

MARINE FISHERY ADVISORY COUNCIL

BARANOF HOTEL

JUNEAU, ALASKA

AUGUST 11, 2004

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

P R O C E E D I N G S

(Juneau, Alaska - 08/11/2004)

CO-CHAIR MR. OSTERBACK: Okay,
everybody. We're going to get started here because
we've got lots to cover today. So Ralph is going
to finish up his presentation that he had going
yesterday.

MR. RAYBURN: I just wanted to carry on
with a few of the conversations. I'm sorry Jim
Murray is not here yet, but just to go back and
reflect on yesterday afternoon where Jim gave a
report on some of the responses that Sea Grant at
least was initiating in reference to the motions
and the activities of the MAFAC meeting back in
last December and there were a few folks that still
wanted to make comments and I think it -- as you
may recall, Jim Murray had mentioned the
opportunity or possibility perhaps, if the group
thought it appropriate, to have some subcommittee
of MAFAC that may would be more in a continuous
review type process of some of these bycatch
measures and even some of the fisheries extension

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 activities that Sea Grant were undergoing, possibly
2 in a review type subcommittee situation.

3 So to get back to the discussion, if we
4 could, Dick was next on the list and I don't know
5 whether you remember what you were wanting to say
6 on this issue and then I have Dick, Vince and Tony
7 -- I'm not sure if you had something, okay -- and
8 Rod had comments. So if you can remember your --
9 from the.....

10 MR. GUTTING: Yes, I.....

11 MR. RAYBURN:last 10 hours.

12 MR. GUTTING: Yeah, I do.

13 MR. RAYBURN: After all that excitement
14 from last night.....

15 MR. GUTTING: Yeah.

16 MR. RAYBURN:and all the.....

17 MR. GUTTING: Still recovering. I just
18 wanted to react to the suggest that perhaps MAFAC
19 might have a role to play in some kind of review of
20 the Extension Program within Sea Grant, and I was
21 left a little bit unclear as to exactly what kind
22 of review that would be. But my only comment,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Ralph, is that if you are going to get involved in
2 something like that, which would be very
3 interesting and, I think, quite intriguing for
4 MAFAC, there's real work to be done and I would
5 suggest that you think through what kind of staff
6 support you would need, what kind of perhaps even
7 funding you would need in order to really do the
8 kind of job that normally takes place when you do a
9 review.

10 MAFAC is great at reviewing drafts and
11 policies and having discussions, but actually
12 getting involved in more of an operational type
13 thing we're not really structured -- maybe we are
14 now that we have an Executive Director. But,
15 anyway, that was my comment -- that I thought from
16 the presentation it needed to be focused a little
17 bit more on the task that we were being asked to
18 perform and then I think we would have to think
19 through the implementation of it. There's a few
20 people on the Committee like Bonnie, who will
21 actually go out and do something and actually write
22 and draft and do what I would call staff work, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that's an unusual situation. So that's my only
2 suggestion.

3 MR. RAYBURN: Okay. Thank you. Vince,
4 did you want to comment?

5 MR. O'SHEA: Thank you, Mr. Chairman.
6 You know, when I think of the Sea Grant Program
7 over the years I associate them with catching fish
8 and helping the industry improve its efficiency and
9 I think with the focus on bycatch and the problems
10 that we have with bycatch this is a terrific
11 opportunity for Sea Grant to step up to the plate.

12 And I was disappointed with the New England
13 Bycatch Workshop -- and Maggie alluded to it --
14 that, you know, the attendance from the industry
15 was really, I think, a disappointment. And I think
16 that as you move that into Southeast and consider
17 doing this, I think the Sea Grant could be a
18 terrific resource to sort of facilitate the
19 communication between the service and the industry
20 and work at improving participation in those types
21 of programs.

22 And then the second point I'd make is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Jim had made the comment it was very difficult to
2 quantify what the Sea Grant Program or the Sea
3 Grant agents are accomplishing, but I think that
4 presentation from Washington, I think, really
5 demonstrated what the bottom line is and that's
6 when we see the bycatch going like this and I think
7 I would encourage the program to report in those
8 types of terms because that's really what the end
9 goal is, is to see the bycatch numbers go down, and
10 it's really in the industry's interests to do that
11 because that will ensure they stay in business and
12 keep working. Those would be my two observations.

13 Thank you.

14 MR. RAYBURN: Thank you, Vince. Rod.

15 MR. MOORE: Thanks, Ralph. My comments
16 are sort of along the same lines as Dick's, and
17 it's unfortunate that Jim isn't here. I think it
18 is a good thing that MAFAC is being asked to do
19 something that can help both NMFS and Sea Grant try
20 to come up with a better program and make sure
21 everybody is doing what they're supposed to be
22 doing and all that sort of stuff, but it does

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 involve a lot of work. We've done similar or tried
2 to do similar sorts of things in the past on MAFAC
3 and, yeah, let's face it, everybody on MAFAC has
4 got a day job. So it's kind of hard to spend some
5 serious time doing the sort of review that needs to
6 be done and, you know, it would also take time away
7 from folks in NMFS and folks in Sea Grant to be
8 able to provide you with the information that you
9 need in order to properly conduct a review. So I
10 guess my recommendation is to go ahead and do it
11 but make sure that you've got the commitment from
12 MAFAC members, from NMFS and from Sea Grant that
13 people are actually going to do the job so it
14 doesn't become a wasted effort.

15 We have tried in the past before a lot
16 of you were here on MAFAC to do similar sorts of
17 things, and they kind of fell apart because nobody
18 had time to do them. You've got all of the
19 ecosystem that Bonnie did is, you know, one of the
20 rare instances where we actually came out, had
21 separate meetings and that sort of stuff. We did
22 something similar in bycatch several years ago,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 too, but it's been few and far between and it
2 really does take a tremendous time and budget
3 commitment and it's going to take a personnel
4 commitment from both NMFS and Sea Grant. So you're
5 going to have to get those commitments out there
6 and locked in before you embark on this.

7 MR. RAYBURN: Uh-huh, okay. Any other
8 comments on this subject, then? Yes, Scott.

9 MR. BURNS: Yeah, a quick one. Thanks,
10 Chair. I agree with Vince that this is an
11 important area of focus for Sea Grant. And, on the
12 one hand, sort of looking at the list of projects
13 that were presented yesterday you see a real
14 variety of initiatives and that's appropriate given
15 the fact that the Sea Grant Program is often
16 providing service to local fishing communities. At
17 the same time, I think it would be good to see a
18 greater degree of synergy between the investments
19 that were being made to the Sea Grant Program and
20 the priorities of the Services's national bycatch
21 plan and its spending priorities so that they could
22 be a little bit more in sync and maybe accomplish

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 more together.

2 MR. RAYBURN: Thanks, Scott. Any other
3 -- Ken.

4 MR. ROBERTS: Thanks, Mr. Chair. I
5 wrote some notes down yesterday at the conclusion,
6 and I didn't get a chance to see Jim. I was going
7 to ask the question whether he was proposing a
8 review of Sea Grant Extension and National Marine
9 Fisheries Service interactions; specifically, on
10 his set-aside money -- the \$2 million that was a
11 new enhancement effort. Was that what he was
12 speaking about? Was he speaking an all
13 encompassing study of everything that Sea Grant
14 Extension does, from aquaculture to coastal zone
15 interaction and restoration techniques in
16 communities? I needed it to be a little bit
17 sharper for me to make a decision as to whether or
18 not things like Rod and them are speaking about --
19 what kind of time commitment would it take to get
20 it done, number 1?

21 The second thought I had was when he
22 made his -- I guess it was a request of MAFAC and I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 wasn't sure and I wanted to ask him. One of his
2 bullets was for Sea Grant Extension in each state
3 to designate a bycatch contact. And after I got to
4 thinking about that, I'm wondering what's stopping
5 him from doing that now? I just couldn't
6 understand what the constraint was there, and I
7 didn't see the reason for MAFAC to have to get
8 involved in that, other than we didn't obviously
9 have any objection to it. But I couldn't
10 understand where he was constrained from doing
11 that. So.....

12 MR. RAYBURN: Thank you. Any other?
13 You know, I'd like to just offer what I -- I mean,
14 this has turned out to be a Sea Grant deal, and
15 obviously I have some interest in that. But I
16 really -- when we started the dialogue with Tony
17 and I and Laurel about the bycatch issue, it was
18 just that in the concept that Sea Grant was an
19 element. And I really didn't set this up to impose
20 Sea Grant into the MAFAC program, but it seemed
21 like several things were coming together that would
22 provide an opportunity for a relationship between

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MAFAC and Sea Grant.

2 When Sea Grant received it's
3 reauthorization a couple of years ago it was fairly
4 unique that, in the language, fisheries extension
5 enhancement was listed with a line item and an
6 authorization for appropriations. So I think, Ken,
7 to your question with -- I understood that Murray
8 was talking about it, and I'd certainly call on
9 Laurel, too, because she's had some discussions
10 with Jim, too, about what this vision and concept
11 would be, but the focus that Jim was looking for
12 was a high-level group such as MAFAC -- and MAFAC,
13 I think, would be appropriate -- to validate the
14 fisheries extension enhancement efforts that Sea
15 Grant was undergoing and to ensure that the
16 concerns that Vince raises -- and others -- about,
17 you know, how Sea Grant can appropriately operate
18 in this regime really supports the vision and the
19 strategy that MAFAC is creating in the issue of
20 bycatch. And maybe there are other fisheries
21 issues out there where there would be a role, too,
22 but it seems in bycatch.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So I think we're really looking -- or
2 my sense would be an element of MAFAC either at the
3 subcommittee or maybe an ad hoc working group that
4 would be ready to validate what Sea Grant is
5 attempting to do with fisheries extension
6 enhancement and also hold Sea Grant's feet to the
7 fire to come up with outputs and come up with more
8 than just hiring people and putting them in the
9 field but actually what are they accomplishing. I
10 think that's what I heard, too, yesterday. It all
11 looks good, but I think Liz asked the question so
12 what does it mean? You know, what are the outputs?

13 So, you know, it's not just a feel good thing. I
14 believe it's really something to validate it -- you
15 know, absent any relationship I have with Sea Grant
16 -- to ensure that what they're doing is synergistic
17 to what NOAA Fisheries needs to have done, what
18 they regions need to have done. If they're not --
19 you know, people on the dock responding not as
20 agents for NOAA Fisheries, but certainly as a
21 conduit for information to the fisheries community.

22 So that would be my two cents' worth, but I would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 yield to Laurel, if I could, Mr. Chairman, because
2 she has some vision and has talked to Jim and maybe
3 a perception on this as well.

4 MS. BRYANT: I don't want to -- Ralph
5 has pretty much said it all. I think -- and, Jack,
6 you know, chime in anytime you want to -- this kind
7 of initiated when that monies first came through.
8 I know Jack and I have served on the first panel,
9 and it was for fisheries outreach enhancement, and
10 the initial discussions that I've been involved in
11 with Hill staff early on it was really to get
12 bodies on the docks.

13 I mean, we've got all the need in the
14 world to educate fishermen, to reach out to the
15 industry. Vince just said, gee, the turnout from
16 the industry was disappointing. Well, you know,
17 that's an old song we all hear, and this looked
18 like an opportunity where you've got skill sets and
19 bodies that Sea Grant has. We've got all the
20 issues and all the need. But you can't just throw
21 money at it because even though you get the
22 proposals out there there's no follow through. You

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 don't know, well, did it accomplish what it was
2 supposed to? Are the proposals targeting the most
3 need, and are they delivering it?

4 And to Rod's point, yes, it does take
5 time and some commitment and it takes some staff,
6 certainly on the part of Fisheries and Sea Grant.
7 But I think without that kind of investment and
8 finding some routine way -- which I think MAFAC can
9 offer us, if there is a subcommittee, some routine
10 way to revisit and review. You can start
11 integrating a process that then becomes more
12 visible and then can actually gain some of that
13 support. And for Fisheries to do it in a vacuum,
14 you all are the national reps that are out there
15 and know where some of the problem areas are and
16 know where maybe there are opportunities on -- or
17 letting those Sea Grant Extension offices know what
18 some of the needs are and that there is this
19 opportunity and help us craft stuff. So this was
20 merely trying to take advantage and trying to put
21 some kind of process in place to take advantage of
22 some monies and, certainly, some Hill interest and,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 as we kind of coined it, getting bodies on the
2 dock, and bycatch seemed to be a good beginning
3 point for that. Thanks, Mr. Chairman.

4 MR. RAYBURN: I'm sorry. The hat did
5 it, Rod.

6 MR. MOORE: Yeah, I figured if I
7 waved.....

8 MR. RAYBURN: Yeah, I.....

9 MR. MOORE:if I wiggled my tail
10 at you, you might pay attention.

11 MR. RAYBURN:I'm lost in space.
12 Yeah, really. Rod, please. Thank you, Laurel.

13 MR. MOORE: I just wanted to point out
14 and, you know, sort of bolster some of what Laurel
15 said. Before your class got on MAFAC, we actually
16 had a long discussion. It was in our, I think,
17 2000 New York meeting about ways to better improve
18 communication of not just new gear types and so
19 forth but, you know, regulatory activities and all
20 of that sort of stuff with the fishing community.
21 And one of the things that MAFAC came up with at
22 that time was that we ought to see if we can use

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Sea Grant to do this because Sea Grant does have
2 the people down on the docks to do these sorts of
3 things. So, you know, MAFAC does have a history of
4 trying to get Sea Grant kind of pulled in and
5 involved in this. You know, like I said, my
6 comments were more to how MAFAC is going to do its
7 work and how the structure is going to be and make
8 sure you guys.....

9 MS. BRYANT: Yeah.

10 MR. MOORE:don't set yourselves
11 up for failure. You know, do something that's
12 going to work.

13 MR. RAYBURN: Maggie, was that.....

14 MS. BRYANT: And don't start throwing
15 pens at people, Maggie.

16 MS. RAYMOND: Thank you, Ralph. I have
17 a suggestion as I've been sitting here listening to
18 people, and if Sea Grant is going to continue and
19 go forward with more of these workshops like they
20 had in New England possibly you might check with
21 who your MAFAC people are in whatever region that
22 is. That certainly wasn't done in New England.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. RAYBURN: Okay.

2 MS. RAYMOND: And, you know, I think
3 the outreach in New England to the industry was not
4 good, and so you really need to improve that. You
5 know, and I looked at the presentation and I
6 thought that was a lot of money that was spent on
7 that workshop and I don't know what the outcomes of
8 it will be. But I think if they're going to
9 continue with that then that needs a lot of
10 improvement.

11 MR. RAYBURN: Okay. Thank you. I
12 think that is the plan. At least the Southeast
13 Regional Administrator seems to be interested in
14 following suit, and I'll probably be in a role of
15 assisting in preparation for the workshop in the
16 Southeast. So any comments you have on how to
17 improve it certainly would be welcome.

18 MS. BRYANT: And also, Maggie, just
19 with outreach, because I know that they were trying
20 to do everything they could and do it on Webs and
21 all of that. So getting that back to the region
22 and Marla Trollan and everything, that would be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 helpful as well, whatever your suggestions for
2 improving it would be.

3 MR. RAYBURN: You know, I'd have one
4 other comment. Not to dominate, but it seems to me
5 in the role of MAFAC it's -- you know, as the
6 advisor to the Secretary of Commerce on all living
7 marine resources under his jurisdiction that this
8 is -- we then create a point of focus where that
9 there can be this consideration given for the
10 different elements of Commerce that are dealing in
11 fisheries, whether it be just NOAA Fisheries or
12 whether it be Sea Grant Extension. But I know just
13 from my own experience and career and where I've
14 been that there sometimes is a conflict where you
15 have Sea Grant going one way and NOAA Fisheries or
16 other groups going another way, and there's not a
17 point of really bringing it together. And, I mean,
18 as we've gone around and tried to establish the
19 relationship of -- you know, certainly there's that
20 baggage that's left over from previous times where
21 that's happened, and so you don't necessarily want
22 a system where you force everybody to march in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 same step. But, certainly, you don't want to have
2 a situation where one unit of Commerce, even though
3 it's relatively independent and university based
4 and all that, it's still -- if it wasn't for the
5 money coming through Commerce the program wouldn't
6 exist. So, you know, you still have some -- you
7 need some point of focus, I think, to ensure that
8 what one group is doing is validated with the other
9 group. And so MAFAC seems to me to be a reasonable
10 point of focus, and I'd say that whether I was in
11 Sea Grant or not. I mean, I'm really not trying to
12 push this in that realm, but I think that would be
13 an appropriate deal, too.

14 So maybe if I could suggest then
15 perhaps we could look at possibly establishing a
16 group. I would consider maybe a mixture or find
17 out within Tony's Outreach Committee who in his
18 group may be willing to be interested in committing
19 to this, the people in Bycatch doing the same
20 thing, and Laurel could look at what the staff time
21 may be required to do this and how it may set up
22 and give us in a proposal about how this may work.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Liz, you had talked to me a little bit -- I mean,
2 does that kind of sense a little bit of what you
3 were interested in doing, or does that hit the
4 target at all?

5 MS. SHEEHAN: I think that MAFAC can
6 help respond to the presentation to help focus and
7 I think, as Vince suggested, figure out how does
8 their work relate to the end goal so we can track
9 that more closely. My only concern about taking on
10 a bigger project is looking back at the minutes and
11 the sort of top 10 issues that we laid out in
12 December in New York that we're supposed to be
13 working on, and so how does that weigh against
14 maybe those issues in terms of MAFAC time? So that
15 would just be my -- but I would be happy to
16 participate in sort of looking at how we measure
17 the goals.

18 UNIDENTIFIED SPEAKER: What page is the
19 top 10?

20 MS. SHEEHAN: First of the minutes.

21 MR. RAYBURN: Any other comments, then?

22 Yes, Rod.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MOORE: Ralph, again, if I can just
2 offer an observation, what you might want to do is
3 ask Laurel to work with Jim Murray and come back to
4 you guys at whatever your next meeting is with a
5 suggested structure and budget and, you know, how
6 this would be accomplished and so forth. And then
7 when you appoint your working group you might want
8 to consider, regardless of who is on which
9 subcommittee, seeing if you can get an appropriate
10 mix of the various regions of -- the NOAA regions
11 of the U.S. so that you've got somebody from New
12 England, somebody from Southeast, somebody from the
13 Gulf, somebody from the West Coast, somebody from
14 Alaska and, that way, your plugged in to what's
15 going on because Sea Grant does different things,
16 as you know, Ralph, in different parts of the
17 country. So rather than looking at who's sitting
18 on what subcommittee in MAFAC form your working
19 group based on where the expertise and local
20 knowledge can come from so you can filter that in.
21 But you might -- as I say, you may want to wait
22 until your next meeting to do this so you can get

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 things better fleshed out, get a better
2 understanding of what the budget and time
3 commitments would be both from NMFS and from Sea
4 Grant.

5 MR. RAYBURN: Okay. Is that a -- how
6 best to handle that is a motion or just a
7 consensus? Would you want to have that as a
8 motion, Rod, that we pass.....

9 MR. MOORE: I am reluctant to make
10 motions to commit MAFAC members to stuff where I'm
11 not going to be around, but if you want me to I'd
12 be more than happy to, Ralph.

13 MR. RAYBURN: You're still a member in
14 good standing, as far as I know, even though you've
15 got the hat.

16 MR. MOORE: Good sitting. I don't know
17 about standing. Well, I will so move that MAFAC
18 ask NMFS or the MAFAC designated Federal officer to
19 come back at whatever your next meeting is with a
20 report on the staffing and time and fiscal
21 commitments and a suggested plan of action from the
22 Federal side to allow MAFAC the opportunity to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 consider establishing a working group that would
2 serve as a continuing oversight of Sea Grant/NMFS
3 interactions. There, you got a motion. If anybody
4 wants to second it, that's fine.

5 MS. BRYANT: I'm so glad we got a
6 recorder.

7 MR. RAYBURN: Seconds?

8 MR. BURNS: Second.

9 MR. RAYBURN: Thank you. Thanks,
10 Scott.

11 CO-CHAIR MR. OSTERBACK: Discussion on
12 the motion. Does anybody remember exactly what he
13 said?

14 MR. MOORE: Yeah, I do, but I ain't
15 going to be here. You can pay me to come to
16 Hawaii, and I'll tell you.

17 MS. BRYANT: It's being recorded.

18 CO-CHAIR MR. OSTERBACK: Maggie.

19 MS. RAYMOND: I got as far as to
20 establish a working group to.....

21 CO-CHAIR MR. OSTERBACK: We got it on
22 the recording.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. RAYMOND: Oh.

2 CO-CHAIR MR. OSTERBACK: It's recorded.

3 MS. RAYMOND: Yeah, but I want to know
4 what it is before I vote on it.

5 CO-CHAIR MR. OSTERBACK: Can you read
6 it back? Can the recorder read it back?

7 MS. RAYMOND: Can you repeat that part?

8 MR. MOORE: I can start from the
9 beginning. I'm not sure I can start from the
10 middle.

11 CO-CHAIR MR. OSTERBACK: Can you ask
12 the recorder to read it back?

13 MR. RAYBURN: Read what you have,
14 Maggie, and maybe then we can just.....

15 MS. RAYMOND: MAFAC asked NMFS' DFO to
16 report on staffing, time, commitments and a plan of
17 action to allow MAFAC to establish a working group
18 to.....

19 MR. MOORE: To provide continuing
20 oversight of NMFS/Sea Grant interactions, I think
21 is how I phrased it.

22 MS. RAYMOND: Thank you.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR MR. OSTERBACK: Okay.

2 Discussion.

3 MR. MOORE: Short-term memory loss.

4 CO-CHAIR MR. OSTERBACK: Yes, sir.

5 MR. SIMPSON: I personally think this
6 is an excellent idea.

7 CO-CHAIR MR. OSTERBACK: Could you say
8 that again?

9 MR. SIMPSON: I say I personally think
10 this is an excellent idea.....

11 CO-CHAIR MR. OSTERBACK: Oh, okay.

12 MR. SIMPSON:and I think it has a
13 way of focusing and directing and initiating
14 direction to Sea Grant. In many Sea Grant
15 programs, it's been my experience that they are
16 very focused; in others, they seem to be wandering
17 a little aimlessly. And I think this kind of
18 group, with the crosscutting knowledge and
19 expertise that it has, has an excellent potential
20 as well as, I think, probability of doing good work
21 here. You know, we're not talking about this group
22 doing the generation and the staff work. Assuming

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 you have some staff to help you do the things, the
2 mind and the brainpower and experience is what this
3 group would offer this activity, and it's good to
4 have a different group to look to.

5 We in the Gulf in our FIN Program --
6 Fisheries Information Network -- have used outside
7 people to tell us are we doing what we should be
8 doing with data collection. It's a good thing. I
9 support it. I think it's an excellent thing.

10 CO-CHAIR MR. OSTERBACK: Okay. Any
11 other comments? Tony.

12 MR. DILERNIA: Question. As a member
13 of the freshman class, I'm still having a little
14 bit of difficulty understanding the difference
15 between committees and working groups. Just
16 because the term working group was used in the
17 motion, it's a good opportunity for me to ask for a
18 clarification maybe one more time.

19 MR. MOORE: No problem. May I respond,
20 Mr. Chairman?

21 CO-CHAIR MR. OSTERBACK: Sure.

22 MS. BRYANT: Yes, you may.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MOORE: When we reinvented MAFAC
2 back at the ptomaine palace meeting in Maryland in
3 1998 we set up a structure whereby there would be a
4 couple of standing committees that are formally
5 designated with membership and so forth, and the
6 chairs of those committees sort of served on the
7 Steering Committee, along with the Chairman of
8 MAFAC, to provide sort of executive direction for
9 MAFAC in terms of budget and that sort of thing.
10 When you guys came in I guess at the last meeting,
11 or whenever it was -- it must have been at the last
12 meeting.....

13 MR. DILERNIA: This is our fourth.

14 MR. MOORE: Huh?

15 MR. DILERNIA: This is our fourth.

16 MR. MOORE: This is your fourth?

17 MR. DILERNIA: This is the fourth
18 meeting for the.....

19 MR. MOORE: God, time flies when you're
20 having fun.

21 MR. DILERNIA: Yeah, I know.

22 MR. MOORE: All right. It was the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 first meeting in D.C.....

2 MR. DILERNIA: Yes.

3 MR. MOORE:that you guys were at.

4 That's.....

5 MS. BRYANT: Right.

6 MR. MOORE:what it was. You
7 decided to change that structure somewhat by
8 getting rid of some of the standing committees and
9 establishing different ones. But, other than that,
10 what you said was that we would continue to have
11 the standing committees and then, as necessary,
12 appoint working groups for specific tasks, whether
13 they be short-term or long-term, but more goal
14 directed tasks towards certain things. That's why,
15 for example, we have the National Standard One
16 Guideline working group. It was a short-term
17 duration directed to a specific issue. You know,
18 there were three of us appointed to it, and so
19 forth and so on.

20 So for something like this, rather than
21 having a standing committee which would seem to
22 indicate the now and forever kind of thing you may

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 want to have a specific working group which gives
2 you a little bit more flexibility for people to get
3 on and off and it also -- working groups, the way
4 that MAFAC was structured, are exempt from the one
5 person one committee rule and, you know, everybody
6 lobbies to get on the Outreach Committee and
7 everybody lobbies to get off the Bycatch Committee,
8 you know, that sort of thing. So a working group
9 is a more flexible functioning subunit of MAFAC
10 with a specific goal.

11 MR. DILERNIA: Thank you.

12 MR. MOORE: You're welcome.

13 CO-CHAIR MR. OSTERBACK: Any other
14 comments on the motion?

15 MR. MOORE: Do I get to be named MAFAC
16 historian?

17 CO-CHAIR MR. OSTERBACK: We'll put you
18 in the museum.

19 MR. MOORE: Can I take my hat?

20 CO-CHAIR MR. OSTERBACK: Okay, take the
21 hat. We have a motion on the table. So if there
22 is no other comments on the motion, all those in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 favor signify by saying aye.

2 IN UNISON: Aye.

3 CO-CHAIR MR. OSTERBACK: Those opposed,
4 same sign.

5 (No opposing responses)

6 CO-CHAIR MR. OSTERBACK: Hearing none,
7 we have direction. Ralph.

8 MS. BRYANT: I've been directed.

9 MR. RAYBURN: Thank you, Mr. Chairman.

10 CO-CHAIR MR. OSTERBACK: You have
11 anything else?

12 MR. RAYBURN: That's all I have. Thank
13 you.

14 CO-CHAIR MR. OSTERBACK: Okay. Thank
15 you. And Committee?

16 MR. ROBERTS: Are we jumping over
17 Jack's?

18 CO-CHAIR MR. OSTERBACK: Jack?

19 MR. ROBERTS: Are we jumping over
20 National Standard One Guidelines?

21 MS. BRYANT: No. Jack's next.

22 CO-CHAIR MR. OSTERBACK: No. He's up

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 next, and he's promised that he wasn't going to
2 take too much time, but Maggie had something she
3 wanted to.....

4 MS. RAYMOND: Thank you. I have a
5 process question. Yesterday, we received several
6 presentations from NMFS and at the end of the first
7 one we agreed that the Outreach Committee would
8 look at the Fish 101 document but we didn't make
9 similar commitments on the other issues and I'm
10 just wondering if we're going to be doing that at
11 some point because there will be some conflicts.
12 People will be on some working groups and some
13 committees and we need to schedule this for those
14 sessions for tomorrow morning and as you'll recall
15 at our last meeting there was some controversy
16 because some groups met and people didn't know
17 where they were and they wanted to sit in on the
18 discussion. So we have to make sure that before
19 this day ends we have a schedule for tomorrow
20 morning for the committees and the working groups
21 that don't conflict and everybody knows where
22 they're going to be meeting and so we -- you know,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 I just wanted to make sure we did that before this
2 day ends.

3 CO-CHAIR MR. OSTERBACK: Okay.

4 MR. MOORE: Mr. Chairman, could I also
5 ask a process question?

6 CO-CHAIR MR. OSTERBACK: Sure.

7 MR. MOORE: And this is both to you and
8 then to Tony -- and, Laurel, you in the absence of
9 Bill, I guess.

10 MS. BRYANT: Uh-huh.

11 MR. MOORE: I was going through the
12 Fish 101 document yesterday and there's a whole
13 bunch of comments that are fairly detailed that I
14 would like to make and is the best way, Tony, to e-
15 mail them to you? I mean, I'm not going to have
16 time to do it until after I leave here.

17 MR. DILERNIA: I would think, from what
18 I'm hearing from yourself and from other members, I
19 would suggest that probably the best way the
20 working group -- or the committee.....

21 MR. MOORE: Uh-huh, yeah, you're a
22 committee.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. DILERNIA: committee gives its
2 report would be that we would take comments
3 tomorrow and summarize those comments and leave
4 ourselves open -- well I don't know if Laurel -- if
5 I can do this, leave ourselves open for additional
6 e-mail comments from other members, and I would
7 compile all of that and photo -- the original
8 comments plus the additional e-mail comments to
9 Laurel within however many working days it takes to
10 give us a deadline -- five days, seven days.

11 MR. MOORE: Give me till the end of the
12 month. I'm not going to be around next week.

13 MR. DILERNIA: That's fine by me so
14 long as it's fine by staff.

15 MS. BRYANT: Oh, absolutely.

16 MR. DILERNIA: Okay.

17 MS. BRYANT: And it's going to take
18 time, actually. I mean, the transcripts, it takes
19 a number of weeks before those get in and once
20 those come in it will be having to go over the
21 transcript.

22 MR. MOORE: I mean, I'm not a member of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the Outreach Committee and, like I say, the
2 comments are extensive.

3 MR. DILERNIA: Any comments that I
4 receive I would forward to the full Committee under
5 the broadcast e-mail saying these are comments I
6 received from, you know, Mr. Moore, and, you know,
7 if you have any other and wish to add to it or
8 whatever so everybody sees what's being said. I
9 would -- you know, I think.....

10 MR. MOORE: Yeah. That's fine.

11 MR. DILERNIA:e-mail is a great
12 thing and for us to be able to communicate that
13 way, just broadcast it.

14 MR. MOORE: Yeah. I just, you
15 know.....

16 MR. DILERNIA: That's how I would go.

17 MR. MOORE:wanted to figure out a
18 way to get some comments to you guys. That's all.

19 CO-CHAIR MR. OSTERBACK: In the past,
20 some of the committees have worked by e-mail. So,
21 okay?

22 MR. MOORE: Thank you.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR MR. OSTERBACK: So, yeah,
2 we'll just set up some time before we get done this
3 evening and figure out all the committees since
4 we're going to start.....

5 MS. BRYANT: Who's going to be meeting
6 and when.

7 CO-CHAIR MR. OSTERBACK: Yeah. So,
8 Jack?

9 MR. DUNNIGAN: Thank you, Mr. Chairman.
10 I'm going to work really hard to get you back on
11 schedule. Laurel very kindly provided a nice block
12 of time to talk about the National Standard One
13 Guideline this morning. Back when she was doing
14 agenda planning, we weren't exactly sure where we
15 were going to be. Given where we are, it wouldn't
16 be useful for you to take that time today. So what
17 I'm going to do is just to bring you up to speed
18 with what's happened since the last time you met
19 and where we see this going and what I would like
20 to ask you for assistance for as we move forward in
21 the process.

22 When you met in December in New York,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Rick Methot, who is one of our senior scientists --
2 he works at the national level, although his office
3 is in Seattle -- made a presentation on a working
4 group report that was developed internally and has
5 been available on the Web for sometime. The
6 working group worked under the leadership of Pamela
7 Mace (ph) for about a year and a half, and it came
8 up with a series of issues related to the guideline
9 for National Standard One that the working group --
10 and I was a member of it -- recommended to Bill and
11 Rebecca that needed to be dealt with. We met as a
12 Fisheries Leadership Council in August of last year
13 and endorsed the recommendations of the working
14 group. The working group then had to finish the
15 paper, and it was rolled out in early December and
16 presented to you at that meeting in New York City.

17 Since then, the task that we have been
18 up to is to take the recommendations of the working
19 group report and put them into regulatory language
20 that we could actually incorporate into the CFR,
21 and that was hard job. It was a small group.
22 There were about four of us that worked on it, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 what we found as we were going through -- you know,
2 actually taking the text of the working group
3 report and the text of the regulation we found two
4 problems. First of all, there were a lot of very
5 detailed issues where the working group report
6 wasn't clear; and, you know, it looked good as we
7 were sort of reviewing it. We thought we knew what
8 it said, but when you actually have to write the
9 language it doesn't always appear to be so. So we
10 ended up having to go through a number of
11 clarifying exercises back with the working group.

12 Secondly, we ended up finding a lot of
13 issues that we thought were obvious that ought to
14 be picked up that had just sort of fallen through
15 the cracks; and, in the end, we elected not to do
16 that because we felt that our charge was to take
17 the working group report and put it into regulatory
18 language and not try to substitute our judgment for
19 what we thought would be significant or not, or
20 unclear or not or something like that. So we
21 really did try to limit ourselves just at coming up
22 with a document that would be the regulatory

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 language for the working group report. We also
2 internally realized we would have to write a NEPA
3 document to accompany this rather significant rule-
4 making, and we undertook to -- we made the
5 determination that, at least at this stage, it
6 didn't appear that any IS would be necessary. So
7 we've written a draft environmental assessment.

8 In terms of process, the idea that we
9 had last December -- and I think we talked to you
10 about this -- was one that we have ended up
11 following through on and that is not to go
12 immediately to a proposed rule, which is very
13 formal and has a lot of procedural implications for
14 what we can do and how we can deal with the public;
15 but, rather, to put out our document for general
16 public consumption early on and let people know
17 that we would be glad to hear your suggestions --
18 or their suggestions -- and try to incorporate
19 those, then, into what will be a proposed rule and
20 that's what we've done. That went out about six
21 weeks ago. It's available on the Web, both the
22 draft regulatory language and the environmental

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 assessment.

2 We haven't gotten a lot of responses
3 yet. We haven't set a deadline for coming back to
4 us, but what we have let the public know is that
5 our expectation is that we would like to begin the
6 final preparation of our proposed rule on September
7 1st. That doesn't mean we're going to stop
8 comments because, I mean, we're not in a formal
9 process. We have a lot of flexibility. If
10 comments come in before the proposed rule goes out,
11 you know, we can and may try to respond to those as
12 best we can at the time. I know there are some
13 regional Fishery Management Councils in particular
14 who are not going to have an opportunity to meet
15 until during that month of September, and they've
16 indicated to us that they may want to consider that
17 and would we try to use their comments if we could,
18 and our response has been sure. So it's nice to do
19 this in this way, in this sort of informal process.

20 I think it will help communications. So we are
21 going to proceed and will probably around the early
22 couple of weeks of October have a proposed rule out

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 in the Federal Register.

2 The draft that is on the Web site
3 shouldn't surprise anybody because it's only
4 supposed to be language to implement the stuff that
5 was in the working group report that came out in
6 December of '03. So if there's new stuff in there
7 to you, maybe we messed up. So if you were to just
8 focus on the ideas in the working group report you
9 would be doing the right thing. It is still our
10 hope that we can have a final rule in January -- as
11 close to January 1st as possible. That's going to
12 require us to move very quickly, and it will depend
13 upon the nature and extent of comments that we
14 receive once we get a proposed rule.

15 So I would like to have an opportunity
16 to talk about the issue to talk -- and probably in
17 an executive session -- to talk about the public
18 comment that we got and what our response to it is
19 and get your feedback and advice to us as to how we
20 should be responding to this. There's going to be
21 a timing question. You're not meeting in December
22 this year. You're apparently going to meet in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 January. So, you know, it's up to Bill and Rebecca
2 to see, you know, how -- whether or not they're
3 willing to be able to hold off. I know Bill is
4 very anxious about moving this and, you know,
5 depending on how the election comes out January
6 could be a very important month for Bill Hogarth.
7 So, you know, we're going to have to see how that
8 works out. It may be that we'll talk to Laurel
9 about the possibility of some interim meeting.
10 Maybe a virtual meeting of some sort that would
11 give MAFAC members an opportunity to feed back to
12 us your reactions to the public comment that we
13 receive on the proposed rule. But that's the
14 process that we're going through and sort of what
15 our expectation is for a time frame for completing
16 the project.

17 CO-CHAIR MR. OSTERBACK: Rod.

18 MR. MOORE: Thanks, Al. A couple of
19 things, Jack. First of all, on the process of
20 trying to do an interim meeting and so forth there
21 is a National Standard One Guideline Working Group
22 that we have in MAFAC. One member is going to be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 gone after the end of this month, but -- so I'm
2 assuming that you want to reappoint to that seat,
3 but the other two members are still around. So,
4 you know, you may want to try to coordinate through
5 that working group as well as involve all of MAFAC.

6 Let me finish, Jack.

7 MR. DUNNIGAN: No, I.....

8 MR. MOORE: Oh, okay. The second thing
9 is looking at what MAFAC adopted at our December
10 meeting on the National Standard One process there
11 are two issues there but most of it, aside from
12 complimenting the working group and the work that
13 you guys have done, which I still think is
14 excellent -- you know, a lot of it has to do with
15 stuff that should be done in the future in terms of
16 involvement of councils and so forth, but there
17 were two particular issues. One was looking at
18 environmental influences on rebuilding, and the
19 other was reconsidering the decision to reject an
20 update on Restrepo's work. I'm assuming that both
21 of those recommendations by MAFAC have gone by the
22 boards, given the process that you're in?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. DUNNIGAN: No. I think they've
2 been deferred.

3 MR. MOORE: Okay.

4 MR. DUNNIGAN: The recommendations
5 haven't gone by the boards, but at this stage of
6 the exercise our job was not to respond to any new
7 information. We had a very thoughtful comment from
8 The Marine Fish Conservation Network. We also
9 didn't respond to that in drafting this proposed
10 rule. Our task was to take the working group
11 report and make it into a proposed rule and not
12 address the policy feedback that we were getting
13 from whomever, and so those recommendations are
14 deferred. And now that we're getting and asking
15 for comment back.....

16 MR. MOORE: Uh-huh.

17 MR. DUNNIGAN: we will be
18 considering those in deciding where to go with the
19 proposed rule.

20 MR. MOORE: Okay. So the MAFAC
21 comments then are still on record. Do they have to
22 be resubmitted to you guys.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. DUNNIGAN: No.

2 MS. BRYANT: I don't think so.

3 MR. MOORE:under the proposed
4 rule.....

5 MR. DUNNIGAN: No, no.

6 MR. MOORE:or process or.....

7 MR. DUNNIGAN: No.

8 MR. MOORE: Okay. So our comments are
9 still formally on record.....

10 MR. DUNNIGAN: Right.

11 MR. MOORE:from MAFAC?

12 MS. BRYANT: Yes.

13 MR. MOORE: Thanks. I'm done, Dick.

14 CO-CHAIR MR. OSTERBACK: Dick.

15 MR. GUTTING: Jack, I just wanted to
16 compliment you on the process and the
17 presentations. I think what is striking to me just
18 from a historical standpoint is you were really
19 engaging us in a dialogue and I think -- thank you
20 for that. That's making the best use of this
21 Committee. This is an incredibly complicated,
22 dense issue. It's mind numbing in its complexity,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and so I appreciate how difficult it is to try to
2 bring it forward.

3 My only suggestion is that we all have
4 an opportunity to comment. Each of us as an
5 individual can certainly review this and give you
6 our thoughts, but to make the most productive use
7 of this Committee what would really be exciting
8 would be if you or Bill were able to, after you've
9 seen the comments from others -- you've got some
10 core policy choices, and if you could bring back to
11 the Committee kind of what's on your minds or
12 what's on Bill's mind. You know, what are the
13 policy choices that you see as being the most
14 significant ones, and basically giving MAFAC three
15 to five of those questions like you did yesterday.

16 Put them up on the board and then have the
17 discussion.

18 The value of MAFAC, it seems to me, is
19 in each one of the members hearing the others'
20 comments and being able to react to it. But to be
21 useful we have to be relevant, and we really need
22 you to say, look, guys, you know, here's a choice

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 we've got to make. You know, we can go this way,
2 or we can go that way. What's your advice? If you
3 could help frame that discussion in the fall or
4 whenever is an appropriate time I think it would be
5 a very.....

