MEMBERS PRESENT:	MEMBERS ABSENT: (Excused)
Chairman Coulter	
Vice Chairman Fielding	Assemblyman Price
Assemblyman Bedrosian	Assemblyman Dini
Assemblyman Polish	
Assemblyman Rhoads	
Assemblyman Prengaman	
Assemblyman Bergevin	

Chairman Coulter brought this meeting to order at 2:35 p.m. for the purposes of hearing AB 572:

> Provides for control of water pollution from diffuse sources.

Assemblyman Bergevin opened the testimony on this bill with a few brief remarks. He stated that this basically relates to the 208 section of the federal Clean Water Act which provides for control of non-point source pollution. He explained that the bill drafter chose the wording of "diffuse" rather than "non-point". Mr. Bergevin went over the history of the bill for the committee and noted that this bill was the result of meetings between soil conservation people, farm bureau, ranchers, miners and the Division of Environmental Protection.

Mr. Van Petersen was next to testify on this bill, in support of it, but with several amendments. A copy of his testimony is attached hereto and marked as Exhibit "A". In addition, Mr. Petersen pointed out page two, line 35 of AB 572, that perhaps this, also, should be amended to read "historical beneficial uses".

Mr. John Connolly of Yerington, Nevada, area vice president of Nevada State Association of Soil Conservation Districts was next to testify in support of this bill. He is one of the people who worked on this bill for the last three years. He pointed out line 30 and 31 on page four. He feels that this is in direct conflict with lines 24 through 29 on page three of the bill. Mr. Connolly states that if you take it out in one place (page three) why it should be put back in in another place (page four). Personally, he is opposed to that being put in at all.

Mr. Ernie Gregery of the Environmental Protection Division of the Department of Conservation and Natural Resources was next to testify in support of this bill, including the amendments as suggested by Mr. Van Petersen (Exhibit "A"). Additionally, he noted a further amendment that has come up and that is on page three, line 48 where it mentions "the department". He said they would prefer it to read "the commission", referring to the State Environmental Commission.

Mr. Bergevin asked of Mr. Gregery whether he had the same problem with section six of the bill, as Mr. Connolly had noted. Mr. Gregery explained that he did have a problem with it and they had tried to write that specifically so that the non-point polluters would not be subject to the ten and twenty-five thousand dollar penalty provisions in the water pollution statute. He said it provides for a series of hearings before either the local agency that might administer the program up through the State Environmental Commission and then the court is covered under section eleven. Mr. Gregery feels that this language should stay in the bill.

Mr. Bedrosian questioned him as to whether or not deleting lines eight through seventeen would weaken it and Mr. Gregery stated that in his opinion it would not weaken it, but to the contrary, it would strengthen it. There followed a lengthy discussion between Mr. Bedrosian and Mr. Gregery.

Mr. Rhoads had a question regarding 208 federal law; he wondered if the federal government had to approve this program. Mr. Gregery stated that somewhere down the line they will have to approve any kind of a regulatory program they develop. The people who have worked on this feel it will be approved.

Mr. Howard Winn, a consultant to the Nevada Mining Association, was next to testify in support of this bill with certain amendments. A copy of his testimony is attached hereto and entered as Exhibit "B". After his testimony, through Mr. Bergevin, they attempted to clarify Mr. Connolly's question pertaining to section six. Mr. Gregery stated that he understood Mr. Connolly's concern, however, there is no intention of reinstating a permit system.

Mr. Thomas Ballew of the Nevada Department of Agriculture, Executive Director, was next to testify on this bill. He noted that he is also a member of the State Environmental Commission and also a member of the State Conservation Commission. During the last three years he has received this information in all of those capacities and many of them have met almost once a month for the last three years to bring forth some form of legislation. He then discussed the philosophy of this bill explaining that they are trying to get some sort of handle on pollution from sources that do not come from a pipe. As an example, run off from agricultural land or from National Forest Land or BLM land, etc. where the actual pollution cannot be controlled by putting something on the discharge point. They are also trying to do something about this form of pollution by applying management practices to the land where it originates, rather than trying to put some sort of a control mechanism on a pipe. Therefore, what they are basically talking about is not controls, but best management practice to the land where this non-point source pollution comes from and it is currently hard to get a handle on this. He supports the changes in this legislation that were recommended by Mr. Petersen, Mr. Connolly and Howard Winn.

Additionally, he recommends that any reference in the bill to any penalties be stricken from the bill, as they have recommended. Also, he suggested anywhere where they mention the word "controls" such as on page four, line 15, the words "best management practices" be used instead. The owner of the land is the one who is going to have to carry out these best management practices possibly with some engineering and technical and some cost-sharing assistance from the government.

Jack G. Warnecke, Carson City Supervisor, also a registered chemical engineer in Nevada and California with extensive experience in industrial waste water treatment and waste disposal was next to testify on this bill. He noted on page three of the bill, line 50, that he had a problem with this section. He explained to the committee that Carson City has this certain sewage treatment plant that includes, as part of the process, a sledge incinerator and he further explained this system's cost and process. He fears that this section of this bill would prohibit them from using this system and he would, therefore, like to see the wording changed so they are not prohibited from using this kind of system of disposal. He noted that it is a well-accepted system, used in thousands of municipalities throughout the United States.

Mr. David Conover of the Nevada Farm Bureau was next to testify on this bill. A copy of his testimony is attached hereto and entered as Exhibit "C". He emphasized their objection to page two, lines 39 and 40, which is also noted in his written testimony.

Mr. G.P. Etcheverry, Executive Director of the Nevada League of Cities, next testified on this bill. He noted that they have some question with section four of the bill.

There was some further general discussion between Mr. Bergevin, Mr. Connolly and Mr. Gregery after Mr. Bergevin had looked into the appropriate statutes concerned with section six of the bill and Mr. Bergevin stated that he did not read anything into that section that would require them to get permits.

COMMITTEE ACTION:

SJR 9 - Assemblyman Rhoads moved to INDEFINITELY POSTPONE this bill, Assemblyman Polish seconded the motion. The committee voted unanimously in favor of this motion with Assemblyman Bedrosian, Price and Prengaman absent from the room.

There being no further business at hand, Chairman Coulter adjourned the meeting at 3:45 p.m.

Respectfully submitted,

Anne M. Peirce

Anne M. Peirce, Secretary

(Committee Minutes)

Nevada Association of Conservation District

P.O. BOX 1972 CARSON CITY, NEVADA 89701

March 28, 1979

Testimony on Assembly Bill 572

My name is Van Petersen and I am representing the Nevada Association of Conservation Districts.

We wish to support Assembly Bill 572, but with several amendments.

The NvACD has been directly involved along with many organizations in the development of non-point source water quality legislation for the past 3 years. We have met on numerous occasions in order to develop a proposal that will address present and future environmental concerns while not destroying or impeding the various industries of the State.

As I mentioned we do have several amendments for your consideration. First and of primary importance on page 2, lines 39 and 40, we recommend those lines be deleted in total, also, on page 4, line 28, the words "or any permit used". Throughout our meetings people are concerned about a permit system such as that utilized in the point sources would be unmanageable and would only serve to cause more problems than it would solve.

Secondly, the word "diffuse" is very misleading. We have been using the words "non-point" throughout the 208 process in Nevada and those words are utilized in the Federal Law. We recommend therefore that the word "diffuse" be replaced with the words "non-point" wherever it occurs.

EXHIBIT A

Next, starting under Section 3, line 20 and wherever else it appears in the text, we recommend that the words "body of surface" be deleted. We recommend this because proposed rules and regulations have been drafted by the Federal Government to combine all programs relating to water quality. - See Reference

Fourth, under Section 5, line 19 and wherever else in the text it appears, we recommend that the word "particular" be deleted and replaced by the words "site specific". Here again this would be consistent with the language we have been using and consistent with the federal language.

Fifth, under Section 9, page 4, line 2, we recommend that the word "any" be deleted and after the word "waters" insert the words "of high quality".

Finally, under Section 9, lines 9 and 10, the legislation is not clear as to "measures". We recomend therefore that a new Section 12, be added to define "Best Management Practices" (BMP's) as follows:

> "Best Management Practices" means measures, methods or practices which are reasonably calculated or designed to prevent, eliminate or reduce non-point sources of water pollution.

