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United States
Environmental Protection
Agency

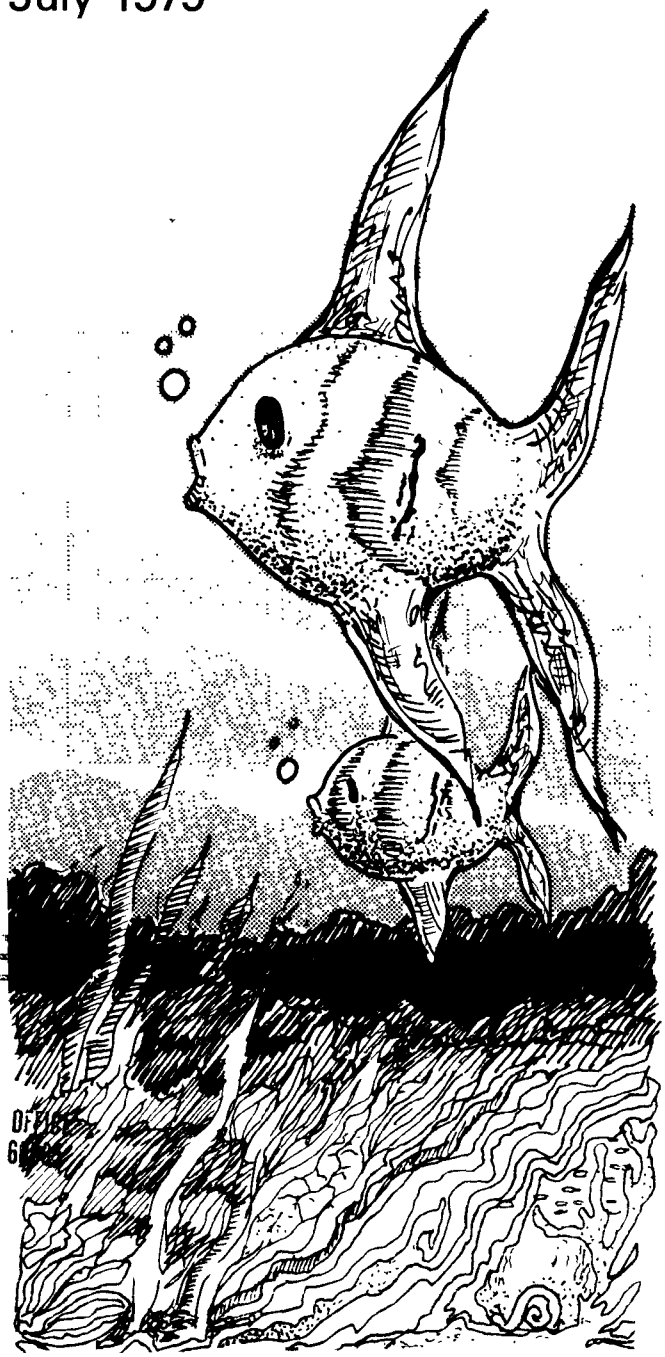
Office of Water
Planning and Standards
Washington DC 20460

Water

EPA

Questions and Answers on Water Quality Standards

July 1979



QUESTIONS AND ANSWERS ON WATER QUALITY STANDARDS

The water quality standards program is directed by the Environmental Protection Agency, an independent regulatory agency which has responsibility for approving State-adopted standards, evaluating adherence to the standards, and overseeing enforcement of standards compliance.

Standards, the first nationwide strategy for water quality management, contain three major elements: the use (i.e., recreation, drinking water, fish and wildlife propagation, industrial or agricultural) to be made of the waters; criteria to protect those uses; and an antidegradation statement to protect existing water quality.

For specified pollutants, minimum water quality criteria or numerical specifications based on physical, chemical and toxicological data and scientific judgment, are stated in a 1976 EPA publication entitled Quality Criteria for Water. The information given for each criterion therein may be used to develop enforceable standards. Standards are adopted by States following their own administrative requirements and then submitted to EPA for review and approval. EPA may promulgate standards for a State if the Agency deems the State-adopted standard does not meet the requirements of the Clean Water Act or in cases where the Administrator judges that a new or revised standard is necessary.

Water quality standards are subject to change when justified by newly available technical or scientific information. For the latest information refer to the existing approved water quality standards which can be obtained from the individual State water pollution control agency or the appropriate EPA regional office, listed in appendix A.

