AFTERNOON SESSION

(1:30 p.m.)

CHAIRMAN WATKINS: The Commission will now come back to order. We will commence the afternoon session with the Chairman of the Stewardship Committee reporting on his seven items. So we will turn it over to you, Paul.

COMMISSIONER SANDIFER: Thank you, Mr. Chairman.

(Slide.)

Going to the agenda, we have seven items that we want to complete this afternoon. All of these deal in one way or another with water pollution issues.

The first three in a row concentrate on animal feeding operations, sewage treatment plants,

and stormwater. I would like to treat these as a group and go through the slides, get through all of the stuff at one time, and then have questions.

This afternoon we go from where we were in the stratosphere with global policy this morning to what might be termed the other end of the

manuralsphere, perhaps, this afternoon. But these are important issues related to water quality.

First of all, concentrated animal feeding operations have become the dominant factor in animal production in the United States over the last two decades. They release incredible amounts of nutrients, principally nitrogen and phosphorus, but also pathogens directly into water supplies, into soils, and into groundwaters.

To put the problem into perspective, the USDA and the EPA estimate that the amount of concentrated waste, animal waste, produced in the United States is roughly three times, or a shade more than three times that amount of human waste generated in the entire United States.

So it is not a trivial problem when one looks at the issues of nonpoint source runoff, nonpoint source pollution of waters both as nutrients

and as a pathway of pathogens.

We have spent a fair amount of time looking at these issues and really have some pretty straightforward and simple recommendations here.

It appears that the current EPA rules for concentrated animal feeding operations are in pretty good shape. It also appears that states could do more if they wished to, and we will get to that in just a moment.

The primary recommendations from the Stewardship Working Group are that:

Congress should ensure that the full authorized funding within the 2002 Farm Bill Conservation Program is in fact made available, and that within that funding the USDA should target those funds as best it can to projects at concentrated animal feeding operations that would have the greatest water quality benefits.

This is the kind of thing that would result in substantially measurable results, measurable improvements, or should result in measurable improvements in water quality with the

resultant impacts I believe not only of improved water quality but also the likelihood that the USDA would be able to continue funding for the long term. It shows very positive benefits.

Third, we recommend that the Federal Government would implement the voluntary EPA/USDA Unified National Strategy for Animal Feeding Operations. That reaches the smaller 80 to 90 percent of these operations not currently regulated by the EPA Rule.

And finally, I reiterate the states can use state law to control problem animal feeding operations because they can enact more stringent regulations than specified by EPA, or deal with things on a site-specific local area by either zoning or regulating density of operations, how close they can be one to another, and so forth.

That is essentially it on the concentrated animal feeding operations.

COMMISSIONER SANDIFER:

Now we move to sewage

treatment plants, which is the human side of this. Sewage treatment plants or publicly owned treatment works, POTWs, is the term you often in the literature, have greatly reduced sewage-related pollution in American waters over the past 30 years. This has principally been done under the Clean Water Act.

Generally the Clean Water Act requires treatment to secondary treatment standards. What we see is a considerable need for additional funding here, that the federal appropriations for Clean Water Act state resolving fund capitalization grants, currently funded between $850 million and $3.5 billion a year, needs to be continued. Certainly there should be no diminution of these funds.

There should be continued federal funding in states to implement the Clean Water Act programs. At the state level, program managers should be directed to give highest priority to those projects that protect public health on the large scale, and secondarily obtain benefits for water quality wherever possible. Move to the next slide.

(Slide.)

We, as you know, also have heard quite a bit of testimony about waivers for secondary

treatment for ocean discharges as we have gone around the country. This is a specific issue related to ocean pollution by sewage.

We have heard lots of difficulties related

to those waivers, but we've also heard from EPA some of the concerns they had that perhaps we had only gotten a part of the picture.

We suggest that EPA ensure that all publicly owned treatment works applying for such waivers fully meet all environmental criteria before EPA grants the waiver.

