Chapter III: Improving Ocean Health

- Discussion Of Watershed Management
- Discussion Of Watershed Monitoring

165

AFTERNOON SESSION

(1:25 P.M.)

CHAIRMAN WATKINS: The Commission will come to order. We will commence the afternoon discussions, which are consideration, again, of policy options this time from the Working Group, the Stewardship Working Group, on watershed management, watershed monitoring, marine mammal protection, essential fish habitat and coral reefs.

I will turn it over to the chair of that working group to commence these discussions.

DR. SANDIFER: Thank you, Mr. Chairman. First
of all, I would like to acknowledge that we have some
members of our Science Advisory Panel with us today for
the Commission as a whole and certainly for the
Stewardship Working Group, and to thank them for a
stalwart attendance.

We also had a working group meeting here in
Washington on the 9th and 10th of January, a little
earlier this month, and had participation by our science
advisors and some other scientists at different times
who have provided input to our working group.
On January 9 and 10, we discussed and spent a
great deal of time working through issues related to
non-point source pollution, watershed management and
monitoring, essential fish habitat and marine mammal
interactions and noise in the sea. We will go into
those areas momentarily.

I think it is important for you to note,

Mr. Chairman, that Stewardship had to take over REMO
today, has had to routinely inform Governance, and now
we get our own turn to bring something before the
Commission and, to further your metaphor I believe it
was, today the Stewardship Working Group's missile
delivery system for our recommendations will be

Vice Admiral Gaffney, who chaired Wednesday's session in
my absence. I will turn it over to Admiral Gaffney.

CHAIRMAN WATKINS: I have to comment on, you know, Stewardship has finally gotten to the point where they have gotten serious about their work, and are migrating toward the grade of A-, and that is about the best we can say for it. With that, we will turn it over to Admiral Gaffney.

ADMIRAL GAFFNEY: Thank you, Mr. Chairman.
Let the record show that we had 10 issues last time approved, and we have five today, so we are well in the lead, even though we did limp along on Wednesday without Paul and a traffic director was relegated to the position of acting chairman. Because only a traffic director ran that meeting, the staff and science advisors and other commissioners from the working group should feel free to speak up and help me as I stumble through.

What you are going to see are several view graphs that, like the other two working groups, is in shorthand form. Based on comments that come out today, we will be able to make better, longer, more coherent papers. I think you will find that, as our chairman has
already said, we are supportive of Mr. Ruckelshaus' presentation this morning that these things do not conflict, but actually fit nicely under what he has said so far.

DISCUSSION OF WATERSHED MANAGEMENT

ADMIRAL GAFFNEY: The first one is watershed management. A point we want to make now on this view graph and the next one, which is watershed monitoring,
is that we see watershed management as critical to sound coastal and ocean management. It is a fact of gravity.

They are, in fact, the same ecosystem.

Angela, will you show the picture?

(A slide presentation in progress.)

Okay. This is how we see the world, that there is an integrated system where watershed monitoring of essentially things above the high-tide mark and ocean and coastal observing go hand in hand and the artificial separation between the two right now should not stand in the future.

With that in mind, we had several recommendations. We had up until this morning been using the term "national" and "regional coordinating
bodies." I think we would be happy, if we had a chance to redo these, to make it "national ocean council" and "regional ocean council," something like that, more consistent with what Mr. Ruckelshaus said this morning.

We believe that those three levels -- the national, the regional and the existing watershed councils -- can be informed by one another. It is not just a downhill flow from the national to the regional
and to the watershed, they can all inform one another
and iteratively do a better job, and we endorse that.

Regarding the national body, the national ocean council, to use today's terms, it should develop broad goals and strategies and periodically review or assess performance, quality in using metrics whenever possible. Beyond that, they should ensure that the federal agencies are coordinated within, the federal agencies at least should be coordinated within, the various regions of the country. More on that in the next slide.

They should provide either because they own the money, you will hear more about that as well, or arrange and coordinate Washington level funding
activities so that technical management and education services can be provided to those folks in the region, whether they be federal or non-federal, and that they should see to the establishment of a best management practices center, a BMP center, that takes the best ideas from each region nationally and then propagates it out, if you will, so others can learn from the successes or failures of other regions or other levels.
Next slide, please.