Under the non-point source water quality planning programs of the State Best Management Practices Manuals have been developed as such and the Federal Law aludes to cost sharing monies under the Rural Clean Water Program for installation of "Best Management Practices". Here again

EXHIBIT A

we would be consistent to the past work in Nevada and not be changing to different words and creating unneeded confusion.

NEVADA MINING ASSOCIATION, INC.

SUITE 602 • ONE EAST FIRST STREET

RENO, NEVADA 89505

ROBERT E. WARREN
Executive Secretary

W. HOWARD WINN
Consultant

POST OFFICE BOX 2496
TELEPHONE 323-6575

March 27, 1979

MY NAME IS HOWARD WINN. I AM A CONSULTANT TO THE NEVADA MINING ASSOCIATION AND I AM REPRESENTING THEM.

WE WISH TO SUPPORT A.B. 572 BUT WITH AMENDMENTS THAT I WILL EXPLAIN LATER. OUR INTEREST IN THIS LEGISLATION ORIGINATES FROM OUR USE IN MINING OF SUBSTANTIAL AMOUNTS OF WATER. ACCORDINGLY, WE COOPERATED WITH OTHER USERS AND INTERESTED PARTIES OVER THE PAST TWO YEARS IN DEVELOPMENT OF IT. I MUST ALSO CONFESS THAT WE VOLUNTEERED TO CONVEY THE FINAL AGREED UPON DEAFT THROUGH THE BILL DRAFTER'S OFFICE INTO THE PRODUCT WHICH IS A.B. 572. THE RECOMMENDED AMENDMENTS INDICATED THAT WE DIDN'T DO A VERY GOOD JOB.

THE ORIGINAL PURPOSE OF THIS EXERCISE WAS TO PROVIDE ENABLING LEGISLATION FOR CONTROL OF NONPOINT SOURCES OF WATER POLLUTION AND THIS HAS BEEN DONE IN SKELETON FORM IN SECTION 10. WE SUPPORT THIS SECTION, PERHAPS, WITH SOME RELUCTANCE, BECAUSE IT REPRESENTS THE ADDITION OF A NEW CONTROL SYSTEM TO NEVADA LAW. HOWEVER, OUR LEGAL ADVICE INDICATES THAT SUCH IS REQUIRED, OR, AT LEAST, STRONGLY SUPPORTED BY FEDERAL LAW. ADDITIONALLY, IT IS HARD TO TAKE A POSITION AGAINST ANY REASONABLE APPLICATION OF ENVIRONMENTAL CONTROLS IF IT CAN BE SHOWN THAT THEY ARE NEEDED TO PROTECT OUR ENVIRONMENT.

WE SUPPORT THE OTHER SECTIONS WITH COMPLETE ENTHUSIASM. ALL OF THEM ARE DESIGNED TO GIVE CLEAR LEGISLATIVE DIRECTION TO THE STATE AGENCIES CONCERNING REGULATION AND CONTROL OF WATER QUALITY IN NEVADA. WE MAY LIKE IT OR NOT, BUT WE HAVE AS A PARTNER IN WATER POLLUTION CONTROL THE ENVIRONMENTAL PROTECTION AGENCY.

EXHIBIT B

THE FEDERAL LAW WHICH MAKES THEM OUR PARTNER, HOWEVER, DOES LEAVE US WITH A SMALL NUMBER OF VERY IMPORTANT RIGHTS. THESE INCLUDE THE SANCTITY OF OUR WATER RIGHTS LAWS, THE PROTECTION OF OUR RIGHT TO DESIGNATE WATER USES, AND THE RIGHT TO SELECT A METHOD TO CONTROL NONPOINT SOURCES. THE AMENDMENTS CONTAINED IN A.B. 572 ARE ALL DESIGNED TO PUBLICLY EMPHASIZE THESE RIGHTS AND TO INSURE THAT OUR REGULATORY AGENCIES PROTECT THEM.

WITH DUE RESPECT TO YOUR BILL DRAFTING DEPARTMENT, WE ARE DISAPPOINTED WITH THE FINAL FORM OF A.B. 572. WE DO NOT BELIEVE THAT THEY HAVE ACCURATELY REFLECTED ALL OF THE MEANING CONTAINED IN THE HARD-WON DRAFT OF LEGISLATION THAT WAS PRESENTED TO THEM. WE SUGGEST AMENDMENTS AS CONTAINED IN THE ATTACHED DOCUMENT.

NEVADA MINING ASSOCIATION, INC.

SUITE 602 • ONE EAST FIRST STREET

RENO, NEVADA 89505

ROBERT E. WARREN
Executive Secretary

W. HOWARD WINN
Consultant

POST OFFICE BOX 3498

TELEPHONE 322-0575

March 26, 1979

Amendments to A.B. 572

1. Replace the expression "diffuse source" with "nonpoint source" wherever it is used.

Page 2, Line 3
Page 2, Line 40
Page 3, Line 29
Page 3, Line 41
Page 4, Line 9
Page 4, Line 17
Page 4, Line 20
Page 4, Line 24
Page 4, Line 29

2. Section 9, Page 4, Line 2:

After the word "~~any~~ waters" add the words "of high quality."

3. Section 9 should be rewritten to incorporate "best management practice" into Nevada law. Page 4, line 9, should read as follows:

(b) If the discharge will be from a nonpoint source, best management practices which apply to the particular place and which achieve maximum control over water pollution consistent with the economic capability of the project or development.

4. Add Section 12 to define Best Management Practice as follows:

"Best Management Practice" means measures, methods of operation or practices which are reasonably calculated or designed to prevent, eliminate or reduce nonpoint sources of water pollution.

5. Section 4, Page 2, lines 39 and 40:

The requirement of permits for diffuse sources may or may not be necessary. The need for these two lines is questionable and they should be eliminated.

EXHIBIT B

NEVADA FARM BUREAU FEDERATION

PRESENTATION TO THE

ASSEMBLY COMMITTEE ON ENVIRONMENT AND PUBLIC RESOURCES

ON

ASSEMBLY BILL 572

THE NEVADA FARM BUREAU IS A VOLUNTARY ORGANIZATION OF RANCHERS AND FARMERS FROM THROUGHOUT THE STATE OF NEVADA UNITED FOR THE PURPOSE OF ANALYZING THEIR PROBLEMS AND FORMULATING ACTION TO SOLVE THESE PROBLEMS.

THERE ARE OVER 4,000 FARM BUREAU MEMBERS THROUGHOUT THE STATE.

WE AGREE WITH THE PURPOSES OF THIS BILL WHICH STATES THAT THE MAINTENANCE OF THE STATE'S WATER QUALITY IS NECESSARY TO PROVIDE FOR THE PUBLIC HEALTH AND ENJOYMENT, THE PROTECTION OF TERRESTRIAL AND AQUATIC LIFE, THE CONTINUED OPERATION OF EXISTING INDUSTRIES, THE PURSUIT OF AGRICULTURE AND THE ECONOMIC DEVELOPMENT OF THE STATE.

WE ALSO FIND THAT THE SETTING OF WATER QUALITY STANDARDS TO PROTECT AND ENSURE THE CONTINUATION OF BENEFICIAL USES IS ESSENTIAL TO THE ACCOMPLISHMENT OF THE PURPOSES OF THIS ACT.

WE DO HOWEVER, OBJECT TO THE LANGUAGE ON PAGE TWO LINES 39 AND 40 WHICH STATES, "(A) BY REGULATION, REQUIRE THE OBTAINING OF PERMITS FOR SPECIFIED CLASSES OF DIFFUSE SOURCES." WE DO NOT AGREE WITH THE CONCEPT OF FARMING BY PERMIT. AND, WE WOULD RECOMMEND THE REMOVAL OF THIS LANGUAGE FROM THE LEGISLATION.

THANK YOU FOR THE OPPORTUNITY TO EXPRESS THE OPINIONS OF THE NEVADA FARM BUREAU FEDERATION.