6 MR. DUNNIGAN: Okay.

7 MR. GUTTING:exciting, productive
8 meeting, rather than trying to jump into this thing
9 and get buried instantly in the terminology and the
10 technical aspects of it.

11 MR. DUNNIGAN: Right. That's a good
12 suggestion.

13 MR. GUTTING: That would be my
14 suggestion.

15 MR. DUNNIGAN: Good suggestion. Thank
16 you.

17 CO-CHAIR MR. OSTERBACK: No other
18 comments?

19 MR. DUNNIGAN: That's all I have.
20 Thank you.

21 CO-CHAIR MR. OSTERBACK: Okay. Thanks,
22 Jack. Okay.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. BRYANT: I need to go find Bill.
2 Do you want to take a break?

3 CO-CHAIR MR. OSTERBACK: We've got
4 Governor Frank Murkowski coming at 9:30. So
5 another five minutes. So.....

6 MS. BRYANT: You want to take a break
7 while I go and find Bill and give him a phone call
8 and see if he's still on-line?

9 CO-CHAIR MR. OSTERBACK: Yeah.

10 MS. BRYANT: You want me to do that?
11 Take a break so I can go.

12 CO-CHAIR MR. OSTERBACK: Okay. We'll
13 take five. Everybody can get a cup of coffee
14 before the Governor gets here.

15 MR. KENT: If I could see the speakers
16 for the next session out in the hall for just a
17 minute I'd appreciate it. Thank you.

18 (Off record)

19 GOVERNOR MURKOWSKI: (Equipment
20 malfunction) adequate fishery that will provide a
21 good living opportunity for many of our smaller
22 communities in Wrangell. As you know, there's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 quite a fishery out of there and a few other areas
2 on the west coast of Prince of Wales and there's
3 room for others and it's going to take good
4 management and good science. The idea of moving in
5 beyond that, of course, is something that I think
6 we're faced with in the aquaculture area as to how
7 far, if at all, we want to go and I'm mixing
8 synonyms a little bit in a sense because Canada is
9 moving into the black cod. They're moving into the
10 shrimp. They're moving into halibut.

11 We have always maintained here in
12 Alaska a concern about farm raised salmon, and I
13 maintain that concern. My administration is not in
14 a position at this time nor are we likely to be, in
15 my opinion, to promote fish farming. We think that
16 we are managing pretty well our anatomous fish to
17 the point that we can do better with quality
18 control, advertising wild Alaska salmon and better
19 marketing efforts and concentrate on our wild
20 species and let the Canadians and others that have
21 already established a significant market for farm
22 raised salmon continue, and we'll try and to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 concentrate more on the quality issue and the
2 benefits of wild Alaska salmon because clearly
3 there have been concerns raised about farmed salmon
4 and the environment that they are raised in and the
5 consequences of disease associated with that and
6 escape.

7 So I just wanted to kind of outline,
8 you know, where we're coming from, I think, as far
9 as cod, halibut and shrimp and other species that
10 we are going to be faced with at some point in time
11 if, indeed, it does develop into a significant farm
12 commercial -- that we're going to have to evaluate
13 that as we go along. But the point I want to make
14 is a pretty simple one. We want to make our
15 decisions on the basis of the best science as
16 opposed to the emotions and that's what I'm
17 committed to and that's why I think our Department
18 of Fish and Game has done a pretty good job. I
19 mean, if you want to get a flavor for it, why just
20 hang around the Kenai River and get the diversity
21 of those from the commercial aspects and those from
22 the sportfishing aspects, and neither side are very

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 happy. But they had a record run, which suggests
2 that, you know, we must be somewhere in the middle,
3 although people will argue either way. But, you
4 know, the policies and guidelines that comes out of
5 gatherings such as this are very important in the
6 direction of managing this renewable resource, and
7 that's why I wanted to come down and say hello and
8 answer any question or, if I don't have the
9 answers, give them to Allen and he's pretty good at
10 it. And that's about all I have to say other than
11 to thank you for being here and contributing your
12 expertise and time.

13 One of the things I learned a long time
14 ago in my 22 years in the Senate is we have a lot
15 of hearings and the hearings bring in the witnesses
16 and the witnesses are the best supposedly witnesses
17 that, you know, we could reach out and get. But
18 it's awfully hard to get them in a mode to give
19 their opinion and kind of lay their reputation on
20 the line with their opinion. There's a reluctance.

21 Well, I can't quite say that because if I had a
22 little more time or if I had another study or a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 little more money I could probably give you a more
2 definitive -- but, hell, who are you going to
3 depend on if you can't depend on those people,
4 because that's all there is. You can't depend on a
5 bunch of Senators that know nothing about it and
6 are going to vote yes or no. They're not going to
7 vote maybe. So that's why, you know, your input is
8 so important, and I think it works both ways. You
9 have to kind of realize that you are important.
10 Your, you know, field of study and expertise is all
11 we can look towards.

12 On the other hand, you get into the
13 shouting matches with those that are moved by the
14 emotional argument, and oftentimes they carry the
15 day. But that's just the harsh reality of my
16 experience working out there. But you've got some
17 people that clearly have been around for a while
18 and know what they're doing. Gunnar and others
19 certainly have a wide-ranging reputation. So I
20 commend you. That's it. Anything else? Okay.

21 CO-CHAIR MR. OSTERBACK: Thank you.

22 GOVERNOR MURKOWSKI: I can get out of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 town fast.

2 (Applause)

3 CO-CHAIR MR. OSTERBACK: Don, that was
4 timed just right. Now the Aquaculture has got
5 their marching orders.

6 MR. KENT: Thank you. I'd still like
7 five minutes, if we could. I haven't had a chance
8 to actually meet with the speakers, and Linda needs
9 to set up her presentation. So if we could.....

10 CO-CHAIR MR. OSTERBACK: Sure. We'll
11 drink coffee for that time.

12 MR. KENT: Thank you very much.
13 Appreciate it. Again, if I could have the speakers
14 outside.

15 (Off record)

16 MR. KENT: Thank you, Alvin. As
17 Chairman of the Aquaculture Subcommittee, I've been
18 asked to introduce the speakers today on this
19 subject, and I just want to give a little bit of
20 historical background. Love the hat, Rod. Please,
21 don't ever take it off.

22 First off, I'd like to thank Alvin for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 arranging for the Governor's visit. That was
2 wonderful and, as Alvin said, it kind of sets the
3 context for what we need to deal with now. At our
4 last meeting in Washington, D.C., MAFAC
5 Subcommittee reported back to the full Committee on
6 the recommendations made within the Pew
7 Commission's report, and in our December meeting in
8 New York we also reported back on the comments made
9 on the U.S. Commission on Ocean Policy report, the
10 draft report. We decided to come spend some extra
11 time at the next MAFAC meeting -- this one -- to go
12 into a little more depth, have speakers come and
13 present material and then have a more in-depth
14 discussion.

15 During that time period since the New
16 York meeting, NOAA has taken a look at its goal --
17 its published goal it's had for sometime of
18 producing 2 million metric tons of additional
19 seafood through aquaculture to meet the estimated
20 increase in U.S. domestic demand and thereby
21 offsetting a predicted additional contribution to
22 the trade deficit of approximately \$5 billion.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Toward that end, one strategy for trying to realize
2 that goal was for the Department to direct NMFS to
3 develop a business case, that business case to
4 investigate the potential for development of
5 aquaculture in the EEZ as is being done offshore in
6 many other countries around the world.

7 So that draft business case is going to
8 be brought to you in its current form today by
9 Linda Chaves. Dr. Hogarth has asked MAFAC to make
10 comments on the case. We've taken Linda out of
11 order here and moving her to the front so that we
12 can set the context for the meeting with the
13 business case. We have speakers here representing
14 not only the economic aspects but the fishing
15 industry, environmental community, Native peoples
16 and scientific research.

17 I would ask that during the
18 presentations what we do is we limit our questions
19 to those of clarification holding, you know, second
20 order philosophical discussions for the end of the
21 speakers and then the major philosophical
22 discussions towards the end after the final speaker

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 is done and then Linda can come up and will set
2 context overall for all the presentations, have the
3 philosophical discussions in the full Committee,
4 and then tomorrow morning the Aquaculture
5 Subcommittee during the breakout session will meet
6 and try to summarize all of these issues back and
7 come back with a report from the Subcommittee.
8 With that introduction aside, I'd like to ask Linda
9 to go ahead and start.

10 CO-CHAIR DR. HOGARTH: Let me say
11 something before Linda to sort of -- from a NOAA
12 perspective and a NOAA Fisheries perspective. You
13 know, we've talked about aquaculture for many years
14 in the Federal government. We've done code of
15 conduct. We've done different things as far as
16 aquaculture is concerned, but it never has, except
17 for the Department of Agriculture, really had money
18 and, you know, people putting any effort into it.
19 Permitting is somewhat of a haphazard type thing.
20 We give experimental permits to get something for
21 aquaculture. OAR has some money that they work
22 with different various groups. You know, we think

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 it's time that we have a really open dialogue on
2 aquaculture. The seafood industry being in the
3 condition it's in, we finally think that this is
4 the opportunity not only for food production in
5 several instances but it is also a very valuable
6 tool for stock enhancement, and I think it's being
7 used as stock enhancement a lot more than people
8 realize. But they sort of separate out the stock
9 enhancement and don't call it aquaculture, but it's
10 really aquaculture.

11 On the West Coast, we have
12 approximately 11 hatcheries that we operate in
13 connection with the Endangered Species Act and
14 salmon on the West Coast, and there's some here in
15 Alaska that operate for salmon. If you look at
16 what's happened in some of the states that have had
17 reduction in fisheries or taking people out of
18 fisheries such as Florida -- Linda will talk about
19 it -- but it went into net ban. Those fishermen
20 were able to pick up and do aquaculture of clams.
21 So, you know, it's been an avenue, I think, for the
22 industry that if you can't, you know, make a good

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 living in fishing off wild stocks there are some
2 opportunities, I think, in aquaculture that it
3 could go to.

4 And I think we need to look at the big
5 picture. We need to make sure -- there are several
6 questions you'll see at the end of this, which I
7 won't go into because Linda and the others will
8 discuss it very thoroughly. But we're not trying
9 to push anything down anybody's throat. We just
10 think that it's time to have an open discussion.
11 We know what other countries are doing. We know
12 that, for example, Norway is putting in probably
13 more money in aquaculture than we are spending in
14 our entire fishery budget. And we know what
15 imports are doing in several instances to the
16 shrimp industry. They've gone up 30 percent. So
17 we know that our industry is being impacted by
18 imports and aquaculture products, but we still
19 don't seem to have a policy or things in this
20 country to go into aquaculture in a responsible
21 way. That's what we're looking for. Should this
22 country have aquaculture? Should it have stock

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 enhancement? What species would you utilize? How
2 would you do it responsibly? Who would do the
3 permits, and things like this?

4 So, you know, we want a good
5 discussion. This will be aired many times before,
6 I think, something permanent goes on, but the
7 opportunities for deepwater aquaculture is going to
8 be -- there's a project in California, for example,
9 that they will release one millionth white sea bass
10 as stock enhancement soon. If you go to Hawaii,
11 estimate -- a whole lot of species that have been
12 taken through the -- you know, that have gone
13 through aquaculture and are ready for commercial
14 production. I think it would help the market. I
15 think it would help us maintain the market. For
16 example, in red snapper we have a market of about
17 six months a year. Then imports or something else
18 takes over or some other species takes over. Then
19 you have to fight to get that market back.

20 So, you know, I know it's controversial
21 and maybe it's not the right time to be talking
22 about it, but I think it's the time -- I think time

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 is sort of running out on us if we don't talk about
2 it and don't do it responsibly and don't get
3 everybody's input. It will be done openly. It
4 will be done with a good thorough discussion from
5 all those, pros and cons, and everyone. But,
6 hopefully, at the end of this we could go in with
7 an open mind and come out with some type of policy
8 or direction that will make this -- it will aid our
9 industry, aid our fishermen, create jobs and help
10 the economy and help those people who are really
11 being impacted. That's the goal. So I hope today
12 -- I've looked forward to today because I think it
13 will be a good open discussion. So that's my two
14 cents' worth before we start.

15 MS. CHAVES: Thanks, Bill. First of
16 all, aquaculture as defined by the National
17 Aquaculture Act -- and I thought this was important
18 because I've heard a lot of different terms being
19 used -- aquaculture, mariculture -- people talking
20 about mariculture just being shellfish aquaculture
21 -- but it is really the propagation of myriad
22 aquatic organisms in a controlled selective

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 environment for any commercial, recreational or
2 public purpose. So that includes enhancement. It
3 includes endangered species recovery and a whole
4 variety of other things.

5 Aquaculture, as far as we're concerned,
6 is a tool. It can be used for commercial
7 production. Those are moi in a cage off of Hawaii.

8 Enhancement of wild fishery stocks. This is the
9 first yellow-eye rockfish that we've been able to
10 grow in our laboratories, looking at possibly using
11 those to enhance those resources because they're
12 depleted. And then, of course, recovering
13 endangered species where we've done a lot of work
14 on Redfish Lake sockeye.

15 What I'm going to talk about today is
16 to provide a little bit of a context for
17 aquaculture in the United States, briefly review
18 the Ocean Commission recommendations, introduce the
19 National Offshore Aquaculture Act around which
20 there's been an awful lot of discussion and
21 publicity and, also, introduce the business case
22 which you were provided copies of, and I can't read

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 mine somehow. I need better glasses.

2 Current situation. Wild capture
3 fisheries are static, and they're unlikely to
4 expand. As much as we would like to have the
5 oceans produce a whole lot more fish, that's not
6 going to happen. Our seafood demands are
7 increasing just not in the United States, but
8 globally, and in the United States we imported \$11
9 million worth of seafood last year to meet that
10 domestic demand and our deficit just for seafood
11 products -- not all fisheries products, which
12 include industrial things, but just for seafood --
13 was \$7.8 billion and those numbers are increasing
14 on an annual basis.

15 There is some question about the safety
16 of some of our imports, particularly in the world
17 we live in today. I know I've seen photographs of
18 shrimp coming in with nails stuck in them, which
19 you couldn't see very easily. But if a consumer
20 were to eat those, who knows what would happen?
21 And there's also the issue of coastal communities
22 being economically depressed, which will be touched

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 on.

2 From a global perspective, world
3 harvests have plateaued. There may be some
4 increases, but not much. You can see -- and these
5 numbers, I know, are very small, but starting in
6 the 1950s you see increase. But then, early 90s,
7 you really don't see a whole lot of increase and I
8 think we're just seeing some ups and downs. So you
9 can't expect much more seafood to be coming from
10 wild harvests.

11 There has been some studies looking at
12 protein consumption around the world and developing
13 countries eat more seafood but you have to realize
14 that their protein consumption is significantly
15 lower than our protein consumption. But there is
16 an estimation that total seafood consumption is
17 going to increase by about four percent per year
18 globally and that will end up resulting in about a
19 21 kilogram per capita consumption rate by the year
20 2030 and those are whole fish numbers, not
21 processed product. We get into an issue sometimes
22 when we're comparing per capita consumption numbers

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that we gather in the United States where we talk
2 about the finished product. So we're eating 15.6
3 pounds per capita, but all other countries convert
4 it back to round weight. So you have to do some
5 conversions when you're using comparisons.

6 Already today a third of all seafood is
7 coming from aquaculture and the estimation is that
8 by 2030 over 50 percent of all seafood consumed in
9 the world is going to be coming from aquaculture
10 and there has been an analysis saying that 54
11 million metric tons of seafood is going to have to
12 come from aquaculture in that same time period.
13 That's a lot of fish. As an example of what's
14 happened -- and this is very particularly
15 interesting, I know, and poignant to people in
16 Alaska, but your blue bars are all of your wild
17 Pacific and Atlantic harvests, and your red ones
18 are aquaculture product. So what you see here is
19 that, by 2001, 55 percent of global salmon
20 production was from aquaculture. You can have all
21 the discussion you want about prices being paid,
22 but the bottom line is that that fish is being

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 consumed, and the markets have grown to meet that
2 demand.

3 With regard to where the United States
4 is on aquaculture production, I don't know if you
5 can see the little red bar at the top of these tall
6 blue bars, but that's what the United States
7 produces -- that little tiny red cap at the very
8 top of those bars -- very, very little, and most of
9 that production is from catfish. While consumption
10 in the states has hovered around 15 pounds per
11 capita since the 1980s there have been some recent
12 increases, but that's been primarily because of the
13 availability of farm products, particularly shrimp,
14 salmon and, to a lesser extent, tilapia most
15 recently and, also, catfish -- both domestic
16 production and imported product.

17 We get our fish from -- about a little
18 over 4 million metric tons is harvested every year,
19 but we don't eat all of that in the United States.

20 A lot of that is exported. Our production from
21 aquaculture is right around 500,000 metric tons a
22 year and those numbers are very, very difficult

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 because the states all gather the information and
2 they don't gather it consistently and we're trying
3 to do a better job of finding out exactly how much
4 we produce in the country but it's not readily
5 available.

6 MR. KENT: And, again, that's not just
7 marine species. That's all.....

8 MS. CHAVES: Yeah, that's.....

9 MR. KENT:aquaculture production.

10 MS. CHAVES: And that includes.....

11 MR. KENT: Primarily catfish.

12 MS. CHAVES: That -- yeah, right --
13 yeah, two-thirds probably of aquaculture production
14 in this country is from catfish. Of the imports,
15 the equivalent of over 5 million metric tons of
16 round fish to meet domestic supply and it's
17 estimated that probably about 40 percent of that is
18 cultured today and we expect those numbers to be
19 increasing as well.

20 And so we've done some work to take a
21 look at what we expect demand to be in the future,
22 and we expect that there will be a need for an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 additional two million metric tons of seafood above
2 and beyond what we consume in today's market. So
3 what we've done here is your middle line, in the
4 blue, these are our wild harvests for seafood.
5 We've projected out to 2025 and we increased it to
6 what our highest level of harvest has ever been.
7 What's left of that supply as exports is this lower
8 line, and I'd like to remind you that all these
9 numbers have been converted back to round weight.
10 Our statisticians went through and took a look at
11 our exports and if it was a fillet that was being
12 exported they used one conversion factor. If it
13 was a headed and gutted fish, they used a different
14 conversion factor.

15 When I saw these numbers, I was quite
16 frankly amazed. I went back to them and they went
17 back to the numbers and said, no, these numbers are
18 accurate. But, now, it's more important from the
19 demand side. This red line is what we've been
20 consuming and it's pretty much a straight line and
21 you see we've projected out to 2025, assuming that
22 per capita consumption would remain the same,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 although I think a lot of people would like to see
2 per capita consumption increase -- I know I
3 personally would like to be able to eat more
4 seafood -- and we're just basing this on a moderate
5 projection of population growth. So your delta
6 between the top of this red line and what we're
7 eating today, down here -- the difference between
8 what we had then and what we're eating today is two
9 million metric tons more seafood. So the question
10 is, where is that going to come from?

11 MR. BURNS: Linda, could I ask a quick
12 question.....

13 MS. CHAVES: Yeah.

14 MR. BURNS:on the last slide? So
15 we're exporting 80 percent?

16 MS. CHAVES: Yeah, we have calculated
17 that over 75 percent of what we consume in this
18 country comes from imports. Now, there is an issue
19 because we do have seafood, particularly from
20 Alaska, that's being exported to China, being
21 processed in China. Some of it comes back to the
22 United States. Some of it goes on to Europe, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 it's very difficult from the statistics to
2 determine exactly what those numbers are. But we
3 export an enormous quantity of seafood, and largely
4 because it's product that, one, you can get a
5 better price for it overseas; or, two, it's
6 something that no one wants to eat here. I haven't
7 seen pollock broil on many menus, you know, and a
8 whole bunch of other things that you don't see on
9 menus. We don't eat much mackerel in this country.

10 You know, there are a whole batch of things, and
11 the markets for pollock, herring -- all those types
12 of things -- are much better in other countries.
13 And some years ago we tried to change -- we tried
14 to influence the American palate. We tried to get
15 Americans to eat more of these underutilized
16 species.....

17 MR. BURNS: Yeah, I remember the
18 mackerel case and all that.

19 MS. CHAVES: There were some that it
20 worked for, but there were an awful lot that there
21 really wasn't a whole lot of interest.

22 Now, the Ocean Commission recognizes

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 this whole thing about aquaculture being a part of
2 the future, and they dedicated an entire chapter to
3 what should be done with aquaculture. They have
4 four main recommendations. One of them was that
5 NOAA should be named as the lead for marine
6 aquaculture and that there would be a new office of
7 aquaculture established either at the NOAA level or
8 at the next level, but they weren't specific about
9 that. We're fully supportive of being the lead
10 agency for marine aquaculture.

11 They also identified the need for a
12 regulatory framework. This is something that's
13 been identified by a consumer group -- constituent
14 groups all around the country that, you know, you
15 can't get out there in the EEZ because the
16 regulations just don't exist; or, you can do it,
17 but it's very complicated and confusing and it's
18 being addressed very differently in all of the
19 regions and there's no consistency. And so we feel
20 that the National Offshore Aquaculture Act, which
21 is in drafting process, would give us permitting
22 and regulatory authority in the EEZ and it is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 directly responsive to the Ocean Commission
2 recommendation.

3 And they also talk about the need for
4 increased funding for research and development,
5 training and extension of tech transfer. This is
6 something the industry, of course, is very
7 supportive of. We have all kinds of plans for
8 doing more research than we're doing right now.
9 They're all on the books and all you need is money
10 but, you know, that's something we can't talk
11 about.

12 And the other thing that the Commission
13 report asked us to do was to work through FAO to
14 get more countries to adhere to best management
15 practices and the code of conduct for responsible
16 aquaculture development, and this is something that
17 we're already doing to a certain extent. Every
18 time we meet with a foreign government and we have
19 aquaculture on the agenda we talk about codes of
20 conduct. We talk about best management practices.

21 We also talk about antibiotic use, therapeutants,
22 try to introduce technology which would reduce the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 need for doing some of those things. So we're
2 already doing some of that already. Is there room
3 for more? Absolutely. It's just a matter of time
4 and resources.

5 So why should NOAA be involved? Well,
6 we've got a strategic plan that identifies
7 aquaculture as part of ecosystems. It can reduce
8 pressure on wild stocks. You can use it for
9 rebuilding depleted stocks. We want to take a look
10 at how we could accelerate stock rebuilding,
11 particularly for some of your long-lived West Coast
12 species, which could take between 50 and 100 years
13 to recover. So there are a lot of things in that
14 area.

15 We also have a major stewardship
16 responsibility in the Department of Commerce. This
17 is something that we have that the Department of
18 Agriculture does not, and we also have recognized
19 scientific leadership. We have a number of
20 laboratories around the country where there are
21 people doing work on aquaculture and they're doing
22 a very, very good job and many of them are

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 recognized as the world leaders in their field. I
2 believe that you were all provided with a copy --
3 you all correct me, if I'm wrong -- with the
4 aquaculture policy.

5 MS. BRYANT: I don't think so. I put
6 in the book what you had given me.

7 MS. CHAVES: Okay. We can provide you
8 with a copy of the aquaculture policy. It about a
9 six, seven-page document. It was written in 1998.
10 It basically says that we're going to go forward
11 and do this, and I don't want to take up too much
12 time. Going into the Department of
13 Commerce. Why should Commerce be interested? They
14 are, because they have responsibility for fostering
15 economic development, creating jobs, encouraging
16 competitiveness, developing technological
17 excellence and improving food security to a certain
18 extent. There are a number of agencies within the
19 Department that already have been involved in
20 aquaculture activities around the country. NIST,
21 for example -- the National Institute for Science
22 [sic] and Technology -- has an Advanced Technology

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Program, and through that program they have funded
2 the development of a machine which will vaccinate
3 fish -- and they're working on the salmonus (ph)
4 first -- and they can now vaccinate salmonus (ph)
5 at the rate of over 6,000 fish per hour. You never
6 have to handle the fish. You have 99 point
7 something percent accuracy on where the injection
8 goes in. You have virtually no mortalities. It's
9 a really slick project. Unfortunately, that
10 technology will probably be used in Chile and in
11 Norway before it would be used in the United
12 States. But they're also working on developing it
13 for some other species, and I know that we'll be
14 trying it out in one of our labs, I think, to
15 inject -- to vaccinate cod or ling cod.

16 The OC organizations obviously have
17 some interests in community development. EDA is
18 involved in that as well. ITA has some trade
19 issues; and, of course, NOAA.

20 In 1999, the department put together a
21 policy with goals for aquaculture, being quite
22 ambitious. Unfortunately, we haven't made a whole

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 lot of progress to those in the last five years;
2 but, importantly, they talk about increasing the
3 value of domestic production five-fold to five
4 billion; increasing exports of goods and services
5 to two and a half; increasing jobs from 200 to
6 600,000 people and, also, enhancing the depletable
7 wild fish stocks. And so we're trying to work
8 towards those, but we don't have all of the
9 regulatory things in place, and all the research
10 capabilities are not there yet.

11 Why now? There's no fair permitting
12 process available for the EEZ, and we are seeing an
13 increasing interest of people moving out into that
14 region. We have people coming in saying I want a
15 permit. I want to grow something. The fishery is
16 managed under a national plan. How do I get around
17 the fact that I'm only allowed to hold two fish and
18 they each have to be 35" long? It doesn't make it
19 really worthwhile for aquaculture. So they end up
20 having to get exemptive fishing permits. But those
21 only last for a year and I think they can be
22 renewed for another year, at which point that's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 when they have to take it to the bank. So there is
2 a need for regulatory framework.

3 Jobs and trade. We see our imports
4 increasing, but that's not going to change. We see
5 jobs being necessary in coastal communities where
6 this would work very well. People are being
7 responsive to the Ocean Commission report. One of
8 the reasons also to go offshore is that there is
9 increasing competition for the use of the coastal
10 zone. You've got a lot more tourism and you've got
11 a lot more recreational fishing, a lot more issues
12 and, in fact, it really makes a lot more sense to
13 be doing your farming operation in deeper, cleaner
14 water away from a lot of other impacts.

15 And I think the last point there is a
16 very important one, and that is that there's some
17 question about what kinds of environmental
18 standards and requirements exist right now for
19 aquaculture. EPA has discharge permits, but no one
20 has really -- or, then, in state waters, states
21 have different types of requirements for
22 environmental standards, but they don't exist for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the EEZ. And, with legislation, the Secretary of
2 Commerce would have the authority to establish
3 requirements as needed, and I'll go into that a
4 little bit more in just a moment.

5 Now, the National Offshore Aquaculture
6 Act doesn't exist until it is submitted to
7 Congress. So this is hypothetical discussion about
8 what could be in a National Offshore Aquacultural
9 Act if one were to be submitted to Congress. One,
10 we would expect it to give the Department of
11 Commerce authority to issue permits, and we think
12 that there would have to be site permits so you
13 could locate it in a specific place. But then you
14 would also have to get an operational permit, and
15 the operational permit would be for any species you
16 were going to grow. So if you want to grow salmon
17 and you want to grow halibut you're going to have
18 to have two different operational permits, which
19 will be specific to the species and may have
20 different requirements for tagging, for stocking --
21 all kinds of different things, depending upon the
22 species that you want to culture.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 There would be an exemption from
2 Magnuson-Stevens, and this is primarily because
3 Magnuson-Stevens, when written, did not contemplate
4 aquaculture. Magnuson-Stevens was written to
5 manage wild stocks. It doesn't address the whole
6 aquaculture issue, and so rather than having you
7 try to contort yourself through that maze, it just
8 makes a whole lot more sense to do something else.

9 But then there would be consultation with the
10 Council before permits would be issued.

11 The other thing that we were involved
12 in in other areas is a streamlined permitting
13 processes. For aquaculture, right now you have to
14 have permits from a number of different Federal
15 agencies and they go sequentially. Frequently, it
16 can take an awful long time. The idea would be to
17 try to streamline the process; hopefully, where you
18 could submit one application and then it would be
19 provided to the other Federal agencies all at the
20 same time so that you can hopefully get something
21 done in your lifetime and some people might not
22 like that.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. RAYMOND: Under the exemption from
2 the Magnuson-Stevens Act, you said that they would
3 still consult with the Council on potential impacts
4 to habitat -- fish habitat.

5 MS. CHAVES: That could be one of the
6 things, yeah.

7 MS. RAYMOND: I mean, what other things
8 would they consult with the Council on and what,
9 really, authority would the Council's comments sort
10 of have on the whole.....

11 MS. CHAVES: That's still being worked
12 out. That's still being worked out. Right now,
13 the hypothetical legislation is fairly general and
14 broad. The regulations will be much more specific,
15 idea being that as an industry develops you may
16 want to make changes upwards or downwards, and it's
17 going to be a lot easier to change regulations than
18 it is legislation.

19 MR. DILERNIA: I understand the need
20 for exemption from Magnuson-Stevens. I think it's
21 a good idea. The only complication I envision
22 there is when you use the aquaculture product to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 enhance wild stocks. Things could get a little
2 trickier there, but.....

3 MS. CHAVES: Well, and I think that
4 when -- yeah, and if you're talking about
5 enhancement I would imagine that -- you know, we're
6 not there yet, but when you're talking about stock
7 rebuilding plans you may want to incorporate an
8 enhancement aspect to your stock rebuilding plan.
9 And we haven't discussed this with Sustainable
10 Fisheries, but this is something that could
11 possibly happen. But we have a long ways to go
12 before we get to that, but it is something that,
13 you know, we recognize that there are
14 complications. Providing environmental and other
15 safeguards. There are mentioned -- oh, I'm sorry,
16 Rod.

17 MR. MOORE: I figure if I wave the hat
18 around somebody will pay attention. Either for you
19 or Al, there's going to be several comments and
20 questions about all of this. Do you want to hold
21 them till the end, or do you want to take them in
22 -- what's your pleasure?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR MR. OSTERBACK: I think Don
2 when he started kind of wanted to hold questions.

3 MR. KENT: Yeah, what I'd like is to
4 hold the questions during the presentation to just
5 points of clarification.....

6 MR. MOORE: Okay. That's.....

7 MR. KENT:and then hold the
8 discussion points for later on.

9 MR. MOORE: Can we discuss immediately
10 after Linda gets done.....

11 MR. KENT: Certainly.

12 MR. MOORE:before we go into
13 other things? Okay. Thank you.

14 MS. CHAVES: Okay. Provide
15 environmental and other safeguards, environmental
16 requirements. There will be more environmental
17 requirements than exist out in the EEZ right now,
18 and some of those will be determined based upon
19 monitoring that is done in the early stages. Also,
20 taking a look at the monitoring results that have
21 become available from other research projects that
22 are ongoing. We'll be hearing about one research

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 project today for sure, but all of the research
2 projects where we are actually funding we are
3 building in fairly heavy-duty monitoring
4 requirements so that we can see what's happening to
5 that environment so that we can help use those in
6 defining what the requirements will be. And this
7 is an area where we see change happening over the
8 next five to 10 years as an industry becomes
9 developed and there may be, as I mentioned before,
10 different monitoring requirements for different
11 species under different conditions.

12 Very strong requirement to do
13 monitoring, to do evaluation, and our enforcement
14 people will have the authority to enforce whatever
15 the regulations happen to be. Their roles will be
16 the authority to suspend, modify or revoke permits
17 for cause or in case something new comes up and,
18 you know, you decide it's not good to have this
19 operation here. You might say, guys, you have to
20 shut down completely, or you need to move to
21 another location. So just because you have a
22 permit to stay someplace for a period of time

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 doesn't mean that you might not have to move at
2 some point in time, depending upon what's going on
3 in that area. There is a capability to request
4 bonds or other financial guarantees so that you
5 can't abandon your facility or, if there is damage
6 done, that there is some way to remunerate or pay
7 back for that.

8 The legislation would also support the
9 development of offshore aquaculture and support
10 research and development to induce public/private
11 partnerships. We think that that's going to be
12 particularly important, especially in the early
13 days as we're learning more as the industry
14 develops. And there would also be reason to
15 require an awful lot of biological, social,
16 production and economic data collection. As I
17 mentioned before, we have a very hard time knowing
18 how much fish is being grown in the United States
19 right now. This will hopefully get at it so that
20 we can start to get a better database to work with.

21 With regard to funding, there is a fee
22 section in there where the government could charge

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 fees for permits. You could charge for an
2 application permit. You could charge for a site
3 permit. You could charge for an operating permit.

4 We don't suggest any specific amount of money,
5 although in the business case we've come up with
6 some monies figures based on what fees are charged
7 by some other people, but that's something that
8 will be determined in Congress. I mean, that's not
9 something that, you know, we're going to decide.
10 The legislation would authorize appropriations, but
11 there are no specific dollars attached to it. So
12 Congress could decide to authorize however much
13 money they felt would be needed to do whatever
14 portions of this legislation.

15 MR. RAYBURN: Linda, are there royalty
16 authorizations within the fee capital?

17 MS. CHAVES: The way the fee language
18 is written, it could be a royalty, but we did not
19 address royalties. And the reason that we haven't
20 gone into the whole royalty discussion is that we
21 would be setting a precedent for collecting
22 royalties of a non-extractive industry when the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 commercial fishing industry does not pay royalties,
2 and I think that if you're going to start talking
3 about royalties there needs to be a much larger
4 debate because I know the aquaculture industry is
5 going to say we've got to pay royalties on fish
6 that we put in and then take out. We think that
7 the commercial industry ought to pay royalties on
8 fish they didn't put in but took out. So, you
9 know, we didn't think that this was the place to
10 raise that flag. And that argument will take
11 place, I'm sure.

12 MR. RAYBURN: Yeah.

13 MS. CHAVES: But, hopefully, not
14 because we've raised it.

15 MR. RAYBURN: Thank you.

16 MS. CHAVES: And some countries do, and
17 some countries don't. We also recognize that there
18 is a considerable list of challenges surrounding
19 aquaculture development -- opposition by commercial
20 fishermen, perception of high risk by the financial
21 community, questions about private use of the
22 commons. You know, what happens -- you know,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 should you be allowed to block off a small area of
2 the ocean to do something? Someone came back to me
3 and said, well, that's what fishermen do except
4 that their small area that they block off is
5 moving. You know, there's is a moving target.
6 This is a sitting target.

7 Fish meal controversy about feeding
8 fish to fish. You know, I can say that an awful
9 lot of people are doing a lot of research on trying
10 to reduce the amount of fish fraction in fish food,
11 but that is still an issue. But what frequently
12 doesn't come up in conversations, that fish meal is
13 also being fed to chickens and pigs and some other
14 animals, but nobody ever complains about that.

15 Organic waste deposits. Disease
16 transmission. Human health risk is something
17 that's come up a lot lately with all the articles
18 about PCBs and methyl mercury and Omega-3 fatty
19 acids, and we need to shed a little more light on
20 that. Introduction of non-indigenous species.
21 Impact of escaped fish. Geodomes, and trying to
22 build cage systems that are going to survive an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 offshore environment, which is a lot higher energy
2 environment. So these are all issues that need to
3 be dealt with. There has been research done on
4 many of these. A lot of it is not known, but this
5 is something that we need to get this information
6 out into the general public and to have more
7 discussion about what is going on in these areas.

8 At the same time, there are economic
9 opportunities. Bill mentioned that I would
10 probably mention a couple of examples. The Florida
11 issue. There was a net ban in 1995, and you now
12 have 400 fishermen who have 600 leases and are
13 growing hard clams. They do about \$34 million a
14 year in sales and \$9 million in labor income and
15 \$12 million in value-added products, and people in
16 that part of the world think that's been fairly
17 successful. In Maine, different types of numbers,
18 but 1,400 jobs have been created with about \$10
19 million a year in tax revenues, \$130 million total
20 positive impact in 2002, and the productivity,
21 apparently, is about double the productivity of all
22 other averaging businesses, and they're going to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 salmon, trout and shellfish.

2 We've tried to come up with a number of
3 how many jobs are created for every thousand metric
4 tons of fish that is produced, and it ranges all
5 over the place depending upon all kinds of things.

6 So we've got a range of 20 to 60 jobs per thousand
7 metric tons out to 100 for indirect jobs after
8 that. Now, those are numbers that I'll freely
9 admit are not perfect numbers, and we're going to
10 be doing a whole lot more work to refine that
11 information, but the range is all over the place
12 because of the different types of operations. For
13 instance, I think the 60 direct jobs was from a
14 shore based aquaculture facility way up on the --
15 but no idea about the economics of it.

16 And there is, of course, the
17 opportunity to revitalize depressed communities.
18 One of the things that we looked at is, you know,
19 employment opportunities for communities where
20 you've got displaced fishermen, and I know that the
21 idea of having fishermen going into fish farming is
22 difficult to swallow for some people. But, at the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 same time, there are fishermen who have decided to
2 do this and, hopefully, we can have more of that
3 happening or at least have people be more open to
4 it and to really take a look at it. One of the
5 things that I've always thought up here in Alaska
6 is that you've got a lot of processing plants that
7 are only open for, I don't know, three, four, at
8 the most maybe six months out of the year, and
9 wouldn't it be nice if you could have fish being
10 supplied to those plants 12 months out of the year,
11 have communities be there all year long and develop
12 more community, if you will, but that's a decision
13 that has to be made here.

14 There's, you know, tax revenues, and
15 one of the other -- a couple of other studies have
16 shown that the employee income is double the
17 average for other agricultural fishing and farming
18 jobs -- when you take the aggregate of those -- and
19 that's been shown in Canada and Washington State
20 and, I think, in Maine.

21 MR. BURNS: Linda, do you have any
22 projections or estimates of likely economic

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 opportunities associated with offshore aquaculture?

2 I mean, these are all examples from inshore,
3 right?

4 MS. CHAVES: Yeah. I haven't done that
5 yet, but that's something that we're going to be
6 doing. So as far as the legislation is concerned,
7 it has gone to OMB. It has gone out to other
8 agencies for comment. We are now looking at all
9 the comments that have come in from all the other
10 Federal agencies. I have to say that none of the
11 comments are deal breakers, if you will. They're
12 all things that we can deal with. I mean, we have
13 lawyers from three different agencies arguing about
14 the definition of the Exclusive Economic Zone. I'm
15 not going to get in the middle of that one. We're
16 going to put the three lawyers in a room and say
17 you guys work it out and, you know, we'll take
18 whatever you decide. So there's some issues like
19 that that have to be dealt with, but pretty much no
20 real problems. And then it will be an
21 administration decision about whether or not
22 legislation gets forwarded to Congress -- probably

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 a political decision this year -- and we have no
2 control over that. And then, if it goes to
3 Congress, then there -- you know, Congress will
4 have to act -- decide what to do and when to do it
5 and, I would imagine, have quite a few hearings.

6 Now, you were provided the business
7 case, which Bill said we would like some comments
8 on. This document was not requested by NOAA to
9 sort of explain why aquaculture was important, and
10 it was intended to be an internal document. We
11 were asked to identify some of the issues around
12 aquaculture and to talk a little bit about the
13 possible costs and revenues for implementation.
14 The document is a number of things. There are also
15 a number of things that it is not. It talks about
16 why we should pursue legislation. It is a draft
17 document. It is not final. It was intended
18 primarily for internal use. It's only an overview,
19 and it is part of the whole response that we're
20 trying to do in response to the Ocean Commission.
21 It is not a definitive work on the economics of
22 aquaculture. It is not an identification of all of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the contentious issues nor a resolving of all of
2 those. It is not a discussion of actual costs and
3 benefits to the industry. It does not say if you
4 want to get into salmon or if you want to get into
5 black cod or if you want to get into cobia you're
6 going to have to invest X number of dollars, and
7 this is what you're going to make. It is not an
8 outline for future development, and it's not a tool
9 to promote aquaculture. It really was meant as an
10 internal document for people at the NOAA level and
11 the DOC level who had never heard the word
12 aquaculture before. But these are people that can
13 make decisions about where we go.

14 So we have a piece of paper that we're
15 going to be handing out to all of you, which has
16 some questions on it, because what we really need
17 is some takeaway stuff so that we can improve upon
18 this. So what we would like to do is review and
19 incorporate your comments into the short report.
20 We would also like to know what additional topics
21 you think ought to be included in the longer robust
22 analysis that we're going to be doing. We will be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 preparing a very detailed economic overview. I was
2 supposed to have this first document just be 15
3 pages long. I think that with the appendices and
4 the citations it's 23 pages. This next one is not
5 going to have a page limit on it, and we'll be
6 working with people -- we are working with people
7 around the country -- industry people, some
8 economists, who have a lot of experiences in this
9 arena -- and it will provide some of the answers to
10 some of the more difficult questions we expect
11 people to be asking. And I think that's it, and if
12 we don't do aquaculture we'll all be eating peanut
13 butter and jellyfish sandwiches.