Here there are some underlying words, and that is to show some emphasis here on something that we think is new, we think is a jumpstart on what Mr. Ruckelshaus mentioned this morning about regional ocean councils.

If Ed Rasmuson was here, they do not override existing authorities or responsibilities of regional fisheries management councils.

We would have the federal agencies align themselves to a common regional boundary. If you, one, determine that there are certain watersheds, a finite number of watersheds, there are large ones, that essentially cover the whole United States and the
islands and Alaska, you should align the federal agencies within those watersheds and match up pretty well, I think we said last time we were in this room, match up reasonably well with common ocean regimes and coastal regimes.

We would put them all together. We would then encourage, because we are not in the position yet where we can direct states, local, tribal or other regional
councils to work with the federal council in the region.

We would try to encourage them. One way to encourage

them is to see that federal grants that go to performing

activities dealing with regional research on watersheds

goes through the regional center, and that will get the

recipients of that more likely to come to the table.

The same could be said for centrally directed

education, technical and other support management

assistance. How would we pay for this? Really two

ways. This first bullet is a work in progress. We

would try to develop some kind of funding stream from

fees, taxing, for example, the amount of water that goes

over a dam or something like that, details to be

determined. We would use that for regional grants and
for technical support.

We would also take existing funds for the regions and see if we can coordinate those funds that are already out there and in little pieces in various agencies, trying to bring them together and coordinate them at the regional area. A bullet that is not on here is we would also gain $160 million to build eight new buildings at $20 million each for eight regions.
Laughter.)

ADMIRAL GAFFNEY: I'm sorry, I was just checking to see if Commissioner Muller-Karger was awake.

It is not a recommendation. That is the management scheme, and now I would like to go to the monitoring scheme again.

DISCUSSION OF WATERSHED MONITORING

ADMIRAL GAFFNEY: We believe that a watershed monitoring, now this (indicating) is the area -- if you will show the diagram again, Angela -- watershed monitoring is the area sort of inland of the high-water mark. It must be comprehensive spatially and temporally and it must be integral to and partnered with any coastal ocean observing system. Because of gravity,
they affect each other. We see that a combination of the two really makes an integrated, sustained ecosystem-based observing and monitoring system, which we think is important for the country.

The national body should oversee the many federal efforts that go on in watershed monitoring. It is not just the USGS that is doing this now. The Corps of Engineers does some things, the National Weather
Service Hydrologic Forecasting Group does some things, and we would bring those all together.

We believe that a lead federal agency, yet to be determined, should have operational responsibility for ensuring this network of monitoring stations is coordinated, that there should be nationally determined some core measurements that are made, but there will certainly be some differences in addition to the core measurements that need to be made in each region because of geographic distinctions from one region to another.

Finally, we believe that as we discussed last time in this room that there ought to be a single clearinghouse, an operations center concept, where all of the data comes in and can be fused and then
distributed in some good manner. It should be in a single clearinghouse probably either at the same place that you did an ocean observing clearinghouse or somehow electronically connected to it.

I believe we can stop there in case there are any questions.

DR. EHRMANN: Thank you.

Mr. Ruckelshaus, a question, a comment on
this?

MR. RUCKELSHAUS: Paul, let me really commend you for this report and set of recommendations. I think it is excellent and very relevant to the possibility of recommending some sort of regional ocean policy councils or whatever we end up calling them.

Making sure that these watershed management efforts which are often citizen-led are tied into what is happening at the federal and state level, and which could be done through these regional ocean policy councils is a very important function for them to consider.

I would suggest one addition to what you are recommending, and that is, what we have seen around the
country are any number of successful efforts dealing
with watershed-based issues or place-based issues
through the use of collaborative processes, where you
assemble all of the interests. For instance, in the use
of water in a watershed, make sure that those interests
and uses are put on the table and see if they can be
harmonized with one another.

Where those processes work, and we saw one
that works in an extraordinary fashion when we visited Seattle -- I am personally familiar with a number of other efforts in Puget Sound, as well as in the rest of the state and in the state of Oregon -- which when they are properly constructed, the people are trained to deal with them, the federal government officials understand what their role is to make them work as well the state and other officials, the amount of progress that can be made is really extraordinary.

