U.S. DEPARTMENT OF COMMERCE

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA)

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HYDROGRAPHIC SERVICES REVIEW PANEL MEETING

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THURSDAY

MAY 24, 2012

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

PANEL MEMBERS PRESENT:

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

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

NON-VOTING MEMBERS PRESENT:
JULIANA BLACKWELL, NOAA/NGS Director
RICHARD EDWING, NOAA/CO-OPS Director
LARRY MAYER, Center for Coastal and Ocean Mapping, University of New Hampshire
NOAA STAFF PRESENT:
CAPT. JOHN E. LOWELL, JR., Designated Federal Official
RADM EVELYN FIELDS, NOAA
LTJG MATT FORNEY, NOAA/OCS, Navigation Manager of Alaska
CAPT. GERD GLANG, NOAA/NOS
AMY HOLMAN, NOAA Alaska
BILL KNIGHT, NOAA West Coast and Alaska Tsunami Warning Center
CARVEN A. SCOTT, NWS/Alaska Region Headquarters
KATHY WATSON, HSRP Program Coordinator
ALSO PRESENT:
CAROLE ANDERSON, ADS-B Technologies
ALAN BALDIVIES, Alaska Energy Authority
LARRY BISCHOFF, Holland American Line
RON BRITTON, Alaska Peninsula National Wildlife Refuge
BRET CHRISTENSEN, U.S. Fish & Wildlife Service
JOEL CUSICK, National Park Service
JON DASLER, David Evans & Associates
ANNE DOLLARD, U.S. Army Corps of Engineers
DARCY DUGAN, Alaska Ocean Observing System
SHANNON EARL, Fugro Consultants
KAS EBRAHIM, Fugro Consultants
AIMEE FISH, National Weather Service
JOHN GERHARD, Woolpert Inc.
CHUCK GILBERT, National Park Service
PENNELOPE GOFORTH, SeaCat Explorations
WILLIAM HAZELTON, Geomatics, University of Alaska Anchorage

TOM HEINRICHS, Director of GIS Network of Alaska at University of Alaska Fairbanks and Executive Committee for Statewide Digital Mapping Initiative

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

CAROL LOCKHART, Woolpert, Inc.

MOLLY McCAMMON, Alaska Ocean Observing System

STEVE MILES, David Evans & Associates

JUDY MILLER, Brendan Environmental

TOM NEWMAN, TerraSond

JOHN OSWALD, JOA Surveys

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

JOEL REYNOLDS, Western Alaska Landscape Conservation Cooperative

MICHELLE RIDGWAY, Oceanus Alaska and Alaska Deep Ocean Science Institute

MARK SMITH, Vitus Marine

BOB STROBE, National Park Service

CAPT. MICHAEL TERMINEL, Edison Chouest

MIKE ZIEGERL, JOA Surveys

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

8:28 a.m.

CHAIR WELLSLAGER: Good morning, everybody. Well, it's the last day. It's going to be a fun day. We're going to come up with some ideas and recommendations today. But, before we get started, we are fortunate to have two presentations this morning before the breakout sessions.

My nav manager of Alaska would like to give us a broad overview of things that he's seeing taking place in the state in the three different sections, and give us his ideas of where things actually are.

And then, we're going to have a presentation using GIS, and do a virtual fly-through the Arctic Ocean, and I'm actually looking forward to seeing that. That's going to be really cool to see the Arctic Sea floor map in a virtual setting.

So, if you would please, let's welcome LTJG Matt Forney, and let's hear what

he has to say.

LT. FORNEY: Thank you very much, Mr. Chair. It really is a pleasure to be up here after yesterday afternoon's discussion. Mr. Wellslager asked me if I'd pop up here and give a quick, brief overview of Alaska, and some of the navigation services, as well as some of the navigation concerns that are going on here in Alaska.

So really, if you look at the state of Alaska, we really do break it into three different regions. You have - and actually, they generally follow the same regions that the pilots follow, which is southeast, south central, and then you have the rest.

So, the way that this is - this area right in here, this is southeast, south central, and then the rest. So - and the rest just so happens to follow this federal definition of what the Arctic is. So really, when you start looking at it into a regional -

regionalize the state, there's different concerns in each of these areas.

So, to start out, in southeast, one of the main driving economic forces there is tourism, and it is the cruise industry. And in that cruise industry, one of the things that NOAA has actually dedicated a lot of time and resource to, is the effort of collecting 100 percent bottom coverage multibeam data in that area.

I don't want to make it sound like we've completed the job, it's definitely not over. There are still definitely areas that we need to put forth quite a bit more resources. With that being said though, it is the best area.

It is one of the places that is actually, as you can imagine, the most accessible, as it is closest to Seattle, and as well as very, very well developed due to the economic availability of resources that have been developed there in the past, namely

gold.

Also in that area, there is a large fishing fleet as well. I want to call it as big as the Bristol Bay fishery, definitely not that large, but definitely still a user of our products and services.

So, now that we move over here into the south central, there's a number of things. We've heard about what's known as the Port of Alaska, which is the one that serves 600,000 of the 700,000 citizens of Alaska.

The other thing that is in south central is the Valdez pipeline, which is also a major port facility, and also deals with a large amount of the commerce that does come out of Alaska.

Another thing that's actually affecting this entire coast area in the Gulf of Alaska area, is marine debris. That's a thing that we haven't heard much about. It is definitely a live, living, current topic, that is every day washing up on our beaches.

I would like to let you know that there is a process in place, as well as a great partnership with NOAA and the state, for identification of that marine debris, from aerial surveys as well as from the shipping industry.

And actually what we're doing now, is we're actually - when that is found, NOAA is notified, and then NOAA actually does notify the Coast Guard, and the Coast Guard will actually put out a local Notice to Mariners, or actually they'll give a position of marine debris that is found over weather radio as well. So, mariners are being made aware of these debris. Keep an eye out for them. Do avoid them to maintain safe navigation.

So, as we move out here into the rest of Alaska as I like to call it, one of the major areas that does see a large amount of shipping traffic is Unimak Pass. Unimak Pass is a part of the Great Circle route from

western United States to Asia. And this is actually a booming area due to the fact that it is, I don't want to call it narrow, I would call it quite a bit of a bottleneck.

But, if you think about it, there's only one port in this area, that's Dutch Harbor. And this port has actually been named as a port of refuge for stricken or disabled vessels.

And it seems like, you know, every December we kind of get a little bit of a situation, where we have a vessel lose steering, lose propulsion, and generally, for some reason, I don't know why, Adak is where this always happens. This, Adak, is right here.

To give you an idea of distance, that's 380 nautical miles. A lot of the response that actually comes to - for towing vessels to come in response to those disabled vessels comes from Seattle. As you can imagine, a vessel that is 20 miles off shore,

drifting at two knots, you got 10 hours. Seattle is greater than 10 hours away. So, it's one of those areas that - it's of great concern.

Resources are not in place in Dutch Harbor, and we are making - taking the efforts to get them in place, to have mooring buoys in those areas due to the fact that there just is not enough pier space to even put a ship, even once it is recovered by a towing vessel.

So, moving north, we do have our Bristol Bay fishery, as well as Norton Sound. So, another thing that I wanted to point out here is the Bering Strait. We had Commander Houck yesterday come and give us the talk on the PARS study.

And it's - the Bering Strait is over - is referred to over and over again as this choke point. I want to kind of put that in perspective. This choke point that everyone is referring to, on the US side

alone, between Little Diomede and Cape Prince of Wales - actually, I know that's really hard to see, but just to let you know, that is 10 nautical miles across.

The area in Prince William Sound, some of those - most of Prince William Sound, much, much narrower than that, and does see a higher volume of traffic than what is seen in the Bering Strait.

Is that going to increase? I don't know. I wish I had the ESP to make that judgment, but we don't know. NOAA is definitely taking the steps to prepare for that, and I think that's very evident in the 2010 survey that was conducted in that area to better define.

So, as we move north, we also have the Chukchi and Beaufort Seas. So currently, and my chart plotter just failed. So, it's coming back up. Anyway, so in Beaufort, it is much easier to show on a chart here, so bear with me.

So, in Beaufort, you have Prudhoe Bay. And there's a - the pipeline that I was talking about that runs into Valdez, starts out in Prudhoe Bay. And it's - we fuel a ship from up here, down to here, and export it from there.

So, there's this idea that with oil and gas doing a large amount of drilling and exploration in the Chukchi Sea, that there is going to be a lot of vessel traffic, and it's - it's going to be more of a support traffic that's going to be present in that area.

The oil and gas - the conversations that I've had with them, their idea right now is to actually put a subsea pipeline, run it over here to Wainwright, and then do a cross-North Slope pipeline, and put a spur into the Trans-Alaska pipeline. And from there, pump it to Valdez and then export it.

So, I just wanted to really just

give you the broad overview of what the shipping and economic realities are here in Alaska, and kind of hopefully better inform you to maybe make some recommendations to NOAA leadership. So, I'm actually available for questions.

CHAIR WELLSLAGER: That was very interesting. Anybody else have anything they would like to ask? Jeff?

MEMBER CAROTHERS: Jeff Carothers. Yes, Matt, I'm just wondering that Shell next door here, doing that drilling bit, isn't there some way to - I know in a lot of places the oil companies will provide funding for different -- I mean, in California, they had to build a school in one spot to bring a pipeline ashore.

So, there's - is NOAA - I assume NOAA or Corps of Engineers, somebody is working with Shell and ConocoPhillips about providing some funding for some of their stuff.

LT. FORNEY: So, yes, we're definitely having communications with Shell about where their interests are, as well as where their operations are going to be based out of. And I guess I should back up here and state that Shell is still in the exploration process. They don't know if this is going to be a profitable venture for them or not.

They're purely in an exploration state, and they think there's a lot of stuff there. And if there is, we're definitely going to, you know, NOAA will be - where the ships are moving, we will be the, you know, there looking into producing some good hydrographic support.

MEMBER CAROTHERS: And you need to make sure you knock on the door and get some money.

CHAIR WELLSLAGER: Interestingly enough, seeing something like this could actually be used to help with the geospatial side of matters in Alaska, because if

Shell/Conoco does something, if pipelines are made, or added, or modified, you have power.

At the junction points, you're obviously going to have to have internet connection. These could be places where you might establish a reference station that could supply geodetic information, and help create the network, not necessarily densify it, but just have a location where you could input a spot, where prior to that, you did not have any type of a connection or geodetic control location that you could build from off that.

LT. FORNEY: So the densest location of our geodetic controls, run from the Aleutian Islands east, along the plate boundary, down into southeast, and from Valdez up to Prudhoe. And that is where we have our road, pipeline, and then of course the plate boundary observations that are occurring.

CHAIR WELLSLAGER: Okay, Michelle?

MS. RIDGWAY: Can you hear me?

CHAIR WELLSLAGER: No.

MS. RIDGWAY: Michelle Ridgway. Yes, Matt, I was wondering whether you currently have, or what the status of bathymetry is in Lease Sale 193, where we may see some potential drilling this year. And for those of you not familiar with that region, Lease Sale Area 193 is basically a triangle up here, and there's Chukchi. Maybe Matt can point it out.

Do we currently have data for that area, or is the industry providing data that NOAA charting is actually incorporating into survey data?

LT. FORNEY: So, NOAA has not conducted a survey in that area. The surveys that have been conducted in those areas, we can definitely zoom right on in and see what data is available.

There is data on the chart. That data is from either a Russian or a British admiralty survey. This area has not been surveyed by NOAA. As Molly referred to

yesterday, there is the MOU that is in place between Shell and NOAA, and that basically was the language to say we'll definitely share data.

But then, as she was saying, the challenge is definitely in the details, and that is where there are the Annexes 1, 2, and 3. And the hydrographic side of things does live in Annex 3. And once that is approved and signed, we will see what Shell does, or I should say Shell/Conoco and Statoil do have the data, and we'll definitely get that.

VICE CHAIR PERKINS: Matt, is there a line of communication with the Navy, or a way to get the Navy data collected in that area declassified and into the chart program?

LT. FORNEY: That is a good question. Navy is - I'm trying to think of the best way to put this. So, Alaska, if you look at a picture of where the Navy assets are port-wise, Alaska is not on that map.

And Navy, they definitely do operate vessels in the region. The only vessel that I know that is going to be making a port call in Alaska is the USS Anchorage, and that's going to be occurring in May of 2013 when that vessel is commissioned here in its namesake.

So, Navy is here. Navy does do work here. The contact is not there. That effort is being made. If the Admiral has a contact, I'd love to tap in and, you know, get the - meet someone, so.

MR. MAYER: The Navy had, for the last about 10 years, a program of declassifying the submarine-derived data, and we get that data regularly through the Arctic Submarine Research Lab in San Diego, and that data, it goes through a process at NGA, and then Arctic Submarine Lab, and then to us in a cleansed way. And that data has all be incorporated into the IBCAO chart that I'll show in a minute.

CAPT. LOWELL: Just to add a little bit more onto that, is NOAA, our Coast Survey, has a very good relationship with the Navy, and the arrangement pretty much is at a high level, is if they collect bathymetric data in US territorial waters, or the US EEZ areas, we have access to that data.

And unless it's for some other reason classified, it is all provided to NOAA, to NGDC Coast Survey for application to the chart. So, there's no mysterious - well, there may be some mysterious Navy data, I don't know, but I don't think so. Thank you.

CHAIR WELLSLAGER: Okay, actually, we're going to need to cut this off real quick, because we have one more presentation, and it's getting a quarter til, so - but, Lawson, you had one thing you wanted to say?

MEMBER BRIGHAM: No, I was just going to add that about 15 years ago, it was the Arctic Research Commission which kicked off this process. It all happens in

Washington, and Matt doesn't feel any of this stuff. It's all bureaucratic in Washington among all the agencies, and well orchestrated. The latest data is not more than a year old, and this is all data from nuclear submarines in the Arctic.

CHAIR WELLSLAGER: Thank you, Matt. That was very good, interesting.

(Applause)

CHAIR WELLSLAGER: Okay, Larry and Michelle Ridgway, a marine ecologist from Oceanus Alaska, would like to take us on a brief tour of multibeam mapping efforts in Alaska, showing highlights from research surveys, Law of the Sea, and the newest version of IBCAO, the Arctic sea floor map. So, let's take a virtual trip through the Arctic Ocean - Arctic Sea - Ocean.

MS. RIDGWAY: Great. So, while we're getting set up, very briefly, this is a great transition from Matt's introduction to the overall geography of Alaska, because Larry

and I are going to now take you down underwater, and take a look at, first, starting in the southern part of the state.

We'll start in a moment in the Gulf of Alaska, and work our way up through the Aleutian trench, up to the Arctic, highlighting some recent advances in mapping that benefit not only navigation, but also many, many sciences, geological sciences and biological sciences here.

So, Larry is first going to talk to you about sort of the overall state of mapping over the last several years.

MR. MAYER: Okay, just to put things into context, I thought I'd throw up the very first map of the Arctic as an ocean. Until this time, everybody thought there were giant land masses under the, what we know as the Arctic Ocean now. And it was quite amazing, based on Nansen, on the drift of his Fram, the vessel he locked into the ice.

And what's most amazing, is that

all he did - all he had was nine soundings. You can see these nine soundings. And from that, somehow concluded that the Arctic Ocean was a big basin. It's really quite amazing.

Well, since that time, there's been mostly individual discrete measurements, and the submarine data, which again, over the years, has been declassified slowly, usually eight or ten years behind, but they're quite steadily doing that.

And this led to what's really the iconic map of the Arctic, the IBCAO chart, which was a product of Mark Jacobson of the University of Stockholm, and then he was a post-doc at our lab.

The latest version until what I'm going to show you today, being a 2008 version. Now, this was based almost only on the submarine data, and individual soundings, either from ice stations, ice islands, helicopter flights, and it probably had about 64,000 soundings in the entire Arctic Ocean.

Martin is a phenomenal artist, and created a beautiful, beautiful picture. And that actually does us a disservice sometimes, because you look at this and you say, "Oh, well, we know what the Arctic looks like."

And as we've gone out in the last few years, and started to map, and this is no discredit to Martin, it's just very sparse data, we found that there are lots of inaccuracies in this.

And what's happened since that time, at that point, that represented about six percent of the Arctic. This is now the Law of the Sea based mapping from the Healy with multibeam since 2003, and you can see the coverage.

And there's been a few other cruises. There's been some Japanese cruises now. The Koreans are coming up - Japanese, with multibeam. And the Russians finally, last year, and the year before, started major multibeam mapping programs.

So, since that time, the IBCAO project, which is the project that accumulates all this data, has had very good relations, has had all that data entered into it. The red is the Healy data. You see it's dominated by that. You also see something we mentioned yesterday, the crowdsourcing around Iceland, Greenland.

The fishermen collected a tremendous amount of data. And I was very suspicious of this at first, but it is a tremendous asset in places where you have no other information. So, that's gone in.

And the other thing I want to point out, and this is really a sad thing, and Captain Lowell can attest to the fact, that we sat in St. Petersburg, and were promised that the Russians would contribute their data to the IBCAO project, but, if you see, that one side of the Arctic is completely white.

The Russians have not at all followed through. Despite the fact they're

collecting good data, they're not contributing it to the IBCAO project.

And so, there's the new IBCAO, and I'll let Michelle take over, and we'll basically fly through that in a - well, we do - I guess we just do it right now.

And we're going to start actually outside of the IBCAO area, because Michelle wanted to show some of the other areas here. This is now the best dataset we have, global dataset, outside of IBCAO, which is a product called ETOPO 1.

It's a one mile gridded dataset, and it gives you the general characteristics. But, in places where we've collected multibeam data, like the Gulf of Alaska, you'll see the contrast is quite remarkable as I zoom in to the much higher resolution data.