EXHIBIT C

federal register

THURSDAY, MARCH 15, 1979
PART V

ENVIRONMENTAL PROTECTION AGENCY

WATER QUALITY CRITERIA

Request for Comments

[6560-01-M]

ENVIRONMENTAL PROTECTION AGENCY

[FRL 1062-5]

WATER QUALITY CRITERIA

Request for Comments

AGENCY: Environmental Protection Agency.

ACTION: Notice.

SUMMARY: EPA is announcing the availability for public comment of water quality criteria for 27 of the 65 pollutants listed as toxic under the Clean Water Act (CWA). When published in final form after public comment, these water quality criteria may form the basis for enforceable standards. The criteria were developed pursuant to section 304 of the CWA and in compliance with a court order.

DATES: Written comments should be submitted to the person listed directly below by May 14, 1979.

FOR FURTHER INFORMATION CONTACT

Kenneth M. Mackenthun, Director, Criteria and Standards Division (WH-585), Office of Water Planning and Standards, U.S. Environmental Protection Agency, 401 M Street, SW., Washington, D.C. 20460, telephone 202/755-0100.

SUPPLEMENTARY INFORMATION:

Background

Section 304(a) of the Clean Water Act (33 U.S.C. 1314(a)), requires EPA to publish and periodically update water quality criteria. These criteria are to reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life, and recreation.

Under paragraph 11 of the Consent Decree in *Natural Resources Defense Council, et al.*, v. *Train*, 8 ERC 2120 (D.D.C. 1976), EPA must publish criteria for 65 specified toxic pollutants. The criteria are to state maximum recommended concentrations consistent with the protection of aquatic life and human health.

The criteria issued for public comment today are for 27 of those 65 pollutants. Criteria for the remaining 38 of the pollutants will be issued for public comment in the near future. Final publication is planned for the latter part of this year.

A section 304(a) water quality criterion is a qualitative or quantitative estimate of the concentration of a water constituent or pollutant in ambient waters which, when not exceeded, will ensure a water quality sufficient to protect a specified water use. Under the Act a criterion is a scientific entity, based solely on data and scientific judgment. It does not reflect considerations of economic or technological feasibility. A criterion based on the protection and propagation of fish, shellfish and wildlife, for example, is simply the best estimate informed scientists are able to make of the maximum concentration of a given pollutant that can be tolerated while still maintaining protection of aquatic life. A criterion intended for the protection of human health, by the same reasoning, is the best estimate of the concentration which may exist and still not pose an undue risk to humans who drink water without further treatment or eat fish or shellfish from the water.

The information and scientific judgments contained in a section 304(a) criteria document could be used to develop enforceable standards under several sections of the Act such as section 302 (water quality-based-effluent limitations), section 303 (water quality standards), and section 307(a) (toxic pollutant effluent standards). It is important to observe, however, that before an enforceable standard is set under any of these statutory authorities, administrative rulemaking procedures by either the States or EPA will provide interested parties the opportunity to participate in the setting of standards. Final publication of these criteria under section 304(a) will therefore have no regulatory impact on any party.

Relationship to Water Quality Standards

Because EPA has raised significant issues about the relationship of section 304(a) criteria to section 303 water quality standards in an Advance Notice of Proposed Rulemaking ("ANPRM") (43 FR 29588, July 10, 1978), it is appropriate to highlight certain aspects of this relationship.

A water quality standard is developed through State or Federal rulemaking procedures and may be directly translated into an enforceable discharge or effluent limitation in a point source discharge (NPDES) permit under section 301(b)(1)(C), or form the basis of best management practices for nonpoint sources under section 208 of the Act. A water quality standard for a particular water body consists basically of two parts: (1) A "use" for which the water body is to be protected or "designated" (such as "agriculture", "recreation", or "fish and wildlife") and (2) a numerical or qualitative pollutant concentration limit which will support that use. (See ANPRM, 43 FR at 29589, 29590).

Establishing the use component of a water quality standard for a given water body, in light of the goals of the Act and the value of the water body for various purposes, involves a determination of what use is attainable. In determining whether a use is attainable, consideration is given to environmental, technological, social, economic and institutional factors (40 CFR 130.17(c)(1)).

The second (concentration) component of a standard, in contrast, involves a decision about the water quality or constituent concentration that must be provided if a particular use is to be maintained. Thus this component of a water quality standard, like a section 304(a) criterion, is founded on scientific considerations.

A section 304(a) criterion is not a water quality standard and in itself has no regulatory effect. Only if a section 304(a) criterion is adopted by a State through rulemaking or promulgated by EPA under section 303 (or is incorporated in a standard under another statutory authority) through rulemaking or adjudication, does the section 304(a) criterion acquire regulatory significance. Moreover, that significance is restricted in two important ways. First, if a section 304(a) criterion is translated into the concentration component of a water quality standard, scientific considerations specific to a given water body may be taken into account. A criterion which has been established as generally necessary to support a specified use may not be required to maintain that use in a particular water body. For example, in some cases ecosystem adaptation may enable a viable balanced

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aquatic population to exist in waters with high natural background levels of certain pollutants. Similarly, toxicity of certain compounds may be less in some waters because of differences in acidity, temperature, water hardness, and other factors. (Conversely, some natural water characteristics may increase the impact of certain pollutants.)

Second, a section 304(a) criterion adopted by a State or federally promulgated under section 303 acquires regulatory weight only when a particular water body is designated for the use which the criterion is designed to protect. A water body designated for agricultural use, for example, might not have to achieve the same concentration levels as a water body designated for the protection and propagation of fish, shellfish, and wildlife. The criteria issued today which reflect levels for the protection of aquatic life and human health would not necessarily be required to protect other uses such as agriculture.

EPA has established regulations and policies concerning section 304(a) water quality criteria and section 303 concentrations and uses. This program was summarized in the ANPRM, and public comment was invited on a variety of questions about the direction this program should take in the future.

Issues raised in the ANPRM potentially affect the significance of the criteria issued today. For instance, EPA's policy for its current (1976) water quality criteria (the "Red Book" criteria) is that "a State may adopt a numerical concentration for a Red Book pollutant which is less stringent than the Red Book number, but only if a State provides adequate technical justification for the deviation." (43 FR at 29590) Failure to provide adequate technical justification may result in EPA disapproval of that portion of the water quality standard and, subsequently, in EPA proposal and potential promulgation of the more restrictive limit. The Agency is considering extending this policy concerning Red Book criteria to its new toxic pollutant criteria after such criteria are published as final, and solicits comments on this option.

The ANPRM also stated that it is EPA's current policy generally not to promulgate standards for pollutants which States have not addressed in their standards. As stated in that notice, EPA is contemplating altering this policy for some or all of the 65 toxic pollutants. Thus, EPA might "provide a list of pollutants for which water quality standards must be developed" either by the States or by EPA (43 FR at 29591). This policy will be developed in future rulemaking efforts separate from the issuance of water quality criteria for public comment today. Persons wishing to comment on this policy option will therefore be able to make their views known at that time.

Relationship to Drinking Water Standards

It is not expected that health-based water quality criteria will necessarily be the same as standards or guidelines issued by EPA under other Acts since other authorities may mandate different considerations. The mandate for establishing standards for drinking water at the tap under the Safe Drinking Water Act (SDWA), for instance, expressly requires consideration of economic and technical feasibility, whereas feasibility is not a factor in developing section 304 water quality criteria. In addition the extrapolation model used to estimate the risk associated with the Interim Primary Drinking Water Standards was somewhat different from that used in calculating water quality criteria. Thus, the criteria today are not intended to serve as drinking water tap standards. Nor are today's criteria expected to be the same as recommended maximum contaminant levels (RMCL's), non-enforceable health-based goals, which are also mandated under the SDWA. While RMCL's are more like section 304 criteria than tap water standards, specific mandates of the SDWA such as the consideration of multi-media exposure, as well as the different methods for setting contaminant levels under the two Acts may result in differences between RMCL's and the criteria published for comment today. In the future, a State or EPA may through rulemaking proceedings consider using the health-based section 304(a) criteria for a public water supply designated use standard under section 303. In such a case, consideration may be given to whether pollutants are more effectively removed before they reach the ambient water (i.e., at the point of discharge), or at a drinking water treatment works.

