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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
HYDROGRAPHIC SERVICES REVIEW PANEL MEETING

TRANSCRIPT OF PROCEEDINGS
SAN FRANCISCO, CALIFORNIA
JULY 29, 2008

ATKINSON-BAKER, INC.

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REPORTED BY: DAWN A. STARK, CSR NO. 7847

FILE NO. A206AA5

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NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
HYDROGRAPHIC SERVICES REVIEW PANEL MEETING

TRANSCRIPT OF PROCEEDINGS, taken at 2500 Mason
Street, San Francisco, California, commencing at
8:18 a.m., Tuesday, July 29, 2008, before Dawn A. Stark,
CSR No. 7847.

HSRP ATTENDEES

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SAN FRANCISCO HSRP PANEL MEMBERS:

- JONATHAN L. DASLER
- ELAINE L. DICKINSON
- SHERRI L. HICKMAN
- THOMAS JACOBSEN
- GARY ALAN JEFFRESS
- R. ADAM McBRIDE
- TOM SKINNER
- EDMUND WELCH
- MATTHEW WELLSLAGER
- RICHARD D. WEST
- LARRY WHITING

OTHER ATTENDEES/SPEAKERS:

- ANDY ARMSTRONG
- CAPTAIN STEVEN BARNUM
- ASHLEY CHAPPELL
- JACK DUNNIGAN
- DAVID ENABNIT
- AMY HOLMAN
- ROGER PARSONS

1 OTHER ATTENDEES/SPEAKERS (CONTINUED):

2

3 MICHAEL SERAFIN

4 MICHAEL SZABADOS

5 JULIANNA THOMAS

6 EDWARD VAN DEN AMEELE

7 BRUCE VOGT

8 DAVID ZILKOSKI

9

10 HSRP COORDINATION TEAM:

11 VIRGINIA DENTLER

12 DANIELLE STUBY

13 KATHY WATSON

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1 SAN FRANCISCO, CALIFORNIA; TUESDAY, JULY 29, 2008;

2 8:18 A.M.

3 - - -

4 CAPTAIN BARNUM: Good morning, everybody.

5 I'm Captain Steven Barnum. I'm the designated
6 federal official.

7 The first thing I'd like to point out is the
8 emergency evacuation information, and the restrooms,
9 elevator, and escalator locations.

10 The emergency evacuation is right outside this
11 hallway here.

12 You go out the door, to the right, to the deck,
13 to the pool, to evacuate the building. We'll hear the
14 alarms and the lights and siren that will come on and
15 make a lot of noise.

16 So, I'll just point out that.

17 The restrooms are located -- I know there's a
18 set of restrooms on the other side of the check-in desk,
19 when you came in, in the front.

20 I'm looking at my map here.

21 (Reviewing document.)

22 Here they are here.

23 They're down to the left, when you go out the
24 door right here. To the left is the men's and women's
25 restrooms, right out the corner here.

1 Lunch here will be provided for the HSRP
2 members.

3 There's a dinner tonight at the Bistro Boudin.
4 Everybody that hasn't picked out anything on the agenda
5 for the menu, please see Virginia. I think most folks
6 have, but any questions about that, see Virginia at the
7 break.

8 The notebooks and certs are on the table, so
9 please take a note of those and place them in the correct
10 position, please.

11 The microphones are familiar. I think they're
12 what we've used in the past. Just push to talk.

13 Please, when you speak, state your name, and
14 speak clearly and slowly so our court reporter, Dawn
15 Stark, over here in the corner, can capture that for our
16 future notes.

17 I ask that you please silence your phones and
18 pagers, if you haven't already done so.

19 The public, please sign in. There's a sign-in
20 sheet on the back table back here, so if the public would
21 sign in, I'd appreciate that.

22 I'd like to remind the panel members, as well
23 as the public, of the mission goals of the Hydrographic
24 Services Review Panel.

25 The HSRP is governed by the Federal Advisory

1 Committee Act, and was established by the Hydrographic
2 Services Improvement Act amendments of 2002.

3 This panel is charged with advising the NOAA
4 administrator on matters specified in the Hydrographic
5 Services Improvement Act specifically related to
6 hydrographic services.

7 In a nutshell, hydrographic services are those
8 services provided by three program offices within NOAA.
9 That's the National Geodetic Survey, the Center for
10 Operational Oceanographic Products and Services, and the
11 Office of Coast Survey.

12 The panel membership consists of 15 voting
13 members. Those are nongovernment employees, appointed
14 based on their particular expertise.

15 Members of the panel do not represent the
16 organization or the entities they are employed by, but,
17 again, they are on the panel by the mere fact of their
18 particular expertise.

19 The members are appointed to serve four-year
20 terms.

21 There are three nonvoting members consisting of
22 government employees, one being Andy Armstrong, the
23 codirector of the Joint Hydrographic Center, and there
24 are provisions for two additional government employees.

25 Those are currently the director of the

1 National Geodetic Survey and the director of the Center
2 for Operational Oceanographic Products and Services.

3 That's Dave Zilkoski and Michael Szabados,
4 respectively.

5 There is one additional nonvoting member that
6 is Andy's counterpart from the University of
7 New Hampshire, the other codirector of the Joint
8 Hydrographic Center.

9 Our meetings are required to be held minimally
10 twice a year.

11 With that, I'll pass it to Jack.

12 MR. DUNNIGAN: Thank you very much.

13 Good morning, everybody. Welcome.

14 Nice to see everyone here. Nice to be in
15 California again. Nice to be in the Bay Area again.

16 This is a particularly interesting area for us
17 and for NOAA.

18 This is the part of the world where George
19 Davidson, 150 or so years ago, really began to blaze and
20 put together the whole network of coastal mapping and
21 geodesy that supports maritime transportation and
22 recreation, and all of the living, working, and playing
23 that we do in America's coasts.

24 So, from the standpoint of the history of our
25 agency, this is a pretty important part of the country.

1 Of course, even today, 50 percent of all of the
2 goods that come into America on boat come in through the
3 State of California.

4 This is the place here where, in San Francisco,
5 two years ago, we carried out our very large safe seas
6 drill to get some experience within our system and the
7 Coast Guard and partner agencies in the private sector in
8 how to deal with large spills as they happen.

9 We got to put all of that to good use last
10 December when the Cosco Busan ran into the Bay Bridge.

11 So, we not only got to train and drill, but we
12 actually got to do the things that we need to do.

13 This is a coast that is dominated by national
14 marine sanctuaries. There are four of them, essentially,
15 that run from Santa Barbara all the way to well north of
16 San Francisco Bay.

17 We also have some of our neatest national
18 estuary and research reserves here.

19 I got to visit the San Francisco Bay NERRS
20 yesterday and see some of the interesting things.

21 It's interesting that at our site at China
22 Camp -- China Camp was a place where a large immigrant
23 population from China, for a long, long time, conducted
24 shrimp fishing.

25 I never thought of San Francisco Bay as a

1 shrimp fishery, but it was a very large shrimp fishery.
2 It was actually an export fishery. It sent a lot of
3 dried shrimp back to Asia, and into China in particular.

4 There's one guy left. His name is Frank Wong,
5 and he lives in the state park, right on the beach at
6 China Camp.

7 I had a chance to talk to him yesterday about
8 changes that have happened and the loss of fresh water
9 inflows to the Bay and what it's done to the ecosystems.

10 The whole water issue, I think, becomes pretty
11 clear to Californians, and it's an issue that all of our
12 grandchildren are going to be dealing with as they live
13 their lives a couple decades from now.

14 So, it's going to be tough. There's a lot of
15 that that's happening.

16 Last year, I had the chance to go to our NERRS
17 site at Elkhorn Slough, which is really a dramatic and
18 exciting place.

19 We installed a CORS station and a new geodetic
20 marker while they were there dedicating the new
21 educational building.

22 I understand we have representation on our
23 panel this morning from the Elkhorn Slough site.

24 So, the other thing about this part of the
25 world is that the citizens of the State of California

1 made a major effort or commitment to install HF radar
2 along their whole coast.

3 That system is being built out.

4 Yesterday, over in Tiburon, I had the
5 opportunity to see some of the operational outposts.

6 This wasn't just a bond issue that got
7 approved; they're actually following through in doing it.

8 So, you can get very accurate and very
9 real-time readings of what's happening in the currents in
10 the ocean off of large sections, probably about half
11 right now, of the State of California.

12 So, a lot of very interesting things for us as
13 we think about maritime transportation and its future are
14 being played out here.

15 So, I think it's a good thing that we're having
16 the opportunity to have this meeting in San Francisco.

17 A lot of interesting things have happened since
18 the last time we got together.

19 I guess this is probably the first time most of
20 you have seen the new haircut. I just wanted you to know
21 that it's really so I could feel the wind a little bit
22 better when I'm out on the sailboat, and it works quite
23 well.

24 The CMTS national strategy has finally been
25 released by the interagency process and is now being

1 picked up on.

2 We're going to talk a little bit more about
3 that.

4 What's important about that, and I think what's
5 important to the committee, is a sense of change that's
6 happening right now in our government.

7 We are going to have a new government beginning
8 on January the 20th, and there a lot of folks that are
9 beginning to try to figure out how to get a whole wide
10 array of issues before our new leadership when they show.

11 Certainly, the maritime transportation issues,
12 as we all know, are among the most critical to our
13 environmental and our economic future.

14 So, the CMTS national strategy, I think, is
15 coming out at a good time as agencies get ready for
16 moving forward.

17 Not all of our news is good.

18 Yesterday, the United States Senate dealt the
19 death blow to a whole series of bills of legislation that
20 we've been working very hard on, and I know the committee
21 has been working very hard on for some time.

22 It's really too bad, but the Hydrographic
23 Services Improvement Act was in that.

24 The National Undersea Research Program Act was
25 in that group.

1 Our Integrated Ocean and Coastal Mapping Act,
2 National Sea Grant Reauthorization Bill, and our IOOS
3 legislation all went down to defeat yesterday because
4 they had a vote of 52 to 40, which meant they couldn't
5 get closure.

6 There aren't 40 people in the Senate who don't
7 like these bills, but the fact is this got tied up in the
8 larger political issues that are going on with
9 Republicans arguing, as a strategy, "How can we deal with
10 these things when we're not dealing with the energy
11 crisis and gas prices?"

12 So, that was the way the day went yesterday,
13 and unfortunately, those are gone, unfortunately.

14 We are not, and we're going to have as much
15 energy, I think, as we get ready to get started again
16 with a new Congress in January and try to get these
17 things back on the table.

18 On the international level, the Senate Foreign
19 Relations Committee has approved the amendments to the
20 International Hydrographic Organization protocol.

21 So, that's really important for our programs --
22 our hydrography programs that are working collaboratively
23 around the world, to have a moderate and more effective
24 IHO.

25 Captain Barnum, of course, as the hydrographer

1 of the U.S., is our representative to that, and I know
2 he's worked very hard to bring that about.

3 We're also trying to do our best to till the
4 fields.

5 We've got a couple of large legislative trips
6 that will be coming for Congressional staff, both in
7 Seattle and in L.A./Long Beach next month, so we'll be
8 getting folks that can help deal with our future out to
9 understand and see better what is going on, and the
10 importance of maritime transportation to the country.

11 If I had anything to say to you today, I think
12 I would encourage you to be looking forward.

13 The great work -- the really great work that
14 you all did to get us to the list of the Five Most
15 Important Things -- and that's something that we keep
16 coming back to a lot in Washington as we do our planning
17 and our programming and talking to potential new leaders
18 and talking to the Hill.

19 We say, "Hey, we got this. This is not just
20 us; this is the stakeholder community telling us that
21 their future is tied up, and we need to work on these
22 things."

23 So, what I would say is we need to start
24 thinking about moving beyond that.

25 That's a great report. We're not putting it on

1 the shelf and leaving it there, but I think that the
2 committee needs to be thinking about the future and what
3 might be happening on or after January 20th, and what
4 might be happening with the 111th Congress when it comes
5 in, in the first week of January next year.

6 What are the messages, in particular, looking
7 forward, that you want to have an opportunity to bring?

8 The other thing you have to think about is:
9 I'm going to get -- well, I'm not going to get directly a
10 new boss, Mary Glackin will stay with us, but Mary and I
11 will get a new boss sometime next year.

12 Who's that going to be?

13 What about the departmental leadership? Are
14 they going to be attuned to the needs of the oceans and
15 of maritime transportation?

16 How is the community at large going to be
17 influencing and affecting those very political decisions
18 that will be made?

19 So, I think those are the kinds of things that
20 you need to talk to each other about, if not around the
21 table, then certainly on the margins and in your
22 follow-up e-mails, as you have an opportunity to move
23 forward.

24 Tom and Ed did a really good job when they came
25 and talked to Mary after the last meeting. I was out of

1 town, but she told me later that she thought that the
2 committee, you know, was still moving forward.

3 She wasn't able to make this meeting this week,
4 but I know she'd love to have a chance to sit down and
5 listen to you and talk to you in some more detail, maybe
6 next time we get together.

7 So, we appreciate that.

8 Again, from my standpoint, thank you very much.
9 It's good to see you all, and good to be back.

10 I think we'll have a good couple of days. Take
11 care.

12 CAPTAIN BARNUM: Thank you, Jack.

13 Now, with that, Tom?

14 MR. SKINNER: Thanks, Steve, and thanks, Jack,
15 again, for being here.

16 I know that the entire panel appreciates the
17 time that you devote to this panel and its -- every time,
18 I think we're amazed that you carve out that much time
19 for us.

20 So, thank you very much.

21 My name is Tom Skinner.

22 I want to apologize to the people behind us.
23 We haven't figured out a way to not have our backs
24 towards you for these meetings, so our apologies.

25 As we go forward, I think, first of all, if we

1 could, let's just go around once again and have each of
2 the people at the table introduce themselves. That would
3 be great.

4 Starting with Admiral West.

5 ADMIRAL WEST: Admiral West.

6 MR. SKINNER: You can tell us a one-liner about
7 yourself, but keep it clean.

8 ADMIRAL WEST: Okay. Then I'll pass.

9 Most of you know that -- the last time we met,
10 I was still working; I'm now retired.

11 I sit on three advisory committees, all related
12 to the ocean.

13 What Jack said just about the Senate is what I
14 predicted, which is really, really disappointing for all
15 of us that worked on the ocean stuff.

16 There were five or six bills in there that were
17 really, really important to us. That's really a downer,
18 and unfortunately, it's going to take a year or two
19 before we can recover from all this.

20 Along with that, it's probably most likely a
21 year-long CR, so that's just -- we're going to basically
22 be frozen in place for a while, and that really hurts the
23 ocean business.

24 So, that's really a disappointment.

25 Anyway, I spent a lot of time on the ocean. I

1 retired from the ocean leadership on 1 January.

2 I sit on some federal advisory committees.

3 I try to play a little golf.

4 I attend all my HSRP meetings faithfully.

5 MR. DASLER: Jon Dasler with David Evans, as
6 associate director of Marine Services.

7 We do hydrographic work for NOAA as one of the
8 NOAA contractors, and I also work for Mike's shop,
9 CO-OPS, doing maintenance and installation of tide
10 maintenance in Alaska.

11 I also serve on the Hydrographic Certification
12 Board through the American Congress on Surveying and
13 Mapping.

14 MS. HICKMAN: Sherri Hickman, pilot on the
15 Houston ship channel.

16 MR. WHITING: Larry Whiting, retired
17 hydrographic surveyor, formerly with TerraSond.

18 MR. ZILKOSKI: Dave Zilkoski, the director of
19 National Geodetic Survey.

20 I work for Jack.

21 MR. JEFFRESS: Gary Jeffress, professor of
22 Geographic Information Science at Texas A&M University,
23 Corpus Christi.

24 We have an endowed institute for the Conrad
25 Blucher Institute for Surveying and Science, which I'm

1 also director of.

2 We also run the Texas Coastal Ocean Observation
3 Network, which is a series of tide gauges integrated with
4 the National Ocean Service.

5 MR. ARMSTRONG: I'm Andy Armstrong.

6 I'm the NOAA -- codirector of the NOAA
7 University of New Hampshire Joint Hydrographic Center in
8 Durham, New Hampshire.

9 MR. WELCH: I'm Ed Welch from Alexandria,
10 Virginia.

11 I do legislative services for marine groups,
12 such as the Union of Greek Shipowners and the
13 U.S. Passenger Vessel Association.

14 MS. WATSON: Kathy Watson, NOAA Office of Coast
15 Survey and CO-OPS.

16 MR. WELLSLAGER: Matt Wellslager, South
17 Carolina Geodetic Survey.

18 I'm a program manager there, and I'm also the
19 program director of the Real-time Network in
20 South Carolina.

21 MR. JACOBSEN: Tom Jacobsen, president of
22 Long Beach Harbor Pilots.

23 MR. SZABADOS: Mike Szabados, director of
24 CO-OPS.

25 MS. STUBY: Danielle Stuby with NGS staff.

1 MS. DENTLER: Virginia Dentler with the Center
2 for Operational Oceanographic Products and Services,
3 CO-OPS, and staff for NGS.

4 MR. SKINNER: One person that's missing, that
5 has been a mainstay here is, of course, Barbara Hess.

6 Some said it wasn't possible to have a meeting
7 without her, but we're very pleased that the NOAA staff
8 put together such an excellent meeting, with the help
9 from Virginia, Danielle, and Ashley, and also our new
10 staff person, who, if you haven't met, please introduce
11 yourself, Kathy Watson over here.

12 We also had help from many of the NOAA field
13 staff here, including Gerry Wheaton, Becky Smyth, Jordan
14 Stout, and Dave Enabnit, who are either in this area or
15 with the different NOAA programs.

16 So, we very much appreciate their help, as
17 well.

18 There were some frantic e-mails and phone calls
19 putting this together, but it all came together.

20 I think we have a great agenda, so thank you
21 all very much.

22 Moving into the agenda, I think we have a
23 couple of meeting minutes to approve.

24 Starting with the one in Tab A, from March 7th,
25 I have a couple of minor suggestions.

1 On page 1, the second paragraph, at the time,
2 actually, I was the acting chair.

3 MS. WATSON: You can correct that.

4 MR. SKINNER: There's also, in the first
5 paragraph, "All voting members attended except XX."

6 I don't have that answer for you.

7 MS. DENTLER: Yes, we have the answer.

8 MR. SKINNER: Okay. The only other thing that
9 I found was on page 3, the paragraph that starts, "On
10 Recommendation 2," putting in the quotes at the end of
11 that sentence.

12 MS. DENTLER: Okay.

13 MR. SKINNER: Any other suggestions?

14 I guess we need a motion to accept the minutes.

15 MR. WELLSLAGER: So moved.

16 MR. SKINNER: Second?

17 MR. SZABADOS: I'll second.

18 MR. SKINNER: Any discussion?

19 All in favor?

20 ALL: Aye.

21 MR. SKINNER: Any opposed? Any abstentions?

22 They're approved.

23 The same on Tab 2, the teleconference call on
24 April 18th.

25 I don't have any changes.

1 Anyone else? Any comments on those?

2 Motion to accept?

3 MS. HICKMAN: I'll move.

4 MR. SKINNER: Second?

5 MR. WELLSLAGER: I'll second.

6 MR. SKINNER: Any discussion?

7 All in favor?

8 ALL: Aye.

9 MR. SKINNER: Any opposed? Any abstentions?

10 They are approved. Thank you very much.

11 A couple of updates.

12 Just about a month ago, the Coastal Society had
13 its -- every two years, they have an annual conference.

14 It was held in Redondo Beach, here in California.

15 There was a panel that Roger Parsons put
16 together on Ocean and Coastal Mapping.

17 We had a great panel, including Bruce Carlisle,
18 who spoke at the March meeting; Representative Debbie
19 Boone from Oregon, representing the State interest; we
20 had Dr. Gary Green from a nonprofit organization; and
21 then Roger and John Haines from the U.S. Geological
22 Survey providing the federal perspective.

23 It was a really good presentation.

24 I think that Roger -- I can't speak into the
25 microphone and look at you at the same time, but he did a

1 great job pulling the panel together.

2 We got a good turnout.

3 I think that the interest that was shown was
4 demonstrated by the fact that the presentations lasted
5 about 40 or 50 minutes; there was another 40 or
6 50 minutes' worth of discussion and informal
7 conversations; and finally, hotel staff came to clean up
8 the room and that closed the session.

9 So, I think it was a very productive meeting,
10 and thanks very much, again, Roger, for putting that
11 together and to NOAA for sponsoring the panel.

12 On the agenda, it looks like it was one
13 meeting, but it was actually two.

14 The second one with Mary Glackin, that Ed and I
15 went to with Bruce Vogt -- and Admiral West, we missed
16 your attendance, but we understand flooded waters kept
17 you from being there.

18 The summary is in the notebook, so I won't go
19 through that entirely.

20 I wanted to point out two things that are in
21 there, one of which Jack alluded to, which was the need
22 to have a transition strategy.

23 This is something that the Undersecretary had
24 suggested that our panel spend some time on, figuring out
25 a strategy for working with the new administration coming

1 up.

2 I think in the coming weeks, we may be talking
3 to both Steve and Jack, and also Bruce Vogt, on how to do
4 that.

5 The other item that you mentioned was the sort
6 of cross-pollinization of advisory panels.

7 I think the success of Admiral West, which we
8 will hear about, with the Science Advisory Board, sparked
9 a lot of interest and the need to really be effective to
10 do that with our panels, as well.

11 So, we'll also be working on that.

12 Any questions so far?

13 Admiral, would you like to give a summary of
14 your presentation?

15 ADMIRAL WEST: The briefing I gave was
16 basically what we worked on in Miami. We spent a lot of
17 time on it.

18 There were a lot of tweaks towards the end that
19 (inaudible) you really put me up to. We really made a
20 lot of little changes right at the end, so thanks for all
21 that work.

22 For all of you who are not familiar with -- the
23 SAB, it is a federal advisory committee to the leadership
24 of NOAA.

25 Because NOAA is a science-based mission, that's

1 what its purpose was, but it was not related to the other
2 federal advisory committees within NOAA.

3 There are a lot of other ones related to NOAA,
4 so there was an initiative to try to get some of the
5 other factors to brief the SAB.

6 It turns out it was a great briefing because
7 all the leadership was there. I was there, Mary was
8 there, Shaunti was there.

9 I mean, everybody was there, and that's
10 unusual. I asked for a bridge meeting three times, and
11 this is the first time that we got all the key players
12 there.

13 One of the comments I made was most people
14 don't know what hydrographic services is, and then
15 there's a lot more people who don't realize it's in NOAA,
16 even people in NOAA.

17 So, we started from there, so the -- the bridge
18 meeting went really well. It's in there, so we won't
19 talk too much about it.

20 There's some formal minutes of the SAB that
21 were put in. They're kind of vanilla, but Barb was
22 there, and she wrote lots of notes.

23 Does everybody have these notes that Barb
24 wrote?

25 We can do that tomorrow afternoon, how it went.

1 (Inaudible.)

2 Barbara's notes were particularly good.

3 Two things out of the briefing: There was a
4 lot of good feedback from several folks, from (inaudible)
5 all the way down. Even Sean O'Keefe grabbed me outside
6 and said it was really informative.

7 A lot of people don't know what hydroservices
8 are and don't realize the important role that NOAA has,
9 because isn't that MRAD or (inaudible) no, it's in NOAA.

10 Back to my theme that I kind of bring up every
11 time we meet, which is that NOAA needs to do a better job
12 of telling people what they do and the responsibilities.

13 That report that we talked about post-Katrina
14 never did come out, as far as I know.

15 Those are the type of things that -- it relates
16 to hydroservice, but it relates overall to NOAA.

17 Other than that, I thought it went really well.

18 There was good feedback.

19 It kind of set up the leadership of NOAA to let
20 them know who we are; to follow on to Tom and Ed's visit
21 with Mary.

22 I think you talked to Bill Brennan real quick?

23 MR. SKINNER: Yes.

24 ADMIRAL WEST: That's good.

25 I think the most key comment came from a couple

1 folks, who were, "This is the way a Federal Advisory
2 Committee ought to work," talking about this one here.

3 So, it's in the quotes here that Barb took
4 down.

5 Well done to you all. I thought it really went
6 well, and we need to keep this going.

7 As Jack says, we got them now, so what are we
8 going to do with them?

9 I thought the bridge team went well, and we
10 should keep it alive and keep it updated and keep using
11 it.

12 MR. SKINNER: Very good. Thank you.

13 Any questions on the presentation?

14 I think, Jack, you're back up again with a
15 budget overview.

16 MR. DUNNIGAN: I'm going to have some comments,
17 and I think I'm going to ask Ashley to run me through the
18 numbers here, and then I'm going to talk a little bit
19 about what I see as some of the complications of this.

20 So, we're going to tag team here.

21 MR. SKINNER: This is in Tab E of your
22 notebook.

23 MS. CHAPPELL: This is Ashley Chappell on the
24 budget.

25 I think we've had a bit of budget information

1 already with the -- that Jack already mentioned, about
2 the bills and the possibility of continuing resolutions.

3 Basically, where we are with FY '09 is that the
4 Commerce/Justice/State bill has been assessed by the
5 Appropriations Subcommittee.

6 There's no plan to go to conference any time
7 soon.

8 As Admiral West says, we see a continuing
9 resolution on the horizon, a year possibly, ideally. Of
10 course, we'd like that to end sooner, but that's where we
11 see things now.

12 Next slide, please.

13 I just wanted to quickly remind you of the
14 things that are in the '09 President's request -- the
15 2009 request.

16 I think you've seen these before, of course, at
17 the last meeting.

18 In the mapping and charting line, which is
19 generally the Office of Coast Survey budget, we have some
20 ATBs, or adjustments to base, for inflation.

21 We have a \$1 million increase to support Ping
22 to chart improvements, which is to get data from the
23 hydrographic survey vessels to the mariner more quickly.
24 That's some streamlining support there.

25 There's \$700,000 for autonomous underwater

1 vehicles.

2 The total increase also includes funds from
3 prior years that have sort of rolled in over the years
4 the way the budgets have happened.

5 That includes \$2 million for VDatum; the
6 \$2 million increase we've been seeking a long time for
7 electronic navigational charts; and \$1.8 million for
8 navigation response team.

9 So, again, the budget -- the '09 request that's
10 in front of the panel right now does have increases from
11 2007 and '08 rolled in together.

12 Next slide, please.

13 The geodesy budget, which is the National
14 Geodetic Survey line, has adjustments to base increases,
15 and then \$500,000 carried through for height mod.

16 That's actually a reduction from '08 because of
17 the earmark that this line typically receives.

18 Next slide.

19 Then tides and currents has adjustments to
20 base, and \$2 million for PORTS expansion and forecast
21 model funds in the '09 request.

22 There was an issue with the 2008 appropriation.
23 That's sort of an omnibus appropriation.

24 There was language -- and Mike Szabados may be
25 able to speak to this more directly, but there was

1 language in the appropriations bill that specifically
2 said to take action on Physical Oceanographic Real-Time
3 System, PORTS.

4 Federal funding of that indicated a dollar
5 amount for that, but then the dollar amount wasn't added
6 to the bill.

7 So, there was some debate back and forth over
8 how NOAA should handle that. It was Congressional
9 discretion to fund it, but the funding wasn't there.

10 Mike, if you want to speak to that -- to the
11 resolution of that issue.

12 MR. SZABADOS: Basically, the resolution is
13 such: Again, there is no direct funds to cover that
14 increase.

15 After some discussions with the Appropriations
16 Committee, it was decided that NOAA would find the
17 resources for this one time, not in the PORTS budget, but
18 out of NOAA's baseline someplace else.

19 MS. CHAPPELL: This is Ashley Chappell again.

20 So, that's a quick update on where we are with
21 2009.

22 Just overall, because of the things that are
23 rolled forward in that budget, it would have been a big
24 budget for us.

25 With the continuing resolution, we would, I

1 guess, be looking at the FY '10 budget for something to
2 happen more in the future.

3 Thanks.

4 MR. DUNNIGAN: Thank you.

5 Let me just make a couple more comments.

6 As Admiral West and Ashley have said, although
7 there have been some budgets that have been approved by
8 the House and Senate Appropriations Committees, there is
9 no expectation that those are going to be acted on this
10 year.

11 So, we will move into the new fiscal year with
12 a budget that is a continuing resolution, authorizing the
13 continuity of services at the same levels that we had in
14 2008.

15 What's sad about that -- wrong word. Let me
16 start that over.

17 What's going to be difficult about that is that
18 2008 was a very bad year for the National Ocean Service
19 and for a lot of the programs that we're concerned about.

20 So, we're going to be repeating, at least for
21 the beginning of 2009, the very difficult circumstances
22 that got us into trouble in 2008.

23 We've just had a number of sort of tsunamis
24 come and overrun us, and it seems like every couple of
25 weeks, somebody says, "Oh, we need another million

1 dollars for this" or "We need another million for that."

2 It got to be very, very hard for us this year
3 to be able to manage our way through that.

4 Now, you can say, "Well, those things won't
5 happen again next year, and we might be able to manage
6 our way through a difficult budget."

7 On the other hand, next year is going to have
8 its own series of tsunamis, so it's going to be a tough
9 time.

10 The political prospect is: What happens after
11 the new administration takes office, and there are two
12 thoughts on that.

13 One is that they will basically throw the
14 budget out and come up with their own budget for 2009.

15 The other one, which I think is probably more
16 likely, is that they'll write off 2009 and keep the
17 continuing resolution going, maybe deal with some
18 programs on the margins, and then focus their efforts on
19 a budget for 2010.

20 That's what I really think is going to end up
21 happening, but you never know, and there may be some
22 things that can actually be done.

23 Actually, right up on the screen now, you can
24 see one of the problems that we're trying to deal with is
25 the Office of Response and Restoration, which essentially

1 took about a \$5 million budget cut, almost by accident,
2 in 2008.

3 So, we've been trying to be able to manage that
4 and manage our way through the situation where Congress
5 told us to fund some PORTS operational activities without
6 giving us the money to do it.

7 We ran into issues in our IOOS funding, just a
8 whole number of things, and then there are have been
9 other NOAA priorities, too.

10 So, there's not a lot of room to maneuver
11 within the funding that we've got here.

12 Let me also raise a couple of other questions.

13 I'm getting -- and this is a longer-term issue.

14 I'm getting to be very worried about our survey
15 backlog, and our whole approach to dealing and thinking
16 about survey backlog, and I'm not sure what to do about
17 it.

18 If you want to give some advice and help us
19 out -- this is something where you could really spend
20 some time thinking.

21 Our survey backlog is huge. You know, it would
22 take us decades, at current funding levels, to be able to
23 address the existing backlog.

24 Of course, the backlog is only going to grow
25 over time as many of the observation points that we have

1 become older and older in time.

2 The other thing that's happening is the needs
3 for doing surveys are expanding, expanding dramatically,
4 in the northern part of the globe, in Alaska and thinking
5 about the future of the Northwest Passage.

6 So, as that is happening -- I mean, we can look
7 at this and we can just see that the demands are getting
8 greater and greater.

9 Maritime transportation is becoming more and
10 more important. There are things we have to do, and yet,
11 what's the likelihood that we're going to be able to see
12 some real growth in funding?

13 We could double the funding that we have set
14 aside for addressing survey backlog and really not make
15 the kind of progress that we would like to make.

16 So, this is not something I have an answer for,
17 but it's a longer-term issue that is sort of laid out
18 there as we study these numbers.

19 Whether we need a new business model, whether
20 we need to redefine what's important, I don't know, but
21 it's certainly something that we've got to figure out a
22 way to move forward with.

23 I've got to tell you, too, that I think that
24 Steve and Ashley, as sort of our long-term planners here
25 for commerce and transportation, do a really great job.

1 That's why I wanted Ashley to sort of walk me
2 through these numbers, because she lives them all the
3 time.

4 We'll try to answer any questions, but right
5 now, I would say that the prospects for the implications
6 of our funding are as murky as the waters of
7 San Francisco and Chesapeake Bays.

8 MR. WELCH: This is Ed Welch.

9 If I could comment on the immediate funding
10 situation, I certainly agree with Jack and Admiral West's
11 analysis, that we're likely to be stuck with a
12 supplemental -- I mean, a continuing resolution of last
13 year's figures, but there's bound to be, in the early
14 spring, some kind of emergency supplemental appropriation
15 bill to take care of needs that won't wait until
16 October 1st.

17 There always is.

18 So, the question is: Can the program convince
19 the agency that there are certain items out of this
20 funding that ought to be in the agency request for that
21 supplemental appropriations bill?

22 People ought to look at that right now and try
23 to start laying the groundwork, because that won't make
24 up the loss of the fiscal '09 money, but it's better than
25 nothing.

1 MR. JEFFRESS: This is Gary Jeffress.

2 I would imagine, Jack, that most of these
3 budgets were formulated 18 months ago or two years ago,
4 and the cost of fuel and energy has gone way up since
5 then.

6 What sort of percentage of the cost of
7 hydrographic mapping does fuel take?

8 MR. DUNNIGAN: There's got to be somebody in
9 the room that can give you a more precise answer than I,
10 but let me say this: The fuel cost implications for the
11 NOAA fleet of vessels and aircraft are immense.

12 Right now, I think it's safe to say that if you
13 looked at the numbers, you couldn't believe that we could
14 continue to operate at the levels we've been operating
15 at, and it's safe to say you'd be right.

16 Right now, I think we're looking at just the
17 prospects of some significant cutbacks in our operational
18 capacity at both -- for all of our fleets and for our
19 aircraft.

20 Frankly, those of you that are involved as our
21 partners in operating at sea under contract have got to
22 be feeling the same pinch.

23 So, I think that's just another thing.

24 I mean, the reality of 5-dollar-a-gallon diesel
25 is going to be with us for -- well, forever.

1 So, how does that affect all of our ability --
2 again, I'm trying to think long term.

3 Over the next 10 years, what does that mean, in
4 terms of how we can address the priorities?

5 The fuel costs -- as I said, somebody may have
6 a better number than -- a more precise number.

7 It's pretty significant, and we did not budget
8 5-dollar-a-gallon diesel.

9 MR. JEFFRESS: So, that's going to add to the
10 backlog; right?

11 MR. DUNNIGAN: We're not budgeting
12 5-dollar-a-gallon diesel for 2011.

13 MR. DASLER: Bob Dasler.

14 At least 10 percent.

15 I know the amount of the Mitchell refuel is
16 about a half a million dollars, and I think the Ranier
17 had about a million dollar fuel bill just to top off.

18 It's pretty significant.

19 ADMIRAL WEST: Dick West.

20 Jack, I agree on the budget, and I'm convinced
21 CR will just cancel '09, and then '10 -- that, again, is
22 not a very good outlook on that.

23 Just a few quick things.

24 Is there an impact on us if the bill's not --
25 you know, the Hydrographic Services Improvement Act?

1 Any effect on us?

2 MR. DUNNIGAN: The committee?

3 ADMIRAL WEST: Yes.

4 MR. DUNNIGAN: Committee operations are still
5 intact.

6 ADMIRAL WEST: Any effect on you or --

7 MR. DUNNIGAN: Well, if you compare the numbers
8 of days I was on the road in 2007 to 2008, you can see --
9 the impact on me? On NOS operations?

10 I'm not sure what you're getting at.

11 ADMIRAL WEST: Well, the bill didn't pass, so
12 what's the impact? Is there anything --

13 MR. DUNNIGAN: The appropos?

14 ADMIRAL WEST: Yes.

15 MR. DUNNIGAN: We will be able to continue
16 programs, moving forward, that we've had in the past.

17 ADMIRAL WEST: But your earmark problem is a
18 huge problem.

19 MR. DUNNIGAN: Yeah, although, for example,
20 there's money in our budget for the PrivLoss clean-up
21 program, which, when it ends, it's over.

22 They're going to have a big meeting on the
23 PrivLoss next week. That's a couple of million dollars
24 that will be in our budget because it's part of our '08
25 base.

1 So, the earmarks -- if you look at them the way
2 we did in '07, when we re-executed the '06 budget, we had
3 a lot of flexibility.

4 The problem is: We had a much larger base,
5 too. We were working from a base of \$30 million of kelp
6 money that we could use to meet a number of needs.

7 This year, that was only \$8 million, so we're
8 not in as good a shape for being able to manage our way
9 through.

10 ADMIRAL WEST: One other comment.

11 To follow up on what you asked on the survey
12 backlog, the federal government usually just turns the
13 other way when they see something that's insurmountable.

14 The sky's falling; the sky's falling.

15 So, we've got to get that addressed better for
16 you.

17 It's also one of the recommendations of our
18 Top 5.

19 So, what I suggest, along with what Ed just
20 said, is we tackle that right now as a committee and get
21 something back that may help them in some form by next
22 spring.

23 MR. DASLER: I think one of the biggest hurdles
24 that we have --

25 MR. SKINNER: Just identify yourself.

1 MR. DASLER: Sorry. Jon Dasler -- is just the
2 public awareness of the age of the data on the charts.

3 Often, we see cartographic product put out
4 that's -- it's not necessarily the data that's on it, but
5 if you have a nice-looking cartographic product, and
6 everybody assumes there's supporting data behind it.

7 I think that's by and large the public
8 perception of the nautical charting program in the U.S.

9 The awareness of the age of the data or, in a
10 lot of areas, the lack of data that really exists -- the
11 white spots on the chart don't necessarily mean there's
12 not a significant shoal in that area; it's just that
13 there's no data there.

14 Public awareness of that, how we can address
15 that, whether that's in the future, drawing more
16 attention to the age of the data on the chart in a little
17 block, or something along that line, I think would help.

18 MR. SKINNER: I think there's a lot here that
19 we need to talk about.

20 I'm hoping that we can spend some time tomorrow
21 afternoon responding to Jack's request for maybe a
22 refining of the message, some events that John and Dick
23 had just talked about, and how we go forward as
24 suggested.

25 So, I think, unless there are other comments

1 right now, we may want to defer that until tomorrow.

2 Is that acceptable? Okay.

3 Jack, the last thing on here for right now is
4 an update on the CMTS.

5 MR. DUNNIGAN: Yes, thank you very much.

6 I'm going to be very brief.

7 As I said, the national strategy is now
8 complete. There's a slide here that's in your materials
9 under Tab F that talks about what was in it.

10 You know, I think that this is a validation of
11 CMTS and what the President did in the Ocean Action Plan
12 to have a new committee sort of take on where the old
13 IMTS didn't do a very good job.

14 The commitment of MRAD and NOAA and the Coast
15 Guard and the Army Corps of Engineers, as the lead
16 agencies, to make this effective has been great.

17 We continue to get a lot of traction with the
18 senior political levels of the department -- of all the
19 departments that are involved here.

20 You can see that the actions focused on five
21 priority areas that are in that fourth bullet down.

22 What I really want to say about this is, first
23 of all, the fact that this is done is significant. This
24 could have have gone into one of those endless loops of
25 agency approvals.

1 The White House, OMB, CEQ, and the leadership
2 of the agency said, "We don't want that."

3 So, what happened was that the document got
4 signed off on in each department by a deputy secretary or
5 a senior policy person, and then the CMTS approved it at
6 their meeting two weeks ago.

7 It's now a public document.

8 It's not going back to the White House for
9 another review; it's not going to be adopted by the
10 President.

11 It's on the Web site. It's out there for
12 Congress and the community at large to see what the
13 federal agencies are laying out there as a national
14 strategy.

15 So, you can go to CMTS.gov, and you can see it.

16 The other thing I want to say is that one of
17 the reasons that all came about was because of Helen
18 Brohl.

19 Helen has just done a terrific job as the
20 executive director of the CMTS and, boy, if anybody had a
21 long and quick lesson about herding cats, Helen has since
22 she took this job and left this committee.

23 She's really doing fine, and she's helped the
24 agency -- she very, very adroitly helped the agencies
25 navigate our way through moving this effectively.

1 So, Helen is still doing a really great job for
2 all of us. I just wanted to make sure I said that.

3 Like I said, this is now a final public
4 document. It's out there for anybody to use in building
5 your cases for the priorities for the future.

6 We definitely -- we, as a community, within
7 government and without, that's something we need to be
8 doing when the new administration comes.

9 Thank you.

10 MR. SKINNER: Any questions?

11 MR. WELCH: Ed Welch.

12 Jack, has the agency or our folks here had a
13 chance to look at this, in view of what it might or might
14 not say indirectly or directly about hydro and the types
15 of programs we're interested in?

16 MR. DUNNIGAN: Yeah, definitely.

17 I mean, I think what's important about this is
18 that we don't want it to end up on a shelf someplace.

19 So, we are looking at it on a continuing basis
20 within NOAA, but also within MRAD, within Coast Guard,
21 within all the agencies, to look at these 33
22 recommendations that had been taken out and moved
23 forward.

24 What's interesting about these is these are not
25 just -- like a lot of the recommendations written in the

1 initial Ocean Action Plan, things that you know you're
2 going to do anyway, and we can build a press release
3 around.

4 There's some things in there that have really
5 gotten to the core of identifying how the agencies can
6 leverage each other in order to provide better services.

7 Now, one of those, for example, that we're
8 working on as the lead is focusing on technology, because
9 each of the agencies -- the Coast Guard with the AIS
10 system, NOAA with the PORTS system, the Core of Engineers
11 and others, have got -- are developing new technologies
12 to be able to do our jobs, but we're not sharing those
13 things necessarily very well.

14 So, there's a whole level of interagency
15 collaboration that came out of this report that is really
16 focusing on: What can we do to make sure that we're
17 sharing technology and learning from each other?

18 So, yeah, this is -- I would say the answer is
19 yes.

20 MR. WELCH: I'll defer.

21 ADMIRAL WEST: I suggest -- Dick West -- that
22 Jack, Steve, your team pull out of this thing what we can
23 use.

24 I'm not going to go back and hook on anything
25 and read it, but, for example, surveying, does it address

1 anything we can use?

2 MR. DUNNIGAN: Well, I'm not sure "use" is the
3 right word.

4 A lot of this certainly builds on some of the
5 work that you all did when you did the Top 5 report, too,
6 and I see a lot of that reflected in there.

7 I think the suggestion is a good one. We can
8 go back through there and distill down what's probably
9 most salient for the things that you're working on here
10 and bring it back in.

11 It's a readable document.

12 MR. WELCH: If we -- whether it's you or us
13 or -- could do that -- have a one-pager that says, "Of
14 the things this strategy talks about, these are the
15 things that relate, in general terms, to what we're
16 interested in," or "Here's how what we're interested in
17 fulfilling these themes of the strategy," I think that
18 would be a useful document.

19 Then I'm wondering whether it might be useful
20 to see if this could get on the agenda of one of the
21 future meetings of this group, and do exactly for this
22 group what Admiral West did, particularly when the -- if
23 we waited until after the turn of the administration.