14 MR. KENT: So, we can take a few
15 questions. Alvin, would you like to make your list
16 and.....

17 CO-CHAIR MR. OSTERBACK: Sure. Go
18 ahead, Rob.

19 MR. MOORE: A couple of things. One is
20 a process issue. Back in 1999 -- I'm being MAFAC
21 historian again -- MAFAC actually had the
22 opportunity to review an administration aquaculture

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 bill, which eventually never went anywhere, and I
2 -- you know, and it's now in some way sort of
3 morphed this National Offshore whatever the heck
4 we're calling it here.

5 MS. CHAVES: The NOAA displayer.

6 MR. MOORE: No comment. I think it's
7 unfortunate that you guys have not provided MAFAC
8 with a draft copy of the bill. You can do that in
9 executive session. You can do that and asked that
10 it not be carried out. We all have appropriate
11 security clearances, blah, blah, blah. We've been
12 through this before, and there's been a lot of talk
13 on the street because of all the presentations that
14 are being made and so forth about what's in the
15 bill. And, as you're careful to point out, it's
16 not a real bill until it gets up there but, you
17 know, here's an opportunity to use your Advisory
18 Committee and it's not being done and I just want
19 to make that point for probably the last time
20 before I get off this thing, and then you'll have
21 to have somebody else make it.

22 Second thing, on your bill you talked

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 about in terms of Magnuson Act exemptions there
2 would be consultation with the Council.

3 MS. CHAVES: Uh-huh.

4 MR. MOORE: On the West Coast, we have
5 this wonderful history of consultation with the
6 Councils in terms of the National Marine
7 Sanctuaries. There's a requirement in the National
8 Marine Sanctuary Act that the sanctuaries consult
9 with the Councils in regard to fishing regulations.

10 You know what consultation with the Council means?

11 You write the regulations the way we tell you, or
12 we're going to ignore you. So I have real
13 heartburn about generic language that we're going
14 to consult with the Councils and we'll maybe cover
15 it in the regulations later on.

16 MS. CHAVES: I think -- well, could
17 I.....

18 MR. MOORE: Can I give my third one,
19 and then you can.....

20 MS. CHAVES: Okay.

21 MR. MOORE:respond.

22 MR. RAYBURN: Yeah.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. CHAVES: Okay.

2 MR. MOORE: The third thing, when you
3 talked about the value of having year-round
4 processing in Alaska, so forth and so on, you damn
5 well better get some good economists to be looking
6 at that. There is a reason that various processing
7 plants are located where they are.....

8 MS. CHAVES: Right.

9 MR. MOORE:that they operate
10 where they are and that they operate in the way
11 they do, and just because they are empty for
12 certain parts of the year does not mean if you put
13 a floating fish pond out in the middle of the
14 Nushagak River that they're going to be able to
15 operate the full time. So you better look at your
16 economics on that.

17 And, finally, it's great that you're
18 creating all these jobs and the catfish farms and
19 so forth. But, you know, I want to point out -- do
20 you know what catfish competes with in the
21 marketplace? It's wild caught Dover sole, it's
22 wild caught Rex sole, it's wild caught west coast

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 rockfish. So for all of the great money that the
2 catfish guys down in Larry's part of the world are
3 making there.....

4 MR. SIMPSON: I never heard of them
5 fish.

6 MR. MOORE:you know, there's.....

7 MR. SIMPSON: How can we compete with
8 stuff I've never heard of?

9 MR. MOORE: You never heard of catfish?

10 MR. SIMPSON: No. The stuff you said.

11 MR. MOORE: Well, that's because you
12 don't work in the -- you only go out to those Cajun
13 restaurants, you know.

14 MR. SIMPSON: That's right.

15 MR. MOORE: You got to go out to a real
16 restaurant.

17 MS. CHAVES: There's no Dover sole down
18 there.

19 MR. MOORE: But there's -- you know,
20 all of that catfish is causing problems for
21 fishermen and processors and distributors and so
22 forth of other wild caught species. So, again, you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 know, you need to be looking at the fact that the
2 seafood industry is a worldwide industry and
3 there's a lot of substitution that goes on out
4 there and you push that balloon down there in
5 Mississippi it's going to pop out in Oregon. So
6 those are my comments.

7 MS. CHAVES: Okay. I'm just going to
8 go over the first one, which dealt with the
9 consultative process.....

10 MR. MOORE: The process.

11 MS. CHAVES:with MAFAC. I've
12 basically been told I couldn't show the legislation
13 to anyone. I understand there's some other things
14 going on on the policy. I was told I couldn't show
15 it to anybody, and since these were pretty high up
16 lawyers, I didn't.....

17 CO-CHAIR DR. HOGARTH: It wasn't Bill
18 Hogarth.

19 MS. CHAVES: It wasn't Bill Hogarth.

20 MR. MOORE: No, I know.

21 MS. CHAVES: This was way above Bill
22 Hogarth.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MOORE: Well, that's okay. You
2 know, we're advisors to the Secretary. So I want
3 the Secretary to hear our words.

4 MS. CHAVES: But the other thing
5 is.....

6 CO-CHAIR DR. HOGARTH: He will.

7 MS. CHAVES: that as this has been
8 going through the interagency review process and as
9 it went into the review process within the National
10 Marine Fisheries Service and through all the
11 different NOAA line offices it's changed. I mean,
12 there have been changes all the way along, and
13 there are changes being made even as we speak. I
14 think that's really.....

15 MR. MOORE: But that's why you have an
16 Advisory Committee to give you some advice up
17 front, early.

18 MS. CHAVES: And I think that some of
19 the things that you're suggesting may have been in
20 there at some point in time and may have been taken
21 out by other people -- lawyers, whatever -- who are
22 all looking at it with different filters. But

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 there will be plenty of opportunity before public
2 comment and discourse, I would imagine.....

3 MR. MOORE: Oh, I'm sure there will be.

4 MS. CHAVES:on this. I expect
5 that there will be lots of hearings.....

6 MR. MOORE: Oh, I'm sure there will be.

7 MS. CHAVES:around the country,
8 and that some of us are going to be much busier
9 than we would like to be dealing with these issues.

10 Second question was on.....

11 MR. MOORE: Consultation with the
12 Councils on this.

13 MS. CHAVES: Consultation with
14 Councils. That is language that is actually being
15 looked at right now, and that's something where
16 there are changes to be made and exactly what that
17 means because there's also consultation with tribes
18 and consultation with all the other Federal
19 agencies. We do not supersede other Federal -- we
20 do not override EPA's discharge laws.

21 MR. MOORE: All I'm saying is that the
22 term consultation with the Councils.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. CHAVES: I understand.

2 MR. MOORE:does not necessarily
3 have a good feeling on the West Coast.

4 CO-CHAIR DR. HOGARTH: Can I join into
5 that, too, because I do think that's a critical
6 issue in this because if a Fishery Management
7 Council is responsible for managing, you know, the
8 stocks it's quite there more than just consultation
9 input, in my opinion, you know, because then it
10 could again be bypassed, you know.

11 MR. MOORE: Uh-huh.

12 CO-CHAIR DR. HOGARTH: So I think that
13 is a key term. It hasn't been resolved, but I
14 think that is one of the things you have to flag.
15 It is key, you know. She answered your third part.
16 If you're looking at possible questions that is
17 under this discussion one of them is wild versus
18 aquaculture, how to identify species which are
19 appropriate and deal with market access and
20 competition. You know, I think that is, again, an
21 extremely important issue. Who determines that?
22 Is it the Fishery Management Council that's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 managing the stocks, or does somebody just want to
2 go out and say, well, I like summer flounder.
3 Well, you know, summer flounder, now, the stock is
4 going to an all-time high. Do we need -- you know,
5 are you just going to drive the prices down here
6 by.....

7 MR. MOORE: Bill, my point is that
8 there are -- because of the nature of seafood in
9 the marketplace.....

10 CO-CHAIR DR. HOGARTH: Yeah.

11 MR. MOORE:there are impacts that
12 you can't look at by narrowly focusing.....

13 CO-CHAIR DR. HOGARTH: Right.

14 MR. MOORE:and saying we created
15 so many jobs in Mississippi by growing catfish,
16 because there's an adverse economic impact
17 someplace else. And I'm not trying to judge one
18 way or the other whether aquaculture should go
19 forward, but in terms of what the public needs to
20 understand and needs to know, now they have to
21 think about, okay, I create these jobs in
22 Mississippi. What does it do for the fishermen and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the processors in Oregon? And that's the sort of
2 thing that you have to be cognizant of.....

3 CO-CHAIR DR. HOGARTH: Well, I agree.

4 MR. MOORE:when you're doing
5 this.

6 MS. CHAVES: But at the same -- how do
7 you deal with what's happening with aquaculture
8 development in other parts of the world where you
9 have absolutely no control?

10 MR. MOORE: It's not a question of
11 control, Linda. It's a question of if you're going
12 to do an honest economic analysis and an honest
13 impact analysis of what this legislation might do
14 and what aquaculture might do, you have to look at
15 it more broadly than what's been shown, and that's
16 all I'm saying.

17 MS. CHAVES: I know, and that's -- and
18 there's a couple of people who are involved in
19 that.

20 CO-CHAIR MR. OSTERBACK: Are you done?

21 MR. MOORE: Yeah, I'm done.

22 CO-CHAIR MR. OSTERBACK: Okay. Dick.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. GUTTING: Couple of quick comments.

2 First, I think you do need to move this issue
3 forward. I mean, the time is right. We are going
4 to have this conversation in Congress next year,
5 and I commend you for trying to pull together
6 information, trying to get expertise, trying to get
7 focus on some of the key issues so that the debate
8 next year, which is going to take place, will be
9 hopefully informed and enriched by your efforts.
10 And that's not to say that you've got it down and
11 you haven't said you've got it down but two
12 comments, Linda, that struck me.

13 In your presentation, you never once
14 mentioned states, and I'm telling you that I think
15 the relationship of your program to the states will
16 be a topic. And if you haven't figured out what
17 your answers are, I suggest to try to address it
18 because it will be an issue. The states are going
19 to want a role. You've seen that issue play out in
20 offshore oil and gas. You see it play out in
21 fisheries every day. Part of what your proposal
22 has got to address is what is the relationship, if

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 any, to the states, and I don't want to get into
2 the substance. I'm just saying you didn't say
3 anything about it. You need to have.....

4 MS. CHAVES: It's.....

5 MR. GUTTING:or you're dead at
6 the front door.

7 MS. CHAVES: Yeah. CZMA consistency is
8 in the legislation and there is a whole section on
9 that and I -- that's not up there.

10 MR. GUTTING: My second.....

11 MS. CHAVES: Good point, though. Thank
12 you.

13 MR. GUTTING:sort of general
14 comment is everybody has strong, passionate
15 feelings about the Councils, whether they're good
16 or bad. My own personal feeling is the Council
17 process is fabulous. It's strong. It is
18 transparent. Yes, it's slow. Yes, it's
19 frustrating. But you bring the stakeholders
20 together, and you do need the stakeholders in the
21 room. It would be a bad mistake to exclude the
22 stakeholders from the discussion. So I personally

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 think that that kind of transparent collaborative,
2 consultative type of a decision making process, a
3 planning process, is strong.

4 When I visit aquaculture operations
5 around the country, those that have embraced the
6 local communities and brought in the stakeholders
7 have succeeded. Those who have tried to hide and
8 exclude have failed. What I didn't hear you talk
9 about is the -- if you will, how are going to make
10 these decisions? Is there going to be a community
11 of stakeholders involved in this, and how are they
12 going to be involved? And my plea to you is if you
13 are planning to sit in Washington, D.C. and make
14 all the decisions without some kind of a community
15 stakeholder participation, I urge you to rethink
16 it. I didn't hear -- I didn't hear anything in
17 your presentation about stakeholder involvement,
18 and I think that is critical.

19 MS. CHAVES: Yeah. In budget documents
20 we've put together, there's a significant amount of
21 money for stakeholder involvement throughout this
22 developmental process and further on, and we're

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 talking about in coastal communities. And if the
2 program gets off the ground, I would expect that we
3 would have people in regional offices who would be
4 the regional state contact -- liaison -- so that
5 there's somebody there working definitely with the
6 constituents on a day-to-day basis. But, also,
7 before anything really happens, there will be a lot
8 of work with constituents around the country, and
9 some of the things that are in the legislation come
10 from constituent meetings.

11 MR. GUTTING: Just a comment. People
12 like to feel like it's something more than they
13 just have to go to a meeting and talk. I mean --
14 so I'll just leave it at that.

15 MS. CHAVES: Got you. Thank you.

16 CO-CHAIR MR. OSTERBACK: Okay. Peter.

17 MR. LEIPZIG: Okay. Hi, Linda. I have
18 three questions, no comments. First, what I got
19 out of your presentation is that currently we, in
20 the larger sense, are importing a lot more seafood
21 than we're producing; but, at the same time, a lot
22 of what we do catch we're exporting. When you talk

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 about aquaculture, are you envisioning that we're
2 going to produce products that we're currently
3 importing, or are we going to be just doing just
4 more of the same -- producing products that we
5 export and continuing to import?

6 MS. CHAVES: I would hope that we would
7 be producing products, some of which we import. I
8 don't -- and I could be wrong, but I don't expect
9 that we'll ever have a shrimp farming industry in
10 this country to supplant the shrimp imports. I
11 mean, we're just way too far behind in that. I
12 just don't -- I could be wrong, but I don't see
13 that happening. Whether or not we would be farming
14 more salmon here to supplant what's being farmed in
15 other countries -- a very political issue. I'm not
16 sure that I would go there. But I know that
17 there's a lot of interest in farming cod. Now, we
18 export a lot of cod; but, at the same time, there's
19 a lot of demand for cod. So if we were to farm cod
20 and have fresh cod available that might be a very,
21 very nice market, and you could sell fresh cod all
22 year long. I think it's going to be very, very

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 mixed depending upon the part of country you're in
2 and what the business numbers turn out to be. Some
3 things may make sense, and some of them won't. I
4 don't know the answer, and I think that those are
5 going to be business decisions.

6 MR. LEIPZIG: Okay. Second question,
7 then. I envision that potentially in the marine
8 environment there could be a considerable amount of
9 space use conflict, and you talked about the
10 permitting -- site permits and, you know, so that
11 people could be established and have a guarantee to
12 operate in a certain area. And this may sound
13 facetious, but within the agency has there ever
14 been a discussion about issuing permits to
15 harvesters of wild fish to have secure access to
16 those same sorts of locations?

17 MS. CHAVES: Not that I'm aware of.

18 UNIDENTIFIED SPEAKER: Sure.

19 MS. CHAVES: I could be wrong on that.

20 UNIDENTIFIED SPEAKER: Oyster leases.

21 CO-CHAIR DR. HOGARTH: Could I -- let
22 me explain -- I'm going to respond to one thing

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that you said earlier. For example, you said
2 shrimp probably wouldn't be. There is a great
3 potential, in my opinion, for shrimp. We are
4 producing about all the shrimp that we can produce
5 in this country, and the demand is still climbing.

6 You go to Hawaii and drive the backroads of
7 Hawaii, they're producing pond raised shrimp.
8 They're selling them right there on the side with
9 all sorts of ways. I do think there is potential
10 for shrimp. I really do. I think that's -- it
11 seems like that's -- the potential for -- you know,
12 shrimp demand is growing greatly, and.....

13 MS. CHAVES: And the other thing on
14 shrimp is that there is an interest on the part of
15 some of the shrimp industry on enhancing shrimp,
16 and we've talked about releasing a lot of -- you
17 know, it's basically like your salmon enhancement
18 program. I don't know if that's going to work or
19 not, but.....

20 MR. LEIPZIG: Well, my question on that
21 wasn't so much, you know, what is.....

22 MS. CHAVES: Yeah.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. LEIPZIG: potential, but
2 whether it was part of the plan to try to replace
3 imports with this type of production as opposed to
4 there is no plan, it's just that we want to produce
5 stuff.

6 MS. CHAVES: I think the -- you know,
7 take.....

8 MR. LEIPZIG: And my answer was we're
9 going to produce stuff, and let things.....

10 MS. CHAVES: We're going to pro --
11 well, I think that the industry is going to be --
12 will be making decisions about what the market is
13 for.....

14 MR. LEIPZIG: Whatever works.

15 MS. CHAVES:and I think that are
16 some people who are talking to large restaurant
17 chains and saying what is the product that you want
18 for the future and what are you importing from
19 abroad and what would you like us to grow to meet
20 your requirements, be it flavor, texture, size,
21 whatever? And it may replace imports, and it may
22 not.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. LEIPZIG: Okay. Last question,
2 then, and this may be the same area that Dick
3 Gutting was starting to go down to. But,
4 currently, states have passed legislation that
5 would, say, ban the landing of fish caught with
6 particular gear.....

7 MS. CHAVES: Uh-huh.

8 MR. LEIPZIG: okay, and apparently
9 that's legal and if you fish with that type gear
10 you can't land that fish. If the states were to
11 pass legislation that says products produced in the
12 EEZ in this manner cannot be brought into this
13 state have there been discussions about whether
14 that is something that is going to be a problem or
15 whether that's legal?

16 MS. CHAVES: It could be. It could be
17 and that would be a way that a state might
18 effectively stop aquaculture off their EEZ and
19 whether or not that would stand up to a legal
20 challenge, I don't know.

21 MR. LEIPZIG: I'm done.

22 CO-CHAIR MR. OSTERBACK: Ralph, please.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. RAYBURN: I had a couple of
2 questions on the legislation or whatever. Is the
3 exemption for the aquaculture under Magnuson --
4 does that supplant the ruling that I think Jay
5 Johnson made that aquaculture was fishing under
6 Magnuson or does it supplant that, meaning that it
7 reverses that decision?

8 MS. CHAVES: It's something that I
9 think that some of the attorneys are looking at
10 right now.

11 MR. RAYBURN: Okay.

12 MS. CHAVES: But the reason for
13 exemption is primarily an issue because of size,
14 possession and.....

15 MR. RAYBURN: Yeah, I understand. But
16 if.....

17 MS. CHAVES: But I understand what
18 you're saying.

19 MR. RAYBURN: the ruling had not
20 been made that it was.....

21 MS. CHAVES: Right.

22 MR. RAYBURN: fishing under

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Magnuson, then there wouldn't be an Act.....

2 MS. CHAVES: Right.

3 MR. RAYBURN:right? And then,
4 secondly, if NOAA is prepared to lease the water
5 column -- I suspect, would be what the water
6 column, the floor -- is consideration given to
7 enforcing the lease, providing policing authority
8 or providing the policing for that lease? Not
9 against the aquaculturists for, you know, misuse of
10 the permit; but, rather, to protect them from.....

11 MS. CHAVES: Yes.

12 MR. RAYBURN:poaching and other
13 things?

14 MS. CHAVES: Yes, yes.

15 MR. RAYBURN: Is that provision in the
16 legislature as well?

17 MS. CHAVES: Yes.

18 MR. RAYBURN: Thank you.

19 CO-CHAIR MR. OSTERBACK: Okay. John.

20 MR. FORSTER: There's a couple of
21 comments, if I may, or one question, at least.
22 Explaining to Scott just now -- you asked about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 economic opportunities offshore, and Linda is
2 right. There's precious little serious offshore
3 aquaculture going on on which to base that
4 judgment, but all the support activities are
5 onshore -- the hatcheries, the feed supply, the
6 processing, the marketing and the distribution. So
7 if you look at existing aquaculture industries,
8 there are models there from which one can draw some
9 fairly good information to base projections on.

10 And a question for Linda -- and Ralph
11 just mentioned it in the context of policing,
12 slightly -- I had it in a different context. But
13 how do you see the codes of conduct being used as a
14 tool in part of the enforcement process in this? I
15 mean, one has got monitoring. One has got some
16 regulations. But codes of conduct I know NOAA has
17 considered, and there are international codes of
18 conduct for this industry too, now. How do you see
19 that being part of this mix?

20 MS. CHAVES: Well, with regard to
21 conduct I think that, you know, one, they're not --
22 they're not law. They're not soft law.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. FORSTER: Right.

2 MS. CHAVES: But it provides sort of an
3 impetus to establish best management practices and
4 to try to require -- suggest adherence to those.
5 One of the things that's been talked about is maybe
6 even establishing some kind of a HACCP system for
7 aquaculture operations, which you have HACCP
8 systems in a processing plants, but may you need to
9 have HACCP systems for an aquaculture operation
10 where there's a lot of record keeping, and your
11 best management practices would be incorporated
12 into those. The answers aren't final on that.
13 It's just something that's been thought about.
14 We've had to do an awful lot to get to where we are
15 now. We don't have a staff of 10, 15 people to go
16 after -- chase after all of the answers,
17 unfortunately.

18 MR. FORSTER: But the code of conduct
19 can be used a tool.....

20 MS. CHAVES: Code of conduct can be
21 used as a tool.

22 MR. FORSTER:through a HACCP type

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of process, it would seem to me.

2 MS. CHAVES: Yeah, yeah.

3 MR. FORSTER: I mean, the HACCP
4 approach seems pretty sensible.

5 MS. CHAVES: Yeah, and that's something
6 that we need to talk about with more of the
7 industry, and some of the industry has actually
8 even suggested as much as five, 10 years ago.....

9 MR. FORSTER: Yeah.

10 MS. CHAVES:saying why don't we
11 establish a HACCP program for an aquaculture
12 facility so that you've got the record keeping.
13 You know what's happening.

14 MR. FORSTER: Absolutely.

15 MS. CHAVES: It makes a lot of sense;
16 and, in the long run, it will save you money.

17 CO-CHAIR MR. OSTERBACK: Okay. I'm on
18 the list this time.

19 MS. CHAVES: Yes, Mr. Chairman.

20 CO-CHAIR MR. OSTERBACK: A year or so
21 ago when we talked about this, one of the questions
22 I had at that time -- and I was hoping it would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 have been up there, but it's how are going to deal
2 with the states? I know that it's been brought up
3 here a couple of times here, but I think it's
4 really important because you have the State of
5 Alaska, which basically says no aquaculture. I
6 mean, they've defined mariculture out of it, that
7 type of stuff; but, to me, my question then and my
8 question still is if this happens -- I mean, I
9 don't think there's a lot of question about how you
10 would do it because they're doing it everywhere.
11 So you would adopt some of those to get it up and
12 running, but if you have states that decide they
13 don't want to participate in this what's going to
14 be the line on how you're going to deal with that
15 state? I mean, have you guys looked at -- are you
16 still going to say that, okay, these are Federal
17 waters so we don't really care what you say, we're
18 doing it anyway?

19 MS. CHAVES: No. I think what the
20 legislation will say is it can be done in Federal
21 waters. But as was just pointed out, that fish
22 that is harvested out in the EEZ is going to have

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 to come to shore, and a state may put in place a
2 ban on the landing of a fish that was farmed.

3 CO-CHAIR MR. OSTERBACK: Well, yeah,
4 but I -- that's -- okay. That's two wrongs to make
5 a right, I guess, or something. But, I mean, what
6 I'm saying is you should look at saying that, you
7 know, you're going to have to have consultation
8 with each state.....

9 MS. CHAVES: Well, and.....

10 CO-CHAIR MR. OSTERBACK:like Rod
11 wants.

12 MS. CHAVES:through CZMA
13 consistency there is a deliberative process, and
14 that could be blocked. I mean, we're not going to
15 force aquaculture to happen off the State of
16 Alaska. We can't do that. That's not the intent.

17 But there are other states that would like to have
18 aquaculture. And so one state may not want to do
19 it, that should not preclude aquaculture
20 development to occur in Federal waters off of other
21 states. Now, if.....

22 CO-CHAIR MR. OSTERBACK: Yeah, and I --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 maybe we just look at it different. I look at it
2 as like a major issue, and you look at it as like,
3 well, we've already dealt with it.

4 MS. CHAVES: I'm not saying we've
5 already dealt with it. That's probably an
6 overstatement, but.....

7 MR. KENT: Well, if I could just -- a
8 point of clarification. There is provision within
9 the Coastal Management Act that provides for state
10 agencies to appeal to NOAA through NOS -- I forget,
11 the Office of Coastal Resource Management under NOS
12 -- to make comments on permits in Federal waters.
13 So that's a requirement that's there. It's
14 something that could be reinforced in legislation,
15 I would think. I don't think anything I've ever
16 heard suggests that this can be done independent of
17 any state's input. Again, even in California it
18 sounds like a minor thing, but there is an
19 aquaculture permit that has to be granted to land
20 product onto the dock. It's the same permit that a
21 catfish farmer or a trout farmer would have to have
22 for being onshore. But if the state doesn't want

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 to grant that permit then you can build all you
2 want offshore. You just don't have anyplace to
3 land it.

4 CO-CHAIR MR. OSTERBACK: Okay. And the
5 only other comment I had was also that when this
6 gets up and running -- and it's been brought up
7 here a couple of times already -- it's going to be
8 really important that the long-reaching impacts to
9 any individual state or its fishery really needs to
10 be looked at, you know, before you crank up one of
11 these on a large scale or whatever, but that's all
12 I have.

13 MS. CHAVES: Okay. Thank you.

14 CO-CHAIR MR. OSTERBACK: And Tony.

15 MS. RAYMOND: Tony's there, and.....

16 MR. DILERNIA: Pass.

17 CO-CHAIR MR. OSTERBACK: Okay. Bob.

18 MR. FLETCHER: Yeah, I just want to
19 respond to a comment that Rod said because it was a
20 rather inaccurate depiction of what I think goes
21 on; and, also, I had a couple of comments. First
22 of all, recreational fishermen in southern

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 California, who is huge supporters of marine
2 aquaculture as the result of our experience with
3 the white sea bass hatchery. You heard Bill say
4 that we're releasing the one millionth fish. That
5 is building a bigger pie for both commercial and
6 recreational anglers, and it's done in a way that
7 treats the impacts on the environment very
8 carefully. It's a very comprehensive program.

9 MS. CHAVES: Uh-huh.

10 MR. FLETCHER: We've really felt good
11 about that process. When Rod said that if you
12 raise more catfish in Mississippi the balloon
13 bulges out on negative impacts on Dover sole sales,
14 it forgets all about the reality that we're
15 importing massive amounts of fish and they could
16 just as well be the bulge that affects the Dover
17 sole sales as well as a domestic production of fish
18 in marine offshore aquaculture. So I just wanted
19 to make that comment because I think we're facing a
20 reality that is that the world supply of fish is
21 flooding into the U.S. Whether you like it or not,
22 in the commercial industry that's a reality, and if

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 we can do a comprehensive and careful evaluation
2 and implement a program that provides the economic
3 benefits as well as the environmental safeguards
4 then I'm all for it. So I just felt like Rod left
5 kind of an inaccurate perception.

6 CO-CHAIR MR. OSTERBACK: Okay. Thank
7 you. Larry.

8 MR. SIMPSON: Thank you, sir. A couple
9 of comm.....

10 MR. MOORE: Listen to what I say,
11 Fletcher, god damn it.

12 MR. SIMPSON: A couple of comments on
13 others' comments, and then a comment or two and a
14 question. Yeah, we do have Pete dedicated to
15 commercial areas -- oyster leases, for example.
16 Bill mentioned the net ban in Florida, which limits
17 gear to a certain type. Therefore, that allows
18 other people to use different gear or prevents one
19 user group. And the issue about the state's
20 preventing importation of aquacultured product is
21 kind of a two-tiered thing. If it's dead product
22 and it's caught legally and done somewhere else,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the Lacey Act will eventually prevail and they may
2 bring -- they may put a law in, but it won't hold.

3 But if you're bringing in a live, non-indigenous
4 species then the states may have a hold on that so
5 some states prevent non-indigenous species coming
6 in live to their states.

7 One comment on the shrimp. You said we
8 in the Gulf -- well, the shrimp is Gulf, basically,
9 but we in shrimp are way behind. It's not really
10 we're way behind. It's just that our land costs,
11 labor, climate and regulations are not going to
12 allow us to compete like they do in China and
13 Malaysia and other places.

14 Another comment is I think that we
15 ought to partition in some fashion the analysis of
16 domestic versus foreign aquaculture. In other
17 words, we need to clearly explain to the people who
18 are going to be making decisions that domestic
19 aquaculture has these effects on domestic economies
20 -- jobs, et cetera -- and then you need to do the
21 same thing for domestic [sic] aquaculture. In
22 other words, you need to partition those two

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 effects out so that people can clearly see the
2 difference in domestic aquaculture versus foreign
3 aquaculture in the overall case study.

4 And, lastly, I have one question that I
5 still can't understand, and there's got to be more
6 to it. You said there's a fish meal issue, a
7 problem of fish eating too much fish. There's got
8 to be more to that issue than I'm able in my simple
9 mind to understand. Is it, in fact, the
10 predator/prey issue, or is it, in fact, fish eating
11 too much fish because most of the fish that I'm
12 aware of eat fish.

13 MR. KENT: First off, I'm always
14 concerned when a gentleman like you drawls on about
15 his simple mind. I always get to feeling a little
16 fear, so just avoid that. Linda deferred to John
17 to.....

18 MR. FORSTER: Well, I think the fish
19 meal issue is an issue of the fish meal industry,
20 which has been going on for many years and as a raw
21 material it is used in animal feeds and as the
22 aquaculture industry has developed it has used it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 as a primary source of raw material. Now, I don't
2 think that anyone can argue that the aquaculture
3 industry has been responsible for the creation of
4 the fish meal industry. I don't know how long
5 menhaden has been being fished in the Gulf, but I
6 don't think the aquaculture industry has been
7 responsible for driving that. So the arguments
8 made that aquaculture is somehow driving the
9 development of the fish meal industry and in fact,
10 by inference, taking valuable fish from the mouths
11 of the poor and hungry, I think, is a misstatement.

12 I do think there's a huge issue about fish
13 meal.....

14 MR. SIMPSON: I agree. I agree. So
15 it's the political issue.....

16 MS. CHAVES: Yeah.

17 MR. FORSTER: Yes.

18 MR. SIMPSON:not the biological
19 issue?

20 MR. FORSTER: Yeah.

21 MR. SIMPSON: Okay.

22 MR. FORSTER: All right.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. SIMPSON: I understand now.

2 MR. FORSTER: Okay.

3 MR. SIMPSON: Okay. Thank you.

4 CO-CHAIR MR. OSTERBACK: Scott.

5 MR. BURNS: Thanks, Chairman. I don't
6 disagree with the notion that this is a good time
7 to rethink current statutory authority and the
8 regulatory framework for offshore aquaculture. I
9 think it's a good time to do it. But the reason
10 for my question earlier was it's my understanding
11 that at present and in all likelihood for the next
12 decade or so the vast majority of both economic
13 opportunities and potential problems associated
14 with aquaculture will take place in inshore waters.

15 That's where the aquaculture is right now. And I
16 guess my point is that, that being the case, the
17 focus of national policy with respect to
18 aquaculture ought to focus on those waters rather
19 than on offshore waters where, at this point,
20 aquaculture is really a somewhat speculative
21 venture.

22 MR. KENT: I don't think you can call

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 it speculative when there's that many open ocean
2 programs going on around the world right now but,
3 you're right, the industry is focused in the
4 nearshore environment but there is infrastructure
5 in place within state agencies to address that. I
6 think you've got a good point, that we ought to be
7 looking at aquaculture not as just development of
8 offshore but development of the overall aquaculture
9 industry, and so I think a synergy between USDA and
10 Department of Commerce needs to be reinforced to
11 ensure that, you know, an overall industry is
12 increased in a responsible manner.

13 MS. CHAVES: And the research
14 requirements don't really change a whole lot
15 whether you're talking inside three miles, outside
16 of 10 miles. You still have the same environmental
17 issues or questions, that whole list of challenges,
18 and, you know, I can go on for a few more pages of
19 issues that have been raised and I think that we
20 need to do more work to answer those questions and
21 the answers will have application to both inshore
22 and offshore. In some cases, issues may not be as

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 severe offshore simply because of the different
2 conditions you're operating in and the fact that
3 you don't have, say, as much agricultural runoff to
4 deal with, which sort of confuses what's going on
5 in the water.

6 CO-CHAIR MR. OSTERBACK: Okay. Chris.

7 MR. DORSETT: Linda, I appreciate the
8 presentation, and I especially appreciate the
9 caveats laid out of what the document is not. I
10 found that very helpful.....

11 MS. CHAVES: Okay.

12 MR. DORSETT:after reading it.
13 But I'm a little bit confused because this is
14 supposed to be for an internal audience and it's
15 supposed to lay out the rationale but I think some
16 of the caveats you laid out are some key issues
17 that decision makers should know about in whether
18 or not to proceed. So I was wandering -- I think I
19 noted that there are going to be some other
20 documents produced, et cetera. I'm just trying to
21 figure out how this process -- where it's going
22 from here, and I'm sorry if I missed it somewhere

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 in there.

2 MS. CHAVES: Well, what happens now, I
3 mean the legislation -- assuming that legislation
4 will be submitted -- the administration will decide
5 to submit legislation -- it's going to go through
6 all kinds of reviews. There will be plenty of
7 opportunity for changes and modifications. I mean,
8 right now, the Department of Commerce has said,
9 yeah, we think we need to go forward and a lot of
10 those caveats, I think, and a lot of those other
11 issues are going to be dealt with through the
12 regulatory process. I mean, the whole idea of
13 legislation is to provide an umbrella so that you
14 can address very, very specific issues in
15 regulations. I don't know if that answers your
16 questions or not.

17 MR. DORSETT: It does, but I would feel
18 a lot more comfortable about people making the
19 decision whether or not to go ahead with
20 legislation to have all of the information.

21 MS. CHAVES: Well, and, actually, in
22 the presentations that we've made there's been a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 lot more information. They weren't just given this
2 document. It was a fairly thick briefing book.
3 Assistant Secretary Tim Keeny and I and others have
4 been before a whole raft of people and we walk in
5 and, you know, there are 20 people in there. It's
6 the murder board.

7 CO-CHAIR DR. HOGARTH: Just to add to
8 that point, you know I think there's a great
9 probability that if this administration even does
10 decide, which the Secretary and the Department do
11 support moving forward with this legislation, it
12 could very easily get introduced next year but then
13 be pulled into the Magnuson reauthorization. I
14 think there's a real strong possibility. So I
15 think we don't know what will happen to it, you
16 know, really. I think that, that said, Magnuson, I
17 think it's almost a hundred percent it will be
18 relooked at next year for reauthorization. What
19 they pull into that -- these other bills or
20 programs, and this one -- I think this will be one
21 of the earlier discussions. You know, they may
22 decide to just defer this to the Commerce Committee

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 for Magnuson reauthorization. So there are many
2 possibilities of what will happen to it, I think,
3 at that point.

4 CO-CHAIR MR. OSTERBACK: Okay. Ralph.

5 MR. RAYBURN: Thank you, Mr. Chairman.

6 Does the proposed legislation deal with incentives
7 such as providing an obligation guarantee or
8 capital construction type funds to the industry?

9 MS. CHAVES: The loan program is
10 already applicable to aquaculture.

11 MR. RAYBURN: It is?

12 MS. CHAVES: It is.

13 MR. RAYBURN: The obligation guarantee?
14 So the obligation guarantee.....

15 MS. CHAVES: Yeah. We actually -- it's
16 no longer an obligation guarantee program. It's a
17 direct loan program.

18 MR. RAYBURN: Oh.

19 MS. CHAVES: And, in fact, some
20 freshwater aquaculture operations have been funded
21 through it already. And as far as the capital
22 construction fund is concerned, it currently does

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 not allow for deposits to be spent on aquaculture,
2 but it is a proposal because there are some fairly
3 sizeable receipts and there's some people who want
4 to be able to try and pull their money out and get
5 penalized for the new aquaculture development. And
6 whether or not it would be allowed to be used
7 completely for aquaculture I think that there are
8 other agencies in front of it that would probably
9 like to shut the whole program down, and so I don't
10 think that's going to happen.

11 MR. RAYBURN: And the proposal is
12 within the legislation or just as.....

13 MS. CHAVES: Yeah.

14 MR. RAYBURN: It is within the
15 legislation. Thank you.

16 CO-CHAIR MR. OSTERBACK: Dick.

17 MS. CHAVES: But we don't know if it
18 will survive.

19 MR. RAYBURN: Yeah, I understand.

20 MR. GUTTING: Linda, I guess what I'm
21 -- my topic is really the dynamic nature of any
22 kind of program that you put together. A number of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 people have been skeptical about the economic
2 viability of the offshore environment as a place
3 where commercial scale operations might take place
4 and we're really in a kind of a transitional,
5 experimental pilot testing kind of a mode and my
6 suggestion is that whatever governmental framework
7 that you erect out there -- whatever decision
8 making framework, analytical framework, data
9 requirements and all the rest -- recognize that you
10 have within the establishment of an industry a
11 transitional period and then you have a mature
12 period.

13 MS. CHAVES: Uh-huh.

14 MR. GUTTING: And the rules and the
15 procedures and the requirements -- perhaps the
16 relationship to government -- are different in each
17 one of those periods, and I encourage you to think
18 in terms of those two stages, if you will, within
19 the development of regions or areas and species and
20 not put a full program in place right at the
21 beginning. And the reason for -- I mean, I can
22 remember in Law of the Sea -- I've said this before

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 -- you know, when we went off to negotiate Law of
2 the Sea in the late 60s and early 70s everyone had
3 these great economic projects about the huge wealth
4 that would come from seabed mining, and we built
5 such an elaborate bureaucratic structure we never
6 got anything. So you need to have, I think, two
7 kinds of systems.

8 MS. CHAVES: Well, and I think one of
9 the things that we would like to be able to do is
10 have, you know, some pilot projects, some
11 demonstration projects where you can really test a
12 lot of things and see what the economics are, and
13 there are three projects ongoing right now. One,
14 in cobia, in the Caribbean -- Puerto Rico. Rich
15 can talk about his project. There's work going on
16 with moi in Hawaii where we're looking at the
17 economics. And, you know, there are a number of
18 other projects that are in the drawing books right
19 now to be able to do demos to try to get to some of
20 those answers, some of those very, very critical
21 economic answers. I also would have to say that
22 technology is moving to the point where it will be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 a lot easier to work in that hostile environment
2 than it would have been, say, five, 10 years ago.

3 CO-CHAIR MR. OSTERBACK: Don, I've got
4 Bonnie, and then maybe you want to move on to the
5 next speaker.

6 MS. CHAVES: Yeah.

7 MR. KENT: Yeah. If we keep it at this
8 rate, it will be 7:00 o'clock before we're finished
9 this evening, so.....

10 CO-CHAIR MR. OSTERBACK: Yeah. Bonnie.

11 MS. CHAVES: I've been up here too
12 long.

13 DR. BROWN: And mine is really a
14 question or comment I hope directly relating to
15 this. You said something that kind of scared me.

16 MS. CHAVES: Uh-oh.

17 DR. BROWN: You said, hey, it's just me
18 and another -- I forget how you said it; but, you
19 know, that it was kind of hard to gather all this
20 information and be putting together that document
21 and the one that's going to come after this, and
22 Bill and Linda it was like you've only got one

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 person doing this, and I'm really about to freak
2 out.

3 MS. CHAVES: No. We have.....

4 DR. BROWN: This is a 15-person job or
5 something, you know.

6 MS. CHAVES: We have more people and we
7 are using outside contractors to do some of the
8 work as well and we are building a staff back up.

9 DR. BROWN: Okay, because that's scary.
10 If there really are just a couple, then it's going
11 to be a very inbred process and I think you
12 need.....

13 MS. CHAVES: No. We're pulling
14 people.....

15 DR. BROWN:the sociologists and
16 the economics.....

17 MS. CHAVES: We're pulling people from
18 different backgrounds.

19 DR. BROWN: Okay.

20 CO-CHAIR MR. OSTERBACK: So if there's
21 more questions, just write them down because she's
22 going to be back up at the end of this again.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. SIMPSON: How do we turn these in?