Development of the Criteria

The development of water quality criteria reflecting the latest scientific knowledge is necessarily an ongoing process. Section 304 reflects awareness of this fact in its requirement that criteria periodically be revised. As new information becomes available indicating that an existing criterion should be revised, or that criteria should be established for substances which have not yet been addressed, it is expected that new or revised criteria will be developed. The draft criteria issued for comment today are part of this ongoing program. It should be recognized therefore that, when published after public comment, these criteria will not be "cast in concrete" but will be updated in future years when additional information becomes available indicating such a need.

EPA recognizes that the quality and quantity of the data in the criteria documents varies, and has undertaken a program to expand the data base dealing with bioconcentration factors and aquatic toxicity. Further data generation can be expected in the future. Comment is invited on what constitutes a sufficient data base for final criterion formulation and on how the quality of the criteria may best be expressed.

The criteria issued for comment today are of two basic kinds: (1) Concentrations estimated to be protective of aquatic life and wildlife, and (2) concentrations relevant to the protection of human health. Criteria are not now being issued to protect recreation, agricultural or industrial uses, since a general lack of data precludes such an effort at this time. As data become available, however, appropriate criteria will be developed. The pollutants covered by today's documents are listed in Appendix A along with summaries of the criteria formulation for each pollutant.

The criteria for protection of aquatic life and wildlife and criteria for the protection of human health were derived separately from essentially different data bases utilizing methods designed specifically to address the concerns of the two separate areas. The methods for deriving criteria in each

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of these areas are presented in appendices B and C, and are discussed briefly below. Comment is invited on all aspects of the methods used and their application in the development of specific criteria.

Criteria for the Protection of Aquatic Life

Most of the aquatic life criteria issued for comment today were derived using guidelines developed from data for a wide range of pollutants and organisms to provide a systematic and consistent approach to the derivation of aquatic life criteria. These guidelines were presented for public comment on May 18, 1978 (43 FR 21506), and over 50 comments were received. As explained in that notice, the guidelines "provide uniform rules for deriving criteria from data bases (for individual pollutants) of varying degrees of adequacy and supply rules for estimating some effects for which data are unavailable." (43 FR at 21506) In a few instances the guidelines were modified on a case-by-case basis where pollutant-specific data indicated both the need and the direction for such modification. Criteria so derived are identified in the text, and the reasons for any modification explained. For some pollutants, data needed to formulate criteria following the guidelines were not available but could be estimated using alternative procedures. In these cases criteria were derived using alternative methods. Finally, where data on a particular pollutant were not sufficient to derive criteria using the guidelines or the alternative procedures, no criterion is presented.

Since a detailed explanation of the basic guidelines is presented in the May 18th notice, interested persons should refer to that notice as modified in appendix B for a basic understanding of the derivation of aquatic life criteria. appendix B contains clarifications which resulted from application of the guidelines as well as a summary of the althernative methods by which criteria are derived.

In the May 18th notice EPA stated its intent to refine the guidelines in response to public comment before issuing these criteria for public comment. Because of the magnitude of the task of preparing these criteria documents within a limited time frame, and because of the highly detailed and technical nature of the guidelines and the numerous comments thereon, however, no major refinements to the guidelines have yet been completed. The criteria issued today, therefore, follow the guidelines published in May, modified as noted in appendix B to reflect knowledge gained in application of the guidelines to the individual data bases. Also, as noted, case-by-case modification and alternative methods have been employed where appropriate.

The complex nature of the guidelines has also compelled EPA to defer response to comments on the May 18th notice at this time. A summary of the comments is presented in Appendix D, however, to assist the reader in understanding the general outlines of the response to the guidelines and the direction which further work on the guidelines is taking.

In order to respond to comments on the May 18th notice EPA has undertaken an assessment of the technical and scientific foundations of the guidelines. This task involves extensive reformatting of the data base and inclusion of new references, as well as investigation of appropriate groupings of data to estimate correction factors used to standardize results and the effects of their variability; enhanced quantification of the variability in the standardized data base; assessment of the validity of averaging across toxicant and species groups; investigation of the sensitivity of criteria to data requirements; and consideration of alternatives for estimating criteria including the use, where appropriate, of regression models, application factors and dose-response bioassay models.

It should be noted that this assessment effort and comments received on the documents issued today may indicate a need for changes in the derivation methods or their application in individual cases. Where modification is so indicated, the derivation methods and criteria values in the final documents may differ from those issued for comment today. The reasons for any modifications will accompany the final documents.

Since the guidelines assessment task will extend into the comment period on today's criteria documents, comments on the guidelines not previously submitted will be accepted during this period. It is not necessary to repeat any comments previously submitted in response to the May 18th notice, as they are already being considered in the reanalysis. A comprehensive response to major substantive comments will accompany the final publication of the documents.

Although response to comments on statistical and toxicological aspects of the guidelines must await completion of the guidelines assessment, two more general aspects of the guidelines which raised some questions are further discussed here. The first aspect which may require some clarification is the twofold nature of the aquatic life criteria. These criteria are comprised of a recommended average concentration not to be exceeded during any 24-hour period and a recommended maximum or ceiling concentration which should not be exceeded at any time during the 24-hour period. The average figure represents a concentration estimated to protect against adverse chronic effects. It is presented as an average because chronic data are usually based on tests lasting from several weeks to more than a year, during which the pollutant concentrations vary. Thus some fluctuation is inherent in a mean exposure concentration, and aquatic organisms can be expected to tolerate some excursions over this mean so long as the excursions are not too high or too frequent.

A time period of 24 hours was chosen in order to ensure that concentrations not reach harmful levels for unacceptably long periods. Averaging for longer periods, such as a week or a month for example, could permit high concentrations to persist long enough to produce significant adverse effects. A 24-hour period was chosen instead of a slightly longer or shorter period in recognition of daily fluctuations in waste discharges and of the influence of daily cycles of sunlight and darkness and temperature on both pollutants and aquatic organisms.

Merely specifying an average is insufficient, however, because data show that very high concentrations of chemicals can kill or cause irreparable damage in very short periods. Furthermore, for some chemicals the effect of intermittent high exposures is cumulative. It is therefore necessary to place an upper limit on concentrations over the average value.

The use of a ceiling value based on

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mulation has been developed using the following basic assumptions and guidelines. The assessment of health risks associated with human exposure to environmental pollutants requires predicting the effect of low doses for up to a lifetime in duration. Because in most cases adequate data on toxic effects in humans are not available due to ethical and practical considerations, predictions are usually made by extrapolation from animal data. However, valid clinical and epidemiological studies are used for both qualitative and quantitative evaluation wherever available. A combination of epidemiological and animal dose/response data was considered the preferred basis for quantitative criterion development.

No-effect or specified risk concentrations were estimated by extrapolation from animal toxicity or human epidemiology studies using the following basic exposure assumptions: a 70-kilogram male person ("Report of the Task Group on Reference Man", International Commission for Radiation Protection, November 23, 1975) as the exposure individual; the average consumption of specified fish and shellfish products equal to 18.7 grams/day (Health Perspectives 24:157-172); and the average ingestion of two liters/day of water ("Drinking Water and Health", National Academy of Sciences, National Research Council, 1977). Concentrations based on these assumptions are estimated to be protective of an adult male who experiences average exposure conditions.

For carcinogens, the method of extrapolation from high dose to low dose effects produces health risk and associated concentration levels which are least likely to understate the human risk. For noncarcinogens, concern that extrapolated values may be underprotective is minimized by the use of safety factors of 10, 100, and 1,000. Special subpopulation sensitivities and synergistic effects are not typically factored into the criteria, although they are referenced, if known. The use of upper bound and otherwise cautious estimation methods is believed to compensate at least partially for the absence of specific consideration of these factors.

Human intake of pollutants from consumption of aquatic organisms is estimated using bioconcentration factors (BCF's) along with the average weight of fish and shellfish products consumed daily. Since BCF's generally are not available for edible portions of freshwater and marine species normally consumed in the U.S., procedures have been developed to estimate edible portion BCF's from whole fish BCF's and from octanol-water partition coefficients. For organic pollutants, for which the BCF is generally proportional to the percentage of lipids in the organism, whole species BCF's are adjusted to edible portion BCF's using data on the percent of lipids in various species and the amounts of those species consumed by the population. For inorganic contaminants, specifically metals, for which the BCF depends on the physical and biological characteristics of the aquatic species, BCF's are estimated by taking a weighted average of the known BCF data.