And the level of features you can see now as we come, in terms of the channels, the down flow processes, the fan building, and we're now, just to give you an idea of depth,

we're now at - this is 2500 meters deep here at the bottom. And we come along and start seeing the tectonic and erosional features, again, all these fans that are building out.

Here is from 2000 to 3000 meters, a cascade, something we see subaerially at a waterfall, but they're obviously very dense waters coming from underneath the glaciers, sediment-laden waters making a cascade, and another one here with a plunge pool, a several hundred meter deep plunge pool down at its base, and this is at 3500 meters water depth. So, really quite remarkable in what we can see at this level of resolution, as opposed to the overall - mostly satellite based in a sense, datasets.

Michelle wanted me to show a dataset, and I don't know who collected it, on the Pribilof canyon area. And if we come out there --

MS. RIDGWAY: Larry's just showing you some of the new multibeam along the plate

boundary in southeast Alaska, that's sort of outside of the Alexander Archipelago. There's been quite a few surveys subsequent to that, multibeam, and some new vessels that Tommy Thompson and Fairweather and Rainier have been retooled with multibeam, have been doing multibeam in shallower areas. It provides tremendous elucidation of geomorphological features in southeast Alaska, that have contributed to biological research significantly.

Now, a lot of our southeast Alaska rockfish population assessments are based upon these habitat maps, where we have sufficient rugosity, where we can extrapolate some of our limited survey data. The multibeam is helping quite a bit in managing some of those long-lived habitat specific species.

It's also been very helpful for finding submerged formerly inhabited sites along southeast, that have been part of the early human migrations to North America.

MR. MAYER: So, you get the contrast here now, that before, what we - the kind of resolution that we had before, with what we have now. It's really quite -

MS. RIDGWAY: So, now Larry's gone all the way across the Aleutian basin, which is the southern half of the Bering Sea, and has gone up to the Beringian margin, which is the sloping feature you see here, the continental margin. And now he's going to show off some of the most amazing multibeam in this region.

MR. MAYER: From a Law of the Sea perspective, having this resolution has tremendous ramifications, because the Law of the Sea involves natural prolongation. And so, if we had just the dataset before, we'd have to put the edge of the slope somewhere out there, but with this new detail, we can now - each one of these prolongations becomes part of the extension of the continental margins. So, this new level of resolution is

quite critical.

And then finally into the Arctic and the new IBCAO dataset itself, start here in the Bering Strait. The area we focused most of our work on is Chukchi. This new IBCAO has all the new multibeam data, both Japanese, Healy, all incorporated into it.

And you can see the differences in places where it's a little more detailed, is where the multibeam data has been incorporated. And where it looks beautiful and smooth and flat, is - we just don't know anything.

So, this is Northwind Ridge, Chukchi plateau, a whole series of sea mounts that were discovered during our surveying, all these areas out here which are extending our continental margin tremendously, a feature we call Healy sea mount discovered in 2003. This was just a flat area before. And our continental margin is now extending tremendously in this direction.

Here again, right here is a place where you can see the difference between the multibeam, where we have the multibeam data, and the pre-multibeam data, where we still have sparse measurements in here.

MS. RIDGWAY: In this region, you can see Point Barrow. Maybe you can show them as a point of reference, right here, Point Barrow, and then off of Point Barrow is this tremendous feature, Barrow Canyon.

Barrow Canyon is an area where marine waters are advected up right toward Point Barrow, and are responsible for concentrating a lot of the food that feeds the whales that are aggregated at Point Barrow, that supports the Eskimo communities' hunting activities, and an entire ecosystem is intimately connected to Barrow Canyon.

This is a region where this coming summer, the Fairweather is going to be transiting in this area, doing multibeam work as well as some in situ work. We'll be

deploying an ROV, and taking samples in this region. And this is the North American continental margin.

This slope is virtually unexplored, but this new multibeam data is tremendously helpful to identify areas where methane hydrate may be exposed, other geological features that dictate what the biological community may also be like. So, we're really looking forward to taking a look with the ROVs, and hopefully later submersibles, into this region that's now been mapped.

MR. MAYER: I've just thrown on the international boundaries. This is the negotiated, but not yet settled, Russian/US boundary line, and then the 200 nautical mile EEZ coming around this way. If we take off this one, that's the Canadian recognition of the end of the EEZ, and then the US recognition here.

So, we have quite a large disputed

zone between the US and Canada, before we even get to the extended continental shelf still in the EEZ.

CHAIR WELLSLAGER: Wow, that's really something else. It's a lot of work, and it's very useful to see what needs still to be done, but what has been done, and the decisions that could be made using good data. Are there any questions? Jeff, go ahead.

MEMBER CAROTHERS: Jeff Carothers. I was just wanting to know, on the new extensions, is there an agreed upon water depth of the - where, you know, the boundary lines are?

MR. MAYER: For the extended continental shelf. The extended continental shelf, it's really not tied into a water depth, it's tied into a morphological feature, and that's the foot of the slope. And that's why, where the foot of the slope is, is very clear along here.

And before we started this

project, everybody assumed the foot of the slope of Chukchi came along this way. What we're now finding, is that the foot of the slope comes all the way along here. It's a morphological break.

And so, that's why, based on this mapping, there's been a huge extension of hundreds and hundreds of kilometers of the US extended continental shelf. So, it's tied into the morphology, not a particular water depth.

MR. CUSICK: Joel Cusick, National Park Service. Approximately what percentage of the Beringian area, where the ancient persons were supposed to travel across, how - what percentage of the sea bottom is known to a level of detail that we can pull information from?

MR. MAYER: Our approach to the mapping, the Law of the Sea mapping, was basically one driven by the demands of the morphological requirements of the law, and so,

we were very constrained. And you're looking right there at the area of the Beringian Margin that was mapped. That's it.

It's a complicated set of formulae that allow you to establish the foot of the shelf, and so we backed that out and said, "Where did we have to map?" And this was being funding by the State Department, not a science agency.

And so, we basically had to stick to that. I would have loved to have mapped it all, believe me, but you're looking at the portion that's been mapped there.

CHAIR WELLSLAGER: Okay, unfortunately we're limited by time, so I would like to thank both of the presentations.

(Applause)

CHAIR WELLSLAGER: Moving on, we have the stakeholder breakout sessions, and there will be four again. The Alaska baseline data collection requirements for NOAA's nav data will still meet here in the Aleutian

Room. Arctic emerging priorities will be downstairs in Cook Inlet. The Alaska geospatial framework will be in the Prince William Room. And the Alaska tides and currents will be in the Lupine Room.

There are sign up sheets. And when we get in there, we're going to pass sheets around, so that everybody can at least put their name, and we can have name and your affiliation, that we can then incorporate into the minutes. This will last for about two hours.

And around 11:00, we would like for the breakouts to organize what you've been able to brainstorm into recommendations. We'll break for lunch, and then we'll debrief the HSRP panel from 1 to 2. So, let's go to our respective rooms, and - I'm sorry, Cathy?

MS. WATSON: Matt, I guess maybe we should - there should be staff kind of helping note taking. If you could ask who would be willing to, for the four breakouts.

CHAIR WELLSLAGER: Would any NOAA staff like to help do the note taking? Capt. Glang, Capt. Lowell and Kathy and Mr. Forney. Yes, thank you.

MS. WATSON: Okay, for the navigation, it's this one here, the Aleutian. For the Arctic emerging, it's the Cook Inlet Room. Geospatial is the Prince William Room, and tides and currents is the Lupine. And those rooms are down on the first floor, and kind of around to the left.

CHAIR WELLSLAGER: Okay, let's do it.

(Whereupon, above-entitled matter went off the record at 9:00 a.m., and resumed at 12:59 p.m.)

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

12:59 p.m.

CHAIR WELLSLAGER: Okay, welcome back after lunch. It is time to hear what each of our stakeholder debriefs came up with as recommendations. I'm sure it was an interesting exchange of thoughts, provoking arguments, who knows what.

But, what I would like to do is have a representative from each of the panels talk, and - where did Joel go? Why don't we start with the Alaska geospatial. So, Joel?

MR. CUSICK: Thank you, Matt. I'm Joel Cusick, National Parks Service. I'm a GIS specialist. I was in the geospatial framework committee, had a great time. And again, thank you for letting us voice our recommendations to all of you. It's a great honor to be in this room with the NOAA players.

Number one I think for our recommendation, was hiring a civil servant to serve as the state geodetic advisor. We want

that advisor stationed here in Alaska, to facilitate partnerships among the feds, university, and private and native stakeholders.

We'd like NOAA to make funding available for the modernization of the Alaska shoreline, specifically representing the mean high water line, the boundary in many cases in this state, between state tidelands and federal uplands.

Expeditiously finish GRAV-D. Incorporate the use of GNSS, namely the Russian GLONASS system, into continually - into the CORS network, and online position user service or OPUS.

Number five, modernize, continue to modernize and densify the CORS network in Alaska. It serves as the backbone for 99 percent of what we're talking about.

CHAIR WELLSLAGER: No, these are not actually in a priority ranking. These were just ones that we came up with as we were

doing the discussion. But, what I would like to do, is we have 15 minutes per, and we've got about 10 minutes for discussion.

So, let's open it up to the panel now, and let's talk about what we have with this set of recommendations, and how we should go about formulating this into something we can do in a letter. David?

MEMBER JAY: What I see there - is the first item a state item and the rest are federal? Is that correct?

CHAIR WELLSLAGER: No, actually the state geodetic advisor is an employee of the National Geodetic Survey, and it would be a representative there to work as an outreach program for other users within the state interested in geodetic information, data, and can serve as an outreach.

MEMBER JAY: Did you envision any state input, as far as money, into any of this?

MR. CUSICK: State input?

MEMBER JAY: Yes.

MR. CUSICK: Yes.

MEMBER JAY: I mean, as far as money. This all seems to be, you know, a to do list for the federal government.

CHAIR WELLSLAGER: Juliana?

MS. BLACKWELL: David, and to the rest of the panel, just a quick update on the state advisor program as it's run by the National Geodetic Survey. Currently, the program is a co-sponsored entity in which states that are interested sign agreements with the National Geodetic Survey through NOS, and cost share for the hiring of a federal civil servant to serve as a geodetic surveyor.

We have approximately 22 of those positions. And over the last couple of years, we've had some challenges with continuing to cost share in those agreements, just because of budgetary issues, et cetera.

The National Geodetic Survey, over the past two years, has studied the program,

and has committed to advancing the state advisor program into a regional advisor effort, so that we're able to cover all states with a geodetic advisor.

So, in some cases, it may be that there's less focus on a state, but the idea is that from a federal perspective, having a point of contact for every state to have at their fingertips for geodetic advice, and that involves shoreline mapping too, I think is a better use of the federal funds.

So, NGS is moving forward into a regional advisor program, which we expect to have implemented by 2017. But, realizing that the state of Texas - I'm sorry, the state of Alaska, which is bigger than many of the states such as Texas, which are currently served by two advisors, really does - is at a disadvantage, and we do realize that there is a great need for an advisor here in Alaska.

So, while we transition, we realize that the state advisor program is

changing. It is an NGS supported and funded position, that we would be asked to put here, located in this state.

And just for the knowledge of the panel, some of the other advisor positions advise more than one state. We currently have an advisor that serves both Montana and Idaho, and those are pretty big territories to cover as well.

But, I think what the - they want to make sure - the group wanted to make sure that the state advisor for Alaska was actually physically located within the state itself, and focused on state/region of Alaska/Arctic.

MEMBER JAY: Thank you. But, I guess my point here is, what we've been hearing consistently is the needs of the state are so outsized relative to the federal resources, and I don't see how this can be accomplished by the federal government acting alone. I think the state needs to take a very active role in this, and it's sad that they're

not here today, by and large.

CHAIR WELLSLAGER: I lost that last bit of input, David, what did you say?

MEMBER JAY: Well, that I think - what we keep hearing is how outsized the need in Alaska is, and how limited federal resources are, and how limited they are going to continue to be for several years certainly, given the economic climate. And there, sadly, is no real state representative.

I mean, I'd like to see the state step up and say, "Yes, we can do some of this," or, "We want to partner with you." What I'm hearing, you know, is mostly, "Well, we want the federal government to do this." And, you know, that's somewhat appropriate, but I think there has to be a partnership.

MS. BLACKWELL: Juliana Blackwell, again. I would just say, David, we've always encouraged a state coordinator, a state-funded, a state employee coordinator, to work with the National Geodetic Survey, and will

continue to do so.

But, these are recommendations that were formed from the group to NOAA, so it's just, you know - I personally hear what you're saying, and just want to make the panel aware that we would love to work with identified contacts within any state to help coordinate the use, and needs for, geodetic control.

But, this, you know, again, from an NGS perspective, we're moving away from this cost-share program, which we don't have one in place here in Alaska, but realize that there is a great need for a geodetic advisor servicing this area, and/or a state-based, or a state funded geodetic coordinator, which again, if that were to come up to NGS, we would more than happy to work with that individual as well.

CHAIR WELLSLAGER: And I might also add onto that, David, in some states, there are geodetic surveys or Departments of

Transportation that have someone who could facilitate something like that. The state of South Carolina, we actually have two people, I being one of the two, and the fellow who is chief of field operations, work together as the geodetic advisor.

So, when situations like that occur, we definitely take the lead and run with that. And that's not to say someone in Alaska won't stand up to do that, but in the event that they don't, we would like to see this, which is part of the NGS program, be facilitated here in the state, because it is one of the hats that Matt Forney is wearing right now, among 10 others, and it should be something that is a permanent fixture here in the state, and stays in the state, and works with the user community.

MEMBER JAY: I don't disagree with any of that, but I just think that the need is so outsized here in Alaska, that unusual arrangements are needed, and there's going to

have to be some sort of partnership between private enterprise, the state, and the federal government.

CHAIR WELLSLAGER: Admiral?

MEMBER BARBOR: When I look at the list, I mean, they're all very reasonable in the light, and what I guess I'm trying to gauge is, if we as a panel said, "Yes, incorporate that," and put the full weight of this panel behind it, what happens? Because they're all common sense.

I'm assuming that, yes, you need to densify the CORS network on 5, but that's not a small issue here, and it's a hugely financial issue.

Number 4 seems much easier to do. I'm assuming that, what, there's an old GPS system, and you want to get GNSS on upgraded receivers. You know, that is probably a little more manageable and doable, and expeditiously is an interesting word. You said you've got it in your game plan. Does

this recommendation change your game plan?

CHAIR WELLSLAGER: Michele?

MEMBER DIONNE: Michele Dionne. So, slightly tongue-in-cheek, but now that our wartime commitments in the Middle East are winding down, maybe it's time for NOAA to declare war on the climate, and slip into that military industrial complex, you know, feedbag somehow.

CHAIR WELLSLAGER: Say that again.

MEMBER DIONNE: Well, if NOAA were sort of to appropriate, of all the government agencies, you know, dealing with climate change, and call it a war, you might get some - that might be an angle for getting some funds. I don't know. Certainly it's going to be as costly - it has the potential to be as costly to the US taxpayer as the other wars we've been funding for forever. So, just a little --

CHAIR WELLSLAGER: Well, interestingly enough, and to follow along that

same tack if you will, densification of the CORS network could help do similar things like that, because the CORS receivers can be used to determine measurable humidity, or precipitation, or air mass movements and things, and you can use it as a predicting tool, and figure out when you've got storm fronts coming in and such.

So, we could tap into the National Weather Service, and have them put 60 stations here in Alaska, and, you know, work with it that way. How's that?

MEMBER DIONNE: I do think that the potential costs to the American taxpayer are going to be ultimately very, very large, that, you know, in terms of climate change drivers, and the sooner the agencies get on board with that, the more money we're going to save.

CHAIR WELLSLAGER: Anybody else? I'm sorry, Gary?

MEMBER JEFFRESS: I believe the

shoreline mapping recommendation is already part of our five most wanted, just to reinforce that. And it's not just an Alaska problem, Texas has the same problem, so does Louisiana, rapidly changing shorelines that aren't up to date on the coastal mapping.

CHAIR WELLSLAGER: And this is actually good in the fact that this is Alaska we're talking about it, but we're actually seeing this as a national problem, so when this goes to the Administrator, she can say, "Okay, this is something that really has national impact, and needs to be accomplished." Good point.

MEMBER DIONNE: I think you all know the statistic that half of America lives within, what, 50 miles of the shoreline or something like that.

MR. CUSICK: As an Alaskan, I'd like to make a comment, how many of the lower 48 shorelines have 1920s shoreline? Many of our charts are that out of date.

CHAIR WELLSLAGER: Okay, Joel, thank you.

MR. CUSICK: Thanks for the opportunity.

CHAIR WELLSLAGER: Tides and Currents. Oh, yes, Kathy?

MS. WATSON: Oh, Matt, I'm sorry. Could we ask the navigation data collection to go first? Because we got some users that have to leave early today.

CHAIR WELLSLAGER: Could we what?

MS. WATSON: The navigation data collection, could they report next?

CHAIR WELLSLAGER: Tides and Currents. Oh, yes, Kathy?

MS. WATSON: Oh, Matt, I'm sorry. Could we ask the navigation data collection to go first? Because we got some users that have to leave early today.

CHAIR WELLSLAGER: Could we what?

MS. WATSON: The navigation data collection, could they report next?

CHAIR WELLSLAGER: Okay. Navigation, please?

CAPT. LOWELL: Yes, this is John Lowell. Just a cautionary note to the panel, and I know you've heard this before, but we need to be careful that we don't create laundry lists of activities that we're going to send Dr. Lubchenco, who will really not want to engage at that level, especially when you get down to the weeds.