There is a great deal of suspicion, I would say, in the public's mind that we've heard as we've gone around that the criteria is of meeting primarily the economic criteria not environmental criteria, and we would like to see the environmental criteria given a great deal more weight. If you would move to the next slide.

(Slide.)

A third area of significant interest has to do with the advance treatment of nutrients, particularly nitrogen and phosphorous at publicly

owned treatment works.

This is an area where it becomes a bit more site specific. Nitrogen and phosphorous are not as great a problem in some waters as they are in

others, but we have heard tremendous testimony and we've belabored it several times about the dead time in the Gulf of Mexico and some other places like the Chesapeake Bay and other major coastal water bodies that have been impacted by nutrients that include sewage discharges.

We recommend that for those nutrient-impaired waters, the EPA and the Congress require consideration of advance nutrient removal. This is biological treatment to ensure nutrient removal prior to the discharge of the waste stream into the receiving waters. And, that EPA should continue research to improve biological nutrient reduction technology.

(Slide.)

Our final slide on this has to do with the problem of septic systems. Fully 25 percent of American residences and probably 30 percent or more

of new residential structures are not connected to centralized sewage treatment plants, but in fact are working on individual home-owned septic systems.

In some cases those septic systems are

quite functional and do a very great job. In other cases, the systems are either inadequately constructed or inadequately maintained over the long term and contribute significantly to nonpoint source pollution of groundwater and, as that groundwater runs into surface waters, into coastal waters.

And so we are strongly recommending that the EPA and other relevant federal agencies urge the states and local governments to adopt and better enforce building and zoning codes for septic systems, and especially to improve public education about septic system maintenance.

This is an area that has received some attention but not quite as much as we believe it should, and certainly this could be picked up in our national education program as one more element of importance.

And we recommend that the National Academy of Sciences, National Research Council, should study whether economic and social factors or policies encourage new development that uses septic systems.

If that is the case, then to help develop for the Nation policies or model policies that would promote centralized treatment where these wastes could be accumulated and better treated hopefully to the advanced treatment level before they are released to receiving waters.

That I believe covers the sewage treatment plants. Let me move quickly to two more issues related to sewage and to nonpoint source runoff.

COMMISSIONER SANDIFER:

Stormwater pollution. The magnitude of stormwater pollution is really a function of impervious area in a given watershed. In some cases, and in most cases, the inability of storm sewer systems or sewer systems to accumulate all of the stormwater that may run off in major rain events and pipe it to the treatment plant so it goes overboard,

so to speak, carrying with it loads of pollutants, nutrients, pathogens, sediments, and in many cases increased temperature, all of which have detrimental effects to the receiving natural waters.

There is a fair amount of literature that demonstrates that when impervious services in a given

watershed reach above 10 percent of the total area, you begin to see significant impairment of water as a result of stormwater runoff.

The impervious services means anything that doesn't allow water to penetrate: that is, paved roads and parking lots, sidewalks, rooftops, those kinds of things that shed water rapidly.

So we have looked at this in some detail and have made several recommendations here for increasing support and funding for outreach programs again that can inform local officials as well as the general public about how land use decisions affect aquatic resources.

We had a lot of discussion about whether this should all be regulatory or not, but again this is one of those areas where public education here is probably going to be much more effective than a regulatory hammer, so to speak.

The overall goal should be to meet state water quality standards. We had long discussions about the natural environment. We suggest minimizing disturbances to the natural environment, where

possible, and to determine the best areas to be preserved, taking into account this 10 percent rule: that water quality becomes increasingly degraded as impervious surfaces in the watershed increase above the 10 percent threshold.

And here we do suggest that the requirements be put in place either through national or state authorities that new development be conducted in such a way to minimize the impacts of stormwater, understanding that in order to minimize continued expansion of impervious surfaces in one area doesn't mean that you want to spread it out so much that every watershed gets 10 percent or more of impervious surfaces. That's why we talk about determining those areas that really need high degrees of protection and not have those degraded and work within existing work areas than to minimize the impacts of new construction.