They are particularly suited for issues like non-point source pollution, issues that reside in watersheds. Because it is impossible to get at those issues through using lawsuits or a top-down approach, we have made very little progress nationally on some of
15 these kinds of problems. I think there is tremendous
16 promise in the use of these watershed councils, as we
17 often call them in the Northwest.
18 I think we should give in our report, we
19 should highlight, the effectiveness of these kinds of
20 efforts. We should either charge the national council
21 or the regional councils with having an understanding
22 and increasing their knowledge of these processes and
how they work, spread an understanding of those

processes, celebrate the successes where they in fact

exist, and accelerate the way those processes are

extended around the country.

One element that is often missing is that

there needs to be training of federal and even state

officials as to how they should interact with these

watershed councils in order to make them successful.

If they come in and tell these councils that

if they are successful in coping with the mix of

problems associated with water use, for instance, they

will endorse the effort, obviously assuming it is within

the confines of their legislative responsibilities, and

they encourage these processes to go forward, that is a
terribly important element of their success.

Just as they can be helpful in encouraging these processes to go forward, they can kill them. If they come in and say, "Well, you can say whatever you like about what you would like to do, but I am going to continue to carry out my responsibilities and my decision in this area is final." That is the end of the effort of the people to voluntarily come together and
try to solve their own problems.

It seems to me we can highlight those successes in our report, fit it neatly into what you are doing here, and provide a useful role for these regional ocean policy councils and accelerate the processes where they worked.

They don't work for every problem obviously; it is mainly place-based kinds of problems. I really commend you for what you have done here, and I think this addition would really be a contribution to pushing these processes forward.

ADMIRAL GAFFNEY: Thank you, sir. I think you know that Susan Hannah met with us and helped us and kept an eye on us for a couple of days while we
discussed these things, and she brought up some of the
same points, which is one of the reasons for
emphasizing, among other things here, not only just
putting it in our report, but having a best management
practices center to take those successes like the
Seattle success and telling other people how it worked.

Also, I went over this quite quickly, but if
you read the first draft of the paper on this, if you
1 had had the opportunity, and you haven't, it talks about
2 educating people, both federal people at the regional
3 level and non-federal people and enabling better
4 communications through education. That is a part of it.
5 Thank you for emphasizing that.
6 DR. EHRMANN: Dr. Hershman?
7 DR. HERSHMAN: Yes. I echo what Bill just
8 said about the value of this. It is very clearly
9 organized. I am looking at and trying to understand the
10 incentives that would bring the players at the state,
11 local, tribal level into what would be generated by the
12 federal.
13 Now, what I see here is the funding mechanism,
14 a very important one, although you mentioned funding
stream from fees. I don't quite know who would pay the
fees, but that is sort of a minor point.

I am just wondering whether the monitoring
strategy and the information generated by the federal
becomes a sort of vehicle for enhancing coordination,
and whether that might be explained a little bit more?

ADMIRAL GAFFNEY: Yes. I think that is a good
point. We have talked on and off about, even since
New Orleans about, datacentric management and does that

bring people together for better public policymaking.

It is not in here. I think that is a great idea. If

there is transparency, availability of data, less likely

to be emotion, less likely to be politics, less likely

to be good public decision making, especially if it is

transparent, everyone can see it.

DR. HERSHMAN: There are some good examples of

how that might work. Again, it is a vehicle for

bringing others, more people, to the table.

ADMIRAL GAFFNEY: Right.

DR. HERSHMAN: Thank you. I agree, thank you.

I think we can add that, can't we, Malcolm?

MALCOLM: Yes.
DR. EHRMANN: Okay.

Paul, do you want to?

DR. SANDIFER: Thanks, John. These questions I am going to ask and comments are from Chris Koch, who couldn't be with us this afternoon. For just a moment, imagine that I am a lot taller and just a bit grayer, and I will proceed with his questions.

DR. EHRMANN: And handsomer?
DR. SANDIFER: Thanks a lot.

(Laughter.)