And so when you talk about what the problem is, especially if you can combine some of these kind of things -- and I'll just take the top bullet there that came out, is maybe we shouldn't come to the recommendation with a solution, which is really what happened there, since we said "Hire a civil servant to serve this purpose."

That's a solution. That's not a recommendation. So did we define what the problem was? Do we have a -- you know, what is the problem? Is it just better

coordination? I'm not clear what the problem was there, but those are the kind of things that we want to see coming out of the FACA, a better understanding of what the problem is.

And then, on the assumption that we just can't be delivering these laundry lists of solutions to the head of NOAA, what is it that you want to, as a FACA, to really focus in on, and can you take it to the level where she can engage with it? If she comes up with extra funds, could she apply it? Or focus on new efficiencies, on the assumption that we're not going to get big budgets.

So that's just a cautionary tale there. Thank you.

VICE CHAIR PERKINS: Okay, great. We had a robust conversation, and the heading here is Baseline Data Collection for Navigation. You know, one of the solid themes that kept coming up was the need for better coordination.

So under that concept of, maybe,

map it once, use it many, U.S. Fish and Wildlife was at the table with us. And we came to a realization that they have a 65 foot boat on the water. You know, if we can do a better job of understanding what assets are really available, then maybe we can do some force multiplying and better leverage that, which led us to the recommendation of "We need a Geographic Information Officer or a Geospatial Czar that can help coordinate those type of activities."

So that was the recommendation, something similar to the concept of IOCM. If we know what boats are on the water, if we can get sensors on those boats, if we can understand who's doing what, where, maybe we can serve multi-mission purposes.

Part of what would drive that is, how can we get the users involved with the baseline data collection? You know, the possibility of using crowdsourcing, open-sourcing. If we need better data at a

particular river harbor where the barge is having trouble delivering the oil, and there's fishing vessels going in and out of there, and there's subsistence fishing taking place there, can we begin collecting data at the population level, by the actual users?

And if that data is -- maybe it's not fit for -- maybe it's referential data, not absolute data. But it might be data that's fit for use, and that data might be able to use multi-use applications. You know, so looking at that, how successful open street network has been for collecting street data, globally, by the users, in an open consortium-type fashion, how can we do that on the water side?

So that's a recommendation to look for new standards that would embrace collecting data that's fit for use, that can go into the system.

And then looking at, where do we need to spend the money? You know, kind of a

Pareto approach of 80/20. You know, what do we have? What do the users really need, either geographically or by type of data? And one of the things that came up was shoreline.

You know, soundings are important, but if you don't know where the shoreline is you can't navigate in that near land/shore interface. So it's encouraging to see shoreline came up in the prior group as well.

So those were it. We tried to keep it short, keep it succinct, to three things. And so that is what we have put forward.

Yes, Joyce?

MEMBER MILLER: Scott, as part of that better coordination, I just wanted to point out, we also discussed the need -- if users like National Park Service or U.S. Fish and Wildlife are collecting data, the need in the coordination side for somewhere that can organize that data, not necessarily on a national level, but on a regional level, where

people can go and sort of have a data clearinghouse.

And maybe that's a GIO-type person or a Czar, but the point was that National Park Service collects this data in the peninsula, and nobody else can get to it. I mean, they share it with their local users, but other people can't get it.

VICE CHAIR PERKINS: Yes, the geospatial one-stop concept. Maybe it takes a State Geographic Information Officer to make that work up here, because doing it on a national level, we've proven that that's not working terribly effectively.

Frank?

MEMBER KUDRNA: Our group hasn't reported yet, but we had a similar discussion. And AOOS, the regional association here in Alaska, has that data charge, and they have the ability to coordinate and make available data that doesn't have the same standard requirements of the many pieces of the federal

government.

So we, on our side, had been encouraged looking at them, and that also could take place in other parts of the country, where there are other regional associations, as being a coordinating mechanism for data to be available. And their DMAC program has that as a charge already, and they are doing a great deal of that.

VICE CHAIR PERKINS: Right. Thank you.

CHAIR WELLSLAGER: Okay. Lawson, would you like to go next? Or would that be Gerd?

MEMBER BRIGHAM: As Gerd goes up to the podium, we had a pretty robust discussion, and the title is Emerging Arctic Issues. Very broad, very eclectic. We didn't necessarily come up with specific recommendations, but perhaps some issues that are important, emerging, key that we could pass to the administrator.

We kept it a fairly broad discussion, but it was pretty robust. I facilitated. Gerd helped to keep the notes and issues. So go ahead, please. Plenty of stuff.

CAPT. GLANG: So as Lawson said, we had a robust, and I'll throw in vigorous, discussion. It was kind of a free-flowing brainstorming session, and we tried to make sure everyone had some input. So we came up with 26 issues which -- this is the raw data, which you could distill down. And all of these, John, will be recommendations. They sort of flow in a theme.

You know, we did an hour and 55 minutes of discussion, and then five minutes of analysis, so in those five minutes there were kind of two overarching themes. There may have been some outlier ideas that don't wrap in very well here, but I think we can distill these into -- and we heard this from the other working groups -- surveys and

related data collection, and then I kind of put in the more descriptive words "to do this in an efficient and innovative way," because we want to take into account this concept of crowdsourcing and partnerships, both trusted partnerships and unknown partnerships, and then making the data available.

And I think, going back to Frank's point on Scott's question about making the data available, and Frank brought up the AOOS, it's my understanding AOOS doesn't deal with geospatial data. So we want to make that distinction, and I asked in our working group that we raise the issue of spatial data infrastructure, that we have some consideration for how we make the data discoverable and accessible.

And then the second overarching theme that came out had to do with oil spill prevention and response, and then associated with that is the research theme of oil and hazardous material spills in arctic and ice

conditions, which I think has been identified already as an area where research needs to be done.

So that's sort of, in a nutshell, the takeaway. There were lots of other associated ideas, but we'll leave that for you to discover on your own. Some of these can be lumped together quite nicely. We're open for discussion.

You didn't like 26 items, John?

(Laughter.)

CAPT. GLANG: This was a show all your work exercise, wasn't it?

(Laughter.)

CAPT. GLANG: Okay, if nothing else, we'll --

CHAIR WELLSLAGER: Captain Glang, could you run it down to the very bottom, so I can see the two overarching themes?

MEMBER DIONNE: If you teach a course on how to collect geospatial data with jet skis, I don't think you'll have any

trouble with enrollments.

CAPT. GLANG: Actually, Michele, you bring up a good point. We did touch on training. Bob Pawlowski and some of the others brought up both the training specific to navigating in the Arctic and the ice training, and then I think we started to touch on some of the other training and jobs in Alaska, and what kind of jobs would come out of supporting the oil industry.

So there was a broad-ranging discussion on training and jobs, and that was very good. Some good ideas came out of that.

MEMBER DIONNE: Also, we talked quite a bit about the training arm, a how to train the trainer kind of thing, out of NOAA.

CAPT. GLANG: Yes, Joyce?

MEMBER MILLER: Yes, we talked about sort of training to figure out what minimum level of metadata you need to certify your data's correct. For instance, I said you only needed a position, a time, and a depth,

and then someone else added that if you just put in -- if you knew just the bare offsets -- we're talking single-beam here, we're just talking really simple data collection -- if you added a little tiny bit more data to that, to make sure that single-beam soundings from various sources were good, that was pointed out as something that NOAA could do as sort of value-added, without a tremendous amount of cost to it.

CAPT. GLANG: I would hope that -- so, you're talking about what kind of metadata you might need if you were crowdsourcing, for instance? I would hope that, within the construct of our IOCM standard, that the crowdsourcing already fits, and that the way we facilitate taking data from partners and trusted sources would incorporate what we have in those standards already. They're pretty broad standards. I don't think it's too much of a stretch.

MEMBER JAY: Crowdsourcing came up

in our group, the tides and currents, as well. It seems to be a persistent theme here, just because of the difficulty of the environment and the idea that standards needed to be flexible, or at different levels.

And the OPUS analogy that I didn't -- I'm not familiar with it -- was brought up in our context, that data can be made publicly available through that, even though it's not collected by the federal government.

CAPT. GLANG: I'm not sure I heard every word, but it was a commentary more that --

MEMBER JAY: It was a commentary that there are other models within, in this case, NGS, for crowdsourcing data of somewhat unknown or variable standard. And you know, you use it at your own risk.

CAPT. GLANG: Okay.

MR. MAYER: I wonder if what we're hearing kind of collectively is an evolution of what maybe we should think about as a

national kind of frontier survey strategy, something that is kind of set apart from our historic evolution of survey strategies, that is catered to -- in this case, it's Alaska-focused, but there may be other places. Joyce, out in the western Pacific, where you have responsibilities, where you focus on crowdsourcing, you focus on making every platform available, data collection platform.

But I wonder if we can articulate this as a central theme, in terms of a frontier survey strategy, that then we can start establishing guidelines to.

MEMBER MILLER: Actually, there was one really good -- I wrote it down. Someone said, it was one of our stakeholders "Perfect is the enemy of good."

(Laughter)

MEMBER MILLER: And I thought that was - I thought that was a really interesting way to think about things.

CHAIR WELLSLAGER: You know, and

again, once again, going back to a conversation, or a question that Dr. Sullivan posed out to us as a panel yesterday, and using what you said Joyce, does it need to be perfect in every situation? Are there not cases where good will suffice? Or okay will suffice?

Because, based on the conditions that you've got to work in, based on the situations you have, any data, if it can meet a standard, and maybe that standard might need to be somewhat modified, could be used, and it's better than nothing at all. And this might be a situation in Alaska where we need to look at doing something like that.

Aimee said without the tide gauge, there were no predicted tides, and they really were able to, having something like that, determine whether or not they needed to move or evacuate the town to the high school or whatever, and they made the decision not to, and were okay with that. But, without any

type of a tide gauge or without any type of predicted tides, they can't do that type of thing.

So, again, I think we need to sit back and think about the crowdsourcing, and maybe in some situations, do we have to have everything perfect, or as good as it possibly can be? And my thoughts are, maybe not.

MS. BLACKWELL: Following along that same line of conversation, and others, I just think we ought to be careful with, you know, if we are the authoritative offices that provide, you know, the best data and information that we have available, that we be careful in the recommendations and the expectations of doing it all, at all different levels.

Because, we're going to be competing, you know, to let different levels of standards be met. And I'm not saying it's wrong to do that, I'm just saying that it would, you know, from my office in particular,

I would speak and say, we want to make other crowdsourcing types of data available, but we have to be balanced in making sure the users know that this is a different level, this is not authoritative and very accurate information, but it is information that can be shared, and what the expected accuracies are of that data.

As well as, you know, realizing that we have resource constraints, and we want to appropriately, you know, put our resources in the right areas.

So, if you want, you know, very exact information about, you know, where stations are, and more CORS, and more improved models, then, you know, we're going to be, you know, torn in an area where we want to focus on providing the best of the best infrastructure, and also just being clear as to what the other data that's available is, and how much we can dedicate to those other levels or standards of data that's being

provided and disseminated.

CHAIR WELLSLAGER: Ken?

MEMBER BARBOR: Yes, let me pick up where David left off, and follow on your comments there, Juliana. Again, NGS was brought up in that light as a shining example that while you have the CORS stations, and you've got a, you know, very rigidly specified requirements for that, you can also go in with your individual benchmark, and through OPUS, work up the data on it, and then have the ability to save that, and have it accessible to other users should they want. And it is appropriately attributed as a non-CORS - you know, whether highly suspect or whatever.

But, that is a valuable piece of data for somebody, and it is retrievable through you, and not through some circuitous Google search of all the available, you know, reference spots that anybody ever inputted somewhere. So, again, that was brought up as an excellent example of not compromising your

standards, but embracing all of the data that's out there.

CHAIR WELLSLAGER: David? And pull your mic to you just a little bit so I can hear you.

MEMBER JAY: Another example along the same line, would be the National Ocean Data Center. It doesn't just sanction the most recent data collected to the highest standards, it's got everything, you know. We recognize that the ocean is a very big place, and everything that was ever collected is in there somewhere, at least if somebody put it there it is.

The objective is to salvage all the historical data, and it is a variable standard. Some of it is outdated, because the ocean changes, but it's all there.

CHAIR WELLSLAGER: Jon? A hydrographer can't turn a mic on?

(Laughter)

MR. DASLER: Okay, here we go, got

it. Jon Dasler. It's been said a person with one watch knows exactly what time it is. A person with two watches is never quite sure. And I think the problem is it's a tremendous expense to get, even if they're private assets and you're bringing that out to get out to these sites and collect the data.

So, I think just the basic concept of some basic standards rather than, you know, 20 people out there with watches that aren't even at least synchronizing them. And so, there - that's what IOCM did. They took the hydrographic specifications and deliverables, and sort of compressed that a little bit. It's not quite as stringent, but at least get the basic standards of what really needs to be done.

It's a minimal extra effort, but like I said, the biggest effort is getting to these sites, and getting the data. And you really do need to have a set of standards. Otherwise, it's - to deconflict this

information and sort it out, is going to be more effort than it took to collect it. And, you know, you really need to take that into account.

MEMBER BRIGHAM: Can I add something -

CHAIR WELLSLAGER: Sure.

MEMBER BRIGHAM: - from our group? What we did here, rigorously, from the stakeholders and the users, that there are wide swaths of the United States Maritime Arctic with no soundings, or some soundings from the Admiralty charts of Captain Cook. So, we are in the 21st century.

So, this conflict of whether the data is good enough, or bad enough, or what modes of strategies of collection and all of that, there are good arguments that you need international standards.

And what is fascinating, is our government is proposing detailed management principles, marine spatial planning, et

cetera, where we don't have the baseline data to do that kind of management. We don't have the baseline bathymetry, hydrography, observing stations, et cetera. So, we can't do all of those sophisticated - use those tools, et cetera, and do that management without some baseline information.

So, the message is clear. The stakeholders are telling us, you know, to use the place safely and efficiently. We don't have enough information to safely navigate. So, I mean, you know, it's a basic conflict.

But, I think at the upper echelons of policy making, pretty sophisticated management tools are being proposed, where we just don't have information available to actually employ those tools. And the flagship is marine spatial planning. So, it's been pretty interesting, different levels of the government talk in different directions here.

MEMBER DIONNE: That was something that I realized very early on when I started

working at the reserve in Maine, is that the coastal managers have lots and lots of needs, but they do not want to pay for data collection. So, it's a real problem.

CHAIR WELLSLAGER: Yes, Gary?

MEMBER JEFFRESS: This is probably a good place to remind you of the Exxon Valdez incident, especially when we're talking about exploring into the Arctic.

One of the fundamentals that came out of the Exxon Valdez was that both Exxon and the United States government knew exactly where the Bligh Reef was, because it was on a NOAA chart, and that was the benchmark in which the litigation took off from.

There was no argument on either side that the reef was where it was plotted on the chart, and it was plotted to a certain accuracy on the chart, and so everybody was aware of that.

And if the same thing is going to happen in the Arctic, we really need that same

standard of mapping, because it's going to end up in a court of law. And that's why Texas, when we put in a tide gauge network, we had to follow NOAA's standard, because the data was going to be used for littoral boundary disputes, and it was going to go into court.

So, I think that's the benchmark we got to take off from. And NOAA is the scientific agency for the federal government that sets the standard for nautical charting.

CHAIR WELLSLAGER: Point noted, thank you. Anybody else? Gerd?

CAPT. GLANG: Just wanted to think maybe a little bit differently about the crowdsourcing of data, sounding data in particular. As long as you can say something about that data, what systems were used to acquire it, how it was collected, then Coast Survey can make a decision about how to use that information.

You may choose to use it only to evaluate whether I have a problem and I need

to go back and do something, a more intense survey to NOAA standards. Or, if there is no data, you may choose, we may choose to put it on the chart, and we can qualify it in certain ways. There are ways to show that on the chart, to identify the quality of the data.

So, it's - we don't need to get too wrapped around the axle on standards, as long as we know that the data is being interpreted and applied to the chart, with consideration of where it came from.

CHAIR WELLSLAGER: And that builds on the need for accurate metadata. Without that, we really don't know what it is that we're working with.

My office is in the process of building a database of geodetic control, that is not able to meet blue book standards, but we have implemented specifications that, if they are met, the user community can give us the coordinates, but we also put a disclaimer on the database. "These were not created by

my office, but are being hosted by our database. Use at your own discretion."

Now, you have to take it up a whole other level for nautical charting, because it is a legally binding document. But, the point is, you need to know what it is that you're working with, and that's going to be done using the metadata. And if you've got very accurate metadata, then I think you can make intelligent decisions on whether you should or should not use this information. Tides and Currents.

MEMBER BARBOR: We had a small but reasonably diverse group, and I think what we initially came up with very, very quickly, was - and Rich, you know, provided guidance that, "Yes, they've taken a look. They probably need 30 more tide stations here," you know, "appropriate tide stations." That's not going to happen. So, how do we back off of that? And what sort of - is there some way to prioritize or the like, and come up and attack

this with a more methodical and learned way?

And in particular, the key is, and other groups have talked about this, is that there are different thresholds. Users have different needs. They can accept different standards. And in some cases, in terms of tides, you know, just having a relative water level or the, you know, constituent harmonics for a particular area, would be sufficient to - as Amy would say, "Geez, okay, we're coming up on a high tide as this wind peaks, therefore, we'll have a significant storm surge."

The absolute value wasn't important, the relative value was. Obviously, for other areas, you need the absolute value if you're going to try to apply it to a chart.