24 That would be a way of getting hydro-type
25 issues to a broad range of policymakers, even beyond

1 NOAA.

2 MR. DUNNIGAN: Maybe one of the things we could
3 do -- because I don't think we can do it in the current
4 setup, but after a new administration comes in, perhaps
5 we could find a way to get this group together with the
6 MRAD, and talk about issues that the two advisory
7 committees see are important between NOAA and MRAD and
8 develop some mutual ways of moving forward.

9 That might be a good way, too.

10 MR. SKINNER: I guess these are all topics that
11 fit under the strategic "how we move forward here," so
12 this ramps right into some of the discussions for
13 tomorrow afternoon.

14 Any further questions on this? Great.

15 Thanks, Jack.

16 The next portion of the meeting is a panel with
17 the San Francisco stakeholders.

18 I want to mention also that we have several
19 public comment periods at the meeting. The first one is
20 at 12:15.

21 Is there a separate sign-up if people want to
22 talk?

23 MS. CHAPPELL: A check box, yes.

24 MR. SKINNER: A check box, okay.

25 So, if someone is interested in making public

1 comments during the public comments session, please check
2 the box.

3 This is a unique area, as many of you know, not
4 only for navigation and maritime purposes, but also for
5 the estuary and San Francisco Bay and the offshore
6 waters.

7 There's a lot going on that's relevant to this
8 panel, both having to do with navigation and with ocean
9 and coastal mapping.

10 We have the national resource efforts underway.

11 Jack mentioned the research reserve and the
12 sanctuaries in this area.

13 So, we have a panel that's been put together to
14 talk about some of the diverse uses of hydrographic data,
15 and I'd like to have them come up at this point.

16 We've got Jim Haussener from the California
17 Marine Affairs and Navigation Conference; Jim Fawcett
18 from Sea Grant Ports and Harbors; Captain Lynn Korwatch
19 from the San Francisco Marine Exchange; Captain Marc
20 Bayer from the Tesoro West Coast Shipping Operations;
21 Eric Van Dyke from the Elkhorn Slough National Estuarine
22 Research Reserve; and Sheila Semans, California Seafloor
23 Mapping Program and the California State Coastal
24 Conservancy.

25 I should also point out that Sheila was going

1 to be on our panel at the Coastal Society meeting, that I
2 mentioned, last month, but at the last minute, she
3 couldn't make it.

4 I'm glad you got a raincheck, and so we'll hear
5 what you've got to say.

6 If we could start, I think, just with Jim,
7 unless there's an order that you've all decided on
8 beforehand.

9 If you could introduce yourself and tell us a
10 little bit about your background, that would be great.

11 On behalf of the panel, thank you all for being
12 here this morning.

13 MR. HAUSSENER: Thank you very much.

14 It's always an honor to address the NOAA
15 backup. I always seem to be somewhere wet with Jack,
16 talking.

17 Normally, I go after he does, and again, I get
18 to do that here.

19 I feel a little bit like a batty uncle, and I
20 think that's one of the reasons why I go first. You
21 know, the guy you invite once a year to a family outing,
22 and you somewhat treat him like the fruitcake.

23 You look at him for a while, and you put him
24 back in his tin to bring him back out next year.

25 I do want to espouse that in addition to having

1 been a harbor master in several of the harbors here in
2 California, primarily in the Bay Area, but also along the
3 coast, and having a 49-foot trawler and having made trips
4 up and down the coast several times, I have hundreds of
5 paper charts from Baja, California, up to Alaska, and a
6 complete suite of charts on my laptop.

7 I have made the trip from San Francisco Bay to
8 San Diego using the old Nynex Yellow Page books and the
9 little chart things in there, because you know how it is
10 with boaters: You tend to forget things from time to
11 time.

12 I think everybody needs to know that a little
13 bit about me.

14 C-MANC is a group of all the ports and harbors
15 in California with federal dredging or navigation
16 projects. There is no state core agency in California.

17 The State of California pretty much doesn't
18 invest any money into PORTS, with the exception of having
19 provided a little bit of money, a minuscule amount, into
20 the PORT system and having recently got into some dredge
21 disposal issues at -- here in San Francisco Bay, the
22 Hamilton project, although bond act money may be finally
23 coming in to do some dredging for the ports of Sacramento
24 and Stockton for the deepening projects.

25 I look forward to that.

1 My comments are a compilation of C-MANC's board
2 of director's comments that I've asked them to provide to
3 me, and that includes port engineers, harbor district
4 managers, dredging contractors, as well as surveyors.

5 Several of those folks do work with NOAA and
6 the Coast Guard, and sharing information on some of the
7 things -- such as what's going on down in the San Pedro
8 Bay, and making sure all the information is being
9 transferred correctly over there to NOAA in a format
10 that's acceptable, I think works out great.

11 I've been asked to make comments, in
12 particular, about your report, and I certainly appreciate
13 that.

14 I do want to make the comment that it is from a
15 singular perspective throughout most of this, although I
16 will wrap up a little bit at the end, but you will hear
17 some other great things going on, including the mapping
18 programs from others.

19 Simply put, it's a great report.

20 It provides all things to all people. That's
21 what all federal reports should do.

22 It talks a little bit about setting priorities.

23 You see a little bit at the beginning, you see
24 a little bit at the end, but you don't necessarily see
25 what is important in the mission, what some of the

1 priorities should be.

2 The standard comment, when talking to federal
3 agencies, is any implementation of recommendations should
4 be worked out with some of the local agencies so that
5 data collected and issues addressed are in line with
6 what's going on in some of the local agencies.

7 We talked a little about the MTS system, and I
8 think everybody is fully aware of going on.

9 It's growing exponentially perhaps nowhere
10 greater than California, the largest exporting state in
11 the United States.

12 Like all of our infrastructure programs, NOAA's
13 navigation service programs are behind the curve. We
14 truly applaud -- and I speak truthfully about that.

15 C-MANC does applaud your work, and you're
16 raising the flag on this big issue for us.

17 Just so you know, in California, 10s of
18 billions of dollars are needed just for the MTS system to
19 take care of what's coming through -- what's projected to
20 come in through the next 12 years or so.

21 One of the things that people need to remember
22 is that 3 percent growth per year doubles in 20 years,
23 and the growth rates that we've been seeing, although
24 it's tapered down this past year to about
25 4-and-a-half percent for exports, and overall, perhaps

1 only 1 percent, we've seen in previous recessions still a
2 7 to 8 percent increase, and we've seen double-digit
3 numbers throughout most of the '90s and through this
4 section.

5 I want to mention just briefly about dredging.

6 Jack was talking a little bit about the backlog
7 of surveys. We're seeing a similar backlog in dredging,
8 which makes some of the other comments crucial.

9 We've gone from the Port of Oakland O&M
10 dredging costs of \$2.2 million per year to now
11 \$10 million per year.

12 With flat budgets, we no longer have the
13 opportunity to dredge the Napa River or the Petaluma
14 River.

15 We don't have the opportunity to dredge the
16 Crescent City Harbor District.

17 I'm looking down the road, and if we continue
18 with the costs for some of these larger projects,
19 Oakland-Richmond-San Francisco bar channel -- we're
20 taking the material from the bar channel, and we're now,
21 instead of putting it out in the disposal site, putting
22 it off Ocean Beach.

23 Great project, no new money, which means we're
24 not able to dredge somewhere else because we're doing
25 that effort.

1 Some of the ports in Long Beach -- as an
2 example, they don't even get the federal government
3 involved in dredging the federal channel anymore; they
4 just do it themselves to make sure it moves ahead and
5 works that way.

6 What I want to talk about a little bit is some
7 important incongruities that may make people think a
8 little bit different.

9 You talk about 3,000 square nautical miles to
10 10,000 square nautical miles as being something to do in
11 moving forward.

12 Basically, I figured that meant if half of it
13 is contracted at \$30 million, at the \$180 million you
14 need to move forward, I'm wondering: What are the
15 foregone benefits that you're giving up? Is it worth it
16 to proceed that way?

17 As you notice, you report that commercial
18 shipping view of inadequate schedule. Is this worth
19 doing?

20 If it is worth doing, then we have a critical
21 need to cause a seismic shift in how we go about doing
22 the surveys, the collecting of them, the packaging of
23 them, and the posting of them, or should we review the
24 area that are most critical?

25 You talk about 95,000 miles of coastline.

1 I went and took a look at your report about
2 where the critical areas are, and I looked only at
3 California.

4 Humboldt Bay is one; the approaches to
5 San Francisco Bay is another one; San Francisco Bay,
6 including the South Bay, all the way down to Elviso,
7 which I thought was a little surprising; then towards
8 St. Louis are the four in here.

9 Can we repackage those a little bit and cut out
10 everything south of the San Mateo Bridge, except for
11 what's going into Redwood City?

12 Would that help, if we took a look at it from
13 that point of view as we move forward?

14 We encourage NOAA to continue to invest in
15 research and development. I'm really glad to see that
16 moving forward, not so much to just pick winners and
17 losers, but to encourage the academicians to move forward
18 and to encourage the private business sector to move
19 forward on this program.

20 In addition, some of the things you listed in
21 your report -- it talked about -- that the RTK base
22 station may be something to start looking forward to.

23 The farmers are doing it. Is there a way to
24 start looking at doing some of those things at lower cost
25 as other agencies or other businesses -- agro businesses

1 or big business here are buying it, it becomes a
2 commodity, the price goes down.

3 Can we then afford to buy into it?

4 While the report encourages contracting, we
5 also ask, in processing the survey data, which has now
6 taken you 16 months, is that something that can be farmed
7 out and contracted out?

8 You can still retain the core knowledge in
9 NOAA, but moving this piece out and seeing if you can't
10 move that forward and saving resources, either time or
11 dollars.

12 We appreciate your desire for federal channels,
13 and that's C-MANC's big issue, and we like the surveys to
14 the highest standard.

15 We just aren't sure why resources should be
16 spent on surveying to the highest standard. There are
17 other things we need.

18 We believe federal channels should be surveyed
19 frequently to assure vessel operators have timely
20 information.

21 By "timely," it could be six months.

22 If you're getting a great boat going into the
23 Port of Stockton, they're going to need to know six
24 months in advance that there's 35 feet or only 32 feet,
25 which it is right now.

1 If you're going up to Humboldt Bay, a 45-foot
2 channel, it got down to 29 feet. You need to know that
3 sort of stuff in advance.

4 So, timeliness is a matter of a little bit of a
5 definition there.

6 To ensure the channels are clear, we certainly
7 like having full-bottom surveys, as you talked about, on
8 a regular basis.

9 You need to recognize that between those
10 surveys, you're going to have some hazards that could
11 show up in that area and create some problems.

12 Of course, one of the things that -- I'm a
13 cynic naturally, and I look at -- having been a person
14 that's done a lot of work with the Corps and the Coast
15 Guard, you've got natural channels going one way; federal
16 channels, which have been dredged in a straight line; and
17 ACE navigation which aren't matching either one of those
18 two channels.

19 So, we really believe the paramount goal should
20 be able to ensure the quality of the data collected and
21 disseminated is clearly stated so everybody knows, "Well,
22 39.5 feet, but there's an error factor of a half a foot
23 either way.

24 "So, realistically, we're talking about 39 to
25 40 feet."

1 Do we really need to get ourself down into
2 centimeters when we have error factors of 6 inches or a
3 foot in some of these things?

4 We're very pleased to see -- and what we're
5 interpreting is happening -- is NOAA's willingness to get
6 into federal channel surveys.

7 There had been an understanding of our members
8 that NOAA was indicating this was a Corps responsibility
9 only, and you aren't going to play in that.

10 There was some negative comments about the
11 Corps, and some of our members had some negative feelings
12 about the Corps from time to time.

13 While we do have problems the Corps surveys,
14 primarily it's in the timely release of the survey
15 results.

16 Our issue is you can spend millions of dollars
17 dredging a channel, but until you post the post-dredge
18 survey results, you might as well not have dredged the
19 channel at all.

20 That's what we really need, is a closer
21 coordination between the actual work to the point that
22 the operators can see the results of that dredging.

23 Some of the importance of hydrographic data --
24 if you don't believe that data is appropriate, then
25 please us know exactly what more you need, but it wasn't

1 clear in the report as to what you were talking about.

2 We do look forward to hearing the agency
3 working group report, which I understood was going to
4 come out in June, or sometimes this summer, on oceans and
5 coastal mapping.

6 That hopefully will move forward as we talk
7 about this.

8 We suggest NOAA, as an agency, could provide a
9 central, coordinated, and well-ordered repository of
10 hydrographic information; ensure data continuity;
11 coverage density standards; adherence to industry
12 standards.

13 This is a big one for everyone.

14 One of the things we suggested to the Corps, as
15 an example, is: Why don't you hire a private contractor,
16 and the dredging contractor hires a third party to do the
17 surveys?

18 That way, the dredging contractor and the
19 survey person can time that so we get the results out,
20 rather the Corps, who, in here, will have the survey team
21 up in Humboldt Bay, and the guy doing the North Shoal is
22 done, but it's going to take another two weeks to get the
23 survey boat back down here as a result.

24 So, there's a delay in that lag time.

25 Back to the highest standard question, I really

1 think that ought to be taken a look at.

2 Do we really need to take it down to 1-100th of
3 a foot or a centimeter when we have an error factor of
4 several inches built into the survey process?

5 Of course, in San Francisco Bay -- and this
6 goes back to when the Navy was here -- where is the real
7 bottom?

8 The survey says the channel is 36 feet, but
9 guess what? The subs are still having the bottom tanks
10 scraped off of them, even though they weren't touching
11 the bottom.

12 So, that's something we need to talk a little
13 bit about.

14 I will talk a lot about the PORT system, but to
15 some, the PORT system is probably the greatest asset NOAA
16 provides to the navigation community, and that's
17 something that really needs to be moving forward here.

18 There are some improvements, but I'll leave
19 that for a little bit.

20 You talk about emergency response and the six
21 teams. We'd like to throw in two more things.

22 One is seismic issues.

23 I just live a mile away from a faultline, but
24 I'm willing to bet that we're going to have a seismic
25 issue here prior to a hurricane.

1 Also, tsunamis. Jack talked about that, where
2 one of our ports in Crescent City got wiped out in 1965.

3 So, we need to include those.

4 We also encourage the involvement of the
5 private sector. There are companies that meet your
6 requirements. A lot of your contractors are out here on
7 the West Coast.

8 One of the things that was a failure, I think,
9 after the Cosco Busan was we didn't get the fishing
10 community actively involved.

11 They got trained, and then we dropped the ball
12 and didn't retrain them and recertify them, and could
13 have used them out in the future.

14 Is there some way to move that team -- instead
15 of being stuck with six teams, move one out here. For
16 the East Coast, we have none, so can we move it back a
17 little bit?

18 One of the things is somebody suggested an
19 online DIS-type database for changes going on.

20 I'll comment.

21 You know, it's really great to get local Notice
22 to Mariners on your computer, but who really goes through
23 21 pages on a weekly basis of doing that?

24 Maybe there's some better way of letting folks
25 know what's going on rather than relying on that system.

1 How many times do I have to page through to see
2 that the Berkeley Marina here has a three-foot shoal
3 that's been going on for the last year in order to find
4 out what's current and what's relevant to today?

5 Speaking from a larger perspective -- and I've
6 been somewhat negative in talking about the navigation
7 point of view, but I really encourage you to be much more
8 aggressive.

9 In terms of your environmental beneficiaries of
10 the program, sediment transport is crucial. California's
11 eroding coastline is about a foot per year on average. A
12 lot of material is moving around.

13 There is a shortage of material.

14 What's going on with some of the fine-grain
15 sediment?

16 We're working down with the Tijuana NERRS and
17 trying to study that in this coming year. How is that
18 material moving?

19 Go ahead and -- you're working on it. Let's
20 talk about your work on it; don't put it all back on MTS
21 and navigation system.

22 Perhaps we need to better understand the
23 upwelling. The upwelling areas of the coast of
24 California are some of the best productive areas we have.

25 How do we study those a little bit better using

1 what you guys are doing, and then is there some way to
2 transport some of the benefits of that to other areas of
3 the coast to make the entire coastline more productive
4 from a biological standard?

5 On a personal note -- and I am a recreational
6 boater.

7 I taught sailing in college. We called it the
8 "Yacht Club" back then. Somehow, I guess that's how I
9 got suckered into this thing.

10 I taught at the Yacht Club just two years ago
11 here in the San Francisco Bay, as well.

12 I appreciate you trying to reach out to
13 recreational boaters. Don't go too far in reaching out
14 to tell them your services, as much as recognizing that
15 they still need to understand what a chart is.

16 I'm amazed by the number of folks who ask me
17 what that blue line is, the demarcation in San Francisco
18 Bay between six feet and seven feet is the blue line, and
19 most folks look out there at the Bay and say, "Oh,
20 there's plenty of water."

21 So, yes, there are some who can take advantage
22 of your ANS systems and the Raster charts which are
23 available, but most boaters need to have something a
24 little more basic.

25 It's somewhat like what the Harbor Safety

1 Committee here did, which was a "Can you speak
2 Channel 14?"

3 Channel 14 is where the ships communicate.

4 One of the things for the pocket guide -- which
5 is back there. I really appreciate having one, and in
6 fact, I may take all the extras when you're done -- but
7 you ought to add Channel 14 to the DHF channels on here,
8 because that's important for people in the Bay Area.

9 In closing, we encourage NOAA to work to
10 develop standards so that the data sets are compatible.

11 We do not believe all the data has to be to the
12 highest standards. It's more important to make sure
13 there's adequate QA/QC programming behind the data.

14 We encourage stronger determination of where
15 there is more bang for the dollar. Channels are not
16 dredged biannually or even once a year.

17 Perhaps data integration provided by other
18 federal or private parties -- increase investment in
19 PORTS and IOOS, or updating the Coast Pilot might be more
20 appropriate than increased service.

21 Thank you.

22 (Remarks outside the record.)

23 MR. SKINNER: Jim?

24 MR. FAWCETT: Good morning.

25 I'm Jim Fawcett, the director of Marine Science

1 and Policy Outreach for the Sea Grant program at the
2 University of Southern Southern California.

3 I'm also a faculty member in the School of
4 Policy, Planning, and Development at USC.

5 Jack, as an initial comment, I was the co-chair
6 of the Coastal Society's meeting last month in Redondo
7 Beach.

8 We very much appreciate the support that NOAA
9 gave us, especially considering the tough times. Since
10 I'm at Sea Grant, I understand the tough times, too,
11 personally.

12 I want to talk about two issues today.

13 I represent the southern part of the state, not
14 the northern part of the state here or the central part
15 of the state, sorry, Jim.

16 I want to address a couple of issues that Gerry
17 Wheaton actually urged me to talk about.

18 One of them is the use of soundings that are
19 generated by the Corps of Engineers' hydrographic
20 surveys, and the second one has to do with IOOS.

21 For about 10 years, I took a leave of absence
22 from my academic career and was the chief of planning for
23 Los Angeles County Department of Beaches and Harbors,
24 which includes Marina del Rey and about 50 miles of beach
25 in Los Angeles County.

1 The Marina del Rey harbor is not a big one.
2 It's 400 acres of water and 400 acres of land, but there
3 are 6,000 yachts there.

4 Although it's only a yacht harbor, those 6,000
5 yachts are owned by people largely who have a lot of
6 political clout.

7 So, as a result, the dredging of the channel in
8 Marina del Rey was a big deal. The channel needed to be
9 dredged very frequently, as Jim quite well knows, because
10 it was adjacent to a major storm drain that drains a good
11 part of the Los Angeles basin.

12 We had the Corps of Engineers in there all the
13 time doing hydrographic surveys in the federal navigation
14 channel.

15 They would generate data that they would
16 provide to me as the chief of planning, and I would
17 provide that to the harbormaster.

18 The harbormaster would go out and buoy the
19 shoal areas, and try to prevent groundings in that
20 entrance channel.

21 It was clearly not terribly effective. We had
22 groundings all the time, despite the fact that the
23 channel was buoyed, mainly because we had no way of
24 providing the Corps of Engineers' soundings to the
25 boating public.

1 All we could do was utilize the buoys that the
2 harbormaster had put out. If that could be rolled into
3 even interim charting that NOAA does -- and believe me, I
4 am not an expert at this, so you can take what I say with
5 a grain of salt.

6 If there was some way of providing interim
7 charting data that could be utilized, perhaps Web-based,
8 for the boating public, it would certainly, No. 1, create
9 a much more congenial atmosphere with that part of the
10 boating public, and certainly would make the
11 harbormaster's job easier, not only in Marina del Rey,
12 but I'm sure in other areas, as well.

13 As I say, this is merely an example.

14 I mean, Marina del Rey is not a big deal, as
15 far as navigation safety goes into the United States, but
16 it's an example of how that Corps of Engineers' data
17 could be made more useful.

18 That's really all I want to say about that.

19 The advent of electronic charting seems, to me,
20 to be an opportunity for this to come about.

21 I want to spend some time talking about IOOS.

22 Sea Grant has had an ongoing relationship with
23 IOOS. IOOS is enormously complicated.

24 Sea Grant, by virtue of the fact that it is
25 based in a university environment, gets involved in IOOS

1 providing the data.

2 I think a useful way of looking at IOOS may be
3 that -- for example, with Coast Survey, the need comes
4 first, then the data.

5 With IOOS, the data comes first, and then we
6 try and figure out the need.

7 That's just the way it is.

8 The research community is obviously interested
9 in generating data for their own needs primarily, and
10 then if that information can be utilized later on through
11 IOOS for another purpose, then great.

12 Well, the IOOS -- the local IOOS -- I forget
13 the term that's used for it.

14 Anybody recall the term? The agencies or --

15 MR. DUNNIGAN: "Regional association."

16 MR. FAWCETT: "Regional association," thank
17 you. Senior moment there.

18 The regional associations are responsible for
19 trying to integrate all this data, and that's a job in
20 itself. Just communicating with the sources of the data
21 is a big deal to start with.

22 The outreach is another matter.

23 I've worked closely with Gerry Wheaton, the
24 regional manager here in California, who's marvelous at
25 connecting up with folks like Tom Jacobsen and the

1 L.A. Pilots and Marine Exchange of Southern California.

2 However, Gerry is one guy, and he does a great
3 job of knowing what needs exist out there in the marine
4 transportation community and trying to translate those
5 backs to IOOS, and in our case, it's the Southern
6 California Coastal Ocean Observation System, but there
7 is -- I think there's an opportunity for NOAA to leverage
8 Sea Grant in this process.

9 There are not a lot of people in Sea Grant who
10 know a hell of a lot about IOOS, but I think they can be
11 trained or they can be taught to better connect the
12 information from their users, that they're in contact
13 with on a frequent basis, back to the IOOS, but somebody
14 needs to teach them how to do it.

15 There's a small group of us within Sea Grant
16 that deal with marine transportation issues, but it seems
17 to me when Sea Grant gets together for its annual
18 conclave next year, if we have one, given the budget
19 situation, but if we do have one, we call it "Sea Grant
20 week."

21 It's a great opportunity for somebody from the
22 Office of the Coast Survey to come talk to Sea Grant
23 folks who are maybe aware of IOOS, but not aware of how
24 they could help it out.

25 Since most of the Sea Grant folks are based in

1 university settings to start with, they're in contact
2 with the researchers, and concurrently, they're in
3 contact with the user community out there.

4 They are folks you could leverage, but the
5 Coast Survey folks have the skill to know what's useful
6 and what's not useful, and if they could translate that
7 into -- Sea Grant can't, and I think it could be a
8 powerful way of leveraging, within NOAA, our mutual
9 skills.

10 The Admiral talks about -- not this Admiral,
11 but Admiral Longbach -- sorry, Greg -- talks about
12 coordination within NOAA.

13 Well, this is one way I think we can do it.

14 I really think that there's an opportunity here
15 for some good coordination, and actually some success,
16 even in this limited budget environment, to help IOOS
17 make a better system.

18 It's certainly complicated, but I think there
19 are opportunities for it to work better.

20 That's really all I want to say, and I'd be
21 happy to answer your questions.

22 MR. SKINNER: Thanks, Jim.

23 Captain Korwatch?

24 CAPTAIN KORWATCH: Yes, good morning.

25 My name is Lynn Korwatch, and I'm the executive

1 director of the Marine Exchange of the San Francisco Bay
2 Region.

3 We were founded back in 1849, so we are proud
4 to say that we're even older than your tide station here,
5 which has just celebrated its 150th birthday a couple
6 years ago.

7 The Marine Exchange of the San Francisco Bay is
8 a nonprofit trade organization. We are not a lobby
9 group.

10 So, as a result of the fact that we are not an
11 advocacy organization, over 10 years ago, we were asked
12 to be the secretariat for our local Harbor Safety
13 Committee.

14 The Harbor Safety Committee found out about the
15 PORTS system that had been installed in Tampa Bay, and
16 was very interested in pursuing having a similar system
17 here in the San Francisco Bay Region.

18 So, as a result of the fact that the Harbor
19 Safety Committee was interested in moving forward with
20 that, they asked if the Marine Exchange was interested in
21 being the project manager of the PORT system.

22 So, what I'd like to talk to you about this
23 morning is a little bit about the status of our PORT
24 system, sort of the good news/bad news, where we're
25 looking to go in the future, and perhaps advice about

1 what we could use your help with.

2 As I indicated, the PORT system was installed
3 over 10 years ago -- and Mike, if I'm speaking
4 incorrectly, I hope you'll jump in here and correct me.

5 We have had, like many port regions, sort of
6 some successes and some not so great opportunities.

7 I think that our PORT system here in
8 San Francisco Bay at this point in time is very robust.

9 We've had some issues in the past. Regarding
10 the fact that as a result of some funding problems,
11 keeping the system functional, keeping the system
12 reliable, has been very problematic.

13 As you know, while NOAA has been great about
14 installing the PORTS program, the thinking is that they
15 are then going to turn it over for local funding.

16 For those of you that are aware, if you've seen
17 one port, you've seen one port. Each of us has our own
18 unique issues when it comes to funding.

19 In Los Angeles and Long Beach, the Port
20 Authorities are funding the program down there.

21 Here in San Francisco Bay, we've been forced to
22 rely upon the State of California to provide our funding
23 because of the fact that we have nine Bay Area counties.

24 We have a multitude of Port Authorities. We
25 have a multitude of stakeholders that use this program.

1 It's not as it was originally, at least to my
2 knowledge, kind of developed to be a commercial-use
3 system.

4 It has now morphed into a system that a
5 significant number of recreational boaters use, that
6 academia uses.

7 Those people are a lot more difficult to kind
8 of put the shoulder on or put the strong arm on and say,
9 "Can you now fund this with us?"

10 We've had a real problem with that.

11 Initially, the program was funded by the Office
12 of Spill Response and Prevention, OSRP, and cosponsored
13 by the Department of Boating and Waterways here in
14 California.

15 As the funding within California has become
16 somewhat difficult to obtain, our funding sources were
17 kind of drying up.

18 As a result, there was, a number of years ago,
19 when I first came to the Exchange, where we were not sure
20 whether this PORT system would be able to continue.

21 I'm very fortunate that my project manager, a
22 gentleman named Alan Steinbrugge, has been able to keep
23 this system functioning with kind of, basically, spit and
24 baling wire.

25 I mean, it has not been pretty.

1 We were at a point where we were unable to pay
2 NOAA to support the contract to provide the quality
3 assurance that this system is required to have.

4 We, again, were not clear whether we were going
5 to be able to keep the lights on, so to speak.

6 Sort of the good news -- the bad news is the
7 Cosco Busan situation.

8 Suddenly, PORTS in San Francisco Bay became
9 very visible, and while we're very confident that the
10 collision to the bridge was not affected by the fact that
11 we have some of our sensors down, but, certainly, we've
12 been told and are aware of the fact that perhaps some of
13 the spill response may have been impacted by the fact
14 that some of our sensors are not as fully functioning as
15 as we had hoped.

16 At this point, we have, in the Port of Oakland,
17 a MET sensor that is up and functioning. At this time,
18 we do have not have a current sensor that is functional
19 within the Port of Oakland.

20 That is just strictly due to a technology
21 change. We are in the process of installing a current
22 sensor on an eight-foot buoy.

23 This is somewhat new technology for us, but we
24 were unable to get buoys because the Coast Guard has been
25 busy deploying all of their buoys to the New Orleans area

1 as a result of Katrina, so we got way down in the queue
2 when it came to getting an eight-foot buoy.

3 We are in the process of installing additional
4 MET sensors and current sensors within the port region.

5 One of the things that I'm very pleased about
6 is the fact that we have been able to kind of foster a
7 private/public partnership, if you will.

8 Marc Bayer from Tesoro, sitting at my left
9 here, has been in a position to fund some sensors that
10 have been installed at his dock, and is looking to
11 install some additional ones at some of his other
12 facilities here in San Francisco Bay.

13 I think that is a really fabulous program.

14 I think that we would like to expand that, kind
15 of "Adopt a sensor," if you will.

16 The Port of Oakland has been willing to fund
17 maintenance and repair to their Oakland wind and Met
18 sensor.

19 We'd like to see if we can develop that even
20 further.

21 That said, getting funding on an annual basis
22 has been problematic for us. We rely on the good graces
23 of some of our state partners, but that can be
24 vulnerable.

25 We kind of go year to year, and in my opinion,

1 in order to ensure that we have a fully functional, fully
2 reliable, very well-run system, my advice would be that
3 if there's any way possible, to look at federal funding.

4 I heard there was some discussion or some
5 mention, and I'm not really up on the specifics, but --
6 of 1.4 million that had been requested in the '09 budget.

7 If there's a way that we could move forward
8 with that, we'd certainly be more than willing to support
9 that locally, and I suspect nationwide, and we would
10 certainly encourage NOAA to do that.

11 I think that there is some value to having
12 systems that don't rely upon the local coffers to
13 support, just so that NOAA can ensure that the product
14 they are willing to put the Q&A stamp on is really kind
15 of a very robust and very successful system.

16 So, again, like the rest, I will defer my
17 questions -- or answer questions to the end.

18 Thank you.

19 MR. SKINNER: Thank you, Captain.

20 Captain Bayer?

21 CAPTAIN BAYER: Good morning.

22 I'm the -- I work for Tesoro Refinery, which is
23 an independent refinery.

24 We have refineries all along the West Coast,
25 from Alaska, Washington, to California, and one in

1 Hawaii.

2 I'm responsible for the marine operations for
3 every place except for Alaska, which is good, because is
4 Alaska a massive long haul, especially in the wintertime.

5 One thing -- I'm just going to talk about
6 different aspects of the PORT system and how I think it's
7 helped in San Francisco Bay, and some of the issues we've
8 faced or we face currently.

9 Working in these four different areas, I find
10 that San Francisco is probably the most difficult port to
11 work with, in terms of geographic features, the shoals,
12 and then the local rules and regulations, air quality,
13 tug escort, and things like that.

14 What I find is that some of the things that
15 PORTS does for us is make this easier to deal with.

16 So, I'd just like to start talking about -- I
17 just wrote some notes here.

18 We have -- there are four refineries upriver in
19 Pinole shoal. In these four refineries, we see about
20 300 tanker transits a year.

21 I pulled these out of my memory, so I don't
22 want to be held to some of these numbers.

23 We see ships up to 200,000 tons, dead weight,
24 coming up to the four refineries before the
25 Benicia-Martinez Bridge complex.

1 These ships can carry, fully loaded, over a
2 million barrels and pull a draft of upwards of 60 feet.

3 What we see, because of the Pinole shoal, which
4 is authorized to 35 feet, we can bring a fully
5 loaded crew carrying about -- well, it's not fully
6 loaded.

7 We can bring about 650,000 barrels.

8 We don't always know what the latest soundings
9 are. Right now, it's 35 feet; it's 34.4 feet. We talked
10 earlier about the half a foot, sort of, variable, but we
11 need to plan well in advance, sometimes a month,
12 sometimes two months in advance, what our transit depth
13 is going to be.

14 So, it's very important for us to know what the
15 most recent survey data is.

16 I'll get to that a little bit later.

17 Then we see about a 100 transits over Bulls
18 Head Channel, which, again, is authorized to 35 feet.
19 Right now, we only have about 32.2 feet.

20 That's how close we're managing our drafts and
21 looking at the depths.

22 We see ships going through the bridge
23 complex -- it used to be two bridges. Now there are
24 three bridges. It's basically a tunnel which ships out
25 to the passage.

1 It's about 290 feet wide, and we're taking
2 ships up to 106 feet wide through this, and with a deep
3 draft of -- depending on how much water is there -- up to
4 36 feet, we have to play the tide.

5 Just to give you an idea of how difficult it is
6 to come through -- to come into San Francisco Bay -- I'm
7 not going to try to speak to the container ship, but to
8 the oil tanker side or bulk carriers.

9 You have to manage your arrival with an oil
10 tanker.

11 You have to look at the currents -- the speed
12 of the current, because that dictates how many kits you
13 have of retarded force with escort tugs.

14 So, at one point, I think it's three-and-a-half
15 or four knots, you hold your ship out until the current
16 drops below that when you're coming into the Golden Gate
17 Bridge.

18 Then you have to look at a place called "Point
19 Chauncey," which is a moored ship channel just south of
20 the San Rafael Bridge -- look at the depth there and make
21 sure you can get over that.

22 Then the next point of your transit is Pinole
23 Shoal. Make sure you have enough water -- and the
24 agreement is that we have a two-hour passage time and
25 with a two-foot underkeel clearance.

1 Oftentimes, to maximize the cargo, you're
2 bringing in -- you're loading for one tide a day,
3 maximum, just to get over Pinole Shoal.

4 There are a couple of things that -- let me
5 just talk about these ships for a second.

6 We're seeing ships from what we call "Panamax,"
7 which are about 75,000 tons, to Suezmax, which these are
8 the outer size of 150,000 tons.

9 When we don't get good hydrographic data from
10 the Corps, which is then passed to NOAA, because the
11 Corps -- one thing they say is they don't provide
12 navigational data; they provide a hydrographic survey not
13 to be used for navigation.

14 That's what we hear constantly.

15 We need to have good data in order to plan our
16 transits. That's -- I mean, that's one thing that NOAA
17 can provide for us.

18 Again, what Jim Haussener said earlier was
19 timeliness of the hydrographic surveys.

20 We're seeing these surveys come out in the
21 past, where the Corps generally does a predredge survey
22 and a post-dredge survey, and we would see the results of
23 the survey sometimes six to eight months after the survey
24 was done.

25 So, there were sort of three ways that we're

1 finding out that we have less water or more water in the
2 Bay: Through the predredge survey if it was posted
3 quickly; the post-dredge survey; and the last way, which
4 we really dislike, is when a ship goes aground, and then
5 we know we have less water for sure.

6 Then everybody rushes out and gets another
7 survey, and they tell us, "Yes, you have less water."

8 So, just to give you an idea of how much
9 planning goes into this and how much one -- let's say
10 one foot of draft on these different size ships is --
11 I'll try to put it in a perspective that is fairly
12 simple.

13 With a Panamax tanker, one foot of draft is
14 about 2,000 tons. 2,000 tons is about 600,000 gallons of
15 gasoline.

16 In an Aftermax tanker, one foot of draft is
17 about 2,800 tons, and that comes out to almost
18 860,000 gallons of gasoline.

19 Then on a Suezmax, which is about 150,000
20 tons -- it's 3,300 tons per foot, and it comes out to
21 about 900,000 gallons of gasoline.

22 So, that one-foot increment is a huge economic
23 incentive to dredge.

24 So, I guess what I would like to say -- and
25 again, Gerry Weaton has just been absolutely fabulous in

1 helping us put the PORT system together -- is if the
2 Corps -- we can move along, and maybe NOAA could either
3 do the surveys on a regular basis or a quarterly basis,
4 or have -- and/or have the sounding data in a digital
5 format that could be passed through the electronic
6 charts, and ask that we get real-time data.

7 It's all for the benefit of deep-draft
8 navigation. That's what I'm looking at, deep-draft
9 navigation for ships and barges so that we can have safe
10 passage planning and maintain our underkeel clearance
11 requirements.

12 In the past, PORTS has been unreliable, but
13 thanks to a partnership with NOAA -- and I really have to
14 say that Gerry Wheaton and Becky Smyth were instrumental
15 in moving the system along and getting us back up on our
16 feet.

17 With NOAA and OSPR, and administered through
18 the Marine Exchange, we have a robust work system now,
19 and it's improving.

20 Again, we talked about the Cosco Busan.

21 Well, we had a similar incident -- we had an
22 incident at one of my docks we're talking about, which
23 was in the channel, on the navigation range. They made
24 the next turn, and they took out a section of my wharf.

25 One of the benefits of that, that I saw, was

1 that we are required by California State Lands, as are
2 all the marine-owned terminals, to maintain essentially a
3 full weather station with a directional current meter and
4 the meteorological data.

5 So, instead of just putting in our own
6 stand-alone system -- and it seemed like it was the same
7 price, and it was the same requirement.

8 We put in -- we're putting in a NOAA-approved
9 system of current meters in that station, and it should
10 be up on the PORT system soon.

11 I would encourage other marine terminals to do
12 the same, because more information is just better for all
13 of us.

14 Some of the benefits of PORTS -- because I
15 heard earlier that a lot of people or a lot of the
16 thought is that we get the data, and then you find uses
17 for it.

18 Well, like the individual who said that, we're
19 kind of finding the same thing, but some of the benefits
20 are passage planning for deep-draft navigation; putting a
21 wind anemometer on the railroad bridge at in Benicia.

22 The UP railroad has issues with lifting the
23 bridge with 35 miles per hour of wind.

24 We definitely don't want to have a ship coming
25 up the channel or going down the channel when it's

1 difficult for them to do a bridge lift. If we know what
2 the weather is now, we can plan our passage later on.

3 Current meters provide information on speed and
4 direction. This is used for -- well, updating the tidal
5 current predictions.

6 At Avon Wharf, the tidal current prediction has
7 been 1.9 knots for years and years as the maximum. We've
8 based our mooring analysis on 1.9 knots.

9 We put it in this current year, and
10 unfortunately, it devalidated our warning analysis
11 because it should be 2.9 knots.

12 This is good information, and it helps the
13 mariner and helps the terminals to keep the ships
14 alongside. All of this is very helpful.

15 Current meters -- directional current meters
16 can be used to improve the accuracy of the spill
17 projectory model.

18 We see that some of the spill projectory, based
19 on the current tide predictions, will put the oil in one
20 location when the actual direction is a little different,
21 and the speeds, as I discovered, can be quite a bit
22 different from the predicted.

23 Having these current meters recording this
24 information can improve that, and it can also be used for
25 search and rescue, as well.

1 I talked about the tug escort requirements,
2 providing pilots and tugboat skippers with direction of
3 current when a large runout is occurring.

4 A couple of years back, up in the Carquinez
5 Strait, we only had tide -- we only had currents, even
6 though the tide was still coming in.

7 The runout was so great, and the only way
8 that -- the pilots would call up different terminals in
9 the Carquinez Strait and say, "Could you go out and see
10 what the current's doing right now?"

11 So, it's just better planning for -- better
12 passage planning.

13 Current meters and anemometers -- marine oil
14 terminals are required under California State Lands or by
15 California State Lands to have an improved operations
16 manual.

17 In this manual, it dictates -- each terminal
18 has different parameters, but they dictate when you can
19 transfer, how much wind -- what your wind limits are,
20 what your current limits are, what your warning analysis
21 is.

22 With the use of PORTS, we can look right on and
23 verify -- we can look right in the system and get
24 real-time information and say, "We should be
25 transferring"; "We shouldn't be transferring"; "It looks

1 like the wind's going to increase or decrease"; "When is
2 it going to resume?"

3 This is all good information and useful to the
4 ports.

5 We talked about spill response. Having
6 real-time information is very helpful; search and rescue.

7 The recreational users, I can't really touch on
8 them. I'm not a recreational user. I don't think I want
9 a boat I have to take care of personally.

10 What I'd like to see -- to sort of wrap up this
11 random diatribe, is I'd like to see the Ocean Observing
12 System married to the PORT system, because then it gives
13 you essentially a one-stop shop.

14 You can plan your passage from, say, Stockton,
15 and you know that the pilot is going to be able to get
16 off when he gets outside, because it's not the Potato
17 Patch, rolling at about 30 or 40 feet.

18 I've only seen that once.

19 There are other sort of bits and pieces in the
20 Bay that I think would be really -- would really help
21 things.

22 At Cal Maritime, there's a salinity sensor.

23 I don't know that very many people know about
24 it, but the salinity in the vicinity of Pinole shoal and
25 Carquinez Strait is actually quite important to

1 everybody, because depending on the size of the ship
2 coming over Pinole shoal, if it's salt water or it's
3 fresh water, there's about a 13-inch difference in draft,
4 and where is that?

5 Is it brackish? If not brackish, how fresh?

6 So, again, when you're planning 30 days out,
7 you'd like to know what the salinity in the water is that
8 you're transporting.

9 I think there's a real opportunity for PORTS to
10 be integrated into AIS and electronic charting, along
11 with real-time tide information, so that as you're
12 making -- before you're making the terms, because I don't
13 think anybody relies on, "Well, I'm hoping I have this
14 much water to get along."

15 The passage planning for safe transit and
16 avoiding groundings is -- would be a real benefit to the
17 mariner.

18 I guess those are all my comments.

19 Any questions? Like everyone else, I'll hear
20 it at the end.

21 MR. SKINNER: Thank you, Captain.

22 Eric?

23 MR. VAN DYKE: Okay. I'm Eric Van Dyke, a
24 research ecologist at Elkhorn Slough National Estuarine
25 Research Reserve.

1 I'm going to entertain you with some images.

2 What I really want to do today is sort of take
3 you away from the blue water and talk about the
4 intertidal region.

5 It's a little bit of a change of pace, but on
6 the other hand, we are using all of the hydrographic
7 data, all of the geodetic data, and all those tools and
8 technology that you use out in the blue water.

9 So, the slide I'm showing you right now -- I
10 should introduce myself.

11 I'm a research ecologist at the slough. I have
12 a background in computer science, so a lot of what you're
13 going to hear is technology.

14 I am not an oceanographer, and in fact, our
15 reserve does not have that sort of thing.

16 I'm not a licensed surveyor or geologist.

17 So, you're going to hear a lot about
18 partnerships and how we take advantage of NOAA's
19 expertise in various areas.

20 What you're seeing is a very low-aerial
21 photograph of some of the marshlands at Elkhorn Slough.

22 It's a beautiful image, but I put it up there
23 partly because of the distressing nature of the image.

24 What you're seeing in green is salt marsh, but
25 what you're also seeing, in addition to the tidal

1 channels, the silver areas are open, unvegetated areas
2 that weren't there a few years ago.