DR. EHRMANN: Let the record show --

DR. SANDIFER: The imagination is really being stretched now, I can tell. Chris observes, and rightly so, that every acre of the United States is in a watershed, so we have got to be very, very conscious of what we are talking about geographically.

Paul, I think that means for us and for staff that means we need to truly define these regions very carefully, what we mean by "large watersheds" and what would be the purview of the major, the big council type approach.

He also indicates that we need to define
15 exactly what we are monitoring. His question is, Is it
16 the quality of the water entering the oceans? If I
17 remember correctly from our previous discussions, it is
18 both the quality and the quantity because we were
19 concerned about stream flow monitoring.
20 There are lots of reasons to be concerned
21 about quantity and quality. Assuming his question of
22 quality, then he went on to say, then we need to define
what we are monitoring for. Assuming it is water quality, does that mean we should be monitoring? These are the core issues that you raised.

He wanted, again, for us to be as specific as possible with things. Are we looking at sediment loads, nitrogen loads, oxygen levels, specific chemicals and temperature? What are the core kinds of variables? We probably should be as specific as possible.

Finally, he concludes that the kind of comprehensive monitoring that we are talking about and its integration with the coastal observing system would clearly require some estimate of cost for us to be able to put forward what is being expended now, which of course, Mr. Chairman, is a sore topic with us, since we
can't get that from the agencies, but what is being expended now and then what we would anticipate the additional cost of implementing the kind of monitoring, his comments for the record.

ADMIRAL GAFFNEY: Okay. Let me address those real quickly. First, we have already looked last time at sort of a connection between major watersheds and what is today the regional fishery management council
boundaries; they match reasonably well, like,

80 percent.

The most terrifying match is the central part of the United States with the Gulf of Mexico. We recognize that that is hard, but we are not afraid of that. It is something we have to deal with, but we don't define Iowa and Minnesota away from the problem.

We want them to be part of this particular issue, for sure, and we have to refine that.

Secondly, on the what do you measure, how much and what constituents? I think that is both a core national set of parameters that are designated, and then there will be some that are not. We may not want to, I don't know what I am talking about here, but you may not
want to measure mercury in Alaska or in Hawaii, but you might want to measure it in the Gulf of Maine, for example.

So, there may be some of that list that you mentioned are in fact regional, but there would certainly be some core, and I think that would be a national body, that sets standards would have to do that.
Finally, on cost, like every recommendation here we have been charged by the boss to try to cost all of these things out. We have been quite worried for several meetings now about what has happened to the stream gauging system here in the United States. Some of those programs have gone down significantly, some have gone down and stabilized, some are okay. I think we have to get a little bit better handle on that, but we may need more money and new techniques, perhaps.

Dr. Muller-Karger, do you have a comment on that?

DR. MULLER-KARGER: Thank you, just a follow-up comment. You did say that there probably needs to be a governance structure that defines what
core measurements need to be taken?

ADMIRAL GAFFNEY: Yes.

DR. MULLER-KARGER: There probably needs to be a governance structure that defines what core measurements need to be taken.

ADMIRAL GAFFNEY: Yes.

DR. MULLER-KARGER: I think that what we need to focus on is the governance issue, and make sure that
there is a way to implement an infrastructure. However,

I am uncomfortable in making a list of variables that we

need to measure in our report.

ADMIRAL GAFFNEY: In our report, great. That

would be the job of the national body, right. Thank

you.

DR. EHRMANN: All right, thank you.

Dr. Rosenberg?

DR. ROSENBERG: Thank you, Mr. Chairman.

I have to say knowing as I do the members and

the capabilities of the Stewardship Working Group, I was

quite surprised by how good this paper was, but

Admiral Gaffney explained that Dr. Hannah participated,

and then it became clear.
DR. ROSENBERG: I had to say that because of the chauvinism at the beginning about Stewardship's accomplishments.

DR. ROSENBERG: I have three points. The first one is I think that you need to explicitly include in here the concept of adaptive management, because we
should assume that an awful lot of the things that we
need to do in watersheds are, first of all, extremely
hard; and, secondly, are data poor.

Just as we talked earlier about pilot programs
for regional management, I think we can imagine that an
awful lot of the work in these watersheds is going to be
incremental, and we want to make sure that it is
incremental based on acquiring new information. I know
that we defined adaptive management somewhere in the
documents, and we should carry that thread through.

