Compendium of Department of the Interior Statements on Non-degradation of Interstate Waters

CLEAN WATER
U. S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMINISTRATION

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INTRODUCTION

One of the most significant problems that the Department of the Interior and the Federal Water Pollution Control Administration have encountered in the setting of water quality standards is what has come to be known as the "non-degradation" issue. This issue arose last winter in the application of Policy Guidelines Nos. 1 and 8 of the Department's "Guidelines for Establishing Water Quality Standards for Interstate Waters."

Guideline No. 1 states in part, "In no case will standards providing for less than existing water quality be acceptable." In the Department's view, this guideline meets the Congressional intent of the Water Quality Act of 1965 to "protect the public health or welfare and to enhance the quality of water" for a variety of legitimate uses.

In order to implement the Congressional enhancement policy, Guideline No. 8 requires that all wastes "...receive the best practicable treatment or control." Most States have interpreted this to mean secondary treatment.

Secretary Udall, at a press conference on February 8, 1968, enunciated the basic policy statement on "non-degradation." Since then, Congressional committees, States, industries, and others have questioned the implications of such a policy.

This compendium brings together the interpretations of Secretary Udall and other Department of the Interior officials relating to the meaning and impact of the "non-degradation" policy. There are also attached copies of "non-degradation" statements which have been approved by the Secretary. It is designed to contribute to an increased understanding of the nature of the "non-degradation" issue and the way in which it has been resolved.

Joe G. Moore, Jr.

Joe G. Moore, Jr.
Commissioner

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FOR RELEASE ON FEBRUARY 8, 1968

WATER QUALITY DEGRADATION ISSUE RESOLVED

Secretary of the Interior Stewart L. Udall today issued the following statement in connection with the review and approval of water quality standards for interstate and coastal waters:

During the past several weeks, I have given intensive study to what has become known as "the degradation issue" in connection with the water quality standards as submitted by the States under the Water Quality Act of 1965.

I have resolved this basic policy issue in a way that I believe is fair and equitable to all concerned and, at the same time, entirely consistent with the policy and objective of the Water Quality Act, which is to protect and enhance the quality and productivity of the Nation's waters.

I have concluded that in order to be consistent with the basic policy and objective of the Water Quality Act a provision in all State standards substantially in accordance with the following is required:

> Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at their existing high quality. There and other waters of a State will not be lowered in quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of the Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters. This will require that any industrial, public or private project or development which would constitute a new source of pollution or an

> increased source of pollution to high quality waters will be required, as part of the initial project design, to provide the highest and best degree of waste treatment available under existing technology, and, since these are also Federal standards, these waste treatment requirements will be developed cooperatively.

Because of the importance of this issue to the future quality of America's waters and to the Nation's further social and economic development, the decision that I have made warrants some elaboration.

On the one hand, it is imperative that there be no compromise with the Declaration of Policy as now set forth in the Federal Water Pollution Control Act. This declaration states: "The purpose of this Act is to enhance the quality and value of our water resources and to establish a national policy for the prevention, control, and abatement of water pollution."

On the other hand, it is also imperative that the water quality standards provision of the Act be administered in a way that will neither seek nor serve to stifle further economic development in areas where interstate waters are of high quality.

I am convinced that the resolution of this issue as set forth above achieves the dual purpose of carrying out the letter and spirit of the Act without interfering unduly with further economic development.

A key factor in the resolution of the degradation issue is the substantial upgrading of water quality that will be achieved as secondary treatment of municipal wastes and the equivalent for industrial wastes becomes the common practice, as it will within a few years under the water quality standards program.

PRESS BRIEFING BY SECRETARY UDALL, FEBRUARY 8, 1968

QUESTION: Mr. Secretary, on the degradation issue you talked about here, you suggested a standard for all the states. There seems to be a kind of loophole in here, and it says the change can be made if it is justifiable. What do you consider justifiable?

SECRETARY UDALL: I had a conference with my people before I came down here. And in reading the language it appears to go up one side of the road and down the other. And I think if you read it carefully, and maybe let some of my people explain it to you, that you will see that essentially this was the issue that something was written about. I know Eric Wentworth wrote a piece in December. There was a major argument between Commissioner Quigley and Secretary Di Luzio on this. And I think in the main that I would say, although I don't think we covered the conclusion, that what we really need is not to treat the water quality standards as something that is hard and fast and set in concrete, but we need to keep our own position where there is flexibility and where we stay in the picture, we just don't approve standards and send them back to the states, but we send them back to the states with reservations and reserving our own right to remain in the picture. And this is one of the main things that has developed out of this. So essentially what we say is that it is our view that the law, the intention of the law is that there be no degradation, that we maintain present quality.

Now, there are situations, however, that exist where, for example, there may be needed decisions. Personally, I think that this issue will largely wash out a year or two from now as we get down the road, because what we are going to be doing, if we can get the big national clean-up going at the rate that we should, if this new legislation passes, and if the states get in action the way that they should, we are going to find that our waters are being upgraded significantly on most lakes and rivers. And therefore the problem of degradation in many areas will disappear.

But there may be some of these immediate situations where decisions are impending with regard to proposing additional uses of water.

So what we say is -- we have attached three conditions. And as a basis for these decisions, the burden of proof is on the proposed new use, whether it is an electric power plant, or an industry using water, that they have to show to the states' satisfaction, and more importantly, to our satisfaction, that there are compelling social and economic reasons -- this would be a first condition -- that they are prepared to install the very latest and most modern pollution control equipment, and thereby to minimize any temporary degradation. And I think we should think of it in that light.

And the third and final condition is that whatever temporary degradation shall not violate the standards themselves in terms of uses.

Now, you have to understand the situation in the sense that you may have water quality here but the standard is below it. And that is where the argument occurred between my Assistant Secretary and Commissioner, are you going to keep it here, or if the standard is here, are you going to let it be depressed to this point? And this is the way we have tried to resolve this problem. We have been candid to say that when we approved this first group of 10 or 12 states that we approved we didn't have this provision in it. We are going to go back to them and ask for its inclusion. We think we will get it, because these first states that were approved were the ones that had the best standards and were the most cooperative.

And so I think we have a workable solution. And I think it also gives us more flexibility, and keeps us in the picture.

LETTER FROM ASSISTANT SECRETARY EDWARDS TO SENATE MAJORITY LEADER MICHAEL J. MANSFIELD, FEBRUARY 8, 1968:

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Before approving as federal standards those adopted by the states, I must determine that the standards "protect the public health or welfare, enhance the quality of water, and serve the purposes of the (Federal Water Pollution Control) Act," in accordance with Section 10(c)(3). The Department of the Interior is firmly committed to implementing the basic policy of the Act, which is to protect and enhance the quality and productivity of the Nation's waters.

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In those instances where knowledge of present quality for given streams is either absent or incomplete, it will be my policy to insist on standards which protect existing quality, rather than degrade. This is an obligation implicit in the Federal Act.

Moreover, as our technology improves, we gather more data, and learn more about quality requirements of water uses, we expect to cooperate with the States in making necessary amendments to the water quality standards which were approved previously.

Standards are being reviewed in the Department in light of these principles. I shall insure that these policy requirements are met before I give my approval and make the determination that water quality standards are consistent with the provisions of the Federal Act.

LETTER FROM SECRETARY UDALL TO GOVERNOR JOHN A. LOVE OF COLORADO, MARCH 26, 1968:

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The policy I announced against degradation of existing water quality where this quality exceeds the adopted standards is designed to protect, for generations to come, the valuable water resources of this country. I am sure you will agree that the many clean lakes and streams of Colorado are a definite asset to your State. We are simply requesting that our mutual goal of protecting high quality waters from degradation be clearly spelled out and made a matter of public record, and it is to this end that I urge you to adopt a statement similar to that expressed in the Department news release of February 8, 1968.

I want to assure you that it is not our intent to supplant State programs, but rather to assist them in carrying out water pollution control responsibilities. Further, I do not intend by the administration of the statement on degradation to propose Federal control of economic development, not to stifle such development in Colorado. Rather, I want to assure that standards satisfy the intent of the Federal Water Pollution Control Act, as amended, to protect and enhance water quality. As social and economic development takes place, the standards should remain a means of focusing on the potential impact such developments can have on water quality, of causing full attention to be given to this impact and means of accomplishing development without destroying precious clean waters, of determining the suitability of particular locations, and of facilitating the design of such developments so that damage to water quality is minimized. I do not think that the location or operations of industrial or other developments have always reflected this consideration in the past, and the deterioration of our Nation's waters is the result.

I agree that standards should be approved as soon as possible so that the joint Federal-State water pollution control programs can proceed quickly and smoothly. In this regard, I

urge you to support an early public hearing date so that agreed-upon revisions in Colorado's original standards can be formally approved and transmitted to Washington. Prior to the public hearing, we will be sitting down with your water pollution control staff for a final discussion of this Department's position on water quality standards for Colorado's interstate waters.

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LETTER FROM ASSISTANT SECRETARY EDWARDS TO CONGRESSMAN JOHN D. DINGELL, MARCH 5, 1968:

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You and members of the Michigan United Conservation Clubs have urged that water quality standards not permit existing water quality to degraded. This Department concurs. Secretary Udall has resolved this basic policy issue in an equitable fashion, consistent with the philosophy of the Water Quality Act to protect and enhance the quality and productivity of the Nation's waters. Before granting approval to any further water quality standards, the Secretary is requiring that a State include a provision for the protection of present water quality. Furthermore, the Secretary is going back and telling the States that do not have such a provision, because their standards were approved prior to this policy decision, to revise their standards and include one.

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The Secretary has stated publicly, and I believe this is particularly important, that this policy puts the burden of proof on any potential polluter to prove his case to the State pollution control agency and the Secretary of the Interior.

The Secretary has said, "If we err on any questions we want to err on the side of safety. We want to make sure that there is a margin of safety for all agreed-on uses in determining the specific water quality criteria that are necessary to c contribute to those waters." In order to carry out this philo: phy, another recently established Departmental policy sets a general range of acceptable values for the key indicators of water quality, such as dissolved oxygen and temperature.

It has become apparent to us that some of the standards that were approved last summer will require upgrading if they are to meet these high requirements which we feel are mandated by the Act. We are now reviewing the ten States' standards

initially approved to assure that they adhere to our policy. If they do not, we will ask for appropriate upgrading revisions.

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Finally, in your correspondence, you expressed the view that the Department should exert its full authorized role in the designation of the use category into which waterways are placed.

The State has the initial responsibility for determining the use category, as a part of the standards setting process. You may be certain that in our review of the proposed State standards, we are very much concerned that all the legitimate uses of the waterways specified in the Federal Act -- public water supplies, propagation of fish and wildlife, recreation, agricultural, industrial, and other legitimate uses -- be considered and adequately represented. When we feel that this is not the case, we are insisting as a condition of approval, that the uses be upgraded.

If the Secretary determines that the State will not consider the uses mentioned in Section 10 (c) (3) of the Act, or that the water quality standards adopted by the State did not meet the criteria in that Section, the Secretary than can initiate action to establish water quality standards. In that case, the Secretary calls a conference in accordance with the Act and publishes water quality standards which later become the final standards, if the State fails to adopt acceptable water quality standards within six months from the date of this publication, or if the governor of a State fails to petition for a public hearing.

The Secretary believes that it is incumbent upon him to pursue an active role to the fullest extent of the authority provided by the Federal Act in order to protect high quality waters and upgrade polluted ones. This Department will vigorously pursue these objectives and we hope you will continue to provide us with your support and guidance.

HEARINGS BEFORE THE SENATE COMMITTEE ON PUBLIC WORKS, SUBCOMMITTEE ON AIR AND WATER POLLUTION, MARCH 27, 1968

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Principles: The principles which we have used in reviewing the water quality standards are as follows:

(1) No degradation of existing water quality. Protection of existing water quality was stated in guideline No. 7 provided to the States, which read: "In no case will standards providing for less than existing water quality be acceptable."

Now, we feel, Mr. Chairman, that this was the intent of the 1965 act, and we find most of the States ready to go along. We don't understand the necessity of disputing it, but I think we are going to be able to bring them around.

Senator MUSKIE. I think, Mr. Secretary, that you and I agreed upon that standard before the formal guidelines were put together.