Two basic methods were used to formulate health criteria, depending on whether the target effect was cancer or other toxic manifestations. Determinations of carcinogenicity were made following the principle that any substance which is shown to cause tumors in animals should be considered a suspect carcinogen and therefore a potential hazard for man. Exceptions were considered only where the carcinogenic effect is clearly shown to result from physical rather than chemical induction, or where the route of administration is shown to be inappropriate in terms of conceivable human exposure. These determinations were reviewed by EPA's Cancer Assessment Group.

Carcinogens

Because methods do not now exist to establish the presence of a threshold for most, if not all, carcinogenic effects, EPA's policy is that there is no scientific basis for estimating "safe" levels for carcinogens. The draft criteria for carcinogens therefore state that the recommended concentration for maximum protection of human health is zero. In addition, the documents present a range of concentrations estimated to pose various degrees of incremental "cancer risk." For example, a document might indicate that exposure to a carcinogen through the lifetime daily consumption of water and edible aquatic organisms could result in one additional case of cancer in a population of 1,000,000 at a concentration of 0.1μg/l, and of 1 additional cancer in a population of 100,000 at a level of 1.0μg/l. Other risk-concentration pairs may be calculated by simple extrapolation.

This range of risk estimates is presented for information purposes and does not indicate any "acceptable" risk level, since as noted the only known exposure guaranteeing maximum protection of human health is zero. However, because in many situations the achievement of zero levels may be infeasible at this time, it may be necessary to identify a maximum target risk level to be recommended in the interim. The Agency is considering a level in the range of 10^{-7} to 10^{-6} as such a target. Concentrations corresponding to the target risk level would become a part of the criteria used by States and EPA for developing and reviewing water quality standards. It should be recognized that particular circumstances may call for the recommendation of risk levels of greater stringency than the target. Such circumstances might exist, for example, where significant exposure to a particular pollutant occurs through other routes, or where several potential carcinogens are present in the same water. Also, as noted above, feasibility and other considerations taken into acount in applying the criteria in section 303 or other regulatory standards may result in enforceable standards which pose a less stringent level of risk. EPA invites public comment on the desirability of establishing an interim target risk level, and on the level at which such a target should be set.

Risk assessment from animal data is performed using the "one-hit" model recommended in the Agency's Interim Cancer Procedures and Guidelines for Health Risk and Economic Impact Assessments of Suspect Carcinogens (41 FR 21402, May 29, 1976). The model has been modified to acount for spontaneous tumor incidence and to adjust for tumors not observed because of premature, chemical-induced death. EPA is aware that other models for risk extrapolation exist and have been used by EPA under other Acts, as well as by other Federal agencies. The "one-hit" model has recently been endorsed by the four agencies in the Interagency Regulatory Liaison Group. It is one of the most conserva-

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96-hour LC50 data was a practical choice. Much of the available acute toxicity data are for 96 hours and the time-concentration mortality curves are poorly documented for shorter periods. Also the additive effect of intermittent exposures mentioned above suggest that higher concentrations might cause harm. It is believed that the values derived from 96-hour LC50 concentrations will be protective against acute toxicity during short excursions from the 24-hour average chronic criterion.

In sum, the two-number criterion is intended to describe an ambient water concentration which will produce an average water quality generally suited to the maintenance of aquatic life while restricting the excursions over that average to levels which will not cause harm.

A second point of concern to commenters was the possibility of using the guidelines to develop criteria taking into account specific water body characteristics. Several commenters noted that the guidelines were presented as making such water-body-specific criteria possible, but that the manner in which this would be achieved was not elaborated.

The criteria issued today should make this feature clearer. A major advance in specificity, for instance, is that to the extent possible criteria are separately derived for salt and fresh waters. In another effort to take specific characteristics into account, criteria for compounds whose toxicity varies markedly with various degrees of hardness are presented in the form of curves. Although EPA recognizes that other water characteristics such as pH, temperature, or degree of salinity (as in estuaries) may affect the toxicity of some pollutants, the data base at this time is not detailed enough to allow for further specificity. The guidelines constitute a structure by which such information may be used for deriving section 304 criteria as it becomes available. This structure will also allow States or EPA to take these variables into account, where data permit, when setting enforceable standards through rulemaking in the future.

Criteria for the Protection of Human Health

The objective of the health assessment portions of the criteria documents is to estimate ambient water concentrations which, in the case of non-carcinogens, represent "safe" levels for humans, and in the case of suspect or proven carcinogens, represent various levels of incremental cancer risk.

Health assessments follow general guidelines developed to assist the scientist in identifying and interpreting all pertinent data on the subject pollutant without impeding the exercise of scientific judgment and expertise. These guidelines are presented in Appendix C.

Health assessments typically contain four elements: Exposure, pharmacokinetics, toxicity, and criterion formulation. The exposure section summarizes information on possible exposure routes such as ingestion, inhalation, and dermal contact. The pharmacokinetics section reviews data on absorption, distribution, metabolism and excretion to assess the biochemical fate of the compounds in the human and animal system. The effects section reviews acute, subacute, and chronic toxicity, synergistic and antagonistic properties, and specific information on mutagenicity, teratogenicity and carcinogenicity. From this review the toxic effect to be protected against is identified, taking into account the quality, quantity and weight of evidence characteristic of the data. The last section presents the data analysis and rationale for criterion development and the mathematical derivation of the criterion.

Specific criteria are developed only if a weight of evidence supports the occurrence of the toxic effect and if dose/response data exist from which criteria can be estimated. Criteria for suspect or proven carcinogens are presented as concentrations in water associated with a range of incremental cancer risks in man. Criteria for non-carcinogens represent levels at which exposure to a single chemical is not anticipated to produce adverse effects in man. In a few cases organoleptic (taste and odor) data form the basis for the criterion because chronic toxicity data were either lacking, insufficient or resulted in a level higher than that which produced adverse organoliptic effects. Finally, for a few toxicants no criteria are recommended due to a lack of information sufficient for quantitative criterion formulation.

Most criteria are based on exposure directly through consumption of water containing a specified concentration of a toxic pollutant and indirectly through consumption of aquatic organisms which may bioconcentrate pollutants from the waters in which they live. In addition to providing a range of concentrations estimated to pose specified risks of cancer from the consumption of water and edible aquatic organisms, the carcinogen documents present a range of concentrations corresppnding to risk incurred from the consumption of edible aquatic organisms alone. In the latter case, it is assumed that water consumed by an individual would not contain the pollutant in question. In criteria reflecting both the water consumption and aquatic organisms routes of exposure, the relative contribution varies with the propensity of a pollutant to bioconcentrate, with the consumption of aquatic organisms becoming more important as the bioconcentration factor (BCF) increases. When the BCF is 100, for example, exposure through the two routes is roughly equal. At higher BCF's such as 1,000 to 100,000, the contribution of the water consumption route becomes relatively minor.

For a few pollutants, information about exposure from other sources such as air or non-aquatic diet has been considered in formulating criteria. These situations are explained in the individual documents.

As information on total exposure is assembled for pollutants for which criteria reflect only the two indicated exposure routes, adjustments in water concentration values may be made. It is anticipated that future revisions of health-based criteria will contain more information on additional exposure routes.

Within the limitations of time and resources, all up-to-date published information of significance is incorporated into the assessments. Review articles and reports are used for data evaluation and synthesis. Scientific judgment is exercised in reviewing and evaluating the data in each document and identifying the adverse effects for which protective criteria are sought.

Guidelines and Assumptions

A uniform approach to criteria for-

KANSAS FARMER
NOVEMBER 19, 1977

THE 208 STORY

Oren Long

Editor's note: Here is some hard-hitting advice from a former EPA official on why and how farmers should fight any attempts by government to regulate their agricultural practices.

I'm a farmer and I worked for the Environmental Protection Agency as an agricultural specialist from May, 1971, to August, 1977. Working inside the bureaucracy proved to be quite an educational experience and one that I wish every citizen could have. No one knows more about the inherent limitations of government than bureaucrats themselves. I'm sure that if the average citizen knew as much about these limitations as the bureaucrats do, we would have a lot less government.