So - but, you've got to establish that. And that should factor into how you prioritize what sort of tide stations you're going to start establishing. And, we clearly need to look at innovation and technology, and

innovative thoughts on how we approach these problems, because Alaska does present unique problems. You don't go out there and stick a, you know, a Sutron tube out there and let it winter-over, doesn't work.

So, with that in mind, we've got to develop some - perhaps develop new technologies. There was some discussion about an acoustic sled that they used on the ice for winter-over, and got a winter's worth of tide data, not real time, but again, a good reference piece of material that you can begin to develop constituents and the like. And so, that's innovative sorts of ways of attacking this rather difficult environment here.

And also, take advantage of what other agencies. We did not - we had - no, we had no industry other than a survey industry representative. So, you know, we obviously look and go, you know, what sort of capabilities can the oil industries, the shipping industries, bring to bear?

It doesn't have to be robust, oil hopefully would be robust, but anyhow, they can contribute something, getting equipment to an appropriate place where you want to get it installed, and use those sorts of things to help that aspect. You know, as one other group mentioned, just getting there is half the problem in this area.

And then what kind of mechanisms are there for coordination? Because there are a lot of stakeholders with, as I said, diverse needs, but very inter-related needs, and we've got to have a better understanding of those people, who is doing what, how can an expansion of one person's efforts meet another person's requirements.

And we felt that an in-place mechanism that appears to have a lot of energy, if not money behind it, is the Alaska Ocean Observing System, AOOS, and that would be a good coordinating body.

They have apparently various

forms. One pointed out was the Alaska Marine Science Symposium that brings a lot of people together that - where you can say, "Okay, these are the sorts of activities that are going to happen over the next year." Again, and so, take that list of activities and see how you can capitalize, leverage, and - to get the most out in terms of our areas of tides and currents.

And so, AOOS seemed very willing to take that on board. Again, not speaking for the boss, but take that on board and see what they could do with the Alaska Marine Science Symposium.

And one comment that, again, a low-hanging fruit sort of thing, but it does, you know, some of our folks in there said, "Geez, we do not get enough warning on what OCS is going to do, when and where." And again, given a little longer lead time, we might be able to get some more assets to bear in terms of capitalizing on the water level

controls we know is going to come along with that capability.

Okay, because, you know, Rich mentioned he thought we probably needed 30, we decided to come up with an A to Z, so at least 26 priority areas. But at any rate, and in fact, the AOOS representative came up with three, and I said, "Oh, we've got three," which sounded very reasonable and manageable.

But, those sorts of things need to be, again, fleshed out, and make sure that - if that is the best three or the like. Access to data, which we've kind of already discussed, is - and Aimee Fish from Weather Service brought up an excellent point.

She had been using some sort of tide prediction based on a two week observation back in the 1890s, went to the website, and it was gone. Well, it, for whatever reasons, probably reasonable reasons, to me it sounds like, I'm not sure how good those data were, but something she had become

accustomed to using, was no longer available.

There are a lot of datasets like that, that somebody may have some use for. Now, you have to take it for what it's worth, but, you know, access to historic non-standard and sorts of data sets was felt in our group that, appropriate caveated, should be available for the user.

And I've already talked about the OPUS example where, again, it's an appropriately attributed, use it at your own risk. And you can tell the difference between the, you know, bench-marked areas, and those that aren't quite as rigorous.

And then another important issue, I think, is again, when you're out there surveying, a very strong belief that, you know, whether you're actually delivering your product as an ellipsoidal reference survey, it should be done with ellipsoidal references, and that's what's going to drive a lot of the

water level understanding in the future.

We had a number of innovative issues, I think. There are buoys out there. AOOS is putting buoys out there. If you put on an appropriately precise GPS, you can get water levels off that buoy now, and that's an additional data source, you know, in the open ocean.

GPS on the ferries, you know, can give you water level. ADCP on the ferries can give you currents. And those sorts of flows of information would greatly enhance the body of knowledge for the area. Thank you.

CHAIR WELLSLAGER: Questions? Jeff?

MEMBER CAROTHERS: Yes, Jeff Carothers. What is the - I mean it sounds like what they need up there is predicted tides really, is the main thing. Rich, what's the observation period, minimum observation period, to develop the harmonic constituents for an area?

MR. EDWING: 30 days.

MEMBER CAROTHERS: 30 days.

MR. EDWING: On a lunar cycle.

MEMBER CAROTHERS: Okay.

CHAIR WELLSLAGER: So, really, we're talking about a 30 day project, is what we're talking about.

MEMBER BARBOR: Yes, and -

CHAIR WELLSLAGER: Go ahead.

MEMBER BARBOR: And again, those are the sorts of - you know, if you're doing survey up there, and there's a lot of survey going on, either contractor or white ship, it's got water level controls. And so, that sort of stuff needs to get propagated, and somehow incorporated into the body of knowledge.

MEMBER CAROTHERS: The other thing I had, I don't - I'm not an expert in this field, but the InSAR data, I don't know if they can monitor water level and measure it from satellites. I'm not sure if that's

possible or not, I mean, as an option.

MEMBER BARBOR: No. And I think David brought up SAR, you know, for water level determination too.

MEMBER JAY: When does the new InSAR satellite start flying?

CHAIR WELLSLAGER: When SpaceX can launch it.

(Laughter)

CHAIR WELLSLAGER: Frank?

MEMBER KUDRNA: I sat in on this group, and there was a general theme that budgets are going to be tight, and we couldn't ask for things that cost massive amounts of money to NOAA.

So, the theme that we worked on was how do you piggyback some existing activities that are taking place to get more observations of data? How do you partner with other folks that have the same need? Because many of the things that we're talking about, NOAA is not the only party in the game. There

are others that could be cost-shared or partnered with, or combined, in terms of products.

And, you know, we had a discussion of the oil leases that take place. Even though that's a federal oil lease, they have land-side facilities that they have to construct, that the states have the ability to negotiate terms and conditions that could have observation platforms established through identification of priorities, and establishing the kinds of needs that could be incorporated as those fields are developed.

So, our theme was not to create a huge shopping list for NOAA, but to try and talk about priorities, and those things that could be partnered.

MEMBER BARBOR: And I think, you know, what - we had Amy Holman in our group, and I think the key role that NOAA plays in this, is being a very vocal and active contributor to these sorts of Alaska Marine

Science Symposiums. You know, she's on the Board of Directors of AOOS.

So, that is where you leverage that sort of thing. And then, you know, bring it back to the home office and say, "If we can get this here, you know, we will have leveraged, you know, an asset, and collect the data."

MEMBER MILLER: One thing that I noticed throughout the entire symposium and so forth, is I think the navigation manager concept is working very effectively here. It works well in the Pacific too. That just that position, which - I don't know - how long ago was it established? Nav managers?

MEMBER BARBOR: Maybe a decade.

MEMBER MILLER: Yes. But, I think it very much facilitates this type of collaboration and so forth. So, it sounds like you're doing a good job, Matt.

MEMBER BARBOR: Yes, take a bow.

(Laughter)

CHAIR WELLSLAGER: Okay, so, we've got the recommendations that have actually taken place here. I want to do one thing first, then we're going to come back to this, and try to consolidate what we've talked about into, at most, maybe four recommendations, and really whittle this down.

We want to work together as a group, and come up with what we think could be a good, concise way of presenting to NOAA administration what we want to do. And possibly taking Larry's approach of looking at everything as a whole, and trying to develop a course of action, might not be a bad idea.

Before we do that, Frank had mentioned yesterday, something about a survey, that the Science Advisory Board needs participation from FACA with. So, if we could put that up on the screen. And Frank, did you want to go up and address it at the podium, or are you just going to sit at your spot?

MEMBER KUDRNA: I can do it here.

That would be fine. Just to - can you make that a little larger? Here's the background of it. NOAA's Science Advisory Board was asked by the NOAA administrator to look at the entire research enterprise of NOAA. And she charged the Science Advisory Committee with that.

A working group made of half Science Advisory Board members, and half outside members, was established. And she gave us a very short time frame for a report back by November on this subject. And it's chaired by Peter Kareiva, the chief scientist and vice president of Nature Conservancy, and Roberta Balstad of Columbia University.

And as part of that working group, they've gone back to, and asked the other FACAs that have research-related functions, and the other working committees of NOAA, to provide input. And this was a formal request from Peter, as the chairman of the committee, to HSRP FACA.

And it describes, the goal is to identify opportunities to enhance NOAA's research portfolio, and ensure it's focused on meeting NOAA's RND needs for today and the future, with particular attention to NOAA's strategic priorities, and they are healthy oceans, a weather-ready nation, resilient coastal communities and economies. And then it goes on to describe the task force.

The chairman is looking for two or three key points, drawing on the experience, insights of our working committee, that address the following questions or a subset of them. And it says, "Don't feel obligated to address them all."

What are some of the best examples you can think of for NOAA research making huge positive impacts on the nation? What are important research opportunities that are being missed by NOAA, and why? Have you uncovered issues with the management and organization of NOAA's research enterprise

that could be improved?

And this is being looked at very hard by the committee. You know, research is spread among probably 11 different places in NOAA, and they're asking us, should that structure be changed or modified within NOAA? Are there other issues you feel strongly that the task force must explore or address?

On the new R&D portfolio, are there R&D issues currently receiving substantial funding that might receive less investment, so that other endeavors could be better resourced? And that's really an interesting comment, because we've never seen a direction back from NOAA asking what they should stop doing, and how they should prioritize in terms of activities.

So, we have an opportunity to respond to this. They're asking for it to be no more than two pages. The time frame is by July 10th, so that the next meeting of this group where they'll start formulating items

will take place.

And let me add one other thing to give you an idea of the importance of this. The House of Representatives, the Commerce, Justice, Science and Related Agency Appropriation Bill 2013, and the accompanying report included the following language: "Science Advisory Board. The committee understands that NOAA's Science Advisory Board is evaluating NOAA's research enterprise, and the effectiveness of its management structure to meet its science requirements.

Preliminary recommendations will be available later this year. The committee requests that the NOAA Science Advisory Board brief the committee no later than 30 days after providing this recommendation to NOAA." This is the appropriation committee in the House.

And additionally, the Senate, in the Department of Commerce, Justice, Science and Related Agency Bill 2013 accompanying

report said, "Research and development, R&D tracking outcomes. The committee directs NOAA to continue to track the division of R&D funds between intermural and extramural NOAA, assure consistency and clarity in the collection and reporting of data, clearly state expected research outcomes, and available funding to provide transparency into the competitive grant process, and increase extramural research funding in future requests, to build broad community support, and leverage external funding for mission-oriented related research."

So, the point I'm making is, we've been asked by the administrator of NOAA, and it's been recognized by both Appropriations Committees of Congress, to look into this subject. So, it's an opportunity for our FACA to provide input into the process.

CHAIR WELLSLAGER: Okay, thank you. I think this would be good - would it be possible to print this out?

MS. WATSON: We can email.

CHAIR WELLSLAGER: Actually - or we could email it out to the panel. Why don't we just do that? We'll email it out to the panel. The discussion is kind of taking place, and I think it would be good if we as a group had a task force, subcommittee, call it what you want, of about three members, at most four members, that could look at this, work with it, and we have personnel that could help out with some expertise in what's going on with research and things within each of the tri offices. Do we not?

CAPT. LOWELL: Yes, basically any way the FACA wishes to approach this. I think that these are pretty big questions. I don't think they can be resolved today. That's my opinion, you all can decide whether you want to resolve it or not.

But, if you put together a small working group, I do believe all three of the offices would be available to provide input,

in some sort of inventory, the research that is currently going on, whatever it is you feel you need to be able to answer these questions or not. As, I think Frank pointed out, you don't have to address every question. But, we stand by to assist as needed.

CHAIR WELLSLAGER: Okay. So, that being said, it would be good if, when we get this, we could sit and think about it. But, David, you had a question or a statement?

MEMBER JAY: Yes, just a point of clarification. Does this include all NOAA research, like Sea Grant, all programs, or is it just certain classes of programs?

MEMBER KUDRNA: The study itself is looking at all research within NOAA.

CAPT. LOWELL: But, the question of this fact has been asked. Is the research being done by the nav services? I do believe that would be my interpretation of that.

MEMBER KUDRNA: I would - it doesn't specifically state that. I would

expect it's specific to your charge. But, if you have broader comments, I don't think those are precluded at all either.

CHAIR WELLSLAGER: I would like to take the approach of it being the HSRP, and looking at things within where we're addressing as a panel here, which would be the tri offices and nav services, and that type of thing. Joyce?

MEMBER MILLER: Yes, I'm a bit - again, looking at just this, but then there's R&D, and then there's, you know, other activities that aren't so - that are management related within NOAA. You know, they're asking where would you take money away on that last question. You know, where, you know, is this only R&D activity? I mean, sometimes there's just a totally hazy line about what's R&D versus what's really management, you know. Does -

MEMBER KUDRNA: And I - if I might respond to that -

CHAIR WELLSLAGER: Please.

MEMBER KUDRNA: And I don't portend to know exactly what the administrator had in mind when she asked the question, but when we discussed this among our committee, what we expect is most of the time when committees are asked for recommendations, they give a shopping list of added stuff you should spend money on. You know, it's big and huge, and, "You need to do all of these."

This question is quite different, and they're asking, are there things we should stop doing now, that have gone the distance, that are less important than things we should expand activities for. Should we put less resources into something, and more resources into something else?

And one of the things we as a committee have been debating, is NOAA doesn't know very well how to stop doing something. And I'm not saying it's in this particular area, anywhere within NOAA. And in tough

resource times, anyone needs to know what to stop doing and what to invest more resources into. So, that's part of the question that's being asked.

MEMBER MILLER: But, what I'm asking is, does that include management activities, or - what comes to mind immediately is something like ocean exploration, which is not really a research activity. It's an exploration activity. Or, something like sanctuaries, which is a management activity, you know.

MEMBER JAY: That's not what they mean though. I don't think that's being requested here.

MEMBER KUDRNA: It - the charge itself focused on research, and -

MEMBER MILLER: What I'm saying, the line between research and managers is -

MEMBER KUDRNA: It's not always clear.

MEMBER MILLER: It's not always

clear.

MEMBER KUDRNA: You're correct.

MEMBER JAY: If I may, I would think it would include the extramural funding associated with the marine sanctuary program, but it wouldn't include, at least in my interpretation, wouldn't include the actual management of the sanctuaries.

MEMBER MILLER: Yes, but that's often very hard to wrinkle out too, so.

MEMBER JAY: Well, yes, that's true.

CHAIR WELLSLAGER: Okay. Well, what I would like to see is, you know, a small group, three, four tops, to look at this, come up with some answers, and send those to the panel as a whole, that we can work with.

CAPT. LOWELL: Everything would have to come back to the panel.

CHAIR WELLSLAGER: Right, right.

CAPT. LOWELL: It was very clear.

CHAIR WELLSLAGER: Right.

CAPT. LOWELL: However you structure it, whether you go here, or a small working group, it has to come back to the broader panel before it goes on.

CHAIR WELLSLAGER: Exactly. Gerd?

CAPT. GLANG: Could those three members of that small working group, would they be allowed to interact - this is probably more for the DFO - interact with the SAB to tease out a little bit more? Because I think the charge here, the questions are fairly broad ranging. I don't think this panel has the insight into NOAA's R&D portfolio. It would be much better for this panel to provide comment on the kinds of research, and then bracket that even narrower by what they've heard here today, for instance. Do you think - I'm just thinking out loud.

CHAIR WELLSLAGER: Just a second. You can say something.

CAPT. LOWELL: I was going to mention, on the introduction paragraph of this

request, it wasn't necessarily built around in-depth knowledge of everything. It was simply a body of knowledge available to the panel, and insights. So, it wasn't - I don't really think they're asking for an in-depth study here.

I think they're looking at, how can we pull a little bit of minimal information together, and then based on the body of knowledge that the panel may have has come up, to try to answer these questions. And you don't have to answer them all, but it's the FACA, or it's your panel, and you can answer it the way you want.

CHAIR WELLSLAGER: Admiral?

MEMBER BARBOR: Being tempered by what John just said, I mean, yes, obviously I know the Navy system well, and I know I could hit a button, and out would print all the line item R&D programs that, you know - I didn't manage R&D, so I didn't have any, but I could at least see what the oceanographer had. I

assume, you know, do you split yours out R&D and operation maintenance, or, you know - no, and I - well, and I kind of thought that might be true.

CAPT. LOWELL: I think the issue with NOAA is these things are so tightly tied together, and intermixed. As Joyce was saying, you know, where is that line of pure R&D versus taking some technology and operationalizing it, versus actually utilizing it in a production capacity?

You know, those lines are moving around a lot. I think the budget lines are intermixed. Some is out of base, some is out of pure research funds, some are grants, some are laboratories that are self-funded. So, there's many different ways. So, there is no, you know, easy button here. I don't think so.

CHAIR WELLSLAGER: You know, Frank, to follow up on what Gerd had mentioned, when it - is there someone at the Science Advisory Board that one, two, three,

collectively, the whole panel on a conference call, could contact and discuss this with?

MEMBER KUDRNA: I would suggest Peter Kareiva, who has prepared the letter. And he's really an open guy. He's on vacation for a couple weeks, but he'll be back shortly. And he would be the appropriate guy to talk to.

CHAIR WELLSLAGER: Okay. Were - Kathy, were you going to send this out, or Frank, could you sent this out to the panel?

MEMBER KUDRNA: Yes, Kathy is, I think, yes.

CHAIR WELLSLAGER: Could you make, to her, his contact information available on that same email, or is it on there?

CAPT. LOWELL: I think it's on the bottom of this.

CHAIR WELLSLAGER: Okay, okay. Yes, David?