3 I'll get back to that in a second.

4 So, first of all, the National Estuarine
5 Research Reserve system -- I'm sure you're familiar with
6 it, but probably not terribly familiar with it.

7 It's a small set of 26, 27 -- I've forgotten
8 the exact number -- of tidal wetland regions where we do
9 research and stewardship.

10 Most of the blue you see on this image is
11 actually the Monterey Bay National Marine Sanctuary, a
12 very large area.

13 If I drew a line, our slough, our estuary, you
14 could hardly see it, but, collectively, we at the
15 National Estuarine Research Reserve system are really at
16 the forefront of understanding how hydrographic and
17 geodetic data can help not only with the kind of
18 navigational marine issues you've heard about, but also
19 with habitat issues and the impact of changes in habitat
20 on our lives.

21 Certainly, the experience on the Gulf with
22 Katrina and Rita taught us all that environmental issues
23 in the intertidal and the coastal zone are not divorced
24 from commercial or sort of societal or social issues.

25 So, the take-home point -- this slide is

1 probably the one I want you to leave with.

2 As I mentioned, I'm a research ecologist. The
3 kind of work we're doing at the slough right now is
4 fairly technical and could not be accomplished without
5 partnerships.

6 So, the partnership I want to talk about, the
7 one we've been building at our reserve and trying to
8 spread around the National Estuarine Research Reserve
9 system, is very tightly allied with both the work of the
10 National Geodetic Survey and the work of CO-OPS.

11 We're working, as I say, in an intertidal area
12 where both the water and the land interact, and the
13 elevations that affect our habitats are influenced by the
14 tides and also by the elevation of the land.

15 I should give credit here to a group within
16 NOAA, and actually within CO-OPS, that's probably not
17 terribly well known.

18 That's the Coastal -- a terrifically tortured
19 acronym, which I'm going to have to read because I can
20 never remember what it stands for -- Coastal
21 Oceanographic Applications and Services of Tides and
22 Lakes.

23 I wish it was a better acronym, but the
24 organization has been a real lifesaver for us, again,
25 because we do not have the funds to move forward with

1 this kind of work without NGS participants.

2 The photo on the left is NGS staff helping with
3 the geodetic surveying, and on the right, CO-OP staff
4 working with our tidal agents.

5 So, a very, very quick introduction to aerial
6 photography interpretation.

7 The Elkhorn Slough is -- about 70 years ago,
8 this is a close-up view of an aerial photograph taken in
9 1931 -- was well-vegetated with a tidal salt marsh.

10 That's that gray, pretty uniformly covered
11 area. What you see across the -- that sort of Elkhorn
12 shape feature is the tidal channel.

13 By 1980, a few decades later, some major
14 changes have occurred.

15 Not only a major feature on the Web site there,
16 with an impounded area where the vegetation is gone, but
17 those little pockmarks, those holes, are something that
18 began to occur several decades ago, and it hasn't gotten
19 any better.

20 This is a very recent 2007 aerial photograph,
21 and you'll see it's mostly silver. These are areas that
22 are now mud flats; they're no longer vegetated.

23 Our jobs as researchers and stewards of the
24 habitat is to figure out what's going on there, and it's
25 not an easy process.

1 I'll give you a quick picture.

2 You're all well familiar with the work of NGS
3 and the work of CO-OPS working in the uplands, looking at
4 elevations and working in the tidal zone.

5 That sort of green haircut in the middle, the
6 intertidal zone where we work, is a little more
7 complicated.

8 So, from the geodetic survey standpoint, we put
9 a vertical control in.

10 As Jack mentioned, he came down and helped
11 dedicate some of the control, both our CORS station,
12 which I represent with that little tripod, and
13 benchmarks, including the 200-year NOAA centennial
14 benchmark that was installed last year.

15 Conversely, out in the water, tides go up and
16 down. We can measure the water levels, but the trick for
17 us is that in between that, in the intertidal zone,
18 things are not so easy.

19 Inundation issues from the tides affect our
20 habitats. Changes in the surface elevation of the land
21 affects our habitats.

22 Those changes, whether it's a deposition of
23 sediment or erosion near the surface or deeper effects,
24 tectonic effects or compaction of the sediments, and so
25 forth -- all of those change the elevation and the

1 surface of the marsh.

2 Unlike some of the comments I heard earlier,
3 the tolerances we have to work with are very small.

4 A few centimeters' difference in elevation
5 means substantial differences in inundation times, which
6 means our habitats either benefit or suffer.

7 So, again, the kind of partnership we've been
8 working on, and really the take-home message is: I would
9 encourage you to continue this kind of partnership with
10 organizations like ours to provide both the geodetic
11 survey technology; our CORS station; the kind of
12 benchmarks we've installed, as well, over the last two
13 years; with both participation and support from NGS
14 staff, and the learning experience of our own to go ahead
15 and understand how that works.

16 Taking part in geodetic surveys, I actually got
17 to be part of the NGS crew that did several days' worth
18 of leveling across the slough.

19 So, it was great fun dodging the railroad, and
20 so forth.

21 The height modernization that NGS is involved
22 in is something that -- you know, the results of that
23 activity, we could not possibly have accomplished.

24 So, a very quick slide.

25 The Elkhorn Slough -- it's a little bit hard to

1 see, but the red marks are benchmarks, both existing
2 benchmarks that had been put in, in the '80s, and about a
3 dozen new marks that we put in, in partnership with NGS,
4 to build our geodetic control network.

5 That's the Oakland part.

6 A quick slide of a piece of Central Coast,
7 including us right in the center.

8 That bigger pink triangle, that's our CORS
9 station. "P210," we fondly refer to it as.

10 Again, the height mod that NGS has been
11 pretty actively involved in, in California, thankfully,
12 is going -- is really the only way that we are going to
13 get accurate geodetic calibrations to our site.

14 We're on the coastal peripheral margin. We're
15 on the coastal sediment area.

16 The land surface changes dramatically. All the
17 marks in the area are far off from what they were before,
18 so we need this kind of active GPS, and we have it.

19 Switching across the water, in partnership with
20 CO-OPS, we've been installing tide gauges.

21 Again, in partnership with CO-OPS, being taught
22 how to do analysis, inundation analysis, how inundation
23 patterns will affect our habitat sites, and then what we
24 can do in the future, because we can't keep this
25 expensive tide gauge equipment there forever.

1 We're in a one-year contract with CO-OPS.
2 After that, we're going to put lower-cost equipment in
3 and be able to calibrate that from the really
4 high-quality sensors that were put out there originally.

5 So, again, a map with -- in this case, our
6 water-level monitoring, one secondary CO-OPS and long
7 site, and three-month occupations at a tertiary site, a
8 short-term tide gauge.

9 Just a quick example of what's beginning to
10 come out on that -- I don't want to spend too much time
11 on the details.

12 The implications of this -- what you're looking
13 at is an inundation pattern that I pulled out fairly
14 quickly from some of that tide gauge data.

15 What you'll see is a whole lot of dots
16 indicating that the high tides, throughout a one-year
17 period, reached various levels, and, therefore, inundated
18 the marshes during a period of time.

19 There a few straight lines -- those outliers
20 out here are actually tide cycles that back up between
21 the two -- during the tides, forming very, very long
22 inundation periods.

23 You can see 12 to 15 hours of inundation of our
24 habitat. That's a smoking gun.

25 Now, it's really the topographic, the geodetic

1 data, and the water-level elevation data that's going to
2 help us tease apart whether those erratic dots up there
3 are, in fact, at the level of the marsh where we're
4 seeing habitat degradation, or they're a bit lower.

5 I marked it as mean high water, which is pretty
6 much the low end of our habitat. We're not really sure
7 yet. It could be a smoking gun.

8 Again, a few centimeters of elevation will make
9 all the difference.

10 So, finally, that difficult area away from the
11 geodetic survey, away from the land surface, and away
12 from the tide gauge, working on sediments, a tricky
13 proposition.

14 So, again, with a collaboration both with the
15 coastal folks from CO-OPS and with Coast Geologic Survey,
16 technology has been developed, this device that I fondly
17 call a "mud tide gauge," SET, surface or sediment
18 elevation table.

19 We've established a network of these in the
20 system.

21 It's a fairly manual process to measure the
22 relative elevation of the surface of the sediment
23 relative to the benchmark.

24 In addition to that, we've got a few other
25 tools.

1 We put markers and Feldspar to indicate whether
2 there's been surface erosion or a deposition on the top
3 of the marsh, a network of mapping -- actually, there's
4 eight installations of that SET equipment.

5 The bottom line, and here's where we end up,
6 with this collaboration, with all of data that we acquire
7 through the NGS, CO-OPS, USGS collaboration, it's really
8 our job to understand how inundation and elevation
9 changes are affecting our habitats and what we're going
10 to do about it.

11 So, my job really is to assimilate this data,
12 to analyze it, and using a variety of geospatial and GIS
13 remote sensing techniques, try to come up with a
14 restoration plan.

15 Right now, we're in the process.

16 So, for example, using the tide data, spreading
17 that geospatially, we can predict inundation patterns.

18 What you can see here -- although I'm not sure
19 you can -- is areas of our system that currently
20 inundated at mean high water.

21 The red areas are -- I believe that's a
22 20-centimeter increase of water levels, which means high
23 water was 20 centimeters higher in those areas.

24 So, it was being inundated at mean high water,
25 a very, very significant difference and a huge loss in

1 habitat.

2 Even more recently, we've gotten involved in
3 some pretty advanced remote sensing technology, once
4 again through a partnership with NOAA, NOAA's Remote
5 Sensing Center and the Coastal Services Center in
6 South Carolina, providing LIDAR for us.

7 Having the geodetic control and having the kind
8 of base network we have allows you to calibrate the LIDAR
9 data and make some pretty strong predictions of where our
10 habitat will be throughout the system in the future.

11 So, that's what I have to say.

12 Once again, it's partnerships.

13 Here's kind of a favorite image of mine.

14 On the right, one of our volunteers, not even a
15 paid staff member, who's put in hundreds of hours out in
16 the field; on the left, a CO-OPS staffer from Seattle;
17 and I'm the photographer, a staff member for the National
18 Estuarine Research Reserve system.

19 We should have had an NGS staffer in there, but
20 we didn't fit him in.

21 So, that's what we're doing. It's been really
22 fun, and we'll continue.

23 Thank you.

24 MR. SKINNER: You have been busy. Thanks,
25 Eric.

1 Sheila?

2 MS. SEMANS: Thank you.

3 I, too, have a presentation to run through, and
4 I apologize if it's too long, but I'll try to get through
5 it quickly.

6 It's a pleasure being on panel like this,
7 because my two worlds at the Coastal Conservancy and with
8 the Ocean Protection Council are both seafloor mapping
9 and ocean observing.

10 So, it's great to see this discussion and this
11 continued effort to integrate all these different data
12 sources.

13 I'm here today to present the California
14 seafloor mapping program, and I'd like to start the story
15 out with the formation of the Ocean Protection Council in
16 2008.

17 This was California's response to the Ocean
18 Commission's recommendations that we form a regional
19 council to look at our ocean governments and how we're
20 managing our oceans.

21 We created the Ocean Protection Council, with
22 this makeup, in 2004, after legislation was passed just
23 to form that council.

24 One of the first challenges that the OPC faced
25 was the fact that we had a number of laws that we aren't

1 able to implement -- we weren't being able to implement
2 through our agencies that were responsible for doing so.

3 One of the big ones was the Marine Life
4 Protection Act, which was responsible for creating a
5 network of marine-protected areas up and down the coast.

6 Basically, this was just languishing, not being
7 able to be implemented.

8 So, the Ocean Protection Council took this
9 under advisement, and looked at what were the primary
10 data sources for this kind of effort, and that was
11 seafloor mapping.

12 So, in 2005, we hosted this mapping workshop
13 that brought in all the experts from various agencies,
14 38 different institutions, state and federal, industry,
15 nongovernmental.

16 We went through the state, basically
17 prioritizing not only where we should map, but how we
18 should map; what are the products we need; what are the
19 standards we need.

20 It was a really good process.

21 What came out of it was essentially this map.
22 This tiny little strip on the coast is our three-mile
23 line, and the not-mapped areas in red actually should
24 have been -- the area around the Bay Area should be red
25 in this map at that time.

1 We were basically seeing that in our
2 territorial seas, we were about 66 percent not mapped.

3 Because there were so many various uses, and
4 not just at the port of the MLPA, the Ocean Protection
5 Council started this pilot project in 2006, which is
6 basically to map the coast from Ano Nuevo to what
7 essentially became Point Arena.

8 It was sort of to test this concept, and to see
9 if there was a use for this kind of data; if we collect
10 it, how we could work out a partnership that was state,
11 federal, academic, and industry supported; and how we
12 could basically work out all of these things.

13 Through this process, we were able to show that
14 where we typically have policy anchors -- you saw this
15 big blue area on the map -- we actually had a complex
16 habitat and geographic structure that was worth mapping.

17 So, after that pilot project was essentially --
18 not even concluded, but essentially wrapping up, we
19 managed to form the full project, which was the
20 California Seafloor Mapping Program.

21 Through this program, we continued the
22 partnerships we established in the pilot phase.

23 We worked strongly with the USGS in data
24 collective, groundtruthing, and seismic reflection work.

25 Also in producing map products, we worked

1 strongly with the Seafloor Mapping Lab, who is a leader
2 in our state on some of the mapping technologies.

3 We contracted, through our last grant, to do a
4 lot of the mapping, so we were working closely with the
5 industry at the time.

6 Moss Landing Marine Labs was doing a lot of
7 habitat analysis. This is something that they're sort of
8 pioneering, and they're doing a great job with that.

9 California Geological Survey is helping us
10 produce map products.

11 The National Marine Sanctuaries Program are
12 helping us to map out state waters -- you know, trying to
13 leverage our programs to map in the sanctuary areas, but,
14 also, they were providing us vessel support, which was
15 needed in the mapping part of our program.

16 So, we wanted to continue those partnerships
17 because it worked out really well in the first phase, but
18 we also realized that we couldn't undertake a project
19 this large without developing a stronger partnership with
20 our federal partners, and especially with the Office of
21 Coast Survey and with CSC.

22 So, we headed off to DC, and met with a number
23 of folks and went to NOAA's headquarters.

24 Basically, we said, "This is what we're
25 thinking of doing. How can we meet your objectives and

1 meet our objective at the same time?"

2 So, we've started this new partnership with all
3 these different parts of NOAA, basically, and also with
4 the Packard Foundation, who's been a supporter of this
5 program.

6 So, in October of last year, the Ocean
7 Protection Council approved \$15 million to get this base
8 map series of data for the state.

9 Basically, what this will consist of is a
10 partnership with NOS to manage an industry contract to
11 share -- and share the support costs for the actual data
12 collection.

13 This has been a great opportunity for us, and
14 working with both Roger Parsons and Becky Smyth on
15 setting this up has been a real help to us, because we
16 will not only be able to access the IDIQ contracts that
17 NOAA has a place with industry for this mapping, but we
18 can also do it for other geospatial data collection means
19 that we may have.

20 We're already looking at some LIDAR collection
21 and other information that we might want to run through
22 there.

23 At the same time, OCS has agreed to put in some
24 money to help with mode/demod, so we can share in those
25 kind of costs.

1 They moved up some of the priority habitat --
2 some of the priority surveying areas in California, so
3 they could map those at the same time, sharing our
4 resources.

5 We also made a grant to the USGS for continued
6 mapping and groundtruthing, and they matched that, as
7 well, dollar for dollar.

8 We made a grant to CSU Monterey Bay to map the
9 marine-protected areas that had been established in the
10 last round of the MLPA initiatives that have not been
11 mapped, because they're needed for the monitoring of
12 those MLPAs.

13 So, the Conservancy and NOS has basically
14 undertaken this process of putting together an MOU.

15 Basically, that MOU is going to funnel
16 \$11.5 million from the Conservancy to NOS for this
17 industry contract.

18 The benefit to us is there's no overhead for
19 this service to us, and we get technical oversight and
20 review from NOAA to ensure that we're collecting data to
21 the standards that they can use them for updating their
22 navigational charts.

23 Data collection will be coordinated. Both the
24 NOAA NRT6, the NOAA OCS, and the CSMP data collection
25 will all try to be coordinated and largely be collected

1 down in Southern California.

2 We will set up this -- we have sort of, and
3 we'll continue, to set up the state and federal controls
4 on -- in theory, the data will be shared.

5 We've actually worked out a common-data
6 threshold from the ship to NGECC, and it will be there for
7 use and dissemination to all the different agencies that
8 need it.

9 Now, I don't want to present too rosy a
10 picture, because we're in probably month 7, trying to get
11 this MOU in place.

12 It's been difficult, both with our state
13 bureaucracy and the federal bureaucracy, to get the MOU
14 in place and -- we actually have the MOU in place, but to
15 get the annex order signed to start the work is the
16 second challenge of getting this done.

17 So, we have a bit of hurdle to get through
18 there. Once we have it in place, it's in place for
19 five years, and we hope to use it quite a bit.

20 I just wanted to mention that there was quite a
21 bit of contributions to the CSMP right now, and there's a
22 variety of them here, as I mentioned.

23 The Sanctuary Program has provided us with
24 vessel support this year, and we hope they continue to do
25 with that each following year, because that's a huge

1 benefit to us.

2 National Fishery Service has gotten involved
3 with some of the biological groundtruthing, which has
4 been great, because we have been sort of heavy on the
5 geologic groundtruthing and light on the biological
6 groundtruthing.

7 NGDC has totally stepped up in helping us try
8 to figure how to deal with these large data sets and
9 manage and store this data.

10 This is the brief rundown of what the Folio Map
11 Series is intended to be for each section of the coast.

12 I should have pointed out earlier on this that
13 the current mapping effort is designed to collect data
14 from the three-nautical-mile limit to the
15 10-meters-of-water depth, which is essentially where we
16 can -- or where we can navigate safely with our ships.

17 So, we don't have the nearshore data collection
18 involved in this current phase, but we do intend to try
19 to tackle that at some point.

20 So, for each 1-in-24,000 block of coastline, we
21 want to create these 11 maps, and I'll show you some
22 examples of them as we go along that we've done with
23 previous data sets.

24 It's an ambitious undertaking, but these are
25 just -- we also want to try to work with our federal

1 partners and other state agencies to come up with
2 decision-support tools that we can also use.

3 So, how much is funded now? We still have
4 quite a challenge ahead of us.

5 I don't want to make it look like we've funded
6 everything, but for -- we think we can collect most of
7 the data from 10 meters to three nautical miles, although
8 the conversation earlier about fuel costs is a timely
9 one.

10 As I just found out, our budget is going to be
11 increased about a million dollars just from what it was
12 last year for fuel costs alone.

13 Groundtruthing, we figure we're about
14 20 percent funded right now. We're hoping to continue
15 leveraging resources and -- both with the Sanctuary
16 Program and within the USGS to improve that number.

17 Subbottom profiling and seismic reflection
18 work, we don't have that funded right now, and that's a
19 big hole.

20 Final map production, we think is about
21 40 percent funded.

22 Data management and information dissemination
23 is really something we're trying to understand right now.
24 We don't necessarily have it well funded because we don't
25 know what our needs are going to be.

1 NGDC is helping us tackle the data storage
2 section of that question.

3 Now, the mapping program and the IOCM shared
4 goal is to map once and use many times, and we can't
5 emphasize that enough.

6 We're trying to figure out how we can continue
7 to build these partnerships to get this data set utilized
8 as many times as we can.

9 So, I just threw in a few examples of how we're
10 using this data or how we're intending to use this data.

11 As I mentioned before, one of the first
12 benefits for us will be to create these habitat maps from
13 the survey data.

14 This is an example of one of the map sheets and
15 what they would look like.

16 We're also hoping to create onshore/offshore
17 and eventually geology maps. If you can see, there's the
18 faultline continuation out in the marine environment, as
19 well as some of the geology information.

20 Of course, we want accurate and updated
21 navigational charts.

22 When it came to our attention that a lot of
23 our -- some of our navigational charts had data soundings
24 that went back to the 1800s, that kind of scared us, and
25 so we wanted to work with OCS to get our data into their

1 system so we could update navigational charts.

2 That has happened from the previous data
3 collection effort that we've already conducted.

4 My panel members mentioned briefly the dredging
5 from the Bay and putting it out on Ocean Beach -- or off
6 Ocean Beach so the sediment can help nourish the beach
7 there.

8 That's something that's been a really
9 interesting use of some of this data, and looking at
10 these sand forms and stuff outside the Bay has gotten all
11 of our geologists excited.

12 We'd also like to use the data to help us form
13 these large-scale restoration projects that are going on,
14 especially in San Francisco Bay.

15 This is the South Bay Salt Ponds restoration
16 project.

17 Looking at sea level rise and inundation issues
18 for removing levies and restoring the salt ponds is
19 really a critical issue and another multiagency
20 cooperative effort.

21 Then I think the ultimate goal is to start
22 managing ecosystems and less habitat, and the big win
23 will be combining the data sets, as we've talked about a
24 little bit today, with -- combining our physical
25 oceanographic monitoring with our bathymetry and our

1 biological monitoring that you can see here, and really
2 start to look at these MPAs and other fishery issues from
3 an ecosystem perspective.

4 Onshore/offshore topographic maps, that would
5 assist us in understanding climate change, sea-level
6 rise, inundation.

7 This is huge need, obviously, for the state,
8 and our biggest data gap at this time is nearshore
9 bathymetry.

10 We undertook, in the pilot project, a LIDAR --
11 a bathymetric LIDAR study, which was fairly disastrous.
12 We concluded at the time that the technology just isn't
13 there.

14 We have to think more creatively about how we
15 might structure the program to collect that kind of data.

16 We couldn't get the planes here when the
17 weather was right. It just wasn't there yet.

18 So, that nearshore data, which is so critical
19 to a lot of these programs you've heard today, we just
20 don't have a way of collecting that just yet.

21 So, that's a huge data gap.

22 The state is looking at trying to collect
23 LIDAR -- topographic LIDAR data for the state, and that's
24 something that's coming.

25 Something we're trying to work with is the Army

1 Corps' National Coastal Mapping Program. That is
2 intended to fill that nearshore gap, but we haven't seen
3 any of this data collected in California's turbid waters,
4 and we're worried about the possibility of really getting
5 good nearshore bathymetry data through this program.

6 It's supposed to start in California in April
7 of next year, although we're dubious about that, because
8 the backlog of surveying is big, and they haven't managed
9 to make it to the West Coast, and we're not first on the
10 list.

11 So, I'm not sure that will really happen in
12 April.

13 So, what does California hope to get out of
14 this partnership?

15 Ongoing coordination of our coastal and ocean
16 mapping efforts is huge. I mean, it's been such a
17 great -- it's been great for me to work with my NOAA
18 partners to help develop these mapping efforts and to see
19 the excitement from the other programs that we can
20 leverage and work with, especially in this budget climate
21 that Jack was talking about earlier.

22 We're looking at no more extra dollars. We
23 need to make the best use of the dollars that we have,
24 and where we can meet mutual program objectives is
25 certainly our aim, and to create decision support tools

1 that support mutual benefits for the state and federal
2 government.

3 I think that's another big plan.

4 Now, when I was looking at your plan, I wanted
5 to look at some of the recommendations and how we either
6 are or could be meeting some of these recommendations.

7 Obviously, we're working to help you
8 aggressively map the nation's navigationally significant
9 waters.

10 OCS, as part of the partnership, is
11 prioritizing mapping the critical areas in California,
12 and I think they were mentioned earlier.

13 Here they are.

14 Graphically, NRT6 is planning to come to
15 San Francisco Bay this year, and I've been told that
16 they've created -- completed some surveying in Humboldt
17 Bay last year, and Morro Bay, I'm still not quite sure
18 what the schedule is on that.

19 We want to integrate the coastal mapping
20 efforts to ensure that channels that are maintained are
21 surveyed to the highest standards.

22 So, this partnership with NOAA and the Joint
23 Technical Advisory Committee, running through the IDIQ
24 contract -- all these different things are making sure
25 that we have collected the data to a standard that is

1 acceptable to navigational charting and marine
2 transportation.

3 We hope to continue to do that, and also,
4 again, work with NGDC to deal with these large data sets
5 and get the data turned over in a timely manner.

6 The IOCM work group met not too long ago and
7 chose California as a pilot project to demonstrate the
8 effectiveness of mapping partnerships.

9 So, we hope to see, in the coming years, more
10 partnerships for and around this mapping program so we
11 can see more benefit.

12 One of the things I wanted to point out is that
13 this is something that we're actually seeing on fairly
14 routine basis as we're out there doing full-on surveying
15 of the California waters.

16 This was something that just came to my
17 attention a couple days, which is 29-foot sounding in a
18 45-foot area right off the Port of Long Beach Harbor.

19 When our survey folks reported this to NOAA,
20 they immediately released -- issued a Notice to Mariners,
21 which was interesting to me to hear that that isn't
22 necessarily the most effective way of getting information
23 like this out.

24 However, what was significant to me about this
25 is that this is in an area that we think we have well

1 mapped. This wasn't in one of the areas that's on a
2 remote part of the coast.

3 In this survey block alone -- and I can't tell
4 you the survey block specifically, but it's not that much
5 coast -- we found four hazards to navigation in the
6 field, and two more when we processed the data.

7 So, it is a fairly routine thing that we're
8 finding, and we're really working with NOAA to try to get
9 this information integrated into the system as quickly as
10 possible.

11 As far as integrating different mapping
12 efforts, it's another thing the state has been trying to
13 do.

14 Here's an example of kind of an industry-led
15 one.

16 Basically, when Jim Gray's boat went missing
17 last year, early last year, the family actually
18 contracted with Fugro Pelagos to map the area outside the
19 Bay.

20 We've been working with Fugro and that family
21 to get that data donated to the Sanctuary Foundation for
22 public use, actually.

23 That data will be integrated into our program
24 and save us quite a bit of money in mapping that area, as
25 well.

1 So, I'm not going to go too much into the ocean
2 observing world that I also work in, but I wanted to -- I
3 always want to emphasize that there's a lot of work going
4 on to try to integrate both the mapping and the ocean
5 observing stuff, and we're not there.

6 I think Marc's point about trying to integrate
7 that with the PORT system -- some of the stuff that's
8 going on through IOOS and the PORT system is, I think, a
9 really timely one.

10 California's ambition is to try to integrate
11 the bathymetry with the ocean observing data that we're
12 collecting currently.

13 I want to point out a program, in case you
14 weren't aware, that California has funded and sponsored,
15 as well, and that's the Coastal Ocean Currents Monitoring
16 Program.

17 We're just at the end of installing,
18 essentially, a system of shore-based,
19 high-frequency radars up and down the coast that will
20 cover 1,100 miles of coastline and measure -- map surface
21 currents direction and velocity along the whole
22 continental shelf.

23 In areas of higher population or higher
24 shipping traffic, we have increased the resolution of
25 that data collection.

1 So, this is something that Toby provided me
2 with the other day, which is a look at the West Coast in
3 general.

4 Oregon has a system in place, as well, and
5 Washington has been funded and is putting in a system to
6 look at their surface currents.

7 So, pretty soon, we're going to have the whole
8 West Coast covered, as far as surface currents along the
9 Continental Shelf.

10 If you look closely at San Francisco Bay, in
11 particular, you can see that we have coverage fairly well
12 into the mouth of the Bay, and then we actually sponsored
13 an experimental four or five radar within the Bay so we
14 can look at the utility of this kind of information
15 integrating into the PORT system, and some of the other
16 maritime safety work that's going on in the Bay.

17 We're just getting that data, you know, up and
18 running, and hoping to integrate it more fully in the
19 future.

20 To get the data and the data parts to the
21 greatest public benefit is obviously something I've
22 talked about a lot already, so I won't go on too much.

23 Again, the assistance that the federal
24 government has given us in data storage and processing
25 and delivery techniques has been big, and we'd love to

1 see that continue and develop, and where possible,
2 develop more opportunities for sharing the data and
3 utilizing the data.

4 I wanted to give you a quick example of some of
5 the ways that we're thinking about processing this data.

6 This is part of that 11 Folio Match series.

7 This is -- this one you're looking at here is
8 the groundtruthing plate that we're hoping to put
9 together that we can show different -- we want to show
10 different uses of this data to people.

11 We want to repackage the data as much as we
12 can.

13 The USGS has put together a nice series of maps
14 to look at that essentially interpret the survey data for
15 you and show examples of different habitats that are
16 being seen.

17 This just a prospective map, but this one
18 captures so much attention from people, just looking at
19 the different ways of seeing the data and then
20 interpreting what that means, as far as what you're
21 looking at.

22 We've got another really effective
23 communication tool.

24 This one is looking at the seismic reflection
25 information, and looking down into the sediment has been

1 another useful thing for some of the tsunami and geologic
2 work that's been going on.

3 What we'd like to see in the future -- again, I
4 can't reiterate enough that we want to continue to
5 evaluate and develop mapping technologies.

6 We want to continue to develop ways to process
7 these large data sets quickly and get them out.

8 We want to help build -- we want to continue to
9 build more partnerships within the state and federal
10 governments to use this data as much as possible.

11 We want to create -- which is something that we
12 haven't quite figured out yet -- working with CSC, we
13 want to help create decision support tools that support
14 both state and federal management.

15 I didn't want to leave without pushing my
16 interest for research and technology development.

17 Bathymetric LIDAR, as I mentioned earlier, is
18 something that we'd love to see tested more frequently,
19 or at all, in California, and help us develop a
20 technology that could get that nearshore data that we're
21 missing.

22 AUVs, I think, have a huge potential, and we
23 just haven't pushed enough annotations for like this, and
24 I'd like to see what kind of mapping capabilities they
25 would have.

1 If we get this baseline data set, can we use
2 AUVs to go in and look at change, or can we use AUVs to
3 go do the groundtruthing for us, because who's getting
4 out there on the ships is -- okay.

5 Merging the topo/bathy LIDAR and doing
6 something with it, we're still struggling with that, and
7 that's definitely something we'd like to see developed in
8 the future.

9 Integration of the bathymetry with the
10 biological data sets so we can really start looking at
11 habitats -- I mean, our habitat characterizations, I
12 think, are mostly based on geology, and we need to look a
13 little bit more strongly at some of sample data sets --
14 the biological data sets to integrate that information.

15 As far as COCMP -- I don't think I mentioned
16 this -- we have funded the development of a ROMS
17 circulation model in California.

18 It's definitely experimental.

19 It's not in its operational stage, and we'd
20 like to see that developed and integrate as much of this
21 information as we can into that, as well as ocean
22 observing information.

23 Before I left, I wanted to just let you know
24 about an initiative that California started, but it's
25 still in its infancy, which is ocean science

1 applications.

2 Basically, we realize that there was this real
3 gap between -- it was mentioned here on panel already,
4 that ocean observing was formed by creating data and
5 finding the users later, which is absolutely what we get
6 when we put in the agent radar system.

7 We realize that we really need somebody or some
8 entity that will help link the people who need this data
9 with people who are collecting this data.

10 So, we're trying to start this effort that
11 basically makes sure that any existing -- at least any
12 existing -- well, any future investments from California
13 into ocean observing will meet state management priority
14 and will be sustained over time and will be available for
15 a suite of users.

16 The West Coast Governors Agreement, if you
17 weren't aware of this -- I think it was being unveiled
18 this morning, even, the final product.

19 The three West Coast governors have gotten
20 together, and they've created this agreement on ocean
21 health.

22 Seafloor mapping is mentioned specifically as a
23 goal to coordinate among our three states.

24 As well as this expanded ocean and coastal
25 scientific information, research, and monitoring, it's

1 got a number of other ocean observing components in there
2 that I think address well the needs to integrate those
3 sources.

4 So, that's the end of what I have to say, and
5 I'd be happy to take any questions.

6 MR. SKINNER: Thanks, Sheila.

7 You have an aggressive program, and a lot on
8 your plate there.

9 Thank you to the entire panel.

10 I think this is really helpful to our panel to
11 have so many different things going on in a relatively
12 small geographic area.

13 In prior meetings, we've heard from people
14 covering sort of a wide geographic area, and having so
15 much going on in the San Francisco area is, I think,
16 really very interesting.

17 Before we get into questions, I just want to
18 recognize Adam McBride, who just joined us, from the
19 Lake Charles Harbor & Terminal District.

20 Glad to see you as always.

21 As we go into questions -- at our last meeting,
22 we had developed some recommendations, which we sent to
23 the NOAA administrator, based on testimony that we've
24 heard or comments that we had received.

25 I think we'd like to do that again after this

1 meeting.

2 So, as you're asking questions, if you can,
3 think in terms of how we want to use this wealth of
4 information and all these different applications that
5 we've heard about today, in terms of recommendations to
6 PORTS and the administrator.

7 So, with that, we'll open it up to some
8 questions.

9 MR. JEFFRESS: Can we make comments, too?

10 MR. SKINNER: Questions or comments.

11 MR. JEFFRESS: Okay. I'd like to address Jim's
12 concerns about chart accuracies.

13 My first part of my career is in land
14 surveying, and I'm a registered professional land
15 surveyor in Texas.

16 I started out in Australia as a surveyor, as
17 well.

18 Surveyors are very conscious about the accuracy
19 of positioning, because the value of real estate rides on
20 it -- but it's the same with any sort of mapping.

21 Whenever you locate anything on the surface of
22 the earth, you've got to have an understanding of how
23 accurate it's located if it's going to be used in some
24 public arena.

25 I've been called on several times in Texas to

1 be an expert witness and go to court and present
2 information about how locations were established and the
3 accuracies.

4 One of the things that the court really looks
5 at is: What is the scientific standard you're using to
6 locate positions?

7 So, over the history of the development of
8 surveying mapping product, the courts have actually
9 dictated to us how we go about doing that.

10 NOAA is very good at establishing scientific
11 standards for mapping and positions, particularly in
12 charting.

13 A good example of that is when the Exxon Valdez
14 hit the Bligh Reef.

15 The position of the Bligh Reef was not under
16 questioning then, because it was mapped accurately, and
17 the technology we have now in positioning GPS is that
18 we're getting to the point what we can locate our own
19 positions more accurately than what's on the map.

20 That becomes a concern, particularly when
21 there's an incident, it goes to court, and there's
22 litigation over it, and there's lots of money involved in
23 it.

24 The courts are going to particularly
25 scrutinize: What are the standards and what are the

1 accuracies you're using to locate what's on the map
2 versus your position?

3 This is something that's critical to mapping,
4 the standard we use.

5 The way technology is going, that standard is
6 going to be even tighter, because we're going to know our
7 positions a lot more accurately because of the advances
8 in GPS and the European Galileo system that's coming on
9 board.

10 We're going to know our positions a lot more
11 accurately than we have on the charts, so there's
12 actually a push to make things more accurate on the
13 charting side than to go the other way.

14 I do understand your issue about getting the
15 data from the observations in the field to the chart in a
16 timely manner.

17 I believe we do have the technology to do that;
18 it's just that our policy makers are not putting enough
19 effort into making that happen.

20 They just don't see that as a worthwhile
21 investment, whereas we do.

22 It's unfortunate in this country right now that
23 policy makers have this attitude of shrinking government,
24 which also shrinks the number of public rules that
25 government provides, and that sort of environment is

1 making it difficult for us to do what we want to do.

2 MR. SKINNER: Any other comments or questions?

3 MR. DASLER: Again, this is Jon Dasler.

4 I guess, just along some of the same issues,
5 you commented about some near-level accuracy in chart
6 depths or ranges in the half-foot range.

7 I guess one of the considerations is just --
8 and the way we look at it now, especially as we get into
9 more statistical processes and total propagated error,
10 and the number of (inaudible) the more you could reduce
11 that total propagated error to reduce that overall
12 accuracy of the soundings.

13 Your mentioned GPS, and that's being utilized a
14 lot, and one of the largest indicators of errors is --

15 MR. SKINNER: Jon, can you speak into the mic?

16 MR. DASLER: -- our vertical accuracies
17 relative to tides, and along those levels.

18 I guess even addressing Captain Bayer's, sort
19 of, concerns of dredging and the timeliness of getting it
20 done, in 2000, 2001, we did a lot of hydrographic surveys
21 in the Bay Area, Presidio Shoals, and up to Richmond, the
22 Carquinez Strait and up Bulls Head Channel.

23 It also boils back down to the concern about
24 the Corps of Engineers. We've done surveys in the Bulls
25 Head Channel for the Corps of Engineers where it's a

1 single deep-line (inaudible).

2 So, their mission is really dredging and
3 dredging maintenance and not addressing hazards to
4 navigation.

5 So, when we come through and we do
6 full-coverage surveys, we've had a lot of hazards to
7 navigation that were uncharted.

8 One was a container in the Carquinez Strait.

9 That's really not a mission plan, and I think
10 that's what we're trying to address, at least some of our
11 comments, which is that the Corps of Engineers has their
12 mission plan for dredging and dredge maintenance, but
13 who's getting in and looking for obstructions and hazards
14 to navigation?

15 Those are things that tend to be overlooked,
16 and there's not regular surveys to really address that.

17 Again, the California State Mapping Program
18 (inaudible) just a number of obstructions that are on the
19 charts that are supposed to be full-coverage surveys.

20 Another thing was: It's remarkable sometimes
21 how unaware the maritime community is of programs and
22 services that is NOAA offers.

23 Recently, we were looking at a dredging project
24 for the channel into the Alameda Naval Station.

25 The specifications are -- require that

1 surveying contractors put in water-level-gauging stations
2 and place sets for the dredging, but, actually, CO-OPS
3 has a national water level observation network station
4 right on the pier where that channel is going in.

5 So, it's an operating station that outputs data
6 at six-meter intervals.

7 Apparently, they're unaware that that station
8 exists on their own pier, and that requires a contract
9 (inaudible).

10 We really appreciate the input that we receive
11 from the panel, a lot of valuable information.

12 It seems like a lot of it is just getting the
13 word out and getting that communication going.

14 MR. HAUSSENER: If I could, because this seems
15 to be a little bit of an issue -- I guess the question
16 is: How often can we survey and get results out that are
17 meaningful?

18 If it's going to take you 160 years to go back
19 and survey everything, then, obviously, we're wasting our
20 time, and why don't we just give up, unless we can come
21 up with an entire -- as I call it, a seismic shift or a
22 change, then all we're doing is spinning our wheels.

23 That's what I'm pointing to, is that we need to
24 either figure out how we're going to do it faster, or we
25 need to figure out what are the real high-risk areas that

1 need to be addressed, such as ship channels, and leave
2 everything outside the designated navigation channel
3 alone to a certain extent, but that seems to be what the
4 real issue is.

5 I'm not necessarily going to talk about the
6 federal government. They collect over \$400 million of
7 harbor maintenance tax in California and give us back
8 \$40 million for O&M dredging.

9 The other \$360 million does get spent in
10 California.

11 Just so you know, the state's general fund has
12 increased by 40 percent since Governor Schwarzenegger
13 became governor.

14 So, we're collecting more money and spending
15 more money at a faster rate here, and are falling further
16 and further behind on some of these things.

17 What I saw in your report was: These are the
18 real problems. An incremental increase is going to go
19 from 3,000 to 10,000, and we've got 95,000.

20 At the rate we're going, we really need to
21 collectively come up with a better system of doing it.

22 ADMIRAL WEST: Dick West.

23 First of all, these panels are really good. At
24 this one and the one in Miami, we really learn a lot, and
25 thanks a lot for that.

1 Back when I was in charge of the hydroservices
2 for the Navy, we had a backlog of surveying, and by the
3 way, you might want to tap into what they're doing, too
4 (inaudible).

5 It's enormous.

6 I can remember going to the CNO and saying --
7 it was so large that it didn't register with him, so
8 you've got bring them in.

9 What we saw the answer was, was digital charts
10 with digital updates. That's where you've got to go.

11 It's fast, but changing from -- to that
12 technology is not easy, because there's a lot of
13 infrastructure in place that it replaces, and there's a
14 lot of momentum that you've got to move to make it
15 happen.

16 Our bottom line is you've got to use digital
17 charts, and you've got to electronically update that
18 chart, which takes a new nanosecond.

19 I mean, that's easy to say, but that is the
20 solution.

21 You've got to be able to take this local stuff
22 and put it in there.

23 You've got some accountability issues with the
24 liabilities, and all that stuff, but that can be solved.

25 A comment about Jim Fawcett's comment about

1 Sea Grant -- a couple things since the last time we met.

2 I became chairman of the Federal Advisory
3 Committee for Sea Grant, so now I know a lot more about
4 Sea Grant than I ever did before in the last four months,
5 which allowed me to go along with NOAA's examiner a
6 couple weeks ago on a trip through New England.

7 Whenever we met, the NOAA examiner would ask in
8 advance to have all the NOAA-sponsored entities in that
9 area be at the meeting, Coastal Zone, Sea Grant, and all
10 this other stuff, in the same meeting.

11 When somebody briefed, he would ask, "Are you
12 cooperating with this other NOAA entity," and if there
13 was a pause or a "no," then his eyebrows went up.

14 So, I'm glad to hear a lot of this, "You'd
15 better start cooperating" amongst the NOAA-funded
16 agencies in these coastal and ocean issues, and these
17 cover a lot of it here.

18 Anyway, I concur with Jim. Not all Sea
19 Grants -- because they're a little bit different in
20 places, but they can certainly help and be a part of
21 this.

22 Two more comments.

23 First -- second of all, NOAA can't fund all
24 this stuff. We keep coming up with all this stuff, but
25 they just can't. There's not enough money.

1 So, in addition to telling us what the problems
2 are, tell us some other innovative ways that we might be
3 able to solve the problem.

4 The economic benefit is a big argument that you
5 have to beat down on the Hill.

6 If the ports are going to bring in X more
7 dollars, then why don't you take some of those dollars to
8 make that extra foot go away?

9 That's part of the decision making you've got
10 to take to the Hill for public money.

11 So, on Sheila's comment on AUVs, they are the
12 right answer, but, again, this technology goes against
13 some infrastructure that's already in place.

14 We replace it, so the momentum is a factor
15 there, too, but they are the answer.

16 MS. HICKMAN: Sherri Hickman.

17 Captain Korwatch and Captain Bayer, I felt like
18 you may have sat in on some of our meetings in the past,
19 because from probably our second meeting on, we've said
20 that the PORTS program is highly desirable, not only
21 where they are to be maintained by the federal
22 government, but in ports that don't have them and want
23 them and they can't get them because they can't get the
24 funding.

25 So, that doesn't fall on deaf ears here.

1 Also, we've always said that the PORTS program
2 should be the backbone to IOOS. I believe that was also
3 brought up, I believe, by Captain Bayer.

4 The AIS being integrated with the PORTS
5 program, I guess, Mike, you could probably bring them up
6 to date on that, but that's also an ongoing issue.