2 MS. CHAVES: Why don't you hang on to
3 those through the other presentations and then turn
4 them in, I think.

5 MR. KENT: Very good.

6 MS. BRYANT: Alvin, may I say? You'll
7 notice that there are some papers and pages in
8 presentations that we've passed out. We've had
9 another FedEx delivery. So, hopefully, everybody's
10 presentation is here. So the folks that you'll be
11 hearing from, that's kind of that stack of paper,
12 and Judy has also been handing some additional
13 things out. If we have extra copies -- I don't
14 know how many we have -- I need to make certain
15 that I have them for the record, but for members of
16 the public you're welcome to also be able to get
17 copies of that. And all of these materials, I
18 don't have them here but eventually they will be
19 put up on-line on the MAFAC page so that you'll be
20 able to see that. Thank you, Mr. Chairman.

21 CO-CHAIR DR. HOGARTH: And I hope the
22 gifts came for the performance last night, since he

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 said.....

2 MS. BRYANT: Yes, they did.

3 CO-CHAIR DR. HOGARTH:he had
4 heard that before. Okay.

5 MS. BRYANT: Yes, it did.

6 CO-CHAIR DR. HOGARTH: Okay. Thanks.

7 MR. KENT: Mr. Chairman, with your
8 permission what I'd suggest is that we go ahead and
9 have Gunnar Knapp do his presentation and then
10 handle questions up to the lunch hour.

11 CO-CHAIR MR. OSTERBACK: Okay.

12 MR. KENT: That will give Gunnar 50
13 minutes, if.....

14 CO-CHAIR MR. OSTERBACK: And today we
15 want to try and break right at noon, too.

16 MR. KENT: All right, great. Next is
17 Gunnar Knapp, the Professor of Economics, Institute
18 of Social and Economic Research, University of
19 Alaska Anchorage.

20 DR. KNAPP: Let's see if I can get this
21 magic technology working. Hi, everybody. My name
22 is Gunnar Knapp. I am a Professor of Economics up

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 at the University of Alaska in Anchorage, and I'm
2 going to be talking about some economic
3 considerations in thinking about the United States'
4 marine aquaculture. Let's see if this works.
5 Okay.

6 So let me talk a little bit of what's
7 my background for talking about aquaculture. Well,
8 basically, I've spent many years studying markets
9 for wild fisheries, and it's impossible to
10 understand seafood markets without understanding
11 what's happening in aquaculture. So I devoted
12 years to learn as much as I could about
13 aquaculture, and I've visited aquaculture
14 operations in a number of different countries.

15 Why am I here today? Basically,
16 somebody called me up from MAFAC and said can you
17 come talk. So I'm speaking for myself. I'm not
18 representing anybody, and I'm not representing the
19 State of Alaska and its position. I'm not speaking
20 for the wild fisheries or wild fishermen in Alaska
21 -- a totally impossible task for anybody -- and nor
22 am I representing aquaculture proponents. Just

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 talking for myself.

2 I always like to start with my
3 conclusions. Then you'll know exactly where I'm
4 going; and, also, I can quit after three minutes.
5 So let me tell you my conclusions. First of all,
6 the global seafood industry is in a period of rapid
7 and profound change, and the key causes of this
8 change are both economic globalization and
9 aquaculture. Aquaculture is growing rapidly around
10 the world because it can meet market demands for a
11 predictable consistent supply of high-quality
12 seafood, and world aquaculture production will
13 continue to expand whether or not the United States
14 becomes a significant producer.

15 Now, marine aquaculture offers
16 significant potential economic benefits for the
17 nation and coastal regions, but it's quite clear
18 that offshore marine aquaculture will not develop
19 in the United States without an enabling regulatory
20 framework. So we will simply -- we don't have
21 offshore aquaculture and we won't have it unless
22 some kind of framework gets passed of the, you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 know, type that's been talked about or some
2 variation. Marine aquaculture clearly
3 has potential environmental impacts and so does all
4 food production, including wild fisheries, and the
5 basic issue in considering marine aquaculture is
6 whether and how it can be developed with acceptable
7 environmental impacts. Marine aquaculture clearly
8 will have market impacts on wild fisheries
9 regardless of the extent of U.S. production, and
10 Alaskans understand totally how expanding world
11 aquaculture supply of farmed salmon has drastically
12 depressed prices for our wild salmon fisheries.

13 Now, there's a flipside to that, and
14 that is lower prices for fishermen -- hard
15 fishermen, Alaska hard fishing communities -- they
16 also benefit consumers. And so the issue is
17 whether and how we consider these effects in
18 encouraging or discouraging marine aquaculture.

19 And, finally, in my opinion the issue
20 is not some simplistic choice, do we want wild
21 fisheries or do we want aquaculture. I really
22 think the issue is more kind of how can we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 responsibly develop our wild fisheries to get the
2 maximum benefit from them, and how can we
3 responsibly develop aquaculture to get the maximum
4 from it?

5 Okay, now aquaculture is a very
6 emotional issue in Alaska, and a great many
7 Alaskans strongly believe that the answer to any
8 kind of aquaculture is just say no. I personally
9 think that we need to learn more and think more in
10 developing aquaculture policy for the United States
11 and for Alaska. I'm saying we need an informed
12 debate about this very complex topic. We should
13 think carefully about the opportunities offered by
14 aquaculture and whether there are ways to achieve
15 them while protecting the environment and other
16 economic activities, including wild fisheries.
17 Okay. So I want to talk -- basically five topics:
18 the globalization revolution, the aquaculture
19 revolution, why is the aquaculture revolution
20 happening; aquaculture in the United States and
21 considerations for an informed debate.

22 Now, far-reaching changes are occurring

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 in the world economy which are generally referred
2 to as globalization. This globalization is a whole
3 lot of stuff that's going on at once, and it's
4 interrelated. It includes increasing reliance on
5 markets, the reduction in trade barriers,
6 technological revolutions in communications and
7 transportation, world economic integration in
8 markets for resources, goods, services, labor and
9 capital, movement of production to the low-cost
10 producers, consolidation and integration resulting
11 in larger and more powerful firms operating in many
12 countries, growing consumer incomes in developing
13 countries, and increasing consumer expectations for
14 quality, convenience, variety and lower prices.
15 And these phenomena, which are worldwide in all
16 industries, are transforming to seafood production,
17 processing, distribution and retailing. We're
18 seeing it in many respects. We're seeing rapid
19 expansion of seafood trade around the world. We're
20 seeing shifts in labor intensive seafood processing
21 to countries with low labor costs. We're seeing
22 increasing consolidation and market power in the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 retail and food services industry. We're seeing
2 restructuring of seafood distribution networks.
3 We're seeing increasing pressure on seafood
4 suppliers to lower costs, and we're seeing
5 increased talk about international standards for
6 food handling and safety.

7 And one of the things that we're
8 specifically seeing is in the United States, Europe
9 and Japan -- the major developed countries seafood
10 markets -- large retail and food service buyers are
11 dominating more and more of the seafood market --
12 the Wal-Marts, the Safeways, those folks -- and
13 what do they want? They want consistent and
14 reliable supply of large volumes. They want low,
15 stable and competitive prices. They want
16 consistent quality. They want traceability, and
17 they want products which consumers are going to
18 like because consumers are going to feel that
19 they're safe, healthy, convenient and
20 environmentally and socially responsible.

21 Now, all this globalization is creating
22 significant market challenges for wild fisheries,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and traditional wild fisheries would still face
2 these significant challenges and changes even if
3 there were no aquaculture. So what I'm trying to
4 say is there's a lot of concern about all of the
5 changes we're seeing and a tendency to say, well,
6 that's caused by farmed salmon. That's caused by
7 aquaculture. But it's caused by -- yes, it's
8 partly the cause of aquaculture but it's caused by
9 more than aquaculture and the challenge wild
10 fisheries have to respond to and adapt to is not
11 only sort of surviving in an aquaculture world but
12 surviving in a world that's changing what it's
13 looking for from food producers.

14 The aquaculture revolution. Now, an
15 aquaculture revolution, as Linda has talked about,
16 is happening in the world's seafood industry.
17 Aquaculture accounts for a large and growing share
18 of world seafood production, and I won't go into
19 the details and data other than to say that when
20 you see these sort of total world production data
21 like the graph I just showed you use them with a
22 bit of care. For one thing, any data out of China

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 are considered highly suspect, and that's really
2 relevant because if you look at the world
3 aquaculture production data China says they're
4 producing 37 million metric tons of aquaculture.
5 So we might -- I tend to take those data out.
6 Another thing is that the trends in aquaculture,
7 where you see aquaculture, really varies depending
8 upon the type of fish.

9 Now, the largest and fastest growing
10 share of world aquaculture production is in what
11 the FAO calls freshwater and diadromous fish of
12 which salmon farming is a relatively small share.
13 Aquaculture production of crustaceans -- mainly,
14 shrimp -- is also growing rapidly, and aquaculture
15 has long represented a large share of world
16 production of mollusks, mussels, oysters, scallops
17 and clams. So my simple point is this aquaculture
18 revolution is much, much more than farmed salmon.
19 Farmed salmon is only one of many species for which
20 aquaculture production has grown very rapidly.
21 Curiously, the growth trend of Atlantic salmon --
22 farmed Atlantic salmon -- catfish, sea bass and sea

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 bream -- you all know what those are -- tilapia --
2 farmed tilapia is one of the fastest growing U.S.
3 seafood imports, along with farmed salmon. And if
4 you look at the U.S. per capita fish consumption
5 data, what's going up? Farm species are going up.
6 Farmed shrimp and farmed salmon. That's what
7 Americans are eating more of.

8 Now, on a global scale, there is very
9 significant potential for growth in aquaculture
10 production. And why do I say that? Because the
11 aquaculture industry has very significant resources
12 to invest in research, production and marketing.
13 And technological innovation is occurring rapidly,
14 and for any particular species or type of farming
15 once the technological hurdles are overcome, as
16 we've seen, farming of new species can expand at a
17 very rapid rate. Here's a controversial statement
18 or, potentially, a controversial one -- but there's
19 no obvious limits to growth in world aquaculture
20 production.

21 You say, well, what about feed? Well,
22 fish farmers can substitute vegetable based feeds

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 for fish based feeds and this is already happening
2 and many aquaculture species don't depend on fish
3 based feeds. That's why the soybean growers of
4 America are very excited about aquaculture. So
5 what about environmental effects, the terrible
6 environmental effects of aquaculture? Well, those
7 can be reduced through regulation and through
8 changes in new techniques and locations. Well,
9 what about market acceptance? Well, it's clear
10 that consumers do and will eat farm products.

11 And as you think about the future world
12 that we're going into in the seafood industry I
13 suggest that the past is not necessarily a guide to
14 the future. Just because we're not seeing farming
15 of a particular species, just because it is only
16 small at the moment, just because consumers aren't
17 eating it at the moment, just because you've never
18 heard of it at the moment doesn't mean that it may
19 not become a major and significant species that is
20 being produced and that you're competing with in
21 the not too distant future, and the major farmed
22 species of the future are not necessarily going to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 be those of today. And, if you think about the
2 past, it was not a guide to the future for farmed
3 salmon, catfish or tilapia, if you looked at the
4 world of 1980 or even more recently.

5 Now, why is this aquaculture revolution
6 happening? Well, it's happening because
7 aquaculture can meet market demands for predictable
8 year-round and growing supply of high-quality
9 seafood. It's what stores want to offer to
10 consumers because it's what the consumers are
11 looking for and I sort of -- that came home to me
12 when I was wandering around Bethel two years ago in
13 April and I go into the grocery store and I see
14 fresh farmed tilapia. I said this is something,
15 you know, we need to be -- we need to understand
16 that this is not some temporary wool pulled over
17 people's eyes who are not in the know, like we
18 Alaskans. Aquaculture is happening because it's
19 producing fish people want to eat, and it meets the
20 needs of this globalized distribution scheme.

21 And another thing that we need to
22 understand is it's happening, in part, because it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 has significant competitive advantages over wild
2 fisheries. It's got some advantages to it over
3 wild fisheries, especially in a globalized economy.

4 The production is predictable. The production is
5 year-round. The production can increase, and the
6 production -- there's more flexibility in where it
7 can occur. The consistency and predictability of
8 production makes it easier to meet buyers' needs
9 and to plan for marketing. And just to think about
10 our sockeye salmon harvest in Alaska -- one, they
11 vary from year to year; and, secondly, the
12 production in any given year is typically 20, 30
13 percent different from what we've predicted it
14 would be immediately before the season. Whereas,
15 salmon farmers around the world know exactly how
16 much fish they have and they can plan exactly what
17 day they are going to bring it to processing plants
18 and what day they're going to deliver it and so on.

19 That's a huge advantage. I'm not saying this is
20 anything anybody should like. I'm saying this is
21 the reality of the world.

22 Year-round production reduces

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 production costs of aquaculture relevant to
2 seasonal wild fisheries. It makes it possible for
3 aquaculture to meet buyers' needs year-round. So
4 we've got tremendous inefficiencies associated with
5 some of our seasonal wild fisheries. And this is
6 -- you know, back on this theme of predictability,
7 an interesting thing in B.C. processing plant where
8 they process farmed salmon they put the fish in
9 boxes where the boxes are already presold. They
10 know who the customer is. You know, that's not
11 something that you usually see in our wild
12 fisheries, and that's an advantage. Another is the
13 ability to control production fish size and other
14 attributes. This allows aquaculture producers to
15 meet buyers' needs and lowers costs.

16 So if you're going to think about the
17 future of aquaculture, I think that a better model
18 than looking at wild fisheries and wild fisheries
19 consumption might be the poultry industry, which
20 has seen phenomenal long-term growth in
21 consumption, and the reason is that that is an
22 industry that has gone through this -- you know,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 they go through this cycle of demand driven growth
2 -- innovation, new products, increased production,
3 lower prices, more demands, marketing -- and this
4 is, I expect, where aquaculture is going to go.

5 Okay. Now, what about aquaculture in
6 the United States? Now, the United States, as I
7 think we all know, has played a relatively small
8 role in this aquaculture revolution -- .9 percent
9 of farmed salmon, 5 percent of freshwater finfish,
10 that being catfish -- very small. And as was
11 talked about earlier, most of our aquaculture
12 industry is catfish, oysters and clams. We have
13 very, very little marine aquaculture production,
14 and the flipside is numerous other countries have
15 far larger production that we have.

16 Now, what kind of industry could we
17 have in a technical sense or in an economic sense?

18 I think it's a reasonable hypothesis -- the only
19 way you can know for sure is if you try it, which
20 is a little bit of a Catch-22 aspect of this very
21 difficult policy issue, but it's a reasonable
22 hypothesis that the United States could

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 significantly expand marine aquaculture, if that's
2 what we wanted to do. Why is that a reasonable
3 hypothesis? Because we've got a number of
4 competitive advantages. We've got diverse and
5 favorable water conditions, high levels of
6 technology, well-developed infrastructures, skilled
7 labor, and we're very competitive in the animal
8 farming industries.

9 On the other hand, we've got certain
10 competitive disadvantages -- high labor costs. We
11 have a less developed infrastructure in some
12 regions, such as Alaska. But obviously the main
13 reason why aquaculture hasn't developed in the
14 United States is a very unfavorable regulatory
15 structure. In Alaska, we've got the finfish
16 farming ban. We have a lack of an enabling
17 regulatory structure for the EEZ for offshore
18 marine aquaculture and an ambivalent to hostile
19 regulatory structure for most other coastal marine
20 activity. So, basically, we don't have aquaculture
21 because we haven't wanted it. But this aquaculture
22 revolution is going to continue regardless of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 whether we choose to participate, and I think
2 that's a real basic reality factor for the United
3 States and states like Alaska to think about as we
4 debate this complex and emotional aquaculture
5 issue. This is going to happen around the world
6 regardless of whether we want to be part of it.

7 Now, I'd like to talk just a little bit
8 in closing about what I would see as some
9 considerations if we're going to have an informed
10 debate about U.S. marine aquaculture policy. You
11 know, a starting point would be just developing
12 some clear definitions of what we're talking about;
13 and, in fact, there are many different kinds of
14 aquaculture -- many kinds of aquaculture that would
15 fall under the very broad definition that Linda
16 started off her talk with -- you know, a sort of
17 legal definition -- and some people include stock
18 enhancement and ranching as part of aquaculture. I
19 mean, I'm sure you're all aware that aquaculture is
20 mentioned in Alaska's Constitution, and the word
21 aquaculture is in there as a reason why you could
22 limit entry of fisheries -- to promote aquaculture

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 development -- but that's referring to salmon
2 ranching. And then we talk about mariculture, you
3 know, here, and I think a lot of people in Alaska
4 think mariculture means shellfish aquaculture but
5 that's not necessarily what it means to other
6 people. So one little aspect of this debate that
7 will simplify it is if you can come up with some
8 common terminology.

9 Okay. Now, I think that there are
10 clearly some significant potential economic
11 benefits for the United States and costal regions
12 from marine aquaculture. These include income,
13 jobs, reduction of the trade deficit,
14 diversification, stability, certain potential
15 synergies with fisheries and backward linkages into
16 research and equipment production -- forward
17 linkages into processing and so on. So there's
18 potential benefits. And, you know, one measure is
19 if you simply go and look at the value of the
20 aquaculture production in places where they're into
21 it in a big way. Those are big numbers. Big
22 numbers of the value being generated. You know,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 more than a billion dollars of salmon produced
2 every year in Norway and Chile. So it's big, big
3 numbers.

4 Another thing is that, you know, these
5 are -- you can say, well, those are corporations
6 and so on, but it's real jobs and year-round jobs
7 and jobs in remote coastal areas. I was sort of
8 impressed by visiting a very remote area of western
9 Norway in January and just seeing, you know, a lot
10 of people working in the farming operation and in
11 the processing plant. You don't see a lot of that
12 in Alaska. We should be in Hawaii in January.
13 That's what my wife told me.

14 Now, part of informing this debate
15 about this very complex policy issue is we need
16 research to better understand, well, you know, what
17 are these benefits and for too long, I think,
18 nationally and locally, we've talked about them in
19 this sort of pointless debate about somebody that
20 says, oh, here's this list of all the good things
21 and somebody else says here's this list of all the
22 bad things. But we don't really sort of think

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 through, well, really, how many jobs of what kind,
2 located where are you talking about, you know? So
3 we need to define that and think about it because
4 why would we even do this? The only reason we're
5 doing it is if we think there's some benefit to it.

6 So we really don't think carefully about what are
7 those benefits and so that we know, you know, how
8 does that compare with costs.

9 Now, obviously a major part of this
10 debate is the environmental impacts, and the only
11 observation I would offer here is that all food
12 production has environmental impacts, including
13 agriculture and wild fisheries, and if we adopt a
14 standard of zero environmental impact or zero risk,
15 one, marine aquaculture will be impossible;
16 second, we'll be imposing a higher standard than we
17 do for other kinds of food production; and we'll be
18 imposing a higher standard than we do for other
19 uses of the marine environment -- wild fisheries,
20 salmon ranching, oil shipping. So I think that for
21 an informed debate we need to have a lot of talk
22 and research about what are these potential impacts

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and risks, what are ways they can be reduced, and
2 how do they actually compare with the potential
3 benefits? Finally, obviously marine
4 aquaculture has impacts on markets for wild
5 fisheries and obviously it lowers prices for wild
6 fisheries and you've seen this in salmon. We had
7 the discussion -- you know, somebody says, hey, you
8 produced all this catfish in one state and somebody
9 says, well, yeah, you wrecked the market for my
10 species over on the West Coast. And so there's no
11 question that aquaculture causes significant
12 economic difficulties for fishermen in fishing
13 communities; but, on the other hand, that benefits
14 consumers. Lower prices benefit consumers. And
15 another thing that adds to the complexity is that
16 the market impacts are going to occur regardless of
17 the extent to which we get into aquaculture. And
18 we banned salmon farming, in part, because we
19 didn't like the potential economic impacts, but it
20 hasn't prevented it on our State of Alaska. And,
21 furthermore, because our fisheries are wild
22 fisheries, many of them depend on export markets.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 It's not like we can to the trade policy route and
2 say, well, you know, we'll just solve it -- we'll
3 ban imports of those farmed fish, and we'll ban all
4 the production and then our wild fisheries will be
5 home free -- because a lot of these impacts of
6 aquaculture, which is being done globally, occur in
7 our export markets, such as the farmed salmon that
8 trashed our Japanese salmon market. So it is a
9 very complicated issue of how we should consider
10 the market effects, and I think, you know, the
11 starting point is to think very carefully about
12 each of these points I just suggested and their
13 magnitude and how incorporate it. That is not an
14 easy policy question to answer.

15 And, finally, I'll leave you with a
16 suggestion -- that I really think this debate needs
17 to be thought about in a more sophisticated way
18 than in simply do we want wild fisheries or do we
19 want aquaculture. Obviously, there are
20 interrelations in many different areas, but I
21 really think that we'll get farther along if we
22 think of all kinds of fisheries production and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 seafood production as valuable to the country,
2 important, and how can we do it? How can we best
3 get the most possible benefit in a responsible way?

4 Thanks.

5 CO-CHAIR MR. OSTERBACK: Rod.

6 MR. MOORE: Gunnar, I just want to
7 thank you for making the point I was trying to make
8 earlier, which is that we do need better research
9 on understanding what the benefits are, who gets
10 them, and that we're not -- aquaculture isn't going
11 to go away. I think you made that point far more
12 eloquently than I did, and there are going to be
13 economic benefits. There are going to be economic
14 costs. We need to understand what those are and
15 who gets them and, unfortunately, as we all know,
16 all politics is local. So, you know, what may be
17 great in one area is not necessarily great in
18 another, and that's going to obviously influence
19 what people say. But I think you gave an excellent
20 presentation, and I really appreciate your trying
21 to run through the various trade-offs and balances
22 that people have to make.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. KNAPP: Well, I was just struck by
2 listening to this morning's discussion about what
3 an incredibly complex.....

4 MR. MOORE: It is.

5 DR. KNAPP:policy issue this is
6 for the country and that.....

7 MR. MOORE: It's terribly -- it's very
8 complex.

9 DR. KNAPP:it -- I think one
10 aspect of it is that the, you know, sort of
11 regional potentials, regional -- different regions
12 of the country have different issues.....

13 MR. MOORE: Uh-huh.

14 DR. KNAPP:and, you know, some
15 are adamantly against it, I'm told; in some areas,
16 there's strong support -- trying to incorporate all
17 that. There's different -- anyway, I wish good
18 luck to the people who get it solved.

19 MR. MOORE: I mean, I guess if I'm the
20 state of Oregon trying to decide on a, you know,
21 CZMA consistency determination on an offshore
22 aquaculture facility off of Coos Bay I've got to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 look at it in terms of what are the potential
2 economic benefits to Coos Bay, which is a fairly
3 economically depressed port, versus the fact that
4 there's 300 to 400 fishing jobs in harvesting and
5 processing and ice machines and so forth and so on
6 that could be affected, either positively or
7 negatively, by having an offshore facility there.
8 And it's the sort of thing where we need that sort
9 of economic information to make an informed and
10 reasonable choice, and it's going to be hard to get
11 because it is -- the seafood market is a global
12 market, and it's all interrelated and I think you
13 laid that out very well and I just really
14 appreciate it.

15 CO-CHAIR MR. OSTERBACK: Okay. Scott.

16 MR. BURNS: I also want to thank you
17 for an excellent presentation. I thought it was
18 right on. The question I had has to do with the
19 focus of our discussion today, which is on offshore
20 aquaculture, and since we're reviewing a kind for
21 first-cut business plan for U.S. involvement in the
22 offshore aquaculture industry can you shed any

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 light on what currently global production is from
2 offshore facilities, what you see the trends in the
3 next decade or so being, kind of recognizing as you
4 said before it's hard to project where we're going
5 to be 10 or 20 years from now based on historical
6 trends.

7 DR. KNAPP: Well, I'm certainly no
8 expert on this. In fact, all I know came from
9 attending a conference last year in October down in
10 Seattle where a number of people came and talked
11 about sort of what's happening in offshore
12 aquaculture. And my general sense -- and I think
13 some other people can sum this up -- is that in
14 terms of, you know, the volume of fish being raised
15 in offshore pens, there is some commercial -- there
16 are some going commercial operations going on
17 around the world. But it's the scale -- the total
18 scale of that is quite small at the moment. On the
19 other hand, the message I drew from those
20 presentations and what I sort of get from, you
21 know, reading the aquaculture journals that I
22 subscribe to and so on is that the technology is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 rapidly advancing in offshore cage technology and
2 all kinds of other stuff and so we're sort of on
3 the edge of a technological breakthrough in how you
4 do that. And so it's -- I guess I tried to suggest
5 that the past is not necessarily a guide to the
6 future, and that's my instincts that in terms of
7 what we'll see around the world in terms of
8 offshore aquaculture that has the potential to
9 really significantly grow, and I think some of the
10 speakers who are actually people who know this and
11 are actually doing it are going to be talking
12 today. So I defer to them.

13 MR. BURNS: Great. Thanks.

14 CO-CHAIR MR. OSTERBACK: Tony.

15 MR. DILERNIA: Thank you. I also,
16 Professor Knapp, would like to thank you for a very
17 unbiased and informed presentation, a very balanced
18 presentation of looking at the facts without any
19 emotion. I agree with you that the market will
20 drive the development of aquaculture programs. In
21 your presentation, as you closed you discussed
22 exploring how aquaculture would develop and, also,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 if wild fisheries would develop. Has there been
2 any studies done regarding how wild fisheries might
3 change as aquaculture develops? Perhaps
4 recreational fisheries and opportunities for
5 recreational fisheries may increase as commercial
6 pressure on species decreases so that the
7 opportunity to harvest wild fish would still be
8 there. It would just be by perhaps a different
9 sector of the fishing population.

10 DR. KNAPP: Well, first of all, I think
11 that -- well, one, no, I've not seen any good
12 studies of that that you're talking. Secondly, I
13 think that one of the sort of simplistic, naive
14 perspectives running around among, you know, some
15 people in the general public is something like
16 this. Oh, well, aquaculture will be great because
17 it will save the wild fisheries because we won't
18 have to harvest so many commercial fish and then,
19 you know, the wild fish will be okay and, you know,
20 there's more fish to go sportfishing for. And I
21 think that there are -- one, as anybody who spends
22 any time around fisheries knows that you just can't

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 generalize about fish. There's so many fisheries
2 and so many different species, and the nature of
3 how wild fishing and wild fisheries are affected by
4 aquaculture through market effects or through
5 environmental effects varies for each fish. But,
6 in general, I see little reason to think that -- to
7 sort of subscribe to that simplistic view I just
8 tried to characterize, and I think that you almost
9 -- it would be foolish to make any generalization
10 like that. I think that -- again, I go back to my
11 final point. If there are wild fisheries where
12 we're catching too many fish for whatever reason
13 who ought to manage those fisheries the right way,
14 so we're -- you know, if there are wild fisheries
15 where, for some reason, there ought to be more
16 available for sport? Well, that's a decision for
17 the wild fishery manager, and lord knows we fight
18 it out every day in Alaska, that issue. And that's
19 a decision that's basically independent from
20 aquaculture, for the most part.

21 CO-CHAIR MR. OSTERBACK: Randy.

22 MR. FISHER: Thank you. Thanks,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Gunnar, it was nice to hear this talk again. He
2 was great in Seattle when we put on this other
3 conference, but I had never thought about this
4 until today, actually, and that is if you thought
5 about the future do you suppose that we should be
6 thinking about things similar to the way we look at
7 IFQs now or IPQs or whatever they are in
8 determining this issue? Meaning, when you look at
9 policy in the future should we be concerned about
10 foreign ownership, for instance? Should we be
11 concerned about -- if you look in the future, I can
12 visualize Wal-Mart Superstores suddenly deciding to
13 go into the aquaculture business and taking over a
14 huge, you know, part of the market. So should we
15 be concerned about the same issues as we are on
16 some of the private firms', you know, harvests --
17 certain fisheries now, I guess would be the.....

18 DR. KNAPP: It's clearly an integral
19 issue in any kind of aquaculture development,
20 whether you're talking a little shellfish farm in
21 Kachemak Bay or a U.S. offshore aquaculture, you
22 know, sort of -- if you're going to say, okay, this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 is a place where you can have aquaculture, what
2 kind of rules and restrictions are you going to
3 place on who can own that and who can get into it?

4 What size can they be? Do they have to be local?

5 Do they have to be U.S. citizens? You know, all
6 of those issues I would expect would arise
7 immediately, and I think as I watch the aquaculture
8 debate that takes place in, say, B.C., you know one
9 of the themes that arises there is people say,
10 well, you know, it's foreigners that are
11 controlling this, and then the usual Norwegians or
12 Dutch or whatever or, you know, similarly about
13 Chile.....

14 MR. FISHER: Right.

15 DR. KNAPP:you know. And so I
16 would anticipate that that kind of issue would
17 arise in any kind of national debate about the EEZ
18 -- what kind of restrictions do we want -- as well
19 as well any local or state debate. And, you know,
20 that will get into -- you know, raise whole other
21 cans of worms about related policy in other
22 industries and so on, just one more dimension of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 this. But I think that if you were looking for
2 ways to mitigate concerns, be it on a local
3 regulatory level or a U.S. regulatory level, if you
4 were looking for ways to mitigate concerns of
5 aquaculture opponents one of a great many concerns
6 would be this, well, are we locals going to get a
7 benefit issue. So one way you could do that is
8 impose various restrictions and bells and whistles
9 that are designed to make sure that the locals do
10 benefit or run the show or whatever. But then that
11 brings another set of issues -- you know, the
12 corresponding set of issues on the other side.

13 CO-CHAIR MR. OSTERBACK: Ken.

14 MR. ROBERTS: Gunnar, I appreciate you
15 as one economist to another. Very entertaining.
16 Very direct to the point. I've got a question on
17 -- to mitigate the effects Rod and other people
18 have been discussing about the global impact
19 whether we develop here or elsewhere there might be
20 impact pricewise, jobwise, and whatnot in the
21 community because of the flood of imports, let's
22 say. There have been efforts to mitigate that in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the past, particularly right here in Alaska, with a
2 lot of public money going into programs that
3 differentiate the wild catch from imported
4 products. I'm going to put you on the spot. Is
5 there a payoff there? Can that work? Can that
6 really mitigate?

7 DR. KNAPP: Well, I mean, a silver
8 lining for wild fisheries in this very difficult
9 market competition is that as seafood consumption
10 expands and as there's more aquaculture product
11 wild fisheries become something unique and, in
12 effect, have the potential to become -- to sort of
13 have higher value because they're different from
14 the ordinary stuff. Once the ordinary stuff
15 becomes this cheap, chunky farmed -- bland farm
16 stuff, well then we've got this special wild
17 product, and it may have various kinds of cachets.

18 It may have its taste. It may have its wildness.
19 It may have its -- you know, the pristine
20 environment that it comes from or the image of the
21 fishermen or whatever and there's no question that
22 in part of the salmon market -- what I would call

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the high-end part of the salmon market -- that is
2 beginning to pay off and that niche in the market
3 or segment of the market is growing, okay. And I
4 think that the silver lining for wild fisheries, in
5 general, is that wherever aquaculture goes to wild
6 fisheries -- you know, one of their advantages is
7 they're not going to -- they're not likely to grow
8 and so they're going to become increasingly
9 special.

10 So the challenge is how do you make
11 good use of that? And it is not just simply
12 saying, oh, now we're going to use some money and
13 tell everybody to buy wild fish. With that goes a
14 whole set of responsibilities to manage the
15 fisheries and the harvests and the processing and
16 the marketing in a way that you are actually
17 responding to this new market demand. You can't
18 just say, oh, now, you know, just buy Alaska
19 salmon. It's great. You make it great -- you make
20 it more great, even more great -- and then that can
21 grow. So, yeah, you can do -- the short answer is
22 you can do mitigating things for wild fisheries

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 impacted by imports -- imports from aquaculture or
2 foreign imports -- but they still have to hold
3 their own in the marketplace. You can't do it for
4 them. They have to -- I mean, the subsidies can
5 help a little bit; but, in a sense, wild fisheries
6 have to find their way in a changing marketplace to
7 take advantage of the new opportunities amidst
8 these huge challenges.

9 MR. ROBERTS: So repetitive use of
10 public funds, you're saying, in a specific fishery
11 if not a good investment?

12 DR. KNAPP: No. In my opinion, there
13 isn't any right or wrong answer to that. I mean, I
14 think that it's a valid -- I think it's a valid use
15 of Federal government money to assist the Alaska
16 wild salmon industry or other wild fisheries that
17 have been dramatically impacted by imports in a
18 short period of time and dramatically impacted by
19 changes and my personal belief is that's in the
20 national interest. My personal belief is that that
21 is not a long-term strategy. You can't build an
22 industry sort of permanently dependent on

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 subsidies. You know, a long-term strategy for the
2 Alaska salmon industry is not the school lunch
3 program for pink salmon, you know. I support that,
4 but that doesn't get you out of your problem in the
5 long run. But we're getting into the local.....

6 CO-CHAIR MR. OSTERBACK: Okay. Ralph.
7 Then Larry. Then we're going to break for lunch.

8 MR. RAYBURN: Just a quick -- I've
9 always related -- I'm from Texas so I've dealt a
10 lot with the shrimp and I always related the issues
11 that the wild caught shrimp fisherman is having to
12 what a salmon fisherman up here is having -- and,
13 by the way, some of your work has been very helpful
14 as we've watched how you've worked with the salmon
15 fishery up here in dealing with the niche market
16 development or specializing their wild product.
17 But you said -- and I didn't realize this --
18 they're really -- it seems to me there is some
19 difference in that, actually, the -- correct me if
20 I'm wrong, but the salmon fishery up here was
21 really directing their market into Japan. So the
22 displacement was not at a domestic level like it

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 was with the shrimp industry but more with the
2 export; is that correct?

3 DR. KNAPP: Well, it's -- there's.....

4 MR. RAYBURN: Plus, I guess the
5 economic impacts are.....

6 DR. KNAPP:there are elements of
7 correctness in it. Anytime you talk about Alaska
8 salmon, you've got to realize we've got lots of
9 different kinds of salmon and lots of different
10 kinds of fisheries, and they're going to very
11 different markets.

12 MR. RAYBURN: Okay.

13 DR. KNAPP: And so if you're talking,
14 say, our sockeye salmon or our red salmon those
15 markets are very dependent upon an export market in
16 Japan. If you look at our troll fisheries and, you
17 know, our chinook salmon, coho salmon, the market
18 is highly dependent on the U.S. market. And so I
19 guess the general way to -- it is very interesting
20 to compare the problems of the U.S. shrimp industry
21 and the U.S. salmon industry. There are many
22 analogies. But one difference is, as I understand

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 it, the U.S. shrimp industry is almost entirely
2 supplying to the domestic market whereas the Alaska
3 salmon industry is much more complicated and large
4 parts of it go to domestic market but, actually, by
5 my estimate, about 60 percent goes to other
6 markets. And then there's the whole issue of a
7 very -- canned salmon is its own unique product
8 form.

9 MR. RAYBURN: Got you.

10 DR. KNAPP: So it's.....

11 MR. RAYBURN: Thank you.

12 CO-CHAIR MR. OSTERBACK: Larry.

13 MR. SIMPSON: Thank you, Mr. Chairman.

14 Something Randy said that really started me
15 thinking about something, and I just -- it's not so
16 much a -- it's more of a comment, just to put it
17 out on the table, just something that I was
18 thinking. You know, in physiology it's an all or
19 none theory with muscles, you know. A muscle
20 contracts or doesn't. The more muscles that
21 contract the stronger the pickup. So are we really
22 talking about all or none theory here about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 allowing foreign imports, or is there a means and
2 method of allowing partial use of imports? In this
3 country, in the Magnuson Act the purpose was
4 basically -- or one of the major purposes of the
5 Magnuson Act was to get rid of foreign fishing in
6 U.S. waters. In this country, you cannot have a
7 U.S. flagged vessel unless it's built in this
8 country. Would it not possibly be a means to
9 transition into what we realize from the excellent
10 presentation by Gunnar here about globalized
11 markets in aquaculture by saying that for every
12 incremental increase in U.S. production of
13 aquaculture there would be a concomitant decrease
14 in imports, and would that get us to some kind of
15 parity? Would that get us to some kind of
16 political safe ground? Would that get us to some
17 kind of economic benefit? Or should we just do
18 like muscles and be all or none theory?

19 CO-CHAIR DR. HOGARTH: It's illegal.
20 Point blank illegal.

21 CO-CHAIR MR. OSTERBACK: Yep.

22 MR. SIMPSON: Huh?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR DR. HOGARTH: It's point blank
2 illegal.

3 MR. GUTTING: Oh, no, it's -- wait,
4 wait. Can I answer that?

5 MR. SIMPSON: How can it be illegal?

6 MR. GUTTING: No, there is a way.

7 MR. SIMPSON: Sure there's a way.

8 MR. GUTTING: Under international trade
9 law there's an escape clause for industries facing
10 a surge of imports. When you have a sudden influx
11 of imports and a domestic industry is materially
12 injured and those facts are confirmed by the U.S.
13 International Trade Commission then the President,
14 in his discretion, may put temporary interim
15 measures in place, including quotas on imports --
16 or tariff quotas -- as well as a package of
17 benefits. But there's one condition, Larry, okay?

18 And that is the President needs to have submitted
19 to him a plan, a business plan, showing that this
20 interim period -- it can't be more than five years
21 -- will be well used and that the industry will
22 take advantage of that time to become competitive

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 again.

2 MR. SIMPSON: All right. So the
3 concomitant decrease must gravitate or must
4 contribute to the concomitant increase of the U.S.
5 market or the U.S. infrastructure or the fishermen.
6 They've got to make strides. They've got to use
7 what happens here in that five-year period.

8 MR. GUTTING: There was a recent case
9 involving brooms -- pretty stupid, but that's what
10 it was -- and the industry came in with a great
11 plan and then after a year and a half didn't do
12 anything.

13 MR. SIMPSON: Uh-huh.

14 MR. GUTTING: The President pulled.

15 MR. SIMPSON: How do cars work? Aren't
16 there quotas on cars?

17 CO-CHAIR DR. HOGARTH: (Shakes head)

18 MR. SIMPSON: They're not?

19 CO-CHAIR DR. HOGARTH: No.

20 CO-CHAIR MR. OSTERBACK: Cars?

21 MR. MOORE: Only at your dealership.

22 MR. SIMPSON: I thought at one time in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 this country there were allocation quotas on cars
2 from Toyota and whatever.

3 MR. GUTTING: It might have been years
4 ago. Not anymore.

5 MR. SIMPSON: It was just a thought.
6 I'm dangerous.

7 CO-CHAIR MR. OSTERBACK: Mr. Chairman.

8 CO-CHAIR DR. HOGARTH: I just want to
9 say one thing. I want to thank Gus for coming down
10 and, you know, this I think is the type of
11 discussion that we have to have if we move forward
12 in this aquaculture discussion and where the U.S.
13 goes. I just want to say I did spend quite a bit
14 of time with Wal-Mart and Sam's in the corporate
15 office, and it is very interesting to listen to
16 them about the seafood industry, particularly, but
17 all the things that -- the profit margins of where
18 they can get it the cheapest. They want to buy a
19 certain amount of U.S.; but, you know, you talk
20 about moving offshore or moving into importing. I
21 think they've considered these things. You know,
22 would we be better off just going to China and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 setting up aquaculture and importing our shrimp,
2 for example? But they look at the price structure
3 and they say they have tried to market U.S.
4 products as U.S. products and they have a very
5 difficult time due to consistency and size and
6 things. So I think we have to do more with our own
7 markets for that niche, but I think we can make it.

8 But it's interesting if you sit down and talk to
9 supermarkets and big companies like Sam's and Wal-
10 Mart -- is how they look at this industry and how
11 it's competing. But, as they say, that every day
12 there's probably 20 different foreign countries in
13 there trying to sell seafood, but very seldom do
14 they see a U.S. person sitting in their office
15 waiting for a turn to come in a sell seafood. So
16 it's interesting, but I think it's part of this
17 long-term discussion. But that's where your big
18 markets are. You go in and look at Wal-Marts and
19 they've -- Wal-Mart is now coming out with a
20 Louisiana pack of shrimp and a Florida pack of
21 shrimp, but they have only committed to a certain
22 amount because they said the price is still higher

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 but they're going to market it. But look on the
2 back of all of them. You'll see that they're most
3 -- every one of them are imported. Plus, the laws
4 we have in the U.S. right now, you can repackage
5 most anything and you don't know where it comes
6 from.

