRP, I thought I would highlight

5 from the top of the list, NOAA's number one

6 priority, you know, getting that charting done.

7 And I've really appreciated hearing,

8 particularly, from Admiral Smith, that it's not

9 just about the percentages, it's about getting

10 the right areas targeted and completed.

11   And I think some of the stakeholders

12 that were on one of the earlier panels, you know,

13 talked about the information and the data that is

14 most critical to them, and synthesizing that and

15 prioritizing that -- there are limited resources.

16 And having worked on the Hill, even with the, you

17 know, championing effort that the Alaska

18 delegation brings to the table, there's only so

19 much money to go around, and there are only so

20 many resources that can be put out on the water.

21 But I really believe that this should be an

22 all-of-the-above-effort.

1   NOAA's vessels, they're current

2   tireless champions on the sea. There are private

3   sector vessels, other vessels of opportunity, at

4   the federal level, and then outside source data,

5   you know, as cloud-sourcing, or taking in data

6   and getting it to a level of confidence. I

7   thought, you know, some earlier commentators have

8   expressed concern about only being able to rely

9   on the best data. You know, somewhere, I think,

10   as Ed had said, you may not get the gold or the

11   platinum standard, but you get enough up there

12   that allows for safe maritime operations.

13   So, we've also heard about how

14   important it is to bring this mapping to shore,

15   because that's where the vessels are going and

16   that's where the people are. And if there's a

17   response, or there's an incident, that's going to

18   be very important.

19   VICE CHAIR SAADE: Ten minutes.

20   MR. STERNE: Other NOAA-related ocean

21   data and infrastructure that's very important.

22   Always glad to see Molly here and talking about

1   AOOS. The data buoys that they put out providing

2   real-time wave and other condition information is

3   critical and it helps improve safe marine

4   operations, it reduces risks, and, at the same

5   time, it's important to try to understand how the

6   marine environment is changing.

7   One of the entities that's not in the

8   room right now, they may be listening, is the

9   Army Corps of Engineers. If you're going to

10   build a big port anywhere in the country, you're

11   going to be working with the Army Corps, unless

12   you're, you know, Paul Allen or Jeff Bezos and

13   you're just going to self-fund it.

14   (Laughter.)

15   MR. STERNE: They haven't shown a lot

16   of interest in coming up for that kind of work,

17   yet.

18   But I wanted to highlight, again, it's

19   very difficult to get things done from a federal

20   policy standpoint in Alaska.

21   Typically, ports, around the country,

22   when they're competing for federal money, or

1   getting in line for an expansion, or any kind of

2   work, they go through a national economic

3   determination.

4   And this is a really painstaking,

5   complex process that basically looks, you know,

6   how much freight's coming in and out, you know,

7   what are the quantifiable economic benefits that

8   would justify spending federal money, with a

9   local cost share? With the exception of

10   Anchorage, Dutch Harbor, and Valdez, that

11   formula, that benefit cost ratio, really doesn't

12   pencil out very well in Alaska.

13   So Congress has given the Corps

14   authority, not just for Alaska, it works in other

15   areas that are defined as remote and subsistence,

16   but it allows -- and I won't go through the long

17   list of criteria -- it allows for broader

18   socioeconomic, environmental, and other regional

19   economic factors to be taken into consideration

20   by the Corps, and then producing a feasibility

21   study that may rise up to the level of a Chief's

22   Report and get the blessing of the Corps, and

1   then the funding of the Congress, hopefully.

2   So, it's tough. And even though

3   Congress has given that authority to the Corps,

4   the Corps is very used to doing business a

5   certain way. So they still have to go through

6   the NED process, but, you know, for a lot of

7   ports and harbors in northwest Alaska and up on

8   the Slope, this is the only path forward to get

9   the Corps involved in a project.

10   There's other language that has been

11   included by Congress, and I wanted to highlight

12   this, because it starts to bring into these

13   factors also national security and homeland

14   security interests, so it brings in Homeland

15   Security, Coast Guard, and also the Navy.

16   The National Defense Authorization Act

17   Fiscal Year '17 established criteria for the

18   Pentagon, in consultation with the Corps, Coast

19   Guard, and MARAD, to look at potentially

20   designated Arctic strategic ports.

21   And, again, I won't go through the

22   long list of criteria there, but the middle

1   bullet talks about a lot of shore-based

2   infrastructure. And I think that's where one of

3   the real challenges is. I mean, you need

4   airports, you need hospitals, you need

5   communications infrastructure, and the ability to

6   dock, you know, a big Polar-class icebreaker, an

7   Arleigh Burke-class destroyer, or a national

8   security cutter.

9   You know, Paul mentioned the IMO. I'm

10   going to highlight just the port reception

11   facilities. As the IMO Polar Code ratchets down

12   on what is allowed to be discharged into Arctic

13   waters, you're going to need a rest area, and

14   you're going to need to have shore-based

15   infrastructure so vessels can come to shore.

16   And Shep last night talked about, you

17   know, improved design for some of the NOAA

18   vessels to be able to stay at sea for 21 days.

19   After that 21 days, I bet they really want to get

20   to shore and replenish, so to speak.

21   So you're going to need that community

22   shore-based infrastructure. You need airports

1 with regular jet service so, you know, if your

2 vessel breaks down, you can get parts out to

3 remote areas.

4 Hospitals for crew members. I'm not

5 going to talk about how challenging it is up in

6 the Arctic. If there was a real serious incident

7 with, you know, several hundred or 1,000 crew

8 ship passengers, like when the Crystal Serenity

9 went through. The capacity of even the largest

10 regional hospitals is really going to be stressed

11 out.

12 Communications, the Quintillion fiber

13 network really ups the game in the area. Utility

14 infrastructure. You got to have power. Housing.

15 If the Coast Guard is doing seasonal deployments,

16 if NOAA establishes more of a presence, you need

17 to be able to find places to, you know, let

18 people spend the night.

19 And since Ed keeps mentioning how much

20 business gets done in bars, you need a little bit

21 of R&R, a little bit of shore leave when you've

22 been on a boat for a while.

1   (Laughter.)

2   MR. STERNE: So the last thing I'm

3   going to say, and this is an intentionally

4   somewhat provocative way of describing things,

5   but my first job out of law school was with the

6   Environmental Defense Fund, so I started out in

7   the environmental community.

8   And then I worked for the Alaska

9   delegation. And I've had a few years of

10   experience in between. But, in general, the

11   environmental NGO community really looks at

12   Alaska as a national park, and it looks at the

13   Arctic, as an area that should be off-limits.

14   And I don't think that that is fair,

15   or respectful, to the communities that have lived

16   there for thousands of years. Some of you may

17   have heard the term "eco-imperialism" before, but

18   that's pretty much what it is. Sitting back in

19   the lower 48 and pointing a finger at Alaska and

20   -- I'll borrow a phrase that my former boss,

21   Senator Murkowski, likes to use a lot -- try to

22   turn Alaska into a snow globe, you know, pretty

1   to look at, but off-limits for development.

2   And it doesn't have to be development

3   for the sake of oil and gas or minerals, but you

4   got to keep the lights on. You got to keep the

5   schools and communities. You've got to keep

6   reasons for young people to stay in these

7   communities so they stick around.

8   So, you know, while there are really,

9   really significant challenges to do things

10   properly, to do things safely, and to have a

11   viable community in the U.S. Arctic, it's

12   definitely worth it. So, thank you very much for

13   having me today.

14   (Applause.)

15   MEMBER PAGE: Okay, I think, Ashley

16   and I will kind of moderate any questions here,

17   but you can direct those directly to the panel,

18   but we're now open for questions to the panel.

19   And I think Admiral Gallaudet is first in line,

20   and Ashley can kind of take the controls from

21   there. Sir.

22   RDML GALLAUDET: Thank you, Ed. You

1 know, you made a funny comment. You said that

2 you didn't know the HSRP could consume so much

3 beer. You'll find something interesting about

4 NOAA leadership when we join you tomorrow.

5   (Laughter.)

6   MEMBER PAGE: Well, good.

7   RDML GALLAUDET: We're the

8 competition.

9   MEMBER PAGE: Competition.

10   (Laughter.)

11   RDML GALLAUDET: I just want to

12 address two comments, and, first, from you, Jay.

13 You are absolutely right, we have great, great

14 support from the Alaskan congressional

15 delegation. I have met with all three very often

16 and continue to do so, and they've been our

17 champions. So I just wanted to put that on the

18 record.

19   Secondly, for you, Mike. It's good to

20 see you. Thank you for highlighting our

21 partnership. And you're absolutely right, I have

22 made it a priority -- and we have two top budget

1   priorities: our weather and water, getting the

2   No. 1 weather model and reducing impacts of

3   extreme weather and water, and the blue economy

4   priority.

5   And an enabling objective, a top one,

6   is increasing, strengthening, and expanding our

7   partnership with the Coast Guard. And that's why

8   I met with the Commandant so early on, and that's

9   why I went to the change of command. I think you

10   were there. It was quite warm there. Certainly,

11   not like now. And it was just fantastic to hear

12   the president talk about the good work the Coast

13   Guard does, and it sounded a lot like he was also

14   talking about NOAA.

15   But a couple things, too, about that.

16   One of the ways that I've been trying to just

17   expand our partnership is I've been getting into

18   your morning brief every Friday.

19   And so my Coast Guard liaison, Captain

20   Kurt Zegowitz, you know -- formerly it was

21   Commander Mark Miller -- has been doing that and

22   I make sure I personally write every entry. So

1 when he's briefing, it's from my mouth.

2 And usually I keep it a three up top:

3 it's blue economy, weather and water, and the

4 Coast Guard and NOAA partnership. And so if you

5 saw me looking at my little iPad just now, it was

6 because I was writing the input for tomorrow's

7 brief.

8 (Laughter.)

9 RDML GALLAUDET: But, anyways, I just

10 wanted to put that on the record, as well, that

11 we are committed to expanding and strengthening

12 this great partnership we have together.

13 MS. CHAPPELL: Okay. Other questions?

14 Sean.

15 MEMBER DUFFY: Yes, I have learned

16 some things, being from a completely different

17 area of Louisiana and some other coastal

18 challenges. And, Jay, I really appreciate a lot

19 of your comments and see we have a lot of

20 recovery to do in our area, too, related to oil

21 spills and hurricanes and the challenges.

22 And I am sure it is easier to recover,

1 but is definitely not easy, and it takes a lot of

2 work. And I'll tell you that I was really

3 surprised when I heard Mr. Goodwin speaking. It

4 dawned on me the similarities between the native

5 peoples of Alaska and the Cajuns of Louisiana.

6 You know, areas that are -- we have environmental

7 refugees that are having to move from their

8 homes, which are falling into the sea, and

9 changing our ways of life and maybe not being

10 able to fish as much, and the impact of the oil

11 field work, too.

12   And I doubt I would have made that

13 connection if I didn't hear you speak, so I'd

14 like to follow that conversation up. I really

15 enjoyed what you had to say and wanted you to

16 know that, because of you, I made that connection

17 that seems a world apart, but many of the

18 challenges are very similar. Thank you.

19   CAPT ARMSTRONG: I had a question for,

20 for Mike. You talked about the new icebreakers

21 that are planned for construction and deployment.

22 Can, can you tell me, if, if they'll be equipped

1   with multibeam echosounders?

2   MR. EMERSON: I can, definitely. Yes,

3   sir. We had a very long process of going through

4   requirements amongst the interagency, and there

5   were 30 different agencies consulted. And there

6   was a strong push-back from the science community

7   on necessarily specifying what science

8   requirements were involved.

9   And, again, it goes back to some, what

10   I consider skittishness, regarding who's going to

11   pay for some of these things. If you say you

12   need it, then maybe you want to help pay for

13   this, and it wasn't a public/private partnership,

14   we call that one Congress. So all we were saying

15   is, do you need these things?

16   And they said, well we're not really

17   -- so we, the Coast Guard independently said,

18   we'll have a three-beam radar on there. We'll be

19   able to emulate what we're doing on the Healy now

20   in helping you get some data that, for wherever

21   we travel, and we're going to make sure that

22   that's on there, as well as the basics of the,

1   you know, cranes and some other lab space and

2   power capabilities.

3   So, we went through the previous

4   requirements that that we've used in developing

5   the Healy as a science vessel and said, this is

6   what we're putting on. And everybody came back

7   and gave us thumbs up.

8   CAPT ARMSTRONG: Yes. Thank you for

9   that commitment on the part of the Coast Guard.

10   And I think it'll be a terrific benefit to our

11   effort to collect pretty accurate data in the

12   Arctic.

13   MR. EMERSON: That's inside baseball,

14   but, I tell you, you know, it's a challenge to

15   get all the cats herded, but we were trying to

16   get a relevant cutter that's going to be relevant

17   in another 30 to 40 years when we start thinking

18   about the next one.

19   MR. FUHS: Could I add something? A

20   question we've had about the design of the new

21   icebreakers, and that question is will it have

22   any emergency response capability?

1   And our understanding, the last time

2   the Polar Sea was retrofitted, that the towing

3   gear was removed. And, you know, we look at the

4   Russian response vessels that have been built and

5   I showed you the picture, they have firefighting,

6   oil spill response, towing capability, hospital

7   capabilities. I'm just wondering if any of those

8   would be incorporated into the design of a new

9   icebreaker?

10   MR. EMERSON: Yes, sir. We're in the

11   design phase now, and we do have multi-mission

12   capability built into all of our ships. So it'll

13   have fundamental towing capability, search and

14   rescue capability, boat lowering. It's going to

15   have room for boarding teams, who are rescue

16   teams, who are special PJs, or, you know, special

17   capability teams. Those will all be in there.

18   But the basic towing bridle and bit

19   are included in at least three of the designs

20   that I've seen. So we're waiting on the public

21   proposals now. We're expecting -- those are

22   already coming in. And then we're expecting cost

1   estimates in October. So we're moving ahead

2   quickly and I'll have a specific answer for you,

3   probably, the next time I see you.

4   MR. FUHS: Thank you.

5   MS. CHAPPELL: Joyce?

6   CHAIR MILLER: I'm really glad to hear

7   about the increased U.S. Coast Guard and NOAA

8   capabilities. But we've heard on the Panel for

9   year, about this AIS broadcasting NOAA data, and

10   out of personal ignorance, what are the obstacles

11   to that?

12   MR. EMERSON: It is, again, inside

13   baseball answer for you, that there's an IT

14   piece, an information technology piece that is

15   not sexy, it is not going to compete well because

16   of timing.

17   The Coast Guard is currently buying

18   large white things with a stripe on them that

19   make noise and they're fun to watch, and the

20   information technology has been sort of put on

21   the sidelines for a while.

22   So, we're just catching up with

1   Windows 10, we're just implementing replacement

2   for our -- our MISLE is our largest operational

3   database. We are not looking at some of the apps

4   and some of the more agile systems that we need

5   to take streaming data, or real-time PORTS

6   information that's available, and make it talk to

7   a transmitter.

8   And it's a very simple app. And I was

9   talking to the Marine Exchange about if I can put

10   this on your existing contract and I can give

11   you, you know, a couple of thousand and your

12   smart kids in the basement of the science center

13   can come up with the app and get this done.

14   You know, we try to proliferate that

15   in other areas. And it's a small IT piece, but

16   the way that we're organized, the Coast Guard has

17   not been able to make that a priority. I've

18   pushed it. I'm going to meet with Admiral Smith

19   here, and Admiral Neddo, the Chief of Prevention,

20   in the coming weeks and we're going to try to put

21   together a timeline and the key milestones to get

22   there.

1   I think it's important. It's just

2   been, at this point in time, every dollar that

3   the -- and the changeover to a new Commandant and

4   new priorities -- every dollar that's out there

5   is being prioritized to operational requirements.

6   And the IT systems, if you saw me playing with my

7   phone, it's not fun for me, it's because it

8   doesn't work.

9   (Laughter.)

10   CHAIR MILLER: Thank you.

11   MEMBER HALL: Having worked with the

12   Coast Guard on these issues, too, it's really

13   sad, because a lot of the money for these systems

14   are sweep-up funds at the end of the year,

15   they're not actually allocated for and

16   apportioned. So, the Coast Guard has a real hard

17   time, when it comes to any of their IT systems,

18   to get funding for them. It's kind of sad.

19   MEMBER PAGE: Thanks.

20   (Laughter.)

21   MEMBER PAGE: If I could just add that

22   I've talked a lot about maritime domain

1   awareness. I was reading that the IMO defines

2   maritime domain awareness as the effective

3   understanding of anything associated with the

4   maritime domain that could impact the security,

5   safety, economy, or environment.

6   So I think that, many times, we think

7   of maritime domain awareness of us, agencies, or

8   looking at vessels, but I also think that domain

9   awareness is giving information to vessels so

10   they have information of that domain, the

11   maritime domain they're operating in, so they can

12   avoid bad things from happening.

13   So I think we kind of look at it

14   twisted, kind of like Paul with the chart of the

15   world that's flipped upside down, that the

16   vessels also need that information. So I think

17   that's where we're kind of going. And I think

18   there's a lot of people that have an interest,

19   and we're going to get there.

20   We're moving a lot forward, actually.

21   The D-17's been very helpful in that and

22   headquarters have been very helpful in that, and

1   I think they just finished a five-year study

2   report that's very -- it says we should go

3   forward.

4   So I think we're getting closer and

5   closer to that. And technology is challenging,

6   obviously, but I think we're getting better with

7   that. So that's encouraging.

8   It's also good to see the Coast Guard

9   signing the floating Swiss army knife, with more

10   capabilities. Because I think we've learned a

11   couple of times, you know, that the Coast Guard

12   is usually the first on-scene, and if they have

13   in their vessels a little bit more capability,

14   they can, you know, slow things, or engage at a

15   different level. And if you look at some of the

16   other Coast Guards around the world, they're more

17   of a Swiss army knife. If you look at the

18   Icelandic Coast Guard, or what have you, or

19   Finnish Coast Guard. So I'm glad to see that's

20   incorporated, because we're not going to have

21   tugs floating around available up in the Arctic

22   to deal with vessels in distress and what have

1   you, so I'm very excited about that opportunity

2   for the Coast Guard.

3   And I think the good thing that we're

4   hearing is that, even though the activity in the

5   Arctic hasn't really grown that tremendously,

6   yet, you know, everyone's leaning forward and

7   being proactive and not waiting until all the

8   activity is happening.

9   They're really-- so there's a lot more

10   behind the scenes, and I think this conference

11   shows that, that there is a lot of work being

12   done. And I think that we're going to make sure

13   that we close the barn door before the horse gets

14   out, in this particular case.

15   MS. CHAPPELL: I think we have time

16   for one more question.

17   CHAIR MILLER: I have a simple

18   question for Willie. Since you said your area's

19   the size of the State of Indiana and has 6,800

20   people, I was born in Indiana, so I was

21   interested. How many people -- is that pretty

22   much a steady-state population, or were there

1   previously a lot more people in those areas?

2   MR. GOODWIN: The native population in

3   the area is back to what it was 200 years ago.

4   Because when the first ships, whaling ships,

5   started coming around, and the other ships, they

6   brought the diseases that our people were not

7   accustomed to, so there was a lot of people that

8   died because of those. And now we're back to the

9   population we had 200 years ago.

10   MS. CHAPPELL: Very quick.

11   MR. BOLEDOVICH: This is more of a

12   request for information. So, myself and my staff

13   do a lot of reporting and talking points for

14   people, and any authoritative information you can

15   provide, or what authorities you would say are

16   the best, for either current or projected levels

17   of marine transportation in the Arctic.

18   We get a lot of numbers from a lot of

19   different places. People up the chain says,

20   well, which one is right? You don't have to

21   answer the question now, but if you could help us

22   with that, that would be really great.

1   Because we get a lot of conflicting

2   information about what's going on up here, and

3   I'd like to be able to make sure I'm accurate,

4   because I'm a former journalist. So, that would

5   be helpful, I'd appreciate that.

6   MS. CHAPPELL: All right. Well, to

7   wrap up, I would just like to thank this panel

8   for this great overview and overlook at the

9   opportunities and challenges in the Arctic.

10   I think it was fascinating to hear

11   everything at all these different levels where

12   people are impacted, from the local to the

13   highest level. So I thank you all for coming

14   today, and actually being here for the last two

15   days, as well.

16   And, Ed, thank you for doing all the

17   introductions. That was terrific. So I think

18   we're ending on-time, we're back on schedule, and

19   you're probably all in need of a break.

20   (Whereupon, the above-entitled matter

21   went off the record at 10:59 a.m. and resumed at

22   11:17 a.m.)

1   CHAIR MILLER: Welcome back to the

2   morning session of the HSRP. In followup to our

3   panel, and it's time for our public comments

4   session, so we're taking both questions for the

5   panel and public comment in general, also on the

6   webinar.

7   So we have two comments, two speakers.

8   Molly McCammon would like to ask a question.

9   MS. McCAMMON: Actually, Madam Chair,

10   this is a comment, kind of a followup over your

11   last couple of days. There are two projects that

12   the Alaska Ocean Observing System is working on

13   in partnership with the Marine Exchange and the

14   AIS data.

15   This is, as people have noted, this is

16   an incredibly rich historical database. We're

17   funded by the Arctic Domain Awareness Center to

18   take vessel tracks and help use that to

19   prioritize where charting and mapping should be.

20   This started from a national project, actually on

21   the East Coast, and now we're doing it in the

22   Bering Strait region.

1   And then we're doing a project that's

2   funded by the National Academy of Sciences for

3   the North Slope that has taken the AIS tracking

4   data, combining that with subsistence harvest

5   areas by species and by time, and then using oil

6   spill scenarios to do some risk assessments.

7   If there was an oil spill in a high

8   risk area, where might that oil go, and which

9   species, and in what time, might be most

10   impacted. So this could help for planning and

11   preparation of deploying any boom or response and

12   really helping that kind of planning effort.

13   So I wanted to note those two projects

14   that we're working on that really take advantage

15   of the AIS database.

16   The second thing I wanted to note is

17   that I think there was some mention about crowd

18   sourcing for bathymetry. And we have worked with

19   Ashley Chappell, and there she is right there

20   several times. And we've written a lot of

21   proposals to start this and to do a pilot effort.

22   We do have the capacity of our data

1   center to do this kind of crowd sourcing. So if

2   you know of some extra funding that might be

3   available to do that, actually implement that

4   pilot effort, we have it all ready to go.

5   And then lastly, I just want to note

6   that I am on the Ecosystem Services Working Group

7   of the NOAA Science Advisory Board. And I have

8   been working with Ed and with Denise Reed on this

9   effort, on how all the various advisory

10   committees really provide some advice and some

11   priority needs for feeding directly into NOAA's

12   priority. So it's a good working relationship.

13   So thanks very much for coming.

14   CHAIR MILLER: Nathan Wardwell, I

15   believe, had a question.

16   MR. WARDWELL: Yeah, hello, Nathan

17   Wardwell with JOA Surveys. This is not so much a

18   question as just a comment after listening for

19   the past couple days. And I've heard a lot of

20   great discussions about, you know, the Arctic and

21   PORTS and 3D Nation.

22   I just want to highlight the

1 importance of longterm, continuous water level

2 measurements and short-term water level

3 measurements in the Arctic and in Alaska in

4 general.

5 You know, if we're doing PORTS, you

6 need longterm, continuous measurements. The

7 coastal engineers need this for designing their

8 PORTS and, you know, I need like a year or more

9 of observations.

10 And it's challenging up here with the

11 sea ice and access and everything. But there's

12 methods of doing that with bottom-mounted

13 pressure gauges and buoys.