MEMBER JAY: I think what's being focused on by this group, is the sort of thing

that researchers see, meaning, there's a Sea Grant solicitation in Oregon due this week, or there's one of these things in the federal registry you look at and go, "What on earth did they want?" You know, but it's clearly a research solicitation for extra - at least partially extramural funding from NOAA. I think that's the kind of thing that they're primarily targeting.

CHAIR WELLSLAGER: Well, and again, I think what we need to do, is once we get the group to talk to the board, and really drill down a little bit more, and see where it is that we want to go with this, and take it up. Would anybody like to step up to the plate and offer their services in helping work with this? David, thank you.

MEMBER MILLER: Actually, I'd like to ask a question.

CHAIR WELLSLAGER: Sure.

MEMBER MILLER: I'm gone for the next month. What's the time frame on this?

I assume it's -

CHAIR WELLSLAGER: Yesterday.

MEMBER KUDRNA: 10th of July.

CHAIR WELLSLAGER: July 10th.

MEMBER MILLER: Yes, I'd offer, but I can't.

CHAIR WELLSLAGER: Michele, you said you would? Okay. Anybody else? No? Okay, great. Once, twice, well, I think we've got three very thoughtful people. I think we have some good expertise here.

So, why don't we do this? If you all would please arrange a time where you can discuss these things, and get in touch with the gentlemen at Science Advisory Board, and we'll make this work. I think that would be great. And we need to try to set up a time line.

CAPT. LOWELL: Yes, set up a Chair of this little working group, and make sure Kathy is involved in all discussions, so that we have a way to track what's going on.

MS. WATSON: Right, and Matt, could I say one - once the small response group for this SAB request gets their stuff together, it needs to be fleshed out with the full panel.

CHAIR WELLSLAGER: Right.

MS. WATSON: Because anything that's a sub-committee, or a task, or a working group of the HSRP, has to always report back to the full panel.

CHAIR WELLSLAGER: Right, right.

MS. WATSON: Okay.

CHAIR WELLSLAGER: Exactly.

MEMBER DIONNE: Through Kathy, or through a general email list?

MS. WATSON: Well, it will be from the Chair to the full panel, asking for panel comments.

CHAIR WELLSLAGER: The Chair of this group will send that to me. I, in turn, will send it out to the panel.

MS. WATSON: Correct.

CHAIR WELLSLAGER: Very good. So, would any one of you three like to be the lead with this? All right, Ken, thank you. Yes, okay, very good. So, we'll get this email out, and I will contact the three of you all, and we'll just try to get the ball rolling next week, early next week, and see what we can do with this, okay? Great, thank you. All right, now - yes?

MEMBER CAROTHERS: Just real quick. Since it's got to be in by July 10th, do we need to set a deadline for the working committee, so that we have time to address it, a time to review it?

CHAIR WELLSLAGER: Actually, yes, I think we should. I don't have a calendar in front of me right now. June 26th would be two weeks before, yes. I would like to see if the panel could get something to me by - would the 13th of June be too late? And if I have it on the 13th, it will be out to the panel by the 14th. And I would like to have something back

from everybody maybe by Friday the 22nd.

We can compile everything that comes back as comments, and I can send it back out for everybody, and have something to Frank by the week of the 25th. Well, no, let's - July 10th, there we go.

CAPT. LOWELL: We have to have it back to the name at the bottom of the letter, you know, a day or two before the comments are due. That should be fine.

CHAIR WELLSLAGER: So, Ken, you're going to get it to me by the 13th, and then I'll have it out to the group by the 14th, and if everybody in the group could get their replies back to me by - what would you think would be a manageable time turn around, a week? So, that's going to be the 21st. I can compile the information, and have it back out to people - say again.

CAPT. LOWELL: Yes, bring in the comments, and go back out for final review -

CHAIR WELLSLAGER: Right.

CAPT. LOWELL: - by everybody. And once that's met, then you can -

CHAIR WELLSLAGER: Do that. So, I'll have final review for the panel by the - I'll have it back out to the panel by the 25th, so the panel can review it and have it back to me by the 29th.

CAPT. LOWELL: Of June.

CHAIR WELLSLAGER: Of June, right. Okay, so, let me write that down.

MEMBER MILLER: Matt?

CHAIR WELLSLAGER: Yes?

MEMBER MILLER: I probably won't be able - I don't know if I'm going to have any email on where I'm going to be. So, the first review I probably will not reply on.

CHAIR WELLSLAGER: Okay.

MEMBER FIELDS: Matt, just for information, I know I won't be able to get you anything back for that first review. But, I will take a look at the final of it.

CHAIR WELLSLAGER: Okay, great,

great. Okay, thank you very much. Getting back to business at hand, we need to discuss a little bit more in-depth now the recommendations, and whittle things down, or hone things together, or assimilate what we had there into three, at most four recommendations. And, if we could pull some of these back up, and --

MS. WATSON: Geospatial, tides and currents.

CHAIR WELLSLAGER: Yes, you know what? I'm wondering if it wouldn't be easier if we had the flip chart right there, something that we could talk and write on the board.

MS. WATSON: All right, got it. Does anyone want to volunteer? Panel members?

CHAIR WELLSLAGER: Yes, Joyce?

MEMBER MILLER: I thought that summary on the third one, the one that had the 26 - and then at the end of it -

MS. WATSON: Arctic Emerging?

MEMBER MILLER: I thought that might be a good place to start.

CHAIR WELLSLAGER: Okay. Would you like to start?

MEMBER MILLER: Well, I mean, I felt like that summarized much of what our panel did. We didn't go into the oil spill prevention response research.

But, the first part of that, surveys and related data collection done in efficient and innovative ways, and then discovering data - or entering data are discoverable and accessible. I think the only thing I think it misses, is the issue of fit for use, or standards, that other groups discussed.

CHAIR WELLSLAGER: Lawson?

MEMBER BRIGHAM: No, there are more words to this, and Larry and I kind of cooked them up during our discussion, or Larry did. It's a new frontier strategy on how to handle the surveys. It's not just the

standards thing that's the issue, it's a different strategy for the nation, for this remote area, that it has to be woven into this theme. Wasn't that your thought, Larry?

MR. MAYER: I think it's just - it's a way to frame this that separates it from our efforts all the time, to be as close to perfect as we can. We should drive hydrography and standards for the most part.

But, it's a recognition that this is really a special circumstance, and we have to somewhat step back. And so, I think if you frame this in something that is not constrained by the normal hydrographic process, and we called it something different, that you invoke - and again, it may not just be Alaska and the Arctic, it may the western Pacific, or other places where data is absolutely sparse, and something is better than nothing.

So, I think if you just kind of frame it in that context, it provides an

opening, yet doesn't go into the areas that Gary and Juliana were very concerned about, which I think are very appropriate to be concerned about. So, it's not a compromise of hydrography in any sense, it's just saying that sometimes we have to do something a little different.

MS. BLACKWELL: This is Juliana. It dawned on me as we're having this discussion about these different applications of the data, and the need, and being able to collect what's out there.

When we walked onboard the Midnight Sun or Star, I don't remember - and we saw on the bridge, the, you know, it was - participated in the volunteer observations for the Weather Service, and had received, you know, year after year, the plaque, you know, recognizing the observations that the personnel on that ship had collected and contributed, that enhanced the weather predictions through the Weather Service.

And the fact that this volunteer observing system for the Weather Service has existed for decades - yes, thank you - I think this is kind of along the same lines of what we're talking about here for hydrographic purposes, is that, you know, as you all are saying, it's not necessarily what we would do if we were making our own chart based on our standards and requirements, but if the data can be collected by other entities, and provided, it is valuable for many applications.

And so, I guess, it just - you know, I don't know if I'm thinking about it the same way you all are, but thinking about the Weather Service volunteer observation program, and tying that into what we're talking about here, is there something to learn from what that program - how that was developed, and how that's utilized, that could apply to the hydrographic and mapping data that we're talking about here today.

CHAIR WELLSLAGER: Ken?

MEMBER BARBOR: I agree, and I can envision a, you know, an opening statement that says as NOAA responds in its, you know, manner to acquire the necessary hydrographic data in this area, a, you know, a new strategy must also be, you know, followed, that, you know, a new frontier strategy that gets appropriate data for appropriate uses, and then elucidate some of the recommendations of that - those sorts of data.

MEMBER CAROTHERS: I agree. I think the term frontier should be in there. That's kind of -

MEMBER BARBOR: It's fitting.

MEMBER CAROTHERS: It's just a phase, and I've seen it on every t-shirt down the street I can think of.

(Laughter)

CHAIR WELLSLAGER: It's the last frontier.

(Laughter)

CHAIR WELLSLAGER: All right. Well, that being said, you know, one of the things that we did, at least on two of the panel discussions agree about, was a need for shoreline - accurate shoreline mapping, which NGS is currently doing. And I think that if we could manage that into one of the recommendations, that might be good.

Again, Alaska said - or Joel said, I think, something to the effect that it's been since the '20s I guess, since they've had any other mapping done for shoreline, or that's what he's got for baseline data.

CAPT. LOWELL: It depends on the part of the country I'm sure, so.

CHAIR WELLSLAGER: Yes, okay. Getting something like that out would be beneficial. I guess it would be good if we could - Kathy, could you scroll a little, I guess to the top of whatever that one is that we're looking at?

MS. WATSON: Yes, this is the -

well, let's see here, the discussions?

CHAIR WELLSLAGER: Well, actually I thought there were - a list, one, two, three, four, or something on the recommendations.

MS. WATSON: There are, I'm sorry. Here we go.

MEMBER BRIGHAM: Yes, they're a list of emerging issues. That's what the theme was.

CHAIR WELLSLAGER: Okay.

MEMBER BRIGHAM: So, it's not necessarily recommendations, it's emerging trends or issues from the stakeholders. Of course there were panelists there too, so everybody threw in the pot.

CHAIR WELLSLAGER: Okay, but seeing these emerging issues - it's kind of hard to look at all of this right now, and try to come up with what you want to throw in too as a recommendation.

MEMBER MILLER: Actually,

crowdsourcing seems to have come up in almost every one of them. Whether that's something that is well understood, what we mean by that, I'm not positive.

CAPT. LOWELL: Let me go back to some of the things I mentioned at the beginning. A recommendation doesn't have to have the solution. Crowdsourcing could be a solution. So, the question then becomes, is what is the recommendation?

I think framing it in this whole frontier, I think you've set a condition that's relatively unique to the region we've been in, very appropriate. That particular issue or condition can exist in other parts of the world, makes it more of a national problem.

I think these are really key things that everybody is focusing in on. So, then it becomes, what else had bubbled up to the surface that isn't necessarily a solution, but is, can we define the condition - refine

the condition to a point where we can have a recommendation that the offices start looking in new directions? And crowdsourcing could be an output of that effort.

So, I would recommend you kind of think in those lines. I'm not sure I'm making a lot of sense here, but -

MR. MAYER: If you don't want to go into any of the detail, then the recommendation could be to develop a strategy. So, then the office sets the task of developing what the appropriate response is to that call for a frontier strategy.

CAPT. LOWELL: And things like - the things that bubbled up on my notes are communication coordination, that's a big overarching issue that came up, certainly in our group, a better understanding of the user requirements.

Where, again, we always focus on a standard, you know, a product for everybody. You know, maybe that's not the appropriate

approach. So, is there something else in there? What is the requirement, or what is the issue that's being pulled to the surface here? And kind of structure that under the frontier environment, or a condition that so far has really come up in the discussions.

CHAIR WELLSLAGER: Michele?

MEMBER DIONNE: I think if you want to, you could get some input from the Coastal Ocean Observing Systems, about this issue about defining America's coastline. Because they're looking for it, and they - at least our association was quite surprised to know that it didn't exist. So, you know they called the Coastal Services Center for a map of the US coastline, and was told that there wasn't one.

CHAIR WELLSLAGER: Okay, thank you.

MEMBER MILLER: Should one of the - I mean in ensuring data are discoverable and accessible, is - I mean, that's something that

doesn't have to - I mean, that's not necessarily part of the frontier data collection strategy. I mean, that could be a separate recommendation, or -

MEMBER BARBOR: I think it is part of the frontier, because the data we are looking at, is going to be non-standard, not to specs, and therefore, the initial reaction of NOS would be to say, "No, that doesn't meet our standards, therefore it's not part of our dataset." But, it is an important dataset.

MEMBER MILLER: I agree with you, yes.

MEMBER BARBOR: So, it has to be discoverable and accessible, even though your inclination would be to -

MEMBER MILLER: And the recommendation might be for NOAA to support that type of data infrastructure or something like that.

CHAIR WELLSLAGER: Michele?

MEMBER DIONNE: It seems, you

know, the Hydrographic Services Center must run into this problem when people call for updates of charts that are 50 years old or more. I mean, they can't possibly be very authoritative in 2012. So, I mean, coming up with a way to rank the - I don't know - the accuracy and the precision of whatever data is served up, seems like it could be useful in more than one way.

CHAIR WELLSLAGER: Hmm. This document that you've got, Kathy, will - I would like to get a copy of this. You can email that to me when we're finished.

MS. WATSON: Yes, okay.

CHAIR WELLSLAGER: Probably when you get back to the office.

MS. WATSON: Yes. You want a copy of all the stakeholder breakouts, right?

CHAIR WELLSLAGER: Yes.

MS. WATSON: Okay.

CHAIR WELLSLAGER: As a matter of fact, I've got a thumb drive. I can give it

to you, just transfer it all onto that, if you could do that today.

MS. WATSON: That's fine, I can do that.

MS. BLACKWELL: I recommend sending it to everyone.

CHAIR WELLSLAGER: Okay. So, I think what we're looking at here is an approach that, based on what we have in this state, and the remoteness of this state, and since there is a such a deficiency in data, while we don't want to relax the standards, we do need to address the fact that we want to try to collect data, and get data, and need to have it accurately depicted with metadata, so that we know what we're actually trying to work with. Yes, I'm going to have to chew on this one. Yes, Gary?

MEMBER JEFFRESS: It seems to me that most of the stuff that we've discussed is already in our five most wanted document. You know, the need to put more resources into

nautical charting, that's in the five most wanted. Shoreline mapping is in the five most wanted, which was a big thing in our group.

Maybe we should just focus on what's already in the five most wanted document, and highlight how all the presentations in Alaska identify various components out of that document in the Alaskan scene. It just reinforces what we've already been saying for the last 12 years is it?

CHAIR WELLSLAGER: Yes. David?

MEMBER JAY: What seems to be different though, I think, is the emphasis on crowdsourcing. That seems like an important and new departure. But, I'm not disagreeing with the rest. I think that's a good point.

CHAIR WELLSLAGER: Lawson? Oh, I'm sorry.

MEMBER MILLER: But, I like the idea of the frontier. I mean, it would be a specific point to this meeting. And as Dr.

Sullivan requested yesterday, you know, it's thinking a bit more out of the box than just more hydrographic surveying, more shoreline mapping.

I mean, it's saying that we need to reconsider what kind of standards need to be used in order to collect the data that is so desperately needed in Alaska. It is a unique environment, or an almost unique environment.

So, I wouldn't just go with the previous. I think, I would like to start out with, NOAA and other agencies need to develop a frontier, you know, data strategy that, you know, that meets the needs of these places where data almost don't exist.

MEMBER DIONNE: I can hear the Star Trek theme song.

MEMBER MILLER: Right.

(Laughter)

MR. MAYER: You may be able to do both, you know. I think Gary is right that

these are the fundamental things you need, and I can envision you start out, and say, you know, the panel has been saying for years these are the highest priorities. Well, now we look at this in the context of this frontier area, and it's not so easy to do that.

It's not so easy anywhere, but it's particularly difficult to do it here, and it offers unique problems. And so, we recommend the development of a frontier strategy as a way to start addressing those critical issues that are ubiquitous.

MEMBER JEFFRESS: Going back to the Exxon Valdez concept of, you know, we knew where the Bligh Reef was because it was on a nautical chart, and because it was all done to high standards. What if we compared the crowdsourcing to existing standards that we know as accurate? You know, has that ever been done? I bet there's a bit of research that probably needs to be done. It's like

there's a section of high-quality date that NOAA has observed, what is the crowdsourcing data? How does that fit over time?

And then - because if we're going to rely on the crowdsourcing data, and there's an accident, then it opens up a can of worms. "Well, is NOAA at fault for not actually surveying that to their high standards, and they're relying on crowdsourcing data." You know, it's - there's no easy solution.

CHAIR WELLSLAGER: Go ahead, Joyce.

MEMBER MILLER: Isn't that the question of whether you decide or choose - well, not choose, but make a conscious decision of, this will go on the chart, or - I mean, that - the charts are the liability issue.

I mean, if you take NOAA data from NGDC, you're taking what was put in, you have some rudimentary metadata, and then there it is. I mean, I think it's how you choose. And

also, as Gerd was saying, you look over it carefully, and you decide whether to put it on a chart of not.

MEMBER BRIGHAM: Just a slight geographic reference here. I don't think we should say all of Alaska. I don't think we can say that, because the Gulf of Alaska in the southeast, is charted to reasonably international standards. It's when Matt said the area called "all the rest", but that's not - that's the United States Maritime Arctic.

And so, we have to be careful as we tackle Alaska, because I think anything south of the Aleutian chain and Gulf of Alaska, is reasonably well charted, and to - I mean, I don't know. It's the frontier area, which is not all of Alaska. It's just a very narrow - and our discussion was really the Arctic.

It wasn't about all the cruise ships in southeast Alaska. It wasn't about that part of the world or the transport of the

ferries and all of that. Now, whether those stakeholders believe there isn't enough data is another question, you know.

I don't know about Holland America and all the rest of them. They probably feel maybe there isn't enough. But, I think there's - I don't know, Matt, maybe could comment about this geographic split here in Alaska.

