

VA. Coastal Zone Management Program

State Water Control Board

Water Quality Standards

COASTAL ZONE
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U. S. DEPARTMENT OF COMMERCE NOAA
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WATER QUALITY STANDARDS

ADOPTED PURSUANT TO
SECTION 62.1-44.15(3)
OF THE CODE OF VIRGINIA (1950),
AS AMENDED

COMMONWEALTH OF VIRGINIA

STATE WATER CONTROL BOARD
RICHMOND, VIRGINIA

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INTRODUCTION

Basis and Purpose

The State Water Control Law mandates the protection of existing high quality State waters and provides for the restoration of all other State waters to such condition of quality that any such waters will permit all reasonable public uses and will support the propagation and growth of all aquatic life that might reasonably be expected to inhabit them (Section 62.1-44.2). The adoption of water quality standards under Section 62.1-44.15(3) of the Law is one of the Board's methods of accomplishing the Law's purpose.

Water quality standards consist of narrative statements that describe water quality requirements in general terms, and of numeric limits for specific physical, chemical or biological characteristics of water. These narrative statements and numeric limits describe water quality necessary to meet and maintain reasonable and beneficial uses such as swimming, public water supply and the propagation and growth of aquatic life. Standards include general, as well as specific, descriptions since not all requirements for water quality protection can be numerically defined. In those cases where numeric standards have not been formulated for scientific or practical reasons, the general standards establish broad requirements to protect and maintain beneficial uses of State waters. Standards are not static. They will change and be constantly adjusted to reflect changes in law, technology and information available to the Board and its staff.

Standards are used in the administration of several Board programs. One is the issuance of permits for the discharge of treated wastewater under requirements of both Federal and State law. Federal law (the Clean Water Act) mandates that certain minimum treatment levels be achieved by all dischargers. Before the Board issues a discharge permit, it must first determine if those minimum levels are sufficient to maintain water quality standards in the receiving stream. If not, the Agency formulates and enforces more-stringent permit requirements which will allow water quality standards to be met. The Board's 401 Certificate program also uses water quality standards. Under Section 401 of the Clean Water Act, if a Federal permit is needed by any project which will or may result in a discharge to State waters, the project must first receive certification from the appropriate State that the project will not violate water quality standards. The State Water Control Board is the 401 certifying agency in Virginia, and it judges whether or not water quality standards will be contravened by proposed projects in administering this certificate program.

Water quality standards are intended to protect the beneficial uses of State waters. Virginia's standards do not assign specific uses to all streams, although they do specifically designate and protect trout streams and public water supplies. The standards are intended to protect all State waters for recreational use and for the propagation and growth of a balanced population of fish and wildlife. By protecting these two uses, which usually require the most stringent standards and the highest degree of protection, other usually less restrictive uses like industrial water supply, irrigation and navigation are usually also protected. Should additional standards be needed to protect other uses as dictated by changing circumstances or improved knowledge, they can be formulated and adopted.

Background

From its beginning in 1946 until the mid 1960's, the State Water Control Board generally approached control of water quality problems on a case-by-case basis, frequently through the adoption of wastewater treatment requirements for individual watersheds. By the mid 1960's, however, the Board was beginning to recognize the need for a program of water quality control with a broader, more extensive base — one that would deal with actual in-stream water quality throughout the entire state.

The Federal "Water Quality Act of 1965" (PL-89-234), provided the incentive and framework for such a program by requiring the establishment of certain water quality standards on a local, state and national scale. States which did not, or could not, adopt standards would have such standards of water quality established by the Federal government. As a result of the Federal Act amendments, and under State law, the Board first developed and adopted water quality standards in 1966 through 1968. They were substantially amended in 1970.

The 1972 amendments to the Federal Water Pollution Control Act (PL-92-500), restated the concept of water quality standards, and set certain water quality goals such as the attainment, by July 1, 1983, of water quality which provides for protection of fish, shellfish, and wildlife and for recreation in and on the water. In 1973 Virginia's water quality standards were slightly amended to ensure compliance with these aims.

This Act further required that a state's water quality standards be reviewed at least once every three years and, as appropriate, modified or amended. Virginia has completed one review period through public hearings in 1976 and formal adoption of amendments in 1977. The present standards have received Federal (Environmental Protection Agency) approvals required by the Act.