14 And then these longterm stations also

15 add value to reduce the uncertainty in our tidal

16 datums at short-terms stations, which, these

17 tidal datums, when you tie them into the

18 ellipsoid, are an important value for coming to

19 this 3D Nation concept. You're not going to be

20 tying in your bathymetry to your topography

21 without that tie between the National Spatial

22 Reference System and your tidal datums.

1   And so I just, that was just my

2   general comment for the, listening for the past

3   couple days.

4   CHAIR MILLER: Thank you. Are there

5   other comments from the audience here in Juneau?

6   Or questions for our panelists? Lynne, is there

7   anything from the webinar? Who had a comment?

8   Oh, there is a comment from Rose in the back.

9   Rada, sorry.

10   MS. KHADJINOVA: Question to Paul. So

11   what is the main obstacle in pushing the data

12   through AIS? Can you summarize that?

13   MR. FUHS: Well, as I understand it,

14   and probably somebody else could answer better

15   than I could, but just I guess it just, the

16   permissions to be able to do it, the permissions.

17   And I don't know if it also ties in with the FCC

18   or anything else. But you know, for the Coast

19   Guard permissions to be able to use the system to

20   transmit the data.

21   And I also want to mention just, you

22   know, for some of the things whether it was a

1   safe shipping practices as best practices, or

2   being able to use AIS data, or anything else, I

3   know a lot of times we'd really like to support

4   the work that you're doing.

5   But it's very byzantine and mysterious

6   sometimes the way these channel work between the

7   agencies. So if you can help us identify where

8   some of these points are where the influence of

9   the end users, the marine industry, can weigh in

10 to say this is what we need. We need to use

11 this.

12   Otherwise I think sometimes in the

13 budgeting process people look at it, "Well, this

14 is just some other bureaucracy trying to get

15 something and increase their, I got somebody else

16 over here."

17   And you know, if we can perform that

18 function to help bring the industry to the table

19 to say this is what we need and this is what we

20 need to support it. But I think we may need some

21 guidance from you as well from where that

22 information needs to go.

1   MR. EMERSON: Well, let me add just

2   one piece is the actual mechanical connectivity

3   between a data string and a transmitter requires

4   communication. It requires an IT piece, coding

5   that will tell a device to find a piece of

6   information and turn it into a radio signal.

7   We don't have that right now. We have

8   a national database that I can create signals

9   manually, and I can take positions of a nav aid

10   that may be off-station due to a hurricane. And

11   we did this 364 times during the three hurricanes

12   last year.

13   We manually type these in and we hit

14   send, and they project on the ECDIS or on a

15   bridge management moving map display, a virtual

16   nav aid over AIS. As long as the AIS is on, the

17   national AIS system, there will be a buoy showing

18   on everyone's moving map.

19   If that buoy has to move, I have to

20   manually put in where that buoy should be showing

21   now. Of course, buoys don't have to move, they

22   mark a position. But if I was to put in title

1   information, I could put in that there is a 1.5

2   foot tide and hit send, and everyone could say,

3   well, that's the tide.

4   But then if I wanted that tide to

5   change an hour later or a minute later, I would

6   have to keep putting it in manually. That's as

7   simple as I can make it. I don't have a

8   capability right now in the national system to

9   take that information and stream it, if you will.

10   So I'm obviously not an IT guy.

11   But I haven't been able to make that

12   a priority yet, and I'm hoping after this

13   conversation, this meeting, that we'll be able to

14   elevate that to a priority for the Commandant and

15   therefore for the Hill, for the Congress to say

16   we agree, and for Coast Guard and NOAA and for

17   the industry, we need to have that.

18   And so that's what I've suggested to

19   Joyce is put that in your findings, your minutes

20   and recommendations.

21   CHAIR MILLER: There's a comment from

22   the audience. Jim, or Jon?

1   MR. DASLER: Jon Dasler, David Evans.

2   So we explored that with, actually back at the e-

3   navigation conference. So there is AIS AtoN

4   message. It's called AtoN, it's basically for

5   weather tied to current. Broadcasts information,

6   and the pilots are doing that and using messages

7   and getting it out by that.

8   But we were always told you can, like

9   Sutron even makes instruments where you can tie

10   it into the gauges and it'll format it into AtoN

11   message and you can do the broadcasting. But the

12   issue was bandwidth, and they were so worried

13   about --

14   MR. EMERSON: Is that atonus?

15   MR. DASLER: AtoN, like Aid to

16   Navigation. AtoN, can't remember the exact

17   message is like a 107.

18   MR. EMERSON: Oh, I thought you were

19   talking about the system itself.

20   MR. DASLER: Yeah, no, but it's an AIS

21   broadcast message that's specific for weather

22   information. That's probably what Ed, I'm

1   assuming he uses it for the same message ring.

2   But I know in Europe, that use that

3   quite a bit. But we were told it was, they were

4   concerned about bandwidth. So that might be

5   something to help push to get that going.

6   The other thing, it wouldn't work so

7   well in Alaska, but in the lower 48. And when we

8   used a lot of Sirius XM Mariner, that, you know,

9   the weather overlays where you can get cones of

10   probability, radar overlay. And I was just

11   talking to Rich about that.

12   That might be nice for the CO-OPS team

13   to get the PORTS system on those systems where

14   you, you know, it's a good way of receiving that

15   information.

16   MEMBER PAGE: Can I clarify an issue

17   just real quickly. I mean, this bandwidth

18   capacity, I think this, one of the issues is that

19   it's that as more and more vessels are getting

20   AIS, if you're in LA-Long Beach on a Friday

21   afternoon, and the sailboats take off their AIS

22   Bs. And you have all the vessels at A and

1   everything else, you do have a capacity issues as

2   far as too much information going over.

3   It's like listening to VHF radio. So

4   much noise on a VHF radio, people don't listen

5   anymore in LA-Long Beach because it's just

6   clutter and non-relevant. That's something the

7   Coast Guard's working in other frequencies and

8   other challenges.

9   But it's nice in Alaska, we don't have

10   that issue, we never had that overload of

11   information going to AIS. So we have a unique

12   environment where it does work and it's not a

13   capacity issue.

14   But you know, Mike Emerson's challenge

15   is when he looks at solutions, he's not going to

16   look at it nationally. And this solution doesn't

17   work everywhere, it works in some of the areas.

18   And that's the trick, is how these regional

19   solutions that work in particular areas.

20   And so that is a legitimate concern in

21   some areas. It's not really a concern up here,

22   but it is one of those issues you're wrestling

1 with, the technology and the capacity and the

2 frequencies, and this is internationally we're

3 realizing that we've already, this has really

4 been used much more than we'd ever thought it'd

5 be used. And we have to start figuring out how

6 to deal with that. So anyway.

7 CHAIR MILLER: Lindsay, you had a

8 comment.

9 MEMBER GEE: Yeah, just so Mike I

10 guess is we did hear that a lot. I think that

11 with NOAA regarding the kind of digital

12 infrastructure and those sort of things. And we

13 had a position paper see that it's like, we see

14 that as one of the key issues.

15 And I think but part of the message is

16 we all kind of understand it and think of it as

17 that IT kind of stuff, we don't want to. But

18 it's actually just as important as the other

19 infrastructure, whether that's ships, roads,

20 railways, all that sort of stuff.

21 And I think the message is, kind of

22 it's, in this modern age, it's the

1   infrastructure. And that's something that if you

2   can, I don't know, we acknowledge that and we

3   support it. We had a position paper saying

4   that's just as key, and it's the things that are

5   transparent to everybody, the ships are sexy to

6   look at an all that sort of stuff.

7   But you can't do anything without the

8   foundation, whether it be the digital charting

9   information, the tidal, the NGS kind of levels.

10   And I think the message from the HSRP has always

11   been, yeah, this is a key element and it needs to

12   be really public. They changed the message, it's

13   not just IT, it's infrastructure now.

14   MR. EMERSON: Completely agree, sir.

15   CHAIR MILLER: Okay, and I would say,

16   having over 40 years worked in and out of NOAA as

17   in various capacities as a contractor, as an

18   actual employee, and I'm sure it's the same way

19   with the Coast Guard. Some of the infrastructure

20   issues just drive you crazy.

21   And you know, I'm sure everybody

22   around this table has a story, that's worked for

1   a government agency, has of you know, how

2   difficult it can be to solve IT problems in

3   particular, so.

4   We have a comment from the webinar,

5   Guy Noll. And Admiral Smith is going to read it.

6   RDML SMITH: Yeah, so Guy asks, "Has

7   there been any discussion of Ecological Coastal

8   Units, which is a USGS-led initiative?" And he

9   lists a website which may be of interest to

10   Panelists. Anybody have any comments or answers

11   on that? Otherwise, it's an interesting thing to

12   follow up. Thank you, Guy.

13   CHAIR MILLER: Any further discussion?

14   Panelists, you're welcome to stay or go as you

15   need to. I believe Ashley and Ed are going to

16   lead a discussion of next steps for and our

17   future topics for our Arctic Working Group.

18   Ashley and Ed.

19   (Applause)

20   MEMBER PAGE: True to form, I have

21   nothing profound to say. Just talk about parties

22   and beer and stuff like that's my strength.

1   But the, you know, Arctic, we have a

2   subset of Arctic Working Group that we decided

3   that, Andy was part of that, I think Larry, oh

4   there you are, of course. And Julie and others

5   are part of that group.

6   And we decided we're going to hold off

7   making decisions until we talk to people that are

8   experts. And those experts just presented to us

9   moments ago. So we obviously have to digest

10 that, discuss that further, what have you.

11   But it'd be I think somewhat premature

12 for us to start identifying the issues without

13 actually listing the people that have other

14 perspectives and a wide range of perspectives.

15 And I think clearly every one of those presenters

16 came from a different angle.

17   And I think that gave us a good

18 breadth of the issues, the challenges. But also

19 the niche, if you will. And of course these

20 things always go astray into, bleed over into

21 other issues. But the niche within the NOS

22 program is pretty clear.

1   There's a lot of relevance to NOS and

2   how our information, or the information -- it's

3   not ours, but the information NOS provides is

4   going to contribute to ensuring that this

5   increased maritime activity has the least

6   negative impacts.

7   It's safe, efficient, environmentally

8   sound, and that the Native communities are, that

9   they can continue to exist up there and not be

10   worried about oil spills and what have you

11   landing on the beach.

12   It's also, to me, we talk about LNG,

13   more and more vessels are going to have LNG on

14   board. And it's intriguing to me, and I think

15   that this may be something, I'm not sure if it's

16   within the bandwidth of HSRP or not, but I think

17   we should raise the issue that all these safety

18   environmental regulations are all directed toward

19   vessels carrying oil.

20   And so if you don't have oil, you're

21   just an LNG vessel only carrying 50 miles of

22   containers, there are no regulations in place to

1   talk about emergency response. There's no

2   requirements for ship, I mean firefighting and

3   salvage, no requirement for other response.

4   There aren't even risk mitigating

5   measures, you know, in many cases because it's

6   all oriented toward oil. OPA 90 has assumed, and

7   at the time safely assumed, that every vessel out

8   there was operating with oil. And therefore that

9   was the concern that when a vessel hits the

10   beach, there's going to be a oil problem.

11   Of course there's other, certainly the

12   passenger vessel regulation coming into play

13   also. But now we're hearing in some cases, I

14   don't really see them in our waters, but there

15   are nuclear vessels obviously operating in the

16   Arctic, at least in the Russian Arctic.

17   But we are going to start seeing LNG

18   vessels. And so I think we need to kind of think

19   about maybe that too is something you don't want

20   to go on beach. Even though it doesn't spill

21   oil, I think the idea that vessel, a thousand-

22   foot vessel of 50 miles of containers floating

1   around would probably of concern.

2   And maybe there'd be some looking at

3   that and risk mitigating measures and regulation

4   applied those types of vessels. Because there's

5   other hazards other than oil hitting the beach.

6   So I think that's another area we kind of need to

7   look at when you hear LNG, let's think about that

8   for a second. It's not only oil.

9   And of course the other issues it

10   raised, have been raised as far as how that's

11   impacting the communities. Well, we don't want

12   to impact their native fisheries, the subsistence

13   hunting operations or the wildlife that appear in

14   that area. It's a very rich biological region,

15   and we don't want to -- and it's dynamic

16   obviously, because ice is changing.

17   So you know, in the Coast Pilot, which

18   is not that responsive, obviously. And I know

19   Admiral Smith and I have talked a little about

20   this as far as the idea of a dynamic interactive,

21   more, you know, relevant Coast Pilot sends

22   information to the vessel in that particular

1   area, and not irrelevant information.

2   And one of our friends that the

3   Admiral Smith and I have a friend that, Kip

4   Louttit down in LA-Long Beach, who is running

5   that vessel traffic service along with the Coast

6   Guard. And he talked about how information, the

7   challenge of getting information to vessels can

8   be they can act upon it.

9   And if you're a major ship and pulling

10   in LA-Long Beach, you're going to listen to pilot

11   frequency Channel 9. Your required to get

12   Bridge-to-Bridge Channel 13. The BTS, Channel

13   14. You're going to be listening to Channel 16,

14   the hail and distress frequency. And probably 21

15   or 22, some of the broadcasts are going on. But

16   try to listen to five different frequencies and

17   navigating the vessels and listening to your

18   crew.

19   Well, there's one container ship that

20   was just plowing in too fast, and there's

21   congestion up ahead. And the Vessel Traffic

22   Service called them on 9, 13, 14, 16, 21, 22.

1   Couldn't get hold of the ship. And even though

2   he wasn't authorized to do so -- I'm not putting

3   him on report, am I?

4   Anyway, somebody, unknown, sent a text

5   message to the ship via AIS. Said, Captain, call

6   us on Channel 14. He called right up. Yeah,

7   Traffic, what do you need? So he was information

8   overload.

9   There's too much non-relevant

10   information going in the airwaves at him that he

11   basically shut down and says 99% of this is non-

12   relevant. I can't tune in and hear the only

13   relevant stuff.

14   And that's part of the reason why AIS

15   came about, was this idea of delivering

16   information better, relevant information to the

17   right vessel, and not giving you all the

18   information everybody out there needs to know.

19   And you're supposed to dissect and pick out the

20   little item that's relevant to you.

21   And so that's where I think the

22   future's going, is if the best information,

1   accurate information, timely information to those

2   who need it, and not, you know, not everything

3   else out there.

4   And so those are things I think that

5   we can look at as a new maritime frontier with

6   new technological tools that we can introduce

7   that actually some HSRP people can discuss and

8   explore and provide in position paper. That's my

9   preliminary thoughts.

10   But I leave this now to my colleagues,

11   Andy and Larry, if they have any other. And

12   Julie, of course. Lindsay, aren't you on my, I

13   can't remember, did you agree to be on the Arctic

14   Panel? Of did I just make you on, I can't

15   remember. On the Arctic Subcommittee Group, are

16   you on that or not?

17   MEMBER GEE: I'm on the Arctic Panel,

18   yes.

19   MEMBER PAGE: Yeah, okay, okay. I'm

20   sorry.

21   MEMBER GEE: The Australian, I'm from

22   Down Under Arctic.

1   MEMBER PAGE: Either way. Whoever

2   else has said they want to be on it, I don't

3   recall. I don't have the list right now, so.

4   MEMBER GEE: I just, kind of just what

5   you're saying there about, and I think it relates

6   to what Andy and Larry, I'm not sure with the,

7   we're talking about the infrastructure and the IT

8   and that sort of stuff. But we, the use of that

9   and the user interface, and I think that's one of

10   the. It gets a bit diluted.

11   I think people that have been to UNH

12   and seen the visualization lab, what they miss in

13   that, they see the results of something. I think

14   someone had wind up the other day, and that was a

15   really intuitive way to see data that's

16   essentially from a number of models.

17   And it's about how you perceive the

18   data and make it easy for people to get it. And

19   the visualization lab underlying that is the sort

20   of psychologist and that testing of how people

21   interact with data, and maybe that can be raised

22   in the, you know, your research over there, I

1   think, that maybe Larry comment on that.

2   But it's fundamental. Visualization

3   comes about because it's an easier way to look at

4   data and to try to lower that overload that

5   people are getting. And it's like, okay, you

6   need that real fundamental research in the

7   psychology of interacting with it.

8   It's not some software guy that's

9   going to solve that, because they kind of mess

10   that up in the end. And you really need that

11   fundamental changes that move it forward, I

12   think, so.

13   DR. MAYER: I'll just comment, and I

14   say I can't agree more. But that's somewhat

15   self-serving in terms of what we do. But I think

16   it's critical that we start thinking in those

17   directions. In terms of not dismissing a visual

18   display as the way to integrate these kinds of

19   information in a very intuitive form.

20   And before Anne goes running out, I'll

21   just say that already she's started some

22   discussions that we're going to have with our lab

1   with people at Volpe who are making PPUs and

2   seeing how we can actually get. Our frustration

3   is really getting that input from the users, from

4   the pilots, from the navigators, and really

5   making sure that what we're developing from a

6   research end is a useful tool

7   And I think the more we can build

8   those connections, and this venue is a great

9   place to start that, the better off we'll all be.

10   MEMBER PAGE: Agree, and those are all

11   good points. And I guess the thing that I've

12   noticed also as we start pushing out data that,

13   and I'll blame pilots. Since Anne's walking out,

14   she can't defend them. She's going to defend,

15   okay. But I've talked to pilots, like, how do

16   you want the information displayed.

17   And then some goes, some will say I

18   want a smart phone because I'm out walking about.

19   I want to know what the status of my boat is, and

20   so I don't need all the detail. And then someone

21   else says, well I'm not on a computer screen with

22   all of the charts and somewhere.

1   So the reality, depending on the

2   circumstance and the individual and the

3   personality, there's not one solution. You have

4   to have a couple different ways to present the

5   data. And I think then you meet these needs.

6   Because people are wired differently, and some

7   people read better.

8   But we certainly know some ways of

9   five different frequencies broadcast doesn't seem

10   to work, you know. And so we, there are other

11   ways to deliver it, to text or smart phones or

12   computers and whatever.

13   And so I think we do, you know, three

14   or four different types, and some people are

15   going to want the Coast Pilot, quite honestly.

16   But it may not be as relevant and current, but

17   they still like that aspect.

18   So the challenge is let's get

19   information out, and we get it out in several

20   formats, and so it's easier to interpret and

21   apply and whatever. See, I pulled my punches

22   since Anne came back in.

1   CHAIR MILLER: Anne, any comments?

2   MEMBER McINTYRE: I think both

3 observations are correct. You do deal with like

4 kind of information overload, and you have to

5 find like a professional process to kind of cull

6 through the information. And it's, you know,

7 just even talking about the VHF radios.

8   Most of the time when I'm doing

9 something that's complex, like docking the ship

10 or something like that, I turn Channel 16 off.

11 There's just certain things that I do to

12 disassociate all that information from coming in.

13   And I also agree with the

14 customization standpoint, is that pilots in ports

15 throughout the United States have different

16 needs, different environments that they work in.

17 And there's different ways to present the

18 information, and then there's also different

19 information that they need.

20   CHAIR MILLER: Thanks, Anne. By the

21 way, goodbye.

22   MEMBER McINTYRE: Thank you,

1   everybody. It's been a great meeting. I really

2   do appreciate all the effort that went into

3   setting this up and I learned a lot, and I think

4   it's been really valuable. Thank you.

5   CHAIR MILLER: Thanks. I would add to

6   perhaps the Coast Pilot information, perhaps the

7   Coast Pilot is more useful for people who are

8   transitting areas who aren't familiar with them.

9   I mean, generally the people in an

10 area will be familiar with that information. But

11 the people coming up for the first time or

12 something still need that wealth of information

13 that's there.

14   MEMBER PAGE: Well, I mean, I saw the

15 article today that Admiral Smith took the front

16 page again, the Juneau Empire, he's a star here.

17 But he talked about in nautical charts moving on.

18 You know, we made it, I'm sorry. But you had

19 lots of quotes.

20   Anyway, and yet there are some people

21 who really love charts and probably still want

22 them. In fact, we have a print-on-demand chart

1   printer in our office, and people come in all the

2   time wanting. And I said, you can get electronic

3   charts too, you know that.

4   But I'm the same way, I like, it's

5   sometimes I like a big chart, I can lay things

6   out. But I'm on my little boat, a little chart

7   just where I am is all I really need. So, and I

8   read digital books, and I sometimes dislike a

9   regular book, you know.

10   And so reality is we want a couple

11   different ways of getting this information. And

12   that's fine. And I think the challenge to the

13   Coast Guard is to some extent, you know, people

14   say, why not do virtual aids? Well, you know

15   what, people depend on visual.

16   There's nothing more confident,

17   comfortable than knowing when you see a visual

18   aid, you have total confidence. And maybe off-

19   station, but you have total confidence, and you

20   know, hopefully it's on-station. More often than

21   not it is, obviously.

22   But there's some, you know, when

1   people are talking about virtual aids, it's

2   really just another layer on top of that. It's

3   not taking the aid out necessarily, it's just

4   another higher confidence. And they can transmit

5   the aid as off-station or determine it's off-

6   station and what other things such as that.

7   So at the end of the day, people

8   really will tell you that I want both. I want a

9   virtual aid and I want the actual aid itself.

10   Because I'm in fog, I can't see the aid, but I

11   can see your virtual aid, or what have you.

12   And I know if in ice, I have less

13   confidence in the -- or some other conditions, I

14   have less confidence in the aid than I do, or.

15   Because some of these aids around here get taken

16   off by ice, and you're off someplace else.

17   In fact right now, when I run the bar,

18   I've seen a couple times like I know that buoy's

19   someone here to take it off-station. There's no

20   one depending on it. Because I use a combination

21   of past track lines and look at the Aids to

22   Navigation.

1   So the challenges are that we

2   introduce and add another layer of information

3   into the network. It doesn't necessarily replace

4   other things completely. In some cases it will,

5   but not always will it be the case, you know. So

6   we just need to understand that.

7   It's not that simple, it's just take

8   one out, put something else in place. If you get

9   rid of coast pilot, someone's going to be upset,

10   you know, because they lose, there's a strategic

11   plan. You're sitting out there, planning your

12   voyage, it's a good tool. And you can flip

13   through better and understand things.

14   But when you're actually underway, you

15   may forget those details until someone sends you

16   an alert. And you go, oh, yeah, let me look back

17   at that, so.

18   CHAIR MILLER: Lindsay, you had

19   another comment.

20   MEMBER GEE: Yeah, just another

21   comment related to that again. I think as, it's

22   one of the areas that we talk about, the digital

1   infrastructure and the importance for NOAA to

2   really go from a product, I think, to a data

3   infrastructure.

4   And in a way, I think that the ocean's

5   in a way a bit constrained in shipping by the

6   standards. Because we're very much, you know,

7   the NOAA and the national authorities are

8   constrained by the SOLAS requirements in the end.

9   I mean, that's kind of the key thing.

10   Whereas on land, you know, the data's

11   available and many, many people have used it and

12   we see it on our apps and all those sort of

13   things, right. And we're constrained, I think,

14   offshore because there's not as many people

15   operating offshore. There's us, you know,

16   there's kind of not many of us if we think about

17   it.

18   And so this is where I think industry

19   are there, but not enough. And it's just a

20   market in the end. But my view would be we'd

21   like to see the data out there. And that's why

22   it's so critical for NOAA to have all of their

1   data available. And then people that don't need

2   to have it to the SOLAS requirements can build

3   the apps and those sort of things.