Secretary UDALL. That is correct.

Senator MUSKIE. In our discussion we agreed this ought to be the minimum goal.

Secretary UDALL. There is no question but that we can't have a water quality improvement program if we have standards and rules which permit water to be degraded further.

As we really move into high gear, we must not simply avoid degradation, but we must actually improve water quality. There are many communities and industries that put raw effluents into rivers and lakes. Every new treatment facility that is put into action, by that fact helps to upgrade the quality of water.

If we see to it that all new industries put in the most modern equipment, and this is becoming the order of the day, then I think we will have a completely different picture than the one which we confronted a few years ago.

Senator MUSKIE. I don't want to interrupt at this point but I do want to indicate here a more complete discussion will take place later in the record.

Secretary UDALL. Our second principle is:

(2) No waters shall be used solely or principally as a waste carrier.

(3) All wastes must receive the best practicable treatment or control prior to discharge into any interstate water, unless it can be demonstrated that a lesser degree of treatment or control will provide for water quality enhancement commensurate with proposed present and future water uses. This was outlined to the States in guideline No. 8.

In practice, we are seeking, and for the most part the States are making, a commitment in standards' implementation plans to secondary treatment for all municipal wastes within the next 5 years. An equivalent degree of treatment or control is outlined for industry.

(4) General acceptable range of values for key indicators of water quality: This requirement was formed during the review of the first few States standards. It soon became clear that there

was a wide variation in values assigned to key water quality criteria - dissolved oxygen and temperature - by different States, even neighboring States. Some were permissive; some were very rigid. For example, deviation of temperature above natural temperature fluctuations ranged from 0°F to 15°F to no limit at all.

There are gaps in our information on the present quality of some waters and the natural requirements of aquatic life and the environment, We determined that standards which we approve shall be set within safe limits, rather than at the extreme limit of what we believe aquatic life can tolerate.

In this way, if new information proves us wrong, any error is on the side of protection and conservation rather than destruction of an assigned use.

In some cases, we may find that we have required a quality that may be higher than necessary to protect a given use. We believe this is a reasonable requirement to protect our resources and aquatic life in the face of incomplete knowledge.

The Department has, therefore determined generally acceptable ranges for temperature deviations from natural conditions and for amounts of dissolved oxygen in al interstate waters.

(5) There must be consistency among standards of adjacent and downstream States: This is a very basic criterion. We must recognize that standards will vary to some extent in different parts of the country and in States with differing water use desires and financial and technical capabilities. However, for common waters or adjoining sections of waterways, the standards must be consistent. Those 10 States standards that were initially approved are now under review to assure that they will be consistent with the higher standards we are seeking from the States today.

Senator MUSKIE. The conclusion seems clear from what you just said, Mr. Secretary, that with respect to the 10 States you are operating in terms of the lower level of performance that you did subsequently. In other words, you shifted into a higher gear at some point there and you are now requiring higher standards than the first one you approved. Now you are going back to review those standards.

Secretary UDALL. Senator, there is one thing I think we understand very clearly today, that we did not completely understand a year ago. We had an oversimplified concept of the whole process of standards setting. We were thinking more at that time, for example, of the States coming in and presenting something and of our rubberstamping it and sending it back to them.

We realize now that is going to be an on-going process. We are deliberately singling out things where we don't have sufficient scientific data, where we don't know what the answers are. We are agreeing with the States that we will not have approve certain water quality criteria, that we are going to wait and study them and make decisions later when we have adequate knowledge.

The no-degradation issue surfaced in November; we had approved several State standards prior to that time without a no-degradation provision. We have gone back to them and indicated that we feel it is needed, but we realize now that the standards setting is an on-going process, and we are going to be carrying this on year in and year out as we go down the road; it is not something that is done and completed. I think this is something we didn't realize a year ago.

Senator SPONG. Mr. Chairman, may I ask the Secretary a question?

Senator MUSKIE. Yes, Senator Spong.

Senator SPONG. Did you then contemplate a periodic approval in the future of standards?

Secretary UDALL. I think what we are going to find, as we get the cleanup program going in high gear, is that the people in the country are going to realize that we can improve the quality of waters, that we can raise the standards, that the standards that we have set in 1967 and 1968 can be improved and that we should come back and upgrade them further as this cleanup program begins to take hold and as our technological capability for handling wastes improves.

So, what we are doing with some of the troublesome questions and where we don't know all of the facts and the data we should know about water quality, is to reserve some of these issues. We are simply agreeing that we will come back at a subsequent date and we will make decisions at that time rather than feeling that we have to decide every question right now.

Senator MUSKIE. Let me ask this question which I think is implicit in the question that Senator Spong has raised.

I fully concur with this idea of continuing review and the stimulation of an evolutionary process of water quality enhancement. At the same time you have got to give the States something that they can rely on.

Now, how does it relate to that? For example, if a certain river basin is given a timetable to achieve certain performance, is it conceivable that the timetable will be accelerated at some time in the future, notwithstanding the approval of that timetable today?

Secretary UDALL. As to the timetables, we have had the general objective of secondary treatment in 5 years, and I think the accomplishment of this depends, in the main, on passing the legislation that we have submitted to raise the Federal assistance level up where the Congress proposed it be so that we can get the construction program going full tilt.

I think that unless we do this, it is unrealistic to think we can accelerate the time phase.

I think, on the other hand, that if we do get up a full head of steam in the construction program, and if the Federal Government makes its commitment then it is foreseeable that there would be, in some areas, an acceleration of the action timetable.

Senator BAYH. Mr. Chairman——

Senator MUSKIE. Is that made clear to the States? Is this policy clear in the States and to the polluters whose activities may conceivably come under constructive control?

Secretary UDALL. Senator, to give you an exa e, in the Lake Michigan Enforcement Conference, we have a time frame that . very clearly understood by everyone. Everyone understands that the standards have no meaning unless you are going to have a program to move toward the cleanup goals.

Senator MUSKIE. May I put one more question and then Senator Bayh because he has one.

My question is this: It strikes me that what you have in mind is this, that the first timetable relates to the first phase of the process of improving water quality. When you speak of acceleration you speak of greater momentum as the next phase comes along rather than a reframing of the rules with respect to the first phase except on those things that you have reserved for future decision.

Secretary UDALL. You stated it correctly.

Senator MUSKIE. Senator Bayh.

Senator BAYH. Thank you, Mr. Chairman.

Mr. Secretary, this advanced acceleration which I salute you for, how can this be done still requiring pollution control and have it done at low-dollar cost as efficiently as you can when I can see the possibility if I were running industry X, for example, and I knew that an expenditure of so many dollars would meet the present standards and it would be much more efficient for me to go ahead and go all the way as far as the art has advanced and yet in the long-range sequence of events this is what I am going to be required to do?

How can we urge industry to go ahead and go as far as the art has advanced, even though this may be 50 percent further than the present standards require when you are going to come along 4, 5 years, maybe 10 years from now and up the standards and then it would be much more expensive for me to go ahead and put this in the program?

Secretary UDALL. Well, Senator, I don't want to go into too great detail on this. I will let my experts, if you want, pursue it further.

I think there is an awareness today among industry that we didn't have 2 or 3 years ago. We certainly didn't have it before the 1965 act passed. Industry realizes that there is a new national goal, that the Congress means business, that this is a rigorous program of cleanup, and that industry should, in new plant construction, put in the best and most modern pollution control equipment available.

I think this is generally accepted because industry realizes that everyone under the water quality standards program is roughly on equal footing nationwide. For example, the day is past when a pulp mill can say, "We are going to run away from Maine or Indiana or Michigan and go to some other State where the standards are lower and where water pollution control equipment is not required."

This is what used to be talked about even a few years ago. We still have the problem of the old plants that did not have any equipment at all or that had poor equipment. This is where the impact is particularly heavy on industry because this is usually more uneconomical and costly to build pollution control equipment into a plant if you did not engineer it in in the first place.

Here is where the pinch is and where it is difficult to get action that would be accelerated beyond the type of schedules that we are talking about.

I think Senator Muskie is right, that we are going to see an accelerated second phase. But I would think we are going to be fortunate, economic and budget conditions being what they are, if we can keep the first phase on schedule. This would be my general feeling about it.

Senator BAYH. In other words, you would still want all of us in our pronouncements and we would want all the States to urge industry to go as far as they possibly could as far as the art had advanced now, and this is beyond the present.

Secretary UDALL. That is correct.

Senator MUSKIE. Let me clarify that point in my own mind. I think it is a very important one.

I think it is our objective in both air and water pollution to control and stimulate the policy of constructing all of the treatment technology that is available in new plants. It is conceivable that in a given industry the state of the art may be moving so rapidly that to take advantage of current technology may be uneconomic in the long run and possibly even a disservice to the cause of water quality.

It is hard to envision that kind of situation, but what would be the policy with respect to a company building a new plant and putting in all current technology if 5 years later you reviewed the program at the river basin involved and decided that you had to have better performance? What would be the policy with respect to such a plant?

Secretary UDALL. Well, Senator, I don't think that the technology is going to improve in a dramatic way. What we find generally is that yes, technology is improving. Usually if technology improves, that means you can do it more efficiently and at less cost.

What tends to offset increased efficiency is inflation. Your costs are going up for the type of facility that you are building. At the same time, if the efficiency of your engineering and your technology is improving, costs usually stay about the same.

Now, if someone comes along with some dramatic new process and you might achieve a significant breakthrough, then you would regret that you had built a more expensive facility.

My experience has been in this field that science just does not generally work that way through something sudden and dramatic but rather through gradual improvement. Therefore, I don't think most industries are going to be faced with this type of decision. Otherwise, this would be very bad from my point of view because they would all be saying: "We are going to wait until we hear something good is coming along." We would, therefore, encounter delays, and we would not meet our deadlines for implementing the water quality standards.

Maybe Mr. Moore or Mr. Edwards would like to add to my comments, but this is my general impression.

Senator MUSKIE. I want to have a frank discussion of this point because this is obviously going to be used, I think, to resist efforts and requirements for incorporation of technology.

Is it also true that often new technology builds on old technology so that you don't necessarily discard the old because you have new developments and new advancements?

I would like to have Mr. Moore comment on this general problem.

Mr. MOORE. Mr. Chairman, if I may, it seems to me that the question of the technology that could be applied to waste treatment would be in the same nature of technology generally in terms of whatever the industrial process is. It seems to me that even in designing a plant to produce a given product the business faces the prospect that the technology upon which its process will be based will also change during a relatively short period of time.

Senator MUSKIE. Of course, the difference there is that when you talk about the cost processes that produce goods, then the expectation of additional profits or higher profits would provide the means for using the new technology.

Mr. MOORE. Yes, sir.

Senator MUSKIE. Whereas, with respect to this problem, you don't have to have the source for financing.

Mr. MOORE. That is correct, but it seems to me that the risk is substantially of the same type.

Now, I do think that as a matter of practice the industry ought to be able to rely with some degree of certainty upon the requirements that will be imposed upon it for the future. At the same time, it seems to me that industry must also recognize that as conditions change in terms of water availability over long periods of time, and as the public expectations or requirements change, they should be prepared to meet those requirements in the same sense that they would meet any other requirement.

I do think that a distinction has to be made between an existing plant and one that is proposed for new construction, because in the latter case you do get certain economies. Sometimes industries discover that they can build in a margin of safety in the initial construction at a relatively small proportionate increase in investment.

I think really that all we are saying is that where that is possible, it would be the better part of prudence for the industry to include that margin in their design.

I agree that you should not impose a requirement upon industry and then at the same time imply that at some relatively near future date you are going to impose a higher requirement. I think there will develop in practice less difficulty in this area, however, than is sometimes anticipated.

Senator MUSKIE. I think that is probably right.

Would you want to add anything to that, Mr. Edwards?

Mr. EDWARDS. Mr. Chairman, I would say, and I am referring now to the nondegradation language, that we are expecting waste treatment facilities from municipalities and industry to be the best available under existing technology.

Now, I think we have to assume that there will be some degree of reasonableness implied in interpreting what existing technology is.

Senator MUSKIE. I want to get into the degradation issue later.