7 MR. SZABADOS: Mike Szabados.

8 In regards to the AIS, NOAA has been working
9 with the integration of that, and actually, we have a
10 planned upcoming test of integration later this year in
11 Tampa Bay as a starting point, and then plan to do that
12 in New York and Houston, and then roll it out nationally.

13 So, there's an integration of ports, but also
14 to say that -- it's also good for the ENC's to display it,
15 and to display real-time data with AIS positioning on
16 that navigational chart.

17 MR. WELCH: Ed Welch.

18 I'd like to thank all you panelists for
19 excellent presentations, but I do have a couple
20 questions.

21 Captain Bayer, your summation of the practical
22 implications of what that PORT data means to commercial
23 operators is really the key.

24 We need more and more of that to convince the
25 policy makers to fund PORTS.

1 We can go up there and talk about it in
2 concept, and even the people that run PORTS themselves
3 can go try to explain what PORTS does to the policy
4 makers and the people that control the purse strings, but
5 they're sort of self-interested.

6 You know, they're running the local PORTS.
7 They have a desire to keep things funded, but when actual
8 users go up and say, "The implications of having this
9 data or not having this data are the following," that
10 makes a big, big impression.

11 So, I would recommend that you and your folks
12 in comparable situations here in California in the
13 Bay Area take what you just gave us, put it on a single
14 sheet of paper, in your situation and your counterparts,
15 and get it to your senators, and get it to Speaker
16 Pelosi.

17 That's the type of stuff that makes an impact
18 on people on the Hill.

19 Rather than having legislators say, "Okay,
20 we're going to respond to the Cosco Busan by saying the
21 Coast Guard is going to take over direction of commercial
22 vessels," which is what a couple of your folks have
23 responded, they ought to be out trying to get 3 or
24 \$4 million more to make your PORT system better.

25 That has much more practical impact, but, you

1 know, maybe if they hear it from you as opposed to from
2 Captain Korwatch or from us, because that's -- I worked
3 on the Hill for 20 years, and that's where the impact
4 comes.

5 That type of testimony that you gave today has
6 big impacts, so thank you very much.

7 CAPTAIN KORWATCH: If I may just comment -- and
8 I may not have all the information.

9 First off, I want to say that one of the
10 realities is that we have realized that while the Port
11 Authorities understand the value of ports, they are not
12 really reaping the economic benefits.

13 These ports within the San Francisco Bay --
14 they're landlords. They are not the Maersks and the APLs
15 and the Matsons who gain that extra foot of cargo space.

16 One of the values that Marc indicated is the
17 tanker companies, on the other hand, are the real
18 hands-on operators who directly see the benefit.

19 We've not had as much success dealing with the
20 Port Authorities as we would like.

21 When we hold a meeting here within
22 San Francisco Bay to talk about the benefits of PORTS and
23 how we can spread that information out to the community,
24 the Port Authorities don't show up.

25 We've been able to kind of twist their arm, but

1 they're not involved.

2 One of the things that I think we're really
3 kind of making progress on is that -- again, I apologize
4 if I might have put you on the spot, Mike, but my
5 understanding is that NOAA doesn't go and ask for the
6 money for PORTS.

7 Now, here's kind of a turn of events, where now
8 NOAA has said, "Okay, we'll put the PORT system in, but
9 we're also going to ask for money to provide O&M for
10 that."

11 My understanding -- and again, I may be
12 speaking incorrectly -- is that this is a new turn of
13 events, is that now NOAA is putting it in their budget as
14 a request.

15 Well, you know, it's a case of -- you just said
16 you have 20 years on the Hill, and if you don't ask, you
17 don't get.

18 So, we would like to encourage that situation
19 to kind of be expanded, to develop.

20 We're certainly -- we realize NOAA cannot
21 lobby, but that can be -- our role is to say, "Yeah, it's
22 been in the NOAA budget. Now we would like to see that
23 supported."

24 We certainly, in San Francisco Bay, have a lot
25 of connection to Speaker Pelosi, to Senator Feinstein, to

1 Senator Boxer, all of whom come from the San Francisco
2 Bay region.

3 I think that's the reality of the Cosco Busan.
4 It's in their home ground. They're seeing the value of a
5 PORT system.

6 While it -- again, as I mentioned earlier, I
7 don't think it had any impact on the collision itself,
8 one could argue it did have an impact on the spill
9 response.

10 PORTS, we think, brings a lot of value to not
11 only San Francisco Bay, but I have colleagues in just
12 about every other port region within the United States,
13 and they also see the value of PORTS and would like to
14 see PORTS expanded into other sensors within their
15 regions.

16 That's kind of a PORTS lite, and I know that
17 they would like to see that system extended.

18 MR. WELCH: Let me take Mike off the spot --

19 CAPTAIN KORWATCH: Mike and I go way back.

20 MR. WELCH: I know, but I think I can probably
21 speak a little more candidly than Mike can.

22 I don't think it's a question of what NOAA
23 wants to do. It's in their budget, because it went
24 through a whole variety of review.

25 There are lots of things that NOAA wants to do

1 and proposes that never makes it out of -- well, there
2 are things that Mike and his shop propose that never make
3 it out of NOAA, and there are things that come out of
4 NOAA that never make it out of the Department of
5 Commerce, and they don't make it beyond the Office of
6 Management and Budget.

7 So, what you see -- so, it's true that the
8 budget requests for NOAA that go to the Hill have
9 traditionally not sought full funding for PORTS, but
10 that's not necessarily indicative of where the NOAA
11 people want to be.

12 They don't control their own fate completely.

13 Let me ask, if I could: You indicated you're
14 sort of funding shuffling, shall we say, here in the
15 state.

16 What do you estimate, roughly, the annual
17 operating expenses for the San Francisco Bay PORTS
18 program is, and if -- you also indicated there were
19 certain capital improvements that you would like to have,
20 and what do you estimate they would cost?

21 CAPTAIN KORWATCH: We have estimated that our
22 annual O&M, with the system being in existence the way it
23 is now, without additional expansion, is in the neighbor
24 of about \$175,000 a year.

25 A number of months ago, all of the port regions

1 got together and came up with a California proposal that
2 we were hoping to take to the legislature and get some
3 support, but, unfortunately, the California economy kind
4 of went in the tank.

5 So, going to the state legislature and asking
6 for additional funding just wasn't going to be a reality.

7 However, we anticipated that to do capital
8 improvements -- to provide O&M for the State of
9 California was in the neighborhood of about \$2.2 million,
10 for the entire state.

11 So, we're not talking a huge amount of money.

12 MR. WELCH: You know, coming from Washington,
13 when you say "\$175,000," it just makes you want to
14 cringe.

15 People waste that type of money in about
16 15 minutes.

17 Let me make a suggestion to you: Sooner or
18 later, probably later than sooner, there's either going
19 to be a court-mandated or a Department of Justice
20 settlement of big bucks with the operator of the Cosco
21 Busan.

22 Typically, these settlements, about half of
23 them, are devoted for compensation of one type or
24 another, and they frequently are used to help fund
25 research programs like at Elkhorn.

1 So, I wouldn't be surprised if -- there's
2 absolutely no reason that part of that settlement, if you
3 all got in there and started working with the Department
4 of Justice and some of your other folks, couldn't be used
5 to enhance the PORTS -- the San Francisco Bay PORTS.

6 CAPTAIN KORWATCH: We realize that, but --

7 MR. WELCH: So, I would encourage you to get
8 your oar in the water early, because everybody else will,
9 too.

10 CAPTAIN KORWATCH: And I understand that.

11 We have been fortunate that we have been the
12 recipients of some of those grants to keep our system up
13 and running.

14 A number of years ago, we got a few dollars
15 through a spill that happened called the "Kate Mohican,"
16 where it was a spill in a dry dock.

17 We have been in the position where we've been
18 obtaining the money.

19 Our main issue is not capital money; our main
20 issue is O&M money.

21 So, those grants will give you money to do
22 enhancements, but if you don't have the ability to use
23 that money for O&M, then every year, we struggle, because
24 we've enhanced our system, we've made it fully functional
25 and reliable, but how do we keep that system to the same

1 level that constituents are going to find it valuable,
2 are going to find it reliable, and are going to continue
3 to use it?

4 One of the complaints that we've had from the
5 pilots here in San Francisco is that unless that system
6 is 100 percent reliable, they're not going to use it,
7 because if they can't count on it today, and if they
8 can't count on it tomorrow, and if they can't count on it
9 into the future, then they're feeling like, "We just
10 don't want to go there; we'll find our own way.

11 "We'll make phone calls to the terminals
12 upriver and say, 'Tell me what the current levels are
13 when you stand up on the pier.'"

14 MR. WELCH: But those pots of money can be
15 devoted to just about anything that anybody can
16 creatively come up with.

17 I don't see any prohibition for creating a
18 special little pot of, say, \$2 million for operation
19 expenses, which ought to take care of you for eight or
20 10 years at current levels.

21 CAPTAIN BAYER: I'd just like to say that the
22 last infusion of money to PORTS, prior to 2006, was the
23 Kate Mohican spill.

24 We were very fortunate to have to Alan
25 Steinbrugge, who could keep a system running with

1 virtually nothing, and now I think he's -- he feels like
2 he's sort of died and gone to heaven with the amount of
3 money and support he has to purchase new equipment and
4 keep the system moving along.

5 I think you're right.

6 I think we can anticipate that there will be
7 additional moneys and -- not just for San Francisco, but
8 for the whole state, because of the Cosco Busan.

9 It's an unfortunate way to get money, but --

10 MR. SKINNER: Let me jump in here for a second.

11 We've gone beyond our time, but I think this is
12 important, so with the panel's concurrence, we'll keep
13 this going and try and cut down on the lunchtime, and so
14 forth.

15 I heard, I think, either Mike or Tom --
16 Admiral, did you -- and Gary, as well, so I think we can
17 do this.

18 Thanks.

19 (Remarks outside the record.)

20 MR. DUNNIGAN: It's hard to invest in routine,
21 consistent, 24/7/365, for 30 years, programs.

22 We've seen this in our satellite program, where
23 we have this NASA research satellite called "QuickScan,"
24 which was put up, and for three years was operating, and
25 the scientists didn't know what to do with it.

1 All of sudden, they were absolutely dependent
2 on it for scatterometry, for when -- you know, wind
3 factors down at the surface.

4 The satellite had a five-year lifespan, and
5 it's now been operating for seven years. It's going to
6 die. It's on its second battery now, and there's no plan
7 to really go forward.

8 Obviously, we're planning hard to figure out
9 how do this, but it's expensive, to sort of take that
10 technology so that we can do scatterometry for something
11 as important as Hurricane Dolly, being able to understand
12 what that was going to do.

13 So, that kind of commitment, we see all
14 throughout NOAA.

15 It's why we're having trouble getting funding
16 to recapitalize our fleet, because it's just building
17 another boat.

18 You know, what does that do?

19 Things like AUVs that the Admiral mentioned,
20 that's something that gets people's attention, but mainly
21 because it's a research program that is doing something
22 new.

23 Once we prove it and move ahead, then how do we
24 develop the commitment to doing our job every day?

25 That is something that affects us, and it runs

1 all throughout NOAA, and if somebody has got a great idea
2 or is willing to help support us on that, we'd appreciate
3 it very much.

4 A couple of others have mentioned about the
5 Corps of Engineers.

6 As Captain Barnum said, one of the problems
7 with the Corps is that it is -- I have a lot of friends
8 in the Corps, but they're an alternate stovepipe
9 organization. They make NOAA look well integrated.

10 They don't get money to do nationwide projects.
11 They get money to dredge this channel, and to do this,
12 and so when we say -- as we have with General Reilly,
13 who's a terrific guy, Chief of Operations for them -- "We
14 need to have these standards. You've got to meet it."

15 He says, "Absolutely," but he has no way of
16 forcing the districts to do that, and so that's a
17 problem.

18 Somehow we have to figure out how to build into
19 the ethic -- and maybe the panel here is really the right
20 group to figure out how the work -- in the end, nobody
21 knows how the Corps does business -- to make sure that
22 they are following standards and doing the follow-up
23 surveys that can be used for navigation, because -- I
24 agree with the captain, that it's somewhat analogous to
25 have this survey that comes out and say, "Well, this is

1 our survey, but don't use it."

2 That's a pretty difficult thing.

3 On the OMD issue -- I guess I'm going to call
4 it an "LMD issue," getting operational funding for PORTS.

5 The young man that Admiral West went to
6 New England with two weeks ago is an important guy, and
7 he answers his phones.

8 These people at OMD -- and we saw it when Emily
9 Waglaum was there, our examiner -- they like to hear from
10 the community at large.

11 If he starts to hear that federal funding for
12 O&M of PORTS is not just NOAA coming forward and
13 requesting it, but it's something that the user community
14 needs, that will help it.

15 I'll tell you what his problem is.

16 As it was said earlier, the operational costs
17 for San Francisco Bay PORTS might be \$200,000 a year.

18 They cannot understand -- and sometimes I
19 can't, to be honest with you.

20 They cannot understand, when you look at the
21 revenues that are associated with maritime transportation
22 in San Francisco Bay, that \$200,000 would be a problem.

23 Now, I think, Captain Korwatch, you've got a
24 tough job, because, as you've said, you've got nine
25 different counties.

1 It's not just a port, or as Captain Jacobsen
2 has got, two ports sitting in L.A./Long Beach, to work
3 out. I mean, you must have to do lot of cat herding.

4 That's a problem, because if any one of the
5 partners fails to meet its obligation, it undermines the
6 partnership, and so keeping something like that going is
7 very hard.

8 So, I think that this system here presents one
9 of the really interesting problems that we have in PORT
10 systems, to sort of generate sort of funding, but -- so,
11 that's a good example to be able to use as to why federal
12 funding makes sense.

13 However, I think that we have to continue to
14 make that case and carry that forward.

15 Thank you all very much. It's been a really,
16 really interesting and knowledgeable panel.

17 I appreciate it very much.

18 MR. HAUSSENER: If I could, just one more thing
19 on the Corps.

20 Out here, the Corps has gone through a Lean Six
21 Sigma for O&M dredging, and they're the only division in
22 the Corps that's done that.

23 They did a full-value stream analysis, and
24 we're part of the project delivery team for that, so
25 we're hoping to put something out portwide on it.

1 Among other things that I'm leading a subgroup
2 on is all the engineering issues, the constructability,
3 the operations, environmental, as well as independent
4 technical review, etc., and one of the things is that
5 there are an awful lot of regulations.

6 You like asking the question why, and you ask
7 it three or four times, and you finally you get down to
8 "Because there's a regulation."

9 That's one of the things we need to get out of,
10 perhaps, with some of those things.

11 If anyone has any comments about how they would
12 like to see the Corps perform better, please let me know
13 so I can input this, because this is the only Lean Six
14 Sigma for O&M dredging for the Corps in the nation.

15 It's the only one that's been funded, and the
16 only one that will be funded probably for the next
17 five years, so feel free to provide any comments along
18 those lines.

19 MR. SKINNER: Well, we've exceeded what we
20 promised was your time limit here, and we very much
21 appreciate your not getting up and walking out.

22 So, thank you once again. It was a great
23 panel.

24 (Applause.)

25 MR. SKINNER: Let's take a quick break.

1 (Remarks outside the record.)

2 MR. SKINNER: We're going to reconvene for the
3 public comment period right now, then break for lunch,
4 and then have Julie's presentation after lunch.

5 We're going to try to shore up the time.

6 We have an hour for lunch. If we can cut that
7 down to 45 minutes, that would be great.

8 Just opening the first public comment period,
9 we have one person signed up so far, Toby Garfield.

10 If you could state your name and affiliation,
11 that would be great.

12 MR. GARFIELD: Thank you very much for this
13 opportunity.

14 My name is Toby Garfield, and I'm with
15 San Francisco State University.

16 I'm actually at the Romberg Tiburon Center,
17 which is in Marin County, and in fact, looking at the
18 cards here, we are on the chart as "ruins."

19 (Remarks outside the record.)

20 MR. GARFIELD: We are listed on the chart here
21 as "ruins."

22 If I can apply a little pressure here to have a
23 small change, we are actually a very vibrant organization
24 out there.

25 So, the reason I wanted to make some comments

1 is that I'm actually involved in a lot of NOAA-related
2 activities.

3 The California State University, through an
4 earmark with the Cultural Services Center, set up a
5 program we call "Seacore," where we put water-measuring
6 instruments all up and down the State of California.

7 In fact, Captain Bayer mentioned that sensor at
8 Cal Maritime which he thought was so important. Well, I
9 happen to be the owner of that sensor.

10 So, we've been trying for a while to get it
11 there. We realize its importance.

12 The way we get that data out to the community
13 is we put it on our local Web site, but for liability
14 issues, we've also worked out an arrangement where that
15 data goes to NVDC.

16 So, the water data that we're collecting is
17 going to NVDC; okay?

18 I also work for Sheila Semans. She's my boss.
19 I am the lead scientist for the California Coastal and
20 Ocean Current Monitoring Program.

21 We've been putting in the HF radar systems up
22 and down the coast, we had the opportunity to show that
23 to Jack yesterday.

24 Sheila showed a slide of our progress, where
25 we've got -- I think it's a little better than that,

1 because, Jack, I think we're at about 80 percent covered
2 at this point.

3 The important thing there, again, is we are
4 working with IOOS, partnering for liability issues, to
5 get that data out.

6 In this case, we're working with the IOOS
7 office. So, on one hand, I'm working with the NVDC, and
8 on the other hand, I'm working with the IOOS office.

9 I would like to take a little bit of exception
10 to the idea that the IOOS office is just scientists
11 collecting data and not having a product.

12 Part of our problem, as a regional association,
13 has been getting the users to come to the table and tell
14 us what they really want and what they need.

15 So, the scientists are out there, doing the
16 best we can to collect the data. We are not getting the
17 feedback or the collaboration that we need to really make
18 these products what they ought to be.

19 We'd like to be product driven, and we're
20 really working on that.

21 Captain Korwatch mentioned the PORTS program.

22 Well, guess what? The PORTS data is going to
23 another portal; okay? We've now got three portals.

24 Eric Van Dyke talked about the NRTs. We have a
25 San Francisco Bay NRT headquartered at our site.

1 Guess what? Their data goes to another portal.
2 So, now we've got four portals for NOAA data,
3 so, I, as a data creator, have to work with four
4 different NOAA offices.

5 Jack, you said that the Army Corps of Engineers
6 makes you look good. Frankly, NOAA, to me, is the most
7 byzantine organization I have ever come across.

8 If it were not for Becky Smyth, I would not
9 know how navigate through NOAA. I'm sorry, but as a
10 taxpayer, I feel that quite badly.

11 So, my points are that we're actively
12 collecting data. We're actively working with NOAA.
13 We're actively supplying data to NOAA.

14 We are sending it to four different places;
15 okay?

16 So, that means the user who wants to get
17 products out of this also has to go to four different
18 places.

19 So, I think it is really incumbent that NOAA
20 has to address these issues of coastal observing, that
21 these data cannot go to multiple places. They have to be
22 integrated into one site, or you're just never going to
23 get the products and the users that you want.

24 The other is latency issues.

25 We collect that data. We have it up on our Web

1 site within about two minutes; okay?

2 When we pass that data on to NOAA, the latency
3 can be up to six hours before that data are posted.

4 So, there's a huge latency issue that also
5 needs to be addressed, in terms of getting products put
6 together and getting them put out there.

7 I mentioned one thing that, Admiral West,
8 reinforces what you said earlier. I'd like to say one
9 other thing.

10 If anybody is interested, I would love to get
11 an AUV that we drive up and down the channels. We could
12 do daily checks on the depths of those channels, you
13 know.

14 So, if there's anybody out there who wants to
15 partner on that, I'd really like to talk to them and see
16 if we couldn't put a program -- our site is right there.

17 Captain Bayer mentioned Point Chauncey is one
18 of the problem areas for that, and, well, that's where I
19 sit.

20 I look at Point Chauncey, and I look at his
21 tankers go by every day. We could survey the Central Bay
22 on a daily basis and provide some relative -- some
23 changes in a relatively short order.

24 So, with that, I thank you.

25 MR. SKINNER: Just a quick comment on the

1 comment on asking users what they want.

2 I recall for many years, when I was a CZM
3 director, the Gulf of Maine ocean observing system folks
4 would say, "Well, what do you want?"

5 I'd say, "Well, I don't know what I want. I
6 don't know what the system can do."

7 We eventually resolved that by sort of
8 saying -- my developing a list saying, "Here are some of
9 our key issues. What does this IOOS thing do for us,"
10 and they came up with system or a pilot project to
11 measure erosion rates based on wind and wave and storm
12 directions, and so forth, which would have been very
13 useful, but it didn't get funded.

14 However, I think the point there was that there
15 was a step -- a component missing, and I think maybe Jim
16 Fawcett alluded to it with the Sea Grant folks, as well,
17 of getting from people who are in a different program
18 that aren't familiar with IOOS to what IOOS' capabilities
19 are.

20 They don't always speak the language, and
21 sometimes you need a middle person.

22 In our case, it was Josie Quintrell, who was
23 pretty good at that stuff, to make the connection between
24 the two, just a comment.

25 MR. GARFIELD: Well, I would point out that I

1 think this is the first year that IOOS has really had an
2 authorized budget.

3 So, I think for a creation that has
4 unauthorized and been trying very hard to be established,
5 they're really doing a good job.

6 Josie is one of the people who is helping up in
7 Alaska.

8 I would say that the IOOS office -- something
9 that was recommended in all of those reports has been
10 pretty slow to be established, but I think the people
11 involved have been working really hard trying to solve
12 some of those problems you mentioned.

13 You know, in reality, this is the first year
14 they've really been funded.

15 MR. SKINNER: I agree.

16 I think it's -- it wasn't meant as a criticism;
17 it's just sometimes that missing component -- and
18 actually, we used to get surveys from NOAA saying, "What
19 can IOOS do for you," and we had to say, "I don't know."

20 I think there is a realization of that, and I
21 think a positive effect of that.

22 MR. GARFIELD: I think NOAA has an internal
23 problem.

24 Being not an authorized agency, they have to
25 compete against themselves as much as figure out how to

1 compete with others.

2 So, I wouldn't want to be doing the NOAA
3 budget, quite honestly.

4 MR. SKINNER: Any other comments? Okay.

5 Is there another one?

6 MS. KERKERING: Hi.

7 My name is Heather Kerkering, and I'm
8 representing Central and Northern California Ocean
9 Observing System.

10 So, you keep talking about IOOS, and this is
11 the regional association for the geographic range between
12 Point Conception and the Oregon border.

13 Further south is the Southern California group,
14 SCOOS, and above us, NANOOS. So, I know you're all
15 familiar with the "OOS" acronym.

16 I just wanted to say hello again to a lot of
17 people I work with on a daily, weekly, and frequent
18 basis, and some of you, I haven't actually met.

19 I wanted to make myself available to you today
20 and tomorrow to talk about what CeNCOOS is and what we
21 do.

22 I'm just going to briefly talk about that,
23 because like all of us, we can give hour-long
24 presentations about our work.

25 We are governed by a 15-member board of

1 directors that's voted on by our 50-plus partners that
2 exist within that geographical range I just described.

3 So, our partners include nonprofit groups,
4 academic research institutions, government agencies,
5 state agencies, and we work together to coordinate all
6 the ocean observing activities that are out there.

7 I would like to say we are leveraging what is
8 in existence, basically, for funding purposes, but we are
9 trying to be a user-driven system.

10 We have had many user needs -- efforts put out
11 there, and we've worked with either Sea Grant or we've
12 worked with the state to assess user needs for a variety
13 of different topics.

14 Our priorities right now for addressing user
15 needs range between Harmful Algal Blooms science and
16 management; looking at how we're going to monitor and
17 help provide ocean observing information for the recently
18 designated marine-protected areas in California; the new
19 ocean energy efforts.

20 We have a task -- well, we've been tasked with
21 looking at ocean information and how that can help salmon
22 management, especially within this past year with the
23 salmon closures.

24 Marine transportation is a big one.

25 We have also worked with many people in the

1 San Francisco Bay area, such as Julie Thomas, who you'll
2 hear a bit of her presentation after lunch, to better
3 provide better information for the marine transportation
4 community.

5 Also, ecosystem-based management initiatives
6 that are occurring on small-scale levels, generally.

7 Then, of course, how can we gather information
8 to look at how global climate changes will impact us,
9 such as if sea levels rise, or whatever it is?

10 How do policy folks and how do managers need
11 that information to make better decisions?

12 So, we are trying to get a user-driven system
13 when we go forward with that.

14 I also wanted to note that we do provide a
15 database of information of what is being collected and
16 where on our Web site, as well as some real-time
17 information, such as surface current information.

18 Wind set in real-time is basically only in
19 Monterey Bay right now, but we did just get some funding
20 from NOAA in the last competitive grant process.

21 One of the things there is to expand that
22 real-time information to the entire CeNCOOS region for
23 wind and forecasted wind.

24 Then there's some real-time water quality
25 information.

1 We also played a role in both the Safe Seas '06
2 effort, and in the recent Cosco Busan oil spill incident,
3 where we did provide surface current information to NOAA,
4 OR&R, and also for the environmental NINA response team,
5 such as the sanctuaries and OFAR.

6 I think Jordan, tomorrow, is going to be
7 talking a little bit about -- more on the general NOAA
8 role, but also the role we played in there.

9 We did do a lot of oil spill assessments
10 afterwards, much like many organizations did. They were
11 a lot of meetings around the Bay.

12 Some of it did make it to Pelosi's office.

13 So, we have made that route and made that
14 connection to demonstrate the need for better response
15 information for events such as that.

16 The other thing that we're really open to, and
17 I hope you are, too, is working more collaboratively with
18 the other NOAA program offices.

19 You are obviously aware that NOAA has created a
20 program office for IOOS, and we appreciate that.

21 You've definitely been a federal agency that
22 takes the lead when many others have not, and to work
23 with courts in creating something similar to what Julie
24 Thomas, again, is going to present later -- to provide a
25 one-stop shop, Web-based product, where all maritime

1 transportation folks can find the information they need
2 for better safety in our ports and harbors.

3 If you have any questions about something,
4 there's a few fact sheets or success stories.

5 Unfortunately, more of our brochures are in
6 print at the moment, so kind of bad timing, but you can
7 ask me.

8 Toby Garfield is very familiar, as well as
9 Sheila and Becky. We work with them frequently.

10 So, thank you.

11 MR. SKINNER: Any questions?

12 Are there any other public comments at this
13 time?

14 We can close the public comment for now, and
15 the plan is now to break for lunch.

16 (Lunch recess taken at 12:14 p.m.)

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1 SAN FRANCISCO, CALIFORNIA; TUESDAY, JULY 29, 2008;

2 1:03 P.M.

3 - - -

4 MR. SKINNER: First up on the agenda is Julie
5 Thomas and Tom Jacobsen.

6 They're going to talk about the project in
7 Long Beach that we heard a little bit about in Miami, and
8 get some more details on that.

9 MR. JACOBSEN: Julie will start, and I'll back
10 her up.

11 MR. SKINNER: Does Julie know this?

12 MR. JACOBSEN: No.

13 MS. THOMAS: Well, thank you, Tom, and thank
14 you for the invitation to talk today.

15 I just wanted to share a project that actually
16 has been really exciting to us.

17 We received a little bit of IOOS funding, so I
18 hope to redeem -- you'll see both IOOS and the Army Corps
19 a little bit during my talk here.

20 We received this funding for a project in
21 Los Angeles and Long Beach, and it is a combined project
22 with SCCOOS and with CDIP.

23 I'm just going to talk briefly about this
24 project.

25 My presentation outline is: I'm going to talk

1 a little bit L.A./Long Beach; I'm going to talk a little
2 bit about what we've done up here so far; and what
3 happens to the other ports in the coastal U.S.

4 So, the two projects -- I couldn't go into my
5 talk without just mentioning these two projects, because
6 so much is leveraged from them.

7 One is the Coastal Data Information Program.

8 I said I hoped to redeem the Corps a little
9 bit. This is their commitment to wait.

10 Since 1975, the project started with state
11 funding at Scripps. We had wave buoys out in the ocean,
12 measuring waves.

13 These are real-time wave buoys. They feed into
14 the same national weather service, the NBC marine weather
15 forecast, as the NBC weather buoys do.

16 We are the Army Corps' component of waves.

17 We're also a component of IOOS right now.

18 Since 1978, the Corps has given this funding.
19 It's been very stable. We have received operational
20 funds since that time.

21 When I said it's 2.5 million plus, we're also
22 involved in beaches sediment transport, bringing waves
23 ashore and doing some of the beach shoreline coastal
24 erosion projects, too.

25 So, that's combined.

1 Our other partner in California is the
2 Department of Boating and Waterways, CDBW.

3 So, there is a cooperative agreement in place
4 since 1978. The state is very committed to putting
5 buoys -- wave buoys, we're talking about -- off of the
6 shoreline of California.

7 We have 35 stations out there. Eighteen of
8 those are in the State of California, and a penny of our
9 gas tax here -- about a penny goes towards Cal Boating to
10 promote beach safety for harbors and boating.

11 The other program, Sheila has already
12 mentioned.

13 It is the COCMP, and it was started at Scripps
14 around 2004, 2005. This is sponsored by the Coastal
15 Conservancy. It's a state-wide program.

16 You will see why these two programs are so
17 important at L.A./Long Beach.

18 So, we have CDIP providing waves, and COCMP
19 providing the HR radar current.

20 Why did we choose L.A./Long Beach for this IOOS
21 proposal?

22 One is we know it's a busy port. We know
23 it's -- commercially, it's got a lot happening.

24 I want to say it's got a lot of tourism.
25 There's 6 million passengers that have visited Catalina

1 Island through the Port of L.A. since the year 2000.

2 It's not only a commercial port; it's also
3 recreational and fishing.

4 Also, it's close to home, so we keep our
5 proposal costs down through travel.

6 I mentioned the HF radar was installed in
7 Palos Verdes, kind of right under the pop-up sign there.
8 There is an HF radar for the whole San Pedro Channel.

9 This is part of what was leveraged for this
10 project. The current funds began, and the wave was -- we
11 leveraged completely.

12 The project is to design a customized Web site
13 to bring HF radar and the waves together. This was
14 actually the idea Dick McKenna of Marine Exchange.

15 I was talking with him one day, and he said,
16 "Julie, I'm so happy you still have a place on the
17 current, and you still have a place on the waves."

18 So, I know that through the PORT system -- Mike
19 Szabados has done this, and we've tried to do it with the
20 waves and current here.

21 The wave portion, CDIP has a wave buoy. It's
22 in the separation zone for the northbound shipping lane,
23 out off of San Pedro.

24 I threw this up here because I wanted you to
25 realize that even though Southern California has the

1 reputation for just having all this good weather and we
2 never have any problems, there are cases -- and I'm
3 hoping that Tom Jacobsen can address this in his
4 follow-up here -- that transferring pilots is difficult.

5 The Catalina Express is shut down due to the
6 waves, and this south swell -- so, here's Catalina,
7 here's the Port of L.A./Long Beach.

8 These are wave models that we have had here
9 since about the mid-'90s now.

10 The San Pedro buoy was installed in about 1990.

11 Fortunately, we have Dr. Bill O'Reilly, one of
12 the world-renowned wave modelers for nearshore waves, and
13 he has brought these global wave models, such as Wave
14 Watch 3, up to where the islands are, and then he'll do
15 the spectral refraction inside the islands.

16 So, we have very, very accurate wave models for
17 the coastline.

18 One more thing here.

19 There's a large canyon, a very deep canyon, in
20 here, where you see these red areas focusing. This is
21 all over the canyon.

22 Once again, I believe that when ships start
23 backing up here, and can't actually -- conditions might
24 get too rough, and they do get down to this Huntington
25 area here.

1 I wanted to just show you that the wave
2 modeling is not insignificant. It takes us a lot to come
3 up with these and -- these highly sophisticated wave
4 models, another reason why we chose the Port of L.A. and
5 Long Beach.

6 Bill O'Reilly did his thesis work at Scripps.
7 We have a lot of support from California. I've already
8 said there's 18 buoys here. They support every buoy that
9 you see in this.

10 We get -- the magenta-colored ones are all
11 measuring swells coming in from the north, the west, the
12 south. The orange-colored ones are giving us the local
13 seas.

14 So, for the first time, there is a wave model
15 there that you have the complete spectra of the waves.

16 You have everything from the wind chop to these
17 long-period waves that the surfers love.

18 So, I think 99 percent of other wave models --
19 even SWAN doesn't always address the high-frequency waves
20 that we're getting through this model now.

21 So, this is moving into our Web site again.
22 This is updating those things online now.

23 There's some flyers on the back table with the
24 actual Web site.

25 This is a NOAA/IOOS project.

1 What we did was we took the current on the left
2 and the waves on the right.

3 This is the swell model for the San Pedro
4 channel.

5 The yellow dot, as mentioned, which right here,
6 is the San Pedro buoy. That's the one that's seated --
7 that's operating now since the early '90s.

8 The green dots are what we call, in CDIP,
9 "model prediction points." We nicknamed them "MOPs."

10 Model prediction points are points that we want
11 to give our end user the full wave spectra for.

12 So, those particular ones represent latitudes
13 and longitudes that were given to us by the maritime
14 community in the Port of L.A. and Long Beach.

15 Dick McKenna at the Marine Exchange hosted a
16 meeting.

17 We have several representations there. We have
18 the Army Corps; we have the Navy; we have the Coast
19 Guard; we have the bulk of the pilots represented;
20 fishing community; Catalina Express.

21 By the way, this is the Catalina Express to
22 Avalon, into two harbors, so some of these are along
23 their transit line.

24 These green dots are in places where,
25 basically, the maritime community said, "Hey, this is a

1 point that is critical to us for our operations. We
2 would like to have the full wave spectra for that at our
3 fingertips."

4 So, that's what we have done.

5 This is to show you the table that's behind the
6 scenes for that particular site. We actually just named
7 them A, B, C, D.

8 Each one has a designation, a site ID, SE001,
9 and you can get a wave height period and a direction for
10 that particular area.

11 You can drill down on those points, and you can
12 not only get the now-cast data every half hour, updating
13 from that point, but you can also get a three-day
14 forecast.

15 I wanted to mention that the forecast,
16 obviously, for operations, has just gained so much
17 visibility. We've had a lot of people come to us and say
18 that this is invaluable to what they're doing.

19 We hope to work further with people at the
20 L.A./Long Beach -- and Tom will talk about this, too --
21 to try to set some limits, as far as: What are the
22 thresholds that will shut down your operations?

23 So, if the Long Beach pilots say, "The south
24 swell is really critical, and that can create difficult
25 creations," then we're saying, "Okay, give us a wave

1 height and a period, and let's try to finetune this."

2 If you give me a wave height and a period, we
3 can send you an automated message that would say, "Hey,
4 day 2 and 3, you've got to watch out, because that
5 wave-height period is in our forecast."

6 This is always a little bit tricky, but -- we
7 do it for the Navy, by the way, at Point Mugu.

8 We actually do this for a few different users.

9 We do this for Kings Bay, Georgia, where we
10 have a buoy offshore.

11 We give a few different people these automated
12 forecasts, but you know what? We have to really have the
13 user feedback on this.

14 Obviously, if you don't finetune this model and
15 you start sending too many forecasts, you just ignore it,
16 or too many warnings -- or notifications.

17 They're not warnings, just notifications that,
18 day 2, you might be receiving a particular wave height in
19 a period.

20 There's a whole bunch of different products.

21 You can drill right down to the spectra, all
22 different things that you can get from these.

23 I put this one up here for Gerry Wheaton. He's
24 not here, but he was also in invaluable, as many other
25 people have said, in working with us on this project.

1 He said, "Well, why don't you throw up the NOAA
2 nautical charts on top of this," and we have done that.

3 I know this is too tiny, but we have the
4 San Pedro Channel chart, the San Pedro buoy, the Anaheim
5 buoy, the L.A./Long Beach Harbor.

6 You can -- this is all on a Google map, so you
7 can drill in; you can zoom.

8 The pilots can look and see exactly where they
9 are transferring and what the conditions are for that day
10 with the overlay of the chart.

11 Moving on to San Francisco, this has also
12 received a lot of visibility in San Francisco. Thanks to
13 the Conservancy who has facilitated discussions, we're
14 working with CeNCOOS to report the same type of
15 template -- use that as a template and report it up here.

16 The conditions are different, obviously.

17 We know that every site has their unique
18 conditions, and the reason why I spent a little bit of
19 time showing, in L.A./Long Beach, what we have for wave
20 conditions and the sophistication that we have of the
21 offshore buoys, getting the swells from different
22 directions, getting seas, is because that is the place
23 where we have the most infrastructure built up.

24 That was one of the key reasons why we chose
25 L.A./Long Beach as our demonstration project.

1 In San Francisco, we have some of this, and I
2 will show you about the waves in a minute.

3 This is the current -- Toby Garfield is here.
4 He's much more up on what the -- the infrastructure that
5 still needs to be built up for the HF radar.

6 I know inside the Bay, there's a big gap of a
7 lot of instruments. A lot have been mentioned already.
8 We need more wind data, we need more currents data, the
9 salinity that Toby was talking about.

10 These are all important physical properties
11 that we need to get on this page.

12 As far as the wave buoys, this is kind of a
13 busy slide, but I could not give this without putting out
14 everyone that has been so collaboratively working
15 together with the San Francisco Bar Buoy.

16 This request -- CDIP has a buoy. We put it in
17 a year ago, right there at the barge coming in at Golden
18 Gate.

19 We have had this one off of Point Reyes now for
20 about 15 years out there.

21 We got a call from the NWS office -- and I
22 think Dave Reynolds might be here tomorrow -- saying,
23 "Could you put in a buoy right at the bar so we can get
24 some high-resolution directional waves?"

25 The buoys that we use, it's called a

1 "directional waverider," and they're known for their
2 high-resolution directional waves.

3 Fortunately, through the State of California --
4 because, remember, CDIP is funded by the Corps and CDBW,
5 and they had had some end-of-the-year funds from the
6 previous year.

7 I had two buoys on hand, so I said, "You know,
8 I have a buoy, but I don't have operational funds. I
9 don't have funds for a vessel. I don't have funds for
10 maintaining it.

11 "We don't know where to put it."

12 So, thank you to our CeNCOOS partners, under
13 Heather and Toby and Becky Smyth. All of a sudden, it
14 turned into this great collaborative effort.

15 USGS is very interested in that.

16 They were using our Point Reyes buoy. It has
17 already been mentioned they were doing some work here at
18 Ocean Beach.

19 They immediately said, "Hey, we'll give you
20 vessel support."

21 The pilots -- we met with the harbor pilots.
22 Heather arranged a meeting. They told us where the best
23 place would be to put it.

24 We have -- the Coast Guard actually gave us
25 some vessel support.

1 NOAA was in it with the NWS.

2 We just had -- this is, to me, a perfect
3 example of collaboration, and the request really came in
4 from the operational folks, saying, "This is what we
5 need. We need a buoy right here, and we need it as soon
6 as possible."

7 I think within three months of the request, we
8 had the buoy in there, and as far as I know, it has been
9 quite -- used quite heavily.

10 We don't have -- we can go ahead and do some
11 modeling. Once again, these model prediction points --
12 those green dots you saw at L.A./Long Beach, those are so
13 critical.

14 I know that I had discussions with Mike
15 Szabados about: How much do you really depend upon that
16 modeling? Can you really put it in for operational use,
17 and whatever?

18 I have to say that in CDIP, we depend upon our
19 model. Bill O'Reilly is so good. We know when they
20 break down, he is running validations behind the scenes
21 all the time.

22 We have 150,000 surfers a day validating our
23 models, and there is no more critical person than a
24 surfer.

25 If we screw up, we know about it.

1 Bill is working on a model for the
2 San Francisco Bar, because what does the NWS want?

3 They give a bar report here in San Francisco.
4 They need to know: Are there breaking waves on the bar?

5 So, this is the type of thing that we're
6 putting together now.

7 The NWS up in Eureka is very active. We have
8 two buoys installed off of Humboldt Bay.

9 We have been working with models for quite some
10 time, and I think it was through trying -- talking to the
11 NWS office down here, saying, "Hey, you know, we can do
12 this."

13 So, I just wanted to let you know that this is
14 not -- these two slides are not online. Everything I
15 else I showed you so far is.

16 This what we are working for.

17 We want to be able to give the NWS office here
18 some greater sophistication than what we know they have
19 been using so far for their barging port.

20 I told you we're running validations all the
21 time behind the scenes. We can see where it's breaking
22 down. In any direction, it's really hard to get.

23 Remember, these are really high-resolution
24 buoys, but if you have a lot of wind chop on the surface,
25 it's really hard to tell which way that wave is coming

1 from.

2 That's where it will break down, is in the high
3 frequency, but we know those things, and we just need to
4 tweak our models all the time.

5 We need to work behind the scenes so we can get
6 some confidence with that San Francisco Bar area.

7 We've been asked: Can we report this to other
8 harbors? We just put a buoy in off the Chesapeake Bay.

9 You know, it's not just putting a buoy in or
10 installing a radar; it's also getting some competence up
11 in the data, making sure the QC is done properly.

12 With the wave data -- yeah, we can put a wave
13 buoy at there, and 24 hours after we put it in, it's
14 going up and down with the sea, but what we'd like to do
15 is to really get to know the wave climate in that area.

16 This is a map of where CDIP does have these
17 35 stations that I mentioned.

18 The red are all of those that I consider near a
19 port or harbor, which is interested in -- actually, each
20 one of these places has talked to me about doing
21 something similar that we've done in L.A./Long Beach.

22 Now that word is getting out about that, the
23 site we're putting online -- there has been an awful lot
24 of interest.

25 Starting from the south -- we're going to be

1 doing San Diego. Actually, that was part of our initial
2 proposal.

3 We said we'd do two ports, so we're doing
4 L.A./Long Beach, and we're going to take it down to
5 San Diego, which is in our backyard.

6 We also have a buoy right off of Port Hueneme.
7 A lot of traffic comes through there that goes out to the
8 Santa Barbara Channel.

9 San Francisco, we've talked about.

10 Humboldt, we've talked about.

11 We have one up above -- off of Coos Bay.

12 By the way, the buoy at Grace Harbor was one of
13 our first directional waveriders. It went in, in about
14 1990. We have worked with the pilots at Grace Harbor
15 since day one.

16 I was telling Becky that they would call me at
17 2:00 in the morning.

18 When our buoy went down -- this was barely when
19 Web access was really coming online, whatever, they would
20 call at 2:00 in the morning if they couldn't get the data
21 live from the NOAA weather channel.