4   And this is an area where the ECDIS

5   was needed to transfer from the paper chart to an

6   electronic chart, but in a way it was a

7   disservice to the non-SOLAS people, because

8   really, my view is like, oh, well, I'm a

9   fisherman and I want to look at it this way.

10   Exactly what you say, I'm a tug

11   operator, I want to look at it this way. I want

12   to go up on the intertidal areas, I want to look

13   at it that way. And I think that should be the

14   vision that it provides the data service for

15   those people that want to do stuff with it.

16   That's where we've moved to.

17   And you know, the previous way we

18   looked at the data was the chart, and I think

19   we're moving forward. And I commend NOAA and I

20   think what Shep's doing is moving in that

21   direction.

22   But communicating that to people and

1   trying to get industry involved to be able to --

2   well, you're doing it in a way. And already at

3   the Marine Exchange, you're providing, taking

4   stuff and providing it the way people want it.

5   And you're saying, like with the weather, people

6   just love that.

7   And I think that's a key message, that

8   I don't think NOAA can provide all the products

9   to all of our, the users in the marine

10   environment. And acknowledging that and then

11   saying, yeah, but we're going to make sure as

12   NOAA we've got the data infrastructure, then

13   others can build on top of.

14   I think that's a real key, in my view

15   and from a technology kind of point of view and

16   an industry point of view, I think we're, and we

17   really need to have the industry then come along

18   and build those things.

19   But I think we're always going to be

20   constrained that it's a much smaller market that

21   they're serving to the, you know, land, people

22   driving cars and all that sort of stuff, so.

1   It's just a general comment on that, thanks.

2   CHAIR MILLER: Okay, so we'll hear

3   probably from the Arctic Working Group after they

4   have a chance to get together after the meeting

5   and have their first interim telephone

6   conversation.

7   Okay, it's 11:50, we have a lunch

8   break, a working lunch for the HSRP members. Oh,

9   I'm sorry, I forgot one thing. Oh, okay, sorry,

10 we're not going to have the break. First of all,

11 Larry had an announcement.

12   DR. MAYER: Yeah, just an

13 informational announcement. On September 11,

14 Tuesday, September 11, the Ocean Studies Board,

15 the Polar Research Board, and the Marine Board of

16 the National Academies of Science, Engineering,

17 and Medicine are going to be holding a, what they

18 call a scoping session on arctic marine

19 infrastructure.

20   And a scoping session for the National

21 Academies is when there's been enough interest

22 from a number of agencies, and I can guarantee

1 there are a number of agencies that have

2 expressed interest in supporting our study by the

3 National Academies on a particular topic, and in

4 this case it's arctic marine infrastructure.

5   So the one-day session is going to be

6 held to try to outline what the scope of that

7 study should be. And there'll be representatives

8 from a number of different federal agencies, from

9 a number of different stakeholder groups, state

10 agencies, and the local community.

11   And I just wanted to let you all know

12 that Captain Brennan will be the Coast Survey

13 representative at that meeting.

14   And should you have any issues that

15 you might want raised at that in terms of what a

16 National Academy study might be looking at with

17 respect to arctic marine infrastructure, I would

18 suggest that you talk to Captain Brennan, and he

19 can feed that into the session. That's it, thank

20 you.

21   CHAIR MILLER: Thank you, Larry.

22 Julie, we're going to put up, for the audience's

1   information, the CO-OPS Group has put out a

2   strategic plan. The HSRP was asked to respond to

3   it, and this will be included in our letter to

4   the NOAA Acting Administrator after the meeting.

5   We have previously discussed this, and

6   this is just a confirmation of our decisions of

7   what comments we should make. And I'll turn it

8   over to Julie Thomas.

9   MEMBER THOMAS: Thanks. So as Joyce

10   said, the HSRP all submitted comments on the

11   plan. First of all, we want to thank Rick Edwing

12   for allowing the HSRP to review this and to

13   provide comments. That's really great.

14   And why don't, we have already looked

15   at it this morning, and I think that we'll just,

16   it's only like five pages here. We can probably

17   flip through now. They go on to the next page.

18   Give everybody a minute to read each page.

19   We did make the corrections mentioned

20   at the breakfast meeting for the sake of the HSRP

21   members. There were a few corrections, we made

22   that. And so we can flip through this. There,

1   okay, key performance indicators, tidal datums,

2   questions including more graphics, particularly

3   where it pertains to the PORTS system.

4   Acknowledge private sector more

5   prominently. The IOOS Regional Associations are

6   called out and the partnerships. There were

7   quite a few comments highlighting, CO-OPS did a

8   good job of highlighting the importance of

9   partnerships going forward.

10   I think this group all commented on

11 the fact that these partnerships should be front

12 and center. And let's see. And communications

13 as far as -- oh, maybe include a few sentences as

14 far as the value of what that CO-OPS's products

15 and services are. Go ahead.

16   And once again, partnerships in

17 leveraging, give some details. And whether or

18 not there wants to be just the mention of

19 precision navigation or blue economy in there.

20 Go ahead. We thought it needed to just be read

21 through one more time to catch some editing and

22 maybe synthesize a little bit better and improve

1   the flow.

2   There were a few grammar issues, there

3   were a few confusing terms that were called out.

4   Go ahead. Maybe a comment as far as placing this

5   document in the NOAA Strategic Plan. What is the

6   role there as far as how does it support that?

7   Once again, the last one up there is

8   talking about partnerships and NOAA priorities.

9   Okay. Oh, there will be a followup

10   implementation plan produced through CO-OPS, and

11   a question came up about whether or not we will

12   have a chance to review that as well.

13   And then very specific, the next

14   couple pages drill down, this plan actually

15   highlights some goals and sections.

16   And this comment really responds to

17   the question that it sounded pretty expensive,

18   frankly, to fulfill a lot of what was being put

19   forth in this particular section. And we just

20   wanted to see if that was really realistic, and

21   maybe some more details on that.

22   Once again, encourage these

1   partnerships, both at the federal and the

2   regional area. There's models that are being

3   done at NCEP, CO-OPS, other federal agencies, and

4   at the regional level. And it seems like

5   sometimes that these different efforts aren't

6   really coordinated well.

7   This, Goal 2, Objective 2.1, was to

8   give a little bit more explanation on this

9   implemented data-driven system. I've already

10   talked to Rich about that, he's totally on board

11   with detailing that out.

12   Expanding coastal observations. This

13   I already mentioned. You know, realistically,

14   what can be done with coastal observations in the

15   near future with our funding climate. Goal 2,

16   Object 2.4, was, once again, and this I think

17   pertained to modeling.

18   And maybe give some more detail there

19   and particularly we wanted to include the word

20   "validation" so we could make sure that that was

21   included in any planning for models going

22   forward. Which might be assumed, but we wanted

1   to highlight that.

2   And I believe that is all. That was

3   the last page, thank you. And so first of all, I

4   think we, if there's any public comments on this.

5   Sorry, I went through it rather quickly. I have

6   a hard copy of these if anyone wants to go back.

7   We need -- we just have to air it in

8   public, we don't need public comments.   I know

9   we need to go around here, okay.

10   And then we do need concurrence from

11   the Panel that we can submit these comments along

12   with our letter to the Administrator. Anyone

13   have any objections? Okay.

14   MEMBER PAGE: Can I add one thing

15   here.

16   MEMBER THOMAS: Of course. Done, no,

17   go ahead.

18   MEMBER PAGE: It has nothing to do

19   with beer, by the way, so. For once. I think

20   that in my look at this document, I really wasn't

21   sure what it was designed for, what the audience

22   was, whether it was going to be a public

1   presentation, whatever. But it's your mission

2   statement on the website.

3   And so I hope that, you know, the CO-

4   OP folks realize this is, at least from my

5   perspective, this is just some other candid,

6   frank perceptions of the data and how maybe you

7   could present this differently.

8   But I would not be offended at all if

9   they didn't take any of this stuff and didn't

10 incorporate it, you know. It's really just,

11 they're asking for fresh perspective, someone

12 else. And not being right in the fore, but this

13 outside looking in.

14   And that I just saw it as a fresh

15 perspective saying, maybe it'd be clearer if a

16 diagram or a graphic or whatever. But then maybe

17 it's not even suited for what you're trying to do

18 there. But I don't think there's anything wrong

19 in that.

20   I didn't see anything wrong or

21 upsetting, it was just a matter of maybe this

22 could be told a little clearer, more clearly, or

1   maybe it was a little too repetitive in some

2   areas and not succinct enough and what have you.

3   So I hope that seen in that light, I

4   hope that our the HSRP Panel sees that also, that

5   this is really kind of candid, frank. Been

6   looking at this, this is how we see it.

7   MEMBER THOMAS: Right, these are

8   suggestions.

9   MEMBER PAGE: You may or may not use

10   it, you know. It's just suggestions. And if you

11   use two or three of those comments incorporated,

12   I think I'd be thrilled and it was a worthwhile

13   process. But there is no obligation or no

14   expectation, in my mind anyway. I hope that's

15   the thoughts of others.

16   MEMBER HALL: This is Kim Hall. I

17   would just say that I think we have two of our

18   newer Panel members who, this may be the first

19   time we've done this with you two. I think we

20   tend to have Rich and Juliana and Shep, you know,

21   those three definitely take our comments on

22   board. So I think we should take it very

1   seriously.

2   It should be like well, if you take

3   it, don't. I think that they really do

4   appreciate what we do, and so if you're asking

5   for Panel members to play and we're not

6   necessarily telling you what to do, I think it's

7   important that we are engaged and are providing

8   comments when asked.

9   I thought this exercise was really

10   good because I felt I was actually helping. I

11   appreciate these meetings and getting the

12   information that we get, but sometimes I'm not

13   sure I'm being effective or actually have a, from

14   our Review Panel, we are a Review Panel, not just

15   a committee, perspective.

16   So I think it's really important, as

17   much as I agree with Ed with a take it with a

18   grain of salt where you need to, I really do

19   think that a lot of us put some effort into this

20   and would appreciate you taking them seriously.

21   And I think you do, but I want to put that out

22   there. Thanks.

1   MEMBER THOMAS: I think you guys do.

2   All right, well, I think we did have concurrence

3   then. I didn't see any objections. So I think

4   thank you all very much. And I really do

5   appreciate all the comments, even the late last

6   night ones. So, glad we got them in there. And

7   thanks, again, Rich.

8   CHAIR MILLER: I think we have

9   concurrence. Okay, I would also say we could use

10   feedback from Rich to the Panel if our comments

11   were helpful or how they might have been more

12   helpful.

13   MR. EDWING: No, these have been very

14   helpful. It's probably the most diverse set of

15   comments I've gotten, not surprisingly, given the

16   diversity of, you know, disciplines and expertise

17   around this table.

18   I mean, we are taking these comments

19   and putting them together with many other

20   comments we've gotten from other NOS Program

21   Offices, from the Weather Service, from other

22   people we've gone out to. So then we have to

1 work through all those and adjudicate.

2 So I will say, I can't say everything

3 in here will get in, a lot of this was very good.

4 And I know we'll be taking a lot of these

5 comments and incorporating them.

6 You know, and getting to Ed's comment

7 about the audience, this really is, you can't

8 satisfy all audiences, right. And this plan in

9 particular, we kept it short and focused, because

10 we're really going to use it as a tool to set

11 internal priorities and then resource those and

12 get some, a more limited set of things done.

13 We didn't try to describe everything

14 we do, at least in those strategic objectives,

15 because we can't make everything a priority. If

16 everything's a priority, then nothing's a

17 priority, right.

18 So it really is a little bit more of

19 an internal document, but we did try to add other

20 things that could help, you know. Because we do

21 want to make it public and share it. And you

22 know, and have people understand as well.

1   And I am hoping to be able to share

2   the implementation plan. Right now, we're kind

3   of focused on getting our FY19, you know, items

4   lined up, because we're in the middle of our FY19

5   planning. But kind of right after that, we'll

6   try to put up like a five-year, you know,

7   implementation plan.

8   And that's what I would hope to share

9   with the Panel and others. So anyway, I very

10   much appreciate the comments, and we do take them

11   seriously, again, so.

12   CHAIR MILLER: Okay, thank you. One

13   thing that has been brought to my attention, and

14   I apologize for forgetting, I'd like to

15   acknowledge the Rear Admiral Ken Barbor, who was

16   a previous member of the HSRP, and he was head of

17   the University of Southern Mississippi, I'm not

18   sure of the exact name of the facility. But he

19   passed away within the last few months. And just

20   want to acknowledge his service to the HSRP, and

21   that we lost a friend.

22   And there was a question, Lawson

1   Brigham, who has been a Panel member, was not

2   able to attend this time because he had other

3   obligations. He was our Arctic member in the

4   past and has been, was a incredibly productive

5   member of the Panel and a staunch advocate for

6   the Arctic, for sure.

7   Was there another topic? Gary, did

8   you have?

9   MEMBER THOMPSON: Just the one we

10   talked about yesterday, to do an issue paper on

11   the 2022 datum, more of a common person

12   perspective of it, I guess.

13   CHAIR MILLER: Yes, I personally think

14   that's a good idea.

15   MEMBER THOMAS: Can we do issue papers

16   this afternoon?

17   CHAIR MILLER: Okay, oh, I'm sorry,

18   wrong issue. I guess we're going to talk about

19   the issue papers this afternoon a bit later. We

20   do have a project that Gary is working on, and

21   there is another Panel member.

22   We, every two years, we need to review

1   the HSRP charter, particularly in light of any

2   legislation that has either taken effect or is

3   process. And Gary, I believe you're going to

4   lead that effort?

5   MEMBER THOMPSON: Yes.

6   CHAIR MILLER: Okay, that was

7   succinct.

8   MEMBER THOMPSON: And as of right now,

9   I've received no comments.

10   CHAIR MILLER: Is there anyone else

11   working on it with you? Okay, all right, thank

12   you. Okay, so now we're four minutes late, but

13   we're going to break for lunch. I'll let the

14   audience know that after lunch, as in your

15   agendas, we have updates from I think it's seven

16   of our NOAA support people on various NOAA

17   projects and updates on their projects for

18   Alaska, and in some cases for the overall U.S.

19   So that will be at one o'clock that we

20   will reconvene.

21   (Whereupon, the above-entitled matter

22   went off the record at 12:05 p.m. and resumed at

1   1:17 p.m.)

2   VICE CHAIR SAADE: We're going to do

3   rapid fire here and I'm going to keep the clock

4   at five minutes so every knows. And being that

5   there is no moderator sitting up there, I'll go

6   ahead and start with Nicole. Thanks.

7   DR. KINSMAN: So, I was recently

8   afforded the opportunity to listen in to the

9   Planning and Engagement working group's Q and A

10   with our NSRS modernization manager. I heard a

11   lot of different questions and very similar

12   questions to what I get all the time here in the

13   region.

14   One person might wonder, you know,

15   this new geopotential datum, how's the official

16   height of Denali going to change? It's going to

17   be about three feet shorter we think.

18   Other people may just want to know

19   how' the new State Plane Coordinate Zone System

20   going to affect us, and we actually have policies

21   and procedures at NGS to help you understand

22   those and how we work with the states on that.

1   Other people may just want to know

2   if the average recreational mariner even needs to

3   worry about all this stuff or if you can just

4   trust it to be taken care of and get on your way.

5   And yes. We're actually trying to make that

6   happen, too. We're totally trying to make that

7   happen, working really hard at it.

8   So a modernized NSRS, modernized

9   National Spatial Reference System, is really just

10   another way of saying a more reliable, more

11   accurate and more accessible National Spatial

12   Reference System, one that's there when you need

13   it to be. And this is no different than what our

14   agency has done for more than 200 years, but it's

15   a little bit better. For example, we heard in

16   the public comment period about the importance of

17   connections between tidal datums and the NSRS,

18   and this requires closer coordination between NGS

19   and COOPS and also continued investment on the

20   observational backbones needed, both sides of

21   that equation, on the land and at sea. And on

22   the land, that means the establishment of a

1   Foundation CORS network.

2   So I'm talking about NSRS

3   modernization and how we kind of want to pass it

4   through a nice smooth transition. But I don't

5   want to minimize the changes that are coming,

6   because they are really big. It's a sea change

7   and how we define positions in our nation. But

8   we're not going to pull the rug out from

9   underneath you. We're doing the exact opposite,

10   in fact.

11   What we're doing is we're bracing the

12   subfloor and we're trying to do so with as

13   minimal disturbance as possible, and a lot of

14   work is going into making sure that there is

15   minimal disturbance there.

16   So for those of you that will be

17   directly affected, NGS has many avenues for

18   outreach. I probably don't need to tell you

19   about those, though. I bet lots of you have

20   already heard about those things in our quarterly

21   NSRS modernization newsletter, or maybe you call

22   into our monthly webinar where we answer

1 questions for people. We have more than 400

2 people on average at those monthly webinars and

3 maybe you guys don't all call into the webinars

4 or subscribes to the newsletter.

5   But in addition to that, we've also

6 been holding Geospatial Summits and Industry Days

7 for the public and for our private sector

8 partners. Our next Geospatial Summit is going to

9 be in the spring of 2019. We've released

10 blueprint documents for public review, and we

11 maintain a really active presence at national

12 professional and industry conferences.

13   So lastly, in terms of making sure

14 that we're keeping the word out there about the

15 changes that are coming, NGS has a fully staffed

16 Regional Advisor program now, because we

17 recognize that NSRS modernization preparedness in

18 Alaska is different than in Arkansas.

19   This summer we released results of a

20 study that estimated the economic benefits of

21 this program to be between $18.6 and $38 million

22 annually, so you're getting a really great bang

1   for your buck. There are 14 of us Regional

2   Geodetic Advisors around the nation and what we

3   are are subject matter experts that are available

4   to answer your targeted regional-specific

5   questions, and we really do a little bit of

6   everything though.

7   So to give you a few examples of what

8   I've done here in Alaska to promote NSRS

9   modernization preparedness, I respond to

10   questions in various capacities including as a

11   technical advisor to state working groups; I meet

12   with our NGS state coordinator, the State Chief

13   Surveyor, Gwen Gervelis, monthly to stay abreast

14   of state concerns and to stand up a task force to

15   work on the state plane coordinate zone system

16   modernization.

17   I work with and mentor students to

18   advance geodetic literacy in the next generation.

19   At the 2018 Alaska Surveying and Mapping

20   Conference, we had a mini NSRS modernization

21   summit. It was the most attended session at the

22   conference. It had folks from BLM, Army Corps,

1   Park Service, private sector, and all three of

2   our Departments of Transportation here in Alaska

3   talking about the NSRS modernization and how

4   that's going to impact work flows in our state

5   and how we can be best prepared for it.

6   We do GPS on Benchmarks campaigns to

7   support transformation, tool, and VDatum

8   development. I provide a lot of outreach to

9   headquarters with feedback about what's needed to

10   guide appropriate NSRS modernization decisions

11   and the new tools that are going to support the

12   transition. And I coordinate across NOS,

13   including collaborations with my Nav Manager

14   here, and then over federal agencies as well to

15   ensure that all of our changes are occurring in

16   lockstep with new changes that are coming in

17   other places.

18   So to be frank, NSRS modernization

19   will probably have limited impact on offshore

20   maritime activities, but some things really will

21   be affected quite a bit. For example, coastal

22   maritime infrastructure will be -- will greatly

1   benefit from ease of GPS-based access and time-

2   dependent reference frames that provide tools to

3   better account for land motion and sea level

4   change in engineering design.

5   And how will NSRS modernization

6   directly affect each of you on the panel here and

7   in this room? I can't actually answer that in

8   five minutes but hopefully, the overview I've

9   given you of the type of outreach we're doing at

10   NGS and the tools and resources we have to get

11   the word out gives you a little bit of a taste of

12   how NGS is continually striving to not only

13   improve the NSRS but to make sure that every

14   stakeholder is prepared for the changes that are

15   to come in 2022.

16   (Applause.)

17   VICE CHAIR SAADE: Thanks. That was

18   Dr. Nicole Kinsman with NGS. So next, we've

19   Laura McLaughlin with CO-OPs speaking on current

20   surveys in Alaska. Currents surveys in Alaska.

21   MS. McLAUGHLIN: Thank you. So my

22   name is Laura Rear McLaughlin and I am the

1   Mapping and Charting Program Manager at COOPS,

2   and for five years, I did run the Currents

3   program, so I'm happy to speak about it today.

4   So for those of you that don't know, we've talked

5   a lot about the National Water Level Observation

6   Program, but we haven't really spoken too much

7   this meeting about the National Current

8   Observation Program, and that's called NCOP.

9   So Tides and Currents -- we are Tides

10   and Currents. We're not just tides, so we'll

11   talk today about the currents in Alaska. But we

12   collect, analyze and distribute observations and

13   predictions of currents. The program's goals are

14   to ensure safe, efficient and environmentally

15   sound maritime commerce and to support

16   environmental needs such as HAZMAT response. The

17   principal product generated by the NCOP program

18   is information used to maintain and update the

19   tidal current tables, and we deploy current

20   meters annually to assist with those updates.

21   So COOPS spent about an entire decade

22   updating tidal current predictions in Alaska from

1   2000 to 2010. We collected close to 200 stations

2   worth of data in Cook Inlet and Southeast Alaska

3   and all of those made it into the tidal current

4   tables. In 2007, COOPS deployed 47 stations in

5   Prince William Sound. In 2008, we deployed 51

6   more stations in Southeast Alaska and 2 in Cook

7   Inlet, specifically to obtain a more accurate

8   prediction for the docking of oil tankers at

9   DeSoto Pier. In 2009, COOPS deployed 44 stations

10   around Kodiak Island. In 2010, COOPS completed a

11   detailed study of Glacier Bay and across sound

12   Alaska with 10 current meters and deployed 24

13   stations around Unimak Pass to capture one of the

14   most dynamic shipping channels in the world.

15   In 2012, we were funded by the Alaska

16   Energy Authority to conduct a study of Cook Inlet

17   to support a model being developed to identify

18   key areas for tidal kinetic energy. We deployed

19   nine more stations in Cook Inlet that year in

20   support of that study. Looking ahead -- and

21   actually, that study created the model that's

22   going to be the basis for the new Cook Inlet OFS,

1   the Operational Forecast System model, so that

2   came out of that study.

3   Looking ahead, we're going to -- we're

4   looking to partner on a circulation study of

5   Kachemak Bay with NOAA's Kasitsna Bay Lab, and

6   we're hoping that we can deploy those meters next

7   fiscal year. We plan to deploy another current

8   meter to update the predictions at North Indian

9   Pass and we heard Captain Hans Antonsen mention

10   that yesterday or the day before I think it was.

11   So just to talk about that a little

12   bit, that station was originally based on 100

13   days of data at Hoonah in 1901. In 2008 -- I

14   talked about it earlier -- we deployed stations

15   in North Indian Pass and we wanted to move that

16   station to be the Reference Station but

17   unfortunately, the meter there didn't collect

18   proper data, so we weren't able to move the

19   station quite yet.

20   In 2010, we went back out and

21   collected two -- we put two meters out and

22   collected data again to try to update those --

1   the station at North Indian Pass. We did. We

2   collected it but the shallowest that we could

3   reach was 100 feet. We received comments that

4   that was too deep and that it didn't satisfy what

5   the pilots needed in order to transit that area.

6   And just so you're aware, 30 stations are

7   referenced to North Indian Pass so it's a pretty

8   important station to make sure that we get right.