Rather than delay the Secretary's statement too long, does anyone on the committee want to raise a question related to the very narrow point we have been discussing?

If not, why don't you go ahead and I will try to avoid any interruption until you finish.

Secretary UDALL. All right.

I am at the bottom of page 5.

> (6) To meet the goals established by the act, water quality standards must be adequate to protect and upgrade water quality in the face of population and industrial growth, urbanization, and technological change.
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> (7) There shall be no exemptions from the standards for a particular industry, or for a particular area.
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> (8) Standards must be feasible and achievable. Through all the standards setting process runs the important consideration of reasonableness. We do not seek clean water for its own sake, but for man's benefit. In balance, our clean water efforts must, therefore, be reasonable.

POLICY PROBLEM

The most significant policy problem and issue arose with relation to the application of policy guideline No. 1—that water quality standards should provide for the enhancement of water quality, and, particularly, that standards should in no case provide for less than existing water quality.

Now, it was our view that this was to start a cleanup and to enhance the Nation's waters, and that existing water quality would be a floor from which you would move upward rather than something beneath which you might go.

This became known as the "degradation issue," and I found myself in late December with a retiring Commissioner and a retiring Assistant Secretary in rather strenuous disagreement on this issue. So, we worked on this, Mr. Chairman, during the entire month of January; we discussed all of the facets of the problem.

In our policy guideline No. 1 in the "Guidelines for Establishing Water Quality Standards for Interstate Waters," we told the States that standards had to protect existing high quality waters, as well as enhance presently polluted waters. The question arose as to how to interpret and carry out the policy of protecting clean waters in the face of necessary social and economic development.

I had to give intensive study to this matter in order to steer a clear and workable course between prohibiting any treated waste discharges to clean waters, on the one hand, and allowing clean waters to be degraded down to the minimum levels for supporting water uses, on the other.

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Secretary UDALL. This policy will require close Federal-State cooperation and will complement specific Federal and State programs designed to preserve certain waters for posterity, such as that envisaged by the proposed legislation on wild and scenic rivers, which passed the Senate last year and is now before the House committee.

The no-degradation policy, as well as our treatment policy expressed in guideline No. 8—that all wastes amenable to treatment will be treated—puts the burden on the discharger to prove that he is not going to degrade water quality or jeopardize any existing or potential uses of clean waters, or damage the indigenous aquatic life.

As social and economic developments take place, the standards should remain a way to focus on the potential impact which such developments can have on water quality; to cause full attention to be given to this impact: to accomplish development without destroying precious clean waters: to determine the suitability of particular industrial locations; and to facilitate the design of such development so that damage to water quality is minimized.

I do not think that the location or operations of industrial or other developments have always reflected this consideration in the past, and the deterioration of our Nation's waters has been the result.

In implementing the no-degradation policy, we will be working closely with the States through the cooperative channels which together we have already developed. We do not intend to supplant State programs, but to assist the States in carrying out water pollution control responsibilities. At the same time, I think that we have to be involved in these far-reaching decisions to assure the orderly and wise development and preservation of our water resources.

We were slowed down somewhat by the degradation issue, and we have also met delay while some States were acting on certain revisions. Since the first of the year, we have made a number of approvals, however, bringing the total to 28 States and one territory. In many cases, there are some parts of these standards which I could not approve, and in those instances we singled these out for further negotiations. These are listed in the status report which I have given you and we would like this placed in the record at this point.

Senator MUSKIE. Without objection, it will be placed in the record.

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Secretary UDALL. Mr. Edwards will discuss our purpose in making these exceptions.

The status report also shows which States already have acceptable antidegradation language, and which States have been asked to include it.

We intend to go back to the States whose standards were approved last summer, based on the new policy and on the experience which we have gained to date, and, where changes are needed in the standards, we will request them.

We have not yet formally asked the 10 States whose standards were approved last summer to adopt antidegradation language, except the State of Idaho. I have publicly indicated that this will be expected.

We feel that we should wait before actually writing to the other nine Governors until we are sure of any other changes which we might consider necessary now in the light of submissions from, and standards approved for, contiguous States. Our goal is to achieve regional consistency, and we have been successful in large part in this objective.

We have had much experience in standards-setting since last year. As part of the no-degradation policy, we have adopted more stringent, yet attainable, criteria—especially with regard to tailoring dissolved oxygen and temperature limits to existing high quality conditions, or to upgrading these for the better protection of various resource uses, particularly the fish and wildlife resource. Assistant Secretary Edwards will be discussing this further.

We have completed our review work on all of the States' standards, and much supplementary material has come in. We are continuing to negotiate with the States when necessary, and the time we have spent in negotiation is well worth it, we feel, because it has helped, in most cases, to strengthen our relationships with the States and to cause the States to face up to a number of hard problems.

It is evident that this whole standards effort has captured the energies and imaginations of the water people in the States—Governors and legislators, as well as water pollution control officials and private citizens.

I might add that the bonus construction grants have been a help in bringing support at the State level.

We are close to obtaining approvable standards from nearly all the States, and I am now aiming for at least partial approval of the standards of all 50 States, the District of Columbia, and the Territories, by the first of June.

I don't know whether we can actually meet that deadline, and I don't want to make this as a flat promise. I do want to say to the committee that we feel it better to take a little more time and be thorough about it and be sure that we give the States a full opportunity to come into agreement with us rather than to issue ultimatums and fix deadlines.

There will be a period, I suspect, Mr. Chairman, come June, when we will have left a few hard cases upon which we may have to put some deadlines. I don't want to begin to do that at this point because, as long as we have good faith negotiations going forward, as long as my people are bringing in every week another State approval or two to my desk, so that I can write the Governor and approve the standards, usually with some conditions attached, I feel that we are making good headway.

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SENATOR MUSKIE ASKED AN ADDTIONAL QUESTION AFTER THE HEARING TO CLARIFY RESPECTIVE FEDERAL-STATE RESPONSIBILITIES:

1. In your statement you discussed the "degradation" issue and its resolution. Could you furnish the Committee with an indication of the respective roles of the Department and the States in evaluating the impact of a proposed municipal or industrial facility on applicable water quality standards?

Answer. As with the establishment of water quality standards, the initial responsibility for implementing the standards program rests with the State water pollution control agencies. In view of this, we will first be looking to the States to evaluate the impact of waste discharges from proposed municipal or industrial facilities on water quality standards. The Federal role would normally be to provide the States with maximum support in order that they may accomplish their responsibility in the most effective manner. Any Federal review would be done at an early stage to avoid undue delay in decisions on requirements. Accomplishing our objectives will require the maintenance of a close and mutually respectful relationship between Federal and State agencies concerned with water pollution. To a large extent, this relationship has been developed in the establishment of standards.

While we recognize the primary role of the States, the Federal Water Pollution Control Administration will maintain the capability of reviewing proposals and to make whatever additional investigations are required to allow an independent judgment concerning the effect of new facilities on standards.

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DURING THE HEARINGS SENATOR COOPER ASKED A SERIES OF QUESTIONS. QUESTIONS AND THE RESPONSES BY THE FEDERAL WATER POLLUTION CONTROL ADMINISTRATION ARE INCLUDED BELOW:

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3. In arriving at State water quality standards, how have the States been enabled to know precisely what constitutes "secondary treatment"—which as I understand from your testimony you insist upon for all discharged effluents? and

4. Has the Department supplied the States with a precise definition of secondary treatment for municipal waste?

The Department has not supplied the States with a precise definition of secondary treatment for municipal wastes. The Department has been firm in requiring a high degree of treatment consistent with existing and practical technology, but it has not adopted a rigid requirement for secondary treatment nor a rigid definition of this level of treatment. The specific terms applied in the standards have generally been left to the judgment of the States.

Some States have limited their specifications to requiring a minimum of "secondary treatment." We have not objected to this approach. Other States have required a specific percent reduction of solids and biochemical oxygen demand. A few States have adopted effluent standards to complement a general requirement for secondary treatment.

These standards characterize an acceptable effluent in numerical terms of biochemical oxygen demand, suspended solids and other parameters. Where this action has been taken by a State, we have recognized that this is the State's prerogative but, even when the overall standards receive Federal approval, this does not mean Federal effluent standards are in *force*. The designation of specific effluent quality on this basis is a State matter.

These matters are discussed in greater detail in a submission to the hearing record in response to Senator Muskie's question concerning the definition of levels of treatment.

5. Has it supplied a definition of "comparable treatment" for industrial wastes — which I understand you also require as a part of State standards? and

6. Are we, in fact, using what the term "secondary treatment" means with respect to the various kinds of industrial pollution?

In cases where the States have conferred with the Department, we have suggested employing the term "an equivalent high degree of treatment" rather than "secondary treatment," particularly in references to inorganic industrial wastes. We do not in fact have specifications defining appropriate ranges of treatment technology with respect to all of the various kinds of industrial pollutants, but such information is currently being developed by the Federal Water Pollution Control Administration. In general, "the industrial equivalent to secondary treatment" may be interpreted as reducing the organic level, oil, grease, solids, alkalis, acids, toxic materials, color and turbidity, taste and odor-producing substances, and other deleterious materials to the lowest practicable level.

In implementing the standards, primary responsibility for determing the "best practicable treatment" for individual waste dischargers rests with the State water pollution control agencies, with the assistance of the Federal Water Pollution Control Administration.

7. How is it possible for the States to commit themselves to enforcing this degree of control, if they are not supplied with scientific and technical information as to what it constitutes for each kind of pollutant?

The technical staff of State water pollution control agencies usually have an awareness of what constitutes available treatment technology for various categories of industrial wastes. In establishing specific treatment requirements for individual waste dischargers, the State agency can take this information into account in relation to the type of plant, waste composition and other pertinent information on the individual factory concerned. If the State pollution control authority lacks the technical competence to evaluate some categories of wastes, technical assistance can be furnished by the Federal Water Pollution Control Administration. As indicated above, we will be developing information to assist in determining the "best practicable treatment" for wastes from specific types of industry or specific waste components, and this information will be communicated to the State water pollution control agencies as it is developed. In the interim, experience with treating discharges having similar characteristics can be used. For example, treatment technology for municipal wastes is well known and therefore there is little question as to what constitutes feasible technology. Likewise, the high degree of treatment already given to a wide variety of industrial wastes can be used as a guide for comparable wastes.

8. As industry plans to install control measures, how is it to know that the expensive equipment or measures it will be required to undertake will be sufficient—and will not soon be overtaken by some new interpretation or request from the FWPCA?

We do not anticipate rapid changes in requirements; however, we do not believe that an industry can be given an ironclad guarantee that it will never be required to undertake new or additional waste control measures. Waste control requirements may change with future developments of technology, process changes and plant expansion or social and economic development. However, the present basic treatment requirements are not intended to be modified in the near future, or at least during the first 3-7 year phase of standards implementation.

9. The procedure, as I understand it, appears to be almost the reverse of that established under the Air Quality Act of 1967. That is, instead of directing control efforts to the quality of the water in the stream, it appears by administrative decision, to be directed to control of pollutant sources without regard for the quality of the water—and for the uses which I believe it was the intent of this Committee to reserve to the States.

The Department is not attempting to control pollution sources without regard for the quality of the water in the stream or its uses. The strong stand of the Department on control of pollution sources is consistent, we feel, with the intent of the Federal Water Pollution Control Act to enhance water quality. The Act provides that standards of quality established shall enhance the quality and consider legitimate uses. Under the Act, the standards are to consist of a plan of implementation as well as stream quality criteria. An effective pollution control program must rely on a strong implementation plan providing for treatment and control of waste discharges as well as on enforcement of stream criteria *per se*. We do not believe that the intent of the Water Quality Act of 1965—to upgrade polluted waters and to protect those waters which are still clean—can be accomplished without calling for generally high waste treatment requirements in these implementation plans. Experience has shown that, in the face of continued population and industrial growth and rising intensity of water use, a high degree of treatment is necessary to improve existing conditions and to prevent the continued gradual deterioration that has occurred in the past. The need to strive for optimum rather than marginal conditions for supporting beneficial water uses is the keystone to the enhancement of water quality.