LT. FORNEY: So, I think the easiest way to put this - by the way, Matt Forney - is to state that when you compare southeast Alaska to the rest of Alaska, it's charted very, very well.

When you compare southeast Alaska to the rest of the United States, the surveys that are not up to date 100 percent multibeam, are definitely older surveys than what are present in the rest of the United States that are currently being updated. So, when it comes to cruise industry and marine pilots, that is who drove the survey recommendations

in southeast Alaska.

MEMBER DIONNE: Just a clarification, is the southeast portion of Alaska, does that include all of the villages that are being serviced by the shipping folks that were here, Crowley and Vitus? Which part of the line did it fall on?

LT. FORNEY: So, Crowley and Vitus, they generally service western Alaska, which is the -

MEMBER DIONNE: That's the part that's poorly mapped?

LT. FORNEY: Yes.

MEMBER DIONNE: As they expressed, okay.

LT. FORNEY: The smaller villages that are in southeast Alaska, yes, there is still work that needs to be done there. I don't want to, you know, put off the impression that southeast Alaska is 100 percent, and it's the best place in the United States, because it is definitely not the best

charted place in the United States.

CAPT. LOWELL: Just to elucidate a little bit more, obviously Coast Survey has been investing heavily in southeast Alaska for a decade now. We have had multiple large assets out there, lots of contract data.

There's - I haven't seen it recently, but of high-resolution multibeam data in southeast Alaska, there's a large percentage of those areas done.

We have not invested resources on anything close to that scale up in the other Alaska portion, with one exception, which is really the Unimak Pass, and slowly expanding out for, you know, where all that heavy tonnage is going.

MEMBER DIONNE: So, it's pretty much following the lines that oil would move, is that the idea, or?

CAPT. LOWELL: Passenger ships.

MEMBER DIONNE: Passenger ships, okay.

CAPT. LOWELL: Yes, the cruise industry was really driving that, and the pilots in the Alaskan Marine Highway, those are all heavily trafficked areas.

CHAIR WELLSLAGER: Okay. I think we've done enough of this. I'll think about this for a while, because I've got something to chew on. And I will definitely get everything out that Kathy gives to me when I get back to the office on Tuesday. Monday's a federal holiday.

Do we want to take maybe a 15 minute break, and the come back and talk about the next steps, next meeting, the DFO transition and such? I think we will. Let's take 15 minutes. Let's meet back here at 3:00, okay?

(Whereupon, the above-entitled matter went off the record at 2:41 p.m. and resumed at 3:12 p.m.)

CHAIR WELLSLAGER: I've got a headache. Break time is over with. It's time

to get back to work, okay?

(Laughter)

CHAIR WELLSLAGER: Thank you for getting back as quickly as you did. Okay, to wrap things up on the recommendations, I'm going to wind up putting some thoughts on paper, and getting them to Scott. He and I are going to formulate I think what's going to be the thing, and then once we're happy with what we've got, we'll send it out.

In addition to that, there's going to need to be some output from the what - the HSRP working groups. And I'm chewing on this, and I think it would be good if I could request the chair of each of those groups to send to me two-three highlight points that they think need - or two or three points that they think were significant in what they've been able to accomplished to date, that can be included in the letter to Dr. Lubchenco, so that we can see where progress has been made, and where we continue to work on these things.

Because, you know, it was an idea. It's been a good idea. It's not done yet, it's in the formative stages. So, we want to report out to her what we've done, but let her know that we're working on some other stuff.

The next meeting, I would like to entertain the idea of having our next meeting in New Hampshire. We have Larry and Andy's facility that, while they might not be able to host our meeting there, they've got a lot of very interesting and incredibly cool stuff.

They'll have just been coming back from the Arctic, so we might actually be able to see some things that you all have been able to do up there. There is a nav service manager there. We would talk with him, try to get some plans about specific things that have been taking place in the New Hampshire, or in the New England area, and deal with things of local interest, but then again, on a broader term. Would that be a site that you all think is worthwhile going to?

There had been some talk initially about the possibility of trying to do something in Silver Spring in the fall. And with the election coming up, if we have a reelected president, there might be some staff change. If we have a new president, there will be staff change. And I think it would be just a waste of our time and money to meet there, and ask people from the Hill to come down and address the panel.

Instead, that would probably be a good place, or the D.C. metro area, to have our spring meetings. Congress will be getting started. We could probably have people from the Hill before their travel docket gets too full, to come and work with us. So, I would like to propose doing that.

MEMBER DIONNE: Do you want a second?

CHAIR WELLSLAGER: Well, I was just waiting to see - Gerd was putting something up there, and it just kind of took

my attention.

MEMBER BRIGHAM: Are you open for other suggestions, or if this -

CHAIR WELLSLAGER: I am, sure.

MEMBER BRIGHAM: Well, I mean, I think - Gerd's going to put up where we've been. We've been there in 2005 to New Hampshire, and we haven't been to the south I don't think.

But, we haven't been to places like New Orleans and Mobile Bay, and I don't know. I'm not a southerner, but I look out for the interests of the southern part of the United States.

I don't know, I'm just wondering. We had talked about New Orleans before going to Norfolk, because Norfolk was the Washington connection. From my view, it didn't work very well with the Washington connections, because the Washington connections, other than the Chief of Staff, didn't come to the meeting.

So, I wonder about going to a true

maritime, large place like New Orleans, and hearing from all the pilots and the thousand issues they have, merging issues. I don't know, just a thought.

CHAIR WELLSLAGER: Yes, and that's a very good thought. Michele?

MEMBER DIONNE: Well, I was just going to ask what did you see - what all did you see when you were in New England? When you were in New England five years ago. Are you talking about Rhode Island? Is that what you're talking about?

MEMBER BRIGHAM: Larry can tell you. Were we up there five - a couple of years ago, right?

CAPT. GLANG: So, Mr. Chair, if I could just do a quick geographic overview of where the panel has been in its history?

CHAIR WELLSLAGER: Sure.

CAPT. GLANG: So, I think the first meeting, as near as I can tell from the website, was 2004. And we've met twice in

Washington D.C. We've had a series of conference calls at least from Silver Spring. We had a meeting in Baltimore in 2009. Let me just keep going here. We met in Rhode Island a couple of years ago. We met in New Hampshire in 2005.

MEMBER DIONNE: How many different areas - I understood at one point, maybe during the orientation, that you're supposed to hit the different - certain different regions of the country. How many of those are there?

MS. WATSON: Michele, let me - of course Captain Lowell can explain it. At the previous panel, when they first were established in 2002, they set the goal to visit all the regions. And last May, Hawaii was the last region to visit. And then, of course, in the report out letter to the NOAA under-secretary, they reported that they had visited all of the regions, and heard from all the stakeholders.

MEMBER DIONNE: Thank you.

CAPT. GLANG: So, just continuing with the east coast, I think there was one meeting in Miami, and we hit Tampa. We hit Houston back in 2006.

CAPT. LOWELL: There was one in New York.

CAPT. GLANG: There is one in New York buried under there, 2004.

MEMBER DIONNE: So, no California, Oregon still? Oh, here we go.

CAPT. GLANG: San Diego was 2005. San Francisco, 2008. And then of course Portland, Oregon in 2010. Seattle we did - did we do Seattle? Where did Seattle go? A little slow - somewhere in there.

CHAIR WELLSLAGER: I want to say it was 2007, 2008 maybe.

CAPT. GLANG: There it goes. Is that Seattle? No, that's Portland. Honolulu, Hawaii was last year this time. I got a slow connection. That's the problem with these

real-time GIS displays.

(Laughter)

CAPT. GLANG: And we've actually met here in Anchorage twice, 2006 was the last time. What I wanted to show also, was the little blue squares represent - I'm not sure what database these were parsed from, but they represent port or dock facilities. And so, you kind of get a flavor. Some of these are upriver, so they're fairly small. They're not represented in size by - they don't represent anything, but -

CAPT. LOWELL: Can you get rid of that black band there?

CAPT. GLANG: We had Duluth, you are correct. Where did New York go? That was New Hampshire. We had New York in - oh, Portland. I thought we had done Seattle, but maybe it's not showing up.

CHAIR WELLSLAGER: We have done Seattle.

CAPT. GLANG: Well, maybe it's not

in my file. Well, we can just leave it like this, so Matt can talk to it, and -

CHAIR WELLSLAGER: Could we bring it more - I mean, CONUS into the center of the screen?

MEMBER BRIGHAM: Last time it - when we discussed where to go previous to Norfolk, it was my recollection that we had never been to New Orleans or Long Beach/L.A., through the large ports in the country.

I would just add, if we did go to New Hampshire, and we went to UNH, and the laboratory, saw all of that, we certainly could do stakeholder day in Portsmouth, and hear from the local maritime community there. So, we could combine maybe.

MEMBER DIONNE: And the Boston Harbor.

MR. MAYER: And Portland.

MEMBER DIONNE: Portland, Maine, yes.

MR. MAYER: And Gloucester.

MEMBER MILLER: But, I mean, there was a very recent meeting in Providence. It was only two or three years ago.

MR. MAYER: Right.

CHAIR WELLSLAGER: Michele?

MEMBER DIONNE: One opportunity we would have in New Hampshire, of course, Larry's office is only 15 miles from my house, so, that's - I have a bias here. But, you get to talk to the fishing industry representatives, which I don't know that we've done much of that.

MEMBER JAY: We could do that in New Orleans too.

MEMBER DIONNE: Absolutely.

MEMBER JAY: And in the aftermath of the Deepwater Horizon.

MEMBER DIONNE: Best shrimp. But, the shrimp aren't fish, come on.

CHAIR WELLSLAGER: No, we got the "swamp people" in New Orleans. We could have a really good time watching that.

CAPT. GLANG: So, some of the other suggestions that I've heard from within Coast Survey, from our nav managers, I asked them for their opinions, included Charleston, Savannah, Mobile, and New Orleans.

New Orleans is an enormous port complex. There's essentially five ports that comprise the Port of New Orleans. It's - I think it's the largest port by tonnage. There are at least four, I've lost count, pilot associations that are inland waterway users. I happen to think it's a really good nexus for the work the panel does.

MEMBER JEFFRESS: Matt?

CHAIR WELLSLAGER: Yes, sir?

MEMBER JEFFRESS: We could also get an update on that BP oil spill, and its aftermath.

MEMBER DIONNE: Yes.

CHAIR WELLSLAGER: Yes, that's very true.

MEMBER DIONNE: Yes, we pushed for

that for the last - that was when we were pushing that at the last meeting, so I'd pick New Orleans.

CHAIR WELLSLAGER: And odds are we're going to have a hurricane blow through the Gulf, so, you know. Well, that's - I mean, you're right, Lawson, there had been actually quite a bit of discussion about going to New Orleans. And I definitely think that needs to be on the list of places to go.

So, I'll open it up to the panel, and I'm not at all against the idea. I think the point being made, that we had a site. We had a visit to Providence two years ago. It's possibly an area that going back to it would be interesting. We have access to a lot of variety there.

But, there's also access to a considerable amount of issues that we've been addressing, including datums, including tides and rivers, including fisheries, and other uses of nav data, in the New Orleans area as

well. So - Joyce?

MEMBER MILLER: I'd just like to point out that NAVO's not many miles up the road, you know, a huge facility that essentially does hydrography as well.

CHAIR WELLSLAGER: Up the road from where?

MEMBER MILLER: New Orleans.

CHAIR WELLSLAGER: New Orleans.

MEMBER MILLER: Yes, basically.

CHAIR WELLSLAGER: Right. Okay, well, would you like to nominate New Orleans as being a site we could vote on it, or - yes?

CAPT. GLANG: If I could suggest to the Chair that we maybe come up with a primary, and an alternate. Because the other overlay we have right now is budget. We have to do a bit of socializing back at NOAA to see whether we could even be approved to have a group travel in the near term. Notionally, we're looking at early winter, late fall, somewhere in there. So, there is a little bit

of socializing we have to do back at headquarters to see if this is even realistic.

CHAIR WELLSLAGER: Okay.

CAPT. GLANG: Because we have this overlay of the travel restrictions.

CHAIR WELLSLAGER: Well -

CAPT. GLANG: So, I'm suggesting maybe a primary and an alternate, or one, two, three, or something like that.

CHAIR WELLSLAGER: We could do that, or we could - let's do that. I like that idea. We can come up with a primary and a secondary site selection for this trip. So, I'll open it up.

For New Orleans, is this going to be a site that we should consider going to as our next meeting place? All those in favor, raise your hand. I think consensus has that. Then I would like to suggest the possibility of Portsmouth as a secondary site if that doesn't work, or - well, wait a minute.

CAPT. LOWELL: If the reason for

an alternate site is for budget considerations, there will be no real budget reduction by going up to another site. So, there's not a major - let me be very clear with everybody - there's not a major cost savings by bringing the HSRP to Washington D.C. I think we have five NOAA employees here, so there are five - I presume everyone else is going to have to travel. Is anybody else in the D.C. area?

(Off-mic comment)

CAPT. LOWELL: Well, exposure.

(Off-mic comment)

CAPT. LOWELL: Yes, yes, it's both, it's both. The guidance on group travel is still being formulated, but I do believe the FACAs are going to be held aside as exceptions to that. Well, yes, we ran into a little bit of trouble. But - so, I guess what I'm saying is as an alternate site, it should almost always be the Silver Spring area.

CHAIR WELLSLAGER: Okay. So, the

decision's then going to be made that Silver Spring will be our back up. And if we can move down to New Orleans in the fall of this year, I would like to propose the Silver Spring meeting be the spring meeting next year, and work from that. So, would people - Jeff?

MEMBER CAROTHERS: I just had a question about Silver Spring. Do we have any stakeholder - I mean, obviously we have government stakeholders. Is there any other stakeholders in the Silver Spring area? I mean, this was probably one of the best meetings we've had with stakeholders, so that's a part of it.

CHAIR WELLSLAGER: Well, okay, let me rephrase that. Instead of Silver Spring, we could go to Annapolis, or Baltimore, or, you know, some of the surrounding areas. I'm just - I'm using that as a geographic location right now. But, Annapolis would probably work, and that wouldn't be a problem there.

We've got BoatUS that we might actually have them help facilitate something there. So, that could be a possibility.

Those in favor of going to the D.C. Metro area for our alternate site, and/or spring meeting in the spring of 2013, can I see a show of hands for that? And discussion, please, I'm sorry.

MEMBER KUDRNA: I would suggest, instead of showing it as an alternate, show a two meeting schedule.

CHAIR WELLSLAGER: Say again.

MEMBER KUDRNA: Show a two meeting schedule, being New Orleans, and the second meeting, spring meeting, being the D.C. area.

CHAIR WELLSLAGER: Okay.

MEMBER KUDRNA: And then if it's rejected because of budget, we'll just flip. But, the argument is, it would be much better to be in D.C. in the spring than in the fall, because you'll have a new Congress in place, and it'd be a more effective meeting.

CHAIR WELLSLAGER: Okay. So, the suggestion was to have a two meeting schedule, the first of those being in New Orleans in the fall, with the spring meeting being in the D.C. area. And if that were to fall apart, the meeting in the fall would be in the Silver Spring area as an alternate.

MEMBER KUDRNA: Yes.

CHAIR WELLSLAGER: Could I have a second on that?

MEMBER CAROTHERS: You may.

CHAIR WELLSLAGER: Very good. Those in favor of that, a show of hands? Those against it? All right then, we will do that. New Orleans will be the next site provided we get people to work with it.

Now, we tried something different this time. We went about with an agenda. We had site visits, which wasn't new. But, we had stakeholders, and then we had stakeholder breakout sessions, where we were able to get down and talk to the users individually, and

formulate a list of needs and praises.

I thought this was good. Does anybody have any feelings that they would like to voice about how the agenda worked, and possible modifications? Larry?

MR. MAYER: Yes, I'd like to make a suggestion, should you have breakout sessions again, and I would suggest that the committee be issued this nice vests outside -

(Laughter)

MR. MAYER: - with different colors, so you know which group we're in.

CHAIR WELLSLAGER: Color coordination, all right. How about if I get a beanie hat with a propeller? We could just have different color propellers. We could do that.

MEMBER FIELDS: I liked it. I thought it was very good.

CHAIR WELLSLAGER: You did?

MEMBER FIELDS: Yes, the one on one with them, we thought that was very good.

CHAIR WELLSLAGER: It was beneficial, and I think the users, instead of sitting back on the outside looking in, having a chance to say, you know, this is something, in an individual setting, a bit more intimate setting, worked out well. So, yes, I was pretty hip to that thing. It was awesome.

MEMBER BRIGHAM: Yes, I think certainly very positive. The challenge is how you package the information. And you can use, actually, specific themes or a sentence, or something in the letter. "The stakeholders from this panel said, or from this group said this."

CHAIR WELLSLAGER: Yes.

MEMBER BRIGHAM: But, the packaging of the whole of the information is a little tricky. I think we should cherry-pick which we are comfortable with, and HSRP like you tried to do a few minutes ago -

CHAIR WELLSLAGER: Right.

MEMBER BRIGHAM: - and pick out a

few that we might report to the administrator. We'll always have the historical record of all the stuff we did, and we should write it up and have it, what we did here. And it's a trial run, so the next time if we go to New Orleans, we'll be a little more attuned to how to do it, and what we want out of it. So, I think it was very positive.

CHAIR WELLSLAGER: Yes, the first step is always the hardest one to make, and that's going to be definitely true with this situation. Joyce, do you have something you want to say?

MEMBER MILLER: I was just going to say I thought it worked well. I made the suggestion before that some introduction of what's being done in the area, at an early time in the meeting, would be useful for us.