9   So in 2016, we went out and we had one

10   of the pilots help us and deployed drifters at

11   that station. And unfortunately, we couldn't

12   really resolve the data because we weren't

13   getting enough data. We were only getting it

14   every 30 minutes. So we went back to the drawing

15   board and COOPS redesigned how we deploy current

16   meters. So next summer we're hoping to deploy

17   what we're calling the elliptical buoy, and what

18   it will do is it'll actually be sort of suspended

19   higher up in the water column than what we've

20   been previously able to reach. And we're hoping

21   that we'll be able to reach that, the surface --

22   hopefully.

1   So hopefully, we'll get this North

2   Indian Pass thing resolved with our deployment

3   next year. So -- but we'll have to figure that

4   out, you know, with the data that were collected.

5   And then our last effort that we have on the

6   calendar right now is hoping to deploy in

7   Aleutian Passes in FY '23.

8   So you can see we've been quite busy

9   in Alaska over the last almost 20 years actually,

10 so. And I just wanted to point that in Western

11 Alaska Region, there's about 70 entries in the

12 tidal current tables, so it's not that many.

13 Just heard me talk about how we've done over 200

14 in the Southeast Alaska area alone. But -- and

15 most of those Western Alaska Region are the ones

16 from our deployment that we did in Unimak Pass.

17 So we're hoping that, you know, in the future,

18 we'll be able to come up to Northwest portion of

19 Alaska and deploy there, but it'll take some time

20 to be able to do that. Thank you.

21   (Applause.)

22   VICE CHAIR SAADE: Thanks, Laura.

1 Next is Captain Rick Brennan talking about the

2 OCS Mapping Plan.

3 CAPT BRENNAN: Good afternoon. So

4 Admiral Smith has commissioned an ocean mapping

5 strategy to be drafted, and so we have been

6 working on that for the past probably eight

7 months, I think, in earnest in gathering

8 information and data to support that. And so at

9 this point, this is just an early brief out on

10 our progress on that, and I think our intent is

11 to be able to, by the next HSRP, provide a draft

12 that you can -- that the Board can review, at

13 least for initial comments on that before it goes

14 for public comment.

15 And so I guess just to outline the

16 document briefly, it has -- there are two main

17 sections. The first are the focus areas that we

18 intend to target our survey work in, and those

19 three are basically maintaining our maritime

20 highways, which is our core competency and our

21 core mission as it stands today. And so that's

22 our ports, harbors, fairways, anchorages,

1 approaches, et cetera, both primarily the in-

2 shore portion of that but as well as the offshore

3 approaches.

4 The next area is reducing our charted

5 uncertainty and chart uncertainties, or chart

6 discrepancies and so I think perhaps in this

7 community, when we say chart discrepancies,

8 that's maybe a well-known entity, I think,

9 outside of our community and certainly outside of

10 the very small charting community, a chart

11 discrepancy has -- means something different.

12 But I think from our standpoint, to

13 clarify what that means, that is basically

14 anything that has some sort of, you know, an

15 inaccurate position on it. So if you look at our

16 charts, you'll see a wreck PA, which is a wreck

17 position approximate; or an obstruction ED, which

18 is an existence doubtful. And so all of those

19 things -- or perhaps areas where shoreline is un

20 -- you know, does not match the chart as was

21 discussed this week. And so trying to go through

22 and eradicate all of those things from the chart

1   is the second focus area.

2   And then in response to Seabed 2030,

3   the third focus area is really going to be on

4   collaborative mapping. So how can we use our

5   expertise and resources that we have to further

6   map our exclusive economic zone. And I will talk

7   a little bit about the statistics for that in

8   just a second.

9   The second portion of the document

10   really gets into our execution strategy on how we

11   intend to do that. So I think first is executing

12   on clear priorities, and so we have been working

13   -- and I think this panel has been briefed at one

14   point or another -- on the Hydro Health Model,

15   bringing that to completion. The NEEA study, as

16   Ashley has briefed on before, is also critical to

17   that whole effort so that, really, where we go

18   and what we do can be traced back to a clear

19   priority to the nation to map that area.

20   The second is basically expanding the

21   coalition or the collaborations in moving towards

22   coalition, and that is really the coalition to

1   fully map our EEZ and why a coalition is

2   necessary I hope will be clear once I show you

3   the next slide.

4   And then finally, is leveraging the

5   technology, and I think we've talked a lot about

6   technology, and we'll see why we're going to have

7   to seriously leverage it. So I could get the

8   next slide? There you go.

9   So this is just to slice up the EEZ so

10   you have a clear understanding of what we have to

11   deal with. So on the left is a graph that shows

12   the unmapped square nautical miles that we have

13   within the EEZ, and you'll notice that the

14   Atlantic and Alaska have the largest chunk of

15   that. So 38 percent of that unmapped area sits

16   here in Alaska and so square nautical miles is

17   great, but as some people like to perhaps hide in

18   the numbers, what really counts is the linear

19   nautical miles that it's going to take to get

20   that surveyed.

21   It's much easier to survey in the

22   deeper water because you get a much wider swath.

1   And as we saw with the survey that Joyce was

2   showing us, she was able to get in one leg or

3   several legs what it might take us an entire

4   field season to get in the shallow water. So

5   depth is critical in this. So when you look at

6   the level of effort as equated to linear nautical

7   miles, you see that Alaska is going to take 44

8   percent of the level of effort just to get that,

9   and 46 percent lies in the Atlantic and Gulf of

10   Mexico. I have the power to change slides now?

11   That's a little blurry when it's that big.

12   So if we break it down by depth and

13   calling deep water everything deeper than 1,000

14   meters, which isn't really deep and we can get

15   into an academic discussion about where is the

16   boundary between deep and shallow, but I have the

17   power of the pen so I arbitrarily drew it at

18   1,000 meters. And so in that case, if you have

19   2,000 -- or sorry, 2 million -- nominally 2

20   million square nautical miles of unmapped area,

21   two-thirds of that, almost exactly, is deep water

22   within our EEZ right now. One-third is shallow

1 water, so one-third is shallower than 1,000

2 meters.

3   When you look at the level of effort,

4 which is the graph on the right, you can see that

5 99 percent of the level of effort is going to be

6 getting that shallow water done. And by our

7 estimates right now, I think we've got just a

8 little over 10 ship years of work in the deep

9 water area to get that completed.

10   So to be clear, when the Admiral

11 tasked me to do this report and we were trying to

12 figure out how we would do this to support Seabed

13 2030, you know, I was like, yeah, let's come up

14 with a plan. We're going to have a plan to map

15 the entire EEZ, you know, by 2030. Let's do

16 that. And then when we started peeling back the

17 layers and looking at the numbers, and we

18 realized that that is really -- that is a very

19 tall order. And it's almost to the point of

20 impossible.

21   And so I think -- I think particularly

22 if we start adding in the shallow water works.

1   So the only way I think that we're going to get

2   to that -- because to get that deep water -- or

3   shallow water work done, we're talking about

4   needing somewhere on the order of 400 ship years

5   of work to do -- we're going to have to add more

6   ships, more platforms, more sensors out there

7   observing to get that covered in any --

8   VICE CHAIR SAADE: One minute.

9   CAPT BRENNAN: -- realistic and

10   meaningful way so.

11   VICE CHAIR SAADE: And more

12   contractors, I guess?

13   CAPT BRENNAN: Absolutely. More of

14   everything so I'll leave it there. I'll --

15   VICE CHAIR SAADE: Thanks, Rick.

16   Okay. Next is Captain Liz Kretovic, I'm sorry

17   about that. OCS again with Precision Navigation.

18   CAPT KRETOVIC: Hi. Good afternoon.

19   Liz Kretovic and during the Miami meeting,

20   Captain Brennan gave you a briefing about

21   precision navigation. And so I'm not going to go

22   into the nuts and bolts of what precision

1   navigation is considering that you are already

2   familiar with it. But what I want to do is just

3   give you an update to where we are with precision

4   nav today.

5   So when we -- shortly after leaving

6   that meeting in Miami, I was named as the program

7   manager for precision nav and quickly had to

8   stand up a team to be dedicated to supporting

9   this effort across the Foundation for Offices and

10 a member from Weather Service. So we have a

11 dedicated requirements coordinator and a

12 dedicated dissemination manager. We also have an

13 announcement out on the street to hire a

14 developer under a contract with UCAR.

15   This weekend, we're going to begin a

16 resurvey operation in Long Beach as part of our

17 commitment to the precision navigation project

18 that we have there. We'll be using the launches

19 off of NOAA Ship Rainier as the ship is

20 conducting shipboard survey operations off the

21 coast of Southern California.

22   We're also in the process of letting

1   a contract for a socioeconomic study that will

2   help us answer the nail-on questions that we get

3   all the time, such as what are the benefits of a

4   precision navigation program, as well as what's

5   the return on investment for a specific port? We

6   have upcoming projects in both the lower

7   Mississippi River complex and currently, there is

8   a contract that just got underway this month to

9   begin surveying noll-to-nall which is the two

10   meter --

11   CAPT BRENNAN: So proud of you.

12   CAPT KRETOVIC: -- thank you -- bank-

13   to-bank full-coverage multi-beam survey from the

14   Heads of pass all the way up to Baton Rouge.

15   That's -- we're also in the process -- back in

16   2016, we conducted a pretty heavy stakeholder

17   engagement process in the lower Mississippi, and

18   right now we're conducting a gap analysis to

19   identify things that may be needed in addition to

20   ensure that we have everything in place to

21   conduct a full-blown precision nav project in the

22   lower Mississippi River complex.

1   Next week, I'm going to New York to

2   attend the Harbor Safety Steering Committee

3   meeting to identify requirements for New York/New

4   Jersey so we can continue to get that project

5   rolling. Recently, we've been contacted by four

6   additional ports to start the conversation about

7   precision navigation, so this thing is coming

8   like an avalanche down upon us, and we're trying

9   to move out as quickly as we can to make this

10   program become something. A happy avalanche,

11   yes, not a bad avalanche. It's a good avalanche.

12   I guess there's an analogy that

13   Admiral Smith has said where Nav Services are the

14   cake and precision navigation is like the

15   frosting on top of that cake. I am a person who

16   loves frosting so I'm really excited about this

17   program. And as you can see, we have a lot going

18   on. Thank you.

19   VICE CHAIR SAADE: Thanks, Liz. Okay.

20   Next we've got -- I'm going to do my best --

21   Neeraj Saraf also with OCS, CSDL autonomous and

22   unmanned vessels. Thanks.

1   MR. SARAF: Thank you. And so

2   actually -- so right now I am the Acting Chief of

3   what we call the Coast Survey Development Lab,

4   and so I have to say my official role is IT Chief

5   for Office of Coast Survey, so I'm actually --

6   given the conversation before lunch, I'm actually

7   very happy I don't have to speak about that

8   today.

9   (Laughter.)

10   MR. SARAF: But what I will talk to

11   you about is autonomous vessels here. So over

12   the past several years dating back to about 2010,

13   the Office of Coast Survey, through CSDL, has

14   been involved in analyzing, prototyping and

15   testing out various autonomous technologies and

16   strategies to see how we could make use of that.

17   So the goal has generally been to see what that

18   technology can do for us, specifically towards

19   charting; can we add, you know, features to the

20   charts, collecting more types of data more

21   efficiently but also accessing areas that can't

22   be reached by ships today. And so that's a key

1 here. And also, the automation will help us do

2 it as, again, as effectively and efficiently as

3 possible to support our operation, so we're

4 excited about that.

5   So through the years, there was

6 extensive on the underwater vehicles and an

7 example of that was REMUS 600. Kind of at the

8 end of that evaluation, it was pretty clear that,

9 again, for the goals that I stated, it probably

10 could be best used -- best done by ASVs, so

11 surface vehicles, and so that's kind of been the

12 focus now. So some things we've worked with in

13 the past and they're still being used in some

14 forms are Z-Boats, echo boats, and as Dr. Mayer

15 mentioned yesterday, the ASV Global C-Worker IV I

16 believe they are using. So we've also used the

17 Version V as well. So we're engaging with those

18 things but also with some other technology

19 providers such as Saildrone and iXblue which I'll

20 expand on a bit.

21   So there are several projects that

22 we've been working on and continue to work on

1   towards these goals. One, again, is the work that

2   UNH has done this summer, in fact, here in Alaska

3   with the C-Worker IV, so our staff along with

4   folks from UNH deployed that and hoping to

5   explore more operational methods, develop more

6   shipboard experience with that as that deployment

7   went very well. So we're looking forward to more

8   like that.

9   With NOAA PMEL, so Pacific Marine Lab

10   in Seattle, based in Seattle, we actually latched

11   on to a Saildrone mission they had this some in

12   the Chukchi Sea, and so that's actually underway

13   right now. It's gone very well. We threw in

14   some data points just to see what comes out of

15   that in terms of Coast Survey goals and

16   objectives. And so -- across NOAA, though,

17   there's fisheries and others who have interest in

18   that mission, so we're very excited again to see

19   how that ends up here after this summer.

20   So a couple of other things we're

21   doing is -- so USM, so University of Southern

22   Mississippi, there's been a cooperative

1   agreement, this is the third or fourth year now,

2   for Fiscal Year '19, so the government Fiscal

3   Year where we're looking at, again, Saildrone as

4   a test bed for USM to see where that can go. For

5   them, that's actually pretty important because

6   they try to acquire a C-Worker through their

7   procurement process sand had issues. So I think

8   this actually will help kick-start things a

9   little better for that effort.

10   And two more things; our launch

11   conversation, so our team is also heavily

12   involved in -- so outfitting NOAA ships with

13   these vessels. So there's one project currently

14   active and another one planned for Fiscal Year

15   '19.

16   And then another exciting thing that

17   we're starting to look at here is an aerial drone

18   and how we can integrate that, so with the --

19   actually, the work that NGS has done through the

20   years with that with a slightly different kind of

21   angle to it. I think our goal eventually is to

22   test these out and have these outfitted on on

1   NOAA ships to aid in data collection. So we're

2   actually very excited about that, but thanks,

3   NGS, for paving the way for us on that.

4   So Saildrone has kind have been a very

5   interesting model for this. So really, how

6   they're talking about it, and I did visit them a

7   few weeks ago in their production facility in

8   Alameda, California, so where they -- they've

9   done a lot of great stuff from the ground up in

10   building this data as a service model. So we've

11   heard of -- in terms of cloud, we hear of, you

12   know, infrastructure is a service, so they've

13   kind of coined their own unofficial term as data

14   as a service.

15   So the really interesting thing here

16   is so an agency like NOAA doesn't have to acquire

17   and manage and, you know, be accountable for the

18   property, and so the actual vessel is built by

19   Saildrone, it's maintained by them, they're the

20   experts on it; it's outfitted with instruments

21   and based on the data you need. So you provide

22   them your requirements. You get the data. You

1 don't know how they're doing it. You kind of

2 have an idea how they're doing it but you don't

3 really have to manage it, which a great thing in

4 terms of infrastructure and kind of that tie to

5 IT, too. I love that, of not having to worry

6 about the actual vessel. So that's really

7 exciting and so it's just getting bigger from

8 there.

9 There's a much larger vessel that Dr.

10 Mayer mentioned yesterday as well, that we're

11 really excited to see those possibilities as

12 well.

13 So some key takeaways regarding this

14 area; it's, again, a very exciting area. As my

15 team likes to say, you know, robot boats, right;

16 everybody loves robots and it's cool, it's cool

17 stuff. So -- but we're still a long way from

18 replacing the people. So they're still the

19 element of you still need a crew, you still need

20 expertise to manage these and make sure they work

21 as effectively as they can. They don't have the

22 intelligence yet to go off on their own and do

1   it, although we're getting closer, so every day

2   we're getting closer on that.

3   However, there are, you know, the risk

4   or the concerns of folks not being able to do the

5   things they love isn't really there. You know,

6   there's lots of opportunity to work with those

7   devices to make things more effective and

8   efficient.

9   VICE CHAIR SAADE: One -- one minute.

10   MR. SARAF: Thank you. So again, the

11   future is really bright. And so another thing I

12   was going to touch on is environmental

13   compliance. So, again, we heard a little bit

14   today as well about, you know, the impact on

15   marine life and lively -- you know, food supplies

16   for folks, such as in the Arctic. So

17   environmental compliance is a big piece of this.

18   And so we, for everything we do with it, we have

19   to comply with federal requirements on

20   environmental compliance, and so we do a full

21   review of those as we do these efforts. So

22   again, we're certainly looking forward to

1   continuing this effort and, you know, it's a

2   growing area that's going to really be beneficial

3   to the industry going forward. Thank you.

4   (Applause.)

5   VICE CHAIR SAADE: Thanks, Neeraj.

6   Next will be Mr. Colby Harmon, OCS MCD rescheming

7   ENC coverage in Alaska.

8   MR. HARMON: Okay. So as you know,

9   NOAA has two principal nautical chart products, a

10   suite of over 1,000 paper nautical charts also

11   distributed as digital raster nautical charts,

12   and a suite of 1,236 vector electronic

13   navigational charts, or ENCs.

14   As of last month, all passenger ships

15   over 500 gross tons and most tankers and cargo

16   ships over 3,000 gross tons on international

17   voyages are required to use ENCs within ECDIS.

18   Also, last year the U.S. Coast Guard authorized

19   the use of ENCs for commercial vessels on

20   domestic voyages without the additional carriage

21   requirement for paper charts. Thus, NOAA now

22   considers ENCs its primary nautical chart

1   product. This is often described as an ENC first

2   strategy. New sources compiled for application

3   to ENCs first and new chart coverage is now

4   always produced as ENCs, sometimes exclusively as

5   ENCs without any corresponding raster chart

6   coverage to follow.

7   Another aspect of making ENC first is

8   a plan to rescheme and improve the quality of the

9   entire ENC product. The current suite comprises

10   over 1,200 irregularly-shaped ENC cells compiled

11   in over 130 different scales. This is a legacy

12   of the paper charts from which ENCs were

13   originally derived starting in the 1990s. That's

14   what's displayed in front of us here.

15   The new ENC scheme has a standardized

16   regular gridded layout in which larger scales fit

17   neatly into the footprints of the next smaller

18   scale cells. The number of compilation scales

19   has also been reduced to 12, two for each of the

20   6 standard ENC usage bands. The first ENC

21   coverage to be converted to the new scheme will

22   be smaller scale cells which are the same or

1   nearly the same as the one -- as one of the dozen

2   new standard ENC scales in the scheme. Other

3   ENCs which will require recompilation and new

4   usually larger scales will follow.

5   In Alaska, work on smaller general-

6   scale ENCs in the Chukchi Sea has already begun.

7   Larger harbor and approach scale ENCs in Etolin

8   Strait, the Shumagin Islands, and Southeast

9   Alaska will come next.

10   The reschemed suite will ultimately

11   have 9,000 ENC cells when fully implemented. I

12   believe there was something in the paper about

13   maybe taken 10 years this morning. In keeping

14   with ENC first strategy, the need for improved

15   chart coverage in Alaska will be met by creating

16   new larger scale ENC coverage. The plans for new

17   paper nautical charts first proposed in the U.S.

18   Arctic Charting Plan in 2011 have been superseded

19   by the NOAA's effort to rescheme the entire ENC

20   suite; that is, the improved chart coverage

21   described in the Arctic Charting Plan will be

22   manifested through the creation of new ENC cells,

1 not new paper nautical charts.

2 The conversion to new ENC scheme is

3 providing opportunities to make several

4 improvements to the ENCs such as delivering

5 larger scale coverage in many areas, soundings

6 and depth contours will also be recompiled in

7 whole integer metric units, and inconsistencies

8 among adjacent ENCs, such as sudden changes in

9 depth contouring intervals will be resolved.

10 The new scheme will also support

11 customized chart products such as the new web-

12 based NOAA custom chart application which can

13 generate a user-defined raster product directly

14 from the NOAA ENC database for a customer to

15 print. NOAA is eager to dig into the rescheming

16 effort which is only just starting. Although the

17 project is expected to take several years to

18 complete, we are confident that users will start

19 to see benefits of the new ENC scheme soon.

20 Thank you.

21 (Applause.)

22 VICE CHAIR SAADE: Thanks, Colby. And

1 next will be Ashley Chappell with OCS, 3D

2 National Elevation Requirements and Benefits

3 Study, and then we'll do questions for everyone

4 for after that. Thanks, Ashley.

5   MS. CHAPPELL: Okay. Thanks, Ed. The

6 3D National Elevation Requirements and Benefits

7 Study, I think I briefed you guys on this just as

8 we were getting started at the Portsmouth

9 meeting; is that right, Dave? Didn't we go brief

10 on this issue then?

11   (No response.)

12   MS. CHAPPELL: So since then, I've

13 communicated with you through emails from Lynne

14 about where the study stands. This is the

15 Requirements and Benefits Study looking at how

16 elevation data, land and sea, if you will, the

17 requirements for that and where people need it

18 and why they need and hopefully, information on

19 how valuable it is to them.

20   This is a project shared with USGS.

21 NOAA and USGS are partnering on this survey and

22 analysis with the support of Dewberry as the

1   contractor on it. And you also see the logo for

2   the Interagency Working Group on Ocean and

3   Coastal Mapping, which is my interagency team and

4   the 3D Elevation program. So we have all of

5   these agencies that are interested in this

6   information.

7   It follows on the -- just a quick

8   reminder because Rick mentioned the NEEA study.

9   In case that didn't trigger any memories, the

10   National Enhanced Elevation Assessment was the

11   study that USGS did for terrestrial lidar, topo

12   lidar back in the 2010-2012 era. And this is the

13   follow-on that incorporates ocean and coastal

14   into that elevation data.

15   The goal of the study is to understand

16   how 3D elevation data is needed, as I said, and

17   how they dovetail specifically in the coastal

18   zone, so basically just said that, how they

19   dovetail in the coastal zone. We're looking at

20   inland, near shore, and offshore bathymetric data

21   requirements as well as terrestrial, you know,

22   topographic requirements. And we're taking a

1   sensor agnostic approach just as a reminder. No,

2   we're not asking people to think about the

3   technology that can give them the data they need.

4   We just want to hear what type of data they need,

5   what accuracy, that kind of thing. So we're not

6   getting into more than that.

7   The study was -- the survey was

8   approved by OMB in the spring. It took a lot

9   longer than we thought but I think it was an

10   enhanced product after that OMB assessment. I'm

11   willing to say that in public. We released the

12   questionnaire. You all are probably well-aware

13   of that. You may have run across it in several

14   avenues.

15   That data collection phase has been

16   happening. We had an initial six-week release.

17   Actually, we've learned something releasing a

18   survey in the spring into summer is not a good

19   time to release a survey, so we've given some

20   extensions because of not just vacations, as you

21   might think, but this is -- summer is the field

22   season; you know, people are out.

1   So we've gotten a lot of responses so

2   far. I think we're up to almost 900 survey

3   responses. We're going through the ones we have

4   to make sure that we're getting responses from

5   all the different sectors and interest areas that

6   we need. We've sent it to federal agencies'

7   states who've told us to whom in the state to

8   send it, private sector, not-for-profit,

9   academia, so we really, you know, have a broad

10   reach.

11   We're in this pink phase of data

12   validation now as we're kind of wrapping up the

13   survey phase. We're looking at what data we

14   have, what kinds of questions we want to ask the

15   people who have responded. We'll be setting up

16   sort of validation meetings and workshops to make

17   sure that we understand what the respondents are

18   trying to tell us about their data needs. So

19   that validation phase will happen.

20   We move then into sort of aggregating

21   all of those benefits together and the final

22   report phase. And then the part I'm really

1   counting on is the program scenario phase, which

2   is where the -- with the analysis, we determine

3   kind of what is the -- what are the different

4   possible scenarios for collecting and providing

5   elevation data to users. And, you know, it might

6   not be that everybody -- that we can afford to do

7   the best everywhere or we go to the bottom rung

8   and provide that.