This pamphlet contains general information on a number of standards issues but it is not a substitute for detailed policy and regulatory requirements.

QUESTIONS AND ANSWERS ON WATER QUALITY STANDARDS

1. When did the water quality standards program begin?

The water quality standards program was established by the Water Quality Act of 1965, which was passed unanimously by Congress.

2. What law applies now?

Section 303 of P.L. 92-500 of the 1977 amended Clean Water Act (33 U.S.C. 1314(a)).

3. Who administers the water quality standards program?

EPA's Regional Administrators have the authority to review and approve State standards following national policies and guidelines developed by the Criteria and Standards Division (WH-585), Office of Water Planning and Standards, 401 M St., S.W., Washington, D. C. 20460. Authority to promulgate Federal standards is reserved for the Administrator of EPA.

4. How many States, territories, or possessions are included in the water quality standards program?

All fifty States plus the District of Columbia, Guam, Puerto Rico, Samoa, Trust Territory of the Pacific Islands, and the Virgin Islands.

5. What does the law require States to do in order to establish standards?

It requires that at least once every three years a State must hold a public hearing(s) for the purpose of reviewing applicable water quality standards, and to modify and adopt new or revised standards where appropriate.

6. Who actually sets the standards?

The most common method is that the States, through the public hearings, set surface water classifications and adopt criteria to meet those classifications. After adoption by the State, they are submitted to the appropriate EPA regional office for approval. The Administrator of EPA may promulgate standards in cases where a new or revised standard is deemed necessary.

7. Are water quality standards approved for all States?

Yes. Standards are approved for all 56 jurisdictions covered by the law. As standards are revised from time to time, it is possible for some portions of State-adopted standards not to have EPA approval. When differences between EPA and the State cannot be resolved through negotiation, Federal promulgation action may result.

8. What items comprise water quality standards?

Water quality standards are comprised of numerical and narrative criteria applied to specific surface water uses or classifications, plus an antidegradation policy.

9. Exactly what are surface water classifications, criteria, and antidegradation?

(A) Surface water classifications include the beneficial uses to be made of a particular stretch of a river, lake, or coastal water; such

as, public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes including navigation, or a combination of these uses.

(B) Numerical criteria reflect the latest scientific knowledge on the identifiable effects of pollutants on public health and welfare, aquatic life, and recreation. Criteria are qualitative or quantitative estimates of the concentration of a water constituent which, when not exceeded, will ensure water quality sufficient to protect a designated water use.

(C) Antidegradation policies are commitments to maintain water quality gains and prevent backsliding.

10. Are all criteria given in numerical form?

No. Some criteria are narrative; where possible, numerical standards are used.

11. Are economics considered in establishing criteria?

No. A criterion is a scientific entity based solely on data and scientific judgement. It does not reflect consideration of economic or technological feasibility. Economics may be considered in setting beneficial use designations and as a factor supporting stream use downgradings (see Question 25).

12. Why is the propagation of fish and wildlife used as a basic guide in improving water quality?

Waters sufficient to provide for the propagation of fish and wildlife are generally suitable for all human uses except swimming, for which microbiological criteria apply, and untreated public drinking water. The term public water supplies in standards refers to waters to be used as public drinking water after suitable treatment.

13. What kind of characteristics are covered by the water quality criteria?

Physical, chemical, microbiological, biological and radiological properties of water as well as fate and effect of toxic chemicals and biochemical constituents are covered by water quality criteria.

14. What does the Environmental Protection Agency use to determine the acceptability of standards?

Quality Criteria for Water, 1976 (QCW); the Advance Notice of Proposed Rule Making ("ANPRM") (43 FR 29588, July 10, 1978); 40 CFR 35.1550; and Chapter 5 of the Guidelines for State and Areawide Water Quality Management Program Development.

15. Are copies of these reports available?

Yes. QCW, 1976 may be purchased from the Government Printing Office at $3.50 a copy (GPO order number 055-001-01049-4). Chapter 5 Guidelines may be obtained from EPA, Water Planning Division (WH-554), 401 M St., S.W., Washington, D. C. 20460.