AT SENATOR MUSKIE'S REQUEST A PAPER ON LEVELS OF TREATMENT AND THE WATER QUALITY STANDARDS PROGRAM WAS PREPARED AND INCLUDED AS A PART OF THE SENATE HEARINGS:

During the oversight hearings, additional information was requested as to the use of the terms "primary" and "secondary" treatment as they relate to water quality standards.

First of all, these terms were not used in the "Guidelines for Establishing Water Quality Standards for Interstate Waters" issued by the Department of the Interior in May 1966 and revised in January 1967. Guideline No. 8 provides as follows:

"8. No standard will be approved which allows any wastes amenable to treatment or control to be discharged into any interstate water without treatment or control regardless of the water quality criteria and water use or uses adopted. Further, no standard will be approved which does not require all wastes, prior to discharge into any interstate water, to receive the best practicable treatment or control unless it can be demonstrated that a lesser degree or treatment or control will provide for water quality enhancement commensurate with proposed present and future water uses."

Note that reference here is made only to "the best practicable treatment or control." In discussions with the States and in public references this phrase has been translated to "secondary treatment" as a convenient or shorthand means of stating the essence of Guideline 8. The Committees of Congress indicated that water quality standards should bear some relationship to the degree of treatment to be utilized or required. "Water quality standards would provide an engineering base for design of treatment works by municipalities and industries. Such standards would enable municipalities and industries to develop realistic plans for new plants or expanded facilities, without uncertainties about waste disposal requirements on interstate waters." (Senate Report No. 10 on the Federal Water Pollution Control Act Amendments of 1965, 89th Congress, 1st Session.)

"Primary" and "secondary" treatments are meaningful to those in the water pollution control field, especially when applied to municipal wastes. The "Glossary Water and Sewage Control Engineering," published by the American Society of Civil Engineers in 1949, prepared by a joint committee representing the American Public Health Association, the American Society of Civil Engineers, the American Water Works Association, and the Federation of Sewage Works Associations (now the Water Pollution Control Federation) contains the following definitions:

"*Preliminary treatment.*—(1)The conditioning of an industrial waste at its source prior to discharge, to remove or to neutralize substances injurious to sewers and treatment processes or to effect a partial reduction in load on the treatment process; (2) in the treatment process, unit operations which prepare the liquor for subsequent major operations.

"*Primary treatment.*—The first major (sometimes the only) treatment in a sewage treatment works, usually sedimentation. The removal of a high percentage of suspended matter but little or no colloidal and dissolved matter.

Intermediate treatment.—The removal of a high percentage of suspended solids and a substantial percentage of colloidal matter, but little dissolved matter.

"*Secondary sewage treatment.*—The treatment of sewage by biological methods after primary treatment by sedimentation.

"*Complete treatment.*—The removal of a high percentage of suspended, colloidal, and dissolved organic matter."

The recommended standards for sewage works adopted by the Great Lakes-Upper Mississippi River Board of State Sanitary Engineers, May 10, 1960 (definitions often referred to as the "ten-State standards") include under primary treatment screening devices, grit chambers, pre-aeration and flocculation, settling tanks and septic tanks. Under secondary treatment is included trickling filters, activated sludge, intermittent sand filtration and "other secondary treatment processes."

Dr. George E. Symons, Editor of *Water and Wastes Engineering*, and a respected consulting engineer in the field of water pollution control, has provided some leadership in trying to develop new terminology in the field of waste water treatment. In April 1967, he published some proposed definitions and invited professional comments: the proposed definitions are:

"*Pre-treatment.*—Any wastewater treatment process used to partially reduce pollution load before the waste water is introduced into a main sewer system or delivered to a treatment plant designed for a substantial reduction of the pollution load.

"*Primary treatment.*—A wastewater treatment plant process employed to remove a substantial portion of gross and settleable or flotable discrete solids, and some portion of colloidal matter and the accompanying biochemical oxygen demand characteristics, and utilizing precipitation, sedimentation, flotation, or any combination of these processes, with or without the use of chemicals, air, or mechanical devices.

"*Intermediate treatment.*—A rather loose term used to indicate some combination of waste treatment methods that produces a degree of treatment between that obtained by simple solids removal (sedimentation) and that obtained by a well operated biological oxidation process.

"*Secondary treatment.*—A wastewater treatment process that employs bioprecipitation and oxidation to reduce the oxygen demand and pollution load and also removes agglomerated particles resulting from the process."

The evolution of the terms "primary" and "secondary" treatment cannot be traced since they do not appear in any textbook in current use in our universities. Some individuals having been using the terms "primary" and "secondary" within the strict definition as presented in the "Glossary," while others have been using the terms "primary" and "secondary" to indicate the percentages of removal which one could expect in conventional treatment plants.

Presently in the United States, treatment requirements are generally expressed in terms of removal efficiency, usually related to the treatment operations or processes necessary to achieve these percentages. To illustrate—the following table, which presents the relative efficiencies of sewage treatment operations and processes after Fair and Geyer, indicates that plain sedimentation would normally produce the following removal percentages: biochemical oxygen demand 25% to 40% and suspended solids 40% to 70%. These are the percentage removals generally anticipated when one speaks of primary treatment. On the other hand, secondary treatment has frequently been used to designate processes with the following removal efficiencies: biochemical oxygen demand 80% to 90% and suspended solids 70% to 95%. These latter percentage removals are normally achieved through trickling filtration or activated sludge treatment, preceded and followed by simple sedimentation.

RELATIVE EFFICIENCIES OF SEWAGE-TREATMENT OPERATIONS AND PROCESSES (AFTER FAIR & GEYER)

[Percentage removal]

Treatment operation or process	5-day 20 C BOD	Suspended solids	Bacteria
(a)	(b)	(c)	(d)
1. Fine screening	5-10	2-20	10-20
2. Chlorination of raw or settled sewage	15-30	.....	90-95
3. Plain sedimentation	25 40	40-70	25 75
4. Chemical precipitation	50 85	70-90	40-80
5. Trickling filteration preceded and followed by plain sedimentation	80 95	70 92	90-95
6. Activated sludge treatment preceded and followed by plain sedimentation	85 95	85-95	90 99
7. Intermittent sand filtration	90-95	85-95	95-98
8. Chlorination of biologically treated sewage	.....	.....	98-99

While intending to indicate these removal efficiencies, the Federal Water Pollution Control Administration has used the terms "primary" and "secondary" treatment more in a non-specific, generic sense to indicate two levels of treatment processes in a progression toward more sophisticated waste treatment technology producing an ever higher quality of discharge into the Nation's waters than in a specific, precise, scientific sense. The term "tertiary" is generally used to indicate some treatment process beyond "secondary" not regarded as conventional during the last decade of national emphasis on pollution control. References to "primary" and "secondary" treatment have produced

charges that these are individual discharge "effluent standards" rather than water quality standards as contemplated in the Water Quality Act of 1965. We do not feel these charges are justified. In addition to the reference quoted above relating to "uncertainties about waste disposal requirements on interstate waters," Senate Report No. 10 also states, "the committee must reemphasize its intent that water quality standards are not designed to 'lock in' present uses of water or to exclude other uses not now possible. The standards are not a device to insure the lowest *common denominator* of water quality but *to enhance the quality and productivity of our water resources.*" And again, "The committee intends the water quality standards should be applied on the basis of the water quality requirements of present *and future uses of a stream* or section of *stream, after due consideration of all factors and variables involved.*" (Emphasis added.) Thus, it appears to us that a higher degree of treatment than that in common use throughout the country during the last several decades must be applied if we are to enhance the quality of our water resources and meet future uses of a stream.

A meaningful effluent standard would have to state an allowable concentration in volume or total quantity of all impurities which may be discharged per unit of time. Among the types of impurities for which limits might be specified in an effluent standard are the following: suspended solids; settleable and floatable solids; dissolved biodegradable organics, dissolved refractory organics; dissolved inorganic solids, including nutrients; biological matter, including pathogenic bacteria; and temperature. Further, reference might be made, in an effluent standard to the following impurities or effects of impurities, either organic or inorganic in origin: color, taste and odors; toxic materials; radioactivity; and acidity and alkalinity.

There are a number of ways in which treatment requirements or an effluent standard can be specified. These include: (1) percentage removal of impurities, e.g., 40% reduction of five-days biochemical oxygen demand at 20° C; 30% reduction in acidity; (2) specification of an operation or process, e.g., sedimentation, flotation, neutralization; (3) residual concentration, e.g., the waste effluent shall contain less than 20 mg/1 of suspended solids, 5 mg/1 of color, pH between 6.5 and 8.5; (4) residual quantity, e.g., the waste effluent shall contain no more than 100 lbs. of biochemical oxygen demand per day, 20 lbs. per day of acidity as calcium carbonate; or (5) residual quantity per unit of population or production, e.f., .01 lb. of suspended solids per person per day, 1 gallon of oil per ton of industrial product, .1 lb. of cyanide per unit of production.

In the development of implementation plans, FWPCA has not required the States to adopt any one of these types of different standards as they relate to individual discharges. Instead, the States have been asked to indicate when the adopted criteria can be achieved and how they will be achieved. Thus, reference has usually been made to requiring a minimum of secondary treatment of municipal waste, and "the equivalent degree of treatment for industrial waste." The latter reference is intended to indicate that both municipal and industrial waste dischargers will be required to achieve an equivalent level of pollution control, e.g., neither municipal nor industrial waste dischargers will be favored or penalized in achieving higher water quality. Both will be required as nearly as possible to exert the same level of effort. We recognize that the degree of treatment for industrial waste "equivalent" to secondary treatment of municipal waste cannot be easily determined or defined for every industrial process in the United States. We, nevertheless, believe the reference is relevant in the context in which it appears in the State implementation plans.

We do recognize that a more precise, widely accepted, broadly understood set of terms should be developed and utilized as we perfect our systems of pollution control. Our staff has been concerned about, and is giving attention to, this need. We shall continue to keep the Committee informed of our progress. Meanwhile, we will attempt to use such terminology as best reflects national policy and the state of the art of waste treatment.

HEARING BEFORE TEE HOUSE COMMITTEE ON PUBLIC WORKS ON H.R. 15906 AND RELATED BILLS, APRIL 23, 1968

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WATER QUALITY STANDARDS

You stated that over half the States standards have been approved. It is not true that 10 States whose standards were approved by you have been called back because you have changed your mind as to what the standards should be in order to meet your approval?

Secretary UDALL. With 10 of the States, these were the first States that were approved, we have not basically changed the approval; we have raised on or two new questions ------

Mr. CRAMER. Like what?

Secretary UDALL. With them.

Mr. CRAMER. Like what, for instance?

Secretary UDALL. What actually occurred, Congressman, is that we went through the process of setting standards. We learned certain things that we did not know in the beginning. We surfaced certain problems that we were not aware of and therefore we improved the standards and we have to go back to the earliest States that we approved in June last year, some of them, and say that we would like to have a couple of changes made. But we have not disapproved their standards, and we have at the present approved 31 States. We have several others that are nearly ready for approval.

Mr. CRAMER. I appreciated that. However, I would like to know what some of the changes were.

"NO DEGRADATION POLICY"

Secretary UDALL. Well, the main change, the one that has gotten the most publicity, was the change with regard to what has been called the "no degradation policy" and most of the States are accepting this. Some are arguing with us about it, and we are compromising, working out compromise language with most of them to incorporate what we consider sound language to implement the 1965 Act.

Mr. CRAMER. Now does "no degradation of existing water quality" mean that on a river, although it is adaptable to industrial development, for instance, or farming or what-have-you, --surface drainage is just as much a problem--where that river today is without that industry or farming, and is a relative clean river, that in the future this "non-degradation" means that river must remain in the same quality?

Secretary UDALL. Our interpretation -----

Mr. CRAMER. Therefore that industry could not come in in some instances?

Secretary UDALL. Our interpretation of the 1965 Act is that the Congress intended it as a water improvement act, as an improvement of quality, and that the whole concept was that we would be enhancing the quality as the program moved ahead.