7 DR. KNAPP: Uh-huh.

8 CO-CHAIR DR. HOGARTH: But thanks
9 again. I think it's a very good discussion.

10 MR. KENT: I'm just saying Gunnar will
11 available later on during general discussion after
12 the rest of the presentations.

13 CO-CHAIR MR. OSTERBACK: Okay. Thanks,
14 Gunnar, for your presentation and your input, and
15 we're going to take a break. So a quarter after I
16 guess we can start again.

17 (Off record)

18 CO-CHAIR MR. OSTERBACK: Okay,
19 everyone. We need to get rolling again. Oh, the
20 little alarm thing was my fault. I told somebody
21 they could open the door not realizing that it was
22 hooked up. So don't beat upon anybody else but me

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 for that.

2 MR. KENT: Alvin, what's our timing for
3 this afternoon?

4 CO-CHAIR MR. OSTERBACK: We need to be
5 completed by 4:45 today.

6 MR. KENT: And how much discussion
7 would you like to have at the end before we
8 dismiss, adjourn?

9 CO-CHAIR MR. OSTERBACK: Well, from
10 what happened so far this morning you're going to
11 get lots of discussion left. But don't we have
12 a.....

13 MR. KENT: We have four more
14 presenters.

15 CO-CHAIR MR. OSTERBACK: Okay.

16 MR. KENT: And we're saying we have,
17 what, three and a half hours, three hours and 20
18 minutes?

19 CO-CHAIR MR. OSTERBACK: Well, it would
20 probably be better if everybody is going to be here
21 to run through the presentations and hold the
22 questions.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. KENT: And, like, hold all the
2 discussion to the end?

3 CO-CHAIR MR. OSTERBACK: Sure, because
4 so much of it is so interrelated anyway that a lot
5 of the questions might get answered along the way.
6 Plus you want to make sure that you get all of
7 your presentations done.

8 MR. KENT: That's fine. Matt, is that
9 okay with you?

10 MR. RAND: Yeah, that's fine.

11 MR. KENT: That's great.

12 MR. RAND: Okay. I will do my best to
13 be as brief as I can and.....

14 MR. KENT: With that, if I can, I'd
15 like to introduce Matt Rand, who is Director of the
16 Marine Fish Campaign of the National Environmental
17 Trust. Matt came out to visit with us all the way
18 from Washington, D.C. Matt, go ahead.

19 MR. RAND: Thanks for having me. I'm
20 glad that alarm stopped because I have a loud
21 voice, but I'm not sure I could carry quite over
22 that. So who am I? I am the Director of the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Marine Fish Campaign for the National Environmental
2 Trust. I run our Conserve Our Ocean Legacy
3 campaign, which is focused at strengthening
4 conservation provisions within the Magnuson-Stevens
5 Act having a direct interest in aquaculture; in
6 addition, uniting the sportfishermen. We'll be out
7 chasing your wild salmon on Saturday via float
8 plane, trying to catch as many as I can and perhaps
9 end up doing so.

10 Just a couple of quick observations on
11 kind of where we are in the discussion that we've
12 had so far. I think the environmental community --
13 and let me raise this, I am speaking for the Marine
14 Campaign for the National Environmental Trust. I
15 think by and large the environmental community has
16 similar observations in by and large degrees with
17 most of what I have to say, but probably with you
18 folks around the table they differ from one sector
19 to the next at some level or degree. We definitely
20 do see the potential of aquaculture as being an
21 environmentally friendly way to harvest seafood.
22 It may surprise you, but we actually do see it as a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 potential. In fact, there are some out there right
2 now that we're supportive of. The native mollusk
3 in New England seems to be a pretty successful
4 aquaculture that's taking place in a biologically
5 environmentally friendly manner. That being said,
6 we also have major concerns with some of the other
7 current species of marine aquaculture that are
8 taking place.

9 Therefore, to start with off with my
10 conclusion, we would like to see those issues
11 addressed with our current aquaculture system
12 before we expand the industry at all, and I'll go
13 through our concerns as quickly as I can. I have
14 about 15 minutes to try to address them all, and I
15 will do so. A quick observation here and kind of a
16 case in point. In 2000, there were 100,000 fish --
17 farm raised salmon that escaped in Maine waters.
18 As you probably all know, we are doing aquaculture
19 for farmed fish -- farmed salmon -- in Maine. You
20 also know Atlantic salmon are endangered species
21 now, and their numbers are dwindling every year.
22 So, 2000, 100,000 fish escaped from Maine, and this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 is according to -- well, that was a documented.
2 The next one is according to a NOAA study known in
3 Fish and Wildlife. 2002, we had 22 wild Atlantic
4 salmon in Maine waters return. We are very
5 concerned that there is any Atlantic salmon
6 aquaculture taking place in Maine waters. They
7 definitely have the ability to impact that
8 endangered wild species there. In addition, to
9 take a step back even a little bit further, those
10 Atlantic salmon at one point were considered to be
11 an endless source. We did not think we would ever
12 overfish those species and yet we are down to,
13 2002, 22 fish. So you can see why we are
14 concerned. So before we expand, we would like to
15 see some of these things addressed.

16 I think overall the biggest one that we
17 haven't had a satisfactory answer to yet is
18 biological pollution, both introduced non-native
19 species and native species -- different issues for
20 all of them -- and diseases and parasites. As
21 everyone all well knows, the actual animals
22 themselves can be considered pollution --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 biological pollution that we're talking about here
2 today. Most major aquaculture in the United States
3 is outside of its native range -- examples in the
4 Pacific, white leg shrimp, the Japanese and eastern
5 oysters being grown on the West Coast, and Atlantic
6 salmon being grown on the West Coast, aside from
7 Alaska. Any of these individual species have the
8 potential for major biodiversity impacts. The
9 possible displacement and extinction of wild
10 species. Other incident on the West Coast, 600,000
11 Atlantic salmon escaped in U.S. waters from '87 to
12 '97. Over a million have escaped from '88 to '96
13 in B.C. waters. On average, we've got 90,000 a
14 year escaping from B.C. from 1990 to 2000.

15 At this point, it's fairly well
16 documented that Atlantic salmon are reproducing in
17 B.C. waters completely. One could look at this as
18 an invasive species. And we, in Alaska, have
19 caught 556 salmon to date, but do keep in mind that
20 there is no farming of Atlantic salmon in Alaska
21 and the closest one is a thousand kilometers to the
22 south and one of those Atlantic salmon was actually

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 caught in the Bering sea. So potential biological
2 effects of introduced or invasive species.

3 Direct competition for wild stocks for
4 food, habitat, spawning grounds and transfer of
5 diseases and parasites. On the big -- most people
6 understand what's going on here. There have been
7 some transfers of a disease that is actually a
8 parasite that was not found in the wilds in
9 Finland, *G. salaris*. It's a small pathogen that
10 reproduces very quickly. It eats the mucous of the
11 salmon, and it eventually kills the salmon. This
12 was a new disease actually transferred from trout
13 farming to wild salmon stocks in Finland. It ended
14 up actually causing extinction of this salmon in --
15 I have to look at my statistic here -- I believe
16 it's 82 rivers in Finland. Since then, they've
17 tried to eradicate it. They have not been able to
18 do so, and that parasite is still living in the
19 waters.

20 This is just a quick -- I tried to pull
21 together some of the recent numbers. I already
22 went through Atlantic salmon, the West Coast, over

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 a million in B.C. -- oh, I'm sorry, did I -- yeah,
2 600,000 in 2002 in Denmark escaped. Over one
3 million Atlantic salmon escaped in Chile just last
4 month. So many farm salmon have escaped in Chile
5 that the fishermen are now urging the government to
6 open a wild fishery or open a fishery of Atlantic
7 salmon as a non-native species. I think what I'm
8 getting to here is escapes. We feel that we still
9 have not addressed the problem of escapes,
10 especially within fish that are still escaping -- a
11 million salmon just recently -- and it's a serious
12 problem that has major biological and pollution
13 effects. Some salmon farms. This guy is -- he's
14 actually not escaping, but cranes are one of the
15 sources of escapes. As you probably all well know,
16 the biggest source of escapes is storms harming the
17 net pens. Predation is another big problem.
18 Props, and then just kind of human problems that
19 are taking place that are escapes.

20 Native species. I think this is
21 actually where we have our biggest concerns.
22 Farmed native species causing biological pollution

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and actually gene pollution in the wild fish.
2 Again, I'll kind of get back to what's taking place
3 in Maine. The problem is we're reducing the
4 fitness level of these farmed fish -- I'm sorry, of
5 the wild fish. The farmed fish are escaping and
6 reproducing with the wild fish, passing on some
7 other traits and actually reducing the fitness
8 level of the native fish. So 30 to 50 percent of
9 the genetic makeup of the Atlantic salmon now of
10 European descent, and that's directly from the farm
11 raised fish actually reproducing with the wild
12 fish. I cannot pronounce this river here -- the
13 Magaguadavic River in New Brunswick -- 82 percent
14 of the smolt leaving in '98 were of farmed origin.

15 So the concern here is that, especially as we move
16 forward, that biological pollution from native
17 stocks in native ranges -- I'm sorry, wild stocks
18 in native ranges has the possibility of
19 reproducing, transferring their genes with the
20 native species and reducing the fitness level of
21 those fish.

22 To get on to the transgenetic,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 genetically engineered, genetically modified,
2 whatever you want to call them fish, there have
3 been over 35 species that have been engineered;
4 and, actually, I think that number has gone up
5 fairly significantly recently. They're engineering
6 growth hormone -- human growth hormone -- in
7 Atlantic salmon -- I'm sorry, or they've got an
8 antifreeze gene that they're engineering into
9 Atlantic salmon, so that many different transgenes
10 that they're modifying into the fish. The Aqua
11 Bounty farms, as probably many of you well know,
12 have applied for a permit to sell their genetically
13 engineered Atlantic salmon. To date, I think
14 that's held up, but they do have letters of intent
15 to sell their product already. So they are just
16 waiting for a permit, and they will go right ahead
17 and start selling those immediately.

18 You'll hear a lot about the sterile
19 females as being what they are going to do for the
20 solution so that there's not gene transfer. That's
21 well and good and actually probably, at least to
22 these Atlantic salmon that Aqua Bounty is doing,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 will help gene transfer, although the technique
2 that they are using is not a hundred percent. So
3 there will be some gene transfer. Some fish that
4 contain those genes will not be sterile. In
5 addition, the problem that we'll have here is that
6 there will be sterile females that will go up into
7 the rivers and try to mate with males that are not
8 sterile and these population models have -- one
9 computer model shows extinction of the population
10 within just a few generations. So that could be
11 the problem that we would have potentially there.
12 In addition, if they're not sterile fish the
13 concern is that they have the potential to transfer
14 the actual transgene into the wild species.

15 So parasites and disease. I think this
16 one most folks are aware of in this area. The sea
17 lice that have been exacerbated due to salmon
18 farms. They are parasites that attach to fish,
19 these little guys right here. And it's not nearly
20 as big of a problem with adult fish but when we
21 start looking at the smolt you can see where the
22 parasites have attached and the problem is when the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 smolt come out of the rivers and pass through areas
2 where there has been epidemics marginally due to
3 some of the farms the parasites attach to the fish
4 and they're killing the smolt. Sea lice epidemics
5 have occurred in every major salmon farming
6 country. Another concern is infectious salmon
7 anemia. It was first found in Maine in 2001. As I
8 mentioned earlier, *G salaris* is another pathogen
9 that there is concern about being introduced from
10 farmed fish.

11 Another major issue, I think we've had
12 some discussion today about fish as feed and the
13 ability of continuing to use forage fish as feed
14 for aquaculture. My opinion is I tend to differ
15 that there is a market out there or there is a
16 ability out there to continue to use forage fish as
17 fish meal and food for aquaculture. It was
18 mentioned already today that we're -- Linda was
19 talking about the increase in the level of
20 aquaculture in the next few decades.
21 Unfortunately, we do not see a potential increase
22 in forage fish. There is a hope that we would move

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 to herbivore fish and, you know, correct that
2 problem -- use soybeans, as was mentioned. But as
3 of right now, we don't see that as the major source
4 of protein for these fish. It's still -- the major
5 source is forage fish. So one-third of the global
6 catch is turned into fish meal and, in '98, 40
7 percent of that was actually used for food for
8 aquaculture -- just am not seeing an answer to
9 feeding these fish that we're going to be growing
10 here and the increase that has been well
11 documented. We don't see a continuum of the forage
12 fish, and I think that's going to be a big problem
13 as we potentially move forward with this
14 technology. The possibility is there, but by and
15 large we're very concerned that we're going to
16 further exacerbate the problem with the forage
17 fish.

18 Quickly, eutrophication is a problem,
19 mostly a localized problem. Obviously, if we're
20 talking about open ocean aquaculture I do believe
21 that this is one that we can potentially solve the
22 problem with. Really, it is a localized problem

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that happens, especially in estuary areas --
2 Chesapeake Bay, the Gulf -- where we do have farms
3 taking place. It does further exacerbate those
4 problems. Just an interesting statistic here. Two
5 hundred thousand fish is equivalent to untreated
6 sewage from 20,000, 25,000 and 65,000 for nitrogen
7 phosphorous and fecal matter. I guess we have
8 about 30,000 in Juneau. So if there's a fish farm
9 of 200,000 fish out there, that's equivalent to
10 just using untreated sewage going right into the
11 ocean out there.

12 MR. KENT: Matt, as a point of
13 clarifi.....

14 MR. RAND: Yeah.

15 MR. KENT: I've seen that a couple of
16 different times before, and I'm just wondering how
17 that gets calculated.

18 MR. RAND: Good question. I'm going to
19 have to get back to you on that. I don't know the
20 answer to that.

21 MR. KENT: Okay.

22 MR. RAND: So I wanted to get to a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 couple of other things. I didn't know if I was
2 going to have enough time. Antibiotic resistance
3 is another concern that we've had. Some of the
4 chemicals that are used, where pesticides are also
5 concerns, but I do believe they can be addressed
6 and would be addressed with open ocean aquaculture
7 but I do want to raise them as concerns. It has
8 been documented that -- let's see, where am I here
9 -- that some of the -- well, where I'm going with
10 this? But, anyhow, those three chemicals that we
11 wanted to raise concerns with -- antibiotics,
12 pesticides and herbicides for use in aquaculture
13 are concerns that we would like to see addressed
14 before we move further forward.

15 Let me get on to our recommendations.
16 Again, these are our recommendations. Not all of
17 the environmental community supports them. If we
18 are to move forward, we do want to see them
19 addressed. So national standards for open ocean
20 aquaculture must be mandatory, not self-regulated.
21 Voluntary codes of conduct are not acceptable.
22 There must be sufficient notice. A 60-day comment

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 period must be available. We would want to see a
2 full environmental impact statement consistent with
3 the requirements of NEPA. No part of the water
4 column do we want to see this privatized.
5 Environment -- and I guess this is kind of the big
6 one right here that kind of gets to where our
7 concerns are. Environmental impacts from net pen
8 culture must be strongly regulated, including
9 adopting regulations and developing technologies
10 that eliminate as fully possible fish escapes;
11 disease transfer to wild fish; depletion of global
12 fish stocks; farm raised fish feed; discharge of
13 waste and harm to the marine mammals with
14 antibiotic use; raising genetically engineered non-
15 native marine aquatic species is prohibited. So
16 that's kind of the overview of the environmental
17 concerns. I couldn't give them justice in the time
18 that I had.

19 So I guess I will close with that.

20 MR. KENT: I open it for any questions
21 of clarification, leaving discussion to after the
22 other presenters.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR MR. OSTERBACK: Dick.

2 MR. GUTTING: You mentioned one
3 example, I think, of an ocean aquaculture operation
4 that you felt would be something we could look at
5 as being done properly.

6 MR. RAND: Uh-huh.

7 MR. GUTTING: I may have missed
8 something. Is there a finfish operation that
9 you.....

10 MR. RAND: Well, we.....

11 MR. GUTTING:would put in that
12 category?

13 MR. RAND: The problem with finfish
14 that we see is the escapes. There's stuff that is
15 being done on land -- catfish, you know, rectifies
16 that problem for the most part. The problem with
17 the catfish is the food; but, catfish, you know,
18 we're fairly supportive of, aside from the food
19 problems, and there's several others as well.

20 MR. KENT: There's several questions
21 now. John.

22 MR. FORSTER: Yeah, a couple of points.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 One, I think you referred to the issue of
2 gyrodactylus salaris in Scandinavia.

3 MR. RAND: Uh-huh.

4 MR. FORSTER: It would be nice to see
5 the references to that because I believe that was a
6 case in Norway -- not in Finland -- and I believe,
7 also, it was actually introduced from salmon smolts
8 for an enhancement stocking program, not actually
9 anything to do with commercial aquaculture.

10 MR. RAND: I have some data for you.

11 MR. FORSTER: So, okay, well, that
12 would be good. And a question about the situation
13 in British Columbia. You referred to a lot of
14 escapes, and you said, I think, that Atlantic
15 salmon were breeding in British Columbia. Can you
16 clarify if that's breeding in terms of supporting a
17 naturally self-sustaining population, or it's just
18 maybe one or two instances of a couple of fish
19 actually having managed to spawn?

20 MR. RAND: Well, no, they are actually
21 -- actually the spawners is your question; but,
22 yes, they have been documented to actually spawn

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and reproduce.

2 MR. FORSTER: That means the juveniles
3 have gone to sea and.....

4 MR. RAND: And come back.

5 MR. FORSTER:come back?

6 MR. RAND: Yep.

7 MR. FORSTER: Well, again, that would
8 not be consistent with the information I have. I
9 think there's a number of people who might disagree
10 with some of it.

11 MR. KENT: Go ahead, Al, if you'd do
12 the calling.

13 CO-CHAIR MR. OSTERBACK: Okay. Vince.

14 MR. O'SHEA: Thank you. Did you say
15 there were fish farms in the Chesapeake Bay?

16 MR. RAND: Yeah. Not fish, but
17 oysters.

18 MR. O'SHEA: Oh, I thought you said
19 fish farms.

20 MR. RAND: Sorry. Oysters.
21 Aquaculture.

22 MR. O'SHEA: Okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 CO-CHAIR MR. OSTERBACK: Bonnie, and
2 then Larry.

3 DR. BROWN: Yeah, I was real interested
4 because this is something I work with. On your
5 native species slide, it said biological pollution
6 -- this is stuff I like to teach about -- so you
7 said that it could -- that escapees could reduce
8 the fitness of native fish.....

9 MR. RAND: Uh-huh.

10 DR. BROWN:and there are a couple
11 of Fish and Wildlife Service NOAA refs there. But,
12 just as a point of clarification, fitness is an
13 evolutionary concept that we can only measure
14 indirectly through monitoring changes in things
15 like growth rate or the number of spines, you know,
16 on fin rays and things, and so it's a plastic
17 character that responds to that fitness means your
18 ability to leave grandchildren, okay?

19 MR. RAND: Uh-huh.

20 DR. BROWN: So are you saying then that
21 you have found some evidence, because I need to
22 know that.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. RAND: No.

2 DR. BROWN:that escaped fish have
3 somehow reduced the ability of native fish to leave
4 grandchildren, because that's the layperson's
5 definition of fitness.

6 MR. RAND: I don't believe that is
7 documented.....

8 DR. BROWN: Okay.

9 MR. RAND:that it has reduced the
10 actual fitness. The concern is that it will reduce
11 the fitness.

12 DR. BROWN: Okay. So and then, at the
13 bottom, you said it can or could reduce
14 fitness.....

15 MR. RAND: That's correct.

16 DR. BROWN:if, indeed, they did
17 that. But it says reduces fitness level of native
18 fish, and so I'm like, uh-oh, because I don't -- I
19 haven't.....

20 MR. RAND: It's not.....

21 DR. BROWN:ever seen the evidence
22 yet.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. RAND: documented that an
2 escaped fish has transferred genes to a native
3 species and then documented that it's reduced the
4 fitness.

5 DR. BROWN: Right. Okay. So I agree
6 that it could and that that's a concern we all need
7 to think about, but I wasn't aware of anybody that
8 had done a study on fitness.

9 MR. RAND: You're correct.

10 DR. BROWN: Okay. Thank you.

11 MR. RAND: Uh-huh.

12 CO-CHAIR MR. OSTERBACK: Larry.

13 MR. SIMPSON: Thank you, Mr. Chairman.
14 I appreciate your presentation. I'm still back on
15 the fish meal issue.....

16 MR. RAND: Uh-huh.

17 MR. SIMPSON:and I'm wondering if
18 you're concerned -- what geographic area are you
19 concerned with the forage fish? Is it Northeast?
20 Is it Gulf?

21 MR. RAND: It's globally is what we're
22 concerned about. I don't see the production of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 forage fish for fish meal increasing as
2 significantly as it's suggested that aquaculture is
3 going to increase.

4 MR. SIMPSON: Okay. So you're
5 concerned that feeding fish will become so
6 important and so prolific that there will be a
7 problem finding more of that.....

8 MR. RAND: Or we're going to further
9 exacerbate the problems already out there on forage
10 fish.

11 MR. SIMPSON: I didn't know there was a
12 problem.

13 MR. RAND: Well, there's not at this
14 point, but if we increase the amount of aquaculture
15 that we're continuing, as proposed, and has been
16 going up in the recent years, the concern is that
17 we're going to continue to go to that food source.

18 You know, if the technology comes up that we're
19 going to be feeding them soybeans or whatever else
20 it may be, that may be a solution. Be we don't see
21 that as the option at this point.

22 MR. SIMPSON: Okay. I'll leave you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 with a couple or three points. SPR on Gulf
2 menhaden is about 60 percent. The Councils would
3 love to have that. The largest biomass in the Gulf
4 is not Gulf menhaden, but bay anchovy. And, third,
5 in the Gulf we're taking about 20 percent out of
6 that 100 percent of the animals available each
7 year. I don't see there's a problem.

8 MR. RAND: I think that's a
9 localized.....

10 MR. SIMPSON: That's why I asked you if
11 you were concerned.....

12 MR. RAND:look at the potential
13 forage fish. I'm not familiar with the actual
14 statistics in the Gulf as far as forage fish go.

15 MR. SIMPSON: Well, in the Gulf you
16 produce menhaden -- I don't know, something like 75
17 percent of all the menhaden is produced in the
18 Gulf, maybe more.

19 CO-CHAIR MR. OSTERBACK: Okay.

20 MR. KENT: All right. Thanks very
21 much, Matt.

22 MR. RAND: Thanks.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. KENT: Mark, do you have a -- you
2 can work from your notes, or.....

3 MR. VINSEL: Yeah, I'll work from my
4 notes.

5 MR. KENT: Okay.

6 MR. VINSEL: I don't have a
7 presentation on the PowerPoint up here.

8 MR. KENT: All right. If I could
9 introduce you, this is Mark Vinsel, who is the
10 Executive Director of the United Fishermen of
11 Alaska. Mark.

12 MR. VINSEL: I'm going to sit down. I
13 passed out my handout to all of you, and I'll be
14 speaking from those. I can answer any questions
15 afterwards. I somewhat apologize but not sincerely
16 because UFA President Bob Thorstenson is not
17 available that was on the agenda to speak. He's
18 fishing right now, as are just about all Alaska
19 fishermen who have a market for their products.
20 This is probably right about the peak week of most
21 of our seasons.

22 MR. KENT: Mark, most people would

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 agree that a bad day fishing is better than a good
2 day at MAFAC. So everybody understands.

3 MR. VINSEL: That's right. They're not
4 used to getting lightning, though. Okay. United
5 Fishermen of Alaska, we're the largest trade
6 organization representing Alaska's commercial
7 fishing industry. We're an umbrella organization
8 with 33 regional or gear specific groups, including
9 six non-profit aquaculture associations. We also
10 have approximately 500 independent fishermen, crew
11 or business members that support us through those
12 membership categories. I don't need to belabor the
13 point of Alaska's top-notch reputation in fisheries
14 management, both in the state and the North Pacific
15 Council. You're all familiar with that, but I have
16 included that paragraph for some of the laypeople
17 who might read this.

18 As you probably know -- since Governor
19 Murkowski mentioned it -- fish farms were banned in
20 1990, and Governor Murkowski has also called for a
21 five-year moratorium on the EEZ fish farms in the
22 coastal waters off Alaska while supporting research

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 into related socio-economic impacts to fisheries
2 dependent communities. Those are from his comments
3 on the U.S. Commission on Oceans Report. As I
4 mentioned, all of the United Fishermen of Alaska
5 Board virtually is fishing right now. If you were
6 to -- we definitely invite you and encourage you to
7 hold public meetings on the development of this
8 legislation or this process, and you will receive
9 plenty of fishermen's input if that's scheduled
10 probably anytime between about the middle of
11 October and May.

12 That said, the UFA has a couple of
13 official policy statements. We oppose fish farms
14 and have for as long as anybody that I know that's
15 been involved with UFA can remember. Nobody I
16 talked to could remember how far back that went,
17 but I'm assuming it goes back at least to 1990 when
18 the state banned fish farms. More recently, on the
19 topic of EEZ fish farming, this spring our Board
20 supported a legislative environmental impact
21 statement on legislation regarding the open ocean
22 fish farms. UFA opposes voluntary regulatory

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 measures for the aquaculture industry, and UFA
2 opposes exemptions from Magnuson-Stevens, Jones Act
3 or any other applicable laws governing
4 transportation and fisheries for the aquaculture
5 industry. In addition to these official positions
6 that UFA has passed on to our delegation in
7 Washington, by word of mouth we're familiar with a
8 wide range of concerns from individual fishermen.
9 Most of these have been covered in other people's
10 presentations, but -- so I want belabor them too
11 long, but I will briefly touch on them.

12 I think, first and foremost, is the
13 market and prices. What we see happening and, in
14 acknowledgement of what Gunnar Knapp said,
15 globalization and fish farming -- the double whammy
16 -- as well as impacts to the Japanese economy,
17 which was a major market for our Bristol Bay
18 fishery and some others, but what we see is the --
19 you know, especially farm salmon production
20 capacity exceeded the market capacity at such an
21 extreme rate that it drove the prices down roughly
22 in half here in the U.S. Now, that wasn't just the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 price for the salmon we were catching. It was the
2 price for the salmon they were making, and I'm not
3 sure if that was their intention. I can't imagine
4 a business plan where you would go out and decide
5 you're going to try to lose money, because that's
6 what I understand they're doing. They -- I'll stop
7 there on that point. But if we're going to move
8 forward with industrial scale aquaculture support
9 by the U.S. we should do this at a pace that can
10 develop the market at the same time so that
11 existing price for existing producers and price for
12 the new product is at a marked, stable level that
13 can foster product development and sort of meet the
14 market's needs instead of creating all this fish
15 and then hoping people will buy them and then
16 selling it to them whatever they're willing to pay.

17 I think a proper business plan, which I look
18 forward to seeing, will address that.

19 Communities, infrastructure and
20 transportation. As Governor Murkowski pointed out,
21 this is really big to all of Alaska's fishermen,
22 especially our coastal communities where there's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 virtually no other source of income. We see the
2 potential of offshore aquaculture is to completely
3 bypass Alaska's communities. Currently, there are
4 large fisheries that deliver to Seattle, and I
5 believe there's infrastructure in place for Alaska
6 to garner some revenue from that. I'm not
7 completely familiar with the workings of that, but
8 some of the questions to Gunnar Knapp said that,
9 you know, local communities would naturally benefit
10 because the fish would come through here. But you
11 guys can't even get your FedEx packages here. We
12 can't get our fish out. So these kind of
13 developments of this kind of industry could be done
14 in such a way that it helps us with our
15 transportation issues that are still the number 1
16 obstacle for us getting, you know, a good price for
17 our fish. So if you're going to do it here in
18 Alaska, bring it through our communities. Help
19 support us.

20 Another thing that was mentioned by
21 somebody was that there are no royalties on fish.
22 Well, our fisheries pay a landing tax and half of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that goes to the local community and half goes to
2 the state and that pays for fish and game
3 management, but it's a profit to our state. So
4 bring them through Alaska, if you're going to do
5 it, and help us with our transportation
6 infrastructure and you will probably see some of
7 the resistance fall by the wayside where we all
8 feel comfortable that we'll still be around.

9 Environment. I don't have the facts
10 and figures. I'm not a scientist. I can tell you
11 that fishermen are very concerned of Frankenfish.
12 I don't think the genetically modified fish, if
13 they were cut loose in Alaska waters, would -- I
14 can't imagine they would only want to spawn with
15 other genetically sterile -- or genetically
16 modified sterile females. They're going to try to
17 spawn with the wild fish that are in our streams.
18 And, from the pictures I've seen, being twice the
19 size of the males that we've got they would
20 probably edge them out and then that female's eggs
21 aren't going to be fertilized and, you know, the
22 possible introduction of genetically modified fish

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 into Alaska's waters is a mind-boggling fear to
2 Alaska's fishermen and anybody here.

3 Other contaminants. You know, the
4 concentration of toxins that we see that I believe
5 are the reason why Chile's fish still have a level
6 of toxins higher, generally, than Alaska's fish,
7 and I could only assume it's because of the feed
8 because I don't think they have a lot of industrial
9 pollution at their sites. But that kind of
10 concentration of toxins anywhere near Alaska,
11 whether it comes out in their feces and mixes and
12 gets eaten by other things -- granted, I don't know
13 the science, and I might be just speaking complete
14 nonsense here, but there are a lot of other
15 fishermen that would also have this fear. Our
16 market niche depends on both the quality of our
17 fish and the tests that show this -- but the
18 reputation of purity and quality in the fish from
19 the pristine environment and it's no consolation
20 that these contaminants would be more diluted in
21 the ocean because any increase in those levels puts
22 to risk our market niche that we are making

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 progress on. As Gunnar Knapp mentioned -- and I
2 think Governor Murkowski mentioned -- we're
3 starting to show results at our high-end fisheries.

4 This year's prices have been the best in, I guess,
5 at least four or five years for our troll fishery,
6 if not longer. The prices have continued to hold
7 through the season, more or less, and that is the
8 biggest sign of encouragement that any of us could
9 have but that's completely at the risk of any
10 increase in toxins whatsoever.

11 Invasive species. I mentioned that a
12 little bit. I can't imagine you're going to put
13 forth policy that's going to risk healthy wild fish
14 stocks with genetically modified fish anywhere near
15 it. Invasive species. I haven't kept a count as
16 well as Matt has on how many there are out there,
17 but I know we catch them occasionally, and it puts
18 a lot of fear in us. I guess that extends way
19 beyond fishermen and way beyond commercial
20 fishermen for markets. I know -- I guess, what,
21 down around Washington, D.C. you get people
22 catching some tooth or some.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 IN UNISON: Snakeheads.

2 MR. VINSEL: Snakeheads, yeah. You
3 know, we're kind of playing with fire here where
4 we're mixing up introducing species from all over,
5 and I think we should be concerned about that. The
6 concept of net pens holding fish to me is a joke.
7 They get out of the net pens by the millions; and,
8 you know, I don't even know if you can hold these
9 things in a tank -- or it didn't work for oil. So
10 put these things on dry land and you would probably
11 have perhaps no problem with them among the
12 fishermen here, at least on that concern.

13 Another big concern I see and we hear
14 from fishermen is, in general, the state of Alaska,
15 the United Fishermen of Alaska, most of our
16 organizations support the Commission on Ocean
17 Policy's recommendation for ecosystem based
18 management. Yet, you know, last night it may have
19 seemed like a nice, cool rain to you all. That's
20 an aberration in our weather pattern. We don't get
21 lightning around here, except for this summer.
22 That's the third major lightning storm we've had

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 here in Juneau. We also had a week of temperatures
2 where it reached above 85. That was unprecedented
3 around here this week -- or that was in June. We
4 had record dry and warm May and June, I believe.
5 But anyways, you all know. There's global climate
6 change going on, or at least some places. You've
7 got towns like Shishmaref that are starting to
8 float away. They've got to move the town 40 or 50
9 -- or nine miles inland or something like that, get
10 it away from the rising water. To implement
11 ecosystem based management in a time where things
12 are obviously changing and then to throw in a major
13 variable with industrial sized aquaculture going
14 on, I think it really puts the chance of success
15 for that kind of management shift -- you know, puts
16 it at risk.

17 I guess another big point -- and to
18 some of the people I talk to, this is the biggest
19 one. This is a fundamental change -- or,
20 potentially, could be in, you know, the open ocean,
21 access to all. And the concept of private property
22 rights, which not seeing a real draft plan with,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 you know, public airing and all that stuff these
2 kind of concerns -- all of these concerns run
3 rampant in the vacuum of information that we have
4 on where this process is and what the regulation
5 is, where the draft business plan is. So without
6 that kind of concrete information on which to base
7 our understanding and to inform fishermen, you've
8 got a real PR problem out there, and I do
9 understand that the Subcommittee on Aquaculture
10 recommended that NOAA bring out a plan back in
11 December. I still haven't seen anything. I was
12 happy to see that recommendation was there, and
13 hopefully somebody is listening.

14 But, you know, fishermen, we say we're
15 the last of the buffalo hunters and that kind of
16 thing. You know, range wars have happened in our
17 Plains states. They weren't states then, as far as
18 most of the states I know, and there wasn't really
19 much local say about what was going on when
20 barbed wire was put up and cattle drives were
21 eliminated, but that's what some people see this
22 as. So we're very concerned. I already sort of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 briefly touched on here that, you know, that you
2 see the high level of fear and misunderstanding.
3 You recognize that probably in this Committee
4 throughout the whole process here. I don't
5 understand why this isn't brought out into the open
6 in developing policy.

7 I could point to -- as has been
8 mentioned, we do have aquaculture that's working
9 here in Alaska. Our enhancement hatcheries. We've
10 got one here. I don't know if any of you were able
11 to tour our DIPAC facility. It's paid for by
12 commercial fishermen. I don't know if there
13 happens to be any sportfishermen out there because
14 you're kind of catching us between our dog salmon
15 and our pink salmon, but in another two weeks we'll
16 have coho salmon and they're bright and silver and
17 there will be a lot of local sportfishermen
18 enjoying those fish. You should see it when the
19 king salmon are in, in June. But those are
20 successful.

21 We also have a shellfish mariculture
22 program going on that Governor Murkowski mentioned.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 We've made regulatory and testing changes so that
2 they could deliver live. We're getting about, I
3 think, \$10 a pound instead of a dollar a pound and,
4 as you can imagine, that's helping a community that
5 basically lost a lot of its salmon jobs and
6 virtually all of its timber jobs over the last 10
7 years. At the heart of those successes are local
8 control, cooperation of the fishermen and
9 communities.

10 I've got a little litany list here of
11 concerns that could be translated into
12 recommendations. I think that I've covered these
13 points, and I don't want to really belabor my
14 speech any. I realize there's even some redundance
15 in them. I compiled this from lists from other --
16 from input that I have received and discussions at
17 UFA Board level. But I think that key, at the very
18 bottom, provide a transparent public process to
19 engage and involve the state, the communities, the
20 tribes, the fishermen -- sport and commercial.
21 People who are interested in this should have a
22 visibility into what's going on. I think another

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 important point is to those who would say that this
2 doesn't fit into the Magnuson-Stevens Act, well,
3 the timing couldn't be better to, you know,
4 consider this in the Magnuson-Stevens
5 reauthorization. So I'll conclude with that.

6 MR. KENT: Thank you. Any specific
7 questions for clarification? Alvin will be calling
8 it.

9 CO-CHAIR MR. OSTERBACK: Okay. Go
10 ahead.

11 MR. FORSTER: Okay. I thought you said
12 something quite interesting in the context of local
13 infrastructure and the fact that if you could be
14 assured in some way that aquaculture wouldn't
15 bypass the local communities and the local
16 infrastructure there might be more receptiveness to
17 the benefits it would bring. And, first of all, I
18 can see how one could, in fact, devise regulations
19 and an industry so that one could assure you on
20 that point, but perhaps more important in terms of
21 the study that NOAA is contemplating now -- the
22 economic study -- it should look at just that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 question: How aquaculture can bring benefits in
2 term of local infrastructure to communities? What
3 sort of benefits it does bring, and how that could
4 be regulated to make sure that it happens. I would
5 have thought that's an addressable concern, and if
6 that indeed does encourage more people to think
7 more positively about the idea that would be
8 something that would be worth doing.

9 MR. KENT: Technically, that's not a
10 clarification.

11 MR. FORSTER: Sorry.

12 CO-CHAIR MR. OSTERBACK: Bob.

13 MR. FLETCHER: Mark, you and the
14 previous speaker both focused on salmonid concerns,
15 which I think are real and I think are appropriate
16 to bring up, but open ocean aquaculture could
17 provide benefits to Alaska and other parts of the
18 nation if they focused on species, say, that were
19 native and just tried to enhance as well as provide
20 more food in, say -- let's say ling cod. Would
21 your concerns cover any kind of open ocean
22 aquaculture, or you more focused on the salmonid

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 issues?

2 MR. VINSEL: Well, we're already
3 actively engaged in sable fish farming, although we
4 acknowledge we don't have a lot of say in what
5 British Columbia does. But if it's not an Alaska
6 species, we don't want it in Alaska be.....

7 MR. FLETCHER: Ling cod is a.....

8 MR. VINSEL:and then the flipside
9 of that is none of our species are overfished,
10 although I have a little bit of trouble -- I'm
11 going to step aside here. I'm not speaking in this
12 -- I'm going to follow up with a sentence here.
13 I'm not going to be talking for United Fishermen of
14 Alaska. I'm talking to you individually as a
15 person who works in a job related to commercial
16 fishing, funded by commercial fishing. I'm also
17 President of the local Rain Country Flyfishers
18 group. And, not speaking for UFA, here in
19 southeast Alaska I don't see hardly any -- I don't
20 see friction between resident sportfishermen and
21 the commercial fishermen. For one, we sure do
22 enjoy that they produce all those DIPAC fish for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 us; but, number 2, there's enough fish to go around
2 here in southeast Alaska.

3 Now, I know there are places in Alaska
4 where that's not quite the case. There's
5 population pressures around Anchorage and, there,
6 there is conflict. But the existing hatchery
7 system is beneficial. It's accepted, generally. I
8 think the people who actually pay for it would
9 probably like it if more of the recreational people
10 paid for some of those fish, but then there are
11 concerns. For instance, among Trout Unlimited they
12 have concerns over the carrying capacity or the
13 straining of those fish. Those hatcheries which
14 are done locally have, you know, local support.
15 But I don't really see where the equation benefits
16 anybody here to just keep making more fish. We've
17 got fish. We just need to sell them. We need to
18 get them to market.

19 CO-CHAIR MR. OSTERBACK: Okay. Bill.

20 CO-CHAIR DR. HOGARTH: I want to thank
21 you for the presentation, and Matt's earlier. I
22 didn't get the opportunity. I think your

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 recommendations are, you know, good
2 recommendations. I think most of them we have
3 considered and, in fact, the Atlantic salmon right
4 now on the East Coast we are requiring a hundred
5 percent markup of those fish even though we don't
6 have much left there, to be honest with you. I
7 think that -- you know, looking at this, the one
8 thing I wanted to comment to you about is I can
9 assure you you will have lots of public input. I
10 had hoped that we would have the draft legislation
11 out by now. We're not allowed to disseminate that
12 until OMB gets through looking at it and they've
13 just given us back comments and we have to respond
14 to those. But we will do nothing unless there is a
15 series of meetings across the country as soon as we
16 get the legislation out. We don't know who is
17 going to introduce it or if it will be introduced,
18 but we think this is something -- in my opinion,
19 it's the first sort of real open, good dialogue
20 we've had on aquaculture here today at MAFAC, but
21 it's something we need to carry across the country.
22 And it will be a while, I think, before you see

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 anything really major done in aquaculture. I think
2 there will some experimentations, some experiment
3 projects and things like that maybe to look at how
4 this things works out. But this can only be
5 successful as we get community build-in, in my
6 opinion, and get the states' involvement. So I
7 take to heart the comments about having the
8 information get out, and it will get out. I can
9 assure you of that.