I am trying to understand the relationship of
this proposal for watershed management to the
ecosystem-based management discussion earlier under
Governance because, as I am sure you are aware, I very
strongly believe that we should be moving toward ecosystem-based management. This, of course, is in line with that, and I don't want us to have parallel tracks there; I think they need to be integral.

Watershed management, particularly with regard to water quality and water quantity, is an extremely important piece of that. This document indicates that there would be a regional, a federal regional, council
whereas before I think we were talking about potentially

a broader regional council, a federal/state partnership.

It does seem to me that while you do want to

have all of the incentives to encourage people to

participate with that regional council, that setting it

up up front as a federal/state partnership may be a

better starting point than a federal council, a federal

regional council.

I would perhaps suggest to Stewardship that we

continue to sort of go back and forth on that issue and

think about it a little bit more, whether you can

motivate this kind of watershed management and do the

things that I think Bill Ruckelshaus talked about best,

if you set up the federal agencies and get them
coordinated and invite people in or if you set up up

front a federal/state partnership and do all of those

things, including the "incentivizing," and so on, if

that is a verb. I have some concern about that.

Finally, I do think that with regard to

watershed management, we need to think back to the issue

of consolidation of activities, which isn't explicitly

mentioned here, but I just want to note it, again, that
some of the activities at the federal level could potentially be consolidated simply to try to sort of clear the air before you try to bring everybody to the table in the sense of easing the task of some of the coordination of at least the federal activities.

You mentioned that with regard to consolidation of some of the very small programs, but I think it also is the functions and even possibly agency programs, not just their funding programs, but their internal operational programs that need to be considered there.

When we come to consolidation of functions under a new proposed structural model, I just think we need to keep this issue of watershed management and
monitoring very clearly in mind. It is probably an area where we have, you know, an awful lot of players and it is a little hard to figure out why we have all of those players as opposed to pulling them together, not just in coordinating, but in actual restructuring.

Thank you.

ADMIRAL GAFFNEY: We agree with you completely. On the last point, and I will go backwards,
that is really what we meant by "lead," a lead agency;

we agree. I didn't go into that deep enough when I

spoke.

As far as feds first and then everybody else

second or encouraging them fed/state together, first

step, we thought with an executive order without

legislation in view of time to make a jumpstart at what

Governance wants to do. We could quickly get the feds

together just by executive order without a "Mother may
"I" from anybody, just to speed the ball along.

We know if you can before we meet again give

us some better ideas on how you could bring state and

federal together without wasting -- not wasting, taking

too much time, I think we would like to know more about
that. We weren't skillful in finding a way to make that happen. And, finally, agree on adaptive management for sure, just as we do on the ocean side.

DR. ROSENBERG: On the federal/state partnership side, I am not sure I am the one to know the legal mechanisms, but I think it is worth exploring whether it doesn't mean -- certainly you can't create one by fiat, but whether you try to set up in that
structure initially would seem to be worth some
exploration. We have a lot of examples of those
programs. I don't think they are always set up by
statute; they can be set up by, essentially, agreement.

ADMIRAL GAFFNEY: Yes. This may the case of
Bill's slide on pilot programs. You know, maybe some
place it is really easy to do that and we show people it
is easy, and then you propagate the faith through other
means and other people catch on.

DR. EHRMANN: Mr. Ruckelshaus, do you want to
come in on this point before I go on?

MR. RUCKELSHAUS: Let me just comment on that
last discussion. About two years ago, the state of
Washington created a Monitoring Oversight Committee,
which I was the chairman of, which was charged by the legislature with coming up with a monitoring, a water monitoring plan for the state.

While the statute didn't mandate it, we included federal officials from all branches that were interested in water out there. We included tribal officials, citizen groups, and collectively we developed this monitoring plan which has now been submitted to the
state. It has a lot more steam behind it, because all
of these other agencies were involved, and they worked
on coordinating their own monitoring activities in this
plan for the state. Actually the state of Oregon, that
was the hardest group to get to participate, but they
participated as well. That was all done by initiative;
it was not done by any statutory response.

DR. EHRMANN: Sure.