Now, this does not mean no new development and I have had to explain this laboriously to some of the State people that were concerned about it. Let's take an average river that has several cities that discharge effluent, some treated, some untreated, and several industries, some put treated effluent in, some untreated effluent, and the "no-degradation policy" there would mean, for example, that as your clean-up program moved forward, and the minute one community or one industry cleaned up its effluent substantially, the river would be of higher quality, and the other thing that is enormously helpful is that most of the new modern plants, industrial plants that are going on, are installing, because of the water quality standards, very modern equipment, and therefore the amount of effluent that they put in that diminishes the quality is rather small as compared with the earlier plants. Therefore, nondegradation does not mean no new industrial development. It simply means we have got to keep a clean-up program going in order to accommodate new industry.

Mr. CRAMER. Is it your philosophy that there are no rivers, that there are no streams, the use of which by industry is justified to the extent of some pollution some degradation of the rivers, necessitated by the nature of the industry?

Secretary UDALL. Some States have deliberately in the water quality standards set aside some rivers. There are prime trout streams and your upland streams, and they have been set aside to not be used for certain purposes and not to be polluted in any way, and I think this is a very good policy.

Mr. CRAMER. I asked you the reverse question, however. Are there streams in which you would approve some degradation because of their particular applicability for industrial development and so forth?

Well, let me give you an example--in other words, you cannot have clean waters on every river where you have industry no matter what cleanup effort they make. Industry in some forms by its nature has to cause some degree of pollution.

When you say "no degradation," that would seem to me to limit the use of the shoreland by the control of standards in that manner.

congressman, there are two answers. I tried to give you the one a moment ago, with regard to how we feel this will actually work. And as the cleanup program moves forward, there is room to accommodate additional uses--additional industrial uses, let us say, or additional municipal loads, and still have what will probably be a cleaner river.

Then we have other situations. Let us take the State of Alaska, which is largely underdeveloped. They have many large rivers there where there is no industry, no community, no pollution at all. They came to me and said, "Well, what does this policy mean? That we can't have cities? We can't locate industry?" We do have an exception clause that we have written into the antidegradation provision that opens the door to exceptional circumstances, with the burden, of course, on the State or on the industry to show that such circumstances do exist.

Mr. CRAMER. Well, I do not want to belabor it interminably, but if, in fact, the hearing record establishes that the maximum value and use of the stream can be achieved by water quality standards somewhat below existing levels, then do you think that you, under the present law, have authority to arbitrarily, despite that hearing record, refuse to give effect to such standards?

Secretary UDALL. In effectuating the "no degradation" policy, we had to attempt to interpret the meaning of the 1965 act. I know there are those who disagree with us, and I saw a letter from the U.S. Chamber of Commerce yesterday on this, the legal opinion that they have gotten that disagrees with us, but it is our view that the "no degradation" policy effectively asserts the policy that Congress itself wrote into the 1965 act, This was contemplated as a water enhancement law. The whole tenor of the 1965 act, if you look at it, was one of water improvement, water enhancement, raising the quality rather than lowering it.

I think we can do that. I do not think this is going to inhibit new industry. It is going to mean that new industry is going to have to put in very good pollution control equipment. It is going to mean that we are going to have to get the cleanup program going. I think, if we do that, that in these industrialized areas, and along the sections of streams and tributaries where there will always be some effluents and some pollution, we can still have no degradation in effect, and have increased uses of these waters.

Mr. CRAMER. Well, maybe the choice of terminology is not too good, when you say "nondegradation," and in the next breath you say "We are going to make some exceptions like Alaska."

Similarly, confusion is created in the case of the suggestion I had relating to new streams that have not been developed industrially, or agriculturally, where you are going to have surface drainage in agriculture. You are going to have some pollution in industry no matter how much they are going to try to clean it up. I do not think you will ever find a pulpmill that is not going to have a little bit of pollution.

Secretary UDALL. That is true, there is going to be some effluent.

Mr. CRAMER. Does that mean by these standards these new areas are not going to be opened and developed, because the result would be some degradation of that stream?

Secretary UDALL. No. We don't interpret it that way at all. And I believe that this policy can be effectuated and that we can achieve what I think Congress wanted without seriously inhibiting the industrial growth of the country. I just do not think that this is going to be the effect.

Mr. CRAMER. And the standards that have been set are that you as Secretary could make exceptions?

Secretary UDALL. We do have authority to make exceptions where there are hardships or special social or economic reasons.

Mr. CRAMER. The State does not have such authority?

Secretary UDALL. We write this kind of language into the State standards. The States will administer them, and we will have to get back into the picture only if we disagree with the way that the State is enforcing the standards. That is the reason we want——

Mr. CRAMER. Why do you not permit the States to having a State agency make those exceptions under certain standards, rather than you, as Secretary, judging every single case?

Secretary UDALL. Well, I would expect only very exceptional cases to actually get to me, or even get to Washington.

Mr. CRAMER. I do not want to see the Secretary of Interior or any Federal agency saying to every industry that "You either can or cannot locate" or that any new farm can be established or not established along a given stream. I do not want to see this as strictly the Secretary's power. That is what bothers me.

Secretary UDALL. Congressman——

Mr. CRAMER. I do not think we intended that in the 1966 act.

Secretary UDALL. I do not think we are setting up that kind of administration. And I would predict that in 99 out of 100 cases the State people merely will be touching base with our people, and that the local or regional level will make most of the decisions on these matters. And we will be brought in only when there is a loud outcry, usually from sportsmen and conservationists, that there is a flagrant example of degradation of a stream or river, and that the water quality standards are not being kept. So we don't want to go in the business of running this program from Washington. We think Congress contemplated that if the States would fix suitable standards, the States would do most of the administering and the enforcing, and we would get in only if they did not do their job right.

Mr. CRAMER. Well, even if the hearing record clearly shows that you cannot have this industry X on this river without some degradation, but that this river can be used and should be used for agricultural purposes, or for industrial purposes, that State does not have the power to say "Yes," because that is an exception to the standards. Only you have that power.

Secretary UDALL. No. Because we end up with a "no degradation" section in the State standards that we are agreed upon. Now they will administer their own standards. We will get into the picture only if their administration breaks down.

Mr. CRAMER. When somebody objects to how they are doing it?

Secretary UDALL. That is right.

Mr. CRAMER. So you have the final say?

Secretary UDALL. We get into the big fight, as we usually do—when there is a big fight between the sportsmen and chambers of commerce over location of a new factory that is going to ruin the fishing somewhere. That is when we are *going* to be in the picture. Only then—usually only then.

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HEARING BEFORE THE HOUSE COMMITTEE ON PUBLIC WORKS ON H.R. 15906 AND RELATED BILLS, MAY 2, 1968

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SECONDARY TREATMENT REQUIREMENT

Mr. McEwen. Mr. Secretary, have you required secondary treatment in all cases?

Secretary Udall. We are urging the States to commit themselves to secondary treatment of municipal wastes in most cases. In our basic guidelines, specifically guideline No. 8 we stated, "Further, no standard will be approved which does not require all wastes, prior to discharge into any interstate water, to receive the best practicable treatment or control unless it can be demonstrated that a lesser degree of treatment or control will provide for water quality enhancement commensurate with proposed present and future water uses." In practice this guideline usually means but not always, secondary treatment of municipal wastes. But it is important to remember that the guidelines suggested certain actions, they did not require them.

Mr. McEwen. As I understand it, we have had streams where classification has been such that quality of that water could be made clean without the secondary treatment required at this time.

What I ask you now is under what provision of law do you require secondary treatment if the water quality standards do not require it?

Secretary Udall. While we do not require secondary treatment, it is obvious that the Water Quality Act of 1965 called for upgrading of water quality, which requires a good degree of waste treatment in order to be achieved. Additionally, the act clearly called for plans of implementation to achieve the designated levels of water quality. We at the Federal level have the responsibility to assure that the plans developed by the States for implementing standards are effective and reasonable. The term "secondary treatment" seems in many cases to identify the kind of treatment which will best meet water quality standards with respect to municipal wastes. The term has little or no application as far as industrial wastes are concerned.

There may be some special situations—again, we have tried not to be categorical and inflexible—where exceptions are necessary. We sit down and discuss these particular situations if they do exist.

But generally the States have agreed with us with regard to the requirement of secondary treatment.

I think most of your water pollution control people in the country at large realize that this is very basic if we are going to have a meaningful water pollution control program in the country.

Mr. Cramer. Will the gentleman yield on that point?

Mr. McEwen. Yes.

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"NO DEGRADATION" POLICY

Mr. Cramer. Now, this no degradation approach, in which the present quality of the water is a condition of approval, were the States consulted relating to that prior to the decision, at the time the decision was made?

NO DEGRADATION LANGUAGE AVAILABLE

Secretary UDALL. This was an issue that was raised in our guidelines that we put out 2 years ago in terms of what was intended. And we have had to not only notify the States; we have had to have extensive discussions with all of the States on implementing this. And again we do not have any stock boilerplate language. We work with each State in trying to get a piece of language that they can put in their standards that will, we believe, satisfy the act and then be workable in terms of whatever problems they have.

In other words, we have not said to them that here is language, this has to be in your standards. We have said that we think that a certain objective is required by the act, and we want to achieve it, and we want a program that will be practical and feasible.

Now, let us sit down and negotiate a general provision in the standards which will cover this particular question.

This is the approach we have used.

Mr. CRAMER. I understand that. However, that is not responsive to my question relating to the fact that you made a major change, as I construe it, relating to this question of nondegradation. I do not think there is a question but that that is a major change, without following the procedures of the act or, in the alternative, conferring with the States relating to that new major requirement.

Secretary UDALL. Well, I do not regard it—some of them may regard it as a new major requirement. *I think it was implicit in the act* as it was enacted initially. We advised them of it in our initial guidelines, and it was merely a matter of construing, not a matter of proposing, something new. It was a matter of how we construed the basic tenor of the act, and how we implemented it.

Mr. CRAMER. Can you indicate where in the initial guidelines that was contemplated? You have it before you there, I believe. I have read them, and I do not see it.

GUIDELINE NO. 1 CONTAINS ESSENCE OF NO DEGRADATION POLICY

Secretary UDALL. I think the essence of it is in the very first guideline, policy guideline, water policy standards should be designed to enhance the quality of water.

This is where we got to the real guts of the question. What does that mean?

This was the philosophy that was implicit in the 1965 act, that this was an act to improve water. It is not to degrade water. This is the very first guideline we laid down. It is where we began.

FUTURE LOCATION BY INDUSTRY ON RELATIVELY CLEAN STREAMS

Mr. CRAMER. That implies that any stream that is not presently being used for industrial purposes cannot so be used in the future if that use in any way changes the present condition of the water in any way or to any degree, if it has any degradation whatsoever, even though it means that industry could not locate there, and even though a State might use it to set aside certain streams for that specific purpose of industrial development.

Secretary UDALL. Well, Congressman, we have not taken that kind of rigid view. I do not think you can. And I discussed Alaska as an example, which is largely an undeveloped State in terms of its resources.

We have left the door open to the consideration of any proposals.

On the other hand, I think in most States you are going to find that these prime unpolluted streams are usually your best trout fishing streams, and other streams, and that they are going to protect them.

Mr. CRAMER. I understand that.

Secretary UDALL. They are not going to want industry to get on them, at least I do not.

Mr. CRAMER. Is it not true in any instance where the State of Alaska, or any other State, wishes to place industry on a river and there is the prospect of some degree of degradation, that it requires approval by you individually as a Secretary and not by the State?

Secretary UDALL. It would require approval——

Mr. CRAMER. In addition to the States.

Secretary UDALL. It would require joint approval, let us put it that way.

Mr. CRAMER. So, in effect, we are getting right around to what many of us had grave concerns about when this was established in the first place.

And that was that we would end up with the Secretary in effect being able to revoke or not approve or override a State decision to, for instance, locate a plant, even though there was substantial sewage treatment facilities provided which there would be, on a river which would have the effect of any degradation whatsoever; and I cannot imagine a plant that would not have some, particularly now when you are going into thermal heating. If the water comes out of a powerplant heated, that is considered to be degradation. I think that is pending now in Miami, Dade County, where the local authorities approved the project.

The local pollution authorities approved the project, but it has—and also in Orlando—it does heat the water. Although there is requirement not to heat it above a certain degree. And the Federal Government has said, no, we will not let you build that plant, because there is a thermal degradation.