10 You know, we have a code of conduct.
11 We have sort of a business model, and then we have
12 the legislation -- the three pieces of documents
13 that we're working on. We've hired a aquaculture
14 coordinator with a lot of good background to get
15 involved in this and to review these things now
16 before we move out further. We lost a person
17 internally, and we went outside and went through an
18 extensive interview process to get what we think is
19 going to be an excellent person to work with it.
20 But, from my perspective, I guess we have to talk
21 about the Magnuson, too. I may be -- I think you
22 have to have involvement in the Council process for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the managed fisheries, and this is another impact
2 to look at, so to speak, if it's in -- if it's
3 enhancement or if it's food production or what.
4 But I think that it does need to be a separate
5 aquaculture type permit, if we permit it. So it's
6 a little different than meeting different
7 requirements, but I think it does need input.

8 So I think your comments are well
9 taken, and your recommendations are right on the
10 mark to the things we've talked about. So thanks.

11 But we know it's been very important --
12 aquaculture facilities and enhancement are very
13 important in Alaska and I know your sensitivity
14 because you do have a tremendous fishery. So I
15 think that's one of my sensitivities is what
16 species and, you know, how this impacts the already
17 good population we have. From an enhancement
18 standpoint and others, I think it has a role. So I
19 hope that we can get these things -- you know, get
20 level heads together and we can sort of work
21 through those as we go forward.

22 MR. VINSEL: Thank you, and thank you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 all for coming to Alaska.

2 MS. RAYMOND: Thanks for having us.

3 CO-CHAIR MR. OSTERBACK: Thank you.

4 MR. KENT: Thank you.

5 CO-CHAIR MR. OSTERBACK: You have one
6 more, I think?

7 MR. KENT: There's two more.

8 CO-CHAIR MR. OSTERBACK: Two more? Gee
9 whiz.

10 MR. KENT: Yeah. Is that okay?

11 CO-CHAIR MR. OSTERBACK: Yeah. I'll
12 just tell you, you know, I remember the first time
13 this subject was brought up at this table. I think
14 I was swearing at certain MAFAC members when it
15 first came out. So we've gone quite a ways.

16 MR. KENT: The bruises are still there,
17 Alvin. They're deep.

18 CO-CHAIR MR. OSTERBACK: Okay.

19 MR. KENT: Anyway, next is Don Bremner.

20 Don is currently the acting Executive Director of
21 the Southeast Alaska Inter-tribal Fish and Wildlife
22 Commission here in Juneau. Don.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. BREMNER: Thank you, and thank you
2 for coming to Alaska. Before I begin, I want to
3 just describe a little bit about what the Inter-
4 tribal Commission is all about. We're a coalition
5 of tribes in southeast Alaska, and our goal is to
6 enhance the commercial fish and subsistence lives
7 that we have in rural Alaska. That's basically
8 what we do.

9 Before I begin, I wanted to tell you a
10 couple of stories that might be applicable to our
11 thinking and our mind-set here, you know, and we
12 could talk about that later. The first story
13 pertains to Yakutat, Alaska, which that's where I'm
14 from. In 1984, the glacier was closing -- the
15 Hubbard glacier was closing off and there was media
16 -- tens and tens and tens of media from all around
17 the world. They had TV, radio, everybody and
18 anybody there taking pictures, interviewing people
19 about the closure of the glacier. Behind the
20 glacier is about 90 miles of fjord where there were
21 seals. There were sea otter. There was porpoise.
22 You name it. All those wild creatures were back

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 there, and the focus was how do we preserve,
2 protect and get porpoises and sea otters and
3 everything out from behind the glacier so they
4 don't starve to death? And at one of our public
5 meetings, one of my father's tribal members got up
6 and said save the baby seals, save the baby whales.

7 What about saving the baby people? And everybody
8 kind of, wow, man, isn't that something? The whole
9 attention was always focused on the resource and
10 the creatures. It wasn't focused on the economy
11 and the people of Yakutat, and it kind of got
12 people off dead center to start thinking about the
13 people.

14 The second story pertains to tribal
15 fisheries, which I'll talk about. About a month
16 ago we met with the Pacific Northwest Inter-tribal
17 Fish and Wildlife Commission folks. They were up
18 here, and they were talking about their programs on
19 the Columbia River and whatnot, and they come to
20 one of these -- they had one of these neat
21 PowerPoints like this and they showed one of their
22 -- they talked about how the economy and the fish

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 prices were affecting them as well, and they come
2 to one of the slides that showed one of their
3 tribal members. He was dipnetting, and on the back
4 of his shirt it said will fish for sex. And, you
5 know, you think what's the moral of that story?
6 Well, the moral of that story -- how do we take the
7 moral of that story and apply it to what we're
8 talking about here -- to the tribe? The moral of
9 that story is that as our tribal members are
10 excluded from fisheries they're going to get
11 creative. They're going to get creative. And
12 you'll see from my presentation that's what we're
13 going to offer.

14 You have in front of you my printout,
15 and the reason I don't have a PowerPoint is because
16 our experience and our role is based on years of
17 social, physical, legal experience, and it's not
18 based on statistics. But we read on research, and
19 we understand them as well. So we want to offer an
20 opportunity for partnering with your local fish --
21 with NOAA. If you look at the document, the first
22 thing I say is that we have to establish some kind

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of order of understanding. We need to understand
2 your organization, and you need to take time to
3 understand who we are. That's really important
4 because you think it's common knowledge of who you
5 are? It's not. You found that out in your
6 meetings around the country. Until yesterday, I
7 only knew two NOAA people -- James and Phil Smith.
8 Other than that, you're the most NOAA people I've
9 ever seen in my life. So we need to come to the
10 table and understand one another.

11 But, from our mind-set, you need to
12 understand -- and we'll beat this drum forever --
13 that our people have made a living from this ocean
14 from time immemorial. We're an ocean culture. We
15 will always be an ocean culture. Not anything you
16 say or do is going to change that. You'll see
17 later on when I talk about that. So we know we
18 have things in common with you because you manage
19 fisheries. Your ultimate goal is to build
20 sustainable fisheries in the ocean. That's our
21 ultimate goal. That's our ultimate goal in life.
22 But we have differences which, you know, page one

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and two we list our differences that we know, but
2 one of the most important things you should
3 understand about us is that we're different people.

4 We're living in Western society in a lot of
5 similar ways, but we are different people. Senator
6 Elton will get up and say, yes, that's right. They
7 are different. We are a different people. We see
8 ourselves as a different nation, but keep that in
9 mind -- keep those words in mind -- because go down
10 to the bottom of that page three and understand
11 that the Tlingit and Haida Tsimshian people we're
12 in a constant state of becoming. We're becoming
13 our ancestors. We're becoming our grandchildren.

14 Try to imagine what that means to a
15 philosophy of life, to a philosophy of what our
16 children and grandchildren are going to be thinking
17 about what they're doing 100 years from now. Try
18 to imagine what that means. There's no separation
19 of generations within our culture like Western
20 society. We are constantly becoming our ancestors,
21 and we're constantly becoming our grandchildren.
22 We pass that mind-set on to our children in our

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 culture, and the reason I mention that is because
2 we're always going to be here. We're stakeholders
3 that's always going to be here.

4 If you go to page four and look at the
5 top, we understand and acknowledge and recognize
6 the social, political, and legal aspects of your
7 problem. Early on, we heard mention of a number of
8 lawsuits that the organization has pending. We
9 sure understand those. We've been on both sides of
10 the track there with those. So we understand them.

11 If you look on page four and five, what I have
12 listed there is what we see ourselves as working
13 partners. Standards of belief. Working partners.

14 If we're going to succeed, there are ingredients
15 -- some of these ingredients of what I have listed
16 here has to be part of our relationship. American
17 government has a couple of hundred years of
18 relationship with us and practices of every kind
19 that has failed. So we're trying to establish
20 standards that we believe in that would work.
21 We're at page five, that last sentence. After
22 everything is said and done, we have a stake in one

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 another's successes.

2 I've heard talk over two days about
3 budgets. Wouldn't it be neat if we went to
4 Congress together as tribes saying, hey, we're an
5 ocean culture. We're supporting this organization
6 for these programs and these funds. It's important
7 because regardless of state lines and tribal lines
8 and everything fish don't know that. They just
9 swim around, you know. They don't have boundaries.

10 So having said that, I heard the discussion of all
11 of the previous speakers, but -- and I -- Gunnar
12 out there with his presentations. They're so
13 amazingly precise. They're wake-up calls.

14 But from our perspective, look at our
15 rural villages. You have a couple of handouts that
16 are supporting documents, along with my
17 presentation from the Denali Commission, Distressed
18 Communities. All our communities are living below
19 poverty. The per capita of income is real low.
20 Unemployment is real high. Every statistic that
21 you can calculate you would think that -- okay,
22 let's look at these statistics and see where they

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 are on the scheme of things with these charts.
2 Well, we're not doing very well. I mention those
3 because when we come to discussing aquaculture in
4 the State of Alaska we have to start thinking about
5 the money portion. And I know you folks know a lot
6 more about that, but in our rural villages in
7 Alaska we're resource rich and cash poor. That's
8 the bottom line there. We don't have sustainable
9 economies. So if you take all your thinking
10 outside the three-mile limit and try to match it up
11 with some society and economic structure on the
12 beach it's not going to match because the economics
13 that's taking place on the beach inside the
14 three-mile limit is certainly not matching this big
15 picture outside. So we're resource rich and cash
16 poor, and our villages don't have sustainable
17 economies.

18 In regards to the ecological issues and
19 environmental issues, there's a real disconnect
20 between the state laws and Federal laws on
21 regulation management and implementation. For
22 example, one of the things we tried to do a couple

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of years ago with the National Science Academies
2 was we tried to get them to add one little more
3 step in their scientific experiments and everything
4 they had going on in the international community to
5 test some of this salmon that they caught out there
6 for environmental pollution. Well, you know, it
7 didn't happen. Now, we read in today's paper about
8 that. I just said, yeah, well, we told you about
9 that. You know, it makes me wonder. How many
10 times do you have say something right before
11 somebody listens, and who do you say it to? We
12 don't know. So I'm saying it to you.

13 Part of the ecological issues and
14 environmental concerns we have is who is the Great
15 White Father out there that we need to talk to say
16 who's monitoring the high seas for this
17 environmental pollution? We need to talk to that
18 guy. That's what we need to know. An inshore
19 example of international companies that we try to
20 prevent pollution from is the cruise ships. We're
21 working with the National ETA Office to try to come
22 up with standards that meet our community goals.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 You know, not so much as the State of Alaska but
2 our community. These little villages.

3 Okay, you look at the part about
4 commercial fishing in Alaska, I see a lot of folks
5 here are from the state and other Alaskans are here
6 and we have a real internal difference about what's
7 needed and what's going on and who should be doing
8 what. So it's not a secret that some of the things
9 that I have listed here are things that the state
10 and maybe the Federal agencies and other people
11 will say no way. You don't know what you're
12 talking about. And I'll say, okay, fine, that's --
13 you could say that. But in the meantime, look at
14 what's happening here on Gunnar Knapp's discussion
15 of world economics of aquaculture. We're fighting
16 over crumbs in the state of Alaska compared to
17 world economics. I mean, just the park fishery out
18 there in the Bering Sea ought to tell us that.
19 We're peanuts. But we're still arguing over it,
20 and it's taking us down.

21 So I point that out because we don't
22 know what factors you're going to use in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 calculating should we move forward with the program
2 or not move forward with the program. So it's
3 (fire alarm) what factors are you going to be using
4 (fire alarm). If you don't mind, I'll keep talking
5 (fire alarm).

6 (Off record)

7 MR. BREMNER: If it was blamed on
8 somebody from Alaska, I could really understand,
9 but it was one of the Committee members. Now, it's
10 important to understand the internal infrastructure
11 issues that we have up here. If we don't iron
12 those out like Gunnar Knapp says, then it's not
13 going to make a difference whether open ocean
14 aquaculture comes to Alaska or where. We're going
15 to go down together if we don't come to grips with
16 those. And in regards to open ocean aquaculture,
17 as other folks in Alaska have said there's no laws
18 that apply farming up here that authorize this. So
19 the majority of the people, including the tribal
20 alliance, they have always come out and opposed
21 salmon farming, halibut farming and sable fish
22 farming. But in regards to what you're talking

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 about now I think you'll see at the end of my
2 discussion -- well, we'll think differently about
3 this.

4 But some of the problems we have with
5 what you're putting forward now about open ocean
6 aquaculture is the potential redesignation of uses
7 and user groups, and there's a 100-mile limit
8 there. What this will automatically do -- and we
9 don't have the time to talk about it -- it's going
10 to create a lot of internal conflicts and you saw,
11 from the decline of the salmon industry and others
12 I had, more competition that we haven't come to
13 grips with yet.

14 The second problem is the cost of
15 entering into this opportunity is going to be
16 higher than we can afford to pay. The state can't
17 afford to help up build the infrastructure in our
18 communities on wild salmon. Who's going to be on
19 our side and stand by our side for this
20 opportunity? Look at the economics. It's not
21 there for us right now. It's going to be a case of
22 what we believe we see happen all the time. The

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 rich getting richer, and the poor getting poorer.
2 If only the big rich companies -- god forbid
3 Haliburton decides to take up fisheries, and we
4 won't have a chance, you know? So that's how we
5 see that right now.

6 And the issue of state based management
7 control to open ocean aquaculture is a real issue
8 that we need to talk about because I know a lot of
9 tribes are going to come to you and say, hey, wait
10 a minute. In this state and this state and this
11 state and including the State of Alaska they have a
12 poor track record of working with the tribes in the
13 rural villages. So it's not working. They don't
14 recognize our tribal sovereignty or the benefits
15 that they could receive from our participation. So
16 we have differences.

17 Finally, I was hoping some of my elders
18 would show, but they didn't know what time I was
19 going to be on. Our (Tlingit language) -- that's
20 our food in Tlingit -- it's really important. Just
21 quickly, one of my elders said at one of our
22 meetings when they were talking about the word

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 subsistence, he said subsistence. He said when I
2 eat Western food I feel like they're starving me,
3 but when I eat my Native food I am full and I am
4 satisfied. Well, there's generations of that
5 relationship to the food, even with our elders. To
6 us, subsistence is a regulatory word which comes
7 under ANILCA and ANCSA. You'll hear it from a lot
8 of Native people across America -- especially in
9 Alaska -- the food is our way of life, and you'll
10 see on page eight the foods that are a part of our
11 life. It's been that way for generations. And all
12 these foods listed are exposed to the 200-mile
13 limit at one stage of their lives. So we have a
14 stake in what you're doing. We'll exercise our
15 right to whatever it takes to preserve and protect
16 that.

17 Finally, on page nine -- and I'm just
18 about done, in spite of the alarms going off -- you
19 know, I didn't realize that I would have that kind
20 of effect with alarms going off, you know. The
21 loss of these foods would be cultural genocide of
22 our people. That's just these foods here. Try to

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 imagine that somebody in 2004 in America can say
2 the loss of these foods would be cultural genocide
3 of our people. It's amazing, but it's true. The
4 foods that are listed, it's who we are. It's our
5 existence, our way of life, and we're going to
6 defend it.

7 So like I said yesterday, if our
8 subsistence fish is at the top of the food chain in
9 this ocean that swims around out there -- Senator
10 Elton will verify that -- we'll defend that to no
11 end. So that's who we are and what we do and how
12 we think. But if you try to imagine, okay, what do
13 you guys want or need or what can you do the first
14 thing that I think should happen -- is because this
15 is the most NOAA people I've ever seen in my life
16 -- I'm wondering about establishing a tribal
17 liaison. You know, a lot of you folks have heard
18 of these tribal liaisons in America -- across
19 America -- but the purpose of saying there should
20 be something like that is because look at what's
21 happening. This bill that you're proposing that's
22 just about on the fast track -- and then it takes a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 long time to gear up tribes to have some kind of
2 input. We're going to announce today -- you'll see
3 at the end of this that we're going to have to work
4 with you and then we're going to have to work
5 outside of you to try to jump ahead of where you're
6 at.

7 We offer number 2 and 3, that you
8 should look at your programs to see where the
9 tribes can plug in. We look at training and
10 education. Try to imagine that in 2004 the Native
11 Americans have a lot of educated people. I know
12 one tribal council that has every -- they have
13 bachelor's and doctorates and masters. They're
14 weird to work with. They're educated, you know.
15 But we have people keep being educated now that can
16 plug into your programs and your systems and become
17 a part of you, stand by you on national issues. We
18 would be a front man of a lot of your discussion
19 instead of a tail. And we have people more
20 educated and wiser than I -- that's for sure -- but
21 I am here to say we need these places to plug in
22 with MOUs or MOAs, whatever working mechanism that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 you have.

2 Finally, because of what you're doing
3 here we are going to work outside of you with our
4 legislators, the Secretary of Interior, the
5 Assistant Secretary of Indian Affairs on getting
6 designation of ocean stewardship programs and
7 tribal economic zones within the 200-mile EEZ. Try
8 to imagine what that's going to look like in six
9 months when you go to Congress. We go to Congress.

10 You say this is the opportunity, and we say, no,
11 this is the opportunity. Try to imagine what the
12 ocean is going to be mapped out like. The ocean
13 and its 200-mile limit EEZ is going to be mapped
14 out like oil tracts -- tracts of oil for sale and
15 lease. That's what we're talking about. So that's
16 who we are. That's what we plan to do. We ask
17 that you take our thoughts to decision making
18 bodies and one way or another we're going to meet
19 again, whether it's at one of your conferences or
20 in D.C. We're going to try to talk to you before
21 we go to court. It's costly for everybody. You
22 don't have the money. We don't have the money, but

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 we're stakeholders and we want to be a part of the
2 program. Thank you.

3 CO-CHAIR MR. OSTERBACK: Thank you,
4 Don. Does anyone have questions? Okay. Thank
5 you.

6 MR. KENT: Thank you very much. And,
7 again, our apologies for the -- Randy messing with
8 the door again. Our final speaker for this session
9 is Rich Langan as Director of the University of New
10 Hampshire Cooperative Institute for New England
11 Mariculture and Fisheries. Rich.

12 DR. LANGAN: Thank you, Don. First of
13 all, I'd like to thank this Committee for inviting
14 me here. I've really enjoyed the meeting so far,
15 and it also gave me the opportunity for my first
16 visit to Alaska although, from what I hear it isn't
17 really Alaska. Is that right?

18 CO-CHAIR MR. OSTERBACK: You got to go
19 that way farther.

20 DR. LANGAN: Anybody mind if I open
21 this door? While I'm getting this booted up -- it
22 will take a second -- I'm from the Northeast, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 those of you in the room probably know that the
2 fishery situation in the Northeast is drastically
3 different than the fishery situation in Alaska. We
4 are -- we have lost a number of fishing jobs. We
5 have lost a number of processing jobs, and there's
6 been a ripple effect throughout the economy and a
7 tremendous change over the entire demographics of
8 the Northeast. I feel like I should probably admit
9 to some guilt in that because I was a commercial
10 fisherman back in what we called the glory days in
11 the early 80s, and there's several things that I
12 took away from my fishing experience for that four-
13 year period.

14 The first thing was I really, truly
15 understood the meaning of hard work, and everything
16 I've done since then has been pretty cushy compared
17 to commercial fishing. The second thing I realized
18 is that we were taking way too many fish and that
19 there were going to be consequences for that. And,
20 along those same lines, there was something I heard
21 about -- and this was around 1984 -- called
22 aquaculture, and I said I got to think about

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 looking into that because farming fish, you know, I
2 think there's going to be consequences of catching
3 too many fish. So the last thing I took away from
4 fishing was a Ph.D. degree, and what I mean by that
5 was along with catching too many fish I also
6 noticed that particularly in the Northern shrimp
7 fishery we were taking so many little fish -- so
8 many undersized fish -- that it was sometimes three
9 or four times the catch of shrimp. So I did my
10 Ph.D. dissertation on discards in the trawl
11 fisheries. So I earned a Ph.D. and I never --
12 without spending any time in the classroom. Don't
13 tell anybody that I didn't take any classes for my
14 Ph.D. But, anyway, that's what I took away from
15 fishing, and it's enough time for me to get this
16 booted up. So I guess that worked.

17 (At ease)

18 DR. LANGAN: Okay. I'm here to tell
19 you about a project that's been going on in the
20 Northeast for the past several years. I am the
21 Director of this program as well as a participant
22 in this, but think of me as a representative of all

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 my colleagues at the University of New Hampshire,
2 other research institutions that we're working with
3 in the Northeast, as well as our industrial
4 partners. That project, the Open Ocean Aquaculture
5 Project, is part of a larger institute, the
6 University of New Hampshire Cooperative Institute
7 for New England Mariculture and Fisheries, and I
8 think this is a point of this slide -- is that we
9 consider fisheries and mariculture all being part
10 of seafood production. We don't differentiate
11 between them. Funding for this program comes from
12 NOAA through Congressional appropriation through
13 the Office of Oceanic and Atmospheric Research. We
14 do have additional grants -- some small business
15 innovation research grants, some SK grants while
16 that program was still around -- but the bulk of
17 the funding comes through this Congressional
18 appropriation. My point here is doing this kind of
19 work offshore -- this experimental work -- is
20 expensive and very difficult to do on small grants.
21 And as I'm given to sloganeering, this is what
22 I've come up with for our institute: Solutions for

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Responsible Seafood Production.

2 In this presentation, I'm going to give
3 you an overview of the project, talk about some of
4 our recent accomplishments -- and those are these
5 categories -- engineering, finfish culture,
6 shellfish culture, economics and technology
7 transfer in commercialization. Also, talk about
8 environmental assessments associated with our
9 project and then a little bit about what we're
10 looking at down the road.

11 Now, our vision for this program is
12 that at some point in time there's going to be a
13 viable industry and it's going to be compatible
14 with other activities going on out there and
15 environmentally responsible. Our mission for our
16 group is to provide the regional and national
17 expertise in research, technology development and
18 technology transfer, and the goal for the project
19 is to demonstrate that this is all possible
20 biologically, engineering wise, economically, and
21 environmentally.

22 Our approach -- now, this is somewhat

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 in chronological order. Some of these activities
2 actually took place at the same time. Select a
3 suitable site. What I mean by suitable and
4 representative site and when I say open ocean
5 aquaculture what I'm really talking about is
6 exposed conditions. I'm not talking about EEZ
7 necessarily, but someplace that's exposed to all
8 the weather.

9 We engaged regional and local
10 stakeholders, and I'll include in that group, first
11 off, the commercial fishing industry, recreational
12 fishermen, non-governmental organizations -- any
13 agencies that were not necessarily associated with
14 giving us a permit like U.S. Fish and Wildlife. So
15 we brought all these people together to talk about
16 what we were planning to do. And then, of course,
17 we had to obtain state and Federal permits. This
18 could be a separate presentation all on its own.
19 We could call it Tales of Wails and Woe.

20 We developed partnership with industry.

21 When I say industry, I'm talking people who make
22 cages, people who make mooring systems, people who

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 make engineered marine related components and we
2 went ahead with some design and testing of offshore
3 systems, established an offshore platform where we
4 could conduct research and -- as well as the shore
5 side infrastructure we needed to support that.

6 Select appropriate native species of
7 fish and shellfish. I'll emphasize native there.
8 I'll also mention here that all of the fish that
9 we're working with have wild brood stock as their
10 parents. So we're working only with F1 fish at
11 this point in time. For the fish we were working
12 with, the hatchery technologies were not there.
13 The nursery technologies were not there. So this
14 is something we had to do. We're pretty much
15 starting from scratch with some of the species.

16 Of course, anytime you do anything out
17 in the ocean you're going to have to evaluate your
18 environment impacts. Nobody is going to let any
19 activity happen without some information about
20 that. Once we've got all that down, we wanted to
21 demonstrate that this was all possible.

22 Evaluate the production economics and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 transfer technology. In terms of the economics of
2 this, we're partway through this part of the
3 project. We understand the economics of some of
4 the shellfish culture very well. We don't
5 understand the economics of the finfish culture
6 very well. I'll give you what I have when I get
7 that far.

8 Project characteristics. It's an
9 interdisciplinary project because it's a very
10 complex project and requires skill sets that are
11 beyond one group of people. So aside from the
12 usual -- biologists and oceanographers -- a couple
13 of the things that I wanted to point out are social
14 scientists. We did a lot of attitude assessment
15 among the commercial fishermen. How do you feel
16 about this? If there was an industry, would you be
17 interested in working in this industry? So we got
18 a lot of information from a lot of different groups
19 in terms of social science. I also don't want to
20 ignore that mechanical trades and maritime skills
21 were very important to this. So we utilized a lot
22 of that skill and knowledge from the commercial

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 fishing community. It's a regional effort. It's
2 not just the University of New Hampshire. All
3 these institutions were involved and still are
4 involved. Also, the industry partnerships were
5 key. If we didn't partner with industry and get
6 that knowledge and get that capability we wouldn't
7 be where we are today.

8 Research grants are awarded
9 competitively. Just to let you know how this is
10 done, I write what's called an omnibus grant to
11 NOAA. Within that grant, it includes a number of
12 different projects. Those projects are selected
13 through a competitive process. I write an RFP
14 based on input that I get on what are the critical
15 issues that need to be addressed over the next year
16 or two-year period. We release that RFP. Anyone
17 is eligible to apply for a grant for that. It goes
18 through a completely independent peer review
19 process, and that's how the projects are selected.

20 And, also, we've been sharing
21 information with other similar type projects, and
22 when I say similar type projects there is an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 offshore farm off the Island of Culebra in Puerto
2 Rico. That's a combined effort of the University
3 of Miami and the University of Puerto Rico and a
4 private company called Snapper Farm. There's
5 another operation in Hawaii called Cates
6 International, and that came about through the
7 efforts of the University of Hawaii and The Oceanic
8 Institute. It's now a totally commercial
9 operation, as well as there's a number of people in
10 Europe thinking about this. Now, when someone asks
11 the question what's the offshore production -- and
12 I think the best answer came from Gunnar, is not
13 much right now but it is really about to happen.

14 Okay. As far as where the project is
15 located, this is a bathymetric map of the Gulf of
16 Maine. Some things that some people might
17 recognize, here's Cape Cod right here. This is
18 Georgia's bank. That dot now is taking up the
19 entire coast of New Hampshire, all 18 miles of it.

20 I'll bring you in a little closer to the site. As
21 you can see, we are 10 kilometers from shore. I'll
22 translate. I was -- slip between kilometers and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 miles. Okay, we're about six miles offshore if you
2 go directly off the New Hampshire coast and by
3 virtue of this pile of rocks right here called The
4 Isles of Shoals it really puts us still in state
5 waters because even though state waters are
6 normally three miles this group of islands is
7 shared by Maine and New Hampshire. So it pushes
8 the state boundary out to six miles right at this
9 location.

10 The water out here is two meters deep.

11 The current velocities range between a little less
12 than a knot to over two knots. So we get a lot of
13 flow going through here, and this is the one that
14 really makes this site representative of offshore
15 sites. We've had significant wave heights greater
16 than nine meters -- so 30-foot waves and storms.
17 We actually measured a sustained 24-hour period
18 where we had waves of 12 meters -- that's nearly 40
19 feet -- and I'm happy to say it didn't do anything
20 to our installation out there. Everything was
21 fine. Not only does it get rough, but it gets
22 cold. And this is sea water -- full-strength sea

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 water, freezing -- and you can see that anything we
2 have at the surface is going freeze. That's one of
3 our feed buoys. That's another one of our feed
4 buoys. We have to go out there on a fairly regular
5 basis when we have cold snaps and chop the ice off
6 these buoys. So it's a very rigorous environment.

7 As our project manager -- our field manager --
8 says, if we can do this here it can be done
9 anywhere.

10 So let's talk about engineering first.

11 Our engineering approach involved developing
12 mooring designs, automated feeders -- and,
13 automated feeders, I'll tell you why that's so
14 important -- and then technology for remote
15 operations. If you've got a farm six miles
16 offshore, you can't be going out there all the time
17 in a boat. So you've got to be able to operate at
18 that shore from a nice, comfy office from your
19 computer using technology. And then, to accomplish
20 this, we employed computer programming, computer
21 modeling, scale model testing and then field
22 evaluation and verification.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 The cages that we're using at our site
2 are really one of the only truly submersible cages
3 available on the market. This is a called a Ocean
4 Spar Seastation, and characteristic of it is it's a
5 central spar that you can put air in. You could
6 raise this to the surface. There's also air in
7 this rim right here. Other characteristics of it
8 are that it's got very taut netting on it so that
9 it is quite a bit different than what are called
10 gravity cages or surface cages.

11 Our initial cage installation. When we
12 first started out, we were saying, okay, we're
13 putting something out in the ocean, something no
14 one has done up before. We want to make sure this
15 is going to stay there. So we created this system
16 of four anchors and a submerged grid. This grid
17 sat about 60 feet below the surface and then the
18 cage, of course, you see, has a very large
19 footprint for just a very small cage, and this
20 worked very well. But we said, all right, farm of
21 the future is not going to be able to take up that
22 kind of footprint. So we said we need to come up

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 with another design. Stealing a bit from what they
2 normally do in the salmon industry now where they
3 have cages attached to each other -- sometimes 12
4 cages -- we took -- oh, let me go back -- we took
5 that idea and created a four-cage grid that you see
6 right here. This is still 60 feet below the
7 surface. The tops of these cages in their
8 submerged position are 30 feet below the surface.
9 This is actually a bathymetric map using multibeam
10 sonar and 3-D visualization of the site.

11 Our engineering tools include finite
12 element model, and this is a model that was created
13 by some of the engineers at the University of New
14 Hampshire. You can see here what we're doing is --
15 let me go back, and see if I can get that to load
16 again -- there it is. You can see that what we're
17 doing is we're modeling the motion and the stresses
18 on the cages in a seven-meter sea -- so in about a
19 25-foot wave. From that model, we're able to know
20 what the stress points are. We also have the
21 facilities at the university for a tow tank. Here
22 we are towing this, so we understand the stresses

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of current flow. And, in that same tank, we can
2 creates waves then so that we can test these scale
3 models under different wave conditions. Once we
4 understand these types of stresses, then we can --
5 when we put the system out in the environment, we
6 can attach some equipment to it and understand what
7 these forces are.

8 This is a very difficult picture to see
9 but this is one of the junction points of the
10 mooring system and these are load cells and these
11 load cells actually have a small computer on them.

12 So they actually can store on this little computer
13 the forces on the cages. We can match that up with
14 the environmental conditions.

15 I mentioned feeding being a big issue.

16 When you have a farm offshore in the winter in New
17 England there might be times when for a week you
18 can't get out there to feed your fish. You're not
19 doing to have healthy fish if you can't feed them.

20 So we realized that feeding fish automatically was
21 a very important thing. Well, someone who knows
22 the salmon industry says big deal, you know.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 They're feeding fish all the time in the salmon
2 industry with automated feeders. Well, they're not
3 pumping fish to submerged cages. They're using air
4 to blow feed into a pen. So this is a totally
5 different technology that was needed.

6 This is a schematic of our original
7 design. This is a quarter-ton design. It's a very
8 small feed buoy. I won't go through all the
9 diagrammatic description of this, but the top part
10 of it holds the feed. The lower part is filled
11 with computers and controllers and this is what it
12 looks like when it's on-site. This is powered by
13 sun and wind, and this becomes a slurry of feed and
14 water down through the submerged cage. Mooring
15 this was no easy trick because the cage sits down
16 here and it doesn't go up and down in the tide.
17 But we have about a three-meter tide, and then
18 we've got to deal with wave heights. So this thing
19 sitting at the surface has got to move up and down.

20 So this took quite a bit of engineering work up
21 front, as well as some testing to figure out how we
22 moor these things.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Once again, we put it through scale
2 model testing and then once we were satisfied that
3 we could moor this thing out here we said, okay,
4 let's move up to the next prototype, which is a
5 one-ton feeder, and that one is powered by diesel
6 power because we just couldn't generate enough
7 energy from wind and sun to feed with that. We
8 also said, okay, we've got this thing out here and
9 how are we going to fill it up? So we built this
10 feed blower, and we have a cyclonic decelerator
11 right here that gets rid of the fines and dust so
12 that we can go out and fill this feeder by pumping
13 feed from the boat.

14 Similarly, we subjected this to the
15 finite element modeling and this is once again a
16 70-year sea and you can see that we're not really
17 that happy with this design, the way that flops
18 around like that. So we're thinking that next
19 round is going to be a slightly different shape and
20 more in configuration for the theaters. We also
21 get reports every hour back from the feeders. The
22 feeders are also our brains. That's where the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 computer is. And, interestingly enough, if you
2 look right -- you're not going to be able to see
3 any of this, but this gives us GPS information. We
4 want to just make sure it's there. So that helps
5 quite a bit, but it reports on the load cell
6 tensions in different parts of the mooring. So we
7 can get that kind of communication from this buoy
8 just sitting at a desk at the university.

9 The next design is coming out -- I
10 think this was one of the designs, but I think
11 we're looking more at this type of pillbox shape
12 for our next design for our next feeder. We've got
13 to maintain and improve some of the things that --
14 you know, always tinker with things that you've
15 created. We want to make improvements to the
16 remote operation system and, in particular, it's
17 video feedback that we're having a problem with
18 because we don't have enough bandwidth. This
19 diagram right here is the diagram for a 20-ton feed
20 buoy that could feed multiple cages. It will have
21 four silos and feed all four cages. We're working
22 on that right now with a company called Ocean Spar

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Technologies, and this is on an SBIR grant that
2 we're doing this with.

3 In terms of finfish culture, I'll just
4 go through the species. We started out doing
5 summer flounder in 1999 and 2000. The only reason
6 we did that is because that's the only marine
7 finfish that was available. We had a hatchery that
8 was doing land based culture. They did have some
9 fish available for us, and we said, well, can we
10 bring them from 500 grams to a kilogram in a
11 season? Well, summer flounder, they like warm
12 water. Once it gets to a certain temperature, they
13 just don't feed. So this really did not work out
14 as well as we had hoped.

15 We did acquire some halibut from a
16 Canadian company in 2001, and we grew them out and
17 finally harvested that cage this past year. We put
18 some haddock in the cage in 2002, and we'll be
19 taking them out this fall. We tried a very small
20 group of Atlantic cod in 2001, and the growth rates
21 that we saw and the survival looked very promising.

22 So we kept trying and then, finally, in 2003, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 industry partner that we worked with -- Great Bay
2 Aquaculture -- was successful in producing very
3 large numbers. So that was stocked last year.

4 Right now, we've got an experiment
5 going on at the request of a person who somehow
6 purchased land that had a hatchery on it and still
7 had some steelhead trout to try to understand if
8 steelhead trout could live in a submerged cage. In
9 other words, the common wisdom is that steelhead
10 trout, Atlantic salmon, need to come to the
11 surface, gulp air, and go back down. Well, we're
12 doing an experiment now to see if they actually
13 have to do that. We'll have a nursery cage that's
14 split in half with a net that prevents the fish
15 from getting to the surface. And, also, this year
16 we were approached by the tuna seining industry
17 about penning bluefin tuna. The United States is
18 one of the few countries that does not pen bluefin
19 tuna and hold them for market, and the tuna seining
20 industry came to us and talked about it. There
21 wasn't enough time this year, but we're still in
22 discussions with them of whether we can do that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 next year.

2 This is just -- I'll run you through
3 some pictures of the fish. That was summer the
4 flounder. This is the Atlantic halibut. We got
5 them at 30 grams. We grew them in tanks to 100
6 grams, and then we harvested this past June at
7 about 4 kilograms. Haddock we stocked at 70 grams.

8 Right now, they're at about a kilogram. This is a
9 disappointment for us. We found that they went to
10 early maturation, so that we have to be looking at
11 what can we do to prevent these fish from going
12 prematurely to spawning conditions.

13 We stocked our largest number of fish
14 last fall, 35,000 cod. This is a picture of them
15 being pumped from their nursery pen into a well
16 boat. They were then delivered out to the offshore
17 cage where they've been since then, and they're
18 about 250 grams right now -- or in April. We
19 haven't done a measurement recently because the
20 fish are very fragile and we you don't want to kill
21 too many. So we're waiting till the temperature
22 came up and we knew they were feeding regularly.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Now, the Norwegians and the Scots and a
2 couple of others -- the Icelanders -- are growing
3 cod, and they know they can produce cod and grow it
4 to full size. But they will all admit, as well as
5 we admit, we don't know the first thing about
6 farming cod. We don't know about their behavior.
7 We don't know if we're feeding the right amount.
8 We don't know if we feed them the right time of
9 day, the right number of times per day. So we
10 said, well, how are we going to figure this out?
11 And we said, okay, how about some telemetry. So in
12 this picture we're seeing the insertion of some
13 acoustic tags, and these are transmitters -- sonic
14 transmitters into fish. You take the fish, put
15 these in, suture them up. We have to make sure
16 they recover, as you see in the little video right
17 there, and then track them while we put them out in
18 the cage. This is a diagram showing the location
19 of the hydrophones. In other words, these are the
20 receivers when we put these sonically tagged fish
21 out there, and this is the cod track.

22 So this is what the cod is doing. You

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 can see that it's swimming. It almost seems
2 random. But when we don't see all the fish we
3 don't know is he doing that because he's bumping
4 into somebody or is there some other reason why
5 this fish is moving like that? So we can see the
6 track of that fish, and we do this over, right now,
7 over two 48-hour periods -- or 96 hours -- before
8 we have to go out and download the information and
9 so on. This only tells us the tagged fish, and we
10 can only tag a few fish. So we're combining this
11 with video, and this video -- and what I want you
12 to look at is look up here. This is where feed is
13 being dropped. You can see a cloud that's coming
14 down here, and you can see the random motion of the
15 fish. You see that cloud getting bigger, and what
16 we're doing is we're pulsing feed down and I think
17 if you look closely you'll see a few pellets
18 dropping down. You can see the big pile of feed,
19 and look at those fish. They know it's there.

20 So this tells us a number of things.
21 Number 1, the fish can sense when the feed is
22 coming, and they know where to go for it. Number

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 2, is that they're all going into this big ball --
2 this big cloud -- and how do we know if that's the
3 right way to deliver the feed to the fish? Should
4 we be distributing it throughout? Because this
5 might be the biggest, strongest fish that are
6 getting up there. So, you know, there's a lot we
7 need to -- this is generating more questions than
8 answers right now. But these are the kind of
9 tools, I think, that are going to help us really
10 understand how to farm these species. Once they
11 stop eating, they just go back random again.

12 Okay, the only fish that we've
13 harvested, you know, all the way through from the
14 cycle is halibut and I have some more detailed
15 information that I didn't really want to put in the
16 slide but come and talk to me afterwards and I'll
17 let you know how we came up with this. So we're
18 assuming four cages, 20,000 halibut per cage.
19 We're stocking two cages in year one, two cages in
20 year two. Harvest size is three kilograms. So we
21 calculated the annual operating costs of about half
22 a million dollars, and this includes everything --

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 boats, feed, everything. Annual capital costs, we
2 amortized them, and I've got all the different
3 capital equipment. I've established the number of
4 years we're amortizing that over. And so the total
5 annual cost is three-quarters of a million dollars,
6 and the total annual production is 120,000
7 kilograms. So we know that our production costs
8 per kilogram is somewhere around \$6.50 per
9 kilogram. That's what we know so far in terms of
10 can you make money on this. There's a lot more we
11 need to do.

12 Okay, one thing that makes our project
13 different than the other offshore projects going on
14 is that we're including bivalve culture. Here's
15 the fish cage design once again. He's some
16 submerged longlines for shellfish culture. Fish
17 plus bivalves equals integrated aquaculture. Some
18 people call it polyculture. Now, what is it about
19 polyculture? There were some concerns about
20 nitrogen. Now, we're in the Gulf of Maine, which
21 is a very rich system. There's a lot of nitrogen
22 naturally in the Gulf of Maine. That's why the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 fishery has been so productive. But if you are in
2 an area that is nitrogen sensitive -- some
3 oligotrophic waters in the tropics, let's say. All
4 right. We look at the fish cage. We're adding
5 feed to the fish cage. There's a certain amount of
6 uneaten food that goes through in a range that I
7 take it from the literature is three to 10 percent
8 and then, of course, fish feces. So 25 -- 10 to 25
9 percent of that total, depending on whose paper you
10 believe -- that is, that nitrogen comes off in
11 feces. There's a great deal of the nitrogen that
12 comes off in terms of metabolism from the gills so
13 -- and H-4 ammonium comes off of the fish's gills,
14 and that goes into the water column in the form of
15 ammonium. And then, everything that drops to the
16 bottom you get decompensation and remineralization.