22 So, we have had a lot of -- CDIP has been very,
23 very involved with the user group since day one.

24 On the East Coast, I just want to mention that
25 we do have one off of Tampa. It's quite a ways out,

1 about 100 miles out, and then -- this is a whole IOOS
2 collaboration.

3 Lynn Leonard at the University of North
4 Carolina, Wilmington, paid for the hardware.

5 We are bringing in the system through -- doing
6 the QC and the data dissemination. We're working very
7 closely.

8 A few of these are actually IOOS
9 collaborations, and the Corps just recently funded one at
10 Cape Henry.

11 So, once again, we know that each port has
12 their own set of challenges. We're very aware of that.

13 A lot of you know Kate Luella. She e-mailed me
14 when this IOOS project came up and said, "Julie, this is
15 fantastic. Let's put it into all the ports."

16 I said, "Yeah, I would love to do that, but,
17 you know, there's a few things we need to work out in the
18 meantime, and how are we actually going to get this into
19 even half the buoys out there?"

20 The other thing I just want to bring up is --
21 because I have a lot of questions.

22 In the West Coast here, we have a tri-state
23 Governors Agreement, which is being signed today, as has
24 been mentioned.

25 We worked really closely with a lot of those

1 shippers in Oregon and Washington, South Brothers, a lot
2 of the fishing community.

3 You know, they're going the whole west, so it's
4 this type of consistency that's the same in the field,
5 the same template.

6 Could that really be a help to them?

7 I think Mike does that for PORTS, so it's very
8 much the same idea as the folks see on the waves here.

9 I just wanted to say that next is the next
10 steps and issues. This is a lot of verbiage here, but
11 these are just points that I didn't want to forget.

12 First of all, we have met with Mike, and he has
13 a wonderful team of people out there. They actually have
14 helped us to support the buoy off Chesapeake at
15 Cape Henry.

16 I think that discussions are under way, as far
17 as how much PORTS can actually integrate with the sites
18 that we're doing, whether or not they can pick up the
19 wave data.

20 I'm sure Mike knows more about that than I do.

21 The next is that there's a National Wave Plan
22 out there. I think that the committee here has had a
23 chance to comment on the National Wave Plan.

24 I just wanted you to know that part of the
25 reason we feel the National Wave Plan is so important,

1 from the Army Corps' perspective, is that we know it
2 takes these high-resolution directional waves to give you
3 good information at these harbor entrances.

4 Part of the Wave Plan addresses where do you,
5 you the maritime community representative, want buoys?
6 How can we make them most effective to you?

7 I just found a National Wave Plan to be really
8 exciting. Not that we expect to get all that money and
9 put out buoys right away. We all know what the financial
10 state of the government is right now, but let's have a
11 plan to do it.

12 Let's start talking about: Where do we need
13 it? How can we bring it together? How can we
14 collaborate on this?

15 Some of the other questions that have come up
16 are: Is this really worth expanding to other ports, and
17 how do we really get this into the operations of the
18 maritime community?

19 I know within the Coast Guard station, they
20 have set procedures every morning. They look at
21 such-and-such a site, etc.

22 If our Web site isn't on there -- you know,
23 they have a rotation every three years or less. The next
24 person coming in isn't going to know about us.

25 They won't know to go to our site and know to

1 use it.

2 It's like we've got to get into the operations.
3 If it's going to be important and not -- these are all
4 questions that I know in my mind -- you know, it sounds
5 like a great idea, but how do you really get it to be
6 used?

7 Is this the same look and feel to go between
8 interstate and intrastate? Is that important?

9 How do we talk the same language?

10 I was talking to Tom the other day. I was
11 talking about the waves, and he said, "Well, will that
12 report the swell, too?"

13 Well, to me, "waves" is full spectrum, and he
14 goes, "No, no. It's correct that waves are short period,
15 high frequency, the 'sea,' as we call them, and then the
16 swell comes in."

17 So, it's like: Who knows what "HFTPBT" is when
18 you're talking to the fisherman or Catalina Express, or
19 whatever.

20 I don't think we use the same things, but we
21 can. That's not a big challenge; that's education on
22 both sides.

23 How do we make these useful offshore? We had a
24 lot of comments on that.

25 The San Pedro Channel is still something I want

1 to work with.

2 There's iPhones these days. I think there's
3 cell phone coverage out there.

4 Also, we know that there's a lot of proprietary
5 systems. We use the PilotMate. We cannot easily get on
6 that PilotMate.

7 I know that Chesapeake -- Kate Bosley -- she
8 used to be one of the pilots there -- they have their own
9 proprietary system there.

10 So, how do we really get the word out to the
11 mariners coming in and out of these parts?

12 The Coast Guard in San Pedro has asked me to --
13 well, a few different people actually have been
14 interested in having a training session, a half-day
15 training session, where we can bring the Web site and
16 really show them how they can use the wave data.

17 What does it mean, those long-period swells
18 coming through and that high-frequency wind chop, and
19 really show them some examples of how this could be used
20 for their operation.

21 What is our state and federal commitment?
22 That's been touched on today.

23 I just had to talk about the liability, because
24 that always comes up, and I put my answer up there, too.

25 Working in CDIP for 30 years, what I tell

1 people is: We're just trying to get the best information
2 out there. We know it's the National Weather Services
3 Office's mission to provide the warnings.

4 We're not saying, "This is a no go."

5 We're not color coding our swell models and
6 putting a big red flashing -- you know, saying, "Don't go
7 out in the San Pedro on this day."

8 What we're doing is providing you with
9 high-resolution data, some good HF radar current data,
10 and bringing those systems together, and trying to make
11 it in a concise Web site so that you can go to it.

12 I just want to bring up other parameters.

13 We have been asked if we would add in the
14 winds. We are probably going to add in the MM5 winds,
15 the modeled winds from the Navy, to this site in
16 L.A./Long Beach.

17 Once again, it is a model. That's the best we
18 have.

19 We don't have the wave data offshore, so we are
20 going to be adding other parameters to that, and we'll be
21 working on that next.

22 (Remarks outside the record.)

23 MS. THOMAS: She had to make sure that I got
24 across the message that IOOS is supporting NOAA's
25 mission, and she has been such a wonderful promoter of

1 this whole project.

2 This whole project has actually been really fun
3 to work out. We have made some wonderful contacts in the
4 L.A./Long Beach.

5 Some I knew of before; some of them we've grown
6 with now, and we hope to just really make this a site
7 that is useful to the maritime community.

8 Thank you.

9 MR. SKINNER: Thanks, Julie.

10 Now I think we're going to hear from one of
11 those wonderful contacts that you mentioned at
12 Long Beach.

13 MR. JACOBSEN: Thank you, Julie. That was
14 great.

15 It has been fun working with Julie and going
16 through the whole project.

17 So, what's changed since the last time I spoke?

18 The ships continue to get bigger for us and for
19 L.A./Long Beach.

20 The tanker companies want to bring in bigger
21 ships, increasing drafts, and looking at underkeel
22 clearance.

23 DP wants to increase the draft from 64 to
24 69 feet. We need to do a little dredging, but what we've
25 just learned is that the new ships' double-hull tankers

1 react differently in the swells than the single-hull
2 tankers, so we're looking for some research on that.

3 The double-hull tankers will pitch more and
4 roll more, and that's decreasing their underkeel
5 clearance.

6 So, we're doing some studies on that, but
7 what's critical is we need to learn and analyze the
8 swells.

9 What's critical to us, this bottom-line site,
10 is this south swell that goes right into our port.

11 We just -- a couple months ago, we had to bail
12 out on a job, a 64-foot oil tanker. It was pitching too
13 much, and we weren't sure if we had adequate underkeel
14 clearance, so we bailed out.

15 This is why we partner with Julie and NOAA and
16 get this information out to all of our pilots.

17 As far as container ships, again, they get
18 bigger and bigger.

19 Meeting with Pan shiplines -- right now, our
20 biggest ships are the 8,200 TEU ships, and that's
21 becoming an average size.

22 The future is they're going up to 10,000 TEUs
23 soon, by the end of this year, and even larger. We're
24 pushing all clearances: The width, the depth, the
25 height.

1 It's quite incredible what we're doing. We
2 need accurate real-time data, and that's real. We need
3 it now.

4 We need to integrate this with PORTS. I think
5 we need to keep moving forward with that, keeping the
6 PORTS system moving forward for the navigational
7 purposes.

8 What I'm hoping for, apart from Julie and also
9 NOAA, is we can get to a point where we can have go and
10 no-go decision tools.

11 So, if we're having a south swell at a certain
12 period, and we have these large tankers, we can have a
13 red flag come up and say, "Maybe we'll put the pilot up
14 onboard. We might not bring it in."

15 The forecasting is fantastic, and automated
16 messages.

17 So, Julie, keep going with that. It's great.

18 She mentioned a few times about the
19 high-resolution sea buoys or the wave buoys.

20 We have to make sure we're all playing on the
21 same field.

22 I think that's something, NOAA, we should
23 discuss here, making sure that the National Weather
24 Services buoys are high resolution so everybody can use
25 that data.

1 Anyway, these partnerships are great. It's
2 helping us out in L.A./Long Beach.

3 If there's any questions, feel free to ask.

4 Thank you.

5 MR. JEFFRESS: Gary Jeffress.

6 Tom, what does it cost to abort an entry like
7 you said you had to do the other day?

8 MR. JACOBSEN: Oh, that was huge for the
9 shipping line.

10 We had to hold that ship out, I believe, for
11 24 hours at least. Usually, it takes \$75,000 to a
12 \$100,000 a day to charter these vessels.

13 That's just the shipping line, but then the oil
14 tanks ashore, they're waiting for that cargo.

15 So, the price is hundreds of thousands of
16 dollars to do that, big money.

17 Also, if we can increase the draft a little
18 bit -- like Captain Bayer mentioned, that's important for
19 these oil tankers.

20 If we can increase the draft, it's important,
21 but we don't want to touch the bottom.

22 MR. SKINNER: Any other questions or comments?

23 MR. DASLER: Jon Dasler.

24 I just had a question for Julie on the model
25 validation.

1 Do you ever put out short-term deployments of
2 buoys for model elevation?

3 MS. THOMAS: Definitely.

4 MR. DASLER: And do you think that would be
5 useful?

6 MS. THOMAS: Oh, definitely.

7 You saw that other buoy -- first of all, the
8 Corps, we have what we call our "index buoy."

9 Those are for long-term, 50-year-timecast
10 forecasts that the Army Corps is interested in.

11 That's how the whole program started. It's
12 been in effect for over 30 years now, so we're getting
13 there.

14 The model validation -- what we actually do --
15 there's so much refraction bottom effects coming into
16 shallow water.

17 All of those inner buoys ring -- actually,
18 those -- most of them are model validation.

19 Bill figures that if he has a complete year in
20 a 20-meter -- okay.

21 There's certain places -- we know, for
22 instance, in the Santa Barbara Channel, we are still
23 validating.

24 We have basically put a buoy over any 20-meter
25 section all along the Southern California shoreline at

1 one time or another in the last 15 years.

2 We keep them out there one year. We let a
3 whole cycle of north swell and south swell come through,
4 different conditions, different periods.

5 Once we feel -- and we're tweaking the model,
6 so we know that under that direction, that period, that
7 wave height, this is what we're getting on the model.

8 We are always putting out validation buoys.

9 We even are talking with some of the
10 biologists, Peasco, to put out some model validation
11 buoys out by the Santa Barbara Islands. They're very
12 concerned with the habitats out there.

13 We're trying to get some funds to put what they
14 need at the south end of Anacapa Island, which we have no
15 clue what the model is doing there; it's definitely not
16 right.

17 We know the areas where it breaks down, but if
18 we could get a buoy there and get some data on the buoy
19 for a year there, we know we can tweak that model to get
20 it.

21 You're right. That's why reporting these
22 models to other sites -- it takes time to build up the
23 sophistication and confidence in the model.

24 MR. DASLER: Thank you.

25 ADMIRAL WEST: I'm not sure who the question is

1 for.

2 Dick West.

3 Is there a drift model for the West Coast of
4 the United States?

5 MS. THOMAS: A drift model --

6 MR. SKINNER: Actually, Julie, speak into the
7 microphone.

8 MS. THOMAS: Sure.

9 For currents?

10 ADMIRAL WEST: Yes.

11 MS. THOMAS: Toby can comment on this, too.
12 This is what I know about this, because it's not my area
13 of expertise.

14 I know that South Brothers up in Coos Bay asked
15 me the same question, not so much even the whole West
16 Coast, but they're sending ships over to Hawaii.

17 Because of the fuel costs, they want to take
18 advantage of the current.

19 I actually put them in contact with U of H,
20 which has a global model for the Pacific, a currents
21 model.

22 I don't think -- Toby, is that right, that we
23 don't have one we're actually running on the West Coast
24 here, but there are people at U of H who are working on
25 exactly that?

1 MR. GARFIELD: Can you clarify what you mean by
2 a "drift model"?

3 ADMIRAL WEST: Yes.

4 If I need an emergency response -- I've got a
5 man overboard. I have a model I can go to, and I can go
6 find him -- or an oil spill, whatever.

7 The reason I bring this up is because we keep
8 talking about all these little programs that are
9 wonderful that feed IOOS.

10 One of the great advantages of a good
11 integrated ocean observing system is response to
12 emergencies.

13 A drift model is one of the areas where -- we
14 really don't have good drift models, East Coast, West
15 Coast, anywhere in the world, frankly, but we've got a
16 lot of data.

17 If you brought it together and crunched it, I'm
18 sure it would be a lot better.

19 MS. THOMAS: Right.

20 I was thinking further offshore.

21 ADMIRAL WEST: Yeah, I agree.

22 MS. THOMAS: CDIP -- as far as the waves, we do
23 get called every time there is an oil spill or every time
24 there is a Coast Guard case, or whatever, not so much
25 because we're in their operations, but because they have

1 to be able get the boat out there to put the booms out,
2 or they have to get the boat out because -- they want to
3 see from the wave direction which way someone might have
4 gone.

5 I know that the HF radar program has totally
6 been involved in a lot of the oil spill response, per se.

7 Yes, it's not really integrated into
8 procedures, and it's not refined.

9 MR. GARFIELD: If I could just add a little bit
10 to that, Admiral West -- this is Toby Garfield.

11 We've been working with the NOAA OR&R and
12 hazmat group quite closely.

13 We now produce automated products, 24-hour,
14 both timecast and forecast occurrence.

15 So, if there is an incident, you can go online
16 and grab that stuff from us on a particular area. We're
17 still sorting through some of the details of that.

18 On the other side of it, the HF radar just
19 hasn't been in place long enough to provide scenarios,
20 like, "If you have a northwest wind for four days, here's
21 your expected drift."

22 We're getting there, but like Julie said, we
23 need more data to be able to produce those products.

24 MR. WELCH: Ed Welch.

25 I was interested in the fact that in this

1 modeling down here in Southern California, the passenger
2 service out to Catalina was a big beneficiary.

3 We, on this committee, tend to talk a lot about
4 commercial vessels, and we tend to think of tankers and
5 container ships, and that type of thing.

6 However, in certain parts of the country, and
7 this is one, there's a tremendous passenger service, and
8 having been out on Catalina Express when there were
9 terrific waves and everybody was getting seasick, I can
10 see the value of that.

11 MS. THOMAS: We actually have been called a few
12 times by the Catalina Express, because what they will do
13 is they will cancel a passage if they deem it too rough.

14 They have lawsuits from their potential
15 passengers, saying -- they would give their money back,
16 but they have been in lawsuits because the passenger is
17 refuting that decision and saying, "No, it wasn't too
18 rough, and I want you to pay for my trip to California,"
19 etc. etc. etc.

20 Tom might know more about these things than I
21 do.

22 Every once in a while, we get, "Can you go back
23 in your history?"

24 All of this data, by the way, is archived and
25 very easily accessible off the CDIP site, so -- we have

1 all the historic data since 1975. Anybody can bring it
2 up, and they do use that.

3 MR. WELCH: For those of you who don't know,
4 we're talking about high-speed passenger ferries.

5 The other thing that struck me from your
6 presentation was how much of this total project is being
7 funded by state funds of one type or another,
8 including -- I think you mentioned the dedicated sales
9 tax?

10 MS. THOMAS: Right.

11 I can tell you exactly the breakdown of
12 funding.

13 We received -- "we" being Eric Terrill, who
14 heads SCCOOS and Scripps, and CDIP, which I manage.

15 We received -- this was a 100K proposal that we
16 put in for. Take out the overhead, and we got about 30K
17 per group for this particular project.

18 That's why I said we have leveraged an enormous
19 amount out from funding from the Corps and from the
20 state.

21 For CDIP, we're \$1 million on the fed side.
22 That's a line item now.

23 We lost our space in the President's budget in
24 2000, so we are struggling every year to keep it as a
25 line item.

1 From the state side, last year, we received
2 500K. This year, I think we are hoping to get 600K, but
3 we do -- we're running 35 buoys right now on
4 \$1.6 million, and that's a lot for us to do.

5 We're pretty -- by the way, that's \$1 million.
6 By the time we get it, it's 770K.

7 So, we're getting 770K, plus -- 425K by the
8 time the overhead is taken out, and that's what we're
9 operating all of these buoys on right now.

10 We're in the budget crunch, too, but even if
11 it's a CR next year, and the courts can give us that
12 million, I said, "We're going to keep everything
13 operational. We won't put out any new assets, but we're
14 there."

15 MR. SKINNER: All right.

16 MR. SZABADOS: I just want to reflect a little
17 bit on the collaboration going on.

18 First of all, Julie, you run a first-class
19 program, and we recognize that, from one operational shop
20 to another.

21 That's one of the reasons why we're looking
22 forward to working with them.

23 We're in collaboration with the Army Corps,
24 seeing how to bring this technology to the ports --
25 integrated to the ports, and sustain that.

1 This work is on the way.

2 Obviously, there's the technical issues of
3 standardization and data transfer standards. Those are
4 sometimes -- while challenging, it's the easy side, but
5 then there is the legal side.

6 We're also talking to the NOAA lawyers, who are
7 talking to the Army Corps lawyers, on how to set this up,
8 and procedures and responsibilities.

9 We are moving forward, and in one way of
10 success, the buoy that's been deployed off of Chesapeake
11 Bay was actually -- our PORTS program manager, Darren
12 Wright, was working with the Army Corps trying to
13 identify the proper location, and the Maryland pilots and
14 the Virginia pilots helped locate that buoy.

15 So, progress is being made.

16 MR. SKINNER: Thanks, Mike.

17 Gary?

18 MR. JEFFRESS: Gary Jeffress.

19 Julie, do you keep any metrics on the amount of
20 users by the Web of your data?

21 MS. THOMAS: Those are all online.

22 If you click on "documents access stats,"
23 everything is on there.

24 I mean, we do -- it's broken down by the
25 suffix, so we know between .edu, .mil, .gov, who's

1 coming online.

2 It's broken down by hits and visitors and
3 unique visitors, and there's a million different ways
4 that it's presented.

5 You want more specifics than that?

6 MR. JEFFRESS: Well, we have a network in
7 Texas, which is --

8 MS. THOMAS: Yes, I'm familiar with that.

9 MR. JEFFRESS: We use Google Analytic --

10 MS. THOMAS: Right. We use that, too. It's on
11 there.

12 The problem with these stats -- first of all,
13 this data is free of charge; right?

14 240 surf companies, at least, grab our data.
15 They're pinging us every two minutes.

16 Those hits, we know -- you know, I say 150,000,
17 because, actually, they're showing 350,000 on our site,
18 but we know how many of those -- we don't know exactly
19 how many, but we know a lot are automated companies
20 grabbing our data.

21 They have this Web crawler that goes out every
22 two minutes, and as soon as we get that data, every
23 half hour, they're on it, and it's on their surf site.

24 That's great. We have worked so closely with
25 the surf companies, and we tell them how to grab our

1 data.

2 We have a lot of partnership with the
3 commercial companies.

4 So, it's very hard to really get the stats.

5 We know -- we know, even through Google
6 Analytic, how many of those are automated -- you know, I
7 don't really know.

8 MR. JEFFRESS: The way I look at it: That's a
9 public buoy, which the public is getting a lot of benefit
10 out of, even surfers.

11 It's not millions of dollars riding on it, but
12 the public is benefiting from all this taxpayer dollars,
13 on top of what we're trying to do.

14 MS. THOMAS: Right.

15 I think that's one reason why we have had such
16 stable funding, really, when a lot of other programs at
17 Scripps have kind of gone under.

18 You know, I would like so much to get it back
19 to the user.

20 I can't tell you how much I fight all the time,
21 "Well, can't you charge a penny a hit from a surfer?"

22 "No. We don't want -- no."

23 This is -- it's public money that's coming into
24 us, and we want to get it back out there to the public,
25 and the State of California recognizes that.

1 We work very closely with our partners at
2 Cal Boating, and this is one of the programs that they
3 talk about going back to the public service.

4 MR. JEFFRESS: I agree.

5 MR. SKINNER: Any other questions or comments?

6 To wrap up, as I mentioned earlier, this group
7 generally would like to make some recommendations to the
8 administrator afterwards.

9 This seems like the kind of project we
10 definitely would like to support and see more of.

11 Are there specific things that, Tom or Julie,
12 you would suggest to us that we look at for
13 consideration?

14 MS. THOMAS: Anybody that knows me knows that
15 high-directional wave data is what we need in this
16 country.

17 That's always my mission.

18 MR. JACOBSEN: Just any kind of support we can
19 get to keep moving forward -- you know, just what we're
20 doing.

21 MR. SKINNER: Okay. Anything else?

22 Thank you both very much.

23 (Remarks outside the record.)

24 CAPTAIN BARNUM: I've been asked by a couple of
25 folks on the panel to go over the process for contracting

1 for hydrographic services -- basic hydrographic survey
2 contracts.

3 Also, Dave Enabnit is going to cover the
4 contracts we have for drafting nautical charts and charts
5 of some issues that have come up recently.

6 In a nutshell, the contractor selection -- we
7 at NOAA have defined the contract area -- the length area
8 of the country that we want to have surveyed.

9 We advertise on FedBizOpps. Companies submit
10 their qualification packages, and the most qualified firm
11 is selected.

12 Cost is not considered here.

13 This is all based on the Brooks Act A/E
14 process, which is spelled out in the FAR, which provides
15 the policies and procedures.

16 Next slide, please.

17 So, NOAA's Source Evaluation Board ranks and
18 selects based on the five criteria, under the guidance of
19 the A/E Brooks Act: Professional qualifications;
20 specialized experience and technical competency;
21 capacity; past performance; and the knowledge of the
22 geographic area.

23 The contract officer informs the firm of the
24 selection, and the contract is awarded upon successful
25 negotiation of a "fair and reasonable" -- and those are

1 the key words -- of a "fair and reasonable" cost.

2 The contracts are not awarded on cost alone.
3 It's not a best value. Again, it's Brooks Act A/E.

4 This is just a quick graph showing the
5 contracting of budget trends.

6 The significant increase there is, in 2006,
7 2007, to the supplemental funding from the
8 post-Hurricane Katrina surveys down in Louisiana.

9 There will probably be another spike once we
10 seal the deal with California on their contracting for
11 surveying.

12 Many of you know the contracting was reduced in
13 2008 from roughly \$31 million to \$26 million. Hopefully,
14 we'll get there.

15 Next slide.

16 Current contractors: C&C; David Evans; Fugro;
17 Ocean Surveys; a new company this year, SAIC; Tenix;
18 Terrasond; and then Williamson and Associates, a group in
19 Washington state.

20 Next slide.

21 Here is the planned projects for 2009.

22 These are addressing the needs of what we hear
23 from our constituents, and also based on our National
24 Hydrographic Survey priorities.

25 So, working through the National Hydrographic

1 Surveys priorities, the manager came up with current
2 requirements that are emerging -- new emerging
3 requirements.

4 We focus our attention on these areas, where
5 we're going to be working on in 2009.

6 This includes boat contracts; more Alaska;
7 project selection.

8 Again, as I mentioned, it's based on the
9 National Hydrographic Surveys priorities, and many of you
10 have reviewed that.

11 It was discussed earlier in the panel by some
12 of the folks there, but that's one of the base documents
13 we go by, based on the survey vintage, how old the
14 soundings are; the use of the water way; the underkeel
15 clearance; and the topography, which all could
16 potentially change due to sediment shifting or uplift.

17 Again, we're talking about survey requests from
18 the Coast Guard (inaudible) and the maritime community
19 trying to be responsive to those needs.

20 So, we have a grand plan of where we want to
21 try to focus in the future, but we're always getting
22 requests for the near term.

23 How do we address those requests and rank those
24 in a way that feeds the timely response to our
25 constituents?

1 Continuation -- again, one of the selection
2 factors is continuation of multiyear projects, where we
3 try to move and demove; working with our contractors and
4 other resources to make sure that we can keep people from
5 hopscotching around the country; trying to take advantage
6 of continuation of where they left off last year.

7 Also, utilizing favorable weather periods to
8 maximize efficiency.

9 Next slide, please.

10 So, for field unit selection -- for all field
11 units, that includes our primary partners, the best
12 capability for the project requirements; the geographic
13 region, local knowledge certainly plays into that; ease
14 and cost of mobilization.

15 As I mentioned earlier, continuation of
16 multiyear projects.

17 For NOAA assets, for the three that we have:
18 Providing the project mix, to maintain our current
19 in-house expertise, and efficient use of the survey
20 platforms.

21 That's it for my part of the presentation.
22 We'll turn it over to Dave Enabnit.

23 I'll take any questions now, if you have them.

24 Okay. Dave, again, is going to go over a
25 couple of issues on both the contracting for our master

1 product and also current demand product.

2 There are some other major --

3 CAPTAIN McBRIDE: I do have a question.

4 My question has to do with the timing -- this
5 is Adam McBride -- with the timing of the process for the
6 Brooks Act acquisition process.

7 I suspect for a number of the areas where
8 you're charting there's seasonal windows or opportunities
9 where you have to work.

10 How frequently do you find that the acquisition
11 process gets in the way of those seasonal windows? Is
12 that a fairly well-oiled sequence, or does it break down
13 a lot?

14 CAPTAIN BARNUM: Probably the biggest factor
15 for us is when we got the appropriation.

16 CAPTAIN McBRIDE: (Inaudible.)

17 CAPTAIN BARNUM: Yes.

18 CAPTAIN McBRIDE: Will you get a CR issued just
19 like everyone else?

20 CAPTAIN BARNUM: Yes.

21 That's one of the biggest hangups of when we
22 finally get an appropriation -- get a final
23 appropriation.

24 MR. DASLER: Just a comment along the same
25 line.

1 What is nice about those contracts is they're
2 five years. You've gone through the process, so it's
3 just issuing a task order, but there is, I think, a need,
4 in terms of contracting.

5 There's a bit of an overload right now.

6 When you're contracting, we need more dollars
7 set aside to use that up a little bit (inaudible).

8 CAPTAIN BARNUM: We did have some vacancies in
9 our Contracting Supports Unit and our Hydrographic
10 Services Division.

11 We have just recently hired three folks this
12 year to help out.

13 ADMIRAL WEST: One of the problems here, I
14 think, is that OMB has directed there will be no
15 contracts renewed past five years, so it has to be
16 renegotiated every five years.

17 Is that true?

18 MR. DUNNIGAN: I don't know.

19 ADMIRAL WEST: I think so.

20 So, you can't just continue it; you have to
21 completely open the proposal thing again, and that really
22 lays the burden on the agencies.

23 MR. WELCH: Ed Welch.

24 Steve, on your chart, where you showed the
25 different priorities for the current fiscal year of the

1 country, you had something down in the outseas --

2 CAPTAIN BARNUM: Can you go back to that slide?

3 MR. WELCH: The one down in the southeast runs
4 with Jacksonville; is that right?

5 CAPTAIN BARNUM: Yes.

6 MR. WELCH: How do hydrographic surveys prevent
7 vessels from hitting rocks?

8 CAPTAIN BARNUM: (Inaudible) It's more than
9 keeping the ships from hitting the obstruction.

10 In this particular case, there was designated
11 routes for the ships that were modified -- the traffic
12 separation scheme was modified to direct the ships in a
13 certain area.

14 So, if we're going to be asking the ships to go
15 in those areas, we're (inaudible) --

16 MR. WELCH: So, we basically told the ships to
17 alter their course without knowing exactly what we were
18 directing them into?

19 CAPTAIN BARNUM: Well, the information we have
20 here, we think, is good, but we also want to make sure
21 there's nothing hidden there, also.

22 MR. WELCH: Do you have any sense as to how
23 much that project is?

24 CAPTAIN BARNUM: As far as cost?

25 MR. WELCH: Yes.

1 CAPTAIN BARNUM: I do not have that in front of
2 me.

3 MR. WELCH: Okay. Thanks.

4 CAPTAIN BARNUM: Anything else?

5 Okay. Thank you.

6 MR. ENABNIT: My name is Dave Enabnit. I'm on
7 POST surveys staff.

8 I'm not quite sure where your interests lie in
9 contracting, but I'm going to talk about two cases of
10 procurement or procurement substitutes, and you can
11 direct me with your questions.

12 The first one I'll talk about are the Raster
13 navigational charts. These are one version of the
14 electronic charts that we make, and today, we give them
15 away for free over the Internet.

16 It didn't start out that way.

17 We started out first with a cooperative
18 research and development agreement, which was a series of
19 authorities and incentives to allow the government to
20 work collaboratively with the private sector in order to
21 commercialize and develop new technology.

22 So, there's a greater benefit to the U.S., not
23 just the federal use for it, but it also subsequently
24 gets commercialized and used elsewhere.

25 We had some government-developed technology

1 dealing with Raster navigational charts.

2 We went through a competitive process to award
3 a cooperative research and development agreement.

4 Under this agreement, no funds are allowed to
5 be given to your partner; they are supposed to
6 commercialize the technology and profit from the
7 commercialization.

8 We did a competitive solicitation for this. It
9 was awarded to the predecessor of a company named
10 "NavTeq," in 1994.

11 It was a four-year agreement. It has renewed
12 twice in the interim as new technology arrived, and I
13 have to say it was highly successful.

14 Navteq took NOAA technology and our data, and
15 developed a manufacturing process, which they then turned
16 into a direct reusable electronic chart, and then they
17 did the manufacturing, sales, and distribution.

18 Over the term of that agreement, they were
19 selling maybe 800,000 Raster charts a year, and we were
20 actually getting back a certain amount of revenues from
21 that.

22 They did the parts that we were not
23 particularly good at.

24 They did the continual manufacturing.

25 They also were out sublicensing the technology.

1 They licensed it to 500 different companies in
2 35 countries.

3 They made the charts, and they also ran a
4 distribution system with retail agents throughout the
5 United States.

6 In 2005, that research and development
7 agreement came to an end.

8 We went out with a competitive solicitation for
9 a contract for a company to make those Raster charts and
10 give them back to us, at which time our plan was to post
11 them for free on the Internet.

12 Surprise, Navteq was the successful offer, and
13 we issued a one-year contract with 2 one-year extensions.

14 We did that because we didn't have the total
15 value of the contract in hand, so the subsequent years
16 were the way to say, "When the appropriation is made,
17 then we can fund the second year or third year."

18 After three years, that expired, in the middle
19 of June this year, and we were preparing to issue a new
20 solicitation for -- to continue to have production of the
21 Raster charts done.

22 Navteq gave us a call in about April, a couple
23 months before the end of the contract, and said, "We're
24 going out of business, and we will not bid on a new
25 contract and we will not accept an extension of the

1 existing contract.

2 "Thank you very much."

3 So, there are business circumstances that
4 changed.

5 The owner of the company passed away. He was
6 quite a wealthy individual, and the company and all of
7 his other assets went into a foundation.

8 Foundations don't run companies; they manage
9 assets, so they were selling off the operating companies,
10 and it was just Navteq's turn to be sold off.

11 They put it up as an asset sale, all or part.
12 It's still in the process.

13 In any case, they're not interested in and not
14 able to do -- make the Raster charts for us.

15 So, we went through a number of alternative
16 ways to continue producing the Raster charts. We started
17 out with about eight alternatives, and we've now got it
18 down to three.

19 The first one is that we would redevelop the
20 production system in-house. We have the best knowledge
21 of what needs to be done, what our data is, how it goes
22 together.

23 Simultaneously, we awarded a contract to
24 company in Canada named "Harris" to also try to develop a
25 production system.

1 We have asserted ownership to the production
2 software that Navteq has been using. We do have that
3 right under the Walker Research and Development
4 Agreement.

5 They assert otherwise, and that's not resolved.

6 Unfortunately, we had an interruption in
7 service because of this. There was not enough time for
8 us to get a new production system in place.

9 We are leaving the Raster charts posted that we
10 had posted, but they are not being updated for Notice to
11 Mariner changes or for new editions, and the weekly
12 update service is also not functioning.

13 We put this in a Notice to Mariners.

14 We've notified the value-added developers who
15 make software.

16 We've notified our federal partners who are
17 using this.

18 The Coast Guard has been heavily dependent on
19 these Raster charts, but there is really no other
20 national capacity to make these.

21 So, by establishing our own production system,
22 we hope to avoid this potential repeat of a systemwide
23 failure.

24 We will regain control of the format and the
25 production ourselves.

1 Unfortunately, we will lose some of the
2 innovation that Navteq was providing, and we will just
3 not be as effect at customer service as they have been.

4 Once we reestablish the production capability,
5 we expect to reevaluate the situation concerning whether
6 to use contract labor to operate that or not.

7 So, that's kind of the contracting or
8 pseudo-contracting history of Raster navigational charts.

9 There is the print-on-demand, which also has an
10 interesting contracting history.

11 I'll talk more about print-on-demand as a
12 product technology in a few minutes, but it has to do
13 with the paper nautical chart.

14 We also did some technology development and
15 product development here prior to the year 2000.

16 Like with the Raster charts, we awarded a
17 cooperative research and development agreement, seeking a
18 private sector partner who would commercialize that
19 technology and who would handle the manufacturing, sales,
20 and distribution.

21 Again, there's no government funds paid to the
22 contractor; they're only compensated by the success of
23 their commercialization.

24 We awarded that agreement in 2000.

25 It ran for five years, at which point we

1 followed a similar path to the Raster chart, in that we
2 competitively awarded a contract for production.

3 This was a no-cost contract, whereas we were
4 paying Navteq to make the Raster charts in the prior
5 years.

6 The contract here was a no-cost contract, and a
7 contractor is -- recoups his investment by sales --
8 successful sales of the project.

9 Again, we awarded a one-year contract with 2
10 one-year extensions, and that expired also in June of
11 this year.

12 Prior to that, we had had a computer-security
13 incident with respect to this system.

14 Right now, the computer-security issues are --
15 again, have been receiving a lot of attention, maybe more
16 than they deserve.

17 In any case, they said we could not have
18 another contract unless we did some quite extensive
19 computer-security efforts, which even went all the way
20 down to having a certification and accreditation of all
21 the nautical chartering agents that were dealing with
22 this.

23 That's just something we were not able to do,
24 so we are going to try something different.

25 We're going to use a -- switch from a contract

1 to a -- I actually have a producer agreement or an agent
2 agreement here.

3 Sorry, I switch back and forth among those
4 terms.

5 The producer agreement will overcome these
6 information/technology security issues.

7 This is not a procurement. It relies on our
8 longstanding ability to have nautical chart agents, which
9 arises naturally from our -- the law that tells us what
10 to do.

11 We've just then stretched it a little bit.
12 That took some doing.

13 We fought that battle about three years ago
14 when we first did the pocket chart, after about
15 nine months of intensive debate with the attorneys
16 downtown.

17 Finally, they conceded that, yeah, maybe that
18 was within our scope of our authority to establish
19 agents.

20 So, we're now going to use that same type of
21 agent agreement for print-on-demand, and that will avoid
22 the security issue.

23 It will avoid the procurement process and the
24 use of federal acquisition regulations.

25 It will permit us to use more of a

1 commercial-like agreement.

2 Hopefully, under this new arrangement, it will
3 increase the exclusiveness of our practice of
4 print-on-demand.

5 We will be able to have more than one partner.
6 That would help us ensure against the single point of
7 failure, because right now, we only have one.

8 It would add some competitive pressure to the
9 print-on-demand environment.

10 Also, the possibility that we could end the use
11 of single printing, which allows us to better serve the
12 Department of Defense and the Department of Homeland
13 Security.

14 It gives us an increased opportunity to expand
15 into new products and hopefully increase sales through
16 these departments.

17 So, this also has its own
18 interesting procurement history (inaudible).

19 These are the kind of issues that have come out
20 of this.

21 We do recognize our vulnerability to only
22 having one supplier in both cases, and in one instance,
23 Raster charts was put on discs.

24 The incentivization has done well by allowing
25 the partners to profit from the sales and the

1 manufacturing of products. I think we got a better
2 result than we were doing ourselves through the
3 traditional networks.

4 There have been some differences.

5 It's an interesting adjustment for the
6 government to work on a commercial product in the true
7 sense, where has to succeed or fail by its financial
8 success.

9 We had some differences with our partners, in
10 terms of -- they would like longer agreements than, I
11 think, we're comfortable with.

12 They would like more of a protection, a little
13 barrier to entry to the competition, so they can recoup
14 their investment, some of which we are -- we don't give
15 them completely free latitude on.

16 There's some differences on pricing, and
17 there's some differences on which products we should
18 follow and develop.

19 We brought them in for their expertise, and
20 we're trying to listen to that.

21 The last item here under "Raster Navigational
22 Charts" is that we started giving those away. We lost
23 the revenue stream that was funding that and lost control
24 of that revenue stream.

25 So, we can no longer use that as leverage in

1 order to get some performance from the private sector.

2 So, those are the two topics I wanted to talk
3 about.

4 Are there any questions I can answer about why
5 we did it or how we did?

6 MR. DASLER: Jon Dasler.

7 I'm assuming NOAA is still pushing moving the
8 ENC's as opposed to the RNC's, and it seems like this is a
9 good motivator to press on on that.

10 We see that, too, where a lot of times, there's
11 information on the ENC that's not on the RNC. As we're
12 doing chart comparisons on surveying and writing
13 descriptive reports, it kind of balances that out, I
14 think.

15 I think this explains a little bit of why we're
16 told, "Compare now to the RNC's, but use the ENC's," or the
17 electronic charts.

18 MR. ENABNIT: I'm not sure where you're getting
19 that.

20 The RNC is still an official product of NOAA.

21 We still advocate its adoption by the Coast
22 Guard -- I mean, for regulations regarding mandatory
23 ferries, and whatnot, this also is accepted.

24 It's pretty much a no-cost by-product from the
25 production of the paper charts, so I'm not sure where

1 you're getting your instructions from.

2 MR. DASLER: We can discuss that afterwards.

3 Maybe this is a question that is more for Jack:
4 I'm assuming the plan is still to move forward with ENC
5 and eventually phase out RNCs?

6 CAPTAIN BARNUM: Remember, the RNC is just an
7 image of the paper chart. It's just a digital image of
8 the paper chart.

9 The paper chart is going to be around for a
10 while, so we're still going to have the product out
11 there.

12 In this case, the disruption of service for the
13 RNCs -- because it's not currently accepted for
14 navigation, it's really mostly for situational, where
15 ENC are accepted for navigation, as, of course, are
16 paper charts, but it does -- what I wanted to bring out
17 and have Dave give this presentation was to point out the
18 vulnerabilities of the partnership of a single vendor and
19 the disruption of service to the community.

20 So, we're trying to take a lesson learned on
21 that as we move forward, and inform the panel of the
22 issues that we're dealing with on this issue.

23 MR. SKINNER: Any other questions or comments
24 for Dave?

25 CAPTAIN McBRIDE: The loss of your single

1 supplier on the Raster charts, how much of a delay -- or
2 is it causing you a delay in their distribution?

3 MR. ENABNIT: We are continuing to make
4 available the ones that were current at the time the
5 service was disrupted, with the caveat, on the
6 distribution site, that these are not being kept up to
7 date.

8 We expect to be able to have new editions
9 probably by the end of September, and electronic patch
10 files sometime after that.

11 CAPTAIN McBRIDE: What's that time gap that
12 you're describing? A couple months or --

13 MR. ENABNIT: June 14th until September.

14 CAPTAIN McBRIDE: Okay. For a couple months?

15 MR. ENABNIT: Three months.

16 CAPTAIN McBRIDE: Thank you.

17 MR. DASLER: Currently, the ENC's are being
18 updated; is that correct?

19 As Notice to Mariners come in and information
20 on surveys and hazards to navigation, the ENC's are being
21 updated, but, currently, the RNC's are not?

22 MR. ENABNIT: The ENC's are being updated on a
23 different schedule than the RNC's were being undated on,
24 and they're being updated for Notice to Mariners; they're
25 not being updated for everything, and somewhat less

1 frequently.

2 We're in a transition period with the ENC's,
3 trying to spin off an entire suite of them, trying to
4 transition to a new production system, trying to train
5 our people, trying to put out an electronic update
6 service.

7 So, you're seeing some transition on there.

8 Right now, it's being updated more like on a
9 monthly schedule.

10 Again, on a single-production system that I
11 mentioned here in passing, purportedly, when that's
12 running, all of the products will come from a single
13 database, and we'll kind of make them all at the same
14 time, so you can have all three.

15 MR. JEFFRESS: Gary Jeffress.

16 Dave, I believe you said that NOAA maintains
17 the liability of these products or --

18 MR. ENABNIT: Well, we're always sued over
19 them, because of deep pockets.

20 MR. JEFFRESS: So, these companies are immune
21 from that?

22 MR. ENABNIT: No. They're responsible for
23 their own work. So, if the court determined that they
24 were at fault, they would pay.

25 In our agreements with them, we require that

1 they carry some type of business insurance to protect the
2 public interest to a certain extent, errors and omission
3 insurance or other types of business insurance.

4 We do tell them that -- we do make a statement
5 that we accept responsibility for the original files that
6 we provide them.

7 MR. JEFFRESS: How often does litigation occur?

8 MR. ENABNIT: We're sued maybe once or twice a
9 year, something like that.

10 None of them have been specific to either of
11 these products that the partners have been drawing on.

12 I think the last one was one just recently up
13 in -- I'm sorry, I can't dredge it up, but we're dragged
14 in along with everybody else.

15 MR. SKINNER: Other questions or comments?

16 CAPTAIN BARNUM: One thing I wanted to add --
17 let's go back to the point I talked about for the project
18 area selection.

19 We are working with the Center for Coastal and
20 Ocean Mapping, U of H, on a risk tool to look at AIS, to
21 look at the vessel types, where their ships are going,
22 and combine that with the age and the vintage of the
23 hydrography, to come up with a tool that helps us --
24 guides us on where we need to survey, based on current
25 maritime information.