REASONABLE DETERMINATION OF WATER USE A STATE PREROGATIVE

Now, it seems to me that somewhere—and I certainly contemplated when we worked on the Clean Water Act in 1965 that standards would be set, that the States would have the jurisdiction to determine within reason where a stream should be used for industrial purposes, the nature of that, and under those guidelines, without having to come to the Secretary on every approval for every plant.

Secretary UDALL. Well, they are not usually going to have to come to the Secretary for approval on plants. There may be a few rare cases that will get to my desk. I think the situation that has developed is that as far as most of your State water pollution control agencies are concerned, they have the same kind of expertise, the same kind of people working as we have in the Federal agency. Most of these matters are going to be worked out at the local level. The States are going to have the main responsibility once their standards are approved.

I would predict there are going to be far fewer of these troublesome exceptional cases that we are talking about here than anyone realizes; because I do not think that we have a great difference between what the States want to do and what the Federal Government wants to achieve.

Mr. CRAMER. I just want to say to you as one of those who worked hard on that legislation and assisted in getting unanimous support for it, I appealed to my colleagues on the floor of the House on the basis that these standards would be set and fixed pursuant to the act, and for certain streams it would be obvious that it would be needed for industrial purposes and that the States, under those standards, would have the final say-so relating to the location of those plants.

Now, it appears, however, that it now takes approval of the Federal Government, and the Federal Government is assuming by that means the responsibility relating to land use, zoning, in effect, on all interstate streams in this country.

FEDERAL INVOLVEMENT IN STANDARDS IMPLEMENTATION EXPECTED ONLY IN UNUSAL SITUATIONS

Secretary UDALL. Congressman, I can only say, in terms of how we are actually functioning and how the implementation of the act is going to work out, that some of the fears that some have, that the Federal Government is staying in the picture too much and that we are going to make the basic decisions, that this is not the way that the program is working out in fact.

If we approve the State standards and——

Mr. CRAMER. Including nondegradation.

Secretary UDALL. An get nondegradation language with them, the only time, probably, that we are going to be called into the picture is when a big argument develops within a State, and it is usually going to be the sportsmen and the conservation interests against industry. Let us be frank about it. When the argument develops, if this involves the nondegradation issue, we may be brought into it. But we are not sitting looking over the shoulders of the States. Those standards have been approved. We do not want to, and we expect to get in only in those rare cases where there is argument, whether the State is observing its standards, whether it is enforcing its standards.

It is really up to the States to be vigorous about it.

Mr. CRAMER. You are actually in it. That is all I have.

MEANING OF "NO DEGRADATION" POLICY

Mr. MCEWEN. I do not have a transcript of your testimony before the committee in the other body, but I have a copy of Conservation News, April 15, in which they say, referring to you, Mr. Secretary:

> He said he resolved this issue by requiring that standards shall include a provision to assure that present water quality will not be degraded.

I quote further from this:

> We are asking, Mr. Udall said, that a paragraph be included in enforcible standards, substantially in accord with the following:

Then it quotes, I assume from the standard, Mr. Secretary, and I would like to know if this is correct:

> Water whose existing quality is better than the established standard as of the date on which such standards became effective will be maintained at their existing high quality. These and other waters of your State will not be lowered in quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters.

Is that correct?

Secretary UDALL. This is the water quality degradation statement, the policy statement that we issued.

Mr. MCEWEN. Is it not fair to assume that you are going to be under that policy in the middle of every controversy in every one of the 50 States where the Isaak Walton League or the local fish and game club, or whoever it may be, feels that a plant is going to, as it would of necessity, I would think, somewhat downgrade the quality of the water, even though it would not affect the standard that had been set on that water?

THE WATER QUALITY ACT NOT A DEGRADATION ACT

Secretary UDALL. Your State conservation agencies these days are just as sensitive to the Isaak Walton League as I am. They are going to hear from them. And I think most of these issues are going to be fought out and resolved at the State level; but this is the real basic question we faced, and we might as well be frank about it, and that is why this statement reads as it does, and, as you can see, we left the door open for exceptions: but did the Congress in 1965 write an act whereby standards would be set, which, in effect, invite the degradation of waters down to some floor, or did the Congress write an act which contemplated that the waters of this Nation were going to be improved?

This was the basic question.

And if some Members of Congress think that the act was a water degradation act, I do not interpret it that way, and I may be wrong. And the Congress can revise it if they want to, but that was the view that we took, that it was a water enhancement, an enhancement of quality act, and that therefore the standards should not be used to invite degradation.

STANDARDS AND INDUSTRIAL GROWTH

Mr. MCEWEN. Mr. Secretary, as one who sat on this committee and supported this bill both here and on the floor, and as a New Yorker who is proud of the program that we have in New York State for cleaning up our streams and improving our water, I certainly never anticipated that the location of an industry would be a matter not only of State review but approval by the Secretary of Interior.

May I say, if I can be parochial, in my own congressional district we are proud of some of the trout waters that exist in the State of New York or anywhere else in this case. And we want those for recreation areas; but we also, on the last count I made, they have almost one score of papermills that are furnishing all manners of paper products to a consuming public that wants them.

We never anticipated, with the paper industry and other industries, that they could not have future growth, future development in that area as long as they did not destroy the quality of the water, as it had been set following public hearings.

I am frankly, Mr. Secretary, shocked when I read that it is contemplated, and I quote again from this apparent standard, that water will not be lowered in quality—let me say, Mr. Secretary, and I said when the gentleman from Iowa said he read your book, I, sir, not only read it, I bought it.

But I am concerned, as you are, and I think all of our people are, in maintaining the waters of America. But I think we all recognize, or at least we should, that this affluent society has effluence, can't eliminate all the effluents if we are going to have the products of industry. We want industry, we want the jobs, and we want the products that they provide.

In our own State we have said what we have believed. I am going to ask now, have you approved the New York State standards?

Secretary UDALL. Yes. We have given general approval to the New York standards.

"NO DEGRADATION" POLICY WOULD NOT PRECLUDE NEW INDUSTRY

Congressman, you raised the real crucial question, and this is very good dialog. I know people are listening who should be listening. And I want to make a statement to you on this. Because the idea has gotten out that the nondegradation policy means no new industry. And this is ridiculous. It has no such effect.

Let me get very specific. The State of New York is a good place to get very specific, because there are many cities on the Hudson River, on the Mohawk and tributaries, for example, that pour untreated sewage into the Hudson River. And the purpose of this act, of course, is to have the municipalities and the industries clean up their effluents.

Now, if you take one of the cities, and I will not mention names, on the Hudson River, which is providing no treatment whatsoever, it is pouring raw sewage in, and it puts in even a primary treatment plant, you have upgraded the quality of the river, have you not, by that one act you have upgraded the quality; and by upgrading the quality without any degradation whatsoever you have opened the door to additional industry right there.

As industry acts, and industry is acting—look in Business Week magazine this week, they are really moving, and I am proud of industry for their investments and their emotion on this. But as this program gets underway, we are going to be improving water, and the door is wide open to new industry, because most of the new industry that is coming in is going to be required by the States—I will not have to require it—to put in the best and most modern water pollution control equipment, and their pollution will be very minimal.

In other words, one of these cities on the Hudson will open the door to a lot of industry, once you clean it up. So that I think the degradation issue or nondegradation issue is being used today as a bugaboo by some of my friends. I do not think it is going to have that effect. I do not think it is going to operate that way.

Mr. McEWEN. May I suggest, Mr. Secretary, that it is certainly time now that this be clarified, because certainly this is not understood. Do you say to take the Hudson River, it is a good example of a stream they sorely abuse. If the community along there, with their sewage treatment plants sort of unburdened this stream of handling that waste, then it opens up for new industry to come in and use the stream for disposal of its waste.

I do not think it is understood at all, sir.

ASSURANCE CONCERNING STANDARDS NEEDED

Coming back to the approval, I still feel, possibly it is the old saying, that the best is the enemy of the good, and maybe we should settle for what is good and not necessarily the best.

I think it is terribly important, Mr. Secretary, that communities and industries be able to rely on standards that have been set following public hearings. I have been told that in some communities and industries, in my own area, I have now been told after they have set standards, that now they have got to put in secondary treatment, although it was not required to maintain the quality of the water.

This of course leads to the understandable apprehension that action such as this having been taken, the antidegredation policy simply means that no one can locate an industry in a community that is discharging anything into those waters if it will in any way downgrade

the quality of the water, even though the water is still acceptable for its classified use.

Our whole program in New York State was based on a classification of streams from the trout waters to the stream that would not be suitable for fishing, for recreation, but for industry use.

I suggest, Mr. Secretary, that this is something that very much needs clarification.

I will yield to the gentleman from New Hampshire.

COST OF CLEAN WATER

Mr. CLEVELAND. I think this dialog is interesting, too, Mr. Secretary. One of the problems that I have noticed during your remarks, when you came before us last week, was you outlined the several major acts that we passed in the last couple of years, and it seems to me every time we pass one of these acts, everyone gets the impression, whether erroneously or not, but they seem to get the impression that, "Boy, this has done it." "Now we are going to have clean waters", and it is all done.

In this connection I think it would be helpful if somewhere along the line somebody put into the record, either now or later on in these hearings, just what the estimated total cost of accomplishing our stated objectives is going to be. I remember when we had our hearings 2 years ago that we were talking about Lake Erie, and of course the estimate of what it is going to cost to clean up Lake Erie ran all over the place, somebody said $5 billion and somebody $20 billion; and they were not hard figures.

Mr. Secretary, do you have an estimate of what it will cost nationwide to accomplish our stated objectives?

Is that figure available? I think it would be a startling figure, but at least it would put this thing in perspective.

Secretary UDALL. Our last study in terms of the present contemplated standards and programs is $8 billion for municipal action—I am not talking about the storm drainage problem—and for industry, $2.6 to $4.6 billion.

Mr. CLEVELAND. This is just a beginning, is it not?

Secretary UDALL. Of course it is just a beginning, because this is really the backlog problem, and installation for expansion of cities and for new industries, of installation of new equipment which industry is moving toward already, and so are the cities. But I think this is a very useful discussion.

INTENT OF WATER QUALITY ACT TO UPGRADE—NOT DOWNGRADE—NATION'S STREAMS

Mr. MCCARTHY. Mr. Secretary, I voted for this, and participated in its shaping, and I certainly, for my part, did not anticipate that this was going to provide for the degradation of streams that were pristine. We were trying to upgrade and not downgrade, and if the impression gets abroad that we are going to backtrack now and permit industry, facing the installation of expensive equipment, go up to some trout stream and locate there, then we are going to be just going backward.

And I read that Business Week story, too, and I am very impressed with what industry is doing. I think, for one reason, they feel that this

committee and the Federal Government and the States are serious about this, and they are not going to permit the degradation of streams.

Now, if we go back a step, as I think this whole approach is, that we are going to retire everything. And I think implicit in the philosophy of this whole approach is that we are not going to stand by and let every trout stream be located into a millstream. I do not think it is vice versa, and I think that somebody who feels that way should state that view.

I think Mr. Waldie has a comment.

"NO DEGRADATION" DOES NOT MEAN CLEANUP OF A CITY'S POLLUTION SO THAT INDUSTRY MAY POLLUTE

Mr. WALDIE. Mr. Secretary, I was a little bit concerned with your answer of your present policy on degradation. I happen to support it as it was announced, but I gathered, in your colloquy with a member of the committee, that you have established a principle that if the Hudson River is using, for purposes of this analogy, percentagewise, 100 percent polluted now, and you stop a city dumping in 10 percent of that 100 percent, that you open up that stream for 10 percent more pollution from industry.

I gathered, what you are saying, that if you stopped raw sewage from flowing into the Hudson from a city, you have thereby cleaned the stream up, say, 10 percent, so you can now permit industry to locate and pollute the stream that 10 percent that you cleared up by preventing the city from polluting it.

I hope that is not the policy, and I hope I misunderstood you.

It seems to me you are not accomplishing anything, except you are substituting for raw sewage industrial pollution. If your policy of preventing degradation of the waters has any meaning, it would seem to me that you do not, by preventing one polluter to open up the ballgame for another polluter to take his position.

Secretary UDALL. Congressman, I was explaining what is in effect the floor problem as far as the water pollution cleanup is concerned. Let me give you the whole picture.