9   You know, hopefully, there are some

10   different scenarios about where the -- you know,

11   the sort of sweet spot for cost and benefit is

12   with that return on investment question. So that

13   will happen at the end. We're looking at end of

14   2019, 2020 for that, but I'm sure I'll be

15   updating you on the progress well before then.

16   And I think that's all I have. These

17   slides were in your packet. This is, you know,

18   what the workshop interview -- oh, we don't need

19   to get into this.

20   Just a quick sample of kind of how

21   we're dealing with confirming responses from the

22   different entities that we've sent the survey to.

1   So not to say green is good, pink is bad so much.

2   It's just informational of who responded and who

3   has as yet hasn't. A pink response isn't

4   necessarily a negative. It may be that they have

5   interacted with us to say their interests are

6   covered by another entity and that kind of thing.

7   So don't think of them as slackers by any means.

8   And this is all in your packet just as background

9   so there you are, the latest and greatest on the

10 3D Nation study.

11   (Applause.)

12   VICE CHAIR SAADE: Okay. We're going

13 to keep going here. So any questions for the

14 panel here from anyone? You.

15   MEMBER THOMAS: Laura, on those

16 currents that you're putting out, does HF radar

17 help you at all, this just having the surface

18 currents? Or do you really need profile

19 currents? Or is it too far offshore?

20   It's too far off shore?

21   MS. McLAUGHLIN: I don't think that

22 there is a spot for HF radar in that region. I

1   think there are too many mountains probably, and

2   I think that it's too far offshore where the

3   location is.

4   MEMBER THOMAS: Right. I know that

5   Molly had to leave this afternoon, but I think

6   she's getting some money for HF radar through

7   AOOS this year. And so I was just wondering if

8   they would be helpful to coordinate locations.

9   MS. McLAUGHLIN: Yes. I'll touch base

10   with her to see where they're putting them in --

11   MEMBER THOMAS: Yes.

12   MS. McLAUGHLIN: -- but we'll check

13   with Molly.

14   MEMBER THOMAS: Okay. Thanks.

15   MEMBER KELLY: Ed Kelly. Liz,

16   precision navigation is turning into the flavor

17   of the month. You mentioned New York. You've

18   got LA you're following up on and four other

19   ports. Is there going to be some type of way to

20   evaluate which projects get done first, because I

21   can imagine every port's going to want to start

22   getting involved -- or rather which one will be

1   second, assuming New York will be first.

2   MEMBER DUFFY: Excuse me.

3   (Laughter.)

4   CAPT KRETOVIC: My money's on -- I

5   want to see you two arm wrestle. No, I'm just

6   kidding. I think part of it -- it's really hard

7   to answer your question. I think both of you,

8   Lower Mississippi and New York-New Jersey are

9   both in the queue and you are the first that

10   we're working with. The socioeconomic study is

11   going to help us determine where to go after

12   that.

13   MEMBER THOMAS: -- coordinate

14   locations.

15   MS. McLAUGHLIN: But we do have four

16   people that have shown interest in something like

17   this, and so I think as we progress, we'll try to

18   get you finished first. You know, I don't know

19   how to say like we'll have it all like done by a

20   specific date or time. And Rick can add in a

21   little bit, too.

22   CAPT BRENNAN: So to be clear, I mean

1   the data acquisition in New York is complete.

2   That data is working its way towards application

3   to the chart so, you know, I think as far as

4   products for that, we'll see products for, you

5   know, New York come out first.

6   The data acquisition on the

7   Mississippi is currently underway and just

8   started within weeks of this meeting, so that

9   will be over the next year or so as those surveys

10   get completed and processed and applied and we're

11   able to start deriving products there.

12   Beyond that, I think the thing that

13   we're looking for and where we have gone is where

14   there are willing partners and willing ports that

15   are interested in partnering with us. So I think

16   that's where, you know, we're overlaying that on

17   top of the shipping demands that requires that.

18   And so I think that's how we're looking at it

19   among other things as a means of determining

20   where to go next so.

21   MEMBER DUFFY: Of course, we would

22   love to help with some of the collections along

1   the lower river and, you know, a good field trip

2   to New Orleans has a way of really helping things

3   along, and you know we're committed.

4   Ed, you may be number one but being

5   number two is not that bad either.

6   VICE CHAIR SAADE: So I have a

7   question for Carol or Laura. Carol, go back 20

8   years and if you had a really comprehensive

9   current measuring system in the Cook Inlet to aid

10   in what we had to do back then, would it -- could

11   you apply it to benefitting the way the survey

12   was run?

13   MEMBER LOCKHART: So one of the

14   hardest challenges of working there was at the

15   time, getting the dynamic draft for the vessel

16   correct, because the speed over ground didn't

17   match the speed through the water. And so the

18   way we got around that was by using engine RPMs

19   and translating that into speed through water.

20   If you had current information, yes, maybe you

21   could have done that a different way and modeled

22   that differently so it wasn't quite as hard to

1 get to and it may have been more accurate. So

2 that's the first thing that comes to mind with

3 that.

4 The other thing it could have

5 influenced was the year before when we're trying

6 to figure out what the tidal zones should look

7 like, because they changed a lot, the shape of

8 them changed a lot, especially going around the

9 bend there and current information may have

10 helped with that, too.

11 VICE CHAIR SAADE: Okay. Thanks. So

12 Laura, we did a survey off Nikiski for a couple

13 of years with Exxon, and we had a current -- I

14 think we still have a current meter there. I'm

15 not sure but if there was industry current meters

16 scattered around, would that be of interest?

17 MS. McLAUGHLIN: That's probably a

18 question for Rich actually, but the -- you know,

19 we have been talking about partnering with

20 outside partners for collecting water level data,

21 so one of the things that we should be starting

22 to look into is how can we partner with outside

1   partners to collect current meter data as well.

2   And, you know, perhaps that's something we need

3   to start thinking about as time moves on, but

4   I'll let Rich answer that.

5   MR. EDWING: So I'll turn my mic on so

6   I can talk to you next to you, but the short

7   answer is yes, we're interested, and certainly

8   either in getting some of this, just a few months

9   of data that we can just make some predictions

10   from or potentially, you know, almost create a

11   PORTS system out of it if people in the area are

12   interested in that. But we also have to look at,

13   you know, what type of equipment's being used and

14   standards and, you know, it's -- as you know,

15   it's not as easy as flipping a switch and that

16   data getting over to us. We have to look at

17   those technical issues as well. But the short

18   answer is yes, we'd certainly like to explore

19   that.

20   MEMBER GEE: Just a couple of

21   questions for you but actually one related to

22   that -- this is my ignorance, I guess -- is with

1   the Coast Survey ships that are out doing the

2   charting in remote areas, do they -- are they

3   collecting current information as well or not?

4   Is that not part of the normal mission, and would

5   that be useful?

6   MS. McLAUGHLIN: The NOAA ships you're

7   talking about?

8   MEMBER GEE: Yes.

9   MS. McLAUGHLIN: No. They don't

10   collect current meter data. So we do partner

11   with them occasionally if they're transiting

12   through an area that we're interested in. Like

13   for example, the one next year that we're going

14   to deploy in North Indian Pass, actually, the

15   Rainier, we're hoping will deploy that for us in

16   April and then come pick it back up in September.

17   So we do take advantage of them being in the area

18   but it's not a -- it's not common for them to

19   deploy instrumentation for us.

20   MEMBER GEE: Okay. Just --

21   CHAIR MILLER: And what about the ADCP

22   data, isn't that on most of the NOAA ships;

1   wouldn't that be helpful?

2   MS. McLAUGHLIN: Most of that data is

3   in transit, right, so what we're looking for is a

4   single point, like a single position so that we

5   have 30 days of data in that one location, so

6   that we can do the harmonic analysis on that and

7   get predictions from it, so the -- like a transit

8   wouldn't give you that information.

9   CHAIR MILLER: Okay. I just thought

10   it might be useful additional data to the data

11   stream.

12   MS. McLAUGHLIN: I think it could be

13   useful for modeling purposes but probably not for

14   actually doing the tidal current predictions.

15   MEMBER GEE: Okay. Yes -- no, that

16   was sort of similar. I was just thinking if

17   there -- you know, it's -- the deployment of

18   assets there is, particularly in Alaska, I guess,

19   is you have few assets up there. If there was

20   the opportunity to -- question of interest really

21   whether that happened. Then in a way, related to

22   what Roger is saying about the autonomous systems

1   as well. I guess it's -- mostly we talked about

2   it with -- sort of up at UNH about mapping

3   systems. But I wonder whether the autonomous

4   systems specifically for the tasks that NOS are

5   looking at, those other ancillary observations,

6   you know, the -- whether it be sound velocities

7   or currents and also then potentially, you know,

8   using the GPS, you know, with post-processing to

9   transfer datums and all that sort of stuff. Is

10   that kind of part of the autonomous -- where you

11   see the autonomous systems might be used?

12   MR. SARAF: I think it's very, very

13   possible it could be used that way. I think the

14   benefit of those devices is it could be outfitted

15   with many things. And so that's part of the

16   testing, and that's why we're sort of taking a

17   very concentrated look at the lab in terms of

18   integrating these types of things. So I think

19   it's a possible future to be seen, but I think

20   it's very possible to do that.

21   VICE CHAIR SAADE: Any other questions

22   from anyone?

1   (No response.)

2   VICE CHAIR SAADE: Okay. I'd say

3   thanks a lot. This is another good panel and

4   really appreciate your time.

5   (Applause.)

6   VICE CHAIR SAADE: Okay. For the

7   Panel, we're work through all the things that we

8   towards the end of the day. We're going to put

9   up the priority matrix panel first, and then

10   we'll chip away at some of these other to do

11   lists. If you need to take a break or want some

12   time, just do your own thing.

13   MEMBER MAUNE: Okay, Ed, is the ball in

14   my court? Okay. At the last meeting we had in

15   Miami, we came up with the idea of a priorities

16   matrix in which different people identified

17   topics that they thought we might be interested

18   in looking into for potential issue papers. And

19   we sent out a priority matrix and had people, all

20   members, vote on which they thought should be

21   highest priorities. You could -- each person

22   could vote on three to five of the various topics

1 that we had. We received responses from 12 out

2 of the 16 members and of those 12 that voted, 8

3 of them voted autonomous vessels and emerging

4 technologies as the one that got the most

5 interest in having potential issue papers in the

6 future.

7   And for that particular one, when we

8 had a -- we've had a couple of monthly or

9 bimonthly telecons to discuss these issues, the

10 last time we talked, Ed, you thought that you

11 were gathering data now and weren't ready to

12 prepare an issue paper yet on that. Has anything

13 changed?

14   VICE CHAIR SAADE: I think what's

15 changed is that it's doing its own thing with

16 whether we say anything or do anything, as Larry

17 demonstrated earlier yesterday.

18   MEMBER MAUNE: Okay.

19   VICE CHAIR SAADE: There's a lot going

20 on. When I sat in with SAB, there was a

21 presentation from all of NOAA's different

22 activity relative to both airborne and vessel

1   autonomous vehicles, surface, subsurface and

2   airborne. So what I'm wondering is if there's

3   really a position for us, because things are

4   happening so fast and moving so quickly forward.

5   MEMBER MAUNE: Yes. Well, we don't

6   have to have an issue paper on it.

7   MEMBER HALL: I just want a quick

8   point of clarification of what actually happened

9   in Miami. I thought the priority -- I know that

10   it became something a little bit different

11   between Miami and now, but the original purpose

12   of the priority matrix was to identify also the

13   things that we wanted to do with these topics.

14   So when I voted for autonomous vessels, say, it

15   was to get more information and keep it at the

16   top of our interest list --

17   MEMBER MAUNE: Okay.

18   MEMBER HALL: -- not necessarily to

19   write a paper. And I didn't see any of these at

20   this point trying to be a paper yet. So I think

21   that's one thing we are now missing is direction

22   on what the group thought we were going to be

1   doing on these particular topics. It was not

2   related specifically to issue or position papers.

3   So I just want to --

4   MEMBER MAUNE: That is correct.

5   MEMBER HALL: -- clarify where we're

6   going with that.

7   MEMBER MAUNE: Kim is right. We are

8   continuing to pursue emerging technologies every

9   time we can. It's something we continuously need

10   to be updated on and appreciated the briefings we

11   had this week on that subject.

12   VICE CHAIR SAADE: So I guess we're

13   all in agreement that number one is -- the one on

14   the top of the list is happening, right?

15   MEMBER MAUNE: Yes.

16   VICE CHAIR SAADE: Okay.

17   MEMBER MAUNE: It's a hot topic for us.

18   It's the hottest topic for us. We can continue

19   to appreciate the different periodic sessions you

20   have introducing us to these technologies and the

21   briefings we've had this week on that. So we

22   don't have to have issue papers on it. I

1   shouldn't have put potential issue papers up

2   there. It was for hot topics for us to continue

3   to be kept abreast of. The second --

4   MEMBER PAGE: Dave, can I say

5   something for a second. I mean I'm just -- now

6   I'm confused. Of course, I'm new to the group

7   here. All I know is how to do is throw parties,

8   I know how to do this stuff but -- I guess my

9   thought is our goal is to provide some advice or

10   counsel or some input to National Ocean Service.

11   So to me, we probably should look -- maybe

12   there's a different list. You know, where are

13   things that we think we should be investigating

14   so we can provide input to NOS versus we -- if

15   we're saying this is happening, autonomous

16   vessels, then that's not really important. I

17   mean I can learn about it more. I can pay

18   attention to it but if I'm not going to

19   contribute -- and my job is to kind of move the

20   needles one way or the other -- just to watch

21   what's going on but maybe evaluate something and

22   then provide some input that can help NOAA find

1   another avenue or another thing to pursue or what

2   have.

3   So maybe there's two different --

4   because I was kind of thinking issue papers too,

5   but everyone's it's not issue papers, it's just a

6   matter of being issues you're interested or I

7   don't -- what's the priority for?

8   VICE CHAIR SAADE: Okay. I'll go

9   first.

10   MEMBER PAGE: I'm lost.

11   VICE CHAIR SAADE: And then Kim. Not

12   everybody on the panel is about autonomous

13   vehicles --

14   MEMBER PAGE: Okay.

15   VICE CHAIR SAADE: -- at least when we

16   started.

17   MEMBER PAGE: Okay.

18   VICE CHAIR SAADE: So the intent of

19   this is, from a technical point of view, was to

20   introduce technologies to everybody so that maybe

21   it's just out of human interest or Panel

22   interest, or maybe it turns into something that

1 we really feel strongly for and then it becomes

2 something for moving the needle.

3   MEMBER PAGE: Okay.

4   VICE CHAIR SAADE: So for instance, a

5 couple of meetings ago, Carol did a real

6 comprehensive presentation about the way

7 hydrographic lidar works, which was really

8 beneficial to the entire panel. And that type of

9 thing is what led to what we're doing here.

10   MEMBER PAGE: That's good then.

11   VICE CHAIR SAADE: And as -- you know,

12 I don't know what we may have learned in the last

13 couple of days. There may be some other things

14 we want to put up there now that --

15   MEMBER PAGE: Right.

16   VICE CHAIR SAADE: -- but you're

17 right, at the end of the day, a lot of this is --

18 part of it's educational, part of it's for us to

19 latch onto something and run with it.

20   MEMBER HALL: Just because I'm the

21 brainchild from this, just -- what it was for was

22 we would get on topics, we would get to a place

1   and we would just kind of talk about what was

2   going on there. And we kind of loose track of

3   some national priorities or other things other

4   than what NOAA had asked us to do.

5   So part of this was specifically what

6   Ed just said, getting smart on the issues and

7   deciding is there a there there, is there

8   something we need to write about or not, also to

9   help kind of establish some meeting priorities as

10   well. What do we want to hear about now. We're

11   really interested in for a while there big data,

12   so we instead of having a meeting, we had

13   telecons with the Technology Working Group

14   thinking about that. And it's a good way to

15   gauge the group's changing priorities so that we

16   can be more agile and nimble for NOAA as we

17   answer things.

18   So I think sometimes we need to be

19   producing. The problem we got to is we were

20   producing quite a few issue papers and if you

21   hadn't figured out through the rewrite of the

22   precision navigation paper, that's like herding

1   cats. And at that point, I was the one who was

2   rewriting them so I wanted to find a new way to

3   do that.

4   So I think it's all of the above and

5   I think we do need to get back to the point on

6   this where people kind of indicate we want more

7   information, we want to keep tracking on it, or

8   we want to think about an issue paper. I think

9   we need those inputs so that you all, as

10   leadership, Joyce, Ed, going to be Julie, can

11   understand the -- just us regular panelists'

12   thoughts on it. And it's also a way for folks

13   that maybe don't always speak up during these

14   meetings to have a little bit of a vote trying to

15   spread the wealth of input in a different way.

16   So there's a lot of reasons why it

17   happened and I think we did lose something in

18   this one without having that kind of follow-on,

19   what do we want to do with it.

20   MEMBER LOCKHART: So I guess to add to

21   all of that, I think it is important to know what

22   we want to keep tabs on, too. So it's easy to

1   say, well, yes, this is happening and as a Panel,

2   we all got educated on this a couple of sessions

3   ago, but I think something became apparent this

4   week because, you know, we just heard that

5   they're going to start looking at the aerial

6   drone now and putting that on NOAA ships. And I

7   think that problem -- that could solve a problem

8   that was highlighted just yesterday by the Vitus

9   guy, that he can use this new technology to solve

10   his problem really quickly.

11   There is a missing piece to that and

12   right now, he needs the processing to be push of

13   a button. Well, that could be some kind of thing

14   that we say, okay, well, maybe we have UNH look

15   at structure from ocean and processing and see if

16   we can make that pushbutton so we can have, you

17   know, a missed or a black box system for aerial

18   drones that can't solve this problem really

19   easily.

20   So I think, you know, when we did our

21   panel, we focused very much on vessels floating

22   on the water, but there are other types of

1 vessels out there that are still in the purview

2 of NOAA. And so I think that's why it's

3 important to keep this kind of stuff on the list.

4 Yes, we did it but I think we are all still

5 interested in it, and it is changing so quickly

6 that I think it's important to keep abreast of

7 that. So yes, maybe it won't come up every

8 session but I think it's important that these

9 topics do still get discussed.

10   VICE CHAIR SAADE: Yes. And I would

11 add for somebody like me, you can never end. I

12 mean all this stuff is great. I love all of it

13 so we have to be a little bit discriminating with

14 some logic in there.

15   CHAIR MILLER: Yes. I just wanted --

16 one thing that Ed Page said and I just wanted to

17 clarify one thing. We're providing advice both

18 to NOS and to the Administrator. And sometimes,

19 you know, I can think of the ship issue that

20 we've written papers on and we've put a

21 recommendation in. That's really an OMAO issue.

22 It's not an NOS issue. So we need to remember to

1   look a little more broadly than just NOS, just as

2   a --

3   MEMBER THOMAS: I'm wondering if we --

4   this first topic there, what I would really like

5   to have at our next meeting in March is some

6   report out on has there been any progress on

7   using any of these autonomous vessel in the

8   shallow water bathymetry or mapping or something

9   like that. I mean I think the reason why this

10   became so important, particularly at this

11   meeting, was because we really saw direct

12   applications where that could really help some of

13   these remote areas that didn't have a baseline

14   for shoreline, et cetera. And if we're going to

15   provide continuity within meetings and really tie

16   back our discussions, we might just make a note

17   that that might be a topic for a future meeting,

18   too, to really tie it in.

19   CHAIR MILLER: I would also add that

20   at the last meeting, we've been very privileged

21   to have Admiral Gallaudet at two meetings in a

22   row. That's never happened before.

1   He asked that the HSRP look at this

2   topic in particular. So when I get a request

3   like that I put it on top of my priority list.

4   VICE CHAIR SAADE: And just so

5   everyone knows, we had a whole session on the

6   status of AUVs when we were in New Hampshire so

7   we spent an entire morning on it.

8   And, again, I could do that every

9   single meeting personally, but in the interest of

10   moving it along, and maybe the right thing to do

11   is to revisit it once a year or maybe once every

12   year and a half.

13   But with Larry doing what he did, that

14   is one step in the update, and sometimes the

15   Admiral does the same type of thing. We could

16   make it more regular.

17   I have no problem with that just

18   because it is a particular type of technology

19   that is changing incredibly fast and the

20   applications are changing incredibly fast.

21   MEMBER DUFFY: So I wanted to comment

22   on something that's not here and one of the items

1 in Miami was the discussion of working on the

2 partnership with NOAA and the Corps of Engineers.

3   And I will just say as someone who

4 lives on the Mississippi River, I depend on all

5 of our government agencies.

6   This past Friday I was on the Motor

7 Vessel Mississippi with the Mississippi River

8 Commissioner Admiral Shep Smith, and Captain

9 Kretovic reminded me that I had my NOAA hat on

10 today.

11   But I strongly believe that that is

12 very important especially with looking at New

13 Orleans in a year, and as the diversity of the

14 panel offers, some things are going to be more

15 important to different people, but I have to ask

16 that that at least be included in future

17 consideration.

18   I will also volunteer that in my area

19 from New Orleans District to Vicksburg to

20 Headquarters, I have a very good and close

21 relationship with the Corps as I do with NOAA and

22 the other agencies.

1   And I think there is a tendency to

2   have silos in ways but especially with the

3   technology increases and more information being

4   available, I would say that that was a very

5   important one to me, and if I could make an

6   appeal that that also be at least kept on the

7   back burner, I'll keep stirring that gumbo, if

8   you will.

9   But I would like to see that not fall

10   by the wayside.

11   MEMBER MAUNE: Do you feel that was

12   not included in the public private partnership

13   there, one that it's --

14   DR. MAYER: I think that's a very

15   different -- and I want to reiterate that. And I

16   think maybe not so much at this point in time for

17   an issue paper. I think it can evolve into an

18   issue paper, but when Lynne asked for suggestions

19   for the meeting in the Washington area, this

20   might be a really appropriate thing to focus on.

21   Because I absolutely agree with Sean

22   that this is a critical issue, and I think

1   there's been some good progress, but I think we

2   need to keep stirring the gumbo and keep the

3   pressure on.

4   And so if we made that a focus area

5   for that meeting, that might lead to some kind of

6   issue paper that we might want to produce.

7   Exactly, well, I'll leave it to the people who

8   know who the right people are, but I think that's

9   the place it'll be.

10   VICE CHAIR SAADE: I'm inclined to

11   suggest just as we have this panel here.

12   Obviously these topics are still of interest, and

13   we had a lot of discussion about exactly what

14   you're talking about at one of the previous

15   meetings that I was at.

16   It may be that we need to have every

17   single meeting a five or ten-minute refresher

18   because -- just to make sure that people realize

19   we're not forgetting about it and things are

20   changing rapidly.

21   MEMBER HALL: There's a lot more on

22   this list, these are just the top votes, and the

1 full matrix has more information on specifically

2 what we're talking about.

3   Because these are really generic,

4 large topics, and so there is more information.

5 What I had done in Miami was everything I've

6 heard related to them I shoved into that

7 spreadsheet.

8   And this is just I think for Dave and

9 Julie's purposes to just get us all on one

10 screen. But there's more to it, and I'm happy to

11 share that with everybody else.

12   There are some specific things people

13 wanted to hear about, and, again, I'm just going

14 to go back to the reason we started this was part

15 of it was to help NOAA think through what we want

16 to see at our meetings as well.