17 That also adds to the dissolved nitrogen in the
18 water column, which can lead to increased primary
19 production. So if you're in an area where
20 eutrophication is a concern, you have increased
21 primary production, you add bivalves and you
22 harvest those and you're removing a certain amount

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of the nitrogen from that.

2 Now, we cultured two species -- we had
3 thought of three -- of shellfish. One was the
4 giant sea scallop. The other one was blue mussel.

5 The third species we thought about was the Belon
6 oyster, which we gave up on because it was not a
7 native species. But why culture mussels? Now,
8 unlike salmon, where you can argue about flavor or
9 taste, fat content, meat content, texture, there's
10 no debate whether rope cultured mussels are better
11 than wild caught mussels. You can see that this is
12 an equal number of mussels. This is the meat from
13 those mussels. That's what you get out of wild
14 mussels.

15 Mussel culture isn't anything new.
16 It's been done for a very long time. Spain has got
17 an enormous industry that's been going on for a
18 long time. Closest to us in the northeast where
19 there's a large industry is in Prince Edward
20 Island. These are surface referenced longlines,
21 and all these buoys are additional longlines where
22 they're growing shellfish. You couldn't do this in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the ocean. You know, it wouldn't even take a
2 storm. It would take a normal day, and all that
3 gear would be everywhere. So we said but, you
4 know, maybe there's something to this. Can we take
5 this system and submerge it, which is what we did.
6 Here's the surface of the water. Here's where the
7 head line or backbone of the system is. And the
8 geometry of this system -- I hope you can see this,
9 if it's a little faint -- geometry is maintained
10 and the tension in the system is by buoyancy in
11 these corner floats right here, and the dead weight
12 of these anchors, and these are just simple granite
13 anchors. The important part here is this geometry
14 -- that this is 45 degrees -- and we did this and
15 we said we don't know if this is going to work and,
16 lo' and behold, it did work. Could be beginner's
17 luck. I don't know.

18 The system is very simple. Concrete
19 blocks, Polysteel rope. These things you can get
20 in the United States. This is where I'm going to
21 stop because anything else for mussel culture you
22 can't buy in the U.S. You're buying it out of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Canada. You're buying it out of New Zealand.
2 You're buying it somewhere, but not the United
3 States. To me, it's a problem, but it's also an
4 opportunity.

5 The other thing that we wanted to do is
6 we wanted to make this an opportunity for the local
7 commercial fishermen. So we said, all right, our
8 tending boat has got to be a typical fishing boat.

9 This is a 40-foot boat, very typical of what
10 people use for gill netting, lobstering and
11 dragging in the inshore reef in New England. We
12 added three pieces of equipment. This right here,
13 this is called an aft idler star wheel; this piece,
14 which is a forward hydraulically driven star wheel;
15 and this right here is simply an overhead boom.
16 There was a winch on this boat and we just fair led
17 the wire from that winch to this overhead boom. So
18 we had tremendous lifting capacity that went over
19 the side of the boat. There's a close-up of this
20 forward hydraulic star wheel. I wish I could say
21 you could buy this. We actually built this. One
22 of the guys that works for me, his father owns a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 machine shop and he actually machined this piece of
2 equipment.

3 So, mussel culture, it starts with seed
4 collection. We collect wild seed, and some times
5 of the year the dominant phytoplankton organ -- or
6 the zooplankton organism is mussel larvae. They're
7 available all the year, but when you collect the
8 issue is where you put your collecting ropes, when
9 you put them in and that determines what kind of
10 density you get and what kind of fallowing you get
11 and you can see that densities ranged from 3,500 to
12 25,000 seed per meter.

13 Nursery culture. This is the simplest
14 part. We just leave the seed on the seed lines and
15 wait until they grow up to about an inch in size.
16 That takes about four to six months. And for grow
17 out we tried several different methods. it was all
18 suspension from a submerged longline, but we used
19 some of the more traditional methods that they use
20 in the surface longline systems and we finally
21 settled on this on the bottom. It was this really
22 -- the New Zealand method for producing mussels,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 which has a rope core that has a mussel seed that
2 is wrapped on by a cotton sleeve -- or held on by a
3 cotton sleeve. And in terms of seed
4 collection, it's very difficult to see but every
5 one of these bumps on here is a mussel seed. We've
6 collect mussel seed in inshore rafts. This is
7 sitting under the dock at our Coast Guard station.

8 That's what seed line looks like after about four
9 to six months. These are all one-inch seed. We've
10 also collected seed at the offshore site. This is
11 a seed collection from ropes that were put in the
12 water in June. This is a picture that was taken in
13 October. These are ready to take off and sock out
14 onto the system. We also found through trying
15 collections all year round that we could collect
16 seed in the fall as well. This is in February. We
17 call that a snowfall here, but this is a fall
18 deployment of collector lines, and in February we
19 had seed that we could -- and that spring sock. So
20 now we've got two cohorts that we can put out in
21 the same year.

22 The first thing you do when you get

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that seed to the inch size is you strip it off. We
2 run it through a declumping and grading machine so
3 that we can separate the sizes out, and then we do
4 what's called sleeving or socking. Now, this is a
5 machine that is a New Zealand idea -- a Canadian
6 copy of a New Zealand idea, which we then tore
7 apart and adapted. And the principle behind this
8 is you have a hopper where you put the seed in.
9 It's a hydraulically driven conveyer belt that
10 moves that mussel seed into a chamber that -- which
11 is right here. Then you insert a rope into that
12 chamber, and that rope goes through this tube that
13 is covered -- and it's covered with the this cotton
14 material. The rope comes out the other end -- is
15 you have the rope, the mussel seed surrounding it,
16 and then the cotton material and you can see we're
17 just about ready to tie this off. Here's one tied
18 off -- tie this off to the backbone of our head
19 line.

20 You can see it's not very hard work,
21 based on what this guy is doing. Doing this, it
22 allows us to put out a continuous section of rope.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So, in other words, we could rope and as long as
2 we have a coil of rope that's 200 meters you can
3 put that out on a longline in continuous loops. So
4 it's very fast and very efficient to put out. This
5 is a picture of the boat, and it's always difficult
6 to get this kind of picture. I always wanted
7 another boat to be out there with us. But, anyway,
8 this is the forward hydraulically driven star
9 wheel. There's the aft wheel. This is the socking
10 machine right here. There's the hopper behind it,
11 and here are the ropes -- the grow out ropes that
12 we just tied onto the line. That cotton is
13 biodegradable. You can see in this picture it's
14 already starting to break up. This is about two
15 weeks after we put it out that that cotton is
16 disintegrating. And here it is after it's fully
17 disintegrated. So all you're left with is mussels
18 holding to this growing rope. This is what it
19 looks like under water.

20 MR. KENT: Rich, you said two weeks?

21 DR. LANGAN: Yeah.

22 DR. BROWN: They were this big.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. LANGAN: No. Two weeks for the
2 cotton to dissolve.

3 MR. KENT: Okay.

4 DR. LANGAN: This is what the mussels
5 look like.

6 DR. BROWN: They got pretty damn big in
7 two weeks.

8 DR. LANGAN: Did you want to stop me?

9 DR. BROWN: Yeah, I want to stop you.

10 MR. O'SHEA: Yeah, but that wasn't --
11 you're saying that the cotton disintegrated in two
12 weeks and then it's like six weeks later you took a
13 picture of those?

14 DR. LANGAN: Yeah.

15 MR. KENT: Okay.

16 DR. BROWN: Okay.

17 DR. LANGAN: Okay. In terms of growth,
18 in this graph this is months plus deployment. This
19 is the number of months that after the whole
20 nursery culture period of four to six months that
21 they've been out and grow out in the open oceans,
22 and here's the shell height that they went out. So

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 20 millimeters is a little less than an inch; 25 is
2 about an inch. So this is the range. This is
3 eight sea cohorts. We actually have another sea
4 cohort that I haven't added the data to this graph.

5 But if you look at what the minimum market size
6 for harvesting these mussels is, it's right about
7 there. It's right about 55 millimeters. So you
8 can see down here that it's about 8 months. So
9 we're getting a crop ready for harvest in about 12
10 or 14 months, which is better than most of the
11 other aquaculture industries in New England.

12 We also developed some harvesting
13 machinery for this. Oops, I went forward. I can't
14 get that to play. Let's see. There we go. Very
15 simply, just some fabricated aluminum with an old
16 pot hauler that we got off one of our lobstering
17 friends and because you have that continuous line
18 of rope you don't even have to stop. As long as
19 you can keep up with the containers underneath of
20 collecting the mussels. They're coming right off.

21 We get almost no breakage using this method as
22 well. This is what they look like when they come

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 off the line. They look pretty clean, but they
2 still have to go through a washing and dehiscing
3 period. You've got to take those threads off.

4 We've been packaging these mussels in
5 10-pound bags, marketing them to local restaurants,
6 to local retail distributors, and you can see the
7 label right there. It was the original label that
8 we used. We actually created a name for these. We
9 were getting a wholesale of \$1.25 a pound, which
10 beats the wholesale price for other competitive
11 products by about \$.40 a pound. This is what they
12 look like when they're cooked. Our meat yields are
13 the lowest just post spawning, 40 percent, all the
14 way up to about almost 60 percent. And when Mike
15 called me and said, yeah, the meat yield was 60
16 percent this time I said, no, you've got to do that
17 again and they did it again and I made them do it a
18 third time until they finally came back and said,
19 yeah, you know, three times this. So that's a
20 remarkable meat yield.

21 This is the trade name that we've
22 created for these. I think everybody got a copy of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the label that we've created, and this is our
2 blurb. My attempt at Madison Avenue of creating
3 the location identification and the identity of the
4 product, and we have trademarked this. And so when
5 I talk about the next thing that I'm going to talk
6 about we're hoping that any growers that are
7 growing get involved in this trademark, which will
8 give them a license for completely for free as long
9 as they agree to certain quality control BMPs and
10 codes of practice.

11 Besides from marketing in the
12 restaurants, some of you may recognize this
13 gentleman. We fed them to people at different
14 events. We also brought them down to the NOAA fish
15 fry this past year. Here it was -- now, picture
16 the NOAA fish fry. It's June. It's Washington,
17 D.C. It's 90-something degrees. It's about 200
18 percent humidity, and then turn on about 30
19 fryolaters and burners and imagine how hot that is.

20 Now, here we were cooking halibut and mussels and,
21 in addition to serving them in our booth, there was
22 another group from the Estuarine Research Reserves

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 that was making a paella. They called me up and
2 said can we get some mussels for our paella? So I
3 brought them about 30 pounds of mussels and, there
4 they are, adding the mussels to the paella.

5 This gentleman right here is from
6 Stratford University's Culinary Institute and he's
7 Spanish and he's been a chef for 18 years -- 16
8 years in Spain and two years in the United States.

9 He came over to me after he was cooking these
10 things and he said these are the best mussels I've
11 ever eaten. And, you know, coming from anybody
12 that's a compliment. But someone who has been a
13 chef for 18 years, particularly in Spain, where
14 they do know something about mussels, I thought
15 that was testimony for the quality of the product.

16 So let's look at the economics of this.

17 I don't know if I'm taking too much time.

18 MR. KENT: Go ahead.

19 DR. LANGAN: I started thinking about,
20 well, you know, what's a reasonable amount to
21 produce for our region and to have something that
22 you have product for 12 months out of the year. So

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 I looked at a 120-longline farm -- I'm not going to
2 go through all these individual assumptions here,
3 but I annualized the cost of running this farm at
4 almost \$400,000. Our annual production is about
5 6,000 kilograms per line. So I was looking at
6 about a million and half pounds of production per
7 year from this area. Annual production costs that
8 I calculated were about \$.24 per pound. So you
9 produce the raw muscle that's stripped off the
10 line, not dehisced and cleaned, for about \$.24. So
11 the gross proceeds with about a 10 percent loss is
12 \$712,000, looking like an annual profit with that
13 same 10 percent product loss at \$320,000.

14 MR. O'SHEA: Is there labor in there?

15 DR. LANGAN: Excuse me?

16 MR. O'SHEA: Labor?

17 DR. LANGAN: Yes. Labor is in there.

18 Once we had this information, we were confident in
19 our production capabilities. We were confident in
20 the quality of the product. We thought the
21 economics looked good. So we took the show on the
22 road. And this gentleman right here is Roland

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Barnaby. He's the Sea Grant Extension agent at the
2 University of New Hampshire. He was our liaison
3 with the fishing community. This is a group of
4 fishermen at one of the meetings. This gentleman
5 right here is from Great Eastern Mussel Farms, one
6 of the larger distributors of mussels in New
7 England, talking to them about marketing. We had a
8 series of meetings towards the.....

9 MR. O'SHEA: Excuse me. Could you back
10 that up? Is that Bob Jones in the back row from
11 Florida -- big guy, grey hair, green shirt?

12 DR. LANGAN: Right here?

13 MR. O'SHEA: No, come back.

14 MS. BRYANT: Come forward. In the
15 green shirt, way in the back?

16 MR. O'SHEA: Next to the t-shirt.

17 DR. LANGAN: Oh, no. That's Bruce
18 Smith.

19 MR. O'SHEA: Okay.

20 DR. LANGAN: He's actually a Fish and
21 Game marine biologist.

22 MR. O'SHEA: I swear it looked like

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Jones.

2 DR. LANGAN: In addition to having the
3 meetings with demonstrations and talking to people
4 we actually invited them to come out and engage in
5 operations with us -- so some hands-on type of
6 information. The results of this has been that
7 there are two commercial farm sites that have been
8 recently approved. Applications were submitted
9 about nine months ago. We just got the approvals.

10 They are located in this location right here.
11 It's a small start. These are only five longlines
12 apiece but, you know, these guys just want to get
13 their feet wet and I'm hoping that this eventually
14 grows into something larger.

15 I also did the economics of looking at
16 just operating a five-longline farm. The numbers
17 are not quite as good because you don't have the
18 economy of scale. You're still profitable. These
19 are your costs right here, and I included
20 processing, packaging and shipping in one of the
21 costs. Total costs of about \$50,000. It looks
22 like the profit for a five-longline farm for an

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 individual operator could be about \$25,000. That
2 is not bad considering he's only working 26 days a
3 year on that farm. So he could expand. At least
4 he's getting some supplemental income beyond the 42
5 days that he's allowed to fish.

6 Okay. In terms of environmental
7 assessments, we have some automated
8 instrumentation. This instrumentation buoy that
9 you see here is just loaded with instruments that
10 are looking at dissolved oxygen, temperature,
11 humidity, fluorescence, turbidity. This is where
12 our wave sensor is, too. So it also gives us the
13 environmental conditions, and we have two ADCP
14 current meters on there so we know the current flow
15 in three dimensions at the site.

16 We're also looking at the benthic
17 infauna with box cores, doing it to family level to
18 see if there's any changes in the benthic
19 community, and we also do epifauna using this
20 camera system right here. This is an example of
21 some of the output from that camera system. You
22 can see a crab right here, some anemones and so on.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 We see a lot of tubes -- you know, holes for large
2 worms and so on.

3 So we're looking at changes. We
4 conduct core resampling and analysis. The
5 indicators that we're using for sediment, it's
6 change in sediment organic content, changes in the
7 benthic community -- both the infauna and epifauna
8 -- through the still and video, and then water
9 quality, looking at oxygen, nitrogen, phosphorous,
10 chlorophyll and total suspended solids. And since
11 1998 -- when we started our baseline studies --
12 through 2004, we've seen no measurable changes.
13 Admittedly, this is a small operation. If you
14 expand it out, it's very difficult to speculate on
15 this. We have done some modeling, but we have
16 billions of gallons of water moving through that
17 site in fairly deep water. So we're really
18 distributing anything that's coming out of that
19 system.

20 In terms of what we're doing next,
21 engineering. The 20-ton feeder I had already
22 mentioned. Improve the real time video

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 transmission. We're also working on new cage and
2 mooring designs, trying to get a cage that's less
3 expensive and larger volume because we think the
4 economics are going to demand that. In terms of
5 finfish, we're going to continue the work to
6 understand cod physiology and behavior; also,
7 looking at different juvenile production strategies
8 and nursery strategies. We're also going to be
9 looking at some live marketing of three-quarter
10 kilogram cod.

11 Great Bay Aquaculture, who is the
12 hatchery we work with, they were down at the Boston
13 Seafood Show and they brought a tank down and they
14 had some of their small cod swimming around in the
15 tank. They had three Korean buyers walk by and say
16 I'll take 10,000 a week. Well, we're going to hold
17 them to that. So we're working out some methods
18 because cod just can't be raised to the surface
19 from a submerged cage. They have very sensitive
20 swim bladders. So we're working on some techniques
21 to be able to raise live fish and sell them to this
22 market. Also, additional species, I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 mentioned the experiment with steelhead and, also,
2 blue fin tuna pending. For shellfish, we're
3 looking to expand the commercialization efforts.
4 Developing local processing capacity is something
5 very important to us. We're looking at doing that
6 at sea on one of the fishermen's boats.

7 Product branding and marketing. This
8 is, you know, something that I have some idea on.
9 I have enough knowledge of this that I'm dangerous.

10 So we've got to bring somebody in with some
11 knowledge about this, and continue with technology
12 transfer. We have a lot of interest from the State
13 of Maine, from Massachusetts and Rhode Island in
14 doing something very similar. So I hope I didn't
15 take up too much of your time. I thank you. If
16 you need more information in addition to the
17 materials that were passed out this is our Web site
18 (ooa.unh.edu), and I'd be happy to take any
19 questions.

20 CO-CHAIR MR. OSTERBACK: I think what
21 we're going to do is we'll take a 10-minute break,
22 and then come back and do questions so everybody

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 can get up for a minute.

2 MR. KENT: Okay. And, if the speakers
3 are willing, it would be nice if we would form like
4 a little panel to take questions up in the front.
5 So if the speakers wouldn't mind being in display
6 yet one more time, I'd appreciate it.

7 (Off record)

8 MS. RAYMOND:so you're in my
9 hands.

10 MR. MOORE: Move we adjourn, Madame
11 Chairman.

12 MS. RAYMOND: It's been pointed out to
13 me that someone who was at least partially
14 responsible for some of our entertainment last
15 night is here.

16 MS. BRYANT: Ray Wilson.

17 MS. RAYMOND: Ray Wilson.

18 (Applause)

19 MS. RAYMOND: Okay. This -- we're
20 going to do some questions and answers. You folks
21 don't look real comfortable up there. I actually
22 want -- if I could start, but I wanted to ask Rich

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 a question. Is he.....

2 DR. LANGAN: I'm still here.

3 MS. RAYMOND: Rich, I wanted to know --
4 first of all, thank you. That was a great
5 presentation. You had everybody really mesmerized
6 with that. My question, though, was how did you
7 site those finfish cages without some kind of
8 consultation with the New England Council relative
9 to potential habitat impact?

10 DR. LANGAN: Well, we invited the
11 Council when I described the process that we used.

12 Before we submitted any permit applications, the
13 Council was one of those groups that we invited to
14 the -- so Paul wasn't necessarily the guy the came
15 up. Pat.....

16 MS. RAYMOND: Fiorelli.

17 DR. LANGAN: Yeah. Pat Fiorelli was
18 the one that showed up. She showed up a couple of
19 times. She said the Council doesn't have any
20 concerns about this. So.....

21 DR. BROWN: Interesting.

22 DR. LANGAN:I just took her at

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 her word.

2 MS. RAYMOND: I don't think that was
3 her decision to make, but okay.

4 DR. LANGAN: Oops. Sorry. Sorry.

5 MS. RAYMOND: Well, that was sort of
6 the -- the reason why I pointed that out was
7 because I -- you know, when Linda was talking
8 earlier about the legislation and, you know, trying
9 to exempt from the Magnuson-Stevens process. I'm
10 not personally sure that that's a great idea,
11 because I think that the Council has a role. If
12 anybody else had done that -- if the Army Corps of
13 Engineers had decided they wanted to do what you
14 did they would have of had to gone to the Council,
15 and Council would comment. Not that it would have
16 changed anything, I don't think, but -- so, you
17 know.....

18 DR. LANGAN: Maggie, do you think that
19 the fact that it was in state waters made any
20 difference to.....

21 MS. RAYMOND: It shouldn't.

22 DR. LANGAN: It shouldn't, okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. RAYMOND: Okay. So we're going to
2 have questions for anybody on the panel, and Don.

3 MR. KENT: Rich, I was curious about
4 your slide when you talked about -- when you
5 introduced the concept of polyculture and suggested
6 that metabolic wastes or waste materials from the
7 fish process could recycle into the nitrogen cycle,
8 create localized phytoplankton development which
9 then could be utilized by a shellfish culture; and,
10 yet, you didn't have any measurable metabolites
11 there. And, also, with a one-knot current, is the
12 generation time of algae sufficient to really
13 suggest that you could.....

14 DR. LANGAN: Well.....

15 MR. KENT:localize that
16 phenomenon?

17 DR. LANGAN:I don't think you
18 could. I mean, I -- true polyculture, when you're
19 actually using that molecule, is really a closed
20 system type thing. I look at it more on a mass
21 balance type thing. We're adding this much
22 nitrogen, this is what we're extracting, and I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 actually do have a paper where I calculate it based
2 on certain size fish farm at a certain feeding
3 rate, the amount of bivalve harvest that you need
4 to balance that. You know, as I said, in a
5 location like the Gulf of Maine I don't think that
6 that's something you need to worry about because
7 it's already an extremely rich nitrogen situation.

8 But if you're in a sensitive area, like some of
9 the tropical waters, you may need to think about
10 something like this. If you're closer to the
11 surface, of course you're much better off going
12 with some kind of a algalculture because that goes
13 directly into the growth of the algae, and there's
14 some significant opportunities for producing things
15 like Porphyra or Nori that could be an extremely
16 valuable crop and take up that nitrogen coming from
17 the waste and feed.

18 MR. KENT: Well, just back to the point
19 then of actually the concern that some people have
20 voiced about eutrophication and issues like that at
21 the site. Was there anything in your studies that
22 suggested that would be an issue in that

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 environment -- where you're in over a hundred feet
2 of water and you've got a one to two-knot current?

3 DR. LANGAN: No. Nothing that would
4 indicate that. We can't even measure the
5 difference in ammonium inside the cage where the
6 fish are -- and it's generally three hours after
7 the fish feed that they really excrete a lot of
8 ammonia from the gills -- can't even measure the
9 difference from upstream in the cage to the outside
10 rims.

11 MR. KENT: Okay.

12 MS. RAYMOND: Tony.

13 MR. DILERNIA: Now, I listened to the
14 point that you brought up, Maggie, regarding the
15 siting of the work. I know in New York waters we
16 still have a significant number of sites that have
17 been designated fish trap areas that were fixed
18 structures. Up until about the mid 70s, there were
19 fixed structures along the beach that consisted of
20 poles, leaders -- net leaders -- fish pens
21 immediately adjacent to many of the inlets. And
22 while those commercial fishing operations are no

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 longer in existence those sites are still
2 designated as fish pen sites and fish traps, and I
3 can't help but wonder if those same sites couldn't
4 be used to site aquaculture projects.

5 MS. RAYMOND: Dick.

6 MR. GUTTING: Two questions. Thank you
7 all. I mean, those presentations were fantastic
8 and I've attended a lot of conferences and I've
9 never seen the array. It's just awesome. I'm so
10 glad I'm here and so glad I had a chance to hear
11 you all. My questions, though, will go to Rich --
12 just two. First, it looks like you've been at it
13 for about five years and you've been looking at
14 both the finfish and the molluscan shellfish. Just
15 for the activities that you've been discussing, how
16 much total private and public investment is
17 represented in that last five years?

18 DR. LANGAN: Some of it is in-kind from
19 the industry side. So it's a little difficult to
20 estimate, but I'll say about \$11 million.

21 MR. GUTTING: \$11 million. And my
22 second question sort of has two parts. What kind

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 of a governance structure is there for making the
2 decisions about what you're going to do next, what
3 species you're going to put in the water, what
4 technologies you're going to use, what kind of
5 environmental parameters you're going to be
6 sampling? In other words, how in this project or
7 series of projects are decisions getting made and,
8 in particular, to what extent do you have
9 stakeholders or outside people involved? Is this
10 like a scientific model, or are you bringing in
11 other people into your decision making process?
12 Can you just describe that? And related to that is
13 does this project of yours have an end? In other
14 words, are you headed somewhere and then it's going
15 to stop, or is this in your mind something that
16 will just keep going and going and going?

17 DR. LANGAN: You're talking to someone
18 involved in research whose livelihood depends on
19 it. So it's never going to end. Actually, we have
20 a set -- you know, I gave our mission goals but we
21 have a set of specific objectives in each of the
22 categories and out of, let's say, 20 objectives I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 think we've probably met 15 of those. So some of
2 it -- well, I'll take the mussel culture component.

3 I see us being engaged in -- we're done
4 experimenting. So, right now, we're going to be
5 engaged in technology transfer, commercialization,
6 and as soon as we can find someone who wants to
7 work with the fishermen and fishing cooperatives --
8 or whether they want to do it themselves -- on the
9 whole marketing and management of production, we're
10 done. So we're not mussel culture anymore. In
11 fact, our two longline farms we signed that over to
12 -- we can transfer that to another operator and
13 they can add to it and make a big farm out of it.

14 Well, on the finfish side of things
15 we'd like to be able to look at phased in
16 commercialization. Think of it as -- I don't know,
17 are you familiar with the Natural Energy Research
18 Lab on the big island? What they do is they have a
19 permanent site where they have water coming in and
20 discharge permits and all the electricity that you
21 need. You go in there and you pay a very low rent
22 and it's for start-ups and it's mostly biotech and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 aquaculture start-ups. So you go in there and
2 you've got all the facilities. You don't have to
3 go through the 100,000 or \$200,000 it costs you to
4 get a permit to do this type of thing and you work
5 on your idea, whether its producing sea horses or,
6 you know, some pharmaceutical. And then once you
7 demonstrated a proof of concept, then you can move
8 into another module where it costs you a little
9 more, and you're a commercial operation. Now, I'm
10 looking at our site similar to that same model,
11 where we have a very skilled staff right now --
12 operations staff. These guys know how to run a
13 farm. And you've got people, even if they're in
14 the aquaculture industry or if they're in the
15 fishing industry and they've never been involved in
16 finfish farming before they've got a crew that can
17 help them. So if they want to come out and say
18 we'd like to rent this space for a dollar, put this
19 cage in, and get these fish and put it in there,
20 they've got people that can train them and help
21 them and we've got the infrastructure out there.
22 We could feed the fish. We've got the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 infrastructure onshore for moving feed and that
2 sort of thing. So I'm looking at us as an
3 incubator for business with phased
4 commercialization where people come in and they say
5 this looks like it could work, I'm going to get a
6 farm site out there. So that's where I see it, but
7 I still see it very long-term.

8 MR. KENT: Maggie.....

9 MR. GUTTING: Okay. And the
10 governance? I mean, are you the evil genius that
11 makes all the decisions? How do you figure on
12 the.....

13 DR. LANGAN: No, no. I don't -- we
14 would be in big trouble if I made the decisions.
15 There is a group of us -- what we call our
16 Executive Committee. It's a representative from
17 all the different components of the project, and
18 we're the ones that -- and that means so the
19 environmental component, engineering, finfish,
20 shellfish component, operations component, outreach
21 component. They're out there supposedly talking to
22 their constituents and their constituents might be

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 the group of commercial fishermen who want to start
2 mussel farming or they might be this industry group
3 who wants to work with us to develop this new feed
4 buoy. So that's where the ideas come in. But the
5 ideas for what we do next is coming from a much
6 larger global perspective -- where offshore
7 aquaculture is going.

8 We attend a lot of conferences in
9 foreign countries. There's one coming up called
10 Farming the Deep Blue in Ireland, and this is an
11 interesting one because it's a different format.
12 It's not just a bunch of talking heads, and they've
13 invited us to go over there and give two
14 presentations. I believe, Linda, you're going to
15 be talking over there. John is going to be over
16 there. So, you know, this is a global thing that's
17 happening, and Gunnar was absolutely right when he
18 said it was this close to really happening on a
19 large scale commercially. So we get a lot of input
20 from our local and regional user groups; but, also,
21 by looking around at what's going on around the
22 globe.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. RAYMOND: Bonnie.

2 DR. BROWN: Does Don want to, like,
3 direct or guide..... MR. KENT: Go ahead.
4 Go ahead, Bonnie.

5 DR. BROWN: Okay. So my question is to
6 anybody that's owning, operating or any commercial
7 or recreational fishers, all right? It's fairly
8 well-known that anytime you deploy a structure in
9 open water that fish tend to congregate there. As
10 far as I know, it's not been decided whether those
11 are fish that came from somewhere else or whether
12 you've increased the carrying capacity of that open
13 water area so that more fish can reside there. So
14 my question for both sides of this is are ya'll
15 aware of any interactions or effects -- anything
16 that's been detected -- outside but in the vicinity
17 of the cages that has to do with the aggregation of
18 fish, the conflict of fishing and growing on that?

19 DR. LANGAN: You want me to take that
20 one? I don't want to do all the talking up here,
21 but yes, yes and yes. All three sites that I'm
22 aware of -- Cates, the snapper farm site off the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 Island of Culebra and our site -- are fish
2 attractive devices. And the way it works at our
3 site -- the one I'm more familiar with -- is we get
4 small pollock that like to hide around the cage.
5 You know, they like -- you know fish. They don't
6 want to be out in the open. And what that does is
7 then attracts these lunker striped bass -- in
8 season, of course -- from May through October. So
9 that's really the kind of aggregation that we see
10 around our cage.

11 I know the snapper farm gets a lot of
12 juvenile fish around their cage. But the other
13 thing that's really interesting about the snapper
14 farm, they get all these larval lobsters -- spiny
15 lobsters -- settling in the cage and growing out to
16 full size in the cage, eating the things that are
17 growing on the cage.

18 DR. BROWN: So can I throw my line and
19 catch them, or am I excluded from that region?

20 DR. LANGAN: Well, they're inside the
21 cage.

22 DR. BROWN: Well, no, but I mean

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 outside. The stripers.

2 DR. LANGAN: Oh, the stripers?

3 DR. BROWN: Yeah.

4 DR. LANGAN: Oh, absolutely.

5 DR. BROWN: So I could come harvest
6 those stripers, and you guys wouldn't care?

7 DR. LANGAN: No, of course not.

8 DR. BROWN: Okay.

9 MS. BRYANT: Bonnie will be up there.

10 DR. LANGAN: And Cates gets a lot of
11 fish of all kinds around its cages.

12 MS. RAYMOND: And, Mark, any others, in
13 particular?

14 MR. VINSEL: Well, I would just like to
15 point out if you're fishing near that cage and it's
16 the net pens I'm familiar with I hope you don't
17 hook the net.

18 DR. BROWN: I know.

19 DR. LANGAN: No, you don't want to do
20 that.....

21 DR. BROWN: Yeah.

22 DR. LANGAN:because you'll lose

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 your lure.

2 DR. BROWN: Right.

3 MR. VINSEL: Or, with some of the
4 tackle we use you'll put a hole in the net.

5 DR. BROWN: Okay.

6 MR. VINSEL: That doesn't matter.

7 DR. LANGAN: It's real tight.

8 MR. O'SHEA: Well, if you're fishing
9 for stripers that's a fully recovered species, by
10 the way.....

11 DR. BROWN: That's right.

12 MS. RAYMOND: Okay. Ken. Ken, did you
13 have a question?

14 MR. ROBERTS: Oh, me?

15 MS. RAYMOND: Yeah.

16 MR. ROBERTS: Yeah, okay. Thank you.
17 The question of transgenics of GMO fish. I don't
18 know who I'm directing this at, but I guess I'll
19 pick on you, Linda, since you have knowledge of the
20 draft plan which Dr. Hogarth said -- I know legal
21 counsel said you shouldn't put out yet for the
22 general public. But the question I've got is, in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 agriculture, I know where to go when I have a
2 transgenic animal or a plant to get permission. I
3 go to APAS. And if I want to sell it, I'll go to
4 FDA and they're already confronting that obviously
5 in some sense. But in terms of actually -- what
6 does the draft bill say now about how an applicant
7 with a transgenic.....

8 MS. CHAVES: The.....

9 MR. ROBERTS: Who is going to sign off
10 on that? I know APAS in agriculture. But the
11 question is, is a structure set up in NOAA yet to
12 handle exactly how they're going to.....

13 MS. CHAVES: The legislation.....

14 MR. ROBERTS:approve or
15 disapprove a transgenic?

16 MS. CHAVES: The legislation does not
17 address it, but regulations would.

18 MR. ROBERTS: Regulations would.

19 MS. CHAVES: That would be in the
20 regulations.

21 MR. GUTTING: It also has to be
22 approved by the Food and Drug Administration.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. ROBERTS: Well, yeah, to sell it,
2 correct.

3 MS. CHAVES: But whether or not they
4 can be used will be addressed in the regulations.
5 The legislation is going to be silent on that, so
6 far.

7 MR. ROBERTS: Is that good?

8 MS. CHAVES: One may want to change
9 one's policy on that on a case by case basis at
10 some point in time.

11 CO-CHAIR DR. HOGARTH: Just to that
12 point, Ken, I think certain things we're concerned
13 about -- if you get it in legislation it takes
14 forever to -- you know, even longer than
15 regulations. So I think the legislation sort of --
16 but also allows other things to be done by
17 regulations so that, you know, you could do more,
18 if you need to, case by base. If you put
19 everything in legislation, it becomes a very
20 difficult -- and so you walk that line between.....

21 MR. ROBERTS: I have an appreciation
22 for that. What I'm trying to tip everybody off

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 to.....

2 CO-CHAIR DR. HOGARTH: Yeah, yeah.

3 MR. ROBERTS:is that transgenics
4 GMO on fish seem to be so dearly held to people
5 that they may want it in legislation. At some
6 time.....

7 CO-CHAIR DR. HOGARTH: Right.

8 MR. ROBERTS:you may have to
9 confront that.....

10 CO-CHAIR DR. HOGARTH: Right.

11 MR. ROBERTS:is my point.

12 MS. CHAVES: At some point in time, it
13 may come up it may come up in the process before
14 anything is actually passed.

15 MR. ROBERTS: Yeah.

16 MR. RAND: I'd just like to comment on
17 that, too. Actually, before working on fish I
18 worked on our GMO campaign for agriculture at one
19 agency and EPA also has authority over crops and
20 pesticides, and I think you are onto something.
21 You have three different agencies. There's already
22 been a huge push back by the consumers. The

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 technology to some level has already stalled
2 because of environmental concerns, one, and a
3 number of other concerns -- health concerns -- and,
4 you know, the fact that we've got three different
5 agencies governing the technologies there's been a
6 problem there, also.

7 MS. RAYMOND: Larry.

8 MR. SIMPSON: Thank you. One comment,
9 and then a question of Matt. You can't bring non-
10 indigenous species into Louisiana. If you wanted
11 to raise vanami in a pond, you couldn't do that.
12 The state prevents that in the State of Louisiana.
13 Question of Matt. If native species are used or
14 unadulterated fish are used does that change your
15 position or your group's position.....

16 MR. RAND: Well, there isn't.....

17 MR. SIMPSON: That's Mark. Excuse me,
18 I'm sorry, Matt. Mark.

19 MR. RAND: Oh.

20 MR. SIMPSON: Mark, would that change
21 your position if only native species or
22 unadulterated species were used?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. VINSEL: That's something that I
2 would have to wait and see addressed and discussed
3 by the UFA Board.

4 MR. SIMPSON: I was just curious. Don,
5 what about you? Matt, what about you? Would that
6 change your ideas or not?

7 MR. BREMNER: Oh, okay. Again, our
8 position is based on economics with the wild
9 fisheries. And, again, if you look at my comments
10 regarding the state on the lack of infrastructure
11 support and -- only example that I could give that
12 will probably stick in your mind was in -- I think
13 it was in 1992 when the Army went into Mogadishu --
14 I think that's how you pronounce it -- and they
15 were going in there to alleviate the starvation and
16 all the problems that was going on there. They did
17 that very quickly with the resources and everything
18 that they had on hand. But they found out real
19 shortly that a long-term solution to correcting
20 these problems that they were having in Somalia
21 just wasn't there. The reason that it wasn't there
22 was because the infrastructure in the people's

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 villages was destroyed. There was no civilized
2 economic system in place. So that's what is
3 happening in Alaska. The economic system that
4 should be in place -- the infrastructure that
5 should be in place to support this wild commercial
6 fish economy that we're trying to make a living
7 from is not there. So we don't see that we should
8 move into an aquaculture if we still haven't come
9 together as a state on fixing this wild resource
10 problem.

11 MR. SIMPSON: What about you, Matt?

12 MR. RAND: I think it's a step in the
13 right direction what they're doing, F-1 generation
14 of native species. You know, there are still other
15 concerns that we would have.....

16 MR. SIMPSON: Sure.

17 MR. RAND: the ones that I've
18 mentioned. But I think that is a step in the right
19 direction.

20 DR. LANGAN: I just want to qualify
21 that. We're working with F-1s now, but that would
22 not be the long-range plan. There would definitely

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 be selective brood stock programs, and I don't want
2 to give anybody the impression that we're going to
3 depend on wild brood stock. I mean, there's no
4 farming that goes on without selective breeding.
5 It doesn't make sense.

6 MR. SIMPSON: Thank you.

7 MS. RAYMOND: Okay, Don.

8 MR. KENT: Thank you. Relative to the
9 question of GMOs and selective breeding, I'm always
10 a little vague whether a selective breeding process
11 represents GMO or not and -- or if that's -- you're
12 talking about an animal that's transgenic as
13 opposed to being modified. But in some of the
14 discussions, it's things -- you know, the ready
15 belief is that escapement of GMOs would be
16 detrimental to the fitness of the wild population
17 and, back to Bonnie's comment earlier, if fitness
18 is a real succinct evolutionary term that there
19 ought to be some differentiation there between
20 popular belief and what a rigorous evaluation of
21 relative fitness or impact of the wild population
22 would be.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 And then, for just full discussion to
2 the whole Committee, I am kind of curious as to
3 what folks on the committee would think Council
4 representation could do to move things forward and
5 represent regional concerns. Is that a mechanism
6 that NOAA could use to help it develop policies for
7 the offshore in different regions? And I'd just
8 throw that open to anybody on the Committee.

9 DR. BROWN: No takers.

10 MS. RAYMOND: Anybody want to respond
11 to that?

12 MR. SIMPSON: I can tell you what in
13 the Gulf they've done.

14 MS. RAYMOND: Okay. Pete.

15 MR. LEIPZIG: Well, I think the Council
16 would have a role in this whole arena in terms of
17 the space use issues. They've got constituents
18 that are out there and utilizing certain areas. So
19 if new permits for particular sites are going to be
20 issued it's going to begin to impact other people
21 in the use that they have been accustomed to using
22 that same area for. So I think the Council gets

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 involved there. If there is going to be programs
2 that are going to be trying to supplement native
3 stocks I think the Council has a role there just
4 from its Scientific Committees of what the impacts
5 would be in terms of estimating the productivity of
6 existing stocks when you are augmenting them with
7 juveniles that may not be fully accounted for in
8 the same manner that scientists are normally
9 accounting for the productivity of the native
10 stocks. So I think that there's a number of issues
11 where the Councils have a legitimate role in terms
12 of just fisheries management of what is going on
13 now and what the scientific bodies are doing.

14 MR. KENT: Well, as our Committee meets
15 tomorrow morning to summarize the comments and come
16 back to the full Committee I just want to make sure
17 that we include in then there, then, the idea that,
18 you know, what would the role of the Councils be
19 and how would that get delineated in legislation.

20 MR. LEIPZIG: Yeah, and to some degree
21 it's hard to anticipate what the Councils' reaction
22 is going to be not knowing what the specifics of a

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 particular program are and, you know, that I think
2 that you need to lay those things on the table
3 before the Council so that they can have the
4 opportunity.

5 MR. KENT: Uh-huh.

6 MR. LEIPZIG: I mean, I can speculate;
7 but, you know, I'm certainly -- speculation is not
8 going to cover everything.

9 MR. KENT: I'm not suggesting it has to
10 be done high priority. I'm just saying that I
11 think that people alluded earlier that you wouldn't
12 want to dismiss any involvement of the Council, and
13 I just think that it's important for us to bring
14 that back as a recommendation.