And the point I was trying to make to Congressman McEwen is that most of our rivers and lakes in this country today are badly polluted. If we mount the type of vigorous program that some of the States are getting ready to do, and that we can do with the legislation pending before this committee, what we are going to see is a significant cleanup in terms of the quality of water in this country.

I know this is going to happen. This is the purpose of the whole program. We are going to significantly improve the quality of waters. We are going to clean up estuaries.

The cleanup in all cases will not be 100 percent, because we do not have that good of technology at this point. But it will be a very significant cleanup.

As a result, this policy that we had to decide, with regard to degradation and what the floor is, was this. Were we to interpret this act and to approve standards that would actually give people a license to degrade the waters in any particular areas? We did not think the Congress intended so.

This is the way we interpreted it.

The point I was trying to make to Congressman McEwen is this. Some of industry have said: "Well, what you are saying is that there will be no new industry on the Hudson River, no new industry on this estuary, or on that lake at all." And this is not the effect of it, because most new industries that come on the line today are going to be required by the States, they are going to be required by these standards, to use the very best and most modern equipment available, and this means that the effluent which gets back into a river or lake from these new industries is going to be very small as compared with the type of raw effluents that have been pouring in.

The result is that under this program you can have new industry, and you are still going to have a picture of water quality being significantly improved, so that there is no collision between the two if we carry out your programs in the right way. And it is not an either or situation. It is a matter of doing our job, of meeting the type of standards that we are talking about and of seeing a very significant and ongoing improvement of the water quality in this country.

Mr. McCARTHY. I do not think the public is going to stand by while we try to upgrade these streams, while over here they are downgrading these [indicating].

FEDERAL-STATE COOPERATION IN ESTABLISHMENT OF WATER QUALITY STANDARDS IN CALIFORNIA

Mr. WALDIE. May I also add, Mr. Secretary, that in terms of at least the State of California, the establishment of the water quality standards under the act has proceeded precisely as you have outlined, and in addition when areas in California have had disagreement with the standards established by the State—and I represent one such area—the flexibility that you have indicated as desirable in terms of arriving at a decision was provided our area. And we were permitted the opportunity to present to your Department in great detail our objections to the proposal, and I would say at least in terms of California that the act in establishing these water quality standards has been implemented by your Department to the satisfaction of everyone in the State, although the decisions may not be satisfactory, but the opportunity to effect and to persuade has been afforded us in full degree.

Secretary UDALL. Congressman Waldie has in his district one of the most serious problems in the whole State of California. It is the type of problem, however, that we do not have all the answers to. We have not developed a solution. We could not decide this. And therefore when it came to this problem we did not approve it or disapprove it. We said let us continue to work with it, and we will try to work out a solution, and then we will decide.

I think this is the only rational commonsense approach for it.

Mr. WALDIE. I think so too, and I wanted it for the record.

EXCERPTS OF REMARKS BY SECRETARY OF THE INTERIOR STEWART L. UDALL TO THE 24TH WHITE HOUSE CONFERENCE OF THE ADVERTISING COUNCIL, WASHINGTON, D.C., MAY 7, 1968

I will predict that during the next several months you will be hearing and reading much about a new addition to the vocabulary of concerned Americans. That word is degradation.

In my lexicon degradation is the slow, insidious erosion of this Nation's great natural resources.

It means their ultimate destruction.

In the Interior Department, degradation these days refers to the threatened deterioration of our priceless water treasures. It refers to a recently announced policy of mine which very simply says that we will no longer permit the quality of a clean stream to be lowered, except where it is socially and economically justified and that the lowering—or degradation--will not interfere with presently existing uses of those waters.

There are some who are rising up to oppose this policy. This is unfortunate. If the opposition gathers enough momentum, it could set the big water clean up back twenty years. And that would be tragic. Much of the reason for the opposition is a misplaced fear that we are retarding economic growth by insisting on cleaner water.

That is simply not true. Let me be absolutely clear about this. The non-degradation policy--as it has come to be called--means increasing the value of clean water by preventing pollution. At the same time it provides the States with a margin for further social and economic development. Some of the States and some industries are saying it's an economic and social roadblock.

Just the opposite is true. The policy will help assure water supply for further social and economic development. And by asking for the best treatment methods for polluted waters, we enhance the quality of the water and therefore its value.

I believe in the non-degradation policy. It is economically and socially sound. It is positive in its approach. It is based on the premise that clean water is an economic and social necessity. It now needs the support of industry. It needs the support of the States, and the cities. It needs the support of people in advertising and the related professions. In short, we need your help and we would welcome your advice.

REMARKS BY MAX N. EDWARDS, ASSISTANT SECRETARY OF THE INTERIOR FOR WATER POLLUTION CONTROL, BEFORE THE FONTANA CONSERVATION ROUNDUP, FONTANA DAM, NORTH CAROLINA, MAY 17, 1968

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Interpreting the language of the statute (PL 89-234 Water Quality Act of 1965) set off a controversy among all water users which was resolved on February 8, 1968, by Secretary Udall's "nondegradation" statement. It was so named because (following approval of some of the initial standards in 1967) some of the mindful conservationists in this very audience vigorously protested that the Department was approving standards which permitted a lowering or degradation of existing water quality. Our critics were quick to remind us that we were ignoring the Congressional mandate to "enhance the quality of water."

* * * *

...When it can be shown that necessary economic or social development justifies a reduction of water quality and that such reduction will not interfere with existing uses, a lowering of water quality will be permitted (if the new industry is willing to install the best practicable means of treatment to minimize its abuse of such high quality water).

Most segments of society have accepted the standards approach as a logical battle plan to attack one of the most critical domestic problems facing this country. Almost every state is to be congratulated for a genuine spirit of cooperation and a keen sense of purpose to accomplish the task at hand. Industry, too, should be lauded for seeking to upgrade its treatment technology to meet water quality standards. And for the most part business is moving forward willingly. As an example of a healthy attitude toward clean water, I am told that capital spending for the control of both air and water pollution by the business community will show a marked increase in 1968. Estimates given me show the chemical industry spending 42% more for water pollution control this

year than in 1967. For the same purpose textiles will increase its funding 136%, the mining industry 51%, electric and gas utilities 32% and fabricated metals and instrument makers will be up 64%.

In administering the Water Quality Act we are of course not without our critics. Some have accused the Department of usurping the states' authority and others complain that we have formulated national water quality standards.

This is not true. We have been continually aware that the primary responsibility for establishing these standards rests with the states. Our policies, consistent with both the language and the spirit of the Congressional mandate, are designed to protect this principal responsibility. I want to make it perfectly clear that the standards are not identical. The wide variety of differences in the standards is reflected in the many designated uses of water, the nature of the water resource, climate, population, industrial activity and a host of other variables. No national standard is intended and when the states adopt standards of their own which meet the terms of the Act they are approved.

REMARKS BY JOE G. MOORE, JR., COMMISSIONER, FEDERAL WATER POLLUTION CONTROL ADMINISTRATION, BEFORE THE 3RD ANNUAL COLORADO WATER RESOURCES CONFERENCE, COLORADO STATE UNIVERSITY, FORT COLLINS, COLORADO, JUNE 19, 1968

* * * *

I do not believe that the non-degradation policy announced earlier this year by Secretary Udall should be or can be reversed or ignored. My reason: The policy stands for clean water; it bars degradation of clean water, and American public opinion generally supports this concept. It is as simple as that.

You will agree, I know, that the success of the national water pollution control effort is dependent on cooperation between the States and the Federal Government, on productive Federal-State relations.

You will also agree, I think, that productive Federal-State relations in water pollution control and related aspects of water quality management are dependent on substantial agreement as to both objectives and means for achieving them.

There is substantial agreement between the States and the Federal Government on water pollution control objectives, growing out of the overwhelming desire of the American people for an abundant supply of clean water for present and future uses.

This, then, brings us to the question of specific steps, the means to get where we all want to go. This, after all, is the ultimate test of our effectiveness. And here, too, I believe the States and the Federal Government are much closer together than some of the things that have been said about the Department's non-degradation policy might lead one to think.

I think everyone is agreed on two basic points. The first is that dirty water should be made as clean as possible as rapidly as possible. The second is that clean water should be kept as clean as possible. I think that's what the people want. I believe that's what the States want. I know that's what the Federal Government wants.

All right, how do we accomplish these two objectives? The only way I know it can be done is to reduce, control, and prevent pollution. In the case of already polluted waters, it means moving up as fast as we can to the best practicable levels of treatment -- all up and down the river, all around the lake. In the case of a new urban development or a new industry on a high-quality lake or stream, it means starting with the best practicable levels of treatment.

This is what the water quality standards program is all about. And this is what the non-degradation policy is all about.

To the best of my knowledge there is no fundamental disagreement with the non-degradation principle. What many of the States are objecting to is the implication, as they see it, that any new development involving a discharge into high-quality water will require concurrent approval of both the State water pollution control agency and the Department of the Interior. The charge has been made that this would, in effect, make the Department of the Interior a licensing agency for any new urban or industrial development on interstate waters whose quality is better than the applicable standards required for those waters.

This simply would not be the case. It is our intent that the States will be the licensing agencies when it comes to new developments on high-quality interstate waters.

The non-degradation policy is not intended to place economic development in irons. But it is intended to prevent any repetition of the gross debasement of our water resources which this country has witnessed in this century. It will help assure water supplies of adequate quality for further social and economic development.

Secretary Udall told the House Committee on Public Works on April 23:

"I do not think this (the non-degradation policy) is going to inhibit new industry. It is going to mean that new industry is going to have to put in very good pollution control equipment. I think, if we do that, that in these industrialized areas, and along the sections of streams and tributaries where there will always be some effluents and some pollution, we can still have non-degradation in effect, and have increased uses of these waters."

Certainly, a strong non-degradation policy is critically essential to the success of our national water pollution control program. Without this concept we would be on a treadmill. Making little headway. Cleaning up dirty water while clean water gets dirty.

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REMARKS BY MAX N. EDWARDS, ASSISTANT SECRETARY OF THE INTERIOR FOR WATER POLLUTION CONTROL, AT THE 153RD MEETING OF THE MISSOURI BASIN INTER-AGENCY COMMITTEE, JACKSON LAKE LODGE, GRAND TETON NATIONAL PARK, WYOMING, JUNE 27, 1968

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The "Anti-Degradation" Standard

As I indicated earlier, I wanted to save my remarks on the "anti-degradation" issue until last. It is the one subject of greatest concern to us at the moment because it is the one subject most seriously misunderstood. The one basic question before the house is: "Do we devote our collective energy to cleaning up our polluted waters, and in the process do nothing to protect those which have remained unpolluted?"

* * * *

There are some waters, and the States know best which ones they are, that have not yet suffered the fate of the others. Do we let them suffer that same fate, or do we resolve to apply the best preventive medicine at hand?

That is what the anti-degradation standard is about.

The purpose and intent of the Water Quality Act of 1965 was to " ... enhance the quality and value of our water resources ... " and the strategy of water quality standards was to carry out that purpose and intent. Clearly and simply, where standards as established and enforced result in a lowering of the present high quality to that level, we have not met the intent of the law on the books. In fact, we will have worked counter to its purpose, because a lowering of present quality without good and sufficient reason and justification is the diametric opposite of "enhancing."

What waters are we talking about?

We are talking about those high quality interstate waters in which fish and other aquatic life propagation now flourishes and is a beneficial use as designated in the water quality standards of a State, but for which we do not now have sufficient data to determine beyond doubt that the criteria adopted in the standards is equal at least to the existing high quality. To give an example, we have in mind those waters for which standards criteria of 6 mg/l or higher of dissolved oxygen have been established, and there are at present no significant natural or man-caused pollution sources which otherwise render this water unfit for this most stringent and sensitive resource use.

The difficulty, of course, is that we cannot now name off each of the high quality waters which would come in this category, for the simple reason that we do not always know what the actual quality is at present, and thus cannot compare it with the standards criteria that are established. Both we and the States have concentrated our study and analysis on where the problems are -- in the most polluted streams and lakes. We will be working to get that same degree of knowledge eventually for our highest quality waters, and the question will simply disappear because the standards can then be revised to reflect that quality and be enforced by the States under normal procedures. But we cannot acquire this knowledge overnight, even if we had the resources at hand this very moment and jointly attacked this shortcoming.

