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PEOPLE'S REPUBLIC OF CHINA**

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**Flood control standards
(English Translation)**

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1 General

1.0.1

This standard is formulated in order to meet the flood control requirements of various sectors and regions of the national economy and the needs of flood control construction, and to protect people's life and property.

1.0.2

This standard applies to protection objects such as flood protection areas, industrial and mining enterprises, transportation facilities, power facilities, environmental protection facilities, communication facilities, cultural relics and tourist facilities, water conservancy and hydropower projects, and defense against storm floods, snowmelt floods, rain and snow. Planning, design, construction and operational management of mixed flood and coastal and estuary defense against tidal waters.

1.0.3

The flood control standards of various protected objects shall not only conform to this standard, but also comply with the current relevant national standards.

2.0.1 Flood protection object

The abbreviation of flood protection object refers to the object that needs flood protection under the threat of flood (tidal) water.

2.0.2 Flood protection area

Areas that may be inundated by flood (tidal) water and that need to be protected by flood control engineering facilities.

2.0.3 Protection grade of flood protection

For the same type of protected objects, in order to facilitate the determination of corresponding flood control standards for their scale or nature, they are divided into several grades according to some characteristic indicators from the perspective of flood control.

2.0.4 Equivalent economic scale

The product of the per capita GDP index and the population of the flood protection area.

2.0.5 Probable maximum flood

Above the design section of the river, the flood that may occur in terms of hydrometeorology and lasts for a certain period of time is close to the physical upper limit.

3 Basic Regulations

3.0.1

The flood control standard of the protected object should be expressed by the return period of the protected flood or tide; for particularly important protected objects, it can be expressed by the maximum possible flood. According to the needs of different protected objects, the flood control standard can adopt the first level of design or the two levels of design and verification.

3.0.2

The flood control standards of various protected objects should be based on the requirements of economic, social, political, environmental and other factors for flood control safety, coordinate the relationship between local and overall, short-term and long-term, upstream and downstream, left and right banks, and main and tributary streams. The analysis argument is OK. When conditions permit, it is advisable to conduct a comparative analysis of the flood economic losses that may be mitigated by different flood control standards and the required flood control costs.

3.0.3

When the same flood protection area is threatened by different rivers, lakes or ocean floods, the corresponding flood control standards should be determined according to the severity of different rivers, lakes or ocean flood disasters.

3.0.4

For the protection object in the flood protection area, when the required flood protection standard is higher than that of the flood protection area and can be protected independently, the flood protection standard of the protection object shall be determined separately, and individual protection measures shall be taken.

3.0.5

When there are more than two kinds of protected objects in the flood protection area, and they cannot be protected separately, the flood control standard of the flood protection area shall be determined according to the higher requirement among the flood protection area and the main protection objects.

3.0.6

For the protected objects that affect the public flood control safety, the higher of the flood control standards required by itself and the public flood control safety shall be determined.

3.0.7

For buildings and structures such as subgrades and enclosures that have flood control functions determined in flood control engineering planning, the flood control standard shall

be determined according to the higher of the flood control protection area and the flood control standard of the building or structure.

3.0.8

The flood control standards of the following protected objects can be raised or lowered after demonstration.

1 For protection objects with huge losses and severe impacts after floods or accidents, the flood control standards can be improved;

2 Flood control standards can be lowered for those protected objects with relatively small losses and impacts after floods or accidents, short service life and temporary protection.

3.0.9

If it is really difficult to carry out flood control construction according to the flood control standards specified in this standard, it can be implemented in stages and gradually achieved after reporting to the competent department for approval.

4.1 General provisions

4.1.1

When determining flood control standards, the flood characteristics, topographical conditions, and the separation of rivers, embankments, roads or other features should be analyzed in flood-threatening areas. If they can be divided into several parts for separate protection, they should be divided into independent parts. The flood protection standards of each flood protection area shall be determined separately.

4.1.2

The statistical scope of the population, cultivated land and economic indicators used to divide the protection level of the flood protection zone shall adopt the submerged scope of the corresponding standard flood.

4.2 Urban protection zone

4.2.1

Urban protected areas shall be divided into four protection levels according to the importance of political and economic status, resident population or equivalent economic scale indicators, and their protection levels and flood control standards shall be determined according to Table 4.2.1.

Table 4.2.1 Protection grades and flood protection standards of urban protected areas

Note: The equivalent economic scale is the product of the per capita GDP index of the urban protected area and the population, and the per capita GDP index is the ratio of the per capita GDP of the urban protected area to the national per capita GDP in the same period.