CHAIR WELLSLAGER: Okay, okay.

MEMBER FIELDS: As a new person on a panel, it would have been nice to have a little bit more of an introduction. We kind

of started off really cold. I don't know about the other people who were new on the panel, but I had not talked to anybody, so I wasn't really totally kind of clued in as to some of the previous things that you had done, that the panel had done.

You keep talking about the five most wanted, or the ten most wanted, or whatever. I will go back now and search through the panel stuff, and see if I can't find that, but it would have been nice to have some of that historical information, whether it came to us in email or however, before I got here, or at least at the beginning of it.

CHAIR WELLSLAGER: Well, the only problem - I officially didn't know who all the new panel members were -

MEMBER FIELDS: Okay.

CHAIR WELLSLAGER: - because you had not been sworn in yet. And I, because of that, really didn't have any knowledge of who to send anything to. And I think you've got

a very good point. And had I known, that's something that -

MEMBER FIELDS: Well, maybe -

CHAIR WELLSLAGER: - I probably wouldn't have done, but I should have.

MEMBER FIELDS: Yes, maybe it's something that you could have put together, or maybe Kathy could have sent to us. I don't know what the legalities are just yet, of your contacting the new people on the board. But certainly, Kathy could have given us something. And she was very helpful, don't get me wrong. She was very helpful in trying to answer the questions that I had in preparation to come to the meeting.

CHAIR WELLSLAGER: Right.

MEMBER FIELDS: Because I did talk to her a couple of different times. But, it just would have been, I thought, a little bit more -

CAPT. LOWELL: Yes, we'll take that down as an improvement item, without a

doubt. And perhaps we - I don't know whether it's actually included in our welcome aboard letter at this point, but all of the information about the HSRP is on the website.

We didn't really go over FACA law and what it means, but a lot of that is applied as a transparency initiative, so that all the discussions, which is why I have a court reporter here, are required to be logged, and required to be made available to a broader audience.

Nothing is really secret here. You know, the Sunshine Law Act applies. All of the outputs are available on the HSRP website, and we can provide that to all, you know, the URL to everybody, and we need to probably do a better job on the welcome aboard letter, letting you know that these information resources are available, and they should be reviewed.

MEMBER FIELDS: In all fairness to Kathy, she did give me that. When I asked her

about it, she suggested that I could go to the website and take a look, but there's a lot of stuff there. I wasn't quite sure where to start.

CAPT. LOWELL: Yes, there's a lot.

MEMBER FIELDS: And so, my point is, as you're putting together the agenda for the new people, you could have maybe given us some idea of what to expect for the meeting. That would have been useful. Maybe nobody else feels that way, but I do.

CAPT. LOWELL: Well, hopefully when we do this, you know, we bring on new members about five at a time is the way we typically operate, and maybe there's a half a day maybe before the first meeting where we can go over some history or something.

I don't know how we could play that out, but we'll take a notice on how to onboard people a little bit - in a little bit more formalized, information-rich way.

MEMBER DIONNE: I usually go to

the website just to look for specific things, but - so, I'm assuming there is not like an orientation button. But, you could patch this stuff up and just add it to the website.

One thing I was - getting back to the discussion about the stakeholders, if we are - once we find where we're going for the next meeting, there may be specific types of stakeholders we want to invite, based on the discussion we've had at this meeting.

I was thinking about the ferry system in New Orleans, which is rather amazing, and if we wanted them to start collecting data for us, it might be a good idea to bring one of those people on - some of those folks on board for the next meeting.

CHAIR WELLSLAGER: Okay. Lawson?

MEMBER BRIGHAM: Yes, a more procedural thing, we did use stakeholder discussions, and we have these lists of points. And I'm sure I'll get a request here from people I know in Alaska, to have that

list. So, do we clean up the list and put it on the website? But, the problem with that is we don't have consensus among the panelists.

So, we do these activities transparent out in the open here, and that's available information, and it's, you know, it's brainstorming. It's points. It's not any policy statements or anything. So, is that available to the public? I think it is actually.

CAPT. LOWELL: Actually, the output of work groups do not fall under FACA law.

MEMBER BRIGHAM: Not the working groups, we just did open stakeholder public discussions. Not necessarily closed workshop, working group panelist things, but -

CAPT. LOWELL: It's in the public forum, so -

MEMBER BRIGHAM: The last activity, I wonder what that -

CAPT. LOWELL: I think we will

probably create a summary. Obviously, the court reporter was not in all four meetings, so this is going to be a bit of a challenge. Maybe we should talk to one of our FACA advisors as to how we should make that information available.

But, the fact that the breakout sessions might allow us some latitude to make it very much a, you know, a brainstorming free flow of information, and then the report-outs is really what becomes to be on the record.

MEMBER BRIGHAM: Yes, I was just thinking of, we could clean up the lists, since it was a public discussion, it's not attribution, so you don't identify who said what, I don't know. Because we did it in an open forum, in a public forum, people might ask if they could have access to it, and it would be good to say yes, this transparency, I don't know. It requires some clean up of each of the teams. Maybe we could do it.

MS. WATSON: Chair? Lawson?

After every meeting, we post all the presentations. We will also post this information from the stakeholder breakouts, because it is public information. But, we just need maybe a couple of weeks to flesh it out, make it clean. And any user can go to the website and they'll be links, they'll click on it, and it'll pull it up.

CHAIR WELLSLAGER: Okay, so she just answered the question there. It will get cleaned up a little bit. But it will be, since it's FOIA -

MEMBER BRIGHAM: So, it doesn't necessarily need consensus of the panelists, because not all HSRP members were, you know, a couple in each one. So, it doesn't need actually a - only what we need is which ones we picked to put in the letter, right? So, it's just the little nuances of procedure.

But, the answer is yes, it's public information, and people will use it. You know, there's a great list of stuff that

we had, and the other - okay, that answers it I think, Kathy.

MS. WATSON: If the panel decides to list for each breakout, the items, like the Arctic 26, we can put that on there. And then, if the Arctic breakout wants to do a little paragraph summary or whatever, we can - however you want to post that information, we can post it on the website.

MEMBER DIONNE: It sounds like each workgroup had a slightly different context for whatever breakout session they were working under. So, you know, that would be good to add to the front end of the - whatever the output that gets posted.

But, along with Lawson, I think these people within these groups are going to make good use of this information, because it's coming from a fairly high-level source.

MEMBER KUDRNA: Two comments. One, I think as long as it's labeled as a product of that forum, and that recognizes

that the actual letter that comes from our HSRP might not include all of those things, or might edit it, I think that's perfectly appropriate.

But, the other thing I was going to request is, now that we're all legal, to get listening and contact information for the other panel members, and the key NOAA staffers, so that if we needed to contact someone, or email, or be in contact, that would be very useful.

CHAIR WELLSLAGER: Go ahead.

MS. WATSON: Frank, to respond to that, we are working to redo the HSRP website. After I get back, we've got some people that are helping us there in Coast Survey. We're going to make it more user-friendly. We're going to also have like a SharePoint, where all of you as the panel members, can click on, and you can communicate with each other, you know, via kind of like a blog or that kind of format.

MEMBER KUDRNA: As Bill knows, if you're from Chicago, and you're in the Witness Protection Program, it's kind of hard to find you.

(Laughter)

MEMBER KUDRNA: But, we'll make some arrangement.

CHAIR WELLSLAGER: We know where he is.

MEMBER MILLER: Kathy, an updated email list soon would be very useful, just -

MS. WATSON: Well, it is updated. When you type - when I type in HSRP and new panel members, it has all of you on there.

MEMBER MILLER: Oh, okay. All right, good.

MS. WATSON: But, I will send you all a full contact list.

CHAIR WELLSLAGER: Thank you. All right, we've talked about it, but the working groups, some people went off, they're still around, I would like very much, and appreciate

very much, if the new members would consider helping out with either the legislative policy initiatives, the strategic mission, central effectiveness, or emerging Arctic priorities.

Because these have started, and we're not done. We've still got issues to discuss, and things needs help. People are good. Ideas are good. And I request that each of you select one of these, and contact me please, you'll have my email address, as to which one you'd like to be on.

I will forward that to the Chair, and then when working group meetings are held, which are usually done by conference calls. You'll be included in that, and you'll be able to follow up with the policy on that.

(Off-mic comment)

CHAIR WELLSLAGER: Three.

(Off-mic comment)

CHAIR WELLSLAGER: Yes, yes.

CAPT. LOWELL: Then there's that fourth little, mini working group. I don't

know what they call it, the one that's actually putting together a response for the SAB. So, there's three standing working groups, and then one very short-term work group.

CHAIR WELLSLAGER: Right. Lawson?

MEMBER BRIGHAM: When we started out, we discussed the working groups. The language of the one on the Arctic was a working group on Arctic infrastructure. And somehow, in the mystery of our discussions, it's turned out to be emerging priorities.

Arctic emerging priorities is pretty broad. Infrastructure is a little narrower. An infrastructure in the language of the Arctic people is from charts, to ports, to even charts, and even pilot house education is infrastructure.

But, I don't know, maybe keeping it broad is the way to go. But, it might be harder to narrow it down to NOAA specific hydrographic services kind of issues, whereas

infrastructure - I don't know. It's all. We'll play with the terminology and get back to you.

CHAIR WELLSLAGER: Okay.

MEMBER BRIGHAM: It's - maybe it's just nuance in the thing, I don't know.

CHAIR WELLSLAGER: Keeping the scope narrow instead of broader might be good. And if it needs to be infrastructure, I don't have a problem with that.

MEMBER BRIGHAM: Well, you saw in our discussion of emerging issues had 27. In a couple of hours, we could have probably had 100 if we just kept going. So -

(Laughter)

CHAIR WELLSLAGER: It sounds like a chain reaction.

MEMBER BRIGHAM: But, our working group needs to kind of focus in on what are the practical, more narrower we call it, infrastructure issues, I think. One more question, I'm sorry, Matt.

CHAIR WELLSLAGER: Okay.

MEMBER BRIGHAM: So, these will be standing committees for a while anyway. We're not decommissioning any. We're going to just continue on our way.

CHAIR WELLSLAGER: Yes. You know, a lot of what we've done today, and well for that matter, this week, has been focused primarily on Alaska and Alaskan issues. If anybody has any thoughts or concerns or things that they would like to discuss about non-Alaska priorities or topics, and you'd like to bring that up right now, this would be a good time. Joyce?

MEMBER MILLER: It was mentioned briefly in some of the Alaska discussions, but looking at the House mark, and the reinsertion of the NRTs back into the budget by that, I was - when I saw that the NRTs were being zeroed out, I was concerned. And I don't know if other members of the panel think it's of concern, but I think it limits Coast Survey's

flexibility.

And certainly what we've seen from other meetings, where the NRTs have been active, it's an incredibly good PR - I hate that term. But, it has been a very effective way to show how much Coast Survey can bring in a disaster and so forth. And Coast Survey should use all assets, such as contractors and so forth.

But, I just think the NRTs give them a lot of flexibility. Now, whether they need six or four or whatever, you know. But, I just would make the suggestion that in our letter to Dr. Lubchenco, that we might mention that.

I mean, if there's consensus in the group that that's a cause for concern for the NRTs, and that we are for the navigation services, and that we might recommend that it be put back in the budget if it were zeroed out this year, or if it is, you know, whatever.

CHAIR WELLSLAGER: Capt. Lowell, as the DFO, is that something, as a recommendation, that we could make to Dr. L? Does she have any capabilities of getting something like that added back into the budget if it's zeroed out?

CAPT. LOWELL: Well, I think Dr. Sullivan explained the landscape fairly well the other day. You know, we're at a point where the Pres Bud went forward with specific language to eliminate the NRTs. They also took away all the funding for the NRTs.

So, fundamentally what we were faced with, is a reduction in capacity, the ability to collect data, the ability to respond to things. That doesn't mean it doesn't go away, we still have a fleet, we still have a contract budget. But, we have a reduction in capacity.

We now have two marks that have come back, one from the Senate, one from the House. Both have disagreed with the

President's budget elimination of the NRTs. Each one approached it slightly different. Off the top of my head, I don't believe the Senate put money back in, so they - obviously it creates a bit of a challenge for us -

(Laughter)

CAPT. LOWELL: - to allow us to keep them, but then not give us any funds for them. But, then the House marks specifically put back $1.4 million, and the actual budget removal was $2.3 million. I'm kind of going off the top of my head here. So, don't quote me on the exact numbers, but it kind of sets the stage.

So, the next thing that has to happen, is that they'll kind of combine the marks, and we'll get a final budget. We don't know exactly what that's going to look like. But, based on, you know, those differences, my guess is there will be language that says, "Keep the ability to use NRTs in the toolbox of Coast Survey."

It's a little unclear as to exactly how much funds might be in the conference mark, but that - I mean, we're still out there at this point. We don't know exactly what's going to happen, but a letter from this FACA panel to the administrator on, you know, how the President's budget was crafted, is completely - I mean that's what the FACA is for. So, you're providing advice to her.

MEMBER HANSON: Matt?

CHAIR WELLSLAGER: Yes, Bill?

MEMBER HANSON: If I could just follow up just so we can understand a little bit clearer. The assumption is that your office did request the NRT be funded. And then the second question would be, did NOAA leadership include that in their budget request? And at what point was it zeroed out? Was it zeroed out by OMB, or was it zeroed out before that?

CAPT. LOWELL: I'm in the position

where all I can tell you is the President's budget contained the language of the removal of the NRTs, and did not include the funding. And as such, you know, that's - we're members of the executive branch, and we stand behind the President's budget.

VICE CHAIR PERKINS: My understanding was it was GAO that took it out.

CHAIR WELLSLAGER: GAO?

VICE CHAIR PERKINS: Yes. The issue came to my table because there's a different association. And questions were asked, whether a different association that I'm involved with was responsible for removing it. Then when we looked into it, the other association, the information we saw, it appeared that it was removed by GAO.

MEMBER DIONNE: So, GAO is the last word on the President's budget?

VICE CHAIR PERKINS: Well, the Congress has the last word. But, you know -

MEMBER DIONNE: Okay, yes. But,

what they've submitted to Congress? GAO?

CAPT. LOWELL: A quick clarification. I think Bill hit the nail on the head here. There is back and forth between the program and NOAA, then NOAA and Department of Commerce, then Department of Commerce and OMB, and then it becomes a President's budget request.

GAO may or may not have engaged in that process. You know, they have considerable latitude in the games that they wish to play in, and - but, I don't have any specific information about that.

VICE CHAIR PERKINS: The challenge now would be to work at - well, it's in conference committee. Because if it's in the House mark, as we've seen, and it's not in the Senate mark, the only opportunity for restoration is in the conference committee.

CAPT. LOWELL: That's the way the government operates.

MEMBER MILLER: And, Scott -

VICE CHAIR PERKINS: I guess what I'm getting at, is putting it in the letter to the Director isn't going to solve the problem.

MEMBER MILLER: Well - but, it could be for next year. If it doesn't get resolved this year, it might be something that could be different next year. That's - you know, whether - I don't know whether, you know, the administrator supported it or not, you know. We don't know where. But, it - I don't know if it will have any effect or not.

MEMBER HANSON: To Joyce's point though, is to do this year by year based on a conference committee agreement, is not helpful to manage a program. And it would be very helpful for you guys to know that year after year, you don't have that to rely on. It's going to be part of your program.

And that's something we need to make the case for NRT outside these four walls here, that we think it's important, and not just in a letter to the administrator, but to

the folks we deal with on a day to day basis.

CAPT. LOWELL: And just so that everybody is clear, is, you know, all of the executive agencies take note of what is in those marks, both the House, the Senate, and the conference. And we weight that into how we originally put our - even our own office budget together, is we look at what is the intent of the monies that are provided. And so, it's never ignored.

CHAIR WELLSLAGER: Yes, I'm sorry, Frank, go ahead.

MEMBER KUDRNA: First of all, if we think it's important, it should be in the letter, and it should go back to the administrator. And as Bill suggested, we should also personally, or through our organizations, support that. We're not a FACA member privately.

But, the budget scenario may be worse than Captain Lowell described. I mean, you have two marks in the House and Senate,

and something will come out of the conference committee, but there still is this issue of the Congressional agreement to 1.3 trillion dollars worth of cuts, and that falls into something they call sequestration.

And the likelihood, or what I hear in the likelihood is that there will be a continuing resolution for a while, and then they're going to have to deal with those cuts. And the new budget starts in October, so if they don't get around to this until February of next year, you'll be spending at the old rate for five months, and then having to deal with those cuts that could be pretty devastating to a whole series of programs of NOAA.

CAPT. LOWELL: Well, the good news is they never gave us the full amount we had last year to spend on in a continuing resolution.

(Laughter)

CAPT. LOWELL: So, obviously,

we're always told to spend on some percentage less, simply because we don't know what the budget is. So, I just want to make sure that was clear, and that we wait it out on pins and needles as to the final resolution.

CHAIR WELLSLAGER: Lawson?

MEMBER BRIGHAM: Would you entertain an Alaska-specific point for the letter? You asked for other issues, but I -

CHAIR WELLSLAGER: Oh, sure.

MEMBER BRIGHAM: Yes, could we put something in this letter voicing some concern or related to the Port of Anchorage, and the navigation depths, and what we heard? Out of the whole meeting, I thought that was - living here, and having been down to the port, but standing there and looking at shoaled water, and talking to captains, and hearing about the challenges, and then hearing the kind of soft federal response from our friends in the Corps of Engineers, that it didn't seem to be a pressing issue, that they might get around to

surveying. And then someday in the future we might do something about it. I don't know.