My job at the EPA was to help develop programs to control the pollution from all types of agricultural activities, but primarily those activities that create erosion and sediment problems. The EPA doesn't call it that though. They call it "non-point source control." It means the same thing but government agencies like to change the names of things. Of course this is confusing to the public, but that matters little to the bureaucracy. Communication is not one of their primary interests.

The truth is that even though the EPA may have changed the name, their program to reduce erosion and sediment problems is little different from the traditional USDA soil and water conservation programs (SWC) with one important exception. The thing about the USDA programs that the EPA dislikes is that they rely on voluntary participation by the farmer; and the EPA has little or no faith in voluntary programs. They are thoroughly convinced that people, including farmers, won't do what is right even if they know what it is. In their mind, force is the only dependable motivation.

It is natural that the EPA should feel that the only way to solve erosion and sediment problems is to persuade State legislatures to pass erosion and sediment control legislation that would force farmers to adopt the necessary soil and water conservation practices. Otherwise they just won't ever do it.

So since August, 1972, the EPA has helped sponsor erosion and sediment control conferences in 40 States. I attended several of these conferences and from the vantage of hindsight I think it would be fair to say that the real intent (although it was never stated) of these conferences was to convince State officials that voluntary SWC programs are no longer sufficient to solve the problem; that government regulations are needed to reduce erosion and sediment problems to acceptable levels, especially if it is to be done within an acceptable time frame.

But these conferences were not as successful as the EPA had hoped. True, they did focus a lot of attention on erosion and sediment problems. Fourteen states have passed erosion and sediment control legislation and several additional States have such legislation under consideration. Yet, of the 14 States that did pass such laws, only three have included agricultural land in their regulatory programs. And none of these States appear to be overly enthusiastic about exerting the kind of tight control over farmers that the EPA feels is absolutely necessary to solve the problem.

So it has become obvious to the EPA that this approach is not going to produce the results that the Agency desires. Another strategy had to be found to replace it. That new strategy is to use Section 208 of the Federal Water Pollution Control Act to force States to do what the EPA has not been able to persuade them to do. The Agency is investing a lot of time, money and determination in making the 208 Program pay off. It will not be easily discouraged.

What is Section 208? Well, it's that part of the Federal Water Pollution Control Act which requires each State to develop programs to solve all the pollution problems within their borders, including erosion and sediment

problems. Specifically, each State must develop a detailed master pollution control plan and submit it by November, 1978, to the EPA for approval.

However, there is a question about these State 208 plans that appears to bother a lot of people. "Will the EPA approve a State plan that includes voluntary erosion control programs?" Well, as I said before, EPA has no faith in voluntary programs. So they won't want to approve such a State plan. But they really don't have much choice. And they know it! From the many conversations I have had with EPA officials working with 208 plans, their attitude appears to be that even though they may be reasonably sure that some parts of a State plan are unworkable, the EPA must give the State a chance to try and make the plan work. And only after the State has tried and failed will the EPA then have the moral authority to require it to develop a more "dependable" control program, one that is more acceptable to the EPA.

Let me say again that the EPA is very skeptical about the ability of voluntary SWC programs for erosion and sediment control. They like to point to the fact that after 40 years of voluntary efforts, less than half the erosion problems have been solved. The EPA does not intend to wait another 40 years. They are impatient for rapid progress now and they are convinced that force is the only way to overcome what they see as the dilatory and arbitrary attitude of the American farmer.

What about the future? Well, I would like to be optimistic that farmers will have less interference from big government; or at least a more enlightened interference. But I know better. The tide is clearly running in the opposite direction. There is simply no doubt that, with increasing frequency, farmers will find themselves eyeball to eyeball with big government. And it will be a government that is becoming increasingly incompetent relative to the problems it has to solve. So I think it is inevitable that more and more farmers will begin to question the wisdom of trying to negotiate in good faith with an incompetent bureaucracy. However, as frustrating and unrewarding as this effort usually is, it must continue because there is no acceptable alternative.

What then is a proper and effective response for farmers to make to such long-range bureaucratic efforts as the EPA 208 program? One thing is for sure, government will not fade away with a new crop season. Time and patience is no longer an adequate response. Farmers must become more aggressive in their relations with government. They must have more faith in the political process; and one way for them to do this is to play an active part in the 208 discussions now taking place in every State. Believe me, the political process works. I was on the receiving end of that process for over 6 years and it's true that "the squeaky wheel gets the grease".

The first thing that every farmer should do is to subscribe to the free periodical, "Waterwatch" that Kansas publishes to describe the progress of 208 planning efforts. Write to: Kansas Department of Health & Environment, 2700 S. Topeka Blvd.; Topeka, Kansas 66620. And second, when the State holds a 208 meeting in your area, go and listen and ask questions. And speak your piece! Don't be afraid to be militant in your presentation. The State wants to know how you feel, how much opposition there will be and just how determined that opposition is.

It costs money to enforce regulations and it costs a lot of money to regulate a population that is both hostile and determined. So if the State receives feedback from the farming population during these 208 meetings that farmers will resist having their agricultural practices regulated, that they will tolerate such regulations only under a rigid inspection and supervision program, the State will quickly get the message.

Any government agency, be it State or Federal, tries to avoid an open confrontation with the voting public if at all possible. It means nothing but trouble. Irate citizens are forever writing those nasty letters which the agency has to answer. And they also complain to their congressmen. I doubt if there is anything that is guaranteed to please a member of Congress more than to have an opportunity to kick the bureaucracy around for harassing his constituents.

So if farmers can convince the State Legislature that any attempt to regulate their agricultural practices will cost the State more than saying "no" to the Federal Government, the EPA will be informed that they will have to accept a control program that the State can afford to enforce; one that farmers consider to be reasonable; and one that they will support.

One thing I learned while working in the bureaucracy is that government is much too incompetent to regulate something as complex and variable as agricultural practices without causing serious damage to the agricultural industry. No matter how small, innocent and reasonable a regulatory program that is administered by a government agency might begin, it would not remain that way for long. It would soon become burdensome, unworkable and primarily a paper shuffling enterprise. Any agency in charge of administering such a regulatory program would soon become primarily interested in administering the program for the benefit of the Agency rather than to reduce erosion and sediment problems or in protecting the welfare of the farming population.

For this reason, I think any program designed to regulate farming practices must always remain under the strict control of local farmers. The role of government must be restricted to providing technical advice, suggesting options for local landowners and providing stimulus and encouragement for further efforts toward soil and water conservation (or non-point source control) just as it is doing now.

But a word of caution. Intransigence is rarely a virtue. If farmers hope to avoid a confrontation with government over the types of agricultural practices they use, they must be willing to listen more closely to what the EPA and most environmental groups consider to be legitimate and serious environmental questions about some of these practices. Every philosophy, institution or profession must be subjected to constant reexamination to discover those ideas and practices that have outlived their usefulness.

Also, we live in a society composed of conflicting interests, and no one has a monopoly on the truth.

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Therefore, a free and open debate over agricultural practices will always be beneficial, and it will always benefit farmers the most.

For example, I doubt if there is a farmer anywhere that would not agree that the current concern over erosion is probably justified because it is a terribly serious problem; serious to him, his society and to this civilization. More must be done to reduce it. More must be done to protect the food producing capacity of this great Nation. And more will be done. The question is, who will do it and how will it be done? This is a question of the greatest significance to every American farmer.

This is what the 208 meetings are all about. It is important that farmers not leave such important decisions to the bureaucrats and the vested interests. These decisions must be made by those who work the land, who know the problems and who will be directly affected by a solution. I stress again that any solution that is in conflict with the wishes of farmers will be unworkable because it will be unenforceable.

We live in an age where coercion has become an inescapable part of the daily life of every citizen, including the lives of farmers. But coercion is tolerable so long as government observes the principle of "mutual coercion, mutually agreed on." Coercion that is not "mutually agreed on" is a corrupting influence and is therefore intolerable. Such coercion destroys our democratic institutions and our community identity. It erodes the willingness and the ability of people to solve their own problems and to govern themselves. And once people lose their desire to be self-reliant, they lose their capacity for freedom.