Development and Adoption

In order for water quality standards to be realistic while at the same time serving the stated purpose of maintaining or improving water quality, there first must be established a relationship between the standard itself and the benefit to be derived from adoption and enforcement of the standard. This relationship is generally determined by making certain studies, or evaluating already completed studies that define or attempt to define which standards and limits are required to provide needed levels of protection for certain water uses. A decision is then made regarding what levels of protection are desired. Finally, the appropriate standards and limits are chosen in order to provide the desired level of protection.

There are many sources of information or studies useful in the development of standards, and from time to time studies are conducted as needed by the Board or by consultants under contract to the Board. A major source of information is the publication *Quality Criteria for Water* published by the United States Environmental Protection Agency in 1976, pursuant to the requirements of the 1972 amendments to the Federal Water Pollution Control Act.

Since standards are designed to protect specific uses, the need for new or amended standards often comes about as a result of an identified new use of a body of water. For example, the Commission of Game and Inland Fisheries may identify a stream which was previously not known to support trout, as a natural trout stream. In this case the standards may be modified to protect this particular use. Also, a locality might want to use a stream as a water supply, and if the stream was not already classified as a public water supply, new standards would have to be applied to protect this use.

Information from every segment of the population is helpful in the development of standards, and their adoption can have wide-ranging effects. Public participation at all levels of standards development is therefore important to the adoption and implementation of standards which reflect the desire of the general public. The Law requires opportunity for public participation in the adoption of standards. Accordingly a public hearing with adequate public notice is mandatory before any standard can be adopted, amended, or cancelled. Following public notice of the hearing, the public has an opportunity to study the proposed standard and determine its effects. At the public hearing any person who is either for or against the proposed Board action on the standard may state his interest in the matter and enter relevant evidence into the hearing record.

Recent amendments to State Law added another mandatory consideration relative to standards — that the Board must give ample consideration to social and economic costs and benefits which will result from any action on the standard, whether by adoption, modification or cancellation.

Following the public hearing the Board's staff examines the hearing record, makes recommendations, and submits both the record and the recommendations to the Board for its consideration and action. Board action on a standard becomes effective thirty (30) days after filing with the Registrar of Regulations who keeps all standards and regulations of State agencies on file.

Both Federal and State legislators recognized the need for periodic review of all standards, and now both Federal and State law require that standards be reviewed at least every three years for possible changes and that the Board hold sufficient public hearings for public input. The Board is required to modify or cancel these standards, or to adopt new ones, as needed.

Summary and Explanation of Contents

This booklet contains the following seven sections:

1. Standards with General State-wide Application (Pages 5-11)

These standards apply to waters on a State-wide basis and include such things as the General Standard, dissolved oxygen and temperature standards for surface waters, and groundwater standards.

2. Standards with More Specific Application (Pages 12-14)

These standards have a specific application; they include, for example standards for public water supplies.

3. Procedural Requirements (Pages 14-15)

This section includes rules that are a part of the standards such as a rule specifying acceptable analytical procedures for water testing.

4. River Basin Section Tables (Pages 15-65)

This section divides the State's nine river basins into sections and indicates what specific standards apply to these specific sections.

5. Key to Special Standards (Pages 67-75)

This section contains the entire printing of special standards that were too long to include in the tables of Section 4.

6. Water Quality Criteria (Pages 76-78)

This section includes information about levels of pollutants to protect surface water and groundwater quality; they are not standards.

7. River Basin Maps (Plates 1-13)

Maps in this part of the booklet delineate the river basin sections described in Section 4.

Additional more specific information can be found in the individual parts of the booklet.

In order to find applicable standards for a surface stream, first one must determine what River Basin Section the stream is in. This may be determined directly from the River Basin Section Tables or it may be necessary to determine the section by using the maps in Section 7.

The River Basin Section Tables indicate each section's Classification (Roman numeral I through VI). Paragraph 1.04 contains the standards that apply to the particular class and paragraphs 1.05 - 1.07 indicate other standards. The River Basin Section Tables also indicate whether any Special Standards apply to the stream. The entire special standard is printed in the special standards column if short; otherwise, a letter in the Special Standards Column refers the reader to the Special Standard which can be found in the Key to Special Standards Section, Section 5, beginning on page 67.

To determine applicable groundwater standards for an area, one can determine which physiographic province the area is in by checking Figure 1 on page 11, then by referring to the standards in Paragraph 1.09 on pages 9-10 that apply to that physiographic province.

In the sections that follow, all standards are shown in boldface type both in text and in tables. The text in lightface type preceding such standards is generally specific explanatory information relating to the standards that follow.