As members of the panel, I say this is a serious issue, security, economic issues. And I don't know how you - what the administrator does with that information. Is it useful? I don't know. Maybe ask Captain Lowell whether - should we slip something like that in there? Is it useful, helpful, or a pain, or?

CAPT. LOWELL: I would always caution the panel to not dive down into the weeds too much, because the administrator of NOAA would probably not want to weigh in to a specific small, you know, issue between the Army Corps and in this case the Port of Anchorage. I think she would be very uncomfortable in doing that.

However, if you raise it up to something like we can discuss around here, better federal coordination, put it into something that she can act on without, you

know, causing any kind of internal issues, would be probably more useful. In other words, I would avoid diving down into the weeds and asking her to do something that's probably outside of her -

MEMBER BRIGHAM: Yes, I guess I should start with the report that we got some stakeholder input direct from the mariners that said there's a serious, or very potentially problem here. And then, I weighed in with some view of the DoD and security issue, and said, "Hey, we bring large, you know, support vessels in here, and MSE ships."

And so, I don't know. I just - maybe we could keep it at a higher level. I don't know. I think it's part of our remit here. But, I don't know. It's up to the group really.

MEMBER JAY: I think in the past we have made some pretty specific recommendations about individual partners. I wasn't on the committee, but in New England,

you know, there was quite a response to the problem, and was it Penobscot Bay? I can't remember, I wasn't here.

But, in this case, it sounds like the problem is the Corps of Engineers, and we're reporting to NOAA. And so, even if we were going to report on this particular situation, what is the action item? I mean, better coordination, that sounds, you know, like something that a, you know, that the NOAA administrator can act on. But, getting the port dredged is not, if I understand this correctly.

MEMBER DIONNE: We might want to backcheck on some of that information too, because the - I forget her name, I'm not sure I caught it - the woman who was here from Army Corps told me that the harbor has maintenance dredging every spring. So, I don't know if that's just within the harbor and not the approach, but we might want to just check on that too.

CHAIR WELLSLAGER: I missed that. She said the harbor was going to be dredged in the spring?

MEMBER DIONNE: Maintenance - every spring they do a maintenance dredge.

CAPT. LOWELL: We're talking about three specific areas.

MEMBER DIONNE: So, that doesn't cover the - in the approach, is what we were talking about. Okay.

MEMBER MILLER: Well, the other thing that I was concerned too, but the 30 foot tide range, and that they can get - it narrows their range of when they can get their ships in and out for sure. However, there's only, I think they said four ships per week, in and out of here, in terms of the big container vessels, which are probably the ones that are of concern.

So, they got windows they can get in and out. I guess, if it were a real serious danger to navigation, I'd be very

concerned. But, I'm not quite sure how serious it is. I mean, that would be one question I would ask.

MEMBER BARBOR: I think in either an aside, or maybe in her public comments, we in some sense agreed that a potential recommendation might be the encouragement of coordination with the new Chief of Engineers, who I guess is newly appointed. And that may prove to be a, you know, a way to deal with this.

MEMBER HANSON: And you also have a new number two guy, Mike Walsh, who's just been there for a few months as well. So, there's been some recent changes at the top that would be very good to weigh in at.

CHAIR WELLSLAGER: So, Lawson, I think what we could do instead of specifically stating something like that, coordinate and make a recommendation to include or work with the - is it the Chief Engineer - with the Corps of Engineer on specific projects that

may need consideration. Or what, Joyce?

MEMBER MILLER: Coordination. And just say that it was brought up as a stakeholder issue in Anchorage, something like that.

CHAIR WELLSLAGER: Okay. What's the panel's feel on the NRTs? Should we include something about that in the letter?

MEMBER BARBOR: If there is a consensus that it is a concern of the panel, I think a view with concern is a valid point. And it doesn't say reinstate or whatever, but it's viewed with concern.

CHAIR WELLSLAGER: All right, we can do something then.

MEMBER HANSON: It's one of the things we've identified that NOAA does well. I think it's important for us to advocate for that every chance we get, and make sure it stays in the budget request from NOAA.

CHAIR WELLSLAGER: Okay, one other thing. This is Captain Lowell's final meeting

as the DFO. There will be a transition.

(Laughter)

CHAIR WELLSLAGER: I'd like to thank him for a job very well done. It's been three years, right?

CAPT. LOWELL: That's right, a lot of meetings.

CHAIR WELLSLAGER: Yes, felt like 10?

CAPT. LOWELL: Not that many. There have been a lot of these meetings.

CHAIR WELLSLAGER: There are things taking place right now in the Senate for confirmation. And once confirmation is complete, the transition of the DFO will then occur. In the meantime, I think there's a deputy that you have, or is - I'm not really sure how the transition actually works.

CAPT. LOWELL: I'm not sure we understand exactly how the transition works. But, what I can tell you about the position, number one, Kathy just had up the charter of

the FACA, the HSRP, and what's in the charter is the Director of Coast Survey shall serve as a designated federal official. So, that's kind of in the charter of the commission.

In the case of the Director of Coast Survey, something really wonderful has happened, is the secretary of commerce maybe six months ago, don't quote me on the time line here, actually recognized this position as one of importance and -

MS. WATSON: Here it is, right here.

CAPT. LOWELL: - importance and responsibility. And what that allowed them to do, was raise the grade of the individual in the position. So, my replacement is not going to be a captain, it's going to be what was referred to as a flag officer or a one-star admiral.

So, that is actually showing several things that I hope the panel member takes note of, is that NOAA and Department of

Commerce have recognized the importance of the broader nav services, to not only NOAA, but to the economic well being of the nation. So, that's a really good thing.

Now, of course, all things government, there's an administrative overhead. And on the bad side, is selecting a flag officer requires significantly more administrative overhead.

And that's put us in a position where I'm retiring, and although Captain Glang has actually gone through a flag officer review board, and has been selected, and all the paperwork has gone up through Commerce, to the White House, and it's been announced, it's on the Federal Register, and it's on a docket for Senate review, that's the status of Captain Glang.

So, now we have a position where the director is gone, the new director cannot assume the roles of the position until Senate confirmation, and shouldn't look like they're

acting in that role because the Senate doesn't like that. And they have not concurred.

So, we have a little bit of a gap here, and we don't know what that gap is going to look like. We don't know how long it is. Is it this week or next week? It's supposedly on the calendar for the end of this month, and I don't know the date. For some reason 25th comes to mind.

But, if they don't act at that point, then we're getting closer to the election, and you know, these kind of administrative activities that the Senate is supposed to do, kind of drop in importance. So, we don't know exactly how that's going to play out.

So, why did I explain all this? Number one, is to let everybody know that Commerce has recognized the importance of the nav services. Number two, is we do have a little bit of a gap. Katie Ries, who's my deputy over at Coast Survey, should step up to

be acting director of the office of Coast Survey until such time as the Senate acts on the paperwork that's on their docket at this point.

How things could fall out over the next couple of weeks or months, it's really up in the air at this point. But regardless, if there is no official director of Coast Survey - well, actually, I guess we'll have to get Kathy trained up to be the DFO, designated federal official.

And I know - we've actually utilized some of the other office directors, or we attempted to utilize the other office directors as DFOs in the past. We were corrected by the lawyers, that because they're non-voting panel members, so the director of CO-OPS, and the director of NGS, are officially panel members, they are precluded from the ability to serve as DFO.

So, there isn't - I actually leaned on Juliana once, only to be told that

that was something we couldn't do anymore. So, we're trying to figure that out. I think eventually, if all goes right, Gerd, who has actually gone through the DFO training, when he is selected, when he assumes the position, he will be the DFO.

But, if there is no DFO, or the next meeting occurs and there is no full time director of Coast Survey, there might be an ability to put in an acting DFO, somebody who has gone through the training, and serves that purpose.

So, we're a little bit on the loose side here. We don't know exactly how it's going to play out. So, I just wanted to let everybody know. But, Gerd's about as well trained as we can get him, so.

CHAIR WELLSLAGER: Thank you. That's it. No, that's perfect. All right. Is there any other business that we should address at this time?

MS. WATSON: Chair? Oh, I'm

sorry. Just logistics, because we said the fall meeting. And what I would do, is after I get back, is I'll look at kind of like the calendar.

And usually for budgetary or acquisition purposes, late October, early November is the best time for FY `13. So, I'll actually go in there and look at like maybe propose - I'm presuming a two day meeting in Norfolk, correct?

CHAIR WELLSLAGER: New Orleans.

MS. WATSON: New Orleans. Excuse me, New Orleans, that's usually what we do? Okay. So, I'll propose like one week, and try to get the majority. If not, a second, okay?

CHAIR WELLSLAGER: Just a second. Ken?

MEMBER BARBOR: Following on your initial statement there, I would recommend we put in our letter a recognition of Captain Lowell's service as DFO, and also the acknowledgment that Commerce and NOAA have

elevated their rank of director of Coast Survey.

CHAIR WELLSLAGER: Lawson?

MEMBER BRIGHAM: I just wanted to thank Matt Forney for pulling together all of the stakeholders, Kathy helping. But local, Matt did a great job. He did a great job of pulling the right stakeholders. We got a lot of them to come. So, great job. Thank you.

(Applause)

CHAIR WELLSLAGER: Last piece of business before we close the meeting, oh, I'm sorry, Michele?

MEMBER DIONNE: Yes, I just wanted to thank you, Matt, for taking on the mantle of Chair for this group.

(Laughter)

CHAIR WELLSLAGER: Thank you.

MEMBER DIONNE: It was a great meeting.

CHAIR WELLSLAGER: Thank you very much.

(Applause)

CHAIR WELLSLAGER: Public comments. Does anybody here have something they would like to address to the panel? I'm sorry, I couldn't see you, yes? Have a mic.

MS. RIDGWAY: I know you've all had a very long, and hopefully productive meeting. And thanks again for coming to Alaska. I'm really, really glad to see you here.

I introduced myself earlier, I'm Michelle Ridgway. In addition to some of the other things I've spoken to so many members about, I also serve on the Federal Advisory Committee for marine protected areas on the Coastal Marine Spatial Planning Subcommittee. I know many members of that subcommittee are very grateful for the work you're doing to try to advance hydrographic survey, and release of services through your work.

I also serve on the State of Alaska's Cruise Ship Science & Technology

Panel. We're wrestling with a lot of issues related to navigation of Arctic ships, and again, many people are very tuned in to what you're doing, and very grateful for your establishing of priorities for navigational mapping.

On a very personal level, I'm a marine biologist. I'm a lifelong Alaskan. I pilot ships. I sail. I pilot submarines. I pilot ROVs all over the state. And the work that you're doing is extremely valuable to establish priorities for improving, not only safety at sea, but also our understanding of the sea floor around here.

As an ecologist, I mentioned earlier that we use habitat data to establish our rockfish quotas. In a lot of Alaska, that data is now coming from multibeam sitters that are on many of the vessels that you have some means to make recommendations for their deployment schedules.

And more specifically, recently

we've been wrestling with a very, very difficult issue in the state. We have a dire situation with regards to our king crab populations across the Bering Sea. We have a very low population of king crab. We've been trying to understand why they're not recovering.

And we recently did a pilot study with NOAA while they were conducting a navigational survey using standard protocols, we asked the question, can the data from that multibeam and backscatter actually help us understand specifically where essential fish habitat is for the baby king crab that don't seem to be recruiting to maturity?

So, we ran the pilot tests up near the Pribilof Islands on a contracted ship, the sister ship of the Fairweather, and found out that by using that backscatter component of the multibeam survey, we were able to bang on identify this special habitat, which is called shell hash. It's crushed up seashells.

But, that multibeam could very clearly distinguish it from other habitats that are not valuable to these juvenile crab, and help us further our understanding of what's going on with the ecology of that species. So, there are many applications of the work that you do.

I do have a couple of suggestions, even though you've discussed your recommendations. One, Forney recommended earlier that - or suggested, that under this Article 3, there's some agreement with the industry to use more of the Shell's future data.

There's a lot of data housed currently at Department of Interior, BOEM. They have a lot of data that was collected for arctic bathymetry that exists there now. And I would strongly encourage you to continue to recommend, that as a means of gaining more coverage efficiently, which is the name of the game, be creative, be cost effective, to try

to access that multibeam data that has been already collected by the industry in the US Arctic. You've seen the gaps, they're massive. Let's try to fill those gaps as efficiently as possible.

And my final suggestion is toward the same end. National Science Foundation and other entities, but primarily NSF, has been fortunately funding a tremendous amount of research in the US Arctic, the Bering Sea, and the Gulf of Alaska.

We have the Healy. We have the Tommy Thompson and other ships, that fortunately are now equipped with multibeam acquiring apparatus. They got great transducers, great equipment. And I know this is not within the purview of the recommendations for the panel, but maybe as you recommend to NOAA and IOCM, that they continue to reach out and encourage NSF, to encourage everyone that's funded with public money, to continue to acquire multibeam data

in such a fashion that it could be used and incorporated into the surveys.

Even go so far potentially to strategically request that they fill in gaps in some of the highest priority areas for navigation and safety. Thanks again for coming up to Alaska. It was very nice to meet all of you.

CHAIR WELLSLAGER: Anybody else? Jon, you don't have anything to say?

(Laughter)

CHAIR WELLSLAGER: Thank you - oh, Michele?

MEMBER DIONNE: So, based on that comment, is there something that we're going to - would that be a specific item that we could add to our - okay. John's - thinking it's too detailed?

CAPT. LOWELL: Well -

MEMBER DIONNE: I mean, just at the agency level, some sort of -

CAPT. LOWELL: I was going to

throw out IOCM and an update for this panel, especially because of the large number of new members, would be very appropriate for the next meeting. I think it's key to get everybody up to speed on where we're at on IOCM.

We do have a new leader in place. We're starting to put in place new policies and procedures. We are working closely with NSF to - when they do collect data, that it's preserved in a way, and delivered to the archive in a way that other people can use it.

Now, how effective it is, and how we're measuring that, I'm not exactly sure. But, I think it would be very useful for this panel to get an update on IOCM - all the IOCM activities that are underway at this point. And now getting back to your specific question, which was -

MEMBER DIONNE: Well, I just wanted to make sure we captured some of that

comment - or I was asking, I guess, whether we would capture the content of that comment in our letter to the administrator.

CAPT. LOWELL: The question is, what is she going to do with that information? And that's more of a comment to the offices.

MEMBER DIONNE: She'd probably talk to the folks at NSF, right? Yes, whatever the appropriate destination is, it would be nice to encourage, you know, again, collaboration, communication with some of the partner agencies that are - you know, we spent a lot of time at this meeting talking about all these different data streams hanging out in different places, not being standardized, all that stuff. So, it would be good to capture a little bit of that.

CAPT. LOWELL: Well, you could certainly put it in a letter, and her response would say, "We are working closely with NSF, and we have procedures in place."

MEMBER DIONNE: Right. And as far

as you know, they're collecting the data in a way that is acceptable to us?

CAPT. LOWELL: Yes. Which is very important for that IOCM update, because, I mean, there are new IOCM mapping standards that are now published and available. There are new programs, both with NSF and with non-hydro NOAA ships, to collect multibeam data. But, there's quite a bit to update the panel on.

MEMBER DIONNE: And there are people at NSF that automatically get this information, right?

CAPT. LOWELL: Automatically get this information?

MEMBER DIONNE: Yes, on an email or, you know, the new standards you were just saying, do the people at NSF that are involved with the equipment that were installed on these new boats, would automatically be in that loop?

CAPT. LOWELL: Yes, there is an

active National Science Foundation. It's called Rolling Deck to Repository program, where they're supposed to be collecting multibeam data basically in any area of opportunity.

MEMBER DIONNE: According to the standards that just came out?

CAPT. LOWELL: According to the standards, right.

CHAIR WELLSLAGER: Joyce?

MEMBER MILLER: That was - I mean, this was some of the requests and discussion in the panel. I think what the previous speaker requested was - is probably encompassed to some extent in our - in the data collection panel. Yes, so.

CHAIR WELLSLAGER: Yes, sir?

MR. DASLER: You talked me into it. Oh, good, it's still on. Yes, I would just say in regards to IOCM, I mean, that was one thing we pushed on the panel before, was NOAA really, kind of take that first step in

going forward in collecting data that's valuable to fisheries. And I'd really like to congratulate NOAA on now setting the standard to collect also backscatter information.

So, that's really not needed for charting, and it's an added effort. It's more data that needs to be collected and archived, but that's being done now with the contractors and NOAA are offering backscatter information that's being used.

And so, taking that first step, I think is very valuable in getting others all on board to meet the best standards for the best available data, and could be used for the most public benefit. And I think that's really been great in moving that forward, and I'd like to congratulate you on that.

And also, for everybody coming up to Alaska, and looking at what's going on up here, and the needs, and moving this forward in the next few years with NOAA. I think that's great. Thank you.

CHAIR WELLSLAGER: Thanks, Jon. Well, I would like to thank all of you all as panel members, for making this a very memorable first meeting to chair. It was interesting, at times a little daunting. And I cut my teeth with it, so this was good.

And I would like to also thank the public for attending this, because without your input, none of this would have been happening. This is very important and very helpful, so thank you.

And Kathy, thank you very much for helping get everything together. You've done a wonderful job.

(Applause)

CHAIR WELLSLAGER: Anything else? Meeting adjourned.

(Whereupon, the above-entitled matter was adjourned at 4:21 p.m.)

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C E R T I F I C A T E

This is to certify that the foregoing transcript

In the matter of: Hydrographic Services Review Panel

Before: NOAA

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Place: Anchorage, AK

was duly recorded and accurately transcribed under my direction; further, that said transcript is a true and accurate record of the proceedings.

Neal R. Gross

Court Reporter