The debate over non-point source control will be an important part of the discussions that will go into the creation of each State 208 plan. It is a debate that no farmer can afford to miss. We must keep these decisions in the hands of the local people where there is an opportunity for wisdom and justice to prevail.

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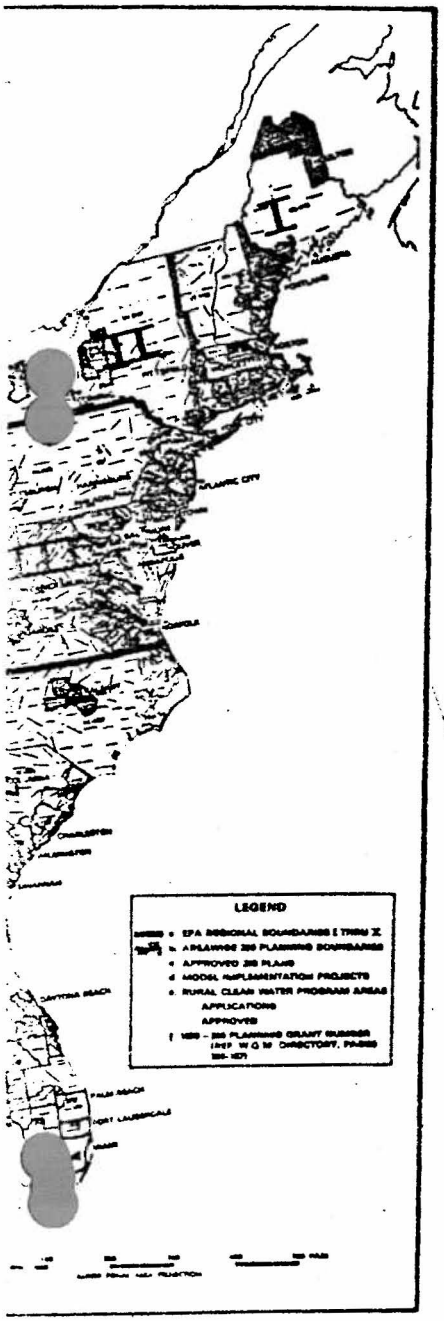
vation, facilities planning, urban storm runoff and pretreatment. With the exception of new designations, to receive additional funds, an areawide agency must be "successful" relative to work undertaken and completed to date. (i.e. the initial plan has been certified by the State and approved by EPA).

Of course the key to the 208 program is implementation. EPA has determined that beginning in FY 80 no funding will be provided unless some portion of the plan is being implemented. □



Proposed Public Participation Regulations

Proposed regulations for public participation (40 CFR 25) were published in the Federal Register in August, 1978. The regulations establish public participation requirements for programs under the Safe Drinking Water Act, the Resource Conservation and Recovery Act, and the Clean Water Act.

The new regulations will replace Part 105 (Public Participation in Water Pollution Control) and Interim Final 249 (Public Participation in Solid Waste Management.)

The scope of the activities covered by 40 CFR 25 are:

- development and implementation of plans, programs, construction and other activities supported with EPA grants to State, interstate, regional and local agencies
- EPA rulemaking
- EPA administration of permit programs
- Delegation of programs to State and substate agencies and administration of such programs
- Development by EPA of major informational materials for wide public distribution
- At a Deputy Assistant Administrator's discretion, development of strategy and policy memoranda

Part 25 regulations cover these major topics: "Public Information," "Public Notification," "Public Consultation," "Public Participation Work Plans" and "Compliance." There are also descriptions for "Responsiveness Summaries" and "Public Participation Summaries," which will be required only when specified by individual programs.

Essentially, Public Information would require that information available to the public should identify significant decisions, alternative courses of action and their implications. Also, information should be accessible, available in advance of important decisions and prepared in layman's language.

Public Notification would require the development of a mailing list of interested or affected individuals and organizations and notification when major decisions are being made. Both

Continued to page 7

208 Planning and Ground Water Protection

Ground water may be out of sight, but it is hardly out of the minds of water quality management planners. Several 208 agencies have been tackling ground water protection as their highest priority.

Ground water needs protecting for several reasons. First, more than 100 million Americans rely on underground sources to supply their drinking water. Ground water supplies roughly 23 percent of the total national water use.

Second, ground water does not readily cleanse itself of contaminants. Once polluted, the slow-moving resource can remain contaminated for thousands of years. Artificial flushing is usually unfeasible because of the large volumes involved.

Little attention has been accorded ground water in the past. Surface water problems, which were more visible, attracted the resources. But, now that 208 plans are being submitted, it is apparent that planning agencies are attacking their ground water problems. Two examples stand out.

The Nassau-Suffolk (NY) Regional Planning Board studied the possible future insufficiencies of the quantity and quality of their ground water. Serious decline of either parameter could threaten the area's almost three million inhabitants who depend on the aquifers for their fresh water supply.

The agency compiled hydrologic and geologic profiles, studied land use, and identified ground water contaminants. (Water level declines would not be sufficiently large to affect availability, they concluded.) The agency did pinpoint storm runoff and other nonpoint sources as principle introducers of contaminants.

The Planning Board recommended programs to control the nonpoint sources of pollution and to promote water conservation. Sewer systems and other structural solutions were secondarily recommended.

The Ventura (CA) Regional County Sanitation District adopted a tripartite solution to ease its problems with overdraft, salt water intrusion and mineralization.

The 208 agency determined that short-term BMPs and water conservation would help balance draft and recharge. Intermediate-term well construction into a lower aquifer zone would ease the burden on the overdrawn upper one. Only the long-term structural solution, a water quality pipeline and improved diversion, would correct the mineralization problem.

The Water Planning Division, meanwhile, is pursuing ways to coordinate 208 planning with other environmental programs to achieve more efficient ground water protection. The State/EPA Agreement is currently considered the best mechanism to accomplish the integration.

At present, the Agreement guidelines call for consolidation of activities under such programs as Construction Grants, Water Supply, Solid Waste, and Water Quality. By FY80, the focus will be on coordinated problem solutions rather than individual program activities.

Relationships to EPA programs other than those administered by the Office of Water and Hazardous Materials, and to other Federal programs, should be clarified in the FY80 Agreements.

Revised WQM Regulations Out for Comment

EPA, in September, published proposed revisions to the regulations governing the water quality management program authorized by §106, 208 and 303(e) of the Clean Water Act of 1977. This revision responds to the President's initiative on consolidation of Federal requirements for State and local planning by combining Part 130; 131; 35.200 through 35.236; and 35.551 through 35.570 of Title 40 into one consolidated set of regulations.

The proposed regulations establish a new focus for continuing planning and implementation, implement applicable provisions of the 1977 Clean Water Act and other new executive orders and directives, and resolve problems with portions of the existing regulations based on the experience of the last several years.

For water quality management under Section 208 of the Act, the proposed regulations emphasize planning and implementation activities that follow development of the initial plans. This change in emphasis occurs because the initial planning phase (generally three years) is approaching completion. To avoid confusion, the old regulations will continue to govern the initial planning phase of existing grantees, except in instances specified in the regulations. WQM planning conducted after the initial phase, including plan updates and revisions will be governed by the new regulations.

The State/EPA Agreement required by existing regulations (§130.11 of this chapter) was designed to establish the level of detail and timing of State water quality management plan preparation and assure the orderly integration of planning efforts and control activities. The original emphasis was on initial plan preparation; the proposed regulation now stresses the integrative and coordinative aspects of the Agreement, and implementation.

Beginning with the publication of the proposed regulations, the State/EPA Agreement becomes the primary means to integrate the planning, management, implementation and evaluation of programs under the Clean Water Act; the Resource Conservation and Recovery Act; the Safe Drinking Water Act; the Clean Air Act; the Toxic Substances Control Act; the Federal Insecticide, Fungicide, and Rodenticide Act; and other laws administered by EPA. Since this subpart governs only that portion of the State/EPA Agreement relating to the 106, 208 and 303(e) programs, other programs included in a State/EPA Agreement will be governed by the applicable provisions of their respective regulations found elsewhere in Chapter 40. The responsibilities of other programs regarding the Agreement will be discussed in their regulations and EPA guidance on State/EPA Agreements.