And finally here, to re-examine building codes and ordinances that may serve to discourage environmental-friendly development. I think both in the testimony before us and in testimony before the

Pew Commission, there were a number of examples given where building codes that have been in place for a long time actually end up requiring more impervious surfaces for roadways, broader roadways and such than is really necessary for residential use.

And if those ordinances could be studied in a systematic way, they might be able to be improved or changed in such a way to still provide all the necessary safety and utility services, but with a decreased impact on the natural environment through stormwater runoff.

We also talked quite a bit about the potential to do things where new development is coming on. That is, new construction. New shopping centers, new residential areas, and so on. And in this case, because we know so much more now about the potential impacts, or the real impacts of stormwater runoff and its relationship to impervious surfaces,

that there be national performance-based goals established with the local flexibility to reduce the impacts during site development and to abate post-development impacts.

And, that best-management practices should be used and monitoring should be done to determine if the best management practices are in fact effective at meeting their performance goals.

And finally, if the goals aren't being met--and that is, water quality goals--then the best management practices should be revised to get to where you're trying to with the established goals, the performance goals.

All of these are done of course at the local--with local input of both people, both the local people and the home building and development industries.

That, Mr. Chairman, I think pretty well covers us from starting with the largest concentration of nutrient pollution in the concentrated animal feeding operations through

stormwater.

MR. EHRMANN: Very good.

COMMISSIONER SANDIFER: I believe that's it--sorry, I missed one.

MR. EHRMANN: Oh, I'm sorry. Did you miss

one?

COMMISSIONER SANDIFER: I missed one slide.

(Slide.)

This was existing development. Basically it's the same kind of thing. Monitor it, identify the major problems. State and local governments identify the local water quality objectives. Again this is done at the local level.

And then it develops performance-based goals. Once they've identified their water quality objectives, utilize best-management practices and local ordinances. And then monitoring to see whether you are in fact having a beneficial effect.

I think in a number of our areas, not just in the water quality area, we've found that what's really lacking on the other end of technology applications, or regulatory applications, is the

19 monitoring to see whether you are actually being

20 effective or not.

21 In these kinds of cases, the monitoring is

22 an essential element if you are ever going to improve

water quality.

MR. EHRMANN: Commissioner Borrone.

COMMISSIONER BORRONE: Thank you.

I want to go back to the slide that says Clean Water Act Waivers on it. It talks about the EPA should ensure that all POTWs applying for the waiver fully meet all environmental criteria.

(Slide.)

I think that's very important. I just wondered whether your group had discussed any consideration of what happens when the waiver process is granted, when a waiver is granted, the length of time is granted for, and whether there should be any mechanism that EPA might have available to try to achieve compliance at some point at that end of the waiver cycle, first of all.

Then the second was: In a lot of the

18 testimony we heard on the subject there was

19 expression of concern because of the lack of funding,

20 basically in many of these cases, leading to these

21 requests, lack of available funding.

22 I think you talked about funding

shortfalls. Maybe you're going to do that in terms of the full water infrastructure program. But do you have an estimate for what the funding needs specifically are for the sewage treatment requirements versus the storm water portion in a way that might be able to be particularly targeted?

Really what I'm after is getting a sense of how long we might see these problems continue to persist without the application of sufficient available funding, or sufficient funding made available.

COMMISSIONER SANDIFER: Lilly, let me deal with the first part of that first.

We did have some discussions about the length of time of these waivers, but didn't end up with a recommendation. I think most of us would be very comfortable, if not all of us, would be comfortable with a recommendation that dealt with

19 that.

20 In other words, if a waiver is given for a

21 five-year period for something that at the end of the

22 time it doesn't just get automatically approved

because the sewage treatment authority doesn't have any money, because they'll always say they don't have any money to deal with this.