1 So, we are working on that.

2 MR. SKINNER: Again, panel members, if there's
3 something here that you'd like to focus on, in terms of a
4 recommendation, please think about it over the course of
5 the rest of the meeting.

6 I keep mentioning that because if we do
7 recommendations, we need to at least frame the
8 recommendation in a public meeting, and if we don't do it
9 here, that means another conference call, and I know you
10 all really like that.

11 CAPTAIN McBRIDE: Just on that subject, and
12 maybe I'm just speaking for myself, but, frequently, when
13 I'm making presentations in my work with commissioners on
14 issues, I'm required to provide some options for
15 recommendations for them to consider.

16 Otherwise, you get a group of folks, like
17 ourselves here, who visit two or three times a year, kind
18 of flopping around, and not really as up on it as the
19 experts.

20 I'm not sure how this fits in the process of
21 whether you can say what you can, but if you could tell
22 us what kind of recommendations might improve the
23 process, streamline it, create efficiencies, or just
24 generally make things better, I think that would help our
25 deliberations quite a bit, rather than just what I call

1 lobbing a dead fish on the table and waiting to see who
2 picks it up.

3 Tell us how we might pick it up for you, and
4 that, to me, would be helpful.

5 Thank you.

6 MR. SKINNER: We've tried to remember to ask
7 people at the end of the presentation -- and you may want
8 to structure future meetings, where they actually start
9 with the recommendations and then go into the
10 presentation so it's framed a little bit better -- but I
11 think that's a good suggestion.

12 MS. CHAPPELL: This is Ashley Chappell.

13 You do have two types of sessions on the
14 agendas.

15 In this case, this was requested by a member of
16 the panel, and then for the specific sessions where NOAA
17 has put something in front of you or will put something
18 in front of you, we do have tasking that we would like to
19 hand to you as potential roles and review for you to
20 play.

21 So, when I know ahead of time sort of what
22 we're looking for, I can provide that.

23 If I can get a sense from panel members on your
24 interest areas, as to why you might be interested,
25 perhaps we can do some prework to craft potential

1 recommendations.

2 MR. SKINNER: Thanks.

3 MR. WHITING: This is Larry Whiting.

4 I have a question about contracting, and Mike
5 is going to have to answer it, probably.

6 NGS, in off-coast surveying, by using -- are
7 using the A/E contract.

8 My pet peeve about this is that this is
9 professional work. CO-OPS does not use the A/E contract,
10 but IDIQ, I believe, a qualifications-based system.

11 I would like to have Mike present something on
12 that for why he doesn't -- feels he doesn't have to, as
13 CO-OPS.

14 If I have to bring that up now, I will make
15 that as a motion. If I have to bring it up in a public
16 meeting -- I was going to wait until tomorrow.

17 I guess from what you've said, I need to bring
18 it up now.

19 So, I'd like some discussion on that from Mike
20 before we bring it completely out.

21 MR. SKINNER: Okay. I'm not sure that we have
22 to bring -- when I was talking about recommendations, I
23 was looking towards what we send on to the
24 administrative -- NOAA administrator.

25 I think that the type of information -- at

1 least to start with, it sounds like, Larry, that we can
2 probably do that more informally.

3 Definitely, we can raise that tomorrow. I
4 don't have a problem with that.

5 MR. WHITING: Okay.

6 MR. SKINNER: I was only referring to if we
7 make a recommendation to the administrator, it has to be
8 done in some public venue for the group saying, "Yes, we
9 want to weigh in on this topic."

10 I'm not -- it doesn't sound like we're
11 specifically there yet, because --

12 MR. WHITING: Well, I think this group should
13 weigh in on it, because Dwight puts out two contracts to
14 do one job -- sorry, not Mike -- the CO-OPS does, and I
15 think this is under the direction of his contracting
16 group.

17 I think we should go in and look and see why
18 that's taking place.

19 MR. SKINNER: Okay. What you originally asked
20 for was to hear an explanation of that --

21 MR. WHITING: Yeah, I want to hear an
22 explanation of that.

23 If I have to make a motion that this group
24 looks further into that, I'll make that motion. I
25 probably won't get a second without more discussion on

1 it.

2 MR. SKINNER: We'll just add it to the agenda
3 so we at least know more -- I mean, you're familiar with
4 it; I know nothing about it.

5 So, I think before we went to a motion stage,
6 we need to hear from Mike and hear from anyone else who
7 wants to weigh in.

8 We can do that informally, and then if we need
9 to move to recommendations, that can be done at a public
10 session.

11 MR. WHITING: Okay. I'll wait.

12 Thanks.

13 MR. SKINNER: Does that work for everyone?
14 Okay.

15 I'm not sure if we have folks on the phone.

16 (Remarks outside the record.)

17 MR. SKINNER: Elaine, it says here -- do you
18 have opening remarks?

19 MS. DICKINSON: Can you all hear me?

20 MR. SKINNER: Oh, yes.

21 MS. DICKINSON: It's loud?

22 I have my phone turned up all the way, too,
23 because I really can't hear you too well.

24 Do you want me to turn my phone down or --

25 MR. SKINNER: No. We've corrected the problem

1 here -- well, it wasn't a problem.

2 MS. DICKINSON: Okay. Well, for the
3 print-on-demand charts, we talked about it a little bit
4 in Miami, but we ran out of time.

5 I sort of got to know Dave DeGree after our
6 Most Wanted report came out. He called me, and we had
7 some lengthy discussions.

8 I realized that we -- in all of our meetings
9 over the last few years, we've never talked about
10 print-on-demand.

11 The more I learned about it, the more I was
12 impressed with it as a product. I think it's a really
13 great asset for the chart selection.

14 There's a few issues with it, though.

15 First of all, paper charts are never going to
16 go away. We're always going to use them, whether they're
17 small boats or a backup to electronic.

18 We've spent so much time on ENC's and RNC's, but
19 these are important, too.

20 One of the issues is they're just not very well
21 known by the public.

22 We've done a couple of promotions at BoatUS,
23 and I think the OceanGrafix products and service got a
24 very, very good reception from boaters, but I just don't
25 think enough people know about it.

1 The other issue is that -- I've heard a little
2 bit of your earlier discussion, talking about the
3 problems of having one vendor.

4 I realize that's an issue, but in this field of
5 business, I don't think there's going to be a whole lot
6 of competition to do this kind of thing. It's just so
7 highly specialized.

8 OceanGrafix has been operating with basically
9 year-to-year contracts. That doesn't really lend itself
10 to much long-term planning.

11 It's a very technology-driven business. It's
12 all Web-based, so it has to keep evolving very quickly
13 with changes in the Web and Internet.

14 So, anyway, that's what I wanted to hear at
15 this session on the agenda, and hear more from the people
16 who are actually doing the work, on how we could do it
17 better, how can we get this product out in front of
18 people, and make the contracting situation a little bit
19 better, maybe.

20 That's all I have for starters.

21 MR. SKINNER: Thanks, Elaine.

22 Just for the record, Elaine Dickinson is with
23 BoatUS, and an HSRP panel member.

24 I guess, Dave, it's back to you.

25 MR. ENABNIT: For the reporter, I'm Dave

1 Enabnit.

2 Since there are a good number of new panel
3 members since we presented this back at the very
4 beginning of the existence of the panel, I have some
5 background materials to bring everybody up to a common
6 understanding of what we're talking about.

7 I have a terribly overly intricate
8 presentation.

9 We have this; we have my virtual panel on the
10 speakerphone; and Mike Serafin in the back from Baker
11 Lyman, who is one of our nautical chart agents.

12 We have a video on YouTube, hopefully, and with
13 sound, hopefully.

14 We have Elaine, representing member of the
15 panel, also, so we'll see how this goes.

16 To bring people up to a common level of
17 understanding for the purposes of this panel,
18 print-on-demand is the use of large-format ink-jet
19 plotters to print official nautical charts just when
20 they're ordered, and using digital files that NOAA
21 maintains -- keeps up to date.

22 We keep them up to date for all -- most
23 mariners all the time, and we do new editions, which
24 catches up the rest of them.

25 The original goal of print-on-demand was to

1 improve the currency of the information we distributed by
2 using the same files that we used for astral charts; to
3 distribute this updated information; and to ensure that
4 we always had inventory to allow us to make products
5 improvements, such as offering multiple materials for
6 different types of users.

7 It was our intention to use the private sector
8 to subsidize this so that we could increase the
9 distribution of the product and improve the service that
10 the public receives.

11 It would allow us to avoid reprints.

12 We could customize it. For example, we could
13 remove the land lines in instances where there was no
14 benefit to the mariner.

15 It would reduce our inventory and warehousing
16 costs.

17 As a point of reference, back before we
18 started, we were throwing away more charts every year
19 than we were selling.

20 We would throw away a million out of inventory
21 because they became obsolete, and we replaced them with
22 ones that were less obsolete.

23 So, between 1995 and 2000, NOAA developed some
24 print-on-demand technology.

25 We did some experimenting with product design.

1 The chart is the same as the -- in the graphic area of
2 the chart, but there's some additional changes we made to
3 improve it to take advantage of print-on-demand
4 technology, and we worked out the business models.

5 In 1999, we awarded a contract for the
6 development of an electronic commerce software interface,
7 and behind that electronic commerce engine is one of the
8 core pieces of this technology that we developed.

9 It basically keeps a record of how to make
10 every product you could possibly make using
11 print-on-demand technology.

12 Whenever that product was ordered, it would
13 update those instructions and send those instructions off
14 to whoever was going to assemble the pieces and make the
15 chart.

16 In 2000, we awarded a cooperative research and
17 development agreement to OceanGrafix to do that part of
18 it, and we also deployed an electronic commerce firm at
19 the same time.

20 In 2000 to 2001, OceanGrafix was deeply
21 involved in refining the product, developing a
22 manufacturing system, and bringing the agents on board.

23 In 2001, we began public distribution, and it
24 went pretty smoothly, and it's been growing ever since.

25 OceanGrafix has been refining their business

1 practices and their technology.

2 In 2005, as I mentioned previously, the
3 contract expired, and we awarded a new cost contract,
4 which OceanGrafix was the successful competitor for that.

5 It was a one-year contract with 2 one-year
6 extensions.

7 In 2006, we transferred all of the remaining
8 capability into the production division within Coast
9 Survey.

10 In 2007, we ran into the security incident that
11 we mentioned, and we were forced to withdraw the
12 electronic commerce front-end, and OceanGrafix had to
13 scramble to update the software, which they did at their
14 own expense.

15 In 2008, in June of this year, our follow-on
16 contract expired, and we were somewhat trapped until the
17 procurement and information technology security people
18 relented and allowed us to do a six-month extension,
19 which is what we're operating under now.

20 As I mentioned, we intend to switch to these
21 producer agreements, hopefully by the end of the year.

22 This is just a brief system overview.

23 NOAA maintains the digital chart files every
24 week for all the Notice to Mariners. We use them for the
25 master navigational charts, the patches for charts, and

1 for print-on-demand.

2 This is the electronic commerce front-end
3 operation, which maintains all the product metadata
4 whenever -- it used to be whenever they absorbed it, but
5 now we transfer this information nightly up to
6 OceanGrafix.

7 (Inaudible) all combinations of products. It
8 takes about 9 megabytes to transfer, but we do that every
9 night.

10 They automatically retrieve the digital chart
11 files; they process the chart files into the format;
12 they assemble digital pieces; and they distribute the
13 plot files to the remote printing agent, which is this
14 route.

15 Mike, who's here, is a remote printing agent
16 and will relate his experience.

17 OceanGrafix will print in St. Paul, Minnesota,
18 and ship for those agents.

19 The agents sell, plot, and distribute,
20 depending on which type of agents they are.

21 The charts take about four, four-and-a-half
22 minutes per copy, depending on the physical size of the
23 chart.

24 OceanGrafix directly supports the agents and
25 the printing technology.

1 They also support the marketing and promotion
2 of the product.

3 NOAA continues to support the chart compilation
4 and updating, and then OceanGrafix is compensated from
5 the sale of the charts for their efforts.

6 So, what we have is an official product which
7 is up to date at the time it's manufactured; it's water
8 resistant; it has a new set of brighter color.

9 They offer a water-resistant, and they also
10 offer a laminated version, which has an
11 abrasion-resistant coating.

12 There is value-added information in the margin
13 of the chart, and because of our -- because of the
14 process in print-on-demand, when we release a new
15 edition, it comes out three to eight weeks earlier than
16 the lithographic new edition.

17 Our results so far is that the retail chart
18 sales agents seem to be satisfied. They're working
19 comfortably with OceanGrafix.

20 Mariners are accepting print-on-demand.

21 Sales are growing steadily. We've received no
22 criticisms from mariners.

23 Price has not been an issue for those that are
24 using the product. It does sell as a premium product.

25 We recognize that OceanGrafix has a privileged

1 position here, in that they're the only supplier. So, we
2 put a cap on that price, but that cap is higher than the
3 price of a lithographic chart, to recognize that the
4 expenses of -- the economic scope that this is a premium
5 product.

6 As I said, that premium price has been not an
7 issue.

8 Quality has not been an issue.

9 The customer service of the chart agents has
10 been excellent. We have not really received any
11 complaints at all from mariners about the product.

12 I'd say that our partnership, from the
13 government's side, with OceanGrafix, has been quite
14 successful, as was our partnership with NavTech.

15 We were able to leverage the value in our
16 intellectual property in order to take advantage of their
17 greater experience with manufacturing operations.

18 So, the status today: The technology is
19 considered to be stable.

20 Sales have been steadily increasing.

21 The lower graph here is pretty much over the
22 entire duration of the agreements we had with
23 OceanGrafix.

24 They had -- the upper graph is the chart sales,
25 total, in large format.

1 Going back to supporting agents, 18 of them are
2 remote printers, including three foreign agencies.

3 Professional mariners do get it and understand
4 what they're getting when you tell them it's an
5 up-to-date chart.

6 They do recognize the work of not having to go
7 through and align a chart that's two or three years old
8 and making corrections themselves.

9 OceanGrafix has survived being a government
10 partner, which we have not always been the most
11 responsive partner that we would like to be.

12 The technology and the work we did here was
13 recognized by our four national awards for technology,
14 innovation, electronic government, and technology
15 transfer.

16 We won an industry award as the product of the
17 year from a publication and four other participants, and
18 the government received a Department of Commerce Silver
19 Medal for their efforts.

20 Our future plan is -- I think at this point --
21 we can say at this point that we would say we consider
22 print-on-demand as a core offering of both survey and --
23 I believe we have the intentions to continue with it as
24 long as we can.

25 We are working as if it's going to continue.

1 We do intend to switch to the producer
2 agreements to expand the number of partners to avoid the
3 single-point-of-failure-like experience with the Raster
4 charts, and to add some competitiveness in the production
5 and distribution of these charts.

6 Hopefully, we'll (inaudible) in certain
7 departments, the Department of Defense, the Department of
8 Homeland Security.

9 We're having difficulty dealing with the
10 private sector for something that they used to order from
11 the Defense Supply Center, and it looked like it was
12 free.

13 We would like to expand the niche products that
14 we're making. Hopefully, we'll be able to increase
15 sales.

16 OceanGraphix has done an excellent job in
17 transitioning our existing customers and agents to
18 print-on-demand.

19 We'd like to do more in reaching out to people
20 who are not using even the traditional product.

21 This would allow us to better align with public
22 policy, where issues of -- everybody should get a chance
23 to try.

24 After you've done something exclusive with one
25 company for a number of years, the pressure to open it up

1 and have more people participate is getting pretty
2 intense.

3 At the same time, as part of our future plans
4 here, we would like to refresh the NOAA technology by
5 supporting -- in order to support additional partners, we
6 would like to evolve the product.

7 We have a new production system called the
8 "Nautical Chart System II" coming online.

9 We need to reconcile the production of
10 print-on-demand with the NCS II system, and we need to
11 simplify what we've been doing in-house order to improve
12 our reliability.

13 At the same time, we'd like to evaluate the
14 opportunity of eliminating new issues in their entirety.

15 We want to see if can exploit better the
16 information that we've been putting in the margin of the
17 print-on-demand charts.

18 It's another means by which we can introduce
19 current information to mariners, and we really have not
20 been as aggressive on that as we could be.

21 We'll also be exploring to end lithographic
22 printing entirely.

23 Once we do the reconciliation, we'll be
24 integrating production of print-on-demand with new
25 Nautical Charts II (inaudible).

1 This is the OceanGrafix executive management
2 team, the Web site.

3 Let's try to click on the hot link and see we
4 can run the YouTube video.

5 (Video played.)

6 MR. ENABNIT: Okay. Well, some technology
7 isn't quite ready for prime time, but that's as close to
8 a demonstration that we could get today.

9 If you want to see it again, you can go to
10 YouTube.com, type "NOAA" in the search box, and you can
11 put it on an endless loop and watch it all you want.

12 Next, I'd like to offer the floor to Mike
13 Serafin.

14 Mike's an agent out of New Orleans, Louisiana,
15 and he's going to tell us about the aging experience.

16 MR. SERAFIN: My name is Mike Serafin, and I'm
17 with Baker Lyman. We're in New Orleans.

18 We've been the chart agent since, I think,
19 1922. We're a NOAA agent, NGA, British Admiralty, and
20 about anything else we can sell.

21 We started with the PODs when they first came
22 out as a prototype. We were one of the first prototype
23 agents, and we were one of their first remote printer
24 agents.

25 Right now, we have two remote printers that we

1 run in our office. They pretty much run continuously.

2 It's a product that, for us, has been very good
3 from all sides.

4 It's taken a little while to get it to where
5 it's gone from, I guess, a Chevrolet product to a
6 Cadillac product, but the Chevrolet product is very good.

7 From technology -- from our standpoint, it's
8 nice that we offer a product to the mariner that is
9 correct and up to date.

10 It's cleared out from the land lines and can be
11 customized if they want, although I have not had a lot of
12 the mariners or companies want to get involved with that.

13 They're interested in it, but they're all
14 cheap. They don't want to spend a little money to do it,
15 to be honest.

16 Our experience with OceanGrafix has been very,
17 very good.

18 We worked with them from the beginning, when
19 their printers they were planning to use were very
20 large -- and I didn't think they would work for our
21 business, they're too expensive -- to having the printers
22 they had.

23 We worked through the software, where,
24 initially, we did the ordering and had to go through the
25 NOAA site to OceanGrafix to us.

1 It could take an hour to order a chart.

2 We've worked through the software and through
3 the technology with them for different updates.

4 We're limited right now; it's point-and-click.

5 Just like you saw on the screen, we get an
6 order; you bring up an order window; you click on the
7 chart; it goes to a print window; you click on it; and
8 you print it.

9 From the business standpoint, that's invoiced
10 right away through OceanGrafix. We know what we've
11 printed; they know what we've printed.

12 If you order it and you don't print it, you
13 don't get charged for it, because sometimes our clients
14 change their mind.

15 From a business standpoint, for us, it's been
16 very good.

17 We used to have about 20 cabinets of NOAA
18 charts. We stocked everything.

19 Right now, we have about seven cabinets of NGA
20 charts, about a cabinet of NOAA charts, and the rest we
21 do is print-on-demand.

22 The product's been very well received by our
23 clients, who are primarily commercial mariners.

24 The primary reason is they are up to date.

25 They can count on them. They can get through a

1 Coast Guard inspection by ordering charts and having them
2 delivered to the ship.

3 From a cost standpoint, they don't have to pay
4 the second mate, or whoever, do the corrections on them.

5 We're in New Orleans, and the Gulf of Mexico, I
6 think, has something between 50 to 70 percent of the
7 Notice to Mariner corrections that NOAA puts out.

8 If you have a Gulf of Mexico chart that's a
9 year-and-a-half old, you probably have a good day's work
10 ahead of you bringing it up to date.

11 There are some companies and some captains who
12 won't buy them. They like the old lithographic chart,
13 and that's what they're using; that's just it.

14 On some of the other things -- like I said,
15 working with OceanGrafix has been very good.

16 We've gone through a lot of changes and
17 updating things and making them work.

18 I understand the comment on a single-point
19 contact -- a single point of production for the chart.

20 Actually, Dave's discussion of the current
21 contract situation scares the hell out of me.

22 It's a chart that the mariners count on. They
23 count on it being available, and although print-on-demand
24 in a slight misnomer, they really expect it to be printed
25 when they want it and be available right now.

1 That's the mode they're in.

2 If somebody called me this week and said, "Hey
3 I need -- I have a Coast Guard inspection. I need a
4 folio for my boat, and I need it tomorrow morning" -- if
5 I said, "Well, NOAA dropped the contract. OceanGrafix
6 can't do it, and you can't have it," they'd be real
7 upset.

8 I'm not sure that they would have the people
9 who could get the charts up to date fast enough
10 otherwise.

11 I understand, also, the -- not wanting to have
12 a single point of production for this, but from my
13 standpoint, having a single point that we can count on
14 and we don't have to worry about changing hardware,
15 changing vendors -- you know, we just signed a lease for
16 our printer, and the contracts changed.

17 We hope the new guy comes in with the software
18 and the production and everything else, but it might not
19 be smooth; it might not happen.

20 That sort of scares me, because that becomes a
21 big blip in our ability to supply the product to our
22 clients.

23 It takes a lot of effort to bring one of these
24 systems in and have it set up and have it functioning and
25 working.

1 If you have to switch providers in the middle,
2 it's going to take a while. It's just not going to be an
3 easy plug-and-play thing that's going to happen.

4 Let's see.

5 One of the things it has done, I guess, from
6 NOAA's side, is in the mariners we deal with, it has, I
7 guess, increased the value of the product to them.

8 A lot of our clients are Gulf of Mexico, U.S.
9 flag -- or U.S. flag vessels. A lot of clients we have
10 are foreign-flag vessels.

11 The majority of the foreign-flag vessels use
12 British Admiralty charts.

13 The reason they've always used them before is,
14 A, they have worldwide coverage, and, B, they were always
15 a correct, up-to-date product when they purchased them.

16 We're required to hand correct the charts we
17 get from the Admiralty before we sell them to keep them
18 up to date.

19 The Admiralty recently said that they didn't
20 want to go to a remote print-on-demand system.

21 I called the people we deal with the other week
22 and asked them why they were crazy. I keep probably
23 4,000 to 5,000 British Admiralty charts, and I have to
24 keep them hand corrected and up to date.

25 It's a great expense.

1 It has a much higher possibility of errors
2 being on a chart rather than just printing the
3 corrections there.

4 The print-on-demand process allows us to keep
5 the inventory matching with the mariner needs, which is
6 nice from a business standpoint, but it also makes sure
7 that if, for some reason, there's a surge in somebody
8 needing a chart, we just hit the button five more times
9 and this comes out, and they have it.

10 It's not a question there.

11 What it has done for the NOAA charts is it has
12 raised the value to what people see to like what the
13 level of Admiralty chart used to be.

14 When people come to U.S. waters, they want the
15 PODs; they want the up-to-date charts.

16 I think price-wise, I understand some of the
17 positions.

18 A NOAA chart, compared to an Maritime Admiralty
19 chart, is very inexpensive. There's really a lot of
20 value there in the fact that it's corrected and
21 everything.

22 I understand the idea of getting it out to the
23 public is less expensive and it gets it to more people,
24 but I think, actually, it's a product, at least on the
25 commercial side, people would be willing to pay more

1 money for than what's charged for them now, particularly
2 if some of that money got put back into having a better
3 product later.

4 Let's see.

5 The comment that was made before on product
6 knowledge going out to your normal boat rather than your
7 commercial guy, I think right now, the commercial
8 industry is well aware of the product.

9 If I shipped them a lithographic chart, I would
10 get a blast, and I often get a blast because I sell the
11 NGA charts, and some people don't understand that's not a
12 NOAA product.

13 You ship them an NGA chart with a stack of
14 corrections, and you get this blast, "Why did you not
15 correct this chart for me? Why didn't you send me a
16 corrected chart?"

17 So, they're well aware of it, and they really
18 like it.

19 For the commercial boater, I'm not sure the
20 problem is as much as a POD chart or often any charts at
21 all, which may sound strange.

22 I know from my experience, the recreational
23 boater, talking to other people in the marina and stuff,
24 "We hook in our Garmins; we go out; we drive down the
25 land line; and we follow it back."

1 The concept of looking at a chart or that type
2 of thing, to a lot of recreational boaters is -- I don't
3 know. They just don't do it.

4 They don't see the need for it in many cases,
5 so I'm not really sure how to rectify that.

6 When people come in to our store, the only
7 difference between what a recreational boater will buy
8 is -- A, obviously, he's there for a chart.

9 If he's buying several, he wants to know why
10 there's not a NavTech chart book that he can buy less
11 expensively for everything.

12 He'll buy a POD or he'll buy a regular one; it
13 really doesn't matter. The price is not a big deal to
14 most people.

15 A lot of times, the guy's driving by; he has
16 three minutes to buy a chart; he walks out with what's on
17 the shelf.

18 That will be the only reason they're buying a
19 lithographic chart.

20 I know some agents do not even stock the
21 lithographic charts anymore. We do because we have
22 people who still want them.

23 Dave's comment on getting away with not
24 producing new editions anymore, we need to produce new
25 editions. It's often the only time even professional

1 mariners buy charts.

2 While we're supposed to keep them updated,
3 particularly in the Gulf of Mexico, you'll find smaller
4 operators or smaller vessels -- they don't put the Notice
5 to Mariners corrections on them.

6 Some of the smaller vessels will buy PODs every
7 three to six months. Other just replace the charts.

8 We sell charts when a new edition comes out,
9 because everybody buys it, and at that point, they have
10 an updated chart, like it or not.

11 Whether they keep it corrected or not depends
12 on the size of the business, who it is, how the Coast
13 Guard is inspecting for that.

14 When we have a new edition, people do get the
15 chart, because they have to at that point.

16 That's really all the comments I have.

17 I don't know if there are any questions.

18 MR. ENABNIT: Okay. Thanks, Mike.

19 Now we're going to hear from OceanGrafix.

20 Dave DeGree, are you there?

21 MR. DeGREE: I am out here, yes.

22 MR. ENABNIT: Okay. You can speak your mind.

23 MR. DeGREE: I appreciate it.

24 Thanks to the panel for inviting me to spend a
25 little time with you this afternoon and to talk about POD

1 charts.

2 I have to tell you it's been an adventure for a
3 small company to deal with the federal government and the
4 folks at NOAA, but at the same time, it's been a
5 rewarding one.

6 There are very good folks at NOAA. Their
7 technical people are smart, and they're capable.

8 They're very professional.

9 They're very oriented to dealing with problems
10 and issues and getting them resolved, and it's been a
11 good experience for us to be dealing with them.

12 I also want to point out to you that the POD
13 system works because of the good network of chart agents.

14 Our agents are hardworking guys, as you can
15 tell from talking with Mike.

16 They know what they're doing.

17 They know their customers, and they know what
18 their customers need.

19 They work long hours.

20 They're responsive, and they work with the
21 understanding that when the ship is ready to go, the
22 charts need to be ready to go, as well.

23 Can you change the slide, please.

24 I'd like to talk to you for a minute or so
25 about the things that we use to evaluate how we're doing,

1 in terms of our performance.

2 As David Enabnit mentioned, there has been
3 continued steady growth of PODs since the project
4 started.

5 What he didn't tell you is that our agent
6 network of 40 agents has outsold the litho charts, which
7 uses 1,100 agents to sell them, and has done so over the
8 last consecutive seven quarters.

9 Our agent network is our principal method for
10 reaching the purchasers and users of nautical charts, and
11 they do an excellent job for us.

12 We include in that agent network roughly 20 of
13 what we call "remote printers."

14 Those are the folks who do just as you saw with
15 Maryland Nautical, who print the charts on-site.

16 Roughly 80 percent of the POD charts sold are
17 sold through those remote printers. The remaining
18 20 percent are printed at our facility in St. Paul and
19 shipped either to the agent or to the end user.

20 The customers have done ratings from time to
21 time, and we recently completed a survey.

22 It shows that when comparing the traditional
23 NOAA chart to a POD chart, customers rate the POD's chart
24 as an 8.9 on a 10-point scale compared to a 7.8 for the
25 traditional NOAA chart.

1 The agent rating of the product has also become
2 an important part of what we look at each year.

3 Just for comparison, when our contract was
4 entered in 2005, the rating of the product by the agents
5 was 7.4, and in our last survey recently completed, it
6 was 9.1, again on a 10-point scale.

7 Agents tell us that in 2005, OceanGrafix
8 business was roughly 11 percent of their chart business.

9 That's not 11 percent of their business; but
10 11 percent of their chart business. Today, it's
11 42 percent.

12 As Mike indicated to you, other options for
13 charts include, of course, the NOAA traditional chart,
14 along with that British Admiralty charts and other
15 brands, like Emary, and so on.

16 Agents rate the reduction of inventory as one
17 of their top benefits at 9.8 of a 10-point scale, and
18 they rate the ability to provide better, faster service
19 at 9.6.

20 The top user, that is customer benefit, is that
21 it's up to date. That repeatedly has been the most
22 important thing.

23 The thing they like -- that is the customers,
24 like least about the POD charts is they complain about
25 the size.

1 I have to temper that slightly, because they
2 still rate the product as an 8.9, but if they had their
3 druthers, they would reduce the size of the chart.

4 I have to also tell you that OceanGrafix has
5 requested that NOAA permit the production of an official
6 chart printed on both sides, which, obviously, would be
7 half as big and would still contain all of the data
8 that's on the current chart.

9 We have the technology to do that, and we have
10 developed the capability and software to be able to do
11 it, as well.

12 So, from an overall standpoint, we feel that
13 our customer performance issues and our agent performance
14 issues indicate that we're doing a good job and that the
15 partnership of NOAA and OceanGrafix works.

16 Would you change the slide, please.

17 I'm going to do this fairly quickly.

18 I'm just wanting to have you see some of the
19 things that are currently going on in the improvement in
20 our system.

21 As you might expect, improvements go on
22 continuously when you're in a business that involves this
23 kind of technology, and not the least of that is the
24 importance of the software.

25 We have deployed, in the last several days, a

1 new version of our software. As it's fully deployed, it
2 will be faster; it will be simpler.

3 It will correct automatically more errors.

4 There are errors that occur. I'm not talking
5 about cartographic errors; I'm talking about things that
6 are related to the orders and assembly of charts.

7 Also, we recently added a gentleman by the name
8 of Ronnie Babin, who's in attendance at your meeting.

9 Ronnie is our national account executive.

10 Our purpose of adding Ronnie to the folks who
11 do things at OceanGrafix was to get a much better
12 presence in the field so that we could listen to
13 customers better; we could explain the benefits of our
14 product better; and we could give better support to our
15 chart agent network.

16 Another activity that we're undertaking that's
17 important is that we think that the message of the
18 relationship between updated charts and safety has not
19 really been fully developed in the field.

20 This is especially true for the recreational
21 mariner.

22 You'll begin to see more white papers from
23 OceanGrafix as we delve into this subject. You'll see
24 more national publications, more promotion.

25 Finally, our Web site now contains a feature we

1 call the "OG Club," which is a service to our customers
2 which permits them to become notified electronically when
3 new editions for charts in which they have an interest in
4 have taken place.

5 So, we will send them an e-mail each time a new
6 edition takes place.

7 I'd like to talk for a minute, too, about
8 what's been good and what's been a little bit more
9 difficult with the NOAA agreements.

10 I've indicated that the folks at NOAA do a good
11 job and, frankly, it's a good relationship. These guys
12 have really tackled some difficult problems over the
13 course of the last eight years or more.

14 They need, however, to become better listeners
15 at NOAA.

16 Customers have been telling them some things
17 they need for some time, and it seems like the agenda at
18 NOAA doesn't always include listening to the customers.

19 We want them to be paying attention to those
20 things, because we need to compete in the field and our
21 agents need to compete, and they need to be servicing
22 those customers in a very thoughtful and careful and
23 aggressive way.

24 Obviously, one of the things that's important
25 here is that there's technology which is taking place,

1 which is changing rapidly, and changes are taking place
2 all the time.

3 We have information which we consider to be
4 proprietary and important, and we feel that it's
5 difficult to communicate some of the issues that take
6 place with that if we can't protect that information.

7 So, we want NOAA to provide mechanisms that
8 assure our confidentiality.

9 Finally, I wanted to spend a few minutes
10 talking a little bit about the contracting issues that go
11 with NOAA.

12 I see that there was another session about this
13 at the meeting, and I have to tell you: The contracting
14 activity is quite a -- well, just almost a little wash
15 here.

16 It's an exciting adventure. Let me put it that
17 way.

18 One of the reasons for that is that you're
19 dealing with small businesses in this business. All of
20 the chart agents, or nearly all of the chart agents, are
21 really small businesses, and OceanGrafix, obviously, is a
22 small business.

23 The chart business, itself, is not large.

24 So, as we enter into contracts, we have to look
25 carefully at what the content of the contract contains.

1 The contract that we currently operate under
2 contains a three-and-a-half page statement of work, but
3 it also contains 11 pages of federal boilerplate, which
4 includes over 150 references to other federal documents,
5 policies, procedures, and forms.

6 I have to tell you: It's just got to be easier
7 to do the math.

8 It's one of the reasons why I wanted to be sure
9 that you folks understand that we're very supportive of
10 the activities that Mr. Enabnit described to you earlier
11 with the new agreement activity.

12 These activities can be done with simple
13 agreements, and they certainly don't have to have pages
14 and pages and pages of boilerplate.

15 Now, relative to things that we'd like to see
16 out of NOAA, these are pretty simple things.

17 First of all, I think you can tell, from what
18 Mike had to say, the commercial mariners understand and
19 get the product. They know what the benefit of the
20 product is.

21 Recreational mariners are having a little
22 harder time.

23 We recently conducted a survey to this issue.

24 We found that 79 percent of recreational
25 mariners are unaware of what a new edition is. They

1 didn't know what new editions did; they didn't know what
2 they were for; and they simply didn't use that as a
3 technique for updating.

4 Relative to Notice to Mariners, 42 percent are
5 unaware of what a Notice to Mariner is, and an additional
6 39 percent simply don't use them.

7 So, when you see those kinds of numbers, it's
8 clear that the message isn't getting out to the
9 recreational mariner about the importance of updated
10 nautical data as it relates to their safety.

11 We think it's important that they get that
12 message, and we think it can't be done without NOAA.

13 I can tell you that we feel like we haven't
14 done a very good job of communicating this information to
15 the recreational mariner, but I can also tell you that it
16 hasn't been because we haven't advertised or promoted or
17 tried.

18 The issues here are that this is a very
19 fragmented market. It takes advertising in lots and lots
20 of places, lots and lots of magazines, and lots and lots
21 of effort has to be made.

22 All of that really boils down to money.

23 Elaine made the point very early, at the
24 beginning of the panel today, about the importance of the
25 length of a contract in making these kinds of

1 investments.

2 It's absolutely critical that you understand
3 that short-term contracts lead to short-term investments.

4 So, when you ask people to invest in this
5 technology, you should provide them back with the
6 commitment that allows them to do a job, that is
7 something that you really want to have the job done.

8 Secondly, if it's important to have this
9 product in the marketplace, then it's also important that
10 your efforts reflect the importance of teaching people
11 how to use it and what it's all about.

12 One other message that we think is important
13 that NOAA can carry to the field, and that is that modern
14 electronic systems are not foolproof.

15 I don't know when the last time was you looked
16 at the disclaimer that comes up when you start up an
17 electronic system, but I think I'd like to see each one
18 of you do it the next time you have a chance.

19 It's an enlightening thing.

20 Paper charts are an important backup to
21 electronics; power fails.

22 Electronic charts do not contain up-to-date
23 graphic references. As a result, the mariner is always
24 best served to have up-to-date data available to him, and
25 we think the POD chart is the best way to do that.

1 Finally, let me spend a minute and address the
2 issue of adding new partners and the effect that might be
3 felt from that.

4 We're not as particularly supportive of that as
5 you might expect, because we spent a lot of time and
6 money developing the market.

7 On the other side of that, we understand your
8 issues.

9 David has mentioned to you that the quality of
10 the product that we produce is not an issue; he's
11 mentioned that the pricing is not an issue; and the
12 service is not an issue.

13 At the same time, redundancy, that is
14 redundancy of suppliers, is important to you, and I
15 understand that with the changes at NavTech that there's
16 some urgency facing that issue.

17 You certainly would not expect me to want to
18 have all kinds of partners in the business, just
19 intuitively knowing what the business is, but you should
20 understand that the chart business is a small business.

21 The size of the business is important to get
22 the synergism that's necessary to provide good, solid,
23 smoothly operating, effective software.

24 It's important to provide good advertising, and
25 so on.

1 When you contract, please pay attention to know
2 what it takes to do the job. You folks really have to
3 understand the amount of support that's necessary, not
4 because the chart agents don't know what they're doing,
5 but because there's a lot of stuff going on here.

6 There are thousands and thousands of files
7 whizzing around every day, and those things require some
8 attention.

9 The quality of the product is important to you,
10 I would think, as it is important to us. It's important
11 that you have standards for quality that you hold your
12 partners to.

13 You should be sure that you have specifications
14 that recognize what the product you are trying to produce
15 will look like; how it's expected to perform in use; what
16 kind of colors; what kind of durability; what kinds of
17 tear; what kinds of water resistance, and so on.

18 Those things are all important, and they need
19 to be defined.

20 Finally, again, I want to emphasize that you
21 should listen to the users here. These guys know what
22 they want, and the best opportunity that will exist to
23 provide the perfect product is to listen to what they
24 have to say.

25 Just a couple of other points.

1 One of them is that we believe that the product
2 has some confusion associated with the two official NOAA
3 chart emphasis.

4 What I'm really saying here is that the litho
5 chart and the POD chart has become more and more
6 competitors with one another, and that's unnecessary.

7 You should stop the confusion and, frankly, you
8 can save a lot of money by getting out of the litho
9 business, and I think I'd like to encourage you to do
10 that.

11 Secondly, when I asked you to listen to what
12 the customers want, one of the things that the agents
13 asked for and the chart -- and the users that we talked
14 to asked about are the NGA charts.

15 The ability to print NGA charts utilizing this
16 system would greatly enhance the ability of these chart
17 agents to provide service for the customers and would
18 greatly support the overall effort.

19 I would really like to have you make a solid,
20 concerted effort to go get those charts and make them
21 available.

22 So, that's my spiel. I hope I didn't go too
23 long here.

24 I very much appreciate the effort, and I very
25 much appreciate the opportunity to work with you folks.

1 NOAA has been an excellent partner.

2 Rich Silcox, who we contact daily, has done an
3 excellent job for us.

4 We've worked with Mr. Enabnit going back to the
5 very beginning, and while he and I have had our chances
6 to tilt with one another, he's always been responsive in
7 dealing with the issues that we have, and I very much
8 appreciate his efforts, as well.

9 Any questions?

10 MR. ENABNIT: Thank you, Dave.

11 We can open it up right now for a few minutes.
12 I think they're pondering what you just said there.

13 Admiral?

14 ADMIRAL WEST: I just have a couple questions.

15 If all I have on my gyroscope is a generic
16 electronic display, can I download the digital map from
17 NOAA on to my display?

18 MR. DeGREE: Not on your vessel.

19 ADMIRAL WEST: Why not?

20 MR. DeGREE: Why not? Are you asking me if
21 it's technically feasible?

22 ADMIRAL WEST: I know it's technically
23 feasible.

24 MR. DeGREE: Yeah, but we do not provide that
25 service.

1 ADMIRAL WEST: Why don't we have the ability to
2 do that?

3 MR. ENABNIT: You can download the electronic
4 navigational chart; you can download the updates to the
5 electronic navigational chart; and barring the technical
6 interruption, which I discussed earlier, you can download
7 the Raster navigational chart updates.

8 You also have online a service by which all the
9 nautical charts, in their updated version, are available
10 over the Internet in real time, used by us, our own
11 people; used by the Coast Guard.

12 We have a real "Comments" button on that page,
13 and the comments -- I send them to my mother, they're so
14 good.

15 That type of service is very, very well
16 received.

17 The print-on-demand chart is not available
18 online. That's a product that requires a physical
19 distribution mechanism, and in order to capture the
20 revenue stream and pay for the work that Dave
21 described -- we just don't dump them out there.

22 ADMIRAL WEST: You cannot print NGA charts.
23 Is that a security issue or --

24 MR. ENABNIT: NGA claims that their charts are
25 not in the public domain, and that they have many

1 agreements with other nations whose data they incorporate
2 in that.

3 They honor those agreements, so they will not
4 let you reproduce them.

5 They will not let us print them.

6 They are withdrawing them from public
7 distribution, as I understand, so that national asset of
8 3,000 or 4,000 charts is about to disappear.

9 MR. SKINNER: Any other questions for Dave or
10 Dave or Mike or Elaine?

11 MR. JEFFRESS: I have a question.

12 It was my comment a little while ago that the
13 recreational users have their Garmins and they stick with
14 that.

15 Would not there be a market for those
16 recreational users to bring their Garmins to the POD
17 outlets and get those maps updated?

18 MR. ENABNIT: Garmin chose to offer their own
19 charts and they can sell that, and there's no reason for
20 them to stop.

21 Since it's in a proprietary format, it's not
22 able to download the ones that we offer for free.

23 If I was Garmin, I'd maintain that position as
24 long as I could.

25 MR. SERAFIN: Mike Serafin.

1 There are a variety of different chips that fit
2 the different machines. They are typically updated about
3 once a year by the companies.

4 Most of them are in proprietary format. The
5 chips only fit certain machines and only work with
6 certain software.

7 They don't use the ENC format or openly use it
8 for the different types.

9 MS. DICKINSON: I can answer that, as well.
10 Elaine Dickinson.

11 You can go to any marine store and get an
12 updated chart for whatever chart system you have, whether
13 it's Garmin or anything, but they're all different.

14 There isn't like one size fits all.

15 MR. WELLSLAGER: Matt Wellslager.

16 Besides being able to get the charts, is there
17 a specialized software that you also need to purchase or
18 have available to view these charts with an interface
19 while you're using them for recreational or commercial
20 purposes?

21 MR. ENABNIT: The electronic charts requires
22 navigation software or some other type of software, yes.

23 MR. WELLSLAGER: To go further on that, where
24 would you go to get that software?

25 MR. ENABNIT: Well, I'm sure chart agents --

1 there's one right there you can order it from right now
2 (indicating).

3 MR. WELLSLAGER: Okay.

4 MR. ENABNIT: It's sold through commercial
5 outlets. Sometimes you can buy it over the Internet.

6 MR. WELCH: Ed Welch.

7 It seems like from these presentations -- and I
8 want to thank the presenters -- that we've evolved to a
9 system of print-on-demand that's producing a higher
10 quality product that's more useful for the users,
11 particularly the commercial users; that probably gives
12 more value than the government could do on its own;
13 that's less expensive for everybody involved.