The preliminary concept paper for revisions to the regulations was issued on May 4, 1978. Many comments were received and incorporated in the proposed regulations. Readers are encouraged to offer comments on the proposed regulations to Program Development Branch, (WH 554) U.S. EPA, 401 M Street, S.W., Washington, D.C. 20460. Final regulations are expected to be promulgated in the fall. □

Missouri Citizens Say Erosion Is Major State Water Pollution Problem

Jefferson City MO, June 16—With 110 of Missouri's 114 citizen water quality committees reporting, soil erosion was identified as the state's major nonpoint source water pollution problem. Some form of erosion was listed as the most important problem by 93.5% of the counties reporting.

The county committee reports are a part of Missouri's Water Quality Management Program (208) which is a jointly funded state/federal project under the direction of the Division of Environmental Quality, Missouri Department of Natural Resources. Authority for the program originates from Public Law 92-500 (Section 208) passed by Congress in 1972. Under the law, the Department of Natural Resources must write a state plan for water pollution abatement by early 1979.

The reports reflect the opinions of about 2,100 county committee members, and other interested citizens. County committees used newspaper articles, radio and TV announcements, and word-of-mouth communication to encourage citizens to offer written or verbal comments about water concerns. Many counties used mini-questionnaires and suggestion boxes to solicit input. Other questionnaires were completed by those attending the 26 public meetings conducted across the state last March.

"We appreciate the excellent guidance Missouri citizens have given us through these county reports," said Richard F. Rankin, director, Water Pollution Control Program, DEQ. "This listing of water pollution concerns will help us write a state water pollution abatement plan that is practical and suitable for most citizens."

More than half of the reports (57%) listed erosion from agriculture as their county's most serious water pollution problem. Another 8% of the reports placed erosion from construction in their first priority position. On a statewide basis, erosion from construction ranked second and erosion from county road was third. Exactly 60% of the counties listed highway and county roads erosion among their first six priorities.

Half of the reporting committees listed solid waste disposal and 42% listed septic tanks as a problem among the first six priority positions. One county, Camden, only listed septic tanks and solid waste disposal as water pollution problems. Littering along streams and waterways was listed by many counties, especially in the Ozark regions.

Margaret Hiett, Texas county committee secretary, offered a prologue with her county report. "There are no major problems with nonpoint pollution in the county," she wrote. The report continued by listing minor problems, such as sediment and littering.

"Texas county is typical of many Ozark counties," Rankin remarked. "The objective for many Ozark counties will be to maintain the water quality existing there now."

Reynolds county suggested an increase in the fines levied against those found guilty of throwing trash along the rivers and highways. This county committee also recommended that users of jeeps and 4-wheel drive vehicles be stopped from driving up and down stream beds.

County committees will now consider the best management practices to eliminate or reduce the water pollution problems they have identified. A series of public meetings will be held at 15 locations across the state between August 7 and 17 to discuss how some of the nonpoint source water pollution problems can be controlled. A second county committee report suggesting the best management practice, how each program can be financed, decisions about what sort of program is wanted, and which agency should administer programs initiated is due two weeks following each public meeting. The last report is due at the Department of Natural Resources September 1. □

Implementation of Agricultural/208 Water Quality Management Plans

One of the main thrusts in water quality management planning has been that of implementation. PL 92-500 specifically states:

"Sec. 101 (a)(5) it is national policy that area wide waste treatment management planning processes be developed and *implemented* to assure adequate control of sources of pollutants in each State, . . . " (emphasis added)

This emphasis on developing an implementable 208 water quality management plan has been carried forth in EPA rules, regulations, and guidance.

The Model Implementation Program within EPA and USDA catches this spirit of, "lets get something done". A request to identify "high priority" water quality problems within the agricultural sector was made of each State through the State USDA Coordinating Committees and the Regional offices of EPA. Together with local interests they were to identify problems that were severe enough that local residents could easily see that something had to done. More than fifty (50) applications were received and evaluated by State, EPA and USDA programs and research management staff. Out of this evaluation, seven areas were selected to develop model implementation programs. Although only seven MIP areas were selected for national evaluation, a number of the proposals are being acted upon locally.

The enthusiam displayed in local MIP areas reflect the impacts that this program, and the subsequent Rural Clean Water Program, will have on rural water quality management. Decisions regarding acceptance of local responsibilities have been made in all projects. Local financial support for these projects has been agreed upon in all areas. County, State, and Federal offices have volunteered manpower and money to meet these projects' clean water goals.

For example, the Maple Creek Watershed MIP area in Nebraska has received support from fourteen groups. These are:

1. *EPA National office* — $10,000
2. *EPA Regional office* — $118,400
3. *EPA R&D Corvallis lab* — $20,000
4. *Nebraska Natural Resources Commission* — Contract administration
5. *Agricultural Conservation Program* — $375,789
6. *Soil Conservation Service* — A soil conservationist and soil conservation technician have been assigned to work exclusively within the MIP area.
7. *Local Land Owners* — Manpower and financial resources to complete conservation treatment for water quality purposes has been volunteered.
8. *Farmers Home Administration* — Cooperation in providing financial assistance to maximize the beneficial impact of its program on water quality.
9. *Forest Service* — has pledged its support and offered its services in all areas that require their expertise.
10. *Economic and Statistical Cooperative Service* — attitude surveys of landowners have been made and follow up surveys planned.
11. *Science and Education Administration — Federal Research* — Initial selection, evaluation, and monitoring of the site selected.
12. *University of Nebraska — Lincoln/Cooperative Extension Service* — Coordination of information dissemination.
13. *University of Nebraska — Lincoln/Experiment Station* — Agreed to oversee the biological monitoring.
14. *Lower Elkhorn Natural Resources District* — coordination to prepare the work plan and start the monitoring program.

This effort in Nebraska is not unique. The other six MIP areas have equal enthusiasm and support. These are:

Indiana — Indiana Heartland area where heavy sediment loads are affecting water quality;

New York — Delaware River, West Branch watershed where agricultural and forest harvest activities including many dairy and feedlot operations have caused serious water quality problem;

Oklahoma — Little Washita River with typical south central Oklahoma water pollution problems caused by sediment from gullying cropland and county roadsides, as well as oil and gas developments;

South Carolina — Broadway Lake watershed east of Anderson City, where serious degradation of water quality stems from sedimentation, agricultural chemicals, and animal waste;

South Dakota — Lake Herman, a natural lake near Madison in Lake County, a recreation lake with water pollution problems that including soil erosion and sedimentation;

Washington — Sulphur Creek, Yakima County, whose chief pollution problem is due to the sedimentation, salts and nutrients from irrigation return flow.

The Clean Water Act of 1977 (PL 95-217) also carries this spirit of "lets get something done on the land" Section 35 of this Act authorizes funding to individual land owners or operators for the purpose of installing best management practices (BMPs) consistent with a 208 water quality management plans. The Secretary of Agriculture is to administer this program with the concurrance of the EPA administrator. This program is called the Rural Clean Water Program (RCWP).

Funding of the RCWP is still in appropriation committees within the U.S. Congress. The outlook is promising for fiscal years 1979 and 1980. □

ENVIRONMENT AND PUBLIC RESOURCES COMMITTEE

GUEST LIST

NAME (Please print)	REPRESENTING	WISH TO SPEAK Yes	No
[illegible] Twedt	League of Women Voters		
David P Conover	Nevada Farm Bureau	✓	
Thomas Ballow	Nevada Dept Agric	✓	
Phil Marshall	" " "		
Pete Morros	DCNR		
[illegible]	Nevada [illegible]	✓	
[illegible]	Nevada [illegible]	✓	
Howard Winn	Nevada Mining Association	✓	
Jack Warnecke	Carson City Bd of Supv.	✓	
Ted P. Bendure	State Conservation Comm		✓
Lee Bergevin	Douglas		✓
Sue Milligan	Nev Assoc of Realtors	X	
[illegible] Connolly	State Assoc. of Conservation Districts	X	
[illegible] Bishop	No. Nev. Affirmative Action Trust		✓