

ICS 13.060



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB 3838-2002

Replacing GB 3838-1988; GHZB 1-1999

Environmental quality standards for surface water

地表水环境质量标准

(English Translation)

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Foreword

In order to implement "Environmental Protection Law of the People's Republic of China" and "Law of the People's Republic of China on Prevention and Control of Water Pollution", prevent water pollution, protect surface water quality, protect human health, and maintain a good ecosystem, this Standard is developed.

This Standard divides the standard items into: basic items of environmental quality standards for surface water, supplementary items of surface water sources for centralized drinking water, and specific items of surface water sources for centralized drinking water. The basic items of environmental quality standards for surface water ARE applicable to the surface waters with use functions such as rivers, lakes, canals, channels, and reservoirs throughout China. The supplementary items and specific items of surface water sources for centralized drinking water ARE applicable to the primary and secondary protection zones of surface water sources for centralized drinking water. The specific items of surface water sources for centralized drinking water SHALL BE selected by the environmental protection administrative department of the people's government above the county level, according to the characteristics of the surface water quality of this region and the needs of environmental management. The supplementary items of surface water sources for centralized drinking water and selected specific items ARE used as supplementary indicators for basic items.

There are a total of 109 items in this Standard; of which 24 are basic items of environmental quality standards for surface water; 5 are supplementary items of surface water sources for centralized drinking water; 80 are specific items of surface water sources for centralized drinking water.

Compared with GHZB 1-1999, this Standard

- adds an indicator of total nitrogen to the basic items of environmental quality standards for surface water;
- deletes the basic requirements and three indicators of nitrite, non-ionic ammonia and Kjeldahl nitrogen;
- adjusts sulfate, chloride, nitrate, iron, and manganese to supplementary items of surface water sources for centralized drinking water;
- revises the standard values of seven items of pH, dissolved oxygen, ammonia nitrogen, total phosphorus, permanganate index, lead, and fecal coliforms;

1 Scope

1.1

In accordance with the functional classification and protection objectives of surface water environment, this Standard specifies the items to be controlled and limits for water environment quality, as well as water quality evaluation, analysis methods for water quality items, and implementation and supervision of standards.

1.2

This Standard is applicable to the surface waters with use functions, such as rivers, lakes, canals, channels, reservoirs, in the territory of the People's Republic of China. For water areas with specific functions, it shall implement the corresponding special water quality standards.

2 Reference standards

The provisions contained in "Standards for drinking water quality" (Ministry of Health, 2001) and in the analysis method standards and specifications listed in Table 4~Table 6 of this Standard, when cited in this Standard, constitute the provisions of this Standard; have the same effect as this Standard. When the above standards and specifications are revised, the latest editions shall be used.

3 Waters function and standard classification

According to the environmental functions and protection objectives of surface waters, they are divided into five categories according to their functions:

Category I: Mainly applicable to source water and national nature reserves;

Category II: Mainly applicable to the primary protection zone of surface water sources for centralized drinking water, the habitat of rare aquatic organisms, the spawning ground of fish and shrimp, the feeding ground of larvae and juveniles, etc.;

Category III: Mainly applicable to the secondary protection zone of surface water sources

for centralized drinking water, fishery waters and swimming areas such as fish and shrimp overwintering grounds, migration channels, aquaculture areas;

Category IV: Mainly applicable to general industrial water areas, recreational water areas where the human body is not in direct contact;

Category V: Mainly applicable to agricultural water areas, water areas with general landscape requirements.

Corresponding to the above five categories of waters functions of surface water, the standard values of the basic items of environmental quality standards for surface water are divided into five categories. The standard values of the corresponding categories are implemented for different functional categories respectively. The standard value of high waters function category is stricter than the standard value of low waters function category. If the same water area has multiple use functions, the standard value corresponding to the highest function category shall be implemented. The realization of waters function has the same meaning as the achievement of the function category standard.

4 Standard values

4.1

See Table 1 for the standard limits of basic items of environmental quality standards for surface water.

4.2

See Table 2 for the standard limits of supplementary items of surface water sources for centralized drinking water.

4.3

See Table 3 for the standard limits of specific items of surface water sources for centralized drinking water.

5 Water quality evaluation

5.1

The environmental quality evaluation of surface water shall be based on the category of waters function that shall be realized. The corresponding category standards shall be selected for single-factor evaluation. The evaluation result shall explain the water quality up-to-standard situation. In case of exceeding the standard, the exceed-standard items and exceed-standard multiple shall be stated.

5.2

For waters with obvious characteristics of wet, normal and dry seasons, water quality evaluation shall be conducted in different water seasons.

5.3

The water quality evaluation items of surface water sources for centralized drinking water SHALL include the basic items in Table 1, the supplementary items in Table 2, and the specific items selected and determined from Table 3 by the environmental protection administrative department of the people's government above the county level.

6 Water quality monitoring

6.1

The standard value of the items specified in this Standard requires that the water sample settles naturally for 30 min after collection; the non-settled part of the upper layer is taken for analysis according to the prescribed method.

6.2

The sampling points and monitoring frequency of surface water quality monitoring shall meet the requirements of the national surface water environmental monitoring technical specifications.

6.3

The analysis methods of the water quality items in this Standard shall preferably be the methods specified in Table 4~Table 6. Other equivalent analysis methods such as ISO method system may also be used; but applicability inspection is required.

7 Implementation and supervision of standards

7.1

This Standard shall be supervised and implemented by the environmental protection administrative department of the people's government above the county level and related departments, according to the division of responsibilities.

7.2

The water quality exceed-standard items of surface water sources for centralized drinking water, after being purified by waterworks, must meet the requirements of "Standards for drinking water quality".

7.3

For items not specified in this Standard, the people's governments of provinces, autonomous regions, and municipalities directly under the Central Government can formulate local supplementary standards; and, report them to the environmental protection administrative department of the State Council for the record.