14 So, it sounds like they're great improvements
15 in the entire system, except that the system looks
16 vulnerable because of these contracting issues.

17 We've seen with the Raster situation what
18 happens if something goes wrong.

19 I mean, I liken this to
20 manufacturing-on-demand, where you've got a "just in time
21 system," but if you have a kink in the system, all of a
22 sudden, you have all sorts of unforeseen and bad
23 consequences.

24 It strikes me that it's incumbent on NOAA, in
25 particular, to invest the energy and perhaps money, if

1 necessary, or change the legal structure of the
2 contracting system to ensure that the system we have is
3 not subject to some kind of a disruption, because as the
4 gentleman says, a number of the commercial users are
5 perhaps even losing their capability of doing the updates
6 on the traditional charts themselves.

7 So, if the government is encouraging everybody
8 to move to this system, it's the government's
9 responsibility to make sure that the system is protected
10 from some kind of unexpected event.

11 That seems to me to be the big weakness here.

12 MR. SKINNER: Any other comments?

13 Tom?

14 MR. JACOBSEN: Tom Jacobsen.

15 Maybe, Dave, do you have solutions for that
16 last comment about how can we protect ourselves or NOAA
17 can protect themselves from this happening again in the
18 future?

19 MR. ENABNIT: Well, our immediate reaction to
20 the Raster charts was to bring production in-house. That
21 is within our capability, and we're proceeding along that
22 course.

23 MR. JACOBSEN: That's temporary; right?

24 MR. ENABNIT: Well, that's the only course
25 we're proceeding on.

1 MR. JACOBSEN: Okay.

2 MR. ENABNIT: We may consider using contract
3 labor on it. I'm not quite sure what alternative you
4 would propose there, but --

5 MR. JACOBSEN: Well, you're bringing it
6 in-house, but I thought that was a temporary move until
7 you find some outside contractors to --

8 MR. ENABNIT: For the Raster charts, we're not
9 looking for outside contractors at the present time. We
10 may look for outside labor, but the system itself is
11 pretty much automated.

12 Our response to that for the paper chart
13 (inaudible) is redundancy by multiple suppliers.

14 Dave DeGree, here on the phone, makes a strong
15 case, but, yes, there are consequences to that. He's
16 stated his position, and we'll listen to your judgment on
17 that.

18 MR. DeGREE: I'm here, but I'm not sure what
19 you asked me to do on that.

20 MR. ENABNIT: I just said you were a good
21 advocate for the position of -- I had proposed redundancy
22 as a means of ensuring reliable production, and you had
23 pointed out the shortcomings of that.

24 MR. DeGREE: You know what? I certainly think
25 it's an important issue.

1 I'm not sure that you recognize the level of
2 redundancy you have with the existing system, in that
3 you've got, first, 20 printers located around the county,
4 all of whom are capable of printing every chart.

5 OceanGrafix has more than one facility in which
6 the computer systems, and so on, are located.

7 So, we have the capability to support it -- in
8 the event that some kind of a calamity were to occur at
9 our facility, we still have the ability to support it in
10 another facilities.

11 MR. ENABNIT: I understand, but you're the
12 single point of failure, not the agency.

13 Your owner could decide to deploy his capital
14 elsewhere and go out of business, so that was the point
15 of failure I was indicating.

16 MR. DeGREE: Right, right. I understand.

17 You know, I think one of the issues I was
18 trying to raise in my discussion was the act of doing the
19 due diligence to understand what your expectations are
20 and how that matches up with the capabilities of people
21 you select to do this job.

22 You know, without too much discussion about the
23 NavTech situation, there are certainly some elements
24 involved in the NavTech situation which -- to which NOAA
25 could have been more aware, and some of the activity may

1 have been the result of actions taken by NOAA.

2 So, I think it's why I'm making the plea to you
3 to understand what it is you expect and who the partners
4 are and what their capability is, what their financial
5 capability is, what the commitments are, and so on.

6 MR. SKINNER: Okay.

7 MR. WELCH: Ed Welch again.

8 David, on the phone, what else does OceanGrafix
9 do besides this job for NOAA?

10 MR. DeGREE: I'm sorry. I had a hard time
11 hearing that, too.

12 MR. WELCH: Okay. The OceanGrafix business,
13 besides this work for NOAA, what else do you do and what
14 percentage of your overall business is this relationship
15 with NOAA?

16 MR. DeGREE: The OceanGrafix business was a
17 business established specifically to deal with NOAA, to
18 deal with the contracts that were related to this
19 project.

20 OceanGrafix is a sister company of a larger
21 company called "Vomela."

22 In terms of volume of business of the overall
23 picture, it's of the order of, oh, 1-and-a-half percent,
24 but as far as the OceanGrafix business itself, it is 100
25 -- the NOAA business is 100 percent of OceanGrafix

1 business.

2 MR. WELCH: Thank you.

3 MR. SKINNER: Just in the interests of trying
4 to keep on schedule here a little bit, we'll try and wrap
5 this up.

6 Are there any other additional comments or
7 questions, Dave?

8 MR. ENABNIT: I did bring a sample of
9 print-on-demand. This is one that has been customized
10 for the Maryland Pilots Association.

11 You can see they provided all the names of the
12 piers, which they use as reference, and there's other
13 customization on here.

14 You'll also see the value-added files in the
15 margins. It makes the chart 6 inches larger than its
16 already large size.

17 You can feel the materials.

18 MR. SKINNER: Great. Thank you.

19 MR. SERAFIN: Mike Serafin.

20 Dave made the comment on the size, and the
21 issue on the size is with the POD, but it's also with all
22 U.S. charts.

23 If you deal with an international company -- a
24 British Admiralty chart comes folded to a nice standard
25 size, regardless of the chart size, so it fits in a nice

1 standard drawer.

2 NOAA charts and NGA charts have always been
3 larger and a variety of different sizes, so it's
4 really -- in many cases, the fact is that they have a
5 standard chart cabinet that fits a nice folded British
6 Admiralty chart, and we send them this big chart.

7 CAPTAIN BARNUM: Just to add to that, it took
8 us 200 years to get to that suite of oddball charts.

9 So, many of those oddball chart sizes are at
10 the request of some of our customers, asking us to extend
11 the limits so that when vessels are navigating in, they
12 get a larger picture.

13 On the one hand, we're being responsive to our
14 customers navigating; on the other hand, the trade-off is
15 the large charts.

16 However, Dave talked about the Nautical Chart
17 System II. As we move into this digital world of
18 producing Raster charts and paper charts and ENCs, often
19 this central one database is going to give us the
20 flexibility to rescheme the charts, if you will.

21 That's going to be a very major undertaking.
22 They'll have to work very closely with our customers on
23 that issue.

24 It will give us the opportunity to do that
25 feature.

1 MS. DICKINSON: Tom, I have one question on it.

2 MR. SKINNER: Sure. Go ahead.

3 MS. DICKINSON: David Enabnit mentioned moving
4 towards producer agreements.

5 What exactly is that?

6 MR. ENABNIT: The producer agreement flows from
7 our agents' selling agreement.

8 It just says that -- with a lot more language,
9 that you want to be a seller of NOAA nautical charts, and
10 by the way, you have to print them first.

11 I can send you a copy of the draft.

12 I can provide that to the committee so they can
13 see it, in terms of editions, but it's just very much a
14 commercial agreement type of document.

15 MS. DICKINSON: Does it have 15 pages of
16 boilerplate?

17 MR. ENABNIT: It has no boilerplate.

18 MS. DICKINSON: Yeah, I'd like to see it.

19 I guess, there obviously won't be another
20 CRADA; is that correct?

21 MR. ENABNIT: CRADAs have gone out of favor.

22 People have found out -- the proprietary police
23 found out that it was working, and so they came around
24 and put terms on them, and started putting limits and
25 conditions, and they went out of favor.

1 So, it's unlikely.

2 MS. DICKINSON: Went out of favor with who?

3 MR. ENABNIT: The policy police, the lawyers,
4 everybody except the people that were using them.

5 MS. DICKINSON: Okay.

6 MR. SKINNER: Anything else, Elaine?

7 MS. DICKINSON: No.

8 I think we've covered a lot of ground. I think
9 it's a good discussion, and a great topic for us to focus
10 on.

11 MR. SKINNER: My sense is that this panel is
12 supportive of the effort to get the up-to-date charts to
13 users in a timely fashion in this print-on-demand effort,
14 but recognizes that there are some issues involved here.

15 We may want to spend some time looking at how
16 NOAA might be able to address some of those issues.

17 Elaine, we'll probably look to you for some
18 guidance, in terms of specifics, but certainly, the whole
19 panel seems to be very plugged into this issue.

20 MS. DICKINSON: Sure. I'd be glad to work on
21 it.

22 MR. SKINNER: Great.

23 With that, I think we're ready for a break.

24 (Short recess taken.)

25 MR. SKINNER: We heard a lot of the panel this

1 morning talk about the great NOAA staff on the West
2 Coast.

3 I know from my experience in the coastal zone
4 management days, certainly, one of them, Becky Smyth, is
5 really a national go-to person.

6 So, we're fortunate that she's out here and
7 working on all the different issues for NOAA.

8 I didn't even see her when she came in this
9 morning, so thank you, Becky, and thank all of the other
10 NOAA people that helped get this meeting together.

11 I mentioned it earlier, but it wasn't just for
12 this meeting. Clearly, many in the user groups
13 appreciate the high quality of people that are working
14 with NOAA out there.

15 (Remarks outside the record.)

16 MR. SKINNER: Dave, I think you're up again for
17 a report on the Navigation Subcommittee meeting -- no,
18 sorry.

19 Steve?

20 CAPTAIN BARNUM: I just want to preamble Dave's
21 participation this afternoon: I asked Dave to do this
22 update for the HSRP.

23 Dave is the representative that goes to the IMO
24 Nav Subcommittee meetings in England.

25 That meeting happened earlier this month, and a

1 significant event occurred, in which the subcommittee
2 voted to make ECDIS mandatory.

3 They also discussed E-Navigation.

4 So, I wanted Dave to brief the HSRP panel on
5 these two critical issues.

6 MR. ENABNIT: Thank you.

7 For the reporter, I'm Dave Enabnit.

8 I'm out of the Office of Coast Survey,
9 Hydrographic Office for the United States, and we do a
10 number of things to be good national citizens and
11 represent the U.S. and the U.S. interests.

12 Our principal area of activity is in
13 hydrographic organization, where we work on 11 working
14 groups, committees, subcommittee, commissions, and so
15 forth, at least 11.

16 We also participate with the Coast Guard, who's
17 head of delegation at the International Maritime
18 Organization.

19 We participate in a number of other
20 international activities.

21 The reason we do this is because we can,
22 because we're a good international citizen.

23 We also need to do a little bit of defense work
24 with some other nations. We got too enthusiastic and
25 tried to implement regulations or standards that we would

1 consider incompatible with the practices we'd like to
2 see.

3 That's enough reasons.

4 So, this IMO Navigation Subcommittee was held
5 in London this year. The Navigation Subcommittee is part
6 of the Maritime Safety Committee, and the parent to that
7 is the IMO.

8 The Navigation Subcommittee dealt with four
9 issues of interest to the Coast Survey.

10 The first was the mandatory carriage of ECDIS.

11 They also dealt with E-Navigation.

12 We had four routing measures that were of
13 particular interest to the U.S. that we helped the Coast
14 Guard deal with.

15 Then we informed them of some work we're doing
16 on Marine Environmental Protection information for marine
17 navigation and other uses.

18 So, on the first one, mandatory carriage of
19 ECDIS, we've been working on ECDIS and electronic charts
20 both through the IMO and the IHO for 25 years.

21 It's been put forward for mandatory regulation
22 for the last three years, and this year, it was approved
23 by the Navigation Subcommittee.

24 So, we redrafted the Safety of Life at Sea
25 regulation, SOLAS V/19, and it will be submitted to the

1 Maritime Safety Committee in December for adoption.

2 Mandatory carriage has a phase-in period for --
3 a calendar phase-in period for weights and types of
4 vessels. It starts in 2012 and goes to 2018, until all
5 the vessels that are going to be regulated are required
6 to carry.

7 I have a copy of the revised regulation, and
8 I'll leave it with the panel if you'd like to see the
9 weights and dates.

10 There is an exemption in the new regulation for
11 vessels to be taken out of service within 10 years, and
12 there were still some opposition to mandatory carriage,
13 although it was muted.

14 Thirty-five nations spoke in favor of carriage,
15 and five spoke against. Their complaints were that
16 there's still not worldwide coverage with ENCs, but there
17 are issues with quality and consistency of the ENCs.

18 There's a cost to the nations producing
19 electronic navigational charts, and a cost to the
20 mariners that buy ECDIS, train on it, and then buy ENCs
21 in addition to that, plus whatever they select as a
22 backup system.

23 They complained -- raised the issue that the
24 logistics for delivering ENCs and updates is cumbersome.

25 It's true that in the United States, it's a lot

1 easier, because we just give them away for free over the
2 Internet, and we have a number of certified partners who
3 can redistribute them.

4 By that process, their official status persists
5 through the redistribution process.

6 Europe has managed to make it an extremely
7 cumbersome process with encryption and licenses and with
8 keys; payments of calling in; and it's -- with
9 different billing schemes, and it's different for every
10 nation.

11 So, it is a bit of a problem for many
12 companies.

13 Then they also objected that the issue of a
14 suitable ECDIS backup has not been ruled on, and wondered
15 how we would proceed.

16 It didn't seem by a large majority, that by
17 2012, that would be resolved.

18 So, that was the resolution of mandatory
19 carriage. Now we'll see what happens in December, but
20 there's no reason believe that the Maritime Safety
21 Committee would reject it.

22 The second item they picked up was
23 E-Navigation.

24 "E-Navigation" doesn't stand for anything; it's
25 a term on its own. It's not "enhanced navigation" or

1 it's not "electronic navigation"; it's "E-Navigation."

2 The IMO established, at the request of the
3 British Transport Ministry, a correspondence group that's
4 been working on this for three years, to define a
5 high-level strategy.

6 The feeling is that the bridges of ships were
7 kind of instrumented piece by piece.

8 There's an integrated bridge system, and it has
9 its own standard. There's an integrated navigation
10 system, and it has its own standard. There's an
11 automated identification system, and it has its own
12 standard.

13 GMGS with ECDIS has its own standard.

14 These are pieces of equipment that do not play
15 together. Well, they're (inaudible), and the companies
16 are just not getting the attendant value out of them.

17 So, this initiative is to try to integrate
18 these considering factors of technology, human factors,
19 regulation standards, and come up with some type of
20 integrated E-Navigation strategy that the IMO would then
21 move on towards implementation.

22 We would endorse this, and whatever other
23 changes, such as policy changes or standards changes that
24 can be worked on by the IMO.

25 So, the revised title and strategy for the

1 development of an E-Navigation system, or whatever it is,
2 was approved.

3 I think we'll pass it by the ECDIS standards to
4 the Maritime Safety Committee for adoption.

5 It's also been recommended that they send back
6 another tasking to the Navigation Subcommittee to spend
7 four years working on an implementation plan for the
8 navigation.

9 The strategy that was forwarded talks about
10 these items: The need for E-Navigation; the objectives;
11 the benefits; the basic requirements; who the users are;
12 and the key strategy elements.

13 I have a copy of this that I'll leave with the
14 panel, as well.

15 So, that's where E-Navigation is.

16 There were four routing measures that were of
17 interest to the United States.

18 There was an amendment to the Boston Traffic
19 Separation Scheme. That's part of our activity to help
20 protect the right of whales.

21 There are seasonal areas we avoid in the
22 Great South Channel in the Boston approach.

23 There is an area to be avoided in -- two
24 mandatory "no anchoring" areas defined to support the
25 Deepwater -- Energy Deepwater Port in the Northeast.

1 There were some technical amendments to the
2 boundaries of the Hawaii Marine National Monument.

3 All four of those were approved without any
4 serious demand, and they also will go forward to the
5 Maritime Safety Committee for adoption.

6 Then the last item of interest to us was the
7 Marine Environmental Protection Product Specification.

8 This is an item that we proposed to the
9 International Hydrographic Organization, that there are
10 some items which are not strictly navigation alone and
11 need to be dealt with in more detail than ENC provides
12 for; further, the International Hydrographic
13 Organization's standards charter to move more into
14 environmental information and other types of marine
15 information; and to volunteer this work as sort of the
16 first one that would address these issues.

17 So, we notified the IMO of what we were doing
18 and why and how it's proceeding, and so forth.

19 There were a couple of comments from the
20 audience, but there was generally nothing to approve; it
21 was just an informational item that I wanted to pass on.

22 That's what happened this year, and this
23 happens every year, and I have to go to London for a
24 week.

25 MR. SKINNER: Captain?

1 CAPTAIN McBRIDE: Thank you, Tom.

2 I probably should know the answer to this, but
3 you said that five countries spoke in opposition to
4 (inaudible).

5 What was the U.S. position on mandatory
6 carriage of interest?

7 MR. ENABNIT: The U.S. spoke in support of it.

8 CAPTAIN McBRIDE: You mentioned that under the
9 ruling measures, a number of considerations regarding
10 approaches to Boston, the Energy project -- the Deepwater
11 Energy Product.

12 Why is IMO interested in those specific
13 projects, which I thought would be sovereign to the
14 United States? How does that -- how do they have a role
15 in that?

16 MR. ENABNIT: As value measures go, because
17 they're SOLAS -- under SOLAS, value measures (inaudible)
18 you just don't, because we're members of this
19 international convention, we've already agreed in the
20 U.S. that we will coordinate internationally with
21 activities that interfere with freedom of shipping.

22 CAPTAIN McBRIDE: Is the U.S. seeking authority
23 from the IMO to invoke these approaches or changes?

24 MR. ENABNIT: We're seeking concurrence.

25 CAPTAIN McBRIDE: Thank you.

1 MR. ENABNIT: (Inaudible.)

2 We try to make this work for everybody.

3 MR. WELCH: This is Ed Welch.

4 If I could, these are out in international
5 waters. These are out beyond the U.S. EEZ, but we don't
6 have unilateral authority to make mandatory things in the
7 EEZ.

8 CAPTAIN McBRIDE: Thanks for pointing that out.

9 MR. SKINNER: Other comments or questions?

10 Great. Thanks very much, Dave.

11 MR. ENABNIT: Thank you.

12 (Remarks outside the record.)

13 MR. SKINNER: The next thing we have is
14 Lieutenant E.J. Van Den Ameele, Surveying on the
15 Ellipsoid.

16 CAPTAIN BARNUM: I wanted to add that this
17 particular agenda item was added at the request of the
18 panel members.

19 This came up in Miami, wanting to know more of
20 NOAA's plan of surveying on the ellipsoid, and so we have
21 a response to that of where we're going with this
22 technology.

23 LIEUTENANT VAN DEN AMEELE: Good afternoon.

24 I'm E.J. Van Den Ameele, the chief of the
25 Hydrographic Systems and Technology Programs.

1 That's one of three branches within the
2 Development Laboratory in Coast Surveys.

3 My group works primarily with looking at new
4 technology for hydrographic surveys, and doing tests and
5 implementation of the new technology.

6 So, we're out working on new AUV, which I know
7 was mentioned earlier, along with new sonar and
8 positioning companies.

9 I am neither a geologist or a modeler, but I'll
10 try to talk intelligently about both (inaudible). I'll
11 try to answer any questions you have.

12 Next slide.

13 So, I just want to go over briefly -- I'll go
14 over a quick datum refresher -- and I apologize if that's
15 review for anyone here, but just to kind of to make sure
16 we're all on the same page for the rest of the talk.

17 Going through horizontal and vertical datums;
18 going through ellipsoid and geodetic datums.

19 Then I'll talk about the VDatum product within
20 NOAA that surveys the ellipsoid, and all three of these
21 are (inaudible).

22 Okay. Next slide.

23 We all know what datum is. It's basically a
24 set of constants for specifying the coordinate system
25 used for calculating points on the earth.

1 So, it's a common reference system for
2 basically knowing where we are on the earth.

3 Specific geodetic datums are usually given
4 distinct names like -- the most common one is the
5 North American Datum of 1983, the European Datum of 1950,
6 and the National Geodetic Vertical Datum of 1929.

7 Next slide.

8 So, classical datums are typically separated
9 into horizontal datums and vertical datums, and that's
10 because datums kind came about when we were starting to
11 make maps.

12 Maps are 2-D -- two-dimensional representations
13 of the earth's surface, and we needed to know where we
14 were on it for the three-dimensional plane.

15 Then for vertical datum, that was more of a
16 one-dimensional data. For example, for orthometric
17 height, NGVD 29 and NAV 88.

18 However, we all know that the earth is not --
19 is not really a two-dimensional surface or a
20 one-dimensional surface; it's certainly a
21 three-dimensional surface.

22 So, contemporary datums are separated into
23 three-dimensional ones, which is latitude, longitude, and
24 ellipsoid height, such as NAD 83 (1999), or even
25 subsequent adjustments of that.

1 Even now, we're moving into four-dimensional
2 datums, which is realizing that the CORS systems shifts
3 as the earth's changes, so none of these coordinates are
4 really fixed, but will change over time.

5 There's really two fundamental types of
6 vertical datums.

7 One is a tidal datum defined by tidal
8 variations over some period of time, and they relate to
9 some reference of the sea level, mean sea level, mean
10 lower low water, mean low water, etc.

11 For geodetic datum, they are either directly or
12 loosely based on mean sea level at one or more points at
13 some epoch, again, NGED 29, NAVD 88, and so forth.

14 So, elevations are referring to mean sea level,
15 that type of geodetic datum.

16 The tidal datum, of course, is what we're most
17 used to seeing.

18 Vertical tidal datum is like horizontal
19 measurements, again referring to elevation, referring to
20 some sorting point.

21 So, there are several tidal datums, mean higher
22 high water, mean high water, local mean sea level, mean
23 low water, mean lower low water.

24 Next slide.

25 Again, charting datums are separated into

1 horizontal and vertical. We all see the reference on the
2 nautical charts that we use.

3 The horizontal datum is typically, for NOAA
4 charts, Northern American Datum of 1983, which we say is
5 an affiliate to the World Geodetic System, or WGS, 84.

6 For all intents and purposes in navigation, the
7 North America Datum has really been a useful target for
8 two-dimensional data, which we use to specify latitude
9 and longitude and translate to a two-dimensional
10 representation, you know, for example, a nautical chart.

11 Then we use a separate vertical datum that we
12 represent our soundings to, so mean lower low water, in
13 most cases, for nautical charts for the sounding data.

14 Next slide.

15 Then when we move to the ellipsoid, we're
16 really talking, again, about a 3-D representation or
17 mathematical approximation of the earth's surface.

18 What is an ellipsoid?

19 It's almost like a sphere, but it has a major
20 axis and a minor axis, so it's not completely round or
21 completely spherical; it's more egg-shaped, if you will.

22 You can imagine this representation up here, in
23 three dimensions, looking more like a egg.

24 So, we have A, which is the semi-major axis and
25 B, which is the semi-minor axis, and that defines where

1 the -- how oblong- or oval-like the ellipsoid is in three
2 dimensions.

3 Next slide.

4 Why do we need an ellipsoid?

5 On its face, is not a perfect sphere; it's more
6 like a -- kind of a clay ball, if you will. It's kind of
7 lumpy.

8 This is obviously quite an exaggeration of what
9 Europe really looks like, but the surface is not
10 perfectly ellipsoidal or spherical, despite what it looks
11 like from space.

12 It depicts the earth's shape without water or
13 clouds.

14 Calculation of a geographic position on this
15 irregular surface would be very, very difficult, so we
16 use a mathematical approximation of the earth's surface.

17 The ellipsoid is sort of the mathematical
18 representation to what the earth's surface really looks
19 like.

20 Next slide, please.

21 This becomes important when we start talking in
22 three dimensions when we want to reference our position
23 on earth.

24 The importance of the ellipsoid is very much
25 accelerated by the implementation of GPS, the Global

1 Positioning System, or as it's now beginning to be
2 called, GNSS, the Global Navigation Satellite System,
3 which is more an acronym than anything else that
4 incorporates all three satellite systems: GPS, the
5 Glonass system from Russia, and the Galileo system from
6 Europe.

7 So, when we use GPS to measure our positions,
8 we're really measuring things in three dimensions, not
9 two dimensions.

10 So, we need to start talking about things on a
11 three-dimensional reference surface, not separate,
12 two-dimensional datums like NAD 83 or tidal or
13 orthometric height.

14 Next slide.

15 One point I wanted to make on the previous
16 slide was that although GPS is certainly the system of
17 choice for positioning or hydrographic surveying
18 accurately, but it also, as we all know, is the
19 positioning for marine navigation that has the
20 capabilities of both increase -- meaning we need to be
21 working from a common reference system or common porting
22 system for datum.

23 GPS has become more and more accurate for
24 surveying, as well as for navigation.

25 So, it's arguable whether or not doing things

1 in separate two-dimensional horizontal datums or
2 one-dimensional vertical datums is really practical, or
3 are we really sort of dumbing down data at that point to
4 go from what we're measuring with GPS to what we're
5 representing with nautical charts?

6 Then this will become a little more important
7 later in the talk, but -- what is the geoid?

8 For those of you who don't know, it's an
9 equipotential surface of the earth, a representation of
10 the earth.

11 So, every point on the geoid's surface has the
12 same force of gravity, essentially. Just like the
13 surface is not equal across the surface of the earth --
14 it's affected by land masses and water masses, and so
15 forth.

16 So, as you would expect, where there are
17 mountain ranges, you get higher gravity. You get lower
18 gravity at deeper parts of the ocean where there's less
19 land mass, and so forth.

20 This becomes important, because gravity
21 obviously affects the topography of the sea surface.

22 So, when we start trying to approximate what
23 the various tidal datums are or sea level datums, gravity
24 comes into play as we need to estimate the ellipsoidal to
25 sea level transformation, which is a whole other level

1 there.

2 The most recent geoid model is Geoid 2003,
3 which is based on these Grace gravity measurements
4 conducted, I believe, in 2001.

5 When we start talking about positioning of GPS,
6 both for surveying as well as for navigation, we need to
7 know what all these relationships are very accurately.

8 We have our orthometric heights; our
9 ellipsoidal heights, which is referenced again to the
10 mathematical approximation of the earth; and then,
11 certainly, various water level datums, as well as the
12 geoid.

13 So, in this slide here, this representation we
14 have, if you will, this is -- this mound -- if you were
15 standing on this mountain, you have the orthometric
16 height, which is your traditional vertical datum, or
17 one-dimensional vertical datum.

18 You have the ellipsoid right here. The latest
19 model is the GRS80, which follows along with the WGS 84
20 model of ellipsoid.

21 These various names and models of these
22 ellipsoid defines these two axes, which I showed you, the
23 major axis and the minor access for the ellipsoid.

24 Then we have the geoid, which is the
25 equipotential surface of the earth, the gravity surface

1 of the earth.

2 This is then representing the sea surface,
3 which is the geoid, roughly, approximately at the sea
4 surface, because the gravity, again, will affect the
5 topography or of the surface of the ocean.

6 If we want to reference any particular vertical
7 measurement to any particular one of these datums, we
8 need to know the offset between how we're measuring it
9 and what we want to reference it to.

10 So, we're going to start using the ellipsoid as
11 a measurement reference, because that's what -- again,
12 the GPS measures things to the ellipsoid.

13 We need to reference it to a more useful datum,
14 such as sea level, because when we're navigating vessels
15 and using charts, we don't -- knowing the depth of the
16 water relative to the ellipsoid isn't really going to
17 keep you from running aground.

18 You need to still be able to reference that
19 back to mean lower low level water or sea level datum.

20 You need to know these transformations or
21 translations on how it looks.

22 Next slide.

23 In the past, the way we conducted hydrographic
24 surveys -- and still to this date, we conduct
25 hydrographic surveys based on the datums that we use for

1 nautical charting.

2 So, again, we do have surveys in separate
3 horizontal and vertical datums, horizontal to define our
4 latitude and longitude and our position of our soundings
5 from our hydrographic survey vessel, and then we use mean
6 lower low water as the survey medium.

7 The way we do hydrographic surveys now is we
8 use GPS as our positioning device, and as our survey
9 vessel is going along, taking soundings, we reference our
10 horizontal position through GPS, NAD 83, and the
11 horizontal datum, and then we install tide gauges to
12 measure the water levels concurrent with sounding
13 operations as our vessel is conducting hydrographic
14 surveys.

15 We use some tidal zoning methods or other
16 methods to extrapolate measurements at the tide gauge to
17 where the hydrographic survey vessel has acquired its
18 sounding datum.

19 We might install additional gauges, as well,
20 out in other parts of the survey to augment what's in
21 between the measurement points of your tide stations to
22 where your survey vessel is.

23 Again, it's kind of an approximation.

24 A lot of these areas -- there's a lot of places
25 where we've had continuously operating tide stations and

1 launch stations for very long periods of time.

2 We know that tidal zoning seems very well
3 established in here.

4 In other places, such as Alaska, for example,
5 we might need to go in and install supporting tide gauges
6 to get more information to fill in the gaps so that as
7 we're reflecting sound data and your boat is going up and
8 down with the tide and we're taking soundings, you can
9 reference that.

10 That's kind of the traditional or even the
11 current way to do things. What we're looking to move
12 towards doing is 3-D positioning of hydrographic surveys
13 to the ellipsoid.

14 So, next slide, please.

15 So, in this model of operations, as we're going
16 along collecting soundings, everything is referenced to
17 this three-dimensional WGS 84 to the ellipsoid.

18 As you're going along and collecting soundings
19 with your survey vessel, you're applying
20 three-dimensional positions relative to the ellipsoid.

21 Concurrently, or even independently of doing
22 that, we still need to know those relationships between
23 your sea level datum, again, for charting and the
24 ellipsoid, so we do that a number of ways.

25 We certainly acquire measurements that can

1 relate GPS observations back to the surface of the ocean.

2 So, we can do that right at the tide gauge.

3 Tide stations are acquiring water level data and your sea
4 level datum very well.

5 You also know that those are related to the
6 ellipsoid measurement with GPS, but sometimes that
7 doesn't work quite so well when you go out and go along
8 the sea level here.

9 So, we use a number of ways of calculating that
10 transformation between your sea level and your ellipsoid.

11 One is by incorporating the geoid models into
12 that base. Again, sea level will follow -- the geoid
13 model will follow gravity, or we can make GPS and monitor
14 water level observations simultaneously by using things
15 like GPS water level, which will go up and down with the
16 tide and acquire tide information, as well as ellipsoid
17 information.

18 Next slide.

19 Next is the GPS water level buoys.

20 We're looking at sort of restarting the program
21 to acquire at least help to augment those observations
22 out in a body of water.

23 So, we had built this through SBIR, a Small
24 Business Innovation Research program, several years ago.
25 We had constructed it, and it became a victim of

1 Hurricane Katrina.

2 It was down in our National Data Buoy Center
3 location down in Mississippi.

4 So, we kind of started over again this year.

5 We just are about to load up procurement to
6 acquire GPS levels (inaudible) so we can better define
7 that relationship between sea level datums and
8 ellipsoidal energy.

9 We're doing that, as well.

10 Next slide, please.

11 That all ties into this program called
12 "VDatum," which is a cooperative effort between the
13 Office of Federal Survey, the National Geodetic Survey,
14 and CO-OPS to build a national infrastructure to better
15 understand the relationship between all of these vertical
16 datums.

17 Next slide.

18 VDatum is a tool that can basically take in --
19 is fed by the geoid model, the tidal model, and the
20 ellipsoid model into this software application that can
21 take all kinds of data sets, topography, and bathymetry,
22 and reference them all to a single common vertical
23 elevation reference.

24 As I mentioned before, typically, it requires
25 bathymetry related with some sea level datum. Other

1 types of land data were not referenced.

2 Sea level datums were referenced to other types
3 of orthometric datums, and when you try to put the two
4 together, it doesn't always come out so pretty.

5 When you need to actually use the datum to see
6 a location between bathymetry and topography, you really
7 need to sort of have it go along a land boundary.

8 So, that's where VDatum originated from, was to
9 have the tool for all types of purposes.

10 Next slide, please.

11 This is a list of all the translations
12 currently available: VDatums, orthometric datums, tidal
13 datums, and 3-D/ellipsoidal datums.

14 So, this list continues to grow as user
15 requirements come in for a specific local datum to make
16 those transformations.

17 Next slide.

18 All this has applications, again, for seamless
19 bathymetric and topographic data sets, which are of a
20 very important significance for a variety of management
21 applications, not just for nautical charting and
22 hydrographic surveying.

23 Again, the land (inaudible) across that, so
24 anything from an inundation model for flooding or
25 tsunamis to erosion, analyzing storm impacts, and so

1 forth, shoreline analysis.

2 A lot of this critical information, as you well
3 know, will always be acquired by light-hard data or other
4 types of data, types of measurement systems, that really
5 go across this interface set at the waterline or the mean
6 high waterline, for example.

7 So, having one data stop at one data with
8 reference to another at that critical boundary is not
9 really workable, so we need better translation tools to
10 have those work.

11 Again, legal boundaries are influenced by these
12 datums, as well.

13 So, these data acquisition methods are
14 independent of these -- of water or land or these
15 relationships, and we have seen these data sets for a
16 variety of reasons.

17 Next slide.

18 This is the current Web page for VDatum where
19 it exists and is available, and these models have already
20 been developed. They're fully downloadable on the
21 Internet.

22 It will look like this for another month or so.
23 Because Surveys are transitioning to the new Web site, it
24 will look slightly different.

25 So, it is a bit up and available on NOAA's

1 Web site for anyone who wants to download and use the
2 VDatum tool for translating data sets or making those
3 translations.

4 Next slide.

5 This is where VDatum has been developed to
6 date, and NOAA's timeline or milestones for completing
7 the VDatum tool for nationwide coverage.

8 We currently have the VDatum program available
9 on the East Coast, from Chesapeake Bay up to Narragansett
10 Bay with the Chesapeake/Delaware Bay and Long Island
11 Sound.

12 I believe this is meant to represent Tampa Bay,
13 which is the one area that we had developed in Florida.

14 On the West Coast, it's currently available
15 from San Francisco on south to the Mexican border, and up
16 to the Puget Sound area of Washington.

17 It's been developed for the Great Lakes, and
18 it's close to release, because we're working with Canada
19 on boundary issues, releasing VDatum cross the border.

20 Once we have those worked out, we expect to
21 have VDatum for the Great Lakes released by the end of
22 the year.

23 As you can see up here, this is the timetable
24 for completion of the rest of the Lower 48.

25 It will be available everywhere, with, I

1 believe, Texas being the last, in 2011.

2 We're told there were some gravity issues
3 because of subsidence in Texas and the Gulf of Mexico.
4 They are going to be some additional gravity measurements
5 made to define the geoid better in Texas, which is why
6 Texas is pushed back to September '11.

7 I believe there's also additional tide
8 measurements potentially needed for the Southeast Coast,
9 which is why that's in 2010.

10 So, we should have West Coast coverage by the
11 end of this year for the complete West Coast and the
12 Lower 48 for the VDatum.

13 Beyond the continental U.S., Puerto Rico, 2012;
14 Hawaii, 2013; and Alaska, which is a tremendous effort,
15 will start in 2012, just a lot of needs and requirements
16 for Alaska to get the VDatum out there.

17 Next slide.

18 Again, this just enumerates what will be coming
19 up.

20 In March of this year, Southern California will
21 release.

22 In December 2008, approximately, the Great
23 Lakes; by December it will be New Orleans and the
24 Northwest Pacific, so that will be full West Coast
25 coverage.

1 By 2009, the East and West Coast of Florida.
2 That's a cooperative project with the U.S. Army Corps of
3 Engineers, and they're funding a bunch of work for VDatum
4 in Florida to meet the requirements of the Jacksonville
5 district.

6 This partnership is with other agencies for
7 development of VDatum, as well, where the new capital
8 requirements may need to accelerate our timetable for
9 VDatum technology.

10 Again, December 2009 is the West Coast of
11 Florida.

12 2010, the Northeast Atlantic Coast from
13 Narragansett Bay on up to Canada.

14 In December, finishing the East Coast, and
15 2011, Texas to New Orleans, and then it will start going
16 offshore.

17 Alaska VDatum priorities are based on user
18 needs.

19 So, I believe one area that we certainly will
20 need feedback is where our work for VDatum should start
21 for Alaska. It's a huge area, and there's a lot of need
22 still to develop geoid models in Alaska.

23 National Geodetic Survey has been out there in
24 the last month, beginning to start gravity measurements
25 in Alaska.

1 I believe we'll hear more about that tomorrow.

2 As to which areas that we should start with is

3 as much a prioritization as to where to start with as for

4 the Lower 48.

5 So, I think that's why we'd we love to hear

6 some feedback on it, which is where we should start

7 prioritizing areas for VDatum for Alaska.

8 Next slide, please.

9 Once we have the VDatum models and software

10 released, obviously, it doesn't stop there. Like a lot

11 of other things we've heard today, there's ongoing needs

12 and maintenance and other requirements for VDatum.

13 One of the things that has yet to be developed,

14 and certainly needs to be accomplished, is VDatum model

15 validation and uncertainty determination.

16 To be useful for all our purposes, including

17 hydrographic services and nautical charting, we need to

18 know what the total propagated uncertainty is for models,

19 how good are they; how accurate are they; how accurate

20 are those transformations, say, between mean lower low

21 water and the ellipsoid.

22 As things change -- as tidal epoch is developed

23 or other information is updated, such as new geoid models

24 or new ellipsoid models, those would need to be fed into

25 the VDatum and certainly used to update the VDatum model.

1 So, there's an ongoing maintenance requirement,
2 as well.

3 So, that gets to hydrographic surveying to the
4 ellipsoid.

5 Hopefully, what I've tried to lay out so far is
6 how we do things now or traditionally, and what the
7 requirements are if we move to hydrographic surveying to
8 the ellipsoid.

9 Next slide.

10 The goal of the Office of Coast Survey to begin
11 acquiring hydrographic surveying data to the ellipsoid in
12 2010.

13 It doesn't necessarily mean we'll be doing it
14 everywhere, but we're at least going to start doing it in
15 earnest in 2011.

16 There are survey vessels and potentially
17 contractors collecting ellipsoidal reference survey data
18 that can be submitted to our processing office at Coast
19 Surveys starting in the year 2010.

20 So, the work we're doing right now is to lead
21 up to that effort and do the testing and development and
22 implementation and change in the system that's required to
23 do that.

24 My group is currently working on the transition
25 plan that addresses all the things that have to happen

1 between now and then.

2 The advantage of conducting hydrographic
3 surveying to the ellipsoid is that now your survey is
4 decoupled from tidal measurements.

5 You do need to know that relationship very,
6 very well between the ellipsoid at sea level, but it
7 doesn't mean that your tide measurements have to happen
8 concurrently with your hydrographic survey.

9 They can happen before or even after you
10 conduct your survey, so long as you very well know that
11 relationship between the mean ellipsoid and sea level.

12 Datum referenced to a common, worldwide datum
13 are not based on local sea level datum. It's really only
14 applicable to the area where you're conducting your
15 survey or where the chart is WGS84.

16 However, ellipsoid is a worldwide datum that is
17 increasingly having more of a worldwide common data set
18 for seeing more data.

19 So, it makes it a lot easier to share data
20 between nations, across boundaries, across borders, and
21 with a variety of users of the data set.

22 Data doesn't expire and become stale as sea
23 level changes and new tidal epochs are introduced.

24 I reference to a recoverable datum or a
25 recoverable ellipsoid. Again, as tidal epochs change and

1 sea levels change, again, you just briefly redefine that
2 relationship, if you need to use it again in the future.

3 A lot of soundings in our charts right now
4 could be very old, 50 to 100 years old, with reference to
5 the tidal epoch, when they were acquired.

6 We don't make an effort, as the tidal epochs
7 change and sea level changes, to recalculate or
8 reconfigure the soundings of our charts, but this would
9 make that a lot easier and make the long-term archival of
10 data a lot more usable.

11 There's potential improvement in data accuracy,
12 as well.

13 A lot of the biggest errors in hydrographic
14 surveys are from the vertical correctors, such as heave
15 of a vessel as you're acquiring your sounding data and
16 tides and the squat or settlement of the vessel as you're
17 acquiring soundings.

18 So, using GPS to just typically relate the
19 soundings to the ellipsoid will remove some of those
20 correctors, and you even get improvement in accuracy, as
21 well. Not a huge improvement, but it's certainly an
22 improvement.

23 There's a couple ways this works.

24 The way we envision it happening -- and I won't
25 say in its simplest form, but probably the first places

1 where we seeing conducting hydrographic surveys to the
2 ellipsoid is where we have very good VDatum models and
3 NGS CORS stations.

4 So, we have really good infrastructure in place
5 for conducting hydrographic surveys to the ellipsoid.

6 We know the water level is very well.

7 There's a good infrastructure of GPS base
8 stations, which is required for conducting these surveys,
9 and we can go out and almost, not quite, flip the switch
10 for activating the infrastructure already in place.

11 Again, the areas of Chesapeake Bay and Long
12 Island Sound is where we can -- we have the
13 infrastructure in place, or it may be possible to do
14 these on a sort of small local area.

15 So, you can take a GPS reference station and
16 put it over the tide information, and that relationship
17 that you determine between water levels and the ellipsoid
18 for that station can apply to the survey area.

19 So, maybe a complex model isn't required for
20 all surveyors because that survey area is small enough or
21 close to that water level station.

22 In more complicated cases, we have to go out
23 and establish a base station and GPS water level buoys,
24 tide gauges, and so forth, either before the survey,
25 during the survey, or after the survey to do that

1 determination of datum transformation (inaudible) because
2 it's a harder area to do accurate hydrographic surveying
3 to the ellipsoid.

4 There's also the issue, that we've sort of come
5 to terms with, of real-time versus post-processed.

6 People talk about RTK, or real-time kinematic
7 surveys, and there's advantages and disadvantages, but
8 usually it's limited to a sort of small area and
9 relatively short distances between your base station and
10 where your vessel is operating from.

11 A lot of survey areas are over a much larger
12 area than that (inaudible).

13 Next slide.

14 Disadvantages: The shore support effort is not
15 necessarily eliminated in all cases.

16 Again, the GPS base stations or CORS stations
17 might have operated during your hydrographic survey to
18 reference your vessel position to a shore reference
19 station, so the work potentially takes place at tide
20 gauges during a hydrographic survey or it might be GPS
21 stations.

22 You need to make sure that either your existing
23 infrastructure or CORS stations are working, and in some
24 cases, you might need to go out and install (inaudible).