So that was one thing we did discuss, and we can reflect that better in here. There would be-- perhaps the way we ought to put it is that the application for an extension of that waiver would require much greater extenuating circumstances than the initial application.

Secondly, the issue of cost here, I really don't have a handle on but I don't know whether Bob or Brooks has a handle on that particular aspect.

VOICE: (Inaudible.)

MR. EHRMANN: Go over to the mike. Thanks.

BROOKS BOWEN: EPA periodically reviews the needs, capital infrastructure needs in particular, of the POTWs. Their most recent review

19 indicates a funding shortfall estimated at about

20 $270 billion over the next 20 years for capital

21 infrastructure. That breaks down--

22 Now there are various economic assumptions

that go into that, so you can, depending upon your assumptions about revenue to the POTW ratepayer rate increases, that sort of thing, the number can vary. But under almost any scenario it is a pretty big number.

And the breakdown works out to be about one-third for actual POTW sewage treatment operations, including collector systems, and about two-thirds to address storm water related problems, which are principally combined sewer overflow and sanitary sewer overflow. So it breaks down.

This is a national survey, so it breaks down about one-third for what is really POTW, and about two-thirds for what is basically stormwater related. So if you start with a number of $270 billion and do the math, you've got about ninety for POTWs and twice that for storm water related needs.

COMMISSIONER SANDIFER: Brooks, I am assuming that we could ask staff to refine those numbers specifically for the waivers that directly impact the marine environment.

BROOKS BOWEN: You mean the 301(h)?

COMMISSIONER SANDIFER: We know about the Southern California and Puerto Rico situations in particular and what kinds of costs are associated there. Because it seems to me that part of that also has to do with not only the availability of money but where this comes to priorities in the state revolving fund--utilization of funds out of the state revolving fund.

BROOKS BOWEN: With regard to the Section 301(h) waivers, economics is not a consideration in granting those waivers. The underlying assumption is that these are discharges to the open ocean environment, and the POTW, the local community, must actively do research and make a demonstration to EPA that their discharge does not adversely affect the environment.

They have to do local marine population

19 sampling, that sort of thing, and it can't affect

20 recreational values either. So economics is not a

21 factor in the 301(h) waivers.

22 MR. EHRMANN: Commissioner Rasmuson on

that.

COMMISSIONER RASMUSON: Oh, I beg to differ with you on that. We were in California. They've got more waivers than you can shake a stick at. They've also got 35 to 40 House of Representatives there, too.

So we were down in, what was it, Danson, Ted Danson gave us a sign saying about all the pollutants going out of there, and we saw this was secondary. I think they had a big waiver out of Long Beach.

COMMISSIONER KELLY: Orange County.

COMMISSIONER RASMUSON: Orange County. I think, irrespective of whether you debate it or not, I think the recommendation--at least I've come to the conclusion--is, as you say, no sewer left behind.

We're going to have to have a massive, massive reconstruction of our sewer treatment plants

19 and runoff here in the United States in the next 20

20 years. I think that's what you're really getting at.

21 You are never going to attack it unless you do it

22 like we did the highways back in the '50s and '60s.

MR. EHRMANN: Commissioner Rosenberg?

COMMISSIONER ROSENBERG: Thank you. I have a few questions just to stick on the point about waivers.

I'm a little concerned about that criteria that says there is no impact on the marine life. Compared to what? I would be very concerned about how those studies proceeded.

It does seem to me that we need to be clear that if there is going to be a waiver, it is finite in period of time and that the requirement is that you actually show some progress towards improving the sewage treatment over time.

COMMISSIONER BALLARD: It already is a finite, isn't it? It's five years?

COMMISSIONER SANDIFER: Five years.

COMMISSIONER ROSENBERG: Yes, but it's renewable. And if you haven't shown demonstrable

19 progress that you've done something about it as

20 opposed to, well, we've just done the same thing,

21 let's get another five years, then the time limit

22 doesn't mean anything.