17   It's not just issue papers, and what

18 we want to hear about, and I think we got some of

19 that from this last panel which we don't normally

20 get.

21   And so to say these are the things

22 we're interested in, even if it's not something

1   that we have anything that we can do about it

2   right now, that doesn't mean when we get to D.C.

3   next time there won't be something hot front and

4   center that we need to do.

5   And, again, yes, going back to the

6   Army Corps, that is always one that we have. I

7   think given everything that Shep has done with

8   it, though, we've let it linger a little bit

9   because we know that he's working hard on that

10 relationship.

11   MEMBER MAUNE: Yes, the full matrix

12 looks more like this. I tried to abbreviate it

13 as best I could.

14   The second topic on the list was the

15 perpetual need for all the line offices to come

16 up with ways to let Congress and other people

17 know the value of their services, and is there

18 any way that we can quantify the benefits of the

19 different offices?

20   The 3D Nation study that Ashley was

21 talking about is one of those steps that will

22 address some of those quantification of benefits,

1 but there are other places maybe that Rich has.

2 I'm not sure how Rich quantifies the

3 benefits, but the more we can come up with

4 methodologies for doing that, the easier it is to

5 get Congressional support for the budgets we need

6 to do our jobs.

7 And so that was sort of my idea, at

8 least of the focus behind that particular topic

9 and why it got the second most votes. I don't

10 know if anybody else had anything they wanted to

11 add on this particular subject?

12 MR. EDWING: Well, I'll just note that

13 we've done a series of economic benefit studies

14 on the PORTS system. We started off with four

15 individual ones.

16 First, we created a template for you

17 all with how you gather the data and generate the

18 benefits, and so we did four of those. Tampa Bay

19 was the first one, Houston-Galveston was next.

20 New York/New Jersey was third I think,

21 and Columbia River was the last one. And then we

22 did a larger study which said, hey, if we had all

1   of the major seaports in the U.S. covered by a

2   PORTS system, what would be the economic benefits

3   of that?

4   And that was completed a few years

5   ago. And then there's been some follow-up work

6   done on that looking at how do we target areas

7   that don't have PORTS? How do we strategically

8   target areas that don't have a PORTS system?

9   We could both benefit from them,

10   primarily from the standpoint of accident

11   reduction because the reports have documented a

12   50 percent or more reduction in accidents when

13   the PORTS goes in, as well as further exploring

14   some of the economic benefits.

15   So we've really done a lot of work for

16   that particular system. We -- I would like to be

17   doing some work with the water-level network.

18   The problem there is what application area do you

19   want to choose?

20   Do you want to look at sea-level rise,

21   long-term coastal planning, or storm surge and

22   tsunami warning, or habitat restoration? There's

1   a wide variety of applications there, so that's

2   probably where I need to go next.

3   MEMBER MAUNE: Okay, the third topic

4   on the list had to do with relative sea level

5   rise.

6   MEMBER ATKINSON: Wait.

7   MEMBER MAUNE: Did I miss something?

8   MEMBER ATKINSON: I'm just down here,

9   I wanted to say something.

10   MEMBER MAUNE: Oh, I'm sorry.

11   MEMBER ATKINSON: Well, actually it

12   relates to relative sea level rise, too. But I

13   think I've said it before, but the long-term tide

14   record at just one tide station, Sewells Point,

15   that data is influencing billion-dollar decisions

16   right now. So it's an interesting economic

17   benefit, literally billions of dollars.

18   RDML SMITH: I bet we didn't account

19   for that in 1920 when we were putting it in

20   there.

21   MEMBER ATKINSON: No, you didn't, I'm

22   sure, yeah, but now. No, that trend is important,

1   and you wouldn't have it without that gauge.

2   MEMBER MAUNE: Okay, the third topic

3   that got the third most votes was relative sea

4   level rise, and I know that that's a topic near

5   and dear to the hearts of Larry and Julie, and I

6   think Sean said he would like to participate in

7   that and Neil Weston.

8   Somebody mentioned that we needed a

9   baseline to see sea level rise relative to what.

10   What is the starting baseline here? And I don't

11   know if we're in a position to get going on --

12   MEMBER THOMAS: Can I just say two

13   words about that because -- and Ed's name should

14   be up there too because I know you had an

15   interest.

16   How I see that evolving, would maybe

17   set up a small subcommittee to address it, and I

18   think the key there is to make -- I mean, that's

19   such a broad topic, to make sure that we really

20   tie it into NOS and what they're doing and how

21   that's really going to -- how their efforts are

22   going to be making an impact on the local

1   communities and make sure we tie it all back.

2   And then maybe it becomes an issue

3   paper down the line, but I would just suggest

4   kind of tabling that and putting it out to the

5   panel that whoever is interested if they wanted

6   to be on a subcommittee.

7   And then we could set up a call or

8   something and go from there. What do you think,

9   Ed?

10   VICE CHAIR SAADE: I was thinking

11   about the idea of taking a few these offline from

12   the formal biannual meeting because we can run

13   with these as much as we want and as far as we

14   want as we do the call-ins.

15   We could make it a call in that

16   everybody attends or we could make it a call in

17   that's key to this focus. And that's an

18   efficient way to move it along.

19   MEMBER THOMAS: Yeah, I just think

20   that whoever's -- well we'll send out some email

21   and say we're setting up a call or let us know or

22   send your names on in if you're interested in

1   participating or something like that.

2   VICE CHAIR SAADE: That's a good way

3   to get folks engaged.

4   MEMBER THOMAS: We'll get it going

5   outside of this meeting if that's okay with

6   people.

7   VICE CHAIR SAADE: I agree.

8   MEMBER MAUNE: Sure. Anybody else on

9   that topic? Yes, Larry?

10   MEMBER ATKINSON: I just wanted to add

11   one thing we could do when we're down with Sean,

12   we could have a session on subsidence for example

13   or whatever in the same -- or when we're in the

14   D.C. area.

15   So this might be a continuing thing

16   and whether we do a white paper or not, we'll

17   figure it out.

18   VICE CHAIR SAADE: We've got another

19   threshold we have to beat. We have to be four

20   days in a row above the fold on the Washington

21   Post when we go to Washington D.C.

22   MEMBER ATKINSON: That's going to be

1 really hard to do.

2 MEMBER MAUNE: Okay, moving on, the

3 fourth place was tied with two topics, one was

4 enhanced navigational assistance, and I think

5 that really showed that a lot of people are

6 interested in PORTS and in precision navigation.

7 We've had several iterations of the

8 precision nav issue paper, and I don't know if

9 there's any need for updating it or not, but four

10 people voted for that.

11 And then four other people voted for

12 the public private partnerships for the blue

13 economy, which is something that Ross Calendar

14 asked us to look into in Miami.

15 MEMBER HALL: But he's gone now.

16 MEMBER MAUNE: He's gone now, but it

17 is interesting. The blue economy is certainly

18 something of interest to Tim Gallaudet over

19 there.

20 MEMBER HALL: Yes, he's talking at our

21 meeting.

22 MEMBER MAUNE: He lives and breathes

1   the blue economy all the time.

2   VICE CHAIR SAADE: Here's a question

3   for the group. Should we redo this every six

4   months or a year or should we keep it fixed?

5   What do you guys think?

6   MEMBER MAUNE: Then it becomes a

7   question of well, we're interested in that, what

8   are we going to do about it?

9   And I'm not sure what we can do about

10   public private partnerships, what recommendations

11   we might have to the NOAA administrator.

12   MEMBER HALL: But I think the point of

13   the follow-on things is do we want information?

14   Do we want to talk about it? Do we just want to

15   keep track of it?

16   That's what we did with U.S. Army

17   Corps. We said, hey, we just want to keep track

18   of this because it's something that's a

19   consistent thing.

20   So I think what we need is we did this

21   last time right after the Miami meeting, we do

22   that again but we do the follow-on on what's your

1   expectation? Do you want to know more?

2   Are there enough votes for an issue

3   paper or are we still learning about it? And I

4   think we've done that and we've gone back and

5   forth with Technology Working Group papers and

6   said, you know what, actually not a paper yet.

7   Or, hey, it's too fast-moving or, yes, we need

8   it.

9   I think it's to continue a

10   conversation and I don't think any of this is

11   fixed but I do think we need more information

12   about what folks really think we're doing. And

13   I'm not sure it takes extra subcommittees to do

14   that.

15   I think it really takes just asking

16   the question and if it's someone like me, there

17   was a couple things that before I joined this

18   three years ago I didn't know anything about.

19   Now I feel like I'm a little further along, but

20   we have new members coming along so how can we

21   bridge that gap?

22   And if there's more people saying I

1 need information versus more people saying I want

2 to write a paper, then we have a better idea of

3 where we are as a Committee, as a panel.

4   And so I think it's really important

5 to do that but I think it's also important to

6 understand the expectation for each of those

7 topics from people.

8   MEMBER MAUNE: The other topics that

9 got fewer than four votes include education,

10 promoting hydrographic education, that got three

11 votes. Incorporating non-authoritative sources

12 from crowd-sourcing, satellite-derived bathymetry

13 example, got two votes.

14   Arctic charting only got one vote,

15 interesting. I want to take a vote again and

16 we'll get a different result.

17   Managing big data and databases got

18 two votes, technology transfer got three votes,

19 USACE NOAA partnership got three votes, Science

20 Advisory Board cross-pollination got three votes,

21 hydrodynamic modeling and validation got three

22 votes.

1   U.S. Coast Guard and AIS got one vote,

2   hydrographic survey fleet only got two votes,

3   though we've had issue papers on that, and then

4   we had NOAA's application of IoT, artificial

5   intelligence and M2M, that page got one vote.

6   That's it.

7   MEMBER SHINGLEDECKER: I would

8   challenge you guys as a group to maybe use this

9   as a forward-looking planning mechanism kind of

10   as what Kim said. So of these topics, which of

11   these do you want to have webinars on to get more

12   information?

13   Which topics might inform where you

14   want to have a meeting because you want local

15   stakeholder feedback on it?

16   Then with that information, okay, as

17   you have more information, then is an issue paper

18   needed, is a subcommittee needed? And maybe rank

19   those after each meeting because I do suspect

20   some of those rankings would change if we

21   reranked today.

22   What I would also challenge you guys

1 to do is something I don't think we've done in a

2 while, is kind of a -- use that as your forward-

3 looking but also have a backward-looking tool.

4   A while ago I know we did, we went

5 back and we took all the letters that we had

6 written to the Administrator over the last five

7 years, and we pulled out each of the

8 recommendations and said where does that stand

9 now?

10   Okay, we made the emphasis, we made a

11 recommendation, was it actioned? Was it not

12 actioned? Is it still relevant? Has it changed?

13   As a way to hold accountability to it

14 and just make sure that the work that we're doing

15 as a panel is getting the results that we hoped

16 for and use that to inform, okay, well, if it's

17 changed what more do we need to know?

18   So I would just say a forward-looking

19 and a backward-looking would be a smart way to go

20 forward.

21   MEMBER MAUNE: One thing I can do is

22 I could start with these topics but before we

1   vote again I would want to get suggestions from

2   the members on what topics need to be added so

3   that we have an updated list of nominated topics

4   for everybody to vote on.

5   That to me would make more sense to

6   see how we update this list. Lindsay?

7   MEMBER GEE: I think I agree with

8   Susan totally.

9   I think if we take away the papers,

10 these are issues that were all obviously voted on

11 but that were raised, and they're issues that

12 should I think also for communicating to NOAA

13 what we're interested in obviously.

14   And there are some areas where we

15 really can't do anything because it just

16 highlights an area that we think we should be

17 addressing that a lot of times I feel I don't

18 know enough what NOAA is doing already.

19   And they may already be addressing

20 some of these things. And some, again, are so

21 general, public- private partnerships versus

22 autonomous vessels, I mean, they're quite at the

1   extremes.

2   PORTS is a solution and public-

3   private partnerships was just -- they must throw

4   it out there. And I think we need to maybe

5   address that.

6   But having those there is good because

7   I think if we do address it early in a meeting

8   and we refresh our memories of what we said last

9   time, I think if I look back now at this meeting,

10   I look at public, private, nonprofits and I

11   think, well, wow, look at the partnership with

12   Marine Exchange -- this is a solution that's

13   working in a particular area and you can take it

14   under that topic.

15   Relative sea level rise up in Alaska,

16   it's like, well, we have no fricking clue what's

17   up there because there's no data and we haven't

18   connected it. There's no infrastructure.

19   So that focuses my mind and says,

20   okay, Juliana and the CO-OPS team and all that,

21   they need to then have support to get the basic

22   infrastructure to even think about that.

1   So that's the way I would address this

2   as opposed to looking for papers to write, it's

3   more like, okay, where do we think there's issues

4   that we can actually -- and it has to be

5   somewhere where we can have an input as an

6   advisory panel.

7   There's really interesting stuff I'd

8   love to talk about more with different folks but

9   it's like, yes, it's not our role in this panel I

10   don't think.

11   So it's important to just address a

12   group of issues that we have not in the forefront

13   but are there that we see as the bubbling issues

14   that we want to address and help NOAA move

15   forward with I think.

16   MEMBER PAGE: Can I ask --

17   CHAIR MILLER: I think you should also

18   look at -- this is a priority list. We have done

19   things recently.

20   There's not just these, there's the

21   papers, there's the recommendations we've put

22   into the letters, and a lot of times the

1   recommendations in the letter is a very hot topic

2   from the meeting we go to.

3   For instance, I think perhaps one

4   recommendation from this meeting would be on the

5   AIS issue. That's not high in this priority

6   list, and one of the things I did when Kim

7   started this matrix was I put in a column to tell

8   new panel members what has been done recently.

9   Issue paper in 2017, letter

10   recommendation in 2016, so you can see where,

11   like Susan was talking about, we've gone in the

12   past.

13   And for instance, on the topic that

14   Sean brought up, the Army Corps coordination,

15   Sean, what I would encourage you to do is go to

16   the papers and look at the paper that Bill Hanson

17   and I were primary on called Improving Access for

18   U.S. Nautical Charts.

19   Buried in that, because it's a

20   sensitive topic, is the U.S. Army Corps NOAA

21   relationship, and so you need to look at that and

22   see if there's some way we can improve that issue

1 paper because it has been addressed.

2   I'm not saying it shouldn't be

3 addressed again, but maybe we need an update on

4 that paper. So there's a lot of resources there,

5 and there's a lot more information in this matrix

6 than is what is up on the screen.

7   So just be aware of that.

8   MEMBER THOMAS: Go ahead, Ed, I think

9 you were before me. I was just going to say that

10 regarding the Corps, I'd actually like to broaden

11 it from just the charting and the channel issue

12 and the quality control of their data.

13   Because, gosh, in southern -- we get

14 Corps dollars for sea level -- for beach erosion

15 dollars, we get Corps dollars -- the Corps is the

16 primary funder of the wave buoys, the 71 wave

17 buoys around the coastal U.S. If those dollars

18 don't continue it all goes away.

19   There's also quality control, and they

20 do work really closely with NOAA on a lot of

21 those topics I think, and I think the

22 coordination with NOAA is essential.

1   So I don't know how you feel about

2   that, Shep, but I feel like it's a broader issue

3   than just the nautical charting too. And I don't

4   know how much of that is particular to this

5   committee is the only thing.

6   The beach erosion for sea level is

7   actually very -- and we fly light with Corps

8   dollars and do a lot of vertical datum stuff with

9   the NOAA dollars. But I just bring it up that

10   there are other partnerships with the Corps too.

11   MEMBER DUFFY: I would just like to

12   respond and say I'll be happy to read that paper,

13   but I think in maybe a way this is more than a

14   paper.

15   When we're talking about a partnership

16   and working to develop it, maybe being an action

17   item and as you know, I'm new here and I really

18   don't want to be a troublemaker, but this is

19   something I believe that would be very important.

20   And just trying to facilitate that, as

21   we look at panelists, I mean in both of the

22   meetings I've attended, we've had other

1   government agencies, and I think that

2   coordination and cooperation is key.

3   And, again, I really would like to

4   help that maybe not having it as a paper isn't a

5   good thing.

6   I'd be happy to put together what I

7   think the partnership should look for and come

8   back and hopefully that could be supported and

9   maybe it will take away one of the papers.

10   I've seen the wordsmithing that goes

11   on, and, of course, I know words are very

12   important as you'll remember from this morning.

13   But it's more of an idea in my mind than if

14   there's a way to facilitate it, I think at least

15   in the areas I spoke about, I have the

16   relationships to help make that better.

17   And hopefully -- I will say that I've

18   spoken to Corps at Headquarters level, and there

19   was an interest, and I think we'll get away from

20   the overlap in the missions.

21   But at the end of the day, through

22   cooperation, I mean, when we have a hurricane or

1   an oil spill we're talking to the Corps and NOAA

2   and the Coast Guard and Customs all in the same

3   call and all in the same mission.

4   So having that partnership I will say

5   again I think is really important.

6   Thank you.

7   MEMBER HALL: I think this is key to

8   looking back, what Susan said. We need to

9   because when I first started this was a huge --

10   you took over for a big name in Army Corps too

11   when Bill Hanson was on the panel.

12   So I want to make sure Sean

13   understands it's not an issue that we don't take

14   seriously.

15   I think what we do need to do and I

16   think Susan's got a great idea there is somebody

17   needs to go back and look because we made these

18   recommendations, we've had wonderful

19   presentations from Shep specifically about this

20   and the things that he is doing and his office is

21   doing to ensure that partnership.

22   And so I think maybe we have not done

1   a great job of supporting our new folks to

2   understand the past of this panel.

3   So I think that's probably a next step

4   once we figure out what we really want to do with

5   this but preparing these folks for success when

6   they get here is a huge key thing.

7   Because I think some of us are sitting

8   around the room going, yes, we really understand

9   the Army Corps issue because it usually comes up.

10   It didn't come up here, and we're just

11   making sure that we put our efforts where we

12   really can and wait for NOAA to push on us when

13   they need our support.

14   But, Sean, Shep can probably talk to

15   you offline exactly what he's up to with that ACE

16   relationship.

17   MEMBER KELLY: Ed Kelly, here. Sean,

18   it's way too late, you are a troublemaker. But I

19   think we have to differentiate the paper is

20   strategic, but the tactical portion of this is

21   what you're talking about.

22   And the paper is one thing, that's

1   strategy, tactical where we have to actually set

2   up individual meetings with specific objectives.

3   I think we have to move that a little

4   bit more, and that's more what you were talking

5   about and what the MOUs with the Corps and

6   everything else that you folks have already

7   started to work on.

8   So it's where we need to go, it's very

9   valuable, but I think we don't want to trip up

10   strategical and tactical and try to assume it's

11   all one package. They are separate things.

12   MEMBER MAUNE: Okay, everybody

13   commented? That's literally all I have, Ed.

14   VICE CHAIR SAADE: Good lively

15   discussion, thanks, Dave. What's next on the

16   list?

17   So we do have a couple of issue papers

18   that have been brought up. First of all, Gary,

19   go ahead and give a little bit of detail of

20   what's your perspective on this.

21   MEMBER THOMPSON: So we've talked

22   about the datum change in 2022, both horizontal,

1   vertical, and Nicole talked about they've created

2   a working group here in Alaska, and we've done

3   the same thing in North Carolina.

4   And what we found out is that we need

5   to talk to each group about how they'll be

6   impacted a little bit differently. So we've

7   written papers in North Carolina for the

8   agricultural community for professional

9   engineers, surveyors.

10   We've tried to -- and I'm writing --

11   I'm meeting with the lawyers next week, and

12   they're very interested in it. So I think it

13   would be good for this group too because we have

14   users like recreational boaters, how it will

15   impact them.

16   So I think having a paper more not

17   down in the weeds but more of a general overview

18   and how that would impact the general population

19   would be a good paper to have.

20   I think we can take from the other one

21   the basic information but then stay away from the

22   deep technical part and just examples of how it

1   will impact them.

2   MEMBER MAUNE: I will say from my

3   experience that we're going to get a lot of

4   resistance from some communities to this and from

5   some of the states for changing their state plan

6   coordinate system.

7   I'll give an example. My county of

8   Fairfax County, Virginia is normally considered

9   to be a pretty progressive state, but they are

10   still using NGVD 29 vertical datum, and I am

11   delivering lidar data of Fairfax County this

12   year, and they first asked for NGVD 29 data, and

13   now they're asking for both.

14   So they are saying, okay, deliver it

15   NGVD 29 and also deliver it in NAVD 88, and then

16   they said in 2022 when the new vertical datum

17   comes out, they may consider switching from

18   NGVD29 directly to the 2022 datum, bypassing

19   NAVD.

20   And if a progressive county like

21   Fairfax has that kind of issue with the datum

22   change, I can imagine there's going to be

1   thousands of others out there so that's going to

2   be a lot of challenges out there to make this

3   happen.

4   And I know Juliana knows that very

5   well. You've done everything I could imagine you

6   doing to prepare -- but it's going to be a hard

7   sell for a lot of people.

8   MEMBER GEE: I'll just comment on

9   that. I think that's what Gary is talking about.

10   You understand that you were having the problems

11   delivering it and it's like why are they still

12   resisting, and I think that's what you're saying.

13   It's like, well, here's why you need

14   to worry about it, and I think that's what we

15   kind of have to -- the simple -- we understand --

16   well some of us understand the technicals of

17   that, but it's like for the average person, it's

18   like why are we investing money in it and what's

19   the benefit?

20   And why do you not have to worry about

21   it so much?

22   MEMBER THOMPSON: And also explain to

1 them they may not have to worry about it because

2 it may just be a relative change and inform them

3 of that so that when they read something in the

4 paper they'll have -- we'll provide them the

5 information and make them aware that it's really

6 not going to impact you.

7 It's just really a change in numbers.

8 So I think the paper needs to explain, yes,

9 there's some areas it will impact and some areas

10 it won't.

11 MEMBER GEE: So, again, if we're

12 writing issue papers to the Administrator, we're

13 saying that NOAA have to communicate this better

14 to the public. That's the kind of thrust?

15 MEMBER THOMPSON: Right.

16 CAPT ARMSTRONG: That's kind of the

17 point I was going to make.

18 I think we need to be clear on our

19 paper what advice we're giving to NOAA on the

20 subject, and I think if we feel like NOAA's

21 communications need to be upped a little bit,

22 then that's advice we can give.

1   But straight to the public I don't

2   feel is appropriate.

3   VICE CHAIR SAADE: That's what I was

4   wondering. What would be our position? But I

5   think that's a good approach, is to point out

6   maybe what the inconsistencies are and make

7   recommendations on how to improve it.

8   Because we all understand it because

9   Juliana explained it to us.

10   MS. BLACKWELL: This is Juliana. So

11   we would love to have as much support and ideas

12   of how to do this better as you all can come up

13   with.

14   But I think what I'm hearing is it's

15   not really appropriate for the group to put out

16   this paper, one-pager or whatever, but if there

17   are -- please clarify if I'm misunderstanding

18   this -- the direction of having one-pagers or

19   having outreach that is really, really light on

20   the technical and just really about the impact

21   and why people should care.

22   It's definitely something we should be

1   putting out, but we would love to have ideas from

2   HSRP on things to highlight or groups to focus

3   our message to and just feedback on here's an

4   example of what we've come up with.

5   Informally, does this meet what you're

6   expecting? So I think anything that you can

7   provide, even if it's not from the group, if it's

8   individually that you want to provide feedback to

9   NGS on our communications materials or have

10   things that you think you should highlight, we

11   welcome that.

12   But I don't see where it would be an

13   official HSRP document to do that. But

14   obviously, I think one of the hardest things is

15   getting the right message to legislatures, at the

16   state and at the federal level, about what we're

17   doing and maybe just giving them an awareness of

18   this as it's coming.