15 MR. RAND: Just to answer your question
16 of transgenics, first it's a new gene introduced
17 into a species that can't happen through a natural
18 occurrence through breeding. So, for instance, a
19 human growth hormone into a fish.

20 MR. KENT: Okay.

21 MR. RAND: You're not going to get that
22 gene. Secondly, I think you're concern -- you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 raised the right question about concern of
2 transgenics, mating and changing the fitness level
3 with a native species. So a transgenic Atlantic
4 salmon with a wild salmon probably, actually, less
5 of a chance for mating to occur in the first place,
6 at least for the proposed Aqua Bounty salmon. But
7 the concern here is that the potential from the
8 transgene actually could be introduced into the
9 wild population. We really don't know, you know,
10 what the possibility is of that. In agriculture,
11 the transgene from Bt corn -- bacillus
12 thuringiensis corn -- actually has been introduced
13 into wild corn -- or not wild corn, but the
14 domestic corn and actually into the area of origin
15 in Mexico. So that's the concerns, that the
16 transgene may actually pass over into the new
17 population.

18 MR. KENT: Yeah, and there's
19 significant interest on the part of wildlife
20 geneticists relative to enhancement programs where
21 largemouth bass from Florida are brought up to
22 Illinois and, hey, it's a faster growing bass.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 It's sticking in there. And it's only recently
2 that they have done fairly rigorous fitness studies
3 where they actually grow the crossed animals in
4 those locations and find that they're actually
5 ruining the stock. Mother Nature has already
6 selected.....

7 MR. RAND: Right.

8 MR. KENT:the best largemouth
9 bass for Illinois.

10 MR. RAND: Right.

11 MR. KENT: So these aren't invalid
12 concerns. It's just -- you know, there's a lot of
13 semantics that get thrown around, and I just think
14 we need to be clear on it.

15 MR. BREMNER: I want to throw something
16 out there. I guess it's just food for thought.
17 But, again, I think a lot of what you're talking
18 about and transgenics and all of that of whole
19 field and it's really interesting and amazing and
20 it's just amazing. But if you look at our own
21 human history of selective breeding and, you know
22 -- and looking for that superhuman and test tube

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 babies and -- we could do all of that for
2 ourselves, as humans, but now it's come to a food
3 source or a species and it becomes way too
4 scientific and complicated when -- and I guess what
5 I'm talking about is morals, the moral approach to
6 the discussion of that is probably more important
7 than the thing itself because we do one thing to
8 ourselves, as humans, and then we come over here
9 and it's a little bit different. So I think, you
10 know, education is so important about this.
11 What.....

12 MR. KENT: Uh-huh.

13 MR. BREMNER:is the truth? What
14 is real?

15 MS. RAYMOND: Okay. I'm going to --
16 just for a second, I'm going to see if there's
17 anybody in the audience who has any questions, and
18 then I'll go back to the people that I have on the
19 list.

20 MR. RAYBURN: There's one over here,
21 Maggie.

22 MS. RAYMOND: Yes.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. TKACZ: Yeah. Bob Tkacz, from the
2 Alaska Fisherman's Journal. I would be interested
3 in knowing from Rich what your history is with
4 vessel interactions with your nets and other gear
5 out in the water there.

6 DR. LANGAN: Well, actually, we have a
7 history, and it's with tugs and barges. And I
8 don't know if you've seen barges under tow, but
9 there's a safety cable that goes to the barge and
10 then there's a safety cable that loops down and
11 they caught our additional feed buoy one time and
12 luckily we had GPS so we could find it. But the
13 only reason we knew is we went back and checked
14 logs at the Coast Guard. The Coast Guard keeps
15 track of who goes in and out of the harbor. But,
16 you know, it's marked on the chart. It's lit with
17 perimeter buoys. The guy was taking a shortcut
18 and, you know, he ran into our feed buoy with his
19 cable. So that's our history.

20 In terms of interactions with fishing
21 vessels, no, because, you know, the site is where
22 it is because we sat down with the fisherman and we

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 said, okay, we've got this big square. Where in
2 this big square do we put the small square? And
3 they said, right here, and then another guys says,
4 no, over there and then finally after, you know, we
5 shuffled it a bit we landed where everybody could
6 agree that now, okay, you guys, we'll let you in
7 there. So they all know it's there. In fact, they
8 tell us when they see, you know, tugs coming
9 through and say, hey, this guy almost ran over your
10 stuff. He took -- he made a quick turn. Well, one
11 guy didn't make the quick turn, and he caught our
12 feed buoy.

13 MR. TKACZ: How about sport vessels
14 coming in to take advantage of your attractive
15 nature?

16 DR. LANGAN: Sports vessels come in
17 there, and people fish. Lobstermen fish. They
18 love to fish right along the mussel lines and, you
19 know, they -- because we set our mussel lines in
20 the same pattern that the lobster guys do because,
21 you know, just want to make sure that we don't put
22 this way and then they all want to set this way.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 So we set in, you know, parallel to the way they
2 set and they set right alongside us and sometimes
3 they claim well, we do really well under the mussel
4 lines. And I said if that means I'm having drop-
5 off then I've got a problem, but I don't.

6 MR. TKACZ: Thank you.

7 MR. KENT: Maggie.

8 MS. RAYMOND: Yes.

9 UNIDENTIFIED SPEAKER: I had a question
10 about the cost of the technology. It's obviously
11 very, very technically sophisticated material, and
12 I wonder in the whole process of ideating about
13 culturing these species if anybody has done any
14 cost comparison about going the opposite way. In
15 other words, instead of trying to take our
16 structures out to the ocean where the animals are,
17 would it be not easier to maybe bring the animals
18 to some sort of enclosed structure onshore?
19 There's got to be some kind of cost balancing
20 there, and I just wondered if you've ever
21 investigated that or if you know if there's been
22 any investigation of that sort of thing?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. LANGAN: There's a lot of analysis
2 of land based culture, and there's some pretty
3 sophisticated recirculating technologies, and there
4 is some successful industries producing fish on
5 land. In fact, most of the cultured halibut that
6 are available today are produced on land. Tilapia.
7 Anywhere that you're at, you know, the tropics,
8 that's all being done in recirculating systems.
9 The one disadvantage to recirculating systems is
10 disease issues, and water quality issues are just
11 so critical that you could very easily lose an
12 entire crop. Before I turn it over to Linda, I
13 just wanted to mention one thing that Randy Case,
14 who has a way with words -- he says that farming
15 fish onshore is like growing corn on a barge out in
16 the ocean. So.....

17 MS. CHAVES: I was just going to
18 mention that I know that Mote Marine Lab is doing
19 some working on the economics of raising sturgeon,
20 for instance, in buildings inside -- and I think
21 some other species that way -- and there is some
22 people growing shrimp in the middle of the desert

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and apparently being successful. So there are some
2 possibilities, but I think it's going to have to be
3 a business decision.

4 MS. RAYMOND: Okay. Larry, you had a
5 -- I had you on the list. I thought you were going
6 to respond to Don's question about what the
7 Councils can do. You had your hand -- was
8 that.....

9 MR. SIMPSON: That's covered enough.

10 MS. RAYMOND: Okay. All right. Ralph.

11 MR. RAYBURN: Yeah, I wanted to respond
12 to Don and then maybe it was what Larry was saying,
13 too. You know, if I heard your question right,
14 Don, about what role the Council should have in
15 this offshore aquaculture, I mean it seems to me
16 that that's one of the major questions that even
17 NOAA has to respond to as they go forward in this
18 process. Are they going to manage the aquaculture
19 operation offshore as a private activity, or are
20 they going to try to keep it within a public
21 activity? And, you know, down in our way the
22 Councils respond to Corps of Engineers permits and,

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 you know, we have, obviously, offshore oil and gas
2 operations down there. When they put those
3 facilities down, they're removing another user
4 group from that area and I guess they can even
5 impose -- can't they, Larry -- a security zone
6 around those rigs, you know. So.....

7 MR. SIMPSON: They do in New Orleans.

8 MR. RAYBURN:you are taking that
9 on, and the Council has the opportunity -- as the
10 industry does, or anyone else -- to respond to
11 that. And it seems to me that if in the process of
12 NOAA trying to take over this -- or, you know,
13 positioning itself within the government to take it
14 on, which seems me to be legitimate, but they're
15 going to have to really consider are they going to
16 manage it like an oil and gas operation relative to
17 it's a private investment? You know, those fish
18 that go in the water are private property. They're
19 not public property anymore. So what role the
20 Council has in that seems to me to be only a matter
21 of within the enforcement context that as the fish
22 are transported into shore they are somehow

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 notified. There's a notification process so that
2 transport can be in no way confused with a harvest
3 from the EEZ. And so -- and, you know, we -- that
4 would -- but, beyond that, you know -- I mean,
5 besides the environmental ramifications that the
6 Council would respond to any type of Corps permit
7 or other permit, I don't see that they would have a
8 role.

9 MR. KENT: Well, I think if one of the
10 things that people were looking at was for areas of
11 opportunity to be identified and the Councils have
12 responsibility for a central fish habitat that
13 crossover right there would imply that the Council
14 should have some role in helping to identify areas
15 that were suitable for leasing.

16 MR. RAYBURN: Exactly. But that's a
17 current authority that they have. It's not an
18 additional -- it's not anything additional that
19 they would get in this offshore aquaculture. It
20 would just be in the normal process of review of a
21 permit, I would think.

22 MS. RAYMOND: Bonnie.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. BROWN: Yeah. Okay. So kind of
2 away from that, Linda said a couple of times that's
3 a decision to be made on economics, and so I think
4 my question is to Gunnar and Don and maybe Mark,
5 maybe. And I know there are little tidbits about
6 this that have already been put out, but is there
7 -- what are your observations, good or bad, on how
8 open ocean aquaculture could repair depressed local
9 economies? And, for example, are there any
10 specific aspects -- you mentioned shipping. You
11 know, yeah, sure, produce it and help us get it out
12 of here. So what are some of the things that we
13 should look at more in-depth in doing an economic
14 analysis -- because this is the document they have
15 to prepare next -- that are specific and, you know,
16 let's take Alaska as an example. If it's really
17 economics that's driving a lot of this, what are
18 those things that could possibly be fixed by this
19 or could possibly be made worse by this?

20 DR. KNAPP: Well, let me start with the
21 made worse.....

22 DR. BROWN: Yeah.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 DR. KNAPP:because I think a lot
2 of people are happy to help, you know, sort of add
3 to that list.

4 DR. BROWN: Yeah, okay.

5 DR. KNAPP: And so one concern, other
6 than -- you know, one is the whole sort of
7 environmental impacts from it and another is things
8 like -- you know, from the perspective of the barge
9 owner, jeez, we always used to take that shortcut
10 and now we got to, you know, drive out of the way
11 of all your cages and there's more and more of them
12 all the time and so on.

13 DR. BROWN: Uh-huh.

14 DR. KNAPP: And another is the market
15 impacts of all this fish, and then another may be
16 sort of the reputation of, well, we used to think
17 of this as a pristine place where, you know,
18 independent fishermen harvested from pristine seas
19 and, now, it's just a big, stinky fish farm all
20 along that coast, you know. So all those things
21 and probably others could be added to a list of
22 ways that these are adverse economic impacts.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 But, in terms of positive impacts, when
2 these things create -- you know, there's work.
3 There's onshore work in supporting -- you know,
4 just to support these operations and, you know, I
5 don't know how many people you have in your lab
6 there running the thing onshore and driving out the
7 boat once a week and then, also, the more technical
8 people that are designing the things and siting
9 them and then all the marketing and processing and
10 so on. It's an economic activity and almost all of
11 it will happen on the shore. And so that's an
12 opportunity that, one, people can get involved in.

13 They can settle in the community. It's a year-
14 round thing. There's work going on continuously.
15 It can pay taxes -- you know, local -- I mean,
16 there's some interesting issues there, but
17 certainly the onshore facilities do pay taxes. And
18 then -- so, one, it's just a new activity. Well,
19 then are there potential synergies with existing
20 activities? Well, there may be, you know, existing
21 fish processors who say, sure, I'd like to do the
22 processing of this fish or marketing organizations

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 or this is an activity for a guy who runs a fishing
2 boat to hire himself out sort of doing tendering
3 services or boat hauling stuff, you know. So you
4 can think of all these things. And then there's
5 sort of -- you know, hatchery operations can come
6 out of this. So it's all pretty speculative
7 because we don't have a lot of offshore aquaculture
8 to observe. I mean, if we want to know, say, the
9 way salmon farming is currently practiced -- what
10 that does in the way of economic impacts -- we can
11 go look at a bunch of salmon farming operations and
12 make some judgments about how many people and what
13 skills and.....

14 DR. BROWN: Okay. I guess I'm thinking
15 if we pretended that it's something like Rich's
16 finfish operation how then do we go straight to the
17 economics of it and the culture of it.....

18 DR. KNAPP: Well, I mean, I tell you
19 one thing you could do.....

20 DR. BROWN:and what's wrong with
21 it or what's right with it?

22 DR. KNAPP: One thing you could do is

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 -- we sort of -- I think somewhere somebody
2 mentioned it, this thing doesn't sort of spring
3 full bloom from nothing to this fully.....

4 DR. BROWN: Uh-huh.

5 DR. KNAPP:fully -- a thing that
6 you set loose with 10,000 operations.

7 DR. BROWN: Right.

8 DR. KNAPP: Rather, you start with
9 pilot projects, you know, like this one -- and you
10 learn from it. You see what they do; and, you
11 know, it seemed to -- and you do that in any
12 industry, any kind of new venture, and it certainly
13 seemed to me to make sense from just all kinds of
14 practical viewpoints. You don't initially start
15 with granting random permits for all this. You
16 grant a few permits under highly restrictive
17 conditions and it's a -- it can go to a research
18 thing or its a pilot test thing and you sort of see
19 and you say, gee, is this -- and that begins to
20 show you whether there's really anything in it or
21 whether it's an economic loser, you know, and so
22 on. So, I mean, it seemed to me that is a -- this

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 idea of pilot projects is one way to help gain more
2 knowledge and, also, to help make decisions along
3 the way instead of saying, yeah, we sign on a
4 hundred percent.

5 DR. BROWN: Uh-huh.

6 DR. KNAPP: Well, how about we sign on
7 to these limited pilot projects and learn from
8 them?

9 MS. CHAVES: And I think that a lot of
10 people who are going to do this are going to -- you
11 know, they're not going to say I'm going to start
12 out with 10 cages and stock, you know, millions of
13 fish. They're going to say I want to start out
14 small and then maybe expand later on. But during
15 those preliminary phases, we need to be gathering a
16 lot of data, both economic and biological.

17 MR. BREMNER: Well, let me try to give
18 a Native perspective here.

19 DR. BROWN: That's what I want.

20 MR. BREMNER: So the perspective from
21 our side of things, again, we have folks that have
22 been living in that one place for thousands of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 years. Our ancestors have been thousands of years.
2 They're not going to move. They're not going to
3 go away, and they have this mind-set of their
4 existence. So we see what's happening out there,
5 and it's going to take time to reflect on what's
6 happening and assess what's happening now, what
7 should be happening and how could we influence
8 what's happening. I mean, we're going to approach
9 it logically and not just socially, culturally,
10 economically -- you know, legally. The communities
11 in Alaska is going to have to take that time to
12 reflect on this whole opportunity because change in
13 our small communities just doesn't happen. A lot
14 of the communities here in Alaska don't even have
15 Internet access. If they do, it's so slow it's
16 like molasses. You wouldn't believe it. It's
17 amazing. So change is going to -- it's going to be
18 a lot of hard work to even change their mind-set to
19 even sit in a room with you to talk about it. It's
20 going to take leadership of everybody in this room,
21 including the State of Alaska to have common
22 values. We do not have common values. That's the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 bottom line. Nobody has taken enough time to
2 understand us, and this government is working
3 really hard just to assimilate us and we're saying,
4 wait a minute. We're Tlingits. We're always going
5 to be Tlingits. Go away. So nobody has taken that
6 time to understand our values. So it takes that,
7 you know. Like I mentioned, becoming part of your
8 education programs you have to change our minds and
9 our intelligence of.....

10 DR. BROWN: Well I just have to say we
11 have Mattaponi and a bunch of other Native American
12 tribes in Virginia, and what I found interesting
13 was that for generations -- if not more than
14 hundreds of years is right -- they always, as they
15 caught the shad, American shad, they had these
16 rudimentary spawning operations where they would
17 combine the eggs and the sperm and then they would
18 hold them in these little tanks and ponds that they
19 had made and release them to give back to the
20 environment what they had taken. And, here we are,
21 we've got this big shad restoration program, and
22 it's something the Native Americans were doing long

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 before there were white people there. And so I
2 found it -- I don't know, it's just so different
3 when I listen to you because yours didn't seem to
4 include that and I thought, well, that's cool. I
5 just always assumed every Nat -- and it's my
6 problem, not yours -- I just assumed that all the
7 different Native tribes had that kind of mind-set.

8 And so now I'm hearing even more mind-sets, and
9 you're right, you know, they have to hear
10 different.....

11 MR. BREMNER: Well, let me finish. We
12 all need to focus on the future. I mean, we have
13 to balance today with the future, and we're working
14 to do that. I mean, we're working to do that. If
15 we don't agree on that, then you're always going to
16 have people focusing over here and groups focusing
17 over there. And then, we all learn by doing. If
18 we're not given the opportunity to do, how could we
19 be? That's the bottom line. We're not invited to
20 the table. We're not invited to do, so how could
21 we be? It's impossible. But we'll run you off.
22 And, finally, if you think about the -- when you

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 hear Native Americans talk, we're talking about
2 growing people for crying out loud and the focus of
3 a lot of these government programs are growing fish
4 and oysters and clams and whatever and our focus is
5 growing people. So, you know, to come along to
6 that side -- kind of thinking, you know I think
7 we'll meet somewhere in the middle.

8 MS. RAYMOND: John.

9 MR. FORSTER: Thank you. I was going
10 to ask Matt if he would maybe respond maybe to
11 Gunnar's point that he made earlier about that
12 nearly all forms of food production have an
13 environmental impact to a greater or lesser extent;
14 and, yet, you presented a series of concerns which
15 concluded really in the statement that until those
16 concerns are addressed you call for a moratorium on
17 any development of this industry. Well, I guess
18 the key word there is addressed. And at what level
19 do they have to be addressed? At what level of
20 satisfaction or perfection does that occur, in your
21 mind? At what level of tolerance do you have for
22 imperfection, bearing in mind that all forms of

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 food production -- in fact, most of our human
2 activities do have an impact?

3 MR. RAND: Yeah, I agree, they do have
4 an impact. It's a tough one for me to answer,
5 John, because I may be much more easygoing with it
6 than some other organizations or other individuals.

7 There are concerns that we would like to see met.

8 I can't give you a quantifiable number that says
9 we need two percent escapes or we need five percent
10 escapes or we need, you know, 50 percent of the
11 finfish using -- be herbivores. You know, where
12 the environmental community will come down on an
13 issue like that is kind of tough to say. We have
14 the concerns. We don't feel that they're being met
15 as well as we'd like to see them being met at this
16 point. So that's where we are. I can't give you a
17 quantifiable number.

18 MR. FORSTER: Do you think that it's
19 possible to get to a quantifiable number
20 through.....

21 MR. RAND: Yes, I do. I do think it's
22 possible. And, you know, as has been suggested

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 it's moving forward. You know, the environmental
2 community will come in. The technology will most
3 like move forward. The policy is moving forward.
4 We are, you know, part of this is the process in
5 trying to get as -- environmentally responsible
6 measures involved in the process as it goes. You
7 know, we'll do our best to hold up the process if
8 we don't feel that the issues are being met -- you
9 know, it's kind the way the environmental community
10 goes, with land based agriculture as well. New
11 technology. It's kind of the way the, I guess, new
12 technology needed and the cultural side come
13 together. So I can't give you a quantifiable
14 number; but, yes, I do think it's possible. I
15 think it's going to move forward regardless.

16 MS. RAYMOND: Okay. Al had wanted me
17 to wrap this up at 4:15, and I still have six or
18 eight people on the list. Is there anybody who
19 just really, really needs to ask questions, because
20 I think what we could do -- these folks are still
21 going to be around, I assume, for the rest of the
22 meeting. We've got some business to move on with.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 If we have time at the end, you might be able to
2 ask some questions then. Bill wanted to say
3 something, and then we're going to move on to the
4 next item of business.

5 MR. KENT: If I could just say on
6 behalf of the Subcommittee on Aquaculture I really
7 appreciate all of you taking the time away from
8 your personal lives to travel all the way here. I
9 know it wasn't quite the trip for some of you that
10 it was for others but very much appreciated and I
11 keep getting patted on the back by members of MAFAC
12 for pulling it together and, really, Laurel pulled
13 it all together and all credit to her. So just
14 thank all of you for your participation.

15 (Applause)

16 CO-CHAIR DR. HOGARTH: Before you
17 leave, I just want to, you know, thank each of you.

18 I've been listening very quietly to the discussion
19 because I think it's good to have the open dialogue
20 and I -- you know, there are a lot of things I've
21 heard that I think we will probably talk about it
22 when we go back, you know, as to who is involved

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 and Council's involvement. You know, there are a
2 lot of things that have to be looked at, and we're
3 well aware of that. If you want to do aquaculture
4 and, particularly, food production, you have to
5 look at size limits and bag limits, how you get
6 exception from the Council to that, how you
7 documented that. But I think it is, I think, the
8 beginning of what I feel like is going to be a good
9 dialogue, and there's one thing I want the
10 Subcommittee to look at today. Is this the type of
11 forum we want to have across the country, or how do
12 we go about continuing this open dialogue to really
13 get input because I personally think -- you know,
14 it's much more than I expected to hear.

15 I thought the discussion on both sides
16 is very good and, you know, I think people have
17 valid concerns about aquaculture and where the U.S.
18 is going in it. But I also think it's time for
19 this good, open discussion and so if we do go in
20 and NOAA gets involved in this -- which I feel like
21 we will -- that we've listened to the people and
22 we've put together a process that reflects the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 concerns of, you know, the American people. And so
2 I really do want to thank you very much for it and,
3 you know, I told the Admiral that I would try to
4 get something done here. The Admiral is very
5 interested and so is Secretary Evans. We've
6 discussed this many times, and I think it's
7 something, you know, we want to go but we want to
8 know how we're going and where we're going.

9 And, you know, I think the
10 infrastructure -- we're continuing to lose
11 infrastructure along the coast for commercial
12 industry and for the fishing industry, as a whole.

13 And so I think when you talk about economics you
14 look at the infrastructure and what you can do it
15 does sort of push some of it offshore but I think
16 you still have to look at inshore, where we can do
17 some things on land in closed cycles too -- also
18 systems. So I want to thank you all and tell you
19 that we're dedicated in NOAA Fisheries to make sure
20 that we don't leave anybody out in this process --
21 that it's an open process and that, you know, we
22 want to continue a good, open dialogue and we are.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 I would have to say that I am committed
2 to seeing this through because I personally think
3 aquaculture along with wild production go hand in
4 hand and we need to be looking at that and how we
5 do that. I have to admit I am concerned when I --
6 you know, when you talk about, you know, like,
7 summer flounder where our population is getting to
8 an all-time high in summer flounder. The price is
9 going down. Would we want to do aquaculture to
10 drive potentially the price down ever further,
11 things like that? There are issues that I have to
12 really -- have bothered me somewhat, too. So I
13 think, you know, we do have a lot of issues to
14 this, but that doesn't keep us from moving forward
15 because there's many things we do with enhancement
16 -- enhancement is a vital part of this -- and we're
17 operating hatcheries all over this country and I
18 think that this will lead us to do a better job
19 even with the enhancements, hatcheries and all that
20 we have.

21 Let's stay turned for further
22 discussion, but I would like for this group to tell

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 me how you think that the dialogue should continue.
2 What's the best way to continue the dialogue
3 because I think we have to do. But I just thank
4 each one of you for coming. I thought each and
5 every one of you did a great job of really
6 presenting your ideas and your concerns and your
7 recommendations, and that's what we need. And so
8 it's a wave. We have to address it. The U.S.
9 can't stick its head in the sand as we watch every
10 other country just get more and more involved in
11 this and we're a country of technology and we're a
12 seafood country and I feel like we're just getting
13 left out and I don't think -- from my perspective,
14 we don't want to hurt our commercial industry, but
15 I think it goes hand in hand with fishermen who
16 have not been able to continue in the industry and
17 it gives them a way to go. And if we operate it
18 right as we can in this country and get fishermen's
19 input and public input I think we can have an
20 extremely good seafood program in this country
21 that's both wild and aquaculture. So I really look
22 forward to seeing us continue the dialogue, and

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 thanks very much.

2 CO-CHAIR MR. OSTERBACK: Okay. Where
3 we need to go now is figure out tomorrow's
4 schedule. Do we have rooms, or how are we going to
5 break up?

6 MS. BRYANT: No, we don't, but I'm
7 hoping that we can have, like, one or two here.
8 There is the whole area along the hallway coming
9 here we can go. So I figured, you know, like we
10 have other ones, we can use those spaces. I can
11 check in to see if we have.....

12 CO-CHAIR DR. HOGARTH: Let's check and
13 see what we can get.

14 MS. BRYANT:some additional
15 rooms.....

16 CO-CHAIR MR. OSTERBACK: Okay.

17 MS. BRYANT:if needed. But I
18 know last time you guys pocketed yourself in and
19 around -- all kind of around the hotel. So we
20 didn't worry about it too much, but we can
21 certainly check into it.

22 CO-CHAIR MR. OSTERBACK: Okay. So the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 order of business then tomorrow is we'll come in
2 here and then figure out where we're going to go.
3 We should know by then. Does everybody know which
4 Committee you're on, I hope?

5 MR. DILERNIA: What time in here
6 tomorrow?

7 MS. BRYANT: I'll get a printout.

8 CO-CHAIR MR. OSTERBACK: Pardon?

9 MR. DILERNIA: What time in here
10 tomorrow?

11 CO-CHAIR MR. OSTERBACK: 8:30.

12 MS. BRYANT: But it's not full
13 Committee. That's that Subcommittee. So if
14 Subcommittees wanted to meet.....

15 MR. DILERNIA: Well, the Recreational
16 Working Group was talking about meeting from 8:00
17 to 9:00. But if that's from 8:00 to 9:00 I can't
18 chair then the Outreach. I can't start Outreach
19 till 9:00 o'clock.

20 MS. BRYANT: So then Outreach wouldn't
21 start until.....

22 CO-CHAIR MR. OSTERBACK: That's fine.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. MOORE: Start Outreach at 9:00
2 o'clock.

3 MR. DILERNIA: All right.

4 MS. BRYANT: Yeah. I mean, it's up to
5 you guys.

6 CO-CHAIR MR. OSTERBACK: But that's
7 fine. You can do that.

8 MR. DILERNIA: Okay.

9 MS. RAYMOND: First we have to --
10 first, we have to, I think -- I mean, is every
11 Committee going to meet? For example, is the
12 Bycatch Committee going to meet? Is there
13 something.....

14 MR. RAYBURN: Yes. I'd like for them
15 to meet. I sent an e-mail out.....

16 MS. RAYMOND: Okay.

17 MR. RAYBURN:last week on it.

18 MS. RAYMOND: All right. So we're
19 going to have -- the Aquaculture Committee is
20 obviously going to meet. The Recreational Working
21 Group is going to meet.

22 MR. DILERNIA: Bob.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. FLETCHER: Yeah, and we're going to
2 meet at 8:00 o'clock.

3 MS. RAYMOND: Okay. Does the National
4 Standard One Working Group have to meet?

5 MR. MOORE: I don't see any reason why
6 we have to, no.

7 MS. BRYANT: I can't imagine, no.

8 MS. RAYMOND: Okay. So there's only --
9 now, what about the presentation on IFQs? Do you
10 want some response back from MAFAC on that; and, if
11 so, who is going to do it?

12 MS. BRYANT: From my perspective, there
13 was such a dialogue and I actually already got
14 feedback even from Jack. He left it. So I think
15 partly -- Joe and I were talking. He's going to
16 try to get me those transcripts STAT. So maybe by
17 the end of next week or something like that Joe is
18 actually going to burn them onto a CD for me so
19 that I can get that out to Jack's folks and I can
20 get it out to you guys.

21 MS. RAYMOND: Okay. So nothing here?

22 MS. BRYANT: If you want to do

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 something, you could do it at follow up or post
2 facto, I suppose. But I feel like it was a good
3 dialogue yesterday, and probably the next step is
4 compiling that together and then giving it back to
5 you guys to respond to.

6 CO-CHAIR DR. HOGARTH: And one thing on
7 that real quick. I think in all sincerity, there
8 is probably nothing going to happen on the Hill for
9 that, and the January meeting of MAFAC is where I
10 think we'll have an opportunity to really get and
11 look at Magnuson reauthorization, as a whole. We
12 should be able to bring that forward to look at the
13 whole package for Magnuson reauthorization.

14 MS. RAYMOND: I'm just trying to see if
15 we have any conflicts, and the only conflict that
16 we have then is you're on the Recreational Working
17 Group and.....

18 MR. DILERNIA: And Outreach.

19 MS. RAYMOND:Outreach. Could I
20 push Outreach back to 9:30 to give the Rec group
21 more time?

22 MS. BRYANT: Oh, I would think so. I

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 mean, it's up to you guys. When do you start full
2 Committee meeting, Maggie? When do we have it, at
3 1:00?

4 CO-CHAIR MR. OSTERBACK: Yeah, we don't
5 come back in full -- you know, once we -- once
6 everybody decides what time your Committees want to
7 meet in the morning, we've got till 1:00. So it
8 will be like after lunch we will come back into a
9 full.

10 MS. BRYANT: And then report out, each
11 of the Committees report out to full Committee.

12 CO-CHAIR DR. HOGARTH: Real quick, can
13 I say one more thing, and I'll be quiet. >From our
14 perspective -- my perspective -- I really liked the
15 further input on the Recreation. I thought there
16 was a lot of good discussions and somewhat of a
17 little bit of -- I'm not sure where, but I mean I
18 think it was good and I think we need to just sort
19 of bring that to some sort of recommendations to
20 us. I think the Aquaculture really was, so far,
21 absolutely the highlight, I think, of these three
22 days and we need to move -- we moved that and now

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 we need input on how ya'll think we should move
2 forward with that. Fishing, very simple. I've got
3 lots of comments, lots of I'm not sure. All, I
4 will go back and review those. If there's any
5 further comment of that, it's fine. But the
6 brochure that Ralph gave me I will take back, and
7 I'm not sure where we go we that. But I think if
8 we (indiscernible) may want to look at that
9 and.....

10 MR. DILERNIA: Fishing made simple is
11 what we were going to do.....

12 CO-CHAIR DR. HOGARTH: Okay. Good.

13 MR. DILERNIA:101. If you want
14 us to do that then tomorrow, we still will.

15 CO-CHAIR DR. HOGARTH: Yeah, okay.
16 Yeah, thanks.

17 MR. DILERNIA: Okay.

18 MS. RAYMOND: All right. So you're
19 still going to meet at 8:00? The Recreational
20 Working Group is going to meet at 8:00?

21 MR. DILERNIA: Yeah.

22 MS. RAYMOND: Okay.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. BRYANT: And Michael Kelly was
2 going to join you in on that.

3 MS. RAYMOND: Okay. So do you know
4 where?

5 MR. FLETCHER: Well, we'll just --
6 probably out in the hall there, since it's a small
7 group.

8 MS. RAYMOND: Okay. But some -- last
9 time, people wanted to know where other Committees
10 were meeting in case they wanted to sit in. So
11 since ya'll are meeting.....

12 CO-CHAIR DR. HOGARTH: Why don't you
13 come in here?

14 MS. RAYMOND: But they're meeting at
15 8:00.

16 CO-CHAIR DR. HOGARTH: Come in here and
17 we're going.....

18 MS. RAYMOND: Right.

19 CO-CHAIR DR. HOGARTH:to try to
20 work on small rooms. If we know how many we need,
21 we'll try to work on it tonight and make sure we
22 have them.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. FLETCHER: Well, we'll be starting
2 at 8:00 before you all are getting in here, though.

3 MS. RAYMOND: Right. Well, so you
4 can.....

5 MR. FLETCHER: We can just say in here?

6 MS. RAYMOND: Right.

7 MR. FLETCHER: Okay.

8 MS. RAYMOND: Okay. So 8:00 o'clock
9 the Recreational Working Group will meet here, and
10 everybody else will meet here at 8:30 and, by then,
11 we should have some more information about rooms or
12 if we feel it's comfortable enough to break out in
13 here and people stay in here or whatever. Just so
14 everybody knows. Tomorrow morning everybody will
15 know where everybody else is so if you want to go
16 to another group and sit in or something.

17 CO-CHAIR DR. HOGARTH: The hotel, seems
18 like we could work it out with them so we can put
19 something on the door by in the morning as to where
20 we'll be meeting.

21 MS. BRYANT: If you guys want separate
22 rooms, we need to know kind of how many you might

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 want.

2 CO-CHAIR MR. OSTERBACK: Well, we
3 need.....

4 MS. RAYMOND: Well, I have.....

5 MS. BRYANT: Because we've got this big
6 room. There's the meeting space out there.

7 MS. RAYMOND: We have Aquaculture,
8 Outreach, Bycatch.....

9 MS. BRYANT: And Rec Fish.

10 MS. RAYMOND:and Rec, but that
11 won't be at the same time. Rec will be first, and
12 then those people.....

13 CO-CHAIR DR. HOGARTH: You need three.
14 So only two more rooms.

15 CO-CHAIR DR. HOGARTH: It would be two
16 more rooms.

17 MS. BRYANT: And make them relatively
18 small, I assume.

19 UNIDENTIFIED SPEAKER: I am, because
20 they fit, like, less than 10 people.

21 DR. BROWN: Do we not have a list of
22 who is on what Committee?

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. BRYANT: I do, Bonnie, and it's not
2 printed out.

3 DR. BROWN: It's not in here?

4 MS. BRYANT: So, I -- right.

5 DR. BROWN: Okay.

6 MS. BRYANT: So I will go print one
7 out.

8 CO-CHAIR MR. OSTERBACK: Okay. So are
9 we all straight on the.....

10 MS. BRYANT: All that stuff is on the
11 Web page. I never worry about it anymore.

12 MS. RAYMOND: Okay. Also, somebody
13 gave me these glasses. I don't know why they gave
14 them to me, but.....

15 MR. KENT: I'm sorry. Don found those
16 in the back of the room. So they might -- we may
17 want to leave them at the front desk, okay?

18 MS. RAYMOND: Okay. And there's no
19 dinner on the whale watch?

20 MS. BRYANT: Oh, there is no dinner on
21 the whale watching, but the whale watching
22 folks.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. KENT: Is there liquor?

2 MR. GUTTING: False advertising.

3 MS. BRYANT: Well, there was a dinner
4 cruise for 120 a person, and then they have the 105
5 without the dinner cruise. So, the bus, we've
6 arranged transportation for you. It comes, I
7 think, at 6:20. Judy -- they actually brought up
8 all the tickets for folks that are going on the
9 whale watching. So see Judy. She's got your
10 tickets. And, let's see, you'll have time to be
11 able to eat before you go on the cruise. The
12 cruise is from 7:00 to 9:00.

13 CO-CHAIR DR. HOGARTH: And if you need
14 me in the morning I'll be in early, and then I have
15 to go do a Washington Post knock-down drag out on
16 why fish is in such bad shape and why we're
17 screwing up the world, and that probably will be
18 about an hour and then I've got to go make a phone
19 call.

20 MR. MOORE: Why don't you just bring
21 the reporter in here, Bill?

22 MR. SIMPSON: So, Laurel, the

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 transportation for whales is what time?

2 MS. BRYANT: I think it's 6:20 -- 6:15,
3 6:20 be down in front.....

4 MR. SIMPSON: 6:15.

5 MS. BRYANT:and they'll pick you
6 up and take you.

7 MR. DILERNIA: 6:15 out front.

8 MS. RAYMOND: We're not done yet.
9 We're not done. We're not done.

10 CO-CHAIR MR. OSTERBACK: Wait a minute,
11 guys.

12 MS. RAYMOND: We haven't adjourned yet.

13 CO-CHAIR MR. OSTERBACK: The other
14 thing I want everybody to start thinking about is
15 the January meeting with dates when people are
16 going to be available and then, from there, start
17 thinking about the next meeting.

18 CO-CHAIR DR. HOGARTH: But you think
19 about January that I have to resign on January
20 20th, and I'd sure like to be with you again.

21 MS. BRYANT: And, right now, we've got
22 the second week targeted for the meeting in

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 January, which I think is January 11, 12 and 13 or
2 something like that.

3 MR. MOORE: Well Bonnie, Dick and I
4 agreed that you guys ought to be in Dubuque, Iowa.

5 MS. RAYMOND: So on the subsequent
6 meeting, after we try to get everybody straightened
7 out for January to find three days when everybody
8 is available we need to think about where and when
9 the next meeting is.

10 MR. RAYBURN: Well, Rob had volunteered
11 to host us. Rob?

12 MS. BRYANT: Yes. I thought it was
13 Florida.

14 MR. KRAMER: I'll host the Winter 2006,
15 I guess. I guess it's the.....

16 MS. RAYMOND: Right.

17 MS. BRYANT: No.

18 MS. RAYMOND: Well, we don't want to go
19 to Florida in August.

20 MS. BRYANT: Oh.

21 UNIDENTIFIED SPEAKER: Yeah. We'll go
22 Hawaii this year, and then we'll go Florida.....

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MR. FLETCHER: How about Maine?

2 MS. BRYANT: Florida next year.

3 MS. RAYMOND: He's going to do Florida
4 in January of '06.

5 MR. MOORE: You guys need to remember
6 that you're going to have a bunch of new members
7 coming on. You're going to have an orientation in
8 D.C. at some point.

9 MS. BRYANT: That was my suggestion,
10 Ron. Yes.

11 CO-CHAIR MR. OSTERBACK: That would be
12 the meeting after this next one?

13 MS. BRYANT: It would have to be.

14 CO-CHAIR MR. OSTERBACK: Yeah.

15 MS. BRYANT: Or we'll have to have one
16 up front for them separately for the new members.
17 We haven't jiggered that one out, yet.

18 CO-CHAIR MR. OSTERBACK: You didn't do
19 that for us. You just threw us to the wolves.

20 MS. RAYMOND: No, we had a big
21 orientation.

22 MS. BRYANT: No, we didn't. You guys

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 got an orientation in D.C.

2 CO-CHAIR MR. OSTERBACK: Did they?

3 MS. BRYANT: Yeah.

4 MR. RAYBURN: Mr. Chair, don't we have
5 to meet in D.C. on one of the two meetings?

6 CO-CHAIR MR. OSTERBACK: Yeah.

7 MS. BRYANT: We tried, but that
8 decision was made at the last meeting where you
9 guys decided go to Hawaii.

10 MR. RAYBURN: Yeah, but if you go to
11 Hawaii, then the next meeting would be D.C., right?

12 MS. RAYMOND: Except that the
13 subsequent meeting is actually when a whole bunch
14 of new people are coming in.

15 MR. RAYBURN: Oh, I see.

16 MS. RAYMOND: So that actually might
17 not be Florida. That might be D.C.

18 CO-CHAIR MR. OSTERBACK: Which is fine.

19 MS. BRYANT: Well, we would be -- we do
20 D.C. maybe in next summer. Sorry.

21 UNIDENTIFIED SPEAKER: Next summer?
22 Yuck.

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com

1 MS. RAYMOND: So, anyway, think about a
2 place for -- and the date, and I am assuming Bill
3 still wants it in the summers because it's easier
4 for him. So come back tomorrow with your
5 suggestions and we'll go from there.

6 MR. KENT: May I move for adjournment
7 for the evening?

8 MR. GUTTING: Recess.

9 MR. KENT: Recess.

10 MR. MOORE: I object.

11 DR. BROWN: Second.

12 MR. KENT: You would.

13 CO-CHAIR MR. OSTERBACK: Okay. Hope
14 you guys find some whales.

15 (Off record)

16

17

NEAL R. GROSS

COURT REPORTERS AND TRANSCRIBERS

1323 RHODE ISLAND AVE., N.W.

WASHINGTON, D.C. 20005-3701

(202) 234-4433

www.nealrgross.com