It only means something if there has been a clear improvement. I mean clearly Bob and staff know a lot about this stuff, but I am rather concerned about those waivers as a long-term policy.

If I could go back to the--

COMMISSIONER SANDIFER: Andy, if I may, several Commissioners have raised this point. Let me ask staff on behalf of all of us to strengthen the wording here to get us a better understanding of the current legal circumstance, but make clear that this Commission would be recommending that waivers not be a standard order of business particularly in the marine environment, near-shore environment.

This is something that should be the last option, not the first option.

COMMISSIONER ROSENBERG: Thank you.

If I could go back to CAFOs for a minute, this is a somewhat ignorant question but I don't

19 understand why, given the discussion we've had of

20 sewage treatment facilities, that we then urge that

21 we implement voluntary strategies for dealing with

22 concentrated animal feeding operations when you've

indicated that there is three times the waste coming from the human population.

And then we say, oh, well, this will be a voluntary strategy? That just doesn't make any sense to me that we shouldn't be moving towards mandatory standards with a clear, a much clearer program at least as strong as that that we are trying to put in place for sewage treatment.

Now I mean I know that there's a lot of EPA history here, and obviously a lot of political factors around this, but it just seems to me that the disparity between what we're talking about with sewage treatment and what we're talking about with CAFOs is a little bit too great for me to really understand the logic.

I'll just go through all of the comments. I only have a couple more.

Similarly on advanced treatment of

nutrients, I thought the wording on "EPA and Congress should require consideration of advanced nutrient removal" was a little weak. It read like an international agreement to me.

I mean "consideration"? There has to be something more there. So I just trust that in the text when we say "consideration," there is some standard that they're trying to meet and that you actually have to make efforts to meet that standard.

On septic systems and on watershed protection in general, storm water, I was concerned that there was nothing about research and technology development. Living in a community that largely relies on septic systems, you know, what doesn't seem to be occurring is someone figuring out a better way to do this. It is a matter of maintenance, but I can't believe that putting a concrete tank in the ground and having a leachfield is the very best technology that we can imagine for individual households.

And I don't know where the research and technology development program is, but it seems like

that is something that this Commission should urge that we have better development of both septic system, or private sewage treatment, and storm water management systems as an important technology need

for the country.

COMMISSIONER SANDIFER: Point taken.

MR. EHRMANN: Yes, Mr. Chairman.

CHAIRMAN WATKINS: Paul, a couple of points for clarification.

On my crib sheet here I don't see one of them items I saw on a slide. I think it was the second slide on concentrated animal feeding operations which said something to the effect that states have the authority to control CAFOs, or something like that.

It was a bullet: States can use state law.

Is that a recommendation? Or is that a statement.

COMMISSIONER SANDIFER: It's--

CHAIRMAN WATKINS: Or what was intended

there?

COMMISSIONER SANDIFER: Let me back up just a little bit, and staff can correct me if I'm wrong. There's a small percentage of CAFOs that truly turn out a huge amount of waste. Those are regulated

under federal EPA regulations, under NPDS permits directly as point source dischargers, and they have pretty stringent standards that they've got to deal with.

The smaller ones--that's the sort of Mexican standoff or gentleman's agreement, depending on where you happen to be in this between USDA and EPA where the environmental groups are suing on one side, the farm groups are suing on the other side, and EPA is in the middle. That has to do with all of these others that are not fully regulated by EPA.

It's a whole bunch of smaller operations, and that is a case where the additional regulation may need to be placed. The telegraphic nature of the final recommendation here should be that this Commission recommends that states use their existing legal ability under state law to promulgate even more stringent rules than EPA has in place as needed in

19 those specific localities. That's what it's meant to

20 be.

21 CHAIRMAN WATKINS: Well we're going to

22 change that to read that?

COMMISSIONER SANDIFER: It was just trying to save a slide here is what it was trying to do.

CHAIRMAN WATKINS: So there is a recommendation. All right.