At this point, then, the Secretary had an option. He could except from his approval the standards for all those high quality streams for which we have not enough data to assure ourselves that the criteria reflect at least the present quality, and approve them only after that knowledge became available. To his way of thinking, however, this course of action might have resulted in needless delay in getting State action programs underway.

Secretary Udall therefore chose to go ahead and approve the standards for such waters if it were possible to get a

commitment from the States that they would see to it that such waters would be safeguarded and that every effort would be made to prevent a lowering of the present quality except for compelling economic or social reasons.

All we are asking, therefore, is a commitment by the States to preserve their high quality waters as best they can until the knowledge gap is overcome and the regular procedures and requirements on changing and revising standards can be followed as they are spelled out in the Act. This is the sum, substance, purpose, and intent of our thinking and of the suggested language which was publicized in the Secretary's February 8, 1968, statement on this matter.

We are asking that this commitment by the States include the following:

(a) that a provision be set forth to require the best practicable degree of treatment for wastes discharged into such high quality waters;

(b) that a lowering of the present high quality be justified by a demonstration of its economic or social necessity;

(c) that some procedural provision be made whereby the Department can be assured that the degree of treatment is adequate and that the justification for lowering the quality has been set forth.

There is no question in my mind that this makes good common sense and enables both the States and the Department to meet the purposes and intent of the law and discharge the joint responsibilities imposed reasonably and efficiently.

> There is further no doubt that the Secretary has defined reasonable limits within which he will exercise his discretion under the Act. We have good reason to believe, moreover, that the States endorse the concept of the anti-degradation principle. The difficulties we have encountered lay

not with the concept but with the articulation of the principle. In his standards approval letters to the various Governors, the Secretary has been careful to advise that he would like the concept incorporated into the State standards in "substantially" the form he suggested.

We have not insisted, and we do not now insist, on the exact language proposed. The text as drafted provides for a review by the Department of any projected use which would lower the high quality of the interstate waters to be protected, and this has been seen as an unwarranted invasion of "States'Rights." No such thing was intended.

As I have noted, the responsibilities under the Federal Water Pollution Control Act are joint and properly require cooperation at all levels of government. The inclusion of this provision was to meet this objective and simultaneously to notify persons and corporations of Uncle Sam's interest. Many of you have already been, and are now, willing to make adjustments which will be mutually satisfactory.

We are in an arena that is new, and the problems must be mutually dealt with and adjusted without precipitous action on the part of any echelon of government. We are seeking to carry out the Congressional mandate, and this mandate includes, among other things, the opportunity to work with the States cooperatively and in a manner geared to solve problems effectively and efficiently. This is our intention.

I do not believe that the States will find any difficulty in making and meeting such a commitment. In fact, several States have already adopted, on their own motion and without a single prior communication with Interior, anti-degradation language more stringent than anything contemplated by us. Other States saw no difficulty in adopting our suggested language, with such modifications as suited the special circumstances.

I do not believe the States will find it difficult in working with us to implement such a commitment. We prefer the advisory role to the adversary role. It is far more constructive to work together than to be locked in opposition. Nor do we intend to meet our responsibilities from a swivel chair in a carpeted office in Washington, D.C. We have people on the scene, people with delegated authority, who work and talk and communicate with State and local officials on a daily basis, who are familiar with local problems, who can make decisions as the need arises.

Let me emphasize, finally, that we have taken it on faith, and we continue to take it on faith, that the States and the Federal Government have the same purpose and the same dedication -- to work toward Clean Water in accordance with the will of the Public and the mandate of the Congress, both as expressed in the law of the land and its waters within.

REMARKS BY JOE G. MOORE, JR., COMMISSIONER, FEDERAL WATER POLLUTION CONTROL ADMINISTRATION, U.S. DEPARTMENT OF THE INTERIOR, BEFORE THE NATIONAL CONFERENCE OF STATE AND FEDERAL WATER OFFICIALS, DETROIT, MICHIGAN, JULY 10, 1968

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The intent of the non-degradation statement released by Secretary Udall in February has been obscured in the subsequent snare over semantics. I do not believe there is any basic disagreement between the States and the Federal Government on the need to provide every possible protection for our remaining high-quality waters. Events are proving this point.

* * * *

I think all would agree that a minimal water pollution control effort -- either by the States or by the Federal Government -- will not effect the purpose of the Federal Water Pollution Control Act "to enhance the quality and value of our water resources." Nor will it fulfill the Act's directive that standards of water quality "shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act."

* * * *

Certainly, those who argue against the anti-degradation policy statement conveniently overlook, or ignore, the clear statutory mandate to enhance water quality. In addition, they would seem to suggest we make the grievous mistake of concentrating on upgrading poor quality water while permitting high quality water to be downgraded by inattention. Such a policy would place us on a treadmill; going nowhere; cleaning up our dirty water while our clean water gets dirty.

There is some risk that continued controversy over the non-degradation question could delay effective abatement of

existing pollution or application of adequate preventive measures to new discharges. In so many ways, we have delayed too long to apply the technology we now have in waste treatment. Any encouragement to those who see an advantage in delaying corrective measures merely compounds the damage and the ultimate cost. Thus full discussion and resolution of both the non-degradation question and other standards issues must be pursued.

We are all aware, of course, of the criticism leveled at the principle of anti-degradation by the Western Governors' Conference, the Southern Governors' Conference and the Association of Attorneys' General. And you are aware of the specifics of the criticism. For example, the resolution passed at the recent national meeting of the Association of Attorneys' General said in part:

"...a number of Attorneys General have ... been apprised by their respective State water pollution control officials of actions by the Secretary of the Interior under the Federal statute which appear to go beyond the spirit and letter of the Congressional enactment by arrogating to a Federal administrative agency the authority to set effluent standards and pass upon the legitimacy of water uses determined pursuant to State law and policy ...."

I want to affirm here today that Federal water pollution control officials do not intend to fix effluent standards. We <u>are</u> concerned with standards of water quality and with making certain that the established criteria to permit assigned uses will be achieved within a reasonable time.

In the strict sense, an effective effluent standard would have to state all allowable concentration in volume - or total quantity of all impurities which may be discharged per unit of time.

It is true of course, that the water quality criteria and plans to implement them are affected by waste discharges and that the States have to consider the quality and quantity of waste discharges in formulating standards and assigning water uses.

* * * *

I wish to emphasize the reference (in Policy Guideline No. 8) to "best practicable treatment of control." In discussions among Federal and State water pollution control officials, and in fact among waste treatment engineers, this phrase has been translated into "secondary treatment" primarily for the sake of convenience. But we have not demanded application of "secondary treatment" to all effluents as a pre-condition of approval of any State's standards. We have and are asking that States commit themselves to requiring "secondary treatment" levels or its equivalent, for all substantial municipal or industrial waste discharges. What we are asking is that municipal and industrial waste discharges be held as nearly as possible to the relatively same level of effort in the upgrading of our water quality. Also, we are asking that substantial wastes receive the best practicable degree of treatment before discharge.

The Secretary did not say that the Government was going to insist that the exact language contained in the February news relase be adopted in all State water quality standards. Quite the contrary. What he said was this:

"I have concluded that in order to be consistent with the basic policy and objectives of the Water Quality Act a provision in all State standards substantially in accordance with the following is required."

In his letters to the Governors, Secretary Udall is asking the States to include a non-degradation provision "substantially in accordance with" or "comparable" to the illustrative provision.

In testimony before the House Committee on Public Works on May 2, Secretary Udall underlined the fact that he had had no intention of proposing hard and fast language for State anti-degradation provisions. He said:

"...we do not have any stock boilerplate language. We work with each State in trying to get a piece of language

that they can put in their standards that will, we believe, satisfy the Act and then be workable in terms of whatever problems they have. In other words, we have not said to them that here is language, this has to be in your standards. We have said that we think that a certain objective is required by the Act, and we want to achieve it, and we want a program that will be practical and feasible."

In other words, it is not the specific proposed language for State anti-degradation provisions but the intent of the policy that should be discussed, considered and evaluated.

The fact is, the Secretary has approved a number of non-degradation provisions in State standards that are different from the language originally suggested but which we deem to be substantially in accordance with it. What we are interested in and have been interested in from the beginning is a plan in each State that will keep the tragic history of water pollution in this country from being repeated in every last clean lake and stream that we have left. And we recognize that there are different ways to state the principle and achieve it.

Now, let me come right to the point and list the four significant requirements for a State anti-degradation provision, requirements which have been transmitted to all FWPCA regional directors for their guidance in assisting State water pollution control agencies. The requirements are:

1. Commitment to the preservation of high quality waters.

2. The best practicable degree of treatment for wastes discharged into high quality waters.

3. Degradation only where necessary economic or social development is demonstrated.

4. Some procedural commitment so that the Department of the Interior (FWPCA) can be assured that the degree of treatment is adequate and degradation is "necessary."

More and more States are now utilizing these requirements as a framework for anti-degradation statements which are acceptable to the FWPCA and the Department of the Interior. Three States have acceptable language in original standards submissions; seven States have submitted acceptable statements since February; some twenty-five States have indicated willingness to submit statements which have received varying degrees of FWPCA staff discussion. Some States have language in their original submissions which meet one or more of the requirements I have indicated.

We are not going to quarrel with the semantics of an anti-degradation statement. We are interested only in its intent, its objectives, and its realization.

Let me give you an example. In April, water pollution control representatives from Utah, Colorado, New Mexico and Wyoming developed for discussion purposes a tentative anti-degradation provision. We would find this provision generally acceptable and for that reason I want to read it to you:

> Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at high quality unless it has been affirmatively demonstrated to the State that a change is justifiable as a result of necessary economic or social development and will not preclude present and anticipated use of such waters. Any industrial, public or private project or development which would constitute a new source of pollution or an increased source of pollution to high quality waters wil be required to provide the necessary degree of waste treatment to maintain high water quality. In implementing this policy, the Secretary of the Interior will be kept advised and will be provided with such information as he will need to discharge his responsibilities under the Federal Water Pollution Control Act, as amended.

In my opinion, this statement adequately fulfills the four requirements which I outlined earlier.

Implementation of such a policy is and must be of concern to both State and Federal governments. It is an essential corollary to the Federal-State effort to raise the quality of polluted water by effective water pollution control.

The Water Quality Act of 1965 properly assigns a dual role to the Federal and State governments. And this dual role pertains to all sections of the Act, not just this one or that one, depending on State or Federal preference at the moment. The whole Act is based on the partnership concept.

Success of the national water pollution control effort is dependent upon cooperation between the States and the Federal Government, upon productive Federal-State relations. And productive Federal-State relations in water pollution control and related aspects of water quality management are dependent, in turn, on substantial agreement both as to objectives and as to the means for achieving them.

I might add here that in all of my discussions and of those of my staff with the States concerning the anti-degradation provision, I know of no State that has been unwilling to commit itself to the preservation of high quality waters. Disagreement has centered around the means to achieve this objective.

We seek to work honestly and cooperatively with all States to help them implement such commitments. I don't mean dictate to the States from an office in Washington. I mean work with you at the regional level, where our representatives are aware of State statutes and special State and local problems which must be studied and considered in the formulation and administration of State water pollution control programs, or any aspect of such a program.

Our representatives on the scene -- your scene -- possess delegated authorities and responsibilities. And they can make decisions when the occasion demands. One of my personal

objectives as Commissioner is to see that they respond to your needs -- and respond quickly and with competence.

The water pollution control program is one of the few that is founded upon unequivocal Federal law that contemplates an integrated Federal-State attack upon a problem. This was one of the attractions for assuming my present role. I'd like to see if we can't make such a program work effectively. State water resources problems are not unknown to me and my seventeen years with varied Texas governmental agencies, including two Governors, has exposed me to a range of Federal-State relations. I hope I can make a constructive contribution to a relationship that is one of partners rather than antagonists.

I am convinced that the anti-degradation issue is well on its way to resolution. I believe that most of the trouble derives from misunderstanding, created in part by poor communication and faulty interpretation.

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