Mr. Kelly had his card up. If you would, go
ahead. Commissioner Kelly, go ahead.

MR. KELLY: I have one brief comment. Before
I do that, in the context of the competitive comments
about our various working groups, I just wanted to say
that the key to the success of the Stewardship Working
Group is obviously due to the fact that we have as a member one of our two outstanding lady commissioners, Ann D'Amato and with Ann's leadership supported by three Pauls, which brings with those names a good deal of sanctifying grace, we can't miss.

Although I am a member of the Stewardship Working Group, I had not thought of this point until now until when Paul Sandifer answered the question that
Chris left with us, Are we concerned about water quality or water quantity? Paul correctly responded, both. It reminded me of the fact that on some days there is no water that arrives in the Gulf of Mexico from the Rio Grande River. That is obviously a water quantity problem, as well a water quality problem. That in turn suggests that with respect to watershed management there could be an international implication of this in those regions of the country that border on Mexico and Canada. There may be times when we want to bring representatives of those governments into the process. Indeed, I think we have a precedent for that. When we heard about the Gulf of Maine, the
rather informal Gulf of Maine Watershed Management Program that the two maritime provinces, New Brunswick and Nova Scotia, are invited to those meetings. That is something we might, for staff we might, include in our drafting.

DR. ROSENBERG: Certainly, the Great Lakes Commission is another.

DR. KELLY: Right. Great Lakes, a good
example.

DR. ROSENBERG: I think there is one on the Columbia.

CHAIRMAN WATKINS: There is also some significant international linkages there, the Nile River, for example, the degree to which you drain off for farming and all that. If you don't have anything running into the Mediterranean, the fishery people worry a lot.

There is a lot of precedent for what Paul is recommending here. It should be a component of the international emphasis, too, that when we finally get to that point, when we really talk about that as a way the United States again can offer a leadership role in doing
the kinds of things you are doing in the watershed monitoring and management programs here.

DR. EHRMANN: Yes, sir?

DR. SANDIFER: I just wanted to respond to Andy's comment about getting the states involved right along from the beginning.

DR. EHRMANN: Yes.

DR. SANDIFER: Andy, I don't think it will
have to wait for legislation, I agree with you entirely.

One of the things that Paul Kelly said earlier and we said back in our November report -- Paul Gaffney, about aligning the federal agencies on these regions better, once the federal agencies are lined up, they deal with the states in those regions.

We, as states, have to work normally through the regional office on certain kinds of things to work with the Fish & Wildlife Service or NOAA or anybody else, USGS, so it is a very common thing.

If this were done by executive order, the executive order should also include that the federal agencies then work directly with the states in their respective regions, and you have got it automatically in
place and then it can be later, hopefully, dealt with in enabling legislation. It can be done immediately, and I think it would be quite effective. Your point is well taken.

DR. ROSENBERG: I certainly agree, but I think that we should be thinking about that and setting up regional councils broadly, not just for this watershed issue because of course this does apply to the ecosystem
issue overall.

DR. SANDIFER: Again, I wasn't here on

Wednesday's discussion, but our previous discussion,

driven by a subset of ecosystem-based management approach. It is a subset of the regional management council kind of approach. This happened to be one of those areas where the working group felt strongly and where we had some great examples of local kinds of watershed councils and commissions and bodies that worked quite well.

If you could then take what they are doing at small scale, in most cases relatively small scale, and scale it up a bit, it could be quite effective on a larger scale. That is what we were trying to do, to include it as an element but not a replacement for, a
substitute, or competing with ecosystem-based management as part of.

DR. EHRMANN: Okay. Just to summarize a few key points and then we will turn to the marine mammal protection topic. Clearly, an emphasis on the place-based nature of these kinds of activities, a number of examples of where that is operating already in the country that can be learned from, and some good
input that has come into the working group on that topic.

There is the need to recognize the role of adaptive management in this process; the issues on quantity and quality, water quantity and quality; and then the associated range of data collection monitoring issues were noted.

The fact is that this kind of process can offer an additional opportunity for coordination in this regional context, and obviously the need to integrate the work of the Governance Working Group, as it relates to the development of the regional council concept and the work that is coming out of Stewardship on this particular topic.