



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

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Technical standard for groundwater monitoring

地下水监测工程技术标准

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1 General provisions

1.0.1 The standard was drawn up in order to suit the needs of the development of groundwater monitoring, to raise the quality and technical level of the construction and operation of groundwater monitoring works, to meet the needs of groundwater survey and planning, water saving and protection, the control of over-exploitation, pollution prevention and control and supervisory management, and to be technically advanced and economically reasonable.

1.0.2 The standard applies to the design, construction and acceptance of groundwater monitoring works and to the operation and maintenance of monitoring systems.

1.0.3 Besides this standard, groundwater monitoring works shall also comply with the provisions of the relevant national standards in force.

2 Terms

2.0.1 Groundwater monitoring station: the monitoring facilities and equipment set up to obtain monitoring information such as groundwater level, water temperature, volume abstracted, spring discharge and water quality, consisting mainly of monitoring facilities, monitoring instruments and equipment and ancillary facilities.

2.0.2 Groundwater monitoring: the process of monitoring and surveying the regime elements of groundwater, such as water level, water temperature, water quantity and water quality, through groundwater monitoring stations at the prescribed time intervals and to the prescribed accuracy; in this standard it also means information monitoring.

2.0.3 Measuring point: the fixed point set on the head of a groundwater monitoring well or on an ancillary facility for measuring the groundwater level or the depth to water, being the starting point of the measurement of level or depth.

2.0.4 Groundwater level: the elevation of the free water surface of the groundwater in a monitoring well.

2.0.5 Depth to water table: the vertical distance from the free water surface of the groundwater in a monitoring well to the ground at the well head.

2.0.6 Difference of groundwater level between two measurements: the difference between the current monitored value of groundwater level or depth to water and the value monitored on another occasion.

2.0.7 Groundwater regime: the phenomena and processes by which the elements of groundwater, such as water level, water temperature, water quantity and water quality, change with time.

2.0.8 Groundwater data processing: the collective name for the work of sorting, analysing, checking, compiling and publishing or storing original groundwater monitoring data.

2.0.9 Permeability sensitivity test of monitoring well: the hydrogeological test work of injecting water into a monitoring well and observing the recovery of the water level, so as to judge whether the permeability of the well wall has changed markedly.

2.0.10 Hydrogeological conditions: the collective name for the burial, distribution, recharge, runoff and discharge conditions of groundwater, its quantity and quality and the geological conditions under which it is formed.

2.0.11 Hydrogeological unit: a groundwater system with unified boundaries and unified recharge, runoff and discharge conditions.

2.0.12 Type division of groundwater monitoring: the areas divided according to landform, geological background and ecological environment, hydrogeological conditions and the intensity of groundwater development and use, as required by the work of groundwater monitoring.

2.0.13 Phreatic water: groundwater buried above the first stable aquiclude below the ground surface and having a free water surface.

2.0.14 Confined water: groundwater filling the space between an upper and a lower relative aquiclude and subject to hydrostatic pressure.

2.0.15 Renewable groundwater: groundwater having a direct recharge and discharge relation with local atmospheric precipitation or with surface water bodies, including phreatic water and confined water closely connected hydraulically with phreatic water.

2.0.16 Unrenewable groundwater: groundwater that in the natural state has a weak hydraulic connection with other water bodies and cannot be renewed or is hard to renew.

2.0.17 Intensity of groundwater development: the ratio of the actual volume of groundwater abstracted within an area to the exploitable volume, usually expressed as a percentage.

2.0.18 Groundwater over-exploitation area: an area in which, over a given period and within a given region, the actual volume of groundwater abstracted exceeds the exploitable