25 Again, for the processing of the positioning

1 data, if that's the model, it can be time consuming and
2 add more processing requirements to the hydrographic
3 survey datum.

4 So, we're talking about trying to reduce the
5 time it takes to get the surveys from the vessel to the
6 chart room. It might be adding another element that
7 could further delay that.

8 So, that's something to definitely be
9 considered.

10 Again, those vertical datum relationships must
11 be well known in places like Alaska or the Pacific
12 Islands. It's not quite there yet, and the VDatum models
13 are many years off.

14 Next slide.

15 So, still outstanding is: Why can't we do this
16 now?

17 As I pointed out earlier, VDatum model creation
18 and validation is incomplete for all areas. If that's
19 your model or concept of operations, we need have that in
20 place in these areas, or at least know those
21 transformations very well, whether it's VDatum or some
22 other method of doing that or conducting hydrographic
23 surveys.

24 We need to figure out how we're going to handle
25 this data internally before we start ingesting it.

1 Where does the transformation from the
2 ellipsoid to the local tidal datum occur? Does it occur
3 right after the survey is complete and the data is
4 delivered to our offices and is already referenced?

5 If that's the case, we do have some of the
6 advantages of storing and archiving our data to the
7 ellipsoid, but if we're going to have it, say, at the
8 time you create your nautical charts and store it in your
9 hydrographic database, reference the ellipsoid, and then
10 that transformation happens, that product creation should
11 start using the most latest information due to the
12 transformation.

13 That's a big infrastructure concern that needs
14 to be worked out through our nautical charting systems.

15 Also, at least internally, there's quite a bit
16 of equipment and software we need to acquire, on the
17 order of several hundreds of thousands of dollars,
18 upgrading GPS receivers, getting post-processing
19 software, and so forth, GPS base stations, ship to shore.

20 So, there's certainly a financial element to at
21 least getting going on this, as well.

22 Next slide.

23 To get ready to do this in 2010, we've done a
24 number of demonstration projects or test projects to get
25 our procedures refined and to learn what all the bugs are

1 and to start pushing some of this data through the
2 system.

3 So, in the last year, we've done three.

4 One was the Endicott Arm in Alaska on the NOAA
5 ship Fairweather.

6 We did the Southern Chesapeake Bay on the NOAA
7 ship Rude, starting in October and going on right now.

8 Chesapeake Bay is a joint project with NOAA and
9 NAVO on the survey vessel.

10 I'll talk about those two things, and then I'll
11 be done.

12 Next slide, please.

13 So, Fairweather was a project to survey
14 Endicott Arm. This is very steep and deep, if you will,
15 which makes it more of a simple tidal regime.

16 So, the assumption here in this survey was that
17 if we obtain the relationship between ellipsoid and mean
18 low level water at the tide gauges, we could apply that
19 throughout the entire survey area.

20 We're still working through some of this data
21 at the moment, and the data, we've also acquired using
22 traditional tide zoning methods.

23 So, the intent is, one, to have the data
24 completely processed to compare the two and see what the
25 differences were, if any, and see if this type of

1 operations can be applied.

2 Again, a secondary objective of this was to
3 develop operating procedures and to begin to train our
4 personnel and get them familiar with the shift in survey
5 requirements to going towards the ellipsoid.

6 So, that was, if not more important, equally as
7 important to seeing how the data looked.

8 Next slide.

9 The Rude in Chesapeake Bay was testing of
10 operations, which is where we have a VDatum model that
11 exists and a very strong CORS network infrastructure to
12 do the positioning and GPS referencing.

13 So, it's very difficult to see the differences
14 between these two examples on the seafloor.

15 Again, with all these test projects, we're
16 requiring they use the traditional methods, as well as
17 ellipsoidal surveying methods, and comparing the
18 differences.

19 So, they look very much the same, which is the
20 intent.

21 There really was no difference in positioning
22 of -- well, there are no practical differences in the
23 positioning of features on the seafloor.

24 One thing we found between the two is that
25 there was a half meter of difference on average between

1 both data sets, and we have yet to resolve those
2 differences.

3 We don't know if that's a function of the
4 VDatum model, which might need further development or
5 validation, or just some application of GPS data or
6 offsets, which could be part of our standard operating
7 procedure.

8 So, again, this is an instance where we need to
9 go back and look and see what all the details are that
10 are going to affect this transition to the ellipsoidal
11 survey.

12 Our third project we've got going on right now
13 was just started a couple weeks ago. It's in Chesapeake
14 Bay, here again, where we have a VDatum model that exists
15 and a good CORS infrastructure.

16 It's a joint project that involves NOAA, Coast
17 Surveys, NGS, and CO-OPS, as well as the Naval
18 Oceanographic Office to conduct the survey and
19 ellipsoidal project in the Bay, and to also further
20 develop the GPS water level buoys to aid in this process.

21 So, the two that you see here, sort of the
22 fantails you see here, is as we're putting two NAVO GPS
23 water level buoys over the side to collect informational
24 data in the Chesapeake Bay and conduct a hydrographic
25 survey here in this area called "G" right here, this

1 rectangle here, where we've supplied two water level
2 buoys.

3 One of them is out in the survey area, and one
4 of them is to continuously operating national water level
5 observation network, tide gauge at Solomon.

6 There's also an NGS CORS station here, as well.

7 So, we can kind of collect all the data we need
8 to here for a variety of purposes, validate VDatum
9 models, further refine the requirements and accuracy of
10 GPS water level buoys, and so forth, and apply
11 hydrographic survey data and reduce it both ways and
12 compare the differences and improve our procedures.

13 So, that's going on at the moment.

14 That's it. Thank you.

15 I'll take any questions.

16 MR. SKINNER: Thank you.

17 Larry, you're all poised, so go ahead.

18 MR. WHITING: Thank you.

19 Does the use of the GPS buoy just take the
20 elevation of the water and put that right on the buoy the
21 same as the tide gauge, or is it real time?

22 How do you get the data out there?

23 LIEUTENANT VAN DEN AMEELE: The water level
24 buoys that are both borrowed from NAVO and that we spec
25 out to procure ourselves actually do both.

1 At its core, it's a GPS receiver on a buoy, so
2 it can acquire vertical data, which can be, you know,
3 used for a variety of purposes.

4 I think at its very essence, and the way that
5 NAVO specs the buoy out, is it records and transmits, in
6 near real time, six-minute water levels, just like a
7 traditional tide would.

8 It can also record the GPS data which can be
9 used for further post-processing for greater accuracy and
10 for a more continuous data set to capture that
11 transformation between the water level and the ellipsoid
12 or any other type of reference.

13 MR. WHITING: I've got to think about this for
14 a little bit.

15 Back before I retired four or five years ago,
16 we did an RTK GPS, without a tide gauge, for about
17 10 miles around the Port of Anchorage.

18 It was repeatable for years, better than any
19 specs that I did with tidal zoning.

20 I would have to ask those guys if it's still
21 being repeated. I don't know at this time --

22 LIEUTENANT VAN DEN AMEELE: Sure.

23 MR. WHITING: -- but it was highly repeatable.

24 It moved around quite a bit, but as smart as
25 the surfaces were, it was better than any other survey

1 being conducted out there.

2 I think what I'm trying to say is you're going
3 down the right path here, but why don't you take and
4 eliminate that buoy -- I shouldn't say that.

5 Eliminate that buoy, put bottom mount on your
6 gauge out there, put a post out there with your RTK, and
7 get gravity involved in this, besides those other things,
8 and really go at it.

9 I mean, you're only about halfway there with
10 this thing, aren't you?

11 LIEUTENANT VAN DEN AMEELE: Sure, sure.

12 The tide buoys, I would not say is the most
13 critical part of this, but it's another tool, another
14 instrument, that we can use to acquire data information
15 that will help us better define those transformations.

16 It's something that will require GPS data and
17 water level data simultaneously so we can use that
18 information, as appropriate, to define those
19 relationships.

20 I don't think we're necessarily using it in
21 place of anything else, such as water level gauges or
22 even looking at bottom-mount gauges, as you suggest, but
23 it's just one tool you can use to help further define
24 these models, and we need to do this.

25 MR. WHITING: The reason I suggested a

1 bottom-mount gauge is that -- because as the waters went
2 along, you wouldn't even have to use it for your data --

3 LIEUTENANT VAN DEN AMEELE: Sure.

4 MR. WHITING: Okay. I've got something later,
5 but I'll turn it over to somebody else.

6 MR. SKINNER: I was going to call on Jon,
7 anyway.

8 MR. DASLER: Jon Dasler.

9 I guess, as many of you know, this is something
10 that is -- I hold very closely.

11 We've been surveying on the ellipsoid for over
12 a decade now, and I'm glad to see that you're involved
13 and making progress, because I think this is really where
14 things need to go.

15 The surveying committee has been surveying on
16 the ellipsoid for well over a decade.

17 Since Katrina, the Corps of Engineers has put a
18 vertical datum specialist at each district to address
19 datum issues.

20 They've been doing RTK GPS surveys or
21 post-process kinematic GPS surveys for pretty close to
22 10 years.

23 I think it was Brian Shannon from the Corps'
24 Technology Engineering Center at UC who had been doing a
25 lot of studies on this over the years.

1 In San Francisco, they're doing a lot of work
2 on RTK.

3 I think that now that NOAA is moving into the
4 Columbia River, the Corps of Engineers is doing all of
5 their work and their dredging surveys off the ellipsoid.

6 Right now, I know that the Ranier is in there
7 doing work, but they're having problems using zoning to
8 get the data to match up.

9 There's an RTK base station right on the KP
10 that could be used by NOAA.

11 The DR areas are pretty much defined, so right
12 now, I don't think waiting for 2010 -- there are areas
13 where you could be doing it right now.

14 You mentioned some of the issues in
15 hydrographic surveying is not just water levels that
16 contribute to vertical error and settlement squat, all
17 that which can be measured with RTK GPS.

18 I guess I would say: Turnaround of the chart
19 would be improved by using RTK GPS.

20 I think, again, some of these areas, like
21 Chesapeake Bay, lend themselves well to use of GPS
22 surveying.

23 It's a pretty proven method in areas where
24 there's good definition.

25 Anyway, I'm just glad to see you're moving

1 forward.

2 MR. SKINNER: Other comments or questions?

3 MS. THOMAS: Julie Thomas.

4 Actually, I just want to thank you.

5 I'm in Southern California. We do LIDAR
6 flights with the Army Corps of Engineers from the Mexican
7 border to Long Beach.

8 We love your VDatum concept.

9 Randy, who works for me, is our GIS person who
10 went to one of the training sessions that you held on
11 this, and we just downloaded it a couple weeks ago.

12 We're real excited, because we also get a lot
13 of researchers working with this data, so that opens up
14 the doors a little bit so they don't have to figure this
15 all out themselves.

16 So, we have that monuments that are -- I'm just
17 curious about this.

18 In Northern San Diego County, there are -- our
19 bay station monuments are sinking, the USGS monuments.

20 How do you address that for VDatum? Is that
21 taken into account at all? Do you plan to update these
22 as you move along, or what are you doing about that, if
23 anything?

24 LIEUTENANT VAN DEN AMEELE: I'm not quite sure
25 about the answer to that, if it's taking into account

1 specific monuments or specific survey markers.

2 Maybe Dave Zilkoski can answer that.

3 MR. ZILKOSKI: Dave Zilkoski.

4 Right now, the subsidence or the crust motion
5 -- because either way, in California, you have
6 earthquakes which cause crust motion, and subsidence
7 could be up.

8 That would actually be handled within the
9 provocation of the coordinates, so VDatum, itself, would
10 have to be modified.

11 The long-term view of that would be putting our
12 time-dependent program values into it. It's not there
13 now.

14 If you go in, you get coordinates in California
15 off of our database, the latitude, longitude, and
16 ellipsoid height. These models do include that, but
17 VDatum is going to be tied to that.

18 So, right now, it's not there, but it will be.

19 Your area will have this more in your tidal
20 regime modeling, so right now, the subsidence is a small
21 part of that.

22 MS. THOMAS: Right, but in the future, you do
23 hope to inject some type of time coordinate?

24 MR. ZILKOSKI: Yeah, the future plans for --
25 and tomorrow, I'll talk about our five-year strategic

1 plan, and that we're going to go to our 10-year vision,
2 which includes four different images, latitude,
3 longitude, the height, with a time dependency.

4 Then all of those parameters would be included
5 in all of our models and tools, which VDatum would be a
6 primary tool that we would incorporate in that.

7 Some of this information will be made available
8 sooner than later.

9 In other words, in Louisiana, we have more
10 information; in Houston and Dallas, we have more
11 information; and in parts of California, we have
12 information, but the rest of the country would be a lot
13 slower to come about.

14 MS. THOMAS: Okay. Thank you.

15 MR. DASLER: Jon Dasler here.

16 How much is NOAA collaborating with the Corps
17 of Engineers on this?

18 They have a program, BERTCON, where you can do
19 transformation from GRS80 and NAVD 88, so there's lot of
20 infrastructure that's developed and built.

21 In fact, I think some people from Dave's shop
22 have worked on those geoid models that are used through a
23 lot of those processes, especially the Columbia River,
24 where it's really well defined, the datum relative to
25 NAVD 88, and just making that additional jump into GRS80.

1 So, the Corps of Engineers right now is
2 surveying that.

3 I guess what I see now is NOAA coming in, and
4 it's apples and oranges. They're using zoning and having
5 problems, and the Corps is surveying off the ellipsoid.

6 So, how much planned collaboration is there
7 with the districts that are already surveying on the
8 ellipsoid when NOAA comes into those areas and now it's
9 doing something completely different, where soundings
10 don't match, and addressing that issue?

11 LIEUTENANT VAN DEN AMEELE: I can't speak for
12 NGS, but I know within my group within the lab, we work
13 very closely with the -- the modeler and those who are
14 developing VDatum to go -- kind of go both ways.

15 On any work that the Corps has nearly or
16 already completed, my understanding is they're
17 incorporated into the VDatum model.

18 So, we're not out there trying to duplicate any
19 work they've done already. If they've figured something
20 out, we'll work with them to incorporate -- and with the
21 districts to incorporate it into the VDatum model.

22 A lot of our priorities for the VDatum have
23 been driven by the Corps of Engineers.

24 In fact, in a couple cases, like the
25 Jacksonville district, they provided funding, so that met

1 our priorities and our user requirements and needs for
2 VDatum.

3 So, it's an area where the Corps hasn't done
4 the work yet, but it will make sure that VDatum is
5 meeting their requirements for it in the district.

6 MR. ZILKOSKI: Just a few other notes on that.

7 First off, we taught Brian Shannon everything
8 he knows about the surveying in the ellipsoid 10 years
9 ago.

10 Anyway, NOS does this.

11 It's CO-OPS, Coast Survey, and NGS meet with
12 the Corps, and we have an in-and-out working group that's
13 implementing the aspects of VDatum, as well as surveying
14 on the ellipsoid.

15 In the VDatum, the Corps has additional data
16 that -- we're trying to figure out how to incorporate to
17 help validate VDatum, as well as to improve VDatum.

18 So, we're meeting with them and trying to work
19 with them.

20 We have trained them on the VDatum, as well as
21 each one of their vertical experts that they have, in
22 their divisions, their districts.

23 So, as a group, we're working with them and
24 training them on what we -- what VDatum does, and also,
25 they're working with us to try to tell us what their

1 requirements are.

2 So, we have a pretty good working relationship
3 with the actual people doing the work.

4 Some of the things, Jon, that you are talking
5 about are probably more addressed at a higher level, and
6 we do have some of those.

7 Jack meets with General Reilly -- I guess it's
8 probably -- it's three or four times a year.

9 So, we're addressing some of those things at a
10 higher level on a policy level, but -- moving a little
11 bit slower, maybe, than we'd like to see them, but we're
12 still trying to do this.

13 MR. DASLER: I think NOAA, in my view, has
14 always been the leader in the field of hydrography, in
15 terms of the government agency.

16 I think this is one area where they're a little
17 bit behind and could really use some expediting to kind
18 of help push that along.

19 When you get down to the Mississippi River
20 Delta, you see bulldozers running and grading levies with
21 GPS receivers on the top of them.

22 It's not a black box as it seems, and you get a
23 very high repeatability where they build highways and
24 create levies based on GPS height.

25 I guess I'd like to continue to see this be --

1 we're doing a project now on the Columbia River, where
2 we're doing for NOAA -- where we're doing all the surveys
3 on ellipsoid heights, but also doing zoning and tide
4 gauges and installing more traditional methods, and the
5 comparison of that.

6 I think following up with this would be good.

7 MR. SKINNER: We're running a little bit behind
8 time here. I'm going to try to wrap this up.

9 Are there any final comments?

10 MR. WHITING: Can we have a motion on this
11 tomorrow?

12 I would like to make a motion today -- I can do
13 it tomorrow or not.

14 MR. SKINNER: We're on the topic, so --

15 MR. WHITING: I want to continue down this
16 path, because this is the way that the surveyors are
17 doing it outside of this room today.

18 They are using all the tools they've got, and
19 the models that they're coming out of there -- these all
20 have to be incorporated into this deal to make it better
21 and easier and quicker to chart.

22 MR. SKINNER: Larry, could you just restate the
23 motion?

24 MR. WHITING: I'll word it tomorrow.

25 MR. SKINNER: Okay. We'll come back to this

1 one.

2 Do we have the concurrence of the panel to move
3 forward on that?

4 MR. WELLSLAGER: I will.

5 MR. SKINNER: Just a sense, everyone is in
6 agreement, and then Larry will work up some language.

7 Thanks very much.

8 Last, but not least, Roger Parsons is going to
9 provide an update on Integrated Ocean and Coastal
10 Mapping.

11 MR. PARSONS: I'm not sure who to thank for
12 having me in this position on the schedule.

13 (Remarks outside the record.)

14 MR. PARSON: I want to thank you for this
15 opportunity.

16 Again, I'm Roger Parsons.

17 I seem to address this group with a different
18 hat on each time, and I don't know if it's an indication
19 I can't hold a job or what it is, but I'm wearing two
20 hats today as I bring you up to speed on some of the
21 Integrated Ocean and Coastal Mapping activities.

22 One is the NOAA IOCM coordinator, and the
23 second hat is the co-chair of the Interim Sea Working
24 Group on Ocean and Coastal Mapping.

25 To acknowledge one of the recommendations made

1 earlier, at the end of my presentation or update, I'm
2 going to throw you a fish and ask for ways to fillet it,
3 if you will.

4 So, I will follow suit and do what Adam has
5 asked.

6 Next slide.

7 Prior to updating you, let me just go back a
8 little bit and give you a little history on how we got to
9 what we're calling "IOCM" today.

10 Whether you realize it or not, this panel has
11 endorsed the IOCM concept in their 5 Most Wanted List.

12 That is the need for coordinating and
13 collaborating through the various mapping agencies so
14 that data is collected for the most uses possible.

15 Your particular interest, obviously, is to
16 support navigation services in the country.

17 This began back in 2002, when three of the
18 primary ocean and coastal mapping agencies, NOAA, USGS,
19 and EPA, approached the National Research Council of the
20 National Academy of Sciences, and asked them to conduct
21 an assessment of the challenges facing the national ocean
22 and coastal mapping community.

23 There are at least 15 federal agencies
24 involved, in some way, shape, or form, with ocean and
25 coastal mapping, and I'll define that momentarily here.

1 These three agencies knew the challenges it
2 faced. It wanted to get an independent look at what
3 those challenges are and what the recommendations might
4 be for addressing those challenges.

5 So, out of that two-year assessment, which was
6 conducted by a very expert panel, chaired by Larry Mayer,
7 who is the codirector of JHC and the director of the
8 Center for Coastal and Ocean Mapping at the University of
9 New Hampshire.

10 The NRC produced a report in 2004 entitled
11 "Geospatial Framework for the Coastal Zone: National
12 Needs for Coastal Mapping and Charting."

13 I'll talk very briefly about their
14 recommendations.

15 Several months later, the U.S. Ocean Action
16 Plan came out in December of 2004. Surprisingly or not,
17 a lot of the recommendations, if not all of the
18 recommendations, that were made in the NRC assessment
19 were parroted in the Ocean Action Plan.

20 Next slide.

21 Some of the things the NRC assessment pointed
22 out is that they took a lot of pain to address common
23 user needs for ocean and coastal geospatial data, ocean
24 and coastal mapping data, and ocean and coastal mapping
25 product development.

1 You can read them here, and you just heard --
2 you've heard for several years, through the three program
3 managers in here, the importance of a consistent spatial
4 framework for this data.

5 You've heard today the importance of vertical
6 datums and the challenges that they provide, but they
7 also pointed out the increased -- the need for increased
8 collection availability of data, particularly in the
9 nearshore area.

10 This is something that Sheila pointed out in
11 her presentation this morning.

12 We are not addressing nearshore areas. These
13 are areas that are most challenging, perhaps the most
14 needed, by a number of communities, including those
15 represented in this room.

16 Easy access to up-to-date digital gestational
17 data imagery and mapping products, not only easy access,
18 but timely data.

19 That is a challenge that was addressed this
20 morning by the panel members.

21 Compatibility among data formats,
22 standardization, and the last line, which sounds easy and
23 it certainly is a challenge, is the need for inter- and
24 intra-agency coordination, communication, and
25 cooperation.

1 With all of the federal, state, regional, and
2 local government mapping activities, there has been a
3 paucity of communication and coordination between those
4 entities.

5 This is something we recognize existed for some
6 while.

7 Next slide.

8 A lot of the Ocean Action Plan recommended many
9 of the same things as the NRC pointed out, in particular,
10 the need for an inventory.

11 They were referred to as an "annual inventory,"
12 but an inventory of capabilities and an inventory
13 geospatial data.

14 Somebody pointed out this morning, on the
15 panel: It's one thing to acquire data; it's another
16 thing to make it accessible.

17 We have any number of portals by which you may
18 or may not discover data, and that is a problem that both
19 the NRC and the Ocean Action Plan addressed.

20 Common shared needs: There are needs of
21 leverage and set priorities and develop standards, and
22 both of these documents certainly preach to the mapping
23 choir, but it's something we needed to see in writing, if
24 you will, and develop and share and standardize the
25 mechanisms for acquiring data, distributing data, and so

1 forth.

2 Next slide.

3 So, ocean and coastal mapping -- you can read
4 through this, and this is a fairly elaborate definition,
5 but it's all-encompassing.

6 It really breaks down mapping into three parts.

7 One is the acquisition of data, and all of
8 these categories are listed. If you can't see your needs
9 or your requirements in there, then we've missed the boat
10 here someplace.

11 I've often said that the acquisition of data is
12 perhaps the easiest thing to do here. All it requires is
13 resources.

14 Jack, all it requires is resources.

15 So, that's the simplest thing.

16 However, management dissemination of these data
17 and the development of technologies, tools, and products,
18 that perhaps is the most daunting and challenging between
19 the various communities of geospatial data users.

20 So, refer back to this definition occasionally
21 when you've got nothing better to do, and see if it makes
22 sense.

23 Next.

24 So, what do we mean by "Integrated Ocean and
25 Coastal Mapping"?

1 It's the practice of acquiring, managing, and
2 integrating data so that the data can be used by the
3 greatest number of users for the greatest number of
4 needs.

5 You saw in the title slide, and I think you
6 heard Sheila refer to it, the mantra of "Map once, use
7 many times."

8 We certainly don't ever envision a day where
9 you only have to go out once and you're done, but we can
10 certainly cut down on the redundancy and the repetitiveness of
11 which we acquire data.

12 We can certainly do a better job at alerting
13 our mapping partners as to who's acquiring data, where
14 they're acquiring data, to what standards are we
15 acquiring data, and do a better job at collaborating.

16 Next.

17 So, if it didn't sink in, why OCM?

18 There's a lot of communities out there that
19 need ocean and coastal geospatial data, whether it's the
20 federal government, whether it's state government,
21 whether it's regional entities, whether it's integrated
22 ocean observing regional associations, you name it.

23 The number of stakeholders that you listened to
24 today, every one of them have a need for ocean and
25 coastal geospatial data.

1 Mapping resources at the federal government and
2 the state and local levels are limited, so it makes no
3 sense to continue to go about it the way we've been doing
4 business, with blinders on.

5 When NOAA goes out to acquire certain types of
6 geospatial data, and the U.S. Geological Survey literally
7 comes up behind us and scratches their heads and wonders
8 why we didn't know what they were doing and vice versa --
9 there are many anecdotal stories about this.

10 The coordination of efforts and the leveraging
11 of capabilities and resources is essential. We just
12 can't do what we need to do with the resources that we've
13 been allocated.

14 So, it only makes sense that we coordinate our
15 efforts.

16 Intra- and interagency coordination, I've said
17 that several times; you've heard it several times today.

18 Intracoordination -- believe it or not, NOAA
19 has not always done a good job at coordinating its own
20 mapping efforts.

21 Fisheries, Coast Survey, you name the program
22 within NOAA, and we all have a need for this data, and we
23 need to do a better job of collaborating.

24 I think we're on the right road.

25 Absent the NRC report, absent the Ocean Action

1 Plan, it's just a smart business practice to do or to
2 follow IOC concepts on things that we're talking about.

3 Next.

4 So, in 2006, in response to the Ocean Action
5 Plan, the Joint Subcommittee on Ocean Science and
6 Technology established its sixth working group, and that
7 was the Interagency Working Group on Ocean and Coastal
8 Mapping.

9 It's co-chaired by four agencies.

10 You might say, "Well, that's a whole lot of
11 agencies to co-chair an activity," and you're probably
12 right, but these agencies work pretty closely together,
13 NOAA, the Corps of Engineers, USGS, the Minerals
14 Management Service.

15 They probably represent, these four agencies, a
16 good 70, 75 percent, if not greater, of all ocean and
17 coastal mapping activities.

18 This is an interagency working group.

19 For anybody that's ever dealt with or been on a
20 interagency working group, they understand that it has no
21 budget; it has no authority; it has no mandates.

22 However, I think this particular one has got
23 commitments from each of the federal agencies involved in
24 OCM.

25 I think to that end, that's a big plus.

1 We are a facilitating group.

2 We are going to attempt and are attempting to
3 coordinate activities between federal agencies, to
4 leverage resources with federal agencies -- and then this
5 next line is important -- and with state, local,
6 academic, NGO, and industry.

7 This is not a process that we can undertake
8 just as a federal activity.

9 I think, certainly, it's advantageous for
10 federal agencies to go about its efforts in a coordinated
11 fashion, utilizing standards and protocols.

12 We certainly have no leverage over state,
13 local, academic, NGO, and industry, but I think we have a
14 willing partner in these organizations.

15 They have a need for the data.

16 They have a need for the products that we
17 develop or collectively develop.

18 They have a vested interest in what the federal
19 government is doing in the ocean and coastal mapping and
20 the other things that we have been tasked through the
21 Joint Subcommittee to do.

22 It's a process that has no end; it shouldn't
23 have an end. This is an ongoing effort, and one that we
24 hope will reap some benefits in the near future.

25 You heard one of the activities that we like to

1 hold up as a poster child for IOCM, and that's the
2 California Seafloor Mapping Program.

3 I'll just briefly touch on that, because Sheila
4 did such a wonderful job.

5 Next slide.

6 One of the first pieces of low-hanging fruit
7 the interagency working group decided to tackle was to
8 respond to the Ocean Action Plan's request for an ocean
9 and coastal mapping inventory.

10 Late last year, the interagency working group
11 met with a number of federal mapping agencies and some
12 state and NGO partners to begin talking about: How do we
13 go about this? How do we make ocean and coastal
14 geospatial data more accessible to those that need it,
15 more discoverable, if you will, such as a clearing house
16 for OCM geospatial data, and also, a second part, a
17 registry of planned data acquisition.

18 How do we inform those that are in the business
19 what data is going to be acquired, where it's going to be
20 acquired, and to what standards, so that there's not a
21 duplicative effort to acquire similar data sets when
22 we're asked to establish some partnerships and spend the
23 taxpayers money more wisely.

24 The result of that meeting was a decision to
25 build this inventory within an existing framework, and

1 that's the Geospatial One-stop.

2 The Geospatial One-stop is one of the OMB.gov
3 initiatives that was instituted in early 2000, and there
4 already exists a requirement by the Office of Management
5 and Budget that every federal agency that acquires any
6 type of geospatial data is required to register it on
7 Geospatial One-stop, make it discoverable through that.

8 Do all federal agencies do that? No.

9 We need to do a better job.

10 NOAA, perhaps more than any other agency
11 involved in geospatial data acquisition, is probably
12 doing a better job at making their data discoverable more
13 than any other.

14 There's been a concerted effort in the last
15 year, through NGS and Coast Survey and a couple of the
16 other geospatial programs of NOAA, to ensure that its
17 data are discoverable through GOS.

18 It's not a perfect system.

19 Those that have used it over the years have
20 been a little gun-shy because it's not a perfect system,
21 but the GOS administrators have partnered with the
22 interagency working group to ensure that we can build an
23 inventory and build tools that will make the
24 discoverability of data more practical, if you will.

25 Somebody mentioned today that NOAA supports any

1 number of Web portals for its data, and that's true.

2 There's nothing wrong with other Web portals,
3 so long as all geospatial data can be discoverable
4 through this one Web portal.

5 That's what our attempt, through the
6 interagency working group, has been.

7 So, again, this is just a quick snapshot of
8 what we're trying to do with the development of Ocean and
9 Coastal Mapping inventory.

10 Next slide.

11 The second activity, and the one that I'm going
12 to throw a trout at you today, is: Last spring, about
13 24 Ocean and Coastal Mapping interests, this is federal,
14 state, regional, NGO, industry, got together in
15 Fort Lauderdale and began an earnest discussion on
16 developing a strategic action plan for Integrated Ocean
17 and Coastal Mapping.

18 Essentially, how can we foster the expansion
19 and improve the development of these items: Coordination
20 and partnerships; data collection; availability;
21 dissemination; interoperability; and the development of
22 products, tools, and other systems, if you will, required
23 by coastal geospatial users?

24 Out of that three-day workshop came a draft
25 strategic action plan, which -- does this panel have it

1 now?

2 It was a draft that was finished up on Friday.
3 You are the first group -- because this won't be
4 distributed until tomorrow to the workshop participants.

5 So, you are the first group that we have asked
6 to take a look at this.

7 Next slide.

8 Sort of hand in hand with that are some of the
9 things that we identified is requiring action over the
10 next three to five years, which is to identify the tools
11 that are required by this community.

12 We call it a "community in practice," by this
13 ocean and coastal mapping community, not only those that
14 acquire data, but those that manage data, those that use
15 data, those that use products, those that need
16 decision-making tools.

17 What is required in the way of tools? How do
18 we better build this awareness for integrated ocean and
19 coastal mapping for this process and this endeavor?

20 The third piece that we saw being important is
21 pointing to some success models in IOCM.

22 There were many models. We like to hold up to
23 California program as an ideal example, but it's one that
24 most people would say is unrealistic.

25 How many states can come to the table with

1 \$15 million?

2 We see OCM activities being driven by the
3 states, being driven regionally, with federal partners
4 coming on board.

5 We don't see it the other way around, so,
6 therefore, it's important that we begin to associate
7 ourselves and our activities with the regional
8 associations of IOOS and a close partnership with IOOS,
9 where -- we're kissing cousins to IOOS.

10 If you go back to those type of data sets that
11 I listed early on, those are the very same parameters
12 that IOOS is attempting to address.

13 So, there's a very close, symbiotic
14 relationship between IOCM and IOOS.

15 So, what we were asking the Hydrographic
16 Services Review Panel, in addition to several other
17 federal hydrographic committees -- we're going to
18 distribute this.

19 It's short, 14 pages, and we wanted to make
20 sure that it was purposely short, less than 20 pages;
21 it's only 14.

22 We didn't want it to be something that was so
23 voluminous that it scared people, and we also wanted to
24 ensure that it remained a living, breathing document; we
25 didn't want this to sit on the shelf.

1 We want to stimulate partnerships in IOCM.

2 We want to address those pertinent issues that
3 are important, not only to the acquisition community, but
4 the user community, and the development community on how
5 to move this process forward.

6 So, through the interagency working group, what
7 we are asking you to do is to take a look at that plan,
8 make recommendations that could strengthen it, and
9 obviously, we'll look at it with a navigation services
10 perspective.

11 This is a plan which, hopefully, addresses the
12 concerns of all of the ocean and coastal mapping
13 entities, not just navigation, but we have coastal zone
14 matters; we have emergency responders; and we have the
15 folks involved in setting and transport and ocean
16 modeling and land coverage change analysis, and any
17 number of programs that have a requirement for OCM
18 geospatial data.

19 It's a fairly short time fuse. We're looking
20 to add consolidated comments by the 22nd of August.
21 That's a day over three weeks from today.

22 What the timeline is, is the draft is going out
23 to workshop participants and to yourselves and the
24 National Geospatial Advisory Committee, the Federal
25 Geographic Data Committee, the National Federation of

1 Regional Associations, and a couple others, to get their
2 first chop on this plan.

3 We will then incorporate changes, submit them
4 to JSOST for their endorsement.

5 By October, and once it is endorsed, we will go
6 out for public comment for about a two- to three-week
7 period in the October, November time frame.

8 We want the National Ocean and Coastal Mapping
9 community and those stakeholders and constituents that
10 have a vested interest to take a look at what the -- it's
11 not a federal Ocean and Coast Strategic Mapping Plan.
12 It's a national plan; it's not federal.

13 We wanted to be as inclusive as possible and to
14 cover the interests of all those constituents.

15 So, if we can ask that this committee take a
16 look, over the next three weeks, and provide your
17 consolidated comments back in the survey, that would be
18 very valuable to the interagency working group.

19 Next slide.

20 Real quickly, some of the ongoing IOCM
21 opportunities, NGS is heavily involved in what's called
22 the "NGS-North Carolina IOCM Coastal Mapping Project."

23 Lots of partners: NGS, Coast Survey, State of
24 North Carolina, the North Carolina Department of
25 Transportation, the NERR research site along the coast of

1 North Carolina.

2 This is an attempt, and a successful attempt,
3 as I understand, to produce a product to the standards
4 that can be used by a very large coastal mapping
5 community, and there's a lot of players in this.

6 Again, it's an example of leveraging resources
7 and capabilities, and producing data to a standard that
8 is usable by a number of communities.

9 CSMP needs no further explanation.

10 We like to use Sheila and her program as a
11 poster child for IOCM. I think that's well along its
12 way.

13 Another ongoing effort is the Massachusetts
14 CZM/USGS/NOAA Mapping Consortium. That's fairly
15 regionally limited to Massachusetts, but we've already
16 done preliminary discussion with Massachusetts, which
17 will expand regionally, to talk about what the regional
18 mapping requirements in an area are and how we can
19 collectively address them.

20 (Remarks outside the record.)

21 MR. PARSONS: Certainly, this is an effort
22 internal to NOAA, but one that can be benefited by any
23 number of constituents in the ocean and coastal mapping
24 community.

25 One last slide before I get in the way of

1 dinner.

2 There are a couple of pieces of legislation out
3 there on the Hill, HR2400 and Title III of S.39. Both of
4 them have the same exact language in the Ocean and
5 Coastal Mapping Integration Act.

6 Somebody updated me this morning that the
7 omnibus bill that was defeated yesterday included S.39.

8 These would have codified, in short, the
9 recommendations of the NRC, and the Ocean Action Plan
10 would have established an interagency committee -- not a
11 working group, but an interagency committee on ocean and
12 coastal mapping, which would have been shared by NOAA.

13 It was one that NOAA found promising.

14 We can certainly see our way through without
15 it, but this provides some authorizations that we
16 wouldn't otherwise have, and it was not readily accepted
17 by all federal mapping interests, and in particular, the
18 Department of Interior, the U.S. Geological Survey, for
19 any number of reasons.

20 It lies dormant right now.

21 It established an integrated mapping initiative
22 within NOAA.

23 The thing that we tried to impress upon our
24 federal mapping partners is that none of these pieces of
25 legislation would have in any way impacted or altered

1 their federal mandates to address their particular
2 agency's ocean and coastal mapping authority.

3 So, with that, I open it up for your questions.

4 Again, perhaps with your willingness, you will
5 take up this draft action plan and take a look at it, and
6 offer us your recommendations and your insight.

7 MR. SKINNER: Roger, thank you.

8 At our last HSRP meeting, we did hear some
9 presentation on some mapping efforts, and they formed
10 part of our recommendation in our letters to the NOAA
11 administrator.

12 I think this is -- in addition to following up
13 on Sheila's presentation this morning, this is great
14 follow up, and we're going to have to work out the
15 logistics of reviewing this and getting back to you in
16 three weeks.

17 We can discuss that as a group at some point.

18 I did fail to mention that Roger is the panel's
19 DFO emeritus, so it's always nice to see you back here no
20 matter what hat you're wearing.

21 We'll open it up to any questions.

22 MR. DASLER: Jon Dasler.

23 We run into Roger at some of the IOCM meetings
24 when I'm in Oregon, but -- just an outstanding job in
25 trying to -- talk about herding cats, to get this pushed

1 through and get everybody on the same page.

2 In my view, I think IOCM is the case of mapping
3 off the ellipsoid, where you have different agencies that
4 have different needs, whether you're going to do your
5 data mean lower low water or coastal datum or NAV88.

6 The Corps of Engineers, if they're doing tech
7 modeling of Potomac River, they want all the data they
8 can get through NAV88 to create -- to do all this
9 hydraulic modeling.

10 So, pushing on -- especially on coastal
11 management efforts, the more we can push to surveying
12 where you can get geospatial data, you can have metadata,
13 and it's repeatable.

14 That's where we need to be going, and I think
15 IOCM is the reason to really jumpstart this for NOAA.

16 MR. SKINNER: Glad to see your experience with
17 this panel has translated into a herding cats expertise.

18 MR. ARMSTRONG: Andy Armstrong.

19 One of the reasons that I think that the
20 California program has been so successful is that, from
21 the beginning, they developed a set of standards to use
22 for this surveying here.

23 We have yet to do that in NOAA, even though we
24 have many organizations doing seafloor mapping.

25 A couple years ago, a group of interline office

1 organizations in NOAA proposed a set of standards, but we
2 have yet to see any action that.

3 I wonder if you can tell us where we are on the
4 standards or what we need to do to get at least a base
5 set of standards going in the organization.

6 MR. PARSONS: I think the efforts of JHC in
7 facilitating that discussion several years ago developed
8 a set of baseline standards.

9 We have not done an adequate job in pushing
10 that out and getting all of the NOAA mapping community on
11 board with those.

12 I certainly think that we need to push that to
13 the forefront once again, and not only develop a set of
14 NOAA seafloor mapping standards, but I certainly see a
15 set of standards developed within NOAA going out to the
16 federal mapping community and having that endorsed, as
17 well.

18 So, we not only have our own house in order,
19 but have the federal and perhaps the national seafloor
20 mapping community on board with those, as well.

21 I certainly think that is something that -- if
22 it's not near the top of the list, it ought to move to
23 the top of the list.

24 The same thing on any number of standards,
25 whether it's shoreline mapping standards, which,

1 obviously, they develop at NGS, but there are other
2 federal agencies that need to come on board, and we need
3 to coalesce those standards.

4 MR. SKINNER: Any other comments or questions?

5 MS. SMYTH: Hi. Becky Smyth with NOAA.

6 I just wanted to make one point, that IOCM, I
7 think, has made a humongous difference in what's in the
8 West Coast Governors Agreement.

9 As you can see, all three states along the
10 coast are very, very interested, for all the reasons that
11 Roger listed.

12 However, what happened out here was we had
13 really dedicated local partners, and they're the ones who
14 brought everyone to the table to start the discussion.

15 It's been off of these lessons that the other
16 states have said, "This can be successful; this can
17 work," but it was Sheila who got the feds, the academics,
18 to the table.

19 That's something we need to acknowledge, that
20 it's not easy. She spent a lot of effort doing that.

21 So, we need to think about how we can make it
22 easier for those partners to start this.

23 MR. PARSONS: Absolutely.

24 At each and every one of those states I
25 mentioned, where there's been ongoing discussion,

1 Washington, Oregon, Long Island, Connecticut, each look
2 towards California as -- if not the model to follow, then
3 certainly a scalable model to follow.

4 I can point out states, such as Oregon, where I
5 think it's safe to say that every governor every year
6 writes his or her Congressional delegation, and points
7 out what his or her priorities for that year are.

8 In 2006, the governor of Oregon addressed his
9 Congressional delegation, and of the eight priorities for
10 his entire state, seafloor mapping made it to the top
11 eight priorities for that state.

12 That's a big jump.

13 Oregon also developed a consortium of
14 interested academics and state and NGO partners that went
15 to the State house and told the governor and his staff
16 the importance of ocean and coastal mapping.

17 We're seeing a similar effort in Washington.

18 Certainly, Massachusetts is way ahead of the
19 power curve.

20 Long Island and Connecticut -- New York and
21 Connecticut, within the Long Island Sound, have done the
22 same thing.

23 They see the importance that these data and the
24 products and the tools that result from these activities
25 are to their state, whether it's in terms of navigation

1 safety, ecosystem management, energy development, you
2 name it.

3 Coastal states are beginning to realize, if
4 they don't already recognize it, the value of these
5 activities to their economies. It's driven by
6 economists.

7 They've got a story to tell, and they've done a
8 better job of telling the story than in the past, sort of
9 answering: What if we don't do this? What are we in
10 for, and we tell them a pretty compelling story.

11 Let me also point out that Tom didn't mention
12 it, but the Coastal Society panel on IOCM could not come
13 together without Tom's chairing that session.

14 He posted 150 flyers around town, tattoo
15 parlors, restaurants, you name it.

16 He was beating the bushes for participants, and
17 it's activities like that that spread the word.

18 MR. SKINNER: We've got some interesting
19 comments from the tattoo parlor owners.

20 Any other comments or questions?

21 Thanks very much, Roger.

22 We have one more public comment session. I
23 don't know if there's anyone signed up, but there is
24 availability if anyone would like to make any comments.

25 Hearing none, I think there's some logistical

1 details for after the meeting.

2 Can we have a motion to adjourn?

3 MR. WHITING: I did it already.

4 MR. WELLSLAGER: I'll second it.

5 MR. SKINNER: Larry has made the motion; Matt
6 has seconded it.

7 Any discussion?

8 All in favor?

9 ALL: Aye.

10 MR. SKINNER: Do we have a motion to amend
11 Larry's -- you think this panel could get out of here.

12 MR. WHITING: I agree with the amendment.

13 MR. SKINNER: All in a favor?

14 ALL: Aye.

15 MR. SKINNER: Any opposed? Any abstentions?
16 Motion carries.

17 (Proceedings adjourned at 5:36 p.m.)

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