16. What does the term "presumptive applicability" mean?

The criteria published in Quality Criteria for Water (QCW) have been declared in a policy statement by EPA to be "presumptively applicable" for use in State water quality standards. This policy requires that criteria which States develop to support designated uses must be equally protective of the designated use as the criteria published in QCW, or an appropriate justification must accompany the adoption of less stringent criteria. Thus, for any criteria to protect a specific designated use contained in QCW which a State might include in its standards, EPA presumes the QCW recommendations apply.

17. Are there any exceptions to the QCW recommendations?

Yes. Standards may be less stringent than recommended levels for a specified use if it can be proven that: (1) the waterway, in its natural state, has component levels which differ from the given criteria values; (2) naturally occurring water characteristics exist that permit designated uses to be attained or maintained with the application of less stringent criteria; or, (3) recent scientific information is available that supports less stringent criteria.

18. How did EPA get started on the project to develop water quality criteria for toxic pollutants?

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.

19. When will these criteria be issued?

Proposed criteria for 27 of the 65 pollutants were published for public comment on March 15, 1979, in the Federal Register (44 FR 15926). Criteria for the remaining 38 are expected to be published during July 1979 with final publication for all 65 by the end of 1979. Criteria will be issued under section 304(a) of the Clean Water Act and are not water quality standards nor do they have any regulatory effect.

20. How will these criteria be used in the water quality standards program?

These criteria could be used to develop enforceable standards; however, it is important to know that before an enforceable standard is set under any statutory authority, administrative rulemaking procedures by either the States or EPA will provide interested parties the opportunity

to participate in the setting of standards. EPA has not decided on the way to use the criteria in the standards program but several options exist: the criteria can be published only as information, they can be viewed as an extension of Quality Criteria for Water with the policy of presumptive applicability applied, they can be promulgated as national standards, or certain selected pollutants may be identified and standards developed for them.

21. Where can a more detailed discussion be found of the issues associated with developing these criteria, their use in water quality standards, and relationship with other programs?

In the Federal Register of March 15, 1979 (44 FR 15926) and of July 10, 1978 (43 FR 29588).

22. Is there an opportunity for public participation in the development of the criteria?

Yes. Public comments were solicited on the proposed criteria and will be considered in the preparation of final criteria documents.

23. Where can copies of the criteria documents be obtained?

National Technical Information Services
5285 Port Royal Road
Springfield, Va. 22161

24. What is a stream downgrading?

The term "downgrading" applies solely to the beneficial use designation of a water body and is used to describe the downward reclassification of a water body when the current designated use requires more stringent water quality criteria than are currently being attained.

25. How are downgrades initiated and approved?

States may request approval of a stream downgrade from EPA based on one of three factors: (1) natural background conditions, (2) irretrievable man-induced conditions, and (3) the imposition of controls above or in addition to the technology-based requirements of Best Available Technology Economically Achievable and Best Practicable Wastewater Treatment Technology would be required and would result in a substantial and widespread adverse economic and social impact. Waters in which the existing use is the same as the standard cannot be downgraded.

26. Do water quality standards apply to all navigable waters?

Yes.

27. Are standards for similar surface water uses comparable throughout the United States?

Generally, yes. However, one goal of water quality standards adoption is to encourage this endpoint, while recognizing local environmental conditions.

28. Can water quality standards for surface water differ within the same State?

Yes. Water quality standards vary within the State depending upon the use to be made of the receiving water. Water quality standards may also vary on each body of water depending on the use to be made of each water segment or natural background condition in the particular water system.

29. Is the purpose of water quality standards to return all waters to their pristine state?

No. The purpose of the water quality standards program is to protect the public health or welfare and enhance the quality of water in line with the uses to be made of the surface water in question.

30. Can high quality waters, i.e. waters not yet polluted, be permitted to deteriorate as long as approved water quality standards are met?

No. An antidegradation provision in standards prohibits the deterioration of high quality waters.

31. Do all States have an antidegradation provision in their standards?

Yes.

32. Where is information available on the approval status of standards for each State?

This question can be answered by either the State water pollution control agency or the Environmental Protection Agency through its Regional Offices or at its Washington, D.C. headquarters.

33. Can the Environmental Protection Agency disapprove standards legally adopted by a State?

Yes. EPA Regional Administrators have 90 days after receipt of State standards to issue a disapproval and notify the States of the changes which are required.