COMMISSIONER SANDIFER: Do you think that's covered it, more or less?

CHAIRMAN WATKINS: Yes. I understand.

The other one is, when we go over to sewage treatment plants, and I think it was maybe the fourth slide, it talked about advanced treatment of nutrients.

It says that EPA should continue. Does that say that current research and biological nutrient production is adequate? It says to me that it's fine. We just continue it. Is that what you mean? Or is it accelerate? I don't know. I'm just asking the question.

VOICE: I don't think we made that distinction, sir.

COMMISSIONER RASMUSON: But is it about to end?

CHAIRMAN WATKINS: That's not a

recommendation, then. Everything's fine.

COMMISSIONER SANDIFER: The concern here is--

CHAIRMAN WATKINS: By the way, when staff comes up to talk, please introduce yourself. Tell them who you are, because the recorder doesn't know who is speaking. So let's do that.

COMMISSIONER SANDIFER: The concern is I think that there's not any immediate threat to this research area, but it has not received as much attention. And if we as a Commission paid some attention to it and said it ought to be continued, we can just as easily say expanded or accelerated. At least it would draw some attention to the problem of advanced treatment specifically to remove nutrients that are causing problems in our already impaired waters.

So the intent was to say more research is

needed in this arena. And if that would be a better statement, then that's fine.

CHAIRMAN WATKINS: But doesn't it apply across the board on a number of nutrient reduction

initiatives as opposed to just this in sewage treatment plants?

COMMISSIONER SANDIFER: Absolutely.

CHAIRMAN WATKINS: So my feeling is that there ought to be a broader recommendation. It's my understanding from testimony we've received that there is inadequate research devoted to nutrient reduction and that it needs to be enhanced.

So maybe it doesn't appear here, but it seems to me it ought to pop into view as a larger, maybe even a REMO-related issue.

COMMISSIONER SANDIFER: We will construct a plant and pipeline to send that particular thing to REMO. No, actually it is a broader research issue that should come under the area of research that is under the fate and control of nonpoint source nutrient loading on nutrients, I guess.

MR. EHRMANN: Commissioner Muller-Karger?

COMMISSIONER MULLER-KARGER: Thank you. The point I want to raise is maybe small on a national scale, but probably very important in local and regional scale.

When we were up in the State of Washington several people told us in testimony about the problems of cross boundary sewage and that there are some issues with discharges coming out of Canada that are not treated and that are dumped into Puget Sound. So that's one.

I know that there are similar issues in the Gulf of Mexico with Mexico and along the border. So these are small problems, but they do add an international dimension to what we're talking about, and I want to make sure we do include that.

There may be an important leadership issue here that we can show as examples of how to deal with things in cross-boundary problems.

MR. EHRMANN: Commissioner Rasmuson?

COMMISSIONER RASMUSON: I sort of agree with you, and I think that if we ever do go ahead and do a massive--recommendation of a massive restructure

of our sewage treatment plants, we've got to include our neighbors in it, too, and give them the money to do it. Because you're absolutely right. You can clean up everything you want in Southern California,

but if Tijuana can't clean up it doesn't make any difference.

What we heard in Puget Sound is, you can do all you want in Puget Sound, but if Victoria doesn't have the money they're a big factor there and they've got to be a part of the whole process.

COMMISSIONER MULLER-KARGER: I'm concerned that--I mean I'm glad that the cost issue came up before. We did talk about this in our Working Group extensively. I'm not sure exactly which way we're going, but from my own perspective I would like to see that some of these costs, both the explicit costs of improving the sewage treatment plants and the implicit costs on the environment that we just don't take into account whenever something is damaged. Those things have to be paid by the users of the water and whatever we discharge.

So we need to start thinking in this way

if we're going to be able to pay for these repairs and improvements.

MR. EHRMANN: Any other comments on this first set of three issues?

(No response.)

MR. EHRMANN: Okay, staff, any other questions? Got it? Good.