19   Because there are going to be issues,

20   there are going to be plenty of places that are

21   going to be challenged by this update, and we

22   know it's going to take a long time.

1   But anything we can do to get the

2   message out there to the greatest numbers

3   possible, we're very happy to have suggestions

4   from you as individuals and HSRP as a group how

5   we can do that better.

6   Thank you.

7   MEMBER MAUNE: Thank you.

8   VICE CHAIR SAADE: So I would

9   recommend maybe if you jot down, you or whoever

10   else wants to grab a couple of these things.

11   There's an anecdote from Dave and a

12   couple of the things that you're seeing, Gary.

13   We can use those as an example of why we think

14   there's concern and make advice that way.

15   Sound okay?

16   MEMBER ATKINSON: Yeah, I have kind of

17   a tongue in cheep statement, but I remember --

18   tongue in cheek, not cheep, in Y2K. I can just

19   see headlines, sea level is going to rise two

20   feet in North Carolina January 1, 2022. People

21   will not read it right.

22   MEMBER MAUNE: And by the way, I hope

1   my comments weren't interpreted as being any

2   criticism of NGS. I think they're doing

3   everything I could think of to do, it's just

4   going to be a difficult problem, and I have no

5   recommended changes for NGS myself.

6   I know they're busting their butts to

7   keep people informed. They have these seminars

8   all the time, webinars all the time, and people

9   up there, there's a great deal of interest in the

10   topic.

11   It's a very complex issue, and there's

12   going to be gripers, but it's not because NGS

13   isn't doing anything I could imagine was needed.

14   They're doing a good job now from what I can

15   tell.

16   VICE CHAIR SAADE: Okay, then, Julie,

17   did we have one other topic for new discussion

18   for this morning?

19   MEMBER THOMAS: I don't think so. Did

20   we? Oh, well, there were two issue papers but,

21   no, one was talking to Gary.

22   The other one was I think we just said

1   that eventually sea level might turn into an

2   issue paper, but I thought we were going to meet

3   as a committee first and discuss that, and it

4   might not be an issue paper depending.

5   That's what I was thinking, and the

6   issue paper with sea level wouldn't be -- once

7   again, I think what we need to do as a

8   subcommittee is decide between NGS and OCS and

9   CO-OPS, you know, how the sea level is going to

10   be impacted by this and what is going on in those

11   lines.

12   So I think that we really need to meet

13   before that's formed or written. That's what I

14   would say. Sorry.

15   VICE CHAIR SAADE: Okay, let's jump

16   over to the key points of the meeting that we're

17   going to include in the paper.

18   MEMBER THOMAS: In the letter to the

19   Administrator.

20   VICE CHAIR SAADE: Yes, so if we can

21   agree as a group what the key items are that

22   we're going to forward up the chain relative to

1 this particular meeting besides the long list of

2 thank yous for the attendance of some really key

3 people.

4 MEMBER THOMAS: So I did jot down just

5 a few key points that I thought.

6 VICE CHAIR SAADE: Is there a way to

7 display it?

8 MEMBER THOMAS: It's in my Word file

9 with a ton of other notes. So we can --

10 VICE CHAIR SAADE: You could say it

11 out loud and somebody could --

12 MEMBER THOMAS: Let me say it out

13 loud, and we can always type it in there and just

14 display it, Virginia.

15 VICE CHAIR SAADE: That would be

16 ideal, yes.

17 MEMBER THOMAS: Well, one thing,

18 first, is just acknowledging this joint meeting,

19 this has already been said, between IOOS and

20 AMEC, right.

21 And first of all, I think we should

22 acknowledge Admiral Gallaudet's presence and that

1   how excited we are, but let's not wordsmith it

2   now.

3   Let's just put down Admiral

4   Gallaudet's recognition of being --

5   acknowledgment of being at the meeting,

6   appreciation of being at the meeting. And then

7   two is this --

8   VICE CHAIR SAADE: Just a second. Do

9   we have a way to --

10   MEMBER THOMAS: Virginia is typing

11   this in right now, and then number two, what I

12   put down was the advantages of having this

13   partnership between AMEC and IOOS at this

14   meeting, their attendance here.

15   MEMBER HALL: I have a question about

16   that, and it's something, luckily I've had the

17   pleasure of talking to folks that have been

18   around a little bit longer than I have on the

19   issues of -- I didn't realize -- I don't think I

20   ever knew that Bill and Susan had gone to an IOOS

21   meeting and briefed them.

22   So again this is understanding the

1   past to figure out where we are in the present.

2   So I think it's a really good first step to have

3   that joint session, but I think we really missed

4   something key which was interaction.

5   We got the same briefings, but I think

6   there's a point there moving forward where

7   wouldn't it have been nice for IOOS to tell us

8   what they were working on in relation to us, us

9   to tell them what we were working on in relation

10   to them and have a conversation?

11   And I think that dialog didn't happen.

12   We were all just sitting in a room together. I'm

13   not trying to be too harsh on that, but it really

14   felt a little bit like that, and I would have

15   loved to have figured out where are our common

16   nexus here?

17   And part of that is letting them

18   understand what the bounds of HSRP are and us

19   understanding what their bounds are, but there

20   certainly must be things that cross over.

21   And I think we missed a key

22   opportunity there, but I also want to just say I

1   understand it's an iterative process. Everything

2   we do on this panel is iterative, and we learn as

3   we go, and so I would just say as we move in the

4   future, I think we should praise what happened

5   with IOOS and AMEC, but I think we should also

6   recognize as a panel that we should be getting a

7   little bit more out of those sessions.

8   So I just want to put that out there.

9   MEMBER THOMAS: Maybe we can -- I

10   mean, we'll take that as an idea for our next

11   meeting in D.C. There will certainly be lots of

12   opportunities to have a couple-hour overlap, and

13   maybe we can set up even an informal discussion.

14   MEMBER HALL: It has to go in our

15   letter, too, just that we want more. Right? So

16   that's my point, like --

17   MEMBER THOMAS: So, Kim, just to let

18   you know, we already have -- I don't think that

19   was announced. We already have a response back

20   from IOOS this morning from Admiral Lautenbacher,

21   and Ed and Joyce have that.

22   So definitely there will be a section

1   of the letter which addresses this joint meeting

2   with IOOS and where we want to go from there.

3   But my problem is I just assume

4   everybody knows about IOOS because I've been with

5   it so much, but it's like IfSAR, if you're not

6   working with it then it's good to know more about

7   it.

8   VICE CHAIR SAADE: So let me go ahead

9   and read this paragraph, and then we can also

10   decide whether it all goes in or pieces that we

11   want to steal. Okay?

12   In welcoming us to the joint meeting

13   of the IOOS Advisory Committee and the

14   Hydrographic Services Review Panel in Juneau,

15   Alaska, Lieutenant Governor Byron Mallott

16   eloquently articulated Alaska's affinity for the

17   ocean and the importance of ocean data and

18   information to their daily lives.

19   He described the cultural foundation

20   and collaboration and cooperation that are

21   necessary to meet the challenges they face.

22   The importance of coordination was

1   well illustrated by the special session on Alaska

2   water level partnerships. The session was

3   bookended with presentations by the CO-OPS

4   Director Rick Edwing and AOOS Executive Director

5   Molly McCammon, bridging the Committee interests

6   and underscoring the connectivity of ocean

7   observing across NOAA programs.

8   More significantly, stakeholders/data

9   users on the panel from the National Weather

10   Service and Alaska Department of Natural

11   Resources described how their close relationship

12   on management and integration of the data was

13   leveraged and other data to create improved

14   weather prediction and alerts, as well as

15   management of coastal hazards at the local level.

16   The joint session made it clear that

17   substantial benefits can accrue to the IOOS

18   system with planning additional joint meetings

19   across NOAA observing program and other advisory

20   panels, with the goal of identifying potential

21   common issues and opportunities.

22   Okay? So I think there's a few items

1 in there that we can obviously bring in to the

2 discussion. I don't think it's a paragraph that

3 stands alone by itself.

4 I think it's a really good idea to add

5 to our little list about the Lieutenant Governor

6 because he really did have an impact on everybody

7 in a unique way.

8 I'm sorry, I can't hear you.

9 MEMBER HALL: I'm terribly sorry. Is

10 there an expectation of a joint statement from

11 them given the title of that slide?

12 VICE CHAIR SAADE: Not that I'm aware

13 of.

14 CHAIR MILLER: Let me steal the mic.

15 We just discussed having something that we could

16 both put in our letters or use together. It

17 wasn't absolutely clear.

18 I had hoped that perhaps there would

19 be more of a quasi-recommendation other than

20 further collaboration, some driving need from the

21 water level panel or something, but we didn't get

22 that.

1   But then I talked to Admiral

2   Lautenbacher after the session this morning and

3   he said he was sending me more things but I

4   haven't received them yet. So it's so in flux

5   I'd say.

6   MEMBER THOMAS: And we did have that

7   scheduled on the agenda to have that discussion

8   at one of the lunch hours, it just fell apart.

9   MEMBER HALL: I'm just looking at the

10   title, Joint Statement. So we're talking about

11   our letter versus the joint statement. Those are

12   two very different things so I just wanted to

13   understand expectations.

14   VICE CHAIR SAADE: Okay, that's their

15   contribution to the joint statement.

16   MEMBER THOMAS: Well, we don't know

17   because we're getting more from Lautenbacher,

18   too.

19   MEMBER GEE: I kind of agree. I think

20   there is no specific thing we can put a finger to

21   say apart from, just a general, yes, we should --

22   potentially maybe common issues.

1   I certainly don't remember anything

2 specific that we could come out of this meeting

3 and say, oh, yes, we're going to do this

4 together, a specific area.

5   And so that I think is, to Kim's

6 point, if we had had a broader discussion, maybe

7 we could have that the next time, that that

8 becomes the next phase of it. We should then

9 start to think about identifying those potential

10 issues that we can then cooperate on specific

11 items.

12   CHAIR MILLER: My thought was that

13 there might be some recommendation that came out

14 of the whole water level panel that might be

15 common with HSRP and IOOS. And if that didn't

16 happen, that's fine.

17   MEMBER THOMAS: I'm putting it in the

18 notes for the next meeting because I've got a

19 Section also on that.

20   MEMBER HALL: Just real quick while

21 you're doing that, I really appreciated having my

22 lunch, though, so I appreciate it. I think some

1 of us sometimes like to have a little bit of a

2 break.

3 We get a little bit inundated with

4 information so we like the flexibility we had at

5 this meeting. So, whoever facilitated that,

6 thank you very much.

7 MEMBER THOMAS: So shall I go on with

8 -- I put down a couple more topics for the NOAA

9 Administrator letter. Virginia, you very nicely

10 typed in those first two.

11 Perfect, okay, well, we're going to

12 have to come back number two after we receive all

13 of Admiral Lautenbacher's comments. And we'll

14 circulate them and come up with some joint

15 statement there.

16 MEMBER PAGE: I'm not so sure that I

17 think, what Kim is bringing up, I don't know if

18 we need to have a joint statement.

19 So that's off the table. It's not a

20 joint statement, it's a matter of if we want to

21 mention a relationship with IOOS in our

22 statement, I think.

1   There might be some confusion because

2   I think there's also a discussion that Julie and

3   I would look into some joint document to kind of

4   outline what the relationship might be with HSRP

5   and IOOS in the future.

6   And that would be a joint deliberate

7   prepared document. That's not a joint statement

8   but it's something that we can kind of socialize

9   between our two different organizations.

10   And then we agree once a year or

11 whatever, some way that we might have more of a

12 relationship with them than we've had in the

13 past.

14   And so that might be a different --

15 maybe to think in that context. But in any case,

16 I think this is our statement if we want to

17 mention IOOS, which I think it has some merit.

18   Maybe the last paragraph portion of it

19 might be merit and would be worth incorporating.

20 Other than that, I wouldn't really get into it.

21 That's just my two cents anyway.

22   VICE CHAIR SAADE: Agreed.

1   MEMBER THOMAS: Okay, there's some

2   mention -- oh, boy, this is not correct at all --

3   but some mention about to me this lack of

4   vertical datum, lack of shoreline, just the

5   critical nature of mapping in Alaska and

6   capturing the infrequent -- I don't know,

7   observations up here.

8   Ed, you're better at this one than I

9   am or Juliana or someone. This lack of defined

10   shoreline of --

11   VICE CHAIR SAADE: I think that was an

12   extension. My notes was that, and I got this

13   from Admiral Smith on Monday, barge navigation in

14   general is a big, big deal.

15   MEMBER THOMAS: Barge navigation?

16   VICE CHAIR SAADE: Barge navigation

17   and bringing things to all these villages up and

18   down the Bering Sea and on the North Slope.

19   And I think we need to make some

20   mention, however we want to say it, we have to

21   emphasize the fact that the barge navigation

22   aspect of things that go on in Alaska needs

1   support and needs attention.

2   MEMBER THOMAS: And so maybe that's

3   kind of a lead-in, too, because then we can put

4   Admiral Smith's little quote in that he said that

5   I thought was so poignant too about how they need

6   to support these user needs as they go into these

7   remote locations or whatever.

8   CHAIR MILLER: But always think about

9   what would you recommend to NOAA once you make

10   that statement?

11   MEMBER THOMAS: Well, this is exactly

12   that, that NOS needs to continue to keep in mind

13   the user needs, particularly in these remote

14   locations where there are such unique challenges

15   and using the new technologies, using --

16   basically think out of the box.

17   VICE CHAIR SAADE: Okay, so from my

18   perspective, when you start talking about merging

19   the terrestrial data with the bathymetric data

20   and you move that datum through the shoreline, by

21   definition you help define some of the

22   requirements and the needs related to barge

1   navigation, for instance.

2   So all of it ties together in my mind.

3   However, we want to say that, it all ties

4   together.

5   MEMBER GEE: I think part of that is

6   the requirements to do that is some of the

7   fundamental infrastructure and data that needs to

8   be put in place, which embraces all of the three

9   sections of NGS.

10   It just has to have those CORS

11   stations. We support having them, maintaining

12   them in the expansion, same thing for CO-OPs in

13   all those observations and then that's with the

14   ongoing shoreline establishment and mapping.

15   And to do any of this, I think what we

16   can say here in my opinion is because it is the

17   frontier, it highlights the requirements for

18   those things which we've discussed in other areas

19   about the need for them. But seeing it in Alaska

20   and seeing it in a frontier just highlights the

21   need for the investment in that core data and

22   observational infrastructure, something in that.

1   MEMBER THOMAS: Well, just a critical

2   need to maintain CORS stations or something like

3   that that will remind us that we want to put some

4   statement in there.

5   CAPT ARMSTRONG: Seems to me we're

6   conflating two issues here, one of the issues is

7   underlying datum-type information and the other

8   issue is the need for barge navigation between a

9   couple meters of water depth and the shoreline.

10   And so I think those --

11   MEMBER THOMAS: The two different

12   ones?

13   CAPT ARMSTRONG: The two different

14   things, the last mile issue that Admiral Smith

15   responded that we don't always stop at four

16   meters but in many areas, that's our policy and

17   so we need to be sure we acknowledge that in

18   these areas it's different.

19   MEMBER THOMAS: So I think we want to

20   break number three, where it says barge

21   navigation, just put it on the next line and then

22   we'll have to flesh out the wording exactly.

1   Let's see, I just have two more

2   things, one was this AIS Coast Guard issue that's

3   come up so often. I think we want to acknowledge

4   continuing support for investigating and whatever

5   we can say they're pushing that forward.

6   CHAIR MILLER: I would strongly

7   support that. I talked to Mike, the Coast Guard

8   guy, and he said he needs a push from somewhere

9   and certainly the collaboration between Admiral

10   Gallaudet and the Coast Guard, the leader of the

11   Coast Guard, is a good opportunity.

12   He said they need a push to get it

13   over the one-yard line, I guess you'd call it,

14   and so I think that's an important one that

15   whatever NOAA can do to facilitate that last one

16   yard would be excellent.

17   I think that's a strong recommendation

18   and it's doable, it's not new money. When you

19   make recommendations, that's what you have to

20   think of, what's doable, what makes sense.

21   It's kind of like we've used in the

22   past, instead of saying more money, say

1   prioritize funding. That's very different

2   language than always asking for more money.

3   MEMBER GEE: So, in our letter to the

4   Administrator with the recommendation that we

5   acknowledge and support his contact and

6   interactions with the Coast Guard and by that

7   contact he addresses what we saw as a key blocker

8   in the dissemination of the information.

9   CHAIR MILLER: Strong advocate would

10   be a good word.

11   MEMBER HALL: I'm not sure this is

12   prioritized funding, I think that's just an

13   example she was using.

14   RDML SMITH: I even asked the Coast

15   Guard specifically whether there's a money issue

16   and they said absolutely not.

17   MEMBER HALL: Can you just put it up

18   there? I was just letting her know.

19   MEMBER THOMAS: Just take out the

20   prioritized funding right there, thank you.

21   Juliana, did you have something to say?

22   MS. BLACKWELL: Yes, before we go too

1 far along with new bullets, I'm trying to

2 understand what the last sentence in number four

3 is and critical needs to maintain CORS stations.

4 So if it's the NGS CORS station -- is

5 that what we're referring to? -- then it's not

6 just maintaining it if we're going to establish.

7 So I just want to make sure that --

8 MEMBER HALL: I think it's going to

9 have to be wordsmithed.

10 I think we are relying on poor

11 Virginia to type as we go so I think this is just

12 reminders for -- I don't know who is writing the

13 --

14 CAPT ARMSTRONG: CORS stations don't

15 go in number four, they go up in number three.

16 MEMBER HALL: Right, they go up in

17 number three. But I think these are reminders

18 for whoever's writing the paper but I'm not

19 entirely sure who's writing the final letter.

20 MS. BLACKWELL: Once we leave here and

21 we look at it again, we're going to go -- so if

22 we can at least just put it in number three then

1   that makes more sense.

2   Okay, thank you.

3   MEMBER GEE: Just to be clear, that's

4   the establishment and then operation of the CORS

5   stations, right?

6   MEMBER THOMAS: Critical needs to

7   establish and maintain. Okay, I'll just breeze

8   through two more I had and then anyone else is

9   open to whatever.

10   I would like to -- also may we include

11   --

12   MEMBER HALL: I'm sorry, real quick,

13   when it comes to the AIS issue, I think we need

14   to recognize Mike Emerson who was here, because

15   he's the equivalent of a Rear Admiral.

16   He's an SES at Coast Guard so that is

17   a big deal that he came out here from Washington

18   D.C. and I'm not sure everybody understood that,

19   that he is the Director of the Marine

20   Transportation System for the Coast Guard.

21   So I just want to make sure if we're

22   acknowledging Gallaudet, which is huge, I know

1   he's a level higher, several levels higher, as an

2   Undersecretary, but I think we need to make sure

3   for this one too, as we get into our

4   acknowledging things, that be something that we

5   really ping on because for the Coast Guard to do

6   that to give him up for a week to come out here

7   is a big deal.

8   MEMBER THOMAS: That's fine. I think

9   we can thank CO-OPs for the document review, the

10   opportunity for reviewing their strategic

11   operating plan, is that what it's called?

12   And then the last thing that I have,

13   I'm not quite sure how we want to -- but we had

14   two Native tribal panel speakers and I thought

15   maybe we could put something in about how their

16   unique perspective or their insightful

17   perspective was --

18   VICE CHAIR SAADE: I think one of them

19   is recognizing the Lieutenant Governor in the

20   words that were actually in the document from

21   AOOS was pretty nice.

22   We can work on that and then

1   definitely, we want to recognize Willy today.

2   MEMBER THOMAS: Willy something. I

3   think it would be nice to recognize Willy

4   Goodwin. It's our local context. So those were

5   the ones that I captured.

6   CAPT ARMSTRONG: Just to add to that

7   list, given our little faux pas with the

8   applause, I think we probably ought to make note

9   in the letter how pleased we were that we got to

10   video it.

11   VICE CHAIR SAADE: And we gave her a

12   standing ovation at the end.

13   MEMBER HALL: And I think I did say

14   that. We'll do all this of merit, everything

15   that we needed to do. The reason I brought up

16   Mike Emerson is because I don't think we

17   recognized who he was here.

18   Are we going to go around and do just

19   a quick round robin on what we think?

20   MEMBER THOMAS: As far as I'm

21   concerned, yes.

22   CHAIR MILLER: I've got a couple more

1   that I think -- okay, so there was the gold

2   standard issue and being able to combine.

3   And I think Rich's start on the Tier

4   1, Tier 2, Tier 3 is excellent. I don't know if

5   we want to say anything about that or not.

6   And then I thought a really important

7   one, which kind of goes with the AIS thing, was

8   how to communicate data, that would be a separate

9   one. Throw darts, but I thought those were two

10   important things that we've heard as well.

11   And by the way, for the new Panel

12   members especially haven't been -- usually, the

13   format of the letter that we've worked out over

14   the past four years, which was sometimes very

15   painful, is that we write a short paragraph in

16   front that acknowledges the most important

17   people.

18   I don't think in this case we can

19   acknowledge everybody, that would take up a page

20   in itself, all the USGS people. We give the

21   primary recommendations immediately after that

22   and then we have one and a half to two-page

1   meeting summary.

2   So, one of the aspects of writing this

3   letter since I've been lead on it for a while is

4   figuring out which goes in which bin.

5   Who are the most important people to

6   acknowledge and one of the things that Shep

7   pointed out is that Admiral Gallaudet was here

8   for much of the meeting so how much we have to

9   explain especially in the letter or how much we

10   have to honor various people, especially in the

11   letter, some or a lot of that could be moved back

12   to the meeting summary that follows.

13   So that's just sort of a brief

14   summary.

15   MEMBER THOMAS: And that did just

16   remind me that we probably want to acknowledge or

17   say how pleased we are that he's also on the

18   Joint Committee with AMEC and when we talk about

19   the joint things.

20   VICE CHAIR SAADE: That's on my list.

21   MEMBER THOMAS: Okay, other people?

22   VICE CHAIR SAADE: To be efficient,

1   let's go ahead and get the list, anybody that

2   wants to add anything to the list, but let's kind

3   of do it in an orderly manner so we can just move

4   through here.

5   So you go ahead and start Larry.

6   DR. MAYER: I'm always last.

7   VICE CHAIR SAADE: Okay, sorry.

8   DR. MAYER: But I'll start anyway.

9   MEMBER GEE: Sean was complaining he's

10   in the middle. Maybe he should start.

11   DR. MAYER: I'll go ahead.

12   VICE CHAIR SAADE: You only get to do

13   bullet items.

14   DR. MAYER: One is we spent a lot of

15   time talking about how thrilled we were with what

16   we saw at the Marine Exchange and yet, that is

17   not acknowledged.

18   And I think there's more than just an

19   acknowledgment of thanks to Ed Page, I think

20   there's a message there in terms of providing a

21   community service and a critical one and private

22   government partnerships and things like that.

1   So I think should probably be touched

2   upon and use those as a good example. And the

3   other is something, and this may be very

4   premature because we really didn't discuss it,

5   Andy and I just threw it out in response to the

6   Lieutenant Governor's statement.

7   And that was this thought that, and

8   this may go in bullet four, I don't know, that

9   maybe the idea of a small boat presence of NOAA

10   in the region here, because of the uniqueness of

11   this area, might be something to think about.

12   But there may be real ramifications to

13   that that we should think through. That might be

14   something for the panel to think about.

15   MEMBER PAGE: Yes, so we might want to

16   think about that one first but this would be the

17   place if we --

18   VICE CHAIR SAADE: It's good to have

19   it on the list. Andy, you're next. You're done?

20   Okay, thanks. Sorry, Ed.

21   MEMBER PAGE: Yes, I agree with what

22   you said that actually, the Admiral was here for

1   quite a bit so it doesn't require too much

2   explanation.

3   I'm thinking just kind of about the

4   Marine Exchange, which I certainly appreciate,

5   Larry, bringing it up.

6   I think also you can almost comment it

7   is a tool that can be used to help NOAA implement

8   some of these initiatives in Alaska because we're

9   already doing some of that.

10   So it's a good partnership but also --

11   not thank me but say, great tool for us to help

12   us implement these things in a unique,

13   challenging, new marine environment.

14   That's all. That would probably be

15   good, I think.

16   MEMBER THOMAS: It's number eleven.

17   MEMBER PAGE: But I think all the

18   other stuff really looks great. I'm trying to

19   figure out how to condense the thing.

20   I guess the other thing, did we really

21   mention Arctic necessarily on one line somewhere

22   along there?

1   And maybe it's almost inherently

2   obvious but if nothing else, we thought the

3   panel, thank you for these people, they gave us a

4   better perspective or understanding of the

5   challenges we have in the Arctic, the role of

6   NOAA and the Coast Guard.

7   VICE CHAIR SAADE: Acknowledging the

8   quality of the panel.

9   MEMBER PAGE: Now we have a better

10   handle on what the needs are and what our work

11   list is like so it goes beyond just saying thank

12   you but this is what we're doing with that

13   information. We're smarter as a result of it.

14   But that's a good list.

15   VICE CHAIR SAADE: Okay, we're going

16   to skip Julie.

17   MEMBER MAUNE: Okay, I guess I'm up

18   then.

19   I would like to acknowledge the joint

20   meeting with the AMEC that is now co-chaired by

21   Admiral Gallaudet, the importance of that and the

22   fact that AMEC is now prioritizing bathymetric

1   mapping and the integration of topographic and

2   bathymetric data of the shorelines of Alaska,

3   something along those lines.

4   It's prioritizing bathymetric mapping

5   and the integration of topo and bathymetric data

6   and the integration of topographic and

7   bathymetric data along the shorelines.

8   And the AMEC now co-chaired by Admiral

9   Gallaudet. Now co-chaired by Admiral Gallaudet;

10   it used to be chaired only by USGS.

11   I would say AMEC, now co-chaired by

12   Admiral Gallaudet. That is now prioritizing

13   bathymetric mapping.

14   MEMBER THOMAS: We can get the

15   spelling and everything down, Virginia, later.

16   MEMBER MAUNE: Now co-chair, yes.

17   That's approximately it.

18   MEMBER HALL: Didn't the Admiral say

19   this is the second time he had been the co-chair

20   of that meeting?

21   MEMBER MAUNE: He said it's the second

22   time.

1   MEMBER HALL: So do we need to tell

2   him that we recognize that he recognizes that

3   he's the co-chair?

4   VICE CHAIR SAADE: That's okay. This

5   is really important, this is going to get

6   mentioned.

7   MEMBER HALL: AMEC is completely

8   important in the NOAA partnership with them.

9   VICE CHAIR SAADE: I don't think we

10   should break with the way -- it's okay that he

11   was here but this is the way we do our letters

12   and if we break it, I think it's going to be a

13   big mess.

14   MEMBER HALL: So my point was that we

15   could just say it's NOAA working more directly

16   with USGS and it's now almost an equal

17   partnership.

18   I don't think we have to say good job,

19   Gallaudet, you're the co-chair. I think we say,

20   great job NOAA for taking on a leadership role

21   with USGS.

22   I think we can find a different way to

1   say it, which is effective, without telling the

2   Acting Administrator --

3   VICE CHAIR SAADE: This letter goes in

4   the public domain, correct?

5   MEMBER HALL: Yes.

6   VICE CHAIR SAADE: I think it's really

7   important to say it's Gallaudet. It's more than

8   just him that is going to be reading it. Sean?

9   MEMBER DUFFY: I'm just going to keep

10   stirring my gumbo. I've said all I've got to

11   say.

12   VICE CHAIR SAADE: Okay.

13   MEMBER KELLY: I think it's important

14   that we recognize the benefit of the joint

15   meeting and doing it here in Alaska that brought

16   it out, the ability to see the relatively

17   untapped potential of the resources available

18   through the IOOS groups and the Marine Exchanges.

19   And I would encourage NOAA to create

20   a strategy to enhance the utilization of that

21   synergy in getting local assets and specifically

22   task them with items to look into and build

1   together from a local basis where it can build up

2   into a larger national project.

3   It's a mouthful but I just saw a whole

4   row of people representing assets and each of

5   those people represented probably 100 or more

6   companies and organizations in each of the

7   Regional Associations.

8   And we have such huge potential to get

9   things that I personally am a Vice Chair of the

10   MARACOOS of one of those regional associations

11   and we make up our own path as to what we think

12   is cool to do.

13   And I don't know, Julie, if you guys

14   do the same but I think a more structured

15   approach led by NOAA that could find ways to

16   utilize those people as well as other national

17   organizations with local roots, such as the

18   Marine Exchanges, it could bring a lot of

19   grassroots value into solving some of these

20   problems.

21   MEMBER ATKINSON: I don't see much on

22   the Arctic. We were shown things about the hub

1 at Adak and I'm not going to give you a quotation

2 but I think we just need more on the Arctic, the

3 importance of merging part of the Arctic,

4 including the -- I'm running out of words --

5 channels, whatever.

6   VICE CHAIR SAADE: Don't forget this

7 isn't going to be the last time you see this so

8 additions and subtractions are still coming in

9 the weeks ahead.

10   MEMBER ATKINSON: I'll email it to

11 you.

12   MEMBER LOCKHART: So nothing to type

13 from me either, but I do want to let folks now

14 what I thought was important from the meeting,

15 and they're pretty much already covered here.

16   As kind of a techy person, I always

17 like to think there is a solution for every

18 problem and it never ceases to amaze me.

19   I come to these meetings and we're

20 doing a lot of fantastic things in the way we

21 collect data and get data, and we do a really bad

22 job of making that data useable to the public.

1   And so the example that came out of

2   this meeting for me was the weather and the AIS

3   and how the Marine Exchange is doing a wonderful

4   job of doing that up here but the fact that

5   doesn't happen on a regular basis nationally just

6   astounds me. It really does.

7   And so things like that, I think, have

8   to make it into one of the top recommendations

9   for the letter because the data is available and

10   it sounds like it's just a bureaucratic problem

11   more than anything else, to make this happen.

12   It's the same thing with the Army

13   Corps, it's the same thing with a lot of other

14   problems we see at these meetings and we seem to

15   just go on a repeat cycle with them.

16   I think the solutions are all there,

17   we just for some reason can't get traction in

18   enacting them. So for me, that was the one thing,

19   was the Marine Exchange and the AIS stuff.

20   MEMBER THOMPSON: We heard from

21   multiple speakers the need for more real-time

22   data so I think we need to mention that in our

1   recommendation.

2   MEMBER HALL: And again, I think this

3   goes back to up to gold standard almost where you

4   don't need -- the perfect is the enemy of the

5   good sometimes.

6   And I think it goes with one of these

7   and I'm not sure if it's the Marine Exchange

8   because it was our best example at this meeting.

9   But I don't know, agility, agility, agility,

10   ingenuity, creativity.

11   Those are all things that NOAA cannot

12   always do and I think that we're reminded of that

13   almost every meeting but I think it was more

14   evident here given what the Marine Exchange can

15   do versus others in the AIS issues.

16   But I think efforts to increase

17   nimbleness, if that's a word, Shep, are key to

18   keeping hydroservices responsive to mariner needs

19   and I think I am happy to send that sentence if

20   people like it.

21   And it's, again, not necessarily new

22   but certainly we can see how successful it is up

1   here and then echoing what the Acting

2   Administrator said, which you might like to hear,

3   NOAA can continue to leverage those partnerships.

4   And partnership is always a key things

5   that we talk about, and where the bureaucratic

6   red tape may not be so difficult to get around.

7   So that's the big key takeaway for me.

8   MEMBER GEE: There's a number of

9   things that I think you have already covered.

10 One is we mentioned the list but we didn't want

11 to put the full list because there's too many.

12   I think that's a significant thing we

13 should mention. I think it's the most I've seen

14 at that level at a meeting. Maybe it's just

15 because it's a nice place to come in.

16   That's to Juneau but who knows? There

17 was a significant number of people that

18 contributed at the meeting for sure.

19   Yes, the Marine Exchange again I

20 think, and generally that kind of Alaskan

21 attitude is like, yes, we know we're remote and

22 we don't have all the resources and we get stuff

1   done and we'll create solution.

2   And I think Shep said earlier that

3   you're not trying to take that back. So again, I

4   think I agree with Carol and Kim here that if you

5   recommend that nimbleness and being able to be

6   more flexible and somehow it's getting around

7   that bureaucracy somehow and that should be a

8   goal.

9   And relating to what Gary says, we're

10   at sea and things change regularly and it's

11   important that we do get real-time information.

12   It's different to on land quite often.

13   I haven't finished but you can

14   interrupt me.

15   MEMBER LOCKHART: Sorry, it just

16   brought to mind that I think the other example up

17   there of that agile behavior is the Tier 1, Tier

18   2, Tier 3 thing that AOOS has done.

19   MEMBER GEE: And I say this is not an

20   additional point.

21   To be honest, I think there's a number

22   that go together and that flexibility to be able

1 to use what you have whether it's the gold

2 standard or anything you have and just get on

3 with it is something that we should be able to

4 transfer elsewhere.

5 And I think in other places we see

6 people complain about not having everything but

7 then sit back and wait for the government or some

8 other organization to get it to them.

9 So, that's a great example of a

10 public-private partnership. So if we look at our

11 issues, it embraces a whole load of what we do.

12 One of the ones I mentioned earlier and I think

13 it's kind of up in -- I've lost the top now.

14 There was three which was the vertical

15 datum and then there was also about AMEC. I too

16 was pleased to see that getting to the blue bit,

17 but it does highlight issues.

18 You can say, oh, yes, that's great,

19 let's get to the topo-bathy but I don't know

20 whether you can recommend it. But it's important

21 to do that fundamentally.

22 You have to have that data and the

1   infrastructure, you have to have the CORS

2   stations. So they kind of go together and the

3   water level observations and network have to be

4   there, and you have to invest in that and it's

5   not going to be cheap.

6   So I think somehow acknowledging that

7   the investment of that in remote areas is going

8   to be significant.

9   And even just to continue to operate

10 those sort of things is not -- and I think you

11 again -- briefly I talked to Rick after the

12 question of the panel about tide gauges and

13 current leaders and things.

14   And I think you already do that and

15 you take a ship to a remote area and you try and

16 do as much as you can so I think we have that

17 flexibility within the organization in a remote

18 area.

19   And then also taking that flexibility

20 down into the other areas I think is key. Yes,

21 that's it, thanks.

22   MEMBER SHINGLEDECKER: I would add

1   that I was thinking about this and I think this

2   is now the 14th letter that I've helped draft so

3   trying to give that perspective to it to really

4   challenge the panel that less can be more.

5   I remember Joyce and I battling, just

6   going back and forth on some letters that just

7   had twelve recommendations. And we really

8   thought deliberately about how we wanted to

9   structure the letters to get our primary points

10   across.

11   The thank yous, the meeting summary as

12   a separate document and then hit them hard with

13   four or five.

14   I mean, we did come up with a number

15   that we tried to settle on but try not to boil

16   the ocean because it's really hard to boil the

17   ocean and if you can really focus in on a few, I

18   think that will give you the greatest benefit.

19   If I were to add anything, I don't

20   know that it has to be in the letter, I would

21   just come at it from really the 100,000 foot

22   level or even higher, that I'm just really

1   appreciative in the current climate that this

2   Federal Advisory Committee, and as Glen tells me,

3   because it's in law, we're able to continue to

4   meet.

5   But I think that's really worth noting

6   or appreciating the priority that NOAA has

7   placed on the work that we do.

8   You know, flying everybody out to

9   Alaska isn't cheap, but the value that I have

10 gotten from this Panel meeting in New York,

11 meeting in Charleston, meeting in Louisiana,

12 meeting in Alaska, and being able to pull all of

13 our expertise, we each know one or two portions

14 of the work of the three Offices.

15   But by traveling regionally and

16 hearing from the regional stakeholders, I think

17 it really allows all of us to apply our expertise

18 on a much broader scale in advising NOAA and I

19 just think that's really important and I think

20 that should continue.

21   CHAIR MILLER: And a question, I agree

22 with Susan greatly that we need to decide which

1 are our three of four most important statements

2 there. Virginia, on number ten, would you take

3 out the word AIS?

4   MEMBER THOMAS: Joyce, so many of

5 these are actually just remembering to thank

6 something and we need to group them into -- do we

7 really want to do it here? I was going to group

8 them, put it into the letter template format that

9 you have, group them by the thank yous, I'll put

10 in the recommendation.

11   People can then prioritize via email

12 is what I was going to suggest.

13   VICE CHAIR SAADE: I think that's fine

14 and then we can start redlining things or yellow-

15 enhancing them.

16   MEMBER THOMAS: A lot of these we can

17 combine and just so much of this is just thoughts

18 to get it in the letter one way or the other.

19   MR. EDWING: I don't have anything to

20 add but I think it's number five. My must-have

21 is the Coast Guard AIS. I really appreciate that

22 being on there.

1   For the first time in a long time I'm

2   starting to get a glimmer of hope that we may be

3   able to move this issue. I certainly appreciate

4   the thanks us for the strategic plan.

5   So number nine, I think this is maybe

6   your potential joint statement or joint

7   recommendation for IOOS and the HSRP because I

8   think you could look at the collaboration between

9   the federal down to the local as a model for

10 other areas.

11   And I'm going to go back to a number

12 of years ago, Zdenka Willis, the former Director

13 of IOOS, and I sat down and we put together a

14 strategic white paper on how can we in the IOOS

15 Regional Association work together to gather more

16 water level data along the nation's coast?

17   And from my perspective, I was looking

18 to fill NWLON gaps but they obviously have these

19 as well.

20   We developed that Tier 1, Tier 2, Tier

21 3 concept because we recognized we could talk all

22 day about the spectrum of accuracy and things

1 you're collecting water level to but until you

2 have some ways of binning things and the tiering

3 has a quantitative part to it, behind each tier

4 there's an error budget and Tier A is our gold

5 standard to why we need to collect things to that

6 standard.

7 But also we grouped applications with

8 those tiers which I think really help people

9 understand how to use that.

10 And really, when we put out that we

11 circulated that policy to all of the IOOS RAs and

12 it was really AOOS that jumped up and waved their

13 hand the most and said we really need to work

14 with you for obvious reasons, but it is a model

15 for perhaps other locations as well.

16 So I won't go on for too much more but

17 I think you've got a series of words there but I

18 think those can kind of be grouped into that kind

19 of joint recommendation of, hey, we saw something

20 really good here, this might be something to

21 emulate in other areas of the coast that would

22 benefit from it.

1   Not every other coast may need it but

2   some do. Thank you.

3   MS. BLACKWELL: So, I won't add any

4   either but I'll just also echo what Richard is

5   saying but also include from the geodesy side

6   which is already covered but agree that there may

7   be a way to lump that together.

8   Because I think we all are trying to

9   get as much relevant data that will meet our

10   minimum requirements so that we can make better

11   products, better tools for this challenging area.

12   So there's an opportunity there but we

13   are going to need to fill some gaps both on land

14   and along the coast so that we can provide that

15   information to Alaska.

16   And one other shout-out and that is to

17   the Nav Manager and to the regional advisor that

18   are here because making these meetings successful

19   requires a lot of on-the-ground contacts and

20   effort and I think you guys both did a wonderful

21   job of supporting the entire HSRP in your Office

22   Directors.

1   So thank you.

2   MEMBER GEE: Could I just add?

3   VICE CHAIR SAADE: Let others of us

4   finish.

5   MEMBER GEE: I'm just making up for

6   those questions that I got asked the other day.

7   We didn't mention actually VDatum

8   specifically in that for the vertical and the

9   topo-bathic and I think that's kind of important

10   that that be in there as part of that vertical

11   infrastructure comment.

12   VICE CHAIR SAADE: The three of us are

13   left. Who wants to go first?

14   CHAIR MILLER: I already had my say.

15   VICE CHAIR SAADE: Okay. I have two

16   things. in addition to the number of upper-level

17   people who contributed to the meeting, I think we

18   should add the number of Alaskans and everyday

19   people that contributed to the meeting.

20   That was an impressive group of people

21   that showed up every day and we should

22   acknowledge it.

1   And the other thing to throw out there

2   because it may be the point to mention it here

3   was when the Admiral said the Critical Minerals

4   Executive Order, and we're going to go grab all

5   the minerals that are on the seabed on the

6   Clipperton Ridge.

7   And I don't know if he said that in

8   your meeting as well, Dave?

9   MEMBER MAUNE: It was discussed. I'm

10   not sure that he brought it up. I think somebody

11   else did.

12   VICE CHAIR SAADE: So, the fact that

13   he took it upon himself to mention it in our

14   meeting, I think we should at least consider

15   referencing it. We can always throw it out, but

16   I'd like to see it on the list to start with and

17   then we can decide if we need to eliminate it.

18   It would be number twenty and it's the

19   Critical Minerals Executive Order and we're going

20   to, quote, study the Clipperton and expand to all

21   of this, end quote.

22   Just put in the Critical Minerals

1   Executive Order and we'll do the rest later.

2   Okay, Shep, your turn. Take us home.

3   RDML SMITH: The two things that I

4   think were mentioned and I thought reflected that

5   I don't think made this, one is the

6   implementation of the National Charting Plan and

7   particularly building all those large-scale

8   charts.

9   That's probably the most significant

10   effort we're going to have in Coast Survey to

11   deliver value from the hundreds of millions of

12   dollars we've already invested in surveying.

13   And we can't be complacent about that

14   because frankly, it's not funded. So don't

15   assume that just because we're talking about it

16   optimistically that it's going to happen.

17   If we want to make it happen we're

18   going to need some help from the public and

19   stakeholders to keep our eye on the ball for a

20   decade to get it done.

21   And the second is the examples we had

22   heard of small areas being really important and

1 how the square nautical miles and percent covered

2 is not a very good measure of cost or value for

3 survey work, and that really targeted work can be

4 really high-value.

5   And I think that's all I have to add.

6   VICE CHAIR SAADE: So I think we have

7 enough material to work with.

8   So, look, we can keep talking about

9 things, I just want to take a moment to make a

10 tiny attempt to thank everybody and I know it's

11 going to be a mess because we're going to leave

12 some out, which is really terrible.

13   So I have a few lumped-in ones. So

14 first of all, Lynne and your staff, thanks a lot,

15 I thought this worked out great. And I think we

16 should thank the folks in this building, this was

17 a good setup here.

18   There's no windows but technically

19 speaking, it really worked out well with the

20 size. It was really nice that we could stretch

21 out a little bit on the tables and the two-pound

22 burrito was really good.

1   Joyce and Carol and Susan, of course.

2   Personally, I'd like to thank the City of Juneau

3   and Alaska, this was a really great venue and the

4   weather was real, it was normal.

5   So we got a taste of that. It's a lot

6   better than Houston, I'll tell you that. I'm

7   going to mention Ed Page again because I know --

8   really, Ed, it worked out great.

9   The fun stuff, the technical stuff,

10   your anecdotes and stories and everything just

11   really added to the whole trip.

12   So thanks.

13   MEMBER HALL: About that specifically,

14   I did submit to the three leaders.

15   Just a quick letter from us I think is

16   really important, especially if we want Sean

17   Duffy and his team to help us out for New Orleans

18   to recognize our appreciation.

19   VICE CHAIR SAADE: I'm going to lump

20   it all into the NOAA staff that contributed to

21   making this happen and the couple of subsets of

22   that would be Bart and Nick and then Laura.

1   Really thank you all, that really

2   helped the process. Putting the panels together

3   was excellent. Let's face it, universally every

4   single one of the panels hit a home run, it was

5   really good and really informative.

6   And I thank the panelists even though

7   they aren't here, I thank the Congressional

8   staff, that was a great turnout and as we

9   mentioned before, the Alaskans that showed up and

10   contributed to the whole thing.

11   So I probably missed about 50 people

12   in that. All of our technical support staff

13   here, yes, so thank you guys.

14   So I think that's everything that we

15   need to get done. If there's any other topics

16   that y'all want to talk about?

17   MEMBER PAGE: Can I just say one

18   thing? At one point, Admiral Smith was saying

19   nice things about our agility and ability to do

20   things and how can we be like that?

21   And I was really impressed by Admiral

22   Gallaudet's comment back saying you are

1   innovative, you are doing this stuff, and I

2   really do think so.

3   I kid with my staff, I say when I come

4   out of these meetings my IQ is higher because

5   there's so many incredibly intelligent people but

6   it goes down pretty quickly unfortunately.

7   But I think that I am truly impressed

8   by the caliber of your staff and innovative

9   approaches and whatever that NOAA does, but I

10   also realize sometimes your hands are ties

11   because you've got to go to Congress and other

12   processes.

13   I don't have that, I can be very

14   reckless and I can take chances. It didn't work

15   out, fine. I always tell people 80 percent B

16   that's good because I graduated with a C so we're

17   doing better.

18   So I not only expect it but Congress

19   is less tolerant, if you will, and so we have a

20   different niche but I am truly impressed by your

21   staff and the creativity and I just get more and

22   more impressed.

1   And I was having a discussion with

2   Mike Emerson the other night over a couple of

3   beers and he was saying the same thing, that

4   NOAA, what a phenomenal organization and the more

5   he learns about it, like myself, the more he

6   loves it and the more impressed by it.

7   And so kudos to you, Admiral, and your

8   staff, and the panel that contributes so much

9   time.

10   And so my goal was to really entertain

11   you a little bit, give you a good facility, make

12   you feel -- because it's really more about

13   appreciating what you all do and so that's why I

14   kind of rolled out the red carpet, if you will,

15   more or less.

16   We got some rain but thank you, sir.

17   MEMBER THOMAS: And actually, I think,

18   too, Juliana and Rich, we should all say thanks

19   for all three of them because sitting through our

20   discussions has to be painful.

21   MEMBER THOMPSON: Do we need to take

22   any action on the charter? Do we need to do

1   anything? So I'll make a motion that we accept

2   it as is with minor changes by the legal counsel.

3   VICE CHAIR SAADE: Everybody in favor?

4   (Chorus of aye.)

5   VICE CHAIR SAADE: Motion passed. And

6   I'll say one more thing, thank you all for

7   nominating me to this position.

8   It's really a privilege and an honor

9   and I'm looking forward to working with you all

10   for the next meeting or two or however long this

11   thing lasts.

12   But there's been a really good

13   standard set by Joyce and others and I'm really

14   looking forward to following in those footsteps.

15   CHAIR MILLER: You have to shrink your

16   feet.

17   VICE CHAIR SAADE: Do I get to gavel

18   it? Meeting adjourned.

19   (Whereupon, the above-entitled matter

20   went off the record at 3:55 p.m.)

21

22

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<u>C E R T I F I C A T E</u>

This is to certify that the foregoing transcript

In the matter of: Hydrographic Services Review Panel

Before: DOC/NOAA

Date: 08-30-18

Place: Juneau, AK

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_____
Court Reporter