34. What happens to the standards if they are disapproved?

The States have 90 days to adopt the required changes. If this is not done EPA must promptly initiate action to begin promulgation action. EPA publishes proposed water quality standards for a State in the Federal Register and after opportunity for public hearings and comment on the proposals, publishes final (promulgates) standards for a State.

35. Once adopted by the States and approved by the Federal government, may standards be modified or revised?

Yes.

36. Who can initiate revisions or modifications?

Either the State or the Administrator of EPA may take action to revise standards.

37. How likely is it that standards will be revised?

With continued advances in the science and technology of water pollution control, it is expected that many of the water quality standards approved as of now will be improved from time to time in the years ahead in order to meet mounting demands for clean water for necessary and desirable use. Standards will also be upgraded as increased knowledge and improved analytical techniques become available. The Act requires that a State review its water quality standards at least once every 3 years.

38. If standards might later be revised, what is the use of investing money to meet today's standards and running the risk of still additional future investment?

One of the costs of doing business is keeping pace with advances in technology and changes in the market place. As water quality technology changes and the public continues to demand cleaner water, all current and future requirements will have to be met. One of the chief causes of today's dilemma is that we failed to take early action to control or prevent pollution. Delay today simply means added problems for tomorrow.

39. What is done to ensure that standards are met?

Each State has a surveillance or monitoring system to verify compliance with standards.

40. How are water quality standards enforced?

The primary mechanism for enforcing water quality standards is through translation into water-quality-based permit limitations. Permits are issued under provisions of the National Pollutant Discharge Elimination System (i.e. NPDES Permits).

41. Can the Federal government enforce standards?

Yes. Once a water quality standard based limit is in an NPDES permit, it can be federally enforced.

42. What are the basic causes of pollution?

The causes of water pollution fall into two broad categories - (1) untreated or inadequately treated wastes from easily identified, point-of-origin sources such as municipal waste treatment discharges, and (2) waste from diffuse or nonpoint sources: silt or fertilizers washed into a stream during a heavy rain.

43. What is a "mixing zone" that is called for in some standards?

A mixing zone is a limited area, serving as a zone of initial dilution, in the immediate area of a point or nonpoint source of pollution. Establishing a mixing zone policy is a matter of State discretion. Such a policy must be consistent with the Act and is subject to EPA approval.

44. Have the water quality standards resulted in any meaningful achievements towards the goal of cleaner water?

The standards program, coupled with the expanded Federal grants program for waste treatment construction, have provided a powerful stimulus to the construction or expansion of municipal waste treatment plants. The requirements of the standards program have accelerated the industrial trend of including pollution control as a legitimate and regular part of the cost of production. Efforts are being intensified to prevent or control pollution from diffuse, nonpoint sources.

45. Do water quality standards apply to ground waters?

No. EPA recommends that States adopt water quality standards to protect the underground waters of the State, however, such standards are not a Federal requirement.

APPENDIX A

WATER QUALITY STANDARDS COORDINATORS

Kenneth M. Mackenthun
EPA Headquarters
401 M. St., S. W.
Washington, D. C. 20460
202-755-0100

Bill Butler
EPA Region I
John F. Kennedy Federal Bldg.
Boston, MA 02203
617-223-5131

Harry Allen
EPA Region II
26 Federal Plaza
New York, NY 10007
212-264-1463

Gerald Pollis
EPA Region III
6th & Walnut St.
Curtis Bldg.
Philadelphia, PA 19106
215-597-3425

Mike McGhee
EPA Region IV
345 Courtland St.
Atlanta, GA 30308
404-257-3012

Robert Pearson
EPA Region V (5WWQ)
230 South Dearborn St.
12th Floor
Chicago, IL 60604
312-353-2166/2170

Sam Nott
EPA Region VI
1201 Elm St.
First International Bldg.
Dallas, TX 75270
214-729-2662

Dale Parke
EPA Region VII
324 East 11th St.
Kansas City, MO 64106
816-758-6391

Tom Willingham
EPA Region VIII (AW-CTC)
1860 Lincoln St.
Denver, CO 80203
303-327-2731

Phil Woods
EPA Region IX
215 Freemont St.
San Francisco, CA 94105
415-556-2263

Bob Rulifson
EPA Region X (M/S-441)
1200 6th Ave.
Seattle, WA 98